



# Republic of South Sudan

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

Reporting period: Epidemiological Week 16  
*15 -21 April 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 16 of 2024, the IDSR reporting timeliness and completeness were 81% and 93%, respectively, and IDSR performance at the EWARN mobile sites was 93%.
- Completeness of IDSR reporting at private Health facilities in Juba and Wau was only at 95%
- A total of 276 alerts have been triggered in the EWARS system, with 62% (171/276) verified in the system. Most of the alerts were for Measles (18%), ABD (17%), AWD (16%), Guinea Worm (14%)
- During Epi-weeks 1 to 15 in 2024, a total of 416 ILI/SARI samples have been collected; 390 tested negatives for all pathogens,
- During this week 5 more samples tested positive for meningitis
- As of Epi week 16, 2024, 2,271 suspected measles cases were reported, with 146 (6.4%) lab-confirmed, 39 suspected Measles deaths
- A total of 624 AJS cases, including 22 deaths, have been reported from week 1 of 2023 to week 15 of 2024. Most cases were reported among the age group 15 years and above

## 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 16 were at 81% and 93%, respectively.

Table 1: Timeliness and completeness of IDSR reporting by State for week 16, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Current reporting period		Cumulative since year start (2024 level)	
			Timeliness wk16	Completeness wk16	Timeliness	Completeness
Lakes	112	106	91%	95%	89%	98%
NBGZ	89	89	91%	100%	86%	91%
Unity	84	84	98%	100%	91%	100%
WBGZ	81	70	59%	86%	78%	81%
WES	183	187	69%	100%	88%	96%
Jonglei	119	105	76%	88%	86%	89%
Warrap	111	106	92%	95%	83%	92%
EES	107	106	88%	99%	87%	95%
RAA	16	6	31%	38%	57%	73%
CES	122	109	89%	89%	90%	94%
AAA	17	16	94%	94%	66%	72%
Upper Nile	141	109	68%	77%	65%	79%
GPAA	15	15	100%	100%	98%	99%
<b>Total</b>	<b>1197</b>	<b>1108</b>	<b>81%</b>	<b>93%</b>	<b>85%</b>	<b>94%</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 16	% Of Completeness in week 16	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 16	% Of Completeness in week 16
IMC	4	100%	100%	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	50%	50%	Wau South	20	90%	90%
CIDO	1	100%	100%	Wau North	12	92%	92%
TOTAL	14	93%	93%	Juba	10	100%	100%
				TOTAL	62	95%	95%

## Epidemic alerts

A total of 276 alerts have been triggered in the EWARS system, with 62% (171/276) verified in the system. The majority of the alerts were for Measles (18%), ABD (17%), AWD (16%), Guinea Worm (14%). It is important to note that there were significant alerts for, Malaria, EBS, ARI and AJS. This week, Eastern Equatoria, Central Equatoria, Northern Bahr El Ghazal and Western Equatoria states show high alert verification rates. See Table 3 below for more details.

Table 3: Summary alerts triggered week 16; 2024

Admin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)			Acute Watery Diarrhoea			AFP			Bloody Diarrhoea			Cholera			Covid-19			EBS			Guinea Worm			Malaria (Confirmed)			Measles			Neonatal Tetanus			Relapsing Fever			Yellow Fever			Grand Total			Percentage			
	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	%V	%PV							
AAA	0	0	0	1	0	1	3	1	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	6	2	4	33%	67%					
CES	0	0	0	2	2	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	12	12	0	100%	0%					
EES	0	0	0	3	3	0	6	6	0	1	1	0	7	7	0	0	0	0	0	0	2	2	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	21	21	0	100%	0%					
Jonglei	4	0	4	1	0	1	3	0	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	8	0	8	1	0	1	3	0	3	0	0	0	2	0	2	0	0	25	0	25	0%	100%		
Lakes	0	0	0	6	4	2	5	4	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	7	7	0	2	5	7	4	3	1	3	3	0	1	1	0	0	0	0	50	39	11	78%	22%		
NBGZ	1	1	0	0	0	0	2	2	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	8	8	0	0	0	0	0	0	0	0	0	17	17	0	100%	0%			
RAA	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	5	1	4	20%	80%			
Unity	3	2	1	4	1	3	5	0	5	0	0	0	5	1	4	1	1	0	0	0	0	0	0	0	1	0	1	5	0	5	1	0	1	0	0	0	0	0	0	0	0	25	5	20	20%	80%		
Upper Nile	0	0	0	3	0	3	1	0	1	0	0	0	8	0	8	0	0	0	1	0	1	0	0	0	0	4	0	4	2	0	2	0	0	0	0	0	0	0	0	0	19	0	19	0%	100%			
Warraap	0	0	0	1	0	1	4	2	2	0	0	0	6	4	2	1	0	1	0	0	0	4	4	0	6	3	3	1	0	1	8	2	6	0	0	0	0	0	1	0	1	32	15	17	47%	53%		
WBGZ	0	0	0	1	1	0	6	5	1	1	1	0	3	3	0	0	0	0	0	0	0	0	0	2	0	2	5	3	2	2	2	0	0	0	0	0	2	2	0	1	1	0	23	18	5	78%	22%	
WES	0	0	0	3	3	0	7	7	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	41	0	100%	0%	
Grand Total	8	3	5	25	4	1	1	4	3	15	2	2	0	7	0	7	2	1	1	1	0	1	6	3	3	9	8	1	5	0	5	9	6	3	1	1	0	4	2	2	2	1	1	276	171	5	62%	38%

#R= reported  
 #V= verified  
 # =Pending

## 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, 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 15 in 2024, a total of 416 ILI/SARI samples have been collected; 390 tested negatives for all pathogens, (22) were positive for COVID-19, zero (1) for Influenza Type A (H3), one (1) for Influenza Type B (Victoria), two (2) for Influenza A/(H1N1) pdm09 and zero (0) for RSV.

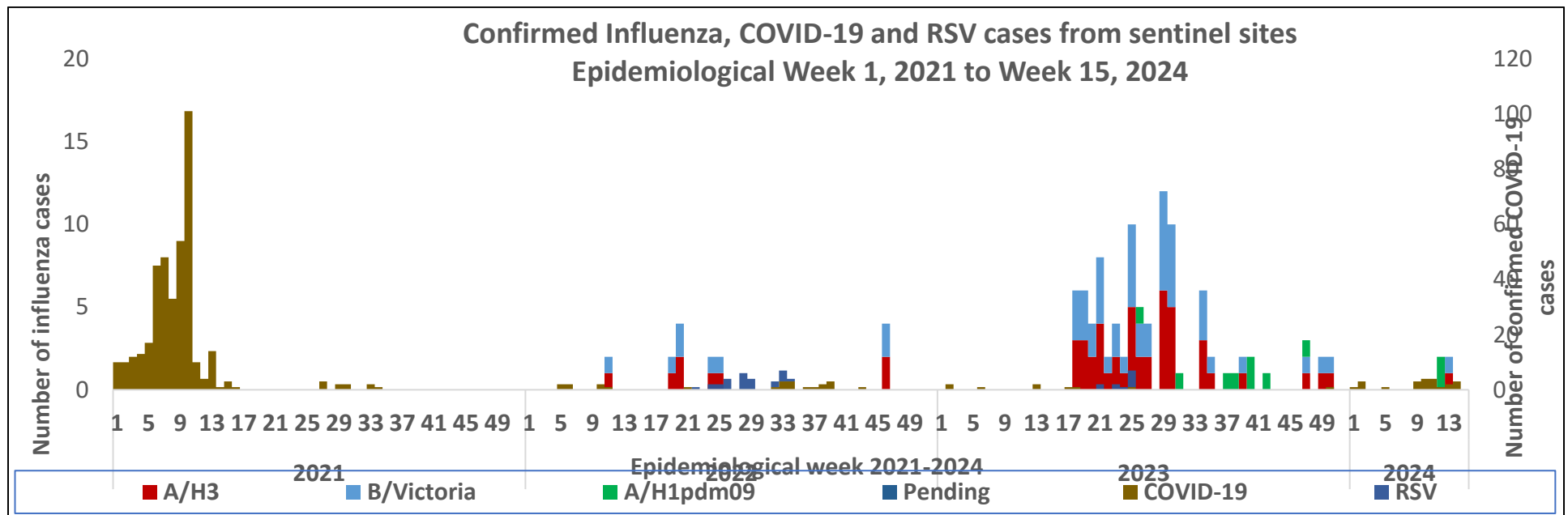


Figure 1: Indicator-Based Surveillance (IBS) Influenza Surveillance

## 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>									
Hepatitis E	Twic	Feb 2024	0	2	1	ongoing	-	Ongoing	Ongoing
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	7	71	3 Laboratory confirmed	Ongoing	Done in 3 counties (Yambio, Nzara and Tambura)	Ongoing	Ongoing
Measles	69 counties	2022	1411	14,344	1,148	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Fangak	2023		617	253	ongoing	ongoing	ongoing	ongoing
cVDPV	Yambio and Juba	19/Dec 2023	0	7	7	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	48	5269	-	ongoing	Done in 2021/22	ongoing	ongoing
Conjunctivitis	Nimule	8/April	1500	-	-	Ongoing	-	Ongoing	Ongoing

## Ongoing Confirmed Outbreaks

Since last year, South Sudan has been witnessing several emergencies across the country based on the data provided by the states and EWARS system, several ongoing disease outbreaks have been reported in most of the Counties ranging from measles, polio and hepatitis E virus and others

### South Sudan: Ongoing Disease Outbreaks as of April 2024

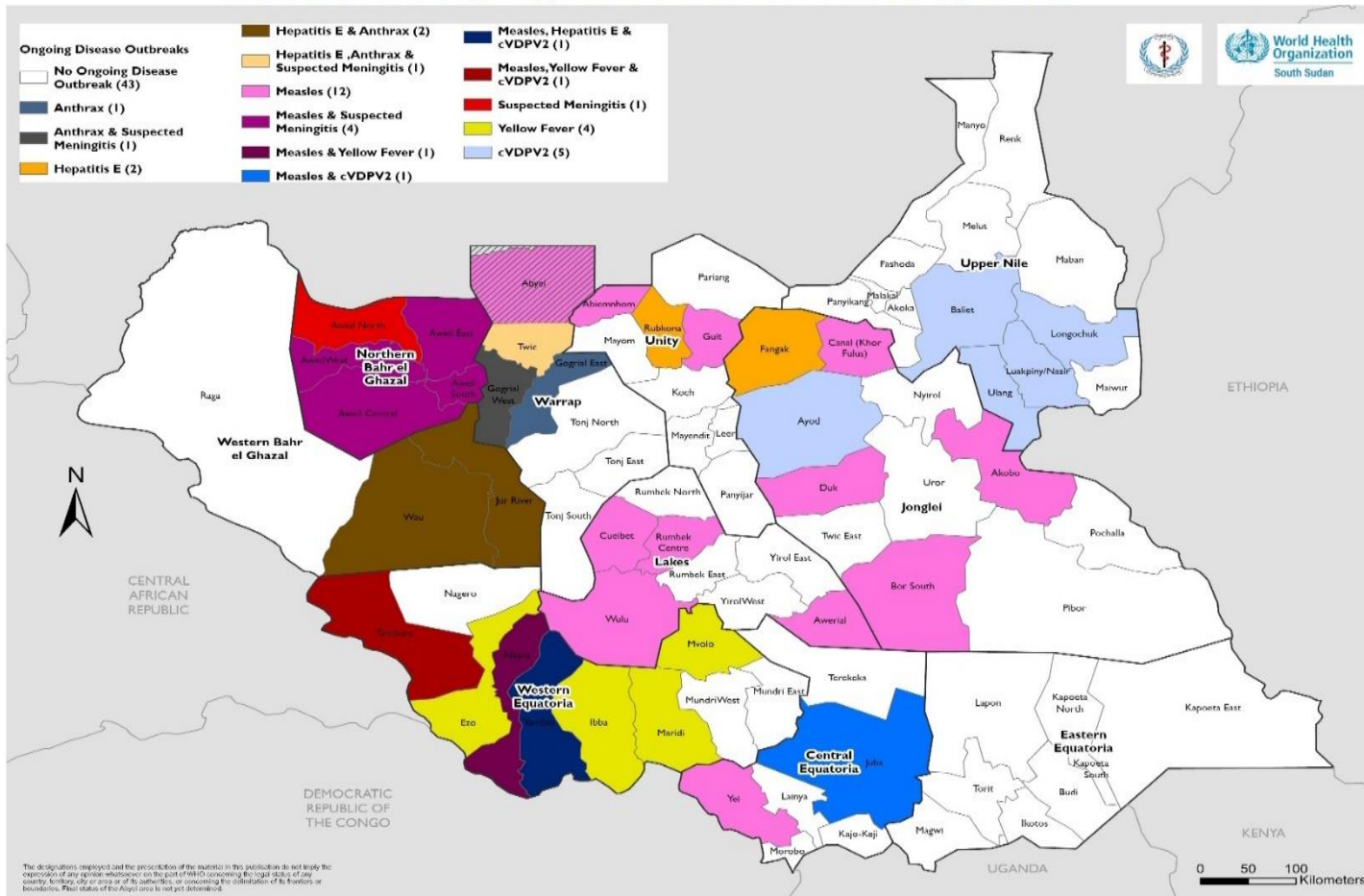


Figure 2: Map showing ongoing disease outbreaks across the country

## Response activities for ongoing outbreaks

### Vaccine-preventable Diseases

#### 1- Meningitis Situation Updates

Currently, a cumulative number of 121 suspected cases including 13 deaths (12% CFR) have been reported between week 4 to week 16, 2024. Furthermore, 5 new cases with zero deaths were reported in Epi- week 15, 2024 most of the cases were reported in Aweil East 25% (18 cases) and Aweil West 19% (14 Cases) of the total reported cases. The most affected age group is 0 – 4 years and the least affected age group is 10 - 14 years.

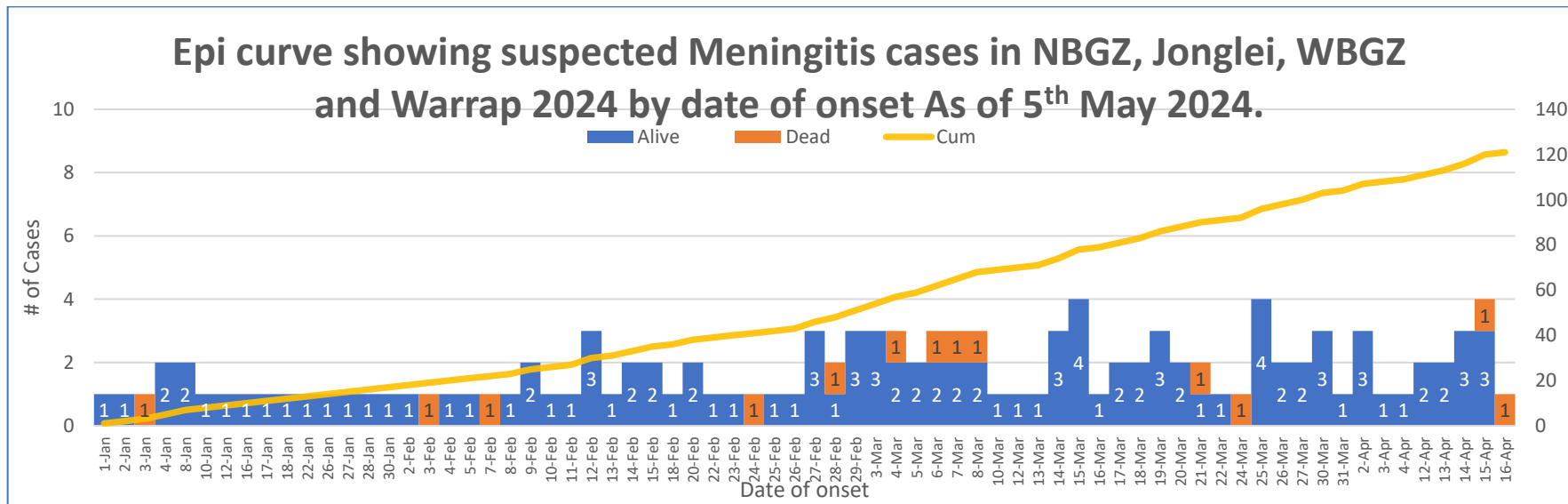


Figure 3 Distribution of Meningitis cases by Age-group and Location



## 2- Measles outbreak

As of Epi week 16, 2024, 2,271 suspected measles cases were reported, with 146 (6.4%) lab-confirmed, 39 suspected Measles deaths, and a case fatality rate of 1.7%. In addition to that number, a total of 32 more cases were reported from different areas across the country

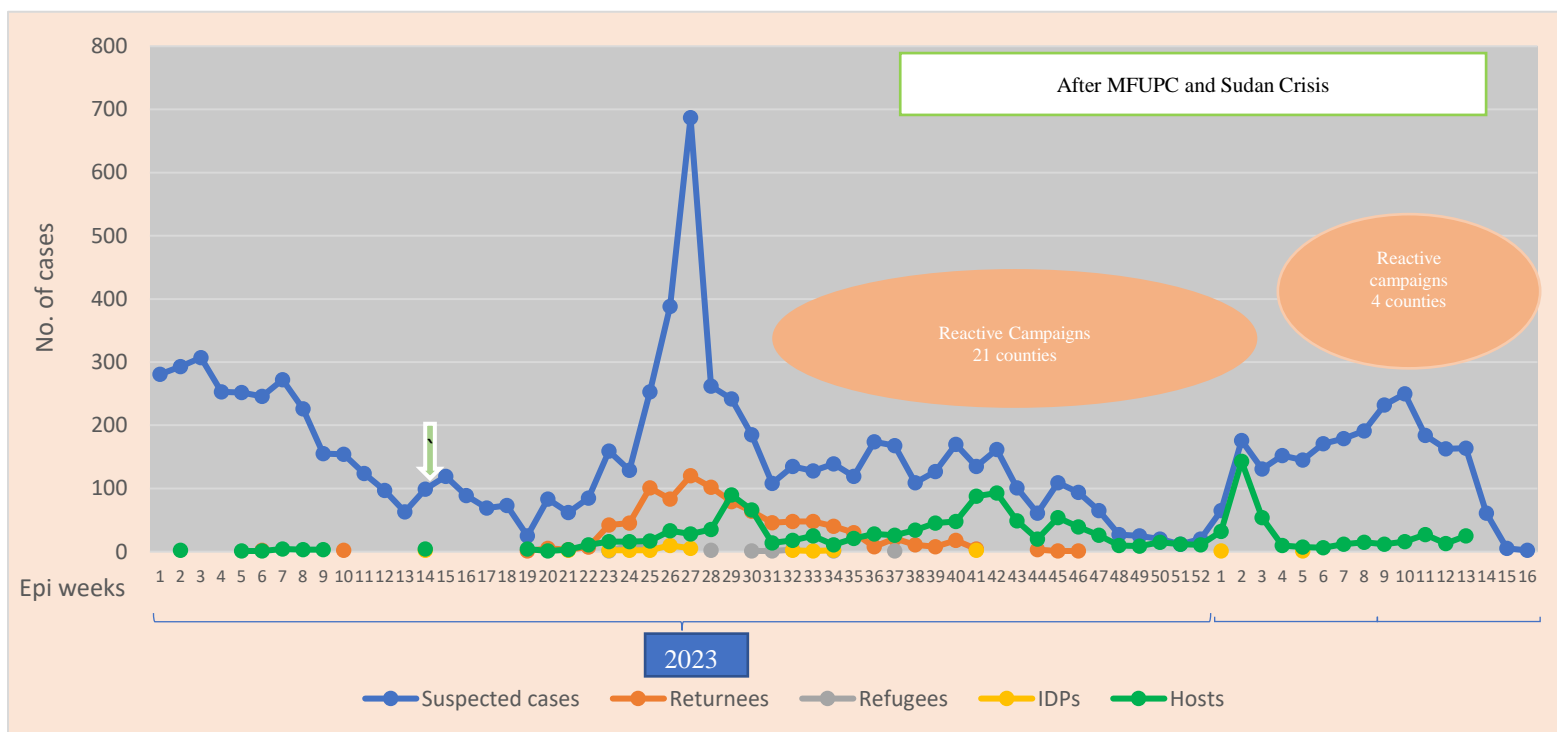


Figure 4: Epi-curve of suspected measles cases against their residential status by Epi week

## Measles vaccination

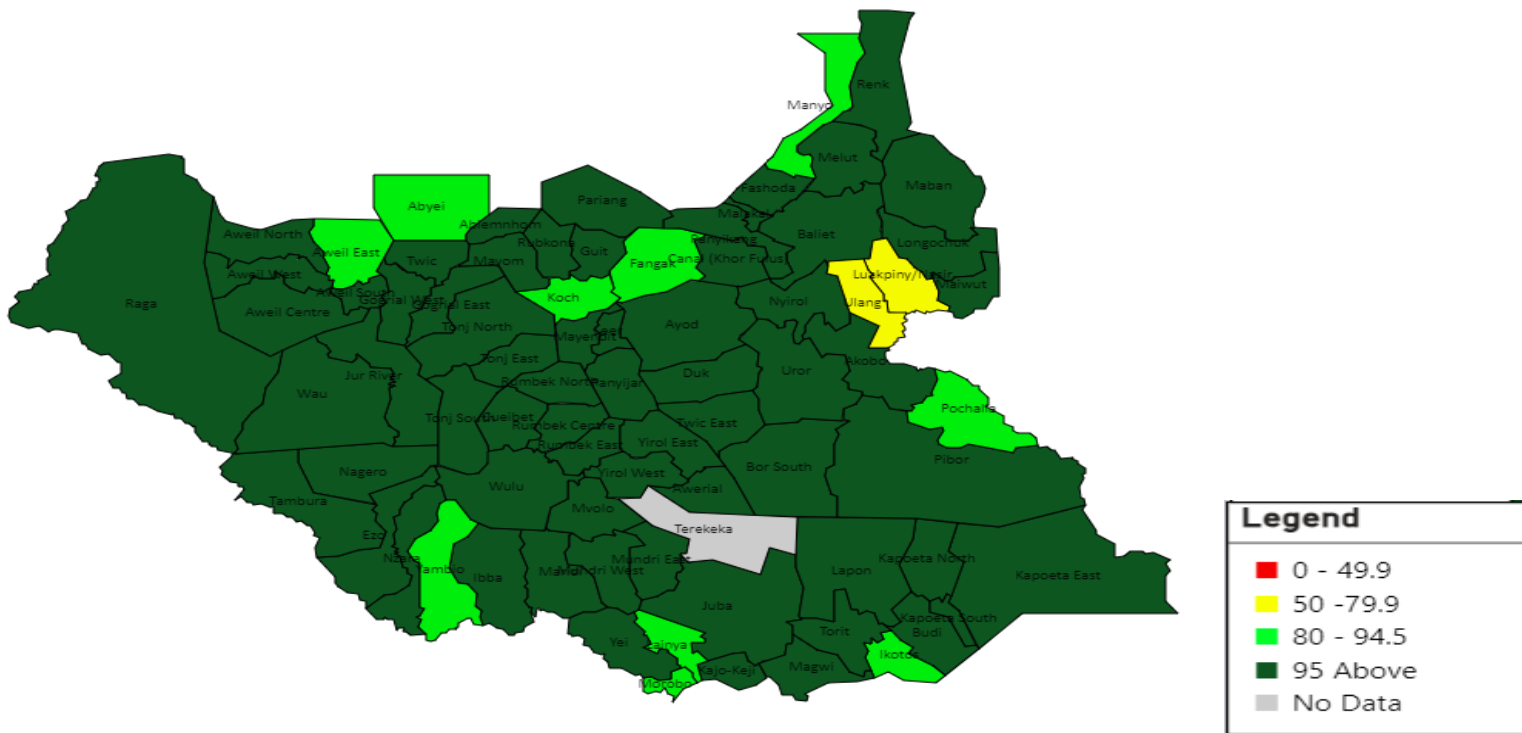
As of Epi week 16 in 2024, reactive vaccination efforts have led to county-wide campaigns in Maridi, Mundri East, Tonj North, and Tonj South, vaccinating 138,844 children against Measles. Preparation for the reactive vaccination campaign in all 5 counties of Northern Bahir El Ghazal state is complete and implementation is scheduled from 25<sup>th</sup> of April 2024. Preparation is underway for 5 outbreak-affected counties in Western Equatoria State to be implemented in the 2<sup>nd</sup> week of May 2024.

Epi week 16 data shows no ongoing outbreak, but twelve (12) counties reporting suspected/confirmed cases yet to reach the outbreak threshold, warranting further investigation and laboratory validation.

## 3- Poliomyelitis

### Circulating Vaccine Derived Polio Virus type-2 (cVDPV2)

As of January 31, 2024, two cases of cVDPV2 had been reported from Yambio in Western Equatoria and Juba in Central Equatoria. The cVDPV2 variant, which closely matched the index case from the West Equatoria State, was confirmed after being collected from three healthy children in Western Equatoria. The most recent case of cVDPV2 was reported from Juba County, Central Equatorial State, with the onset of paralysis occurring on November 4, 2023. The lab has a few samples that need to be tested. In response to the nationwide outbreak, a campaign was launched on February 27th, 2024, using the nOPV2 vaccine, which has been completed in most counties. Preliminary data shows 3,310,438 (110%) under-5 Children vaccinated in, Terekeka County started the campaign on started today 30<sup>th</sup> April 2024 due to COVID-19 vaccination, which was ongoing, when nOPV-2 was being scheduled. Following up with a few Counties with pending data not submitted on ODK.



The second round of nOPV2 SIAs Response/Outcomes as of 30 April 2024

## Water Born Diseases

### 1- Acute Watery Diarrhea

The table below shows the summary of weekly acute watery diarrhea cases in Renk County, to date Renk County has recorded 132 suspected cholera cases out of which 78 suspected cases were tested for cholera using RDT, five cases were positive, and samples were sent for further confirmatory test all the five samples tested negative using culture and sensitivity test. As part of the cholera preparedness plan in Renk, an active AWD case search is going at TC1&2, RC, Renk Hospital, and health facilities

Table 5 suspected cholera cases in Renk County.

#	Indicator	Numbers/percentage
1	Cholera (Suspect cases) detected in the week	0
2	New cases confirmed	0
3	Cumulative cases	132
4	New deaths in the week	0
5	Cumulative deaths	0
6	Case fatality Rate	0

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

A total of 624 AJS cases, including 22 deaths, have been reported from week 1 of 2023 to week 15 of 2024. Most cases were reported among the age group 15 years and above; Females accounted for 66% (412/624) while Males accounted for 34% (212/624) of cases. The outbreak peaked in week 42 of 2023, with an RDT positivity rate of more than 60%. Until week 52, 2023, and week two of 2024 with four RDT positive cases.

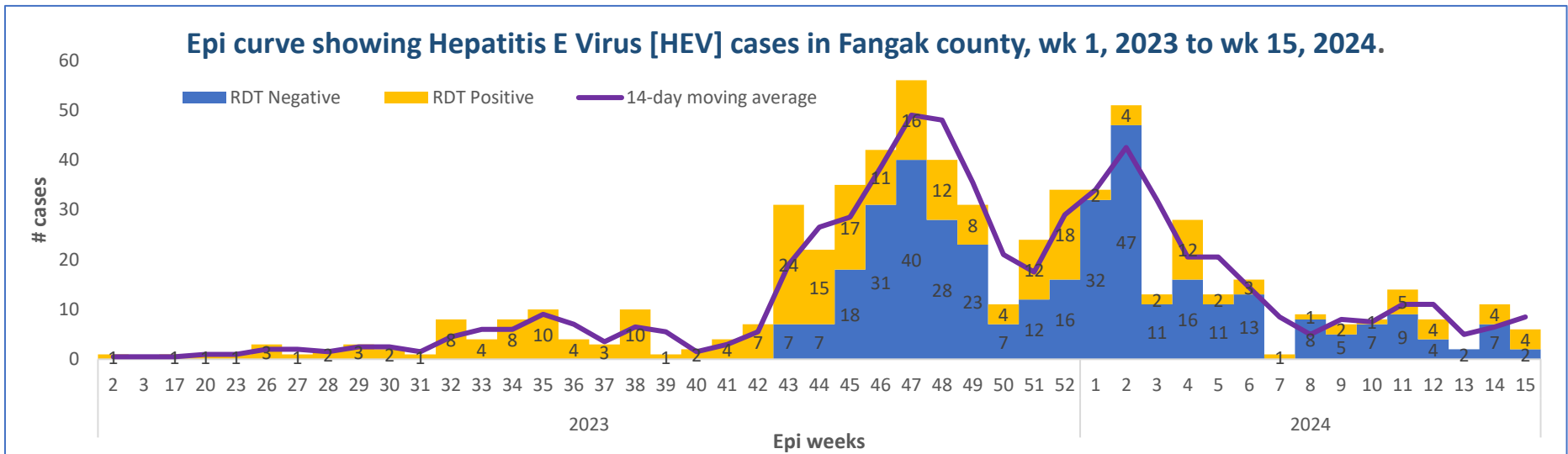


Figure 6: Epi-curve of HEV in Fangak County

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

Recently 31 new cases were reported including Four RDT positive and zero deaths in week 15, 2024; cumulatively marks a total of 5300 cases including 27 deaths reported since the outbreak began in 2018; 3% of the cases were reported among age group 15 – 44 years; In terms of sex, Male account for 52% (2, 768 cases) while female accounted 48% (2, 501 cases).

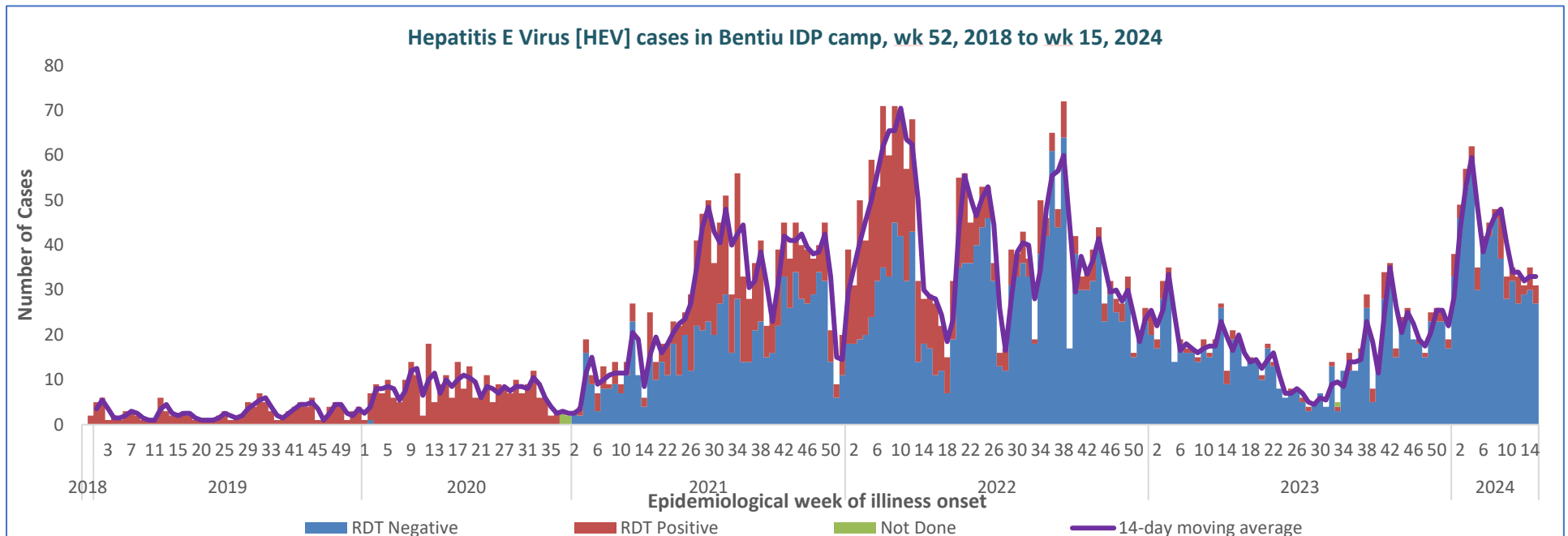


Figure 7: Epicure of HEV in Bentiu IDP camp, Unity State

#### 4. Hepatitis E in Western Bahr EL-Ghazal State

A total of 481 cases including 19 deaths have been reported from week 8, 2023 to week 16, 2024. The majority of the cases were reported among the age group 15 years and above; In terms of the distribution of the cases by gender; Males account for 64% (308) while females account for 36% (173).

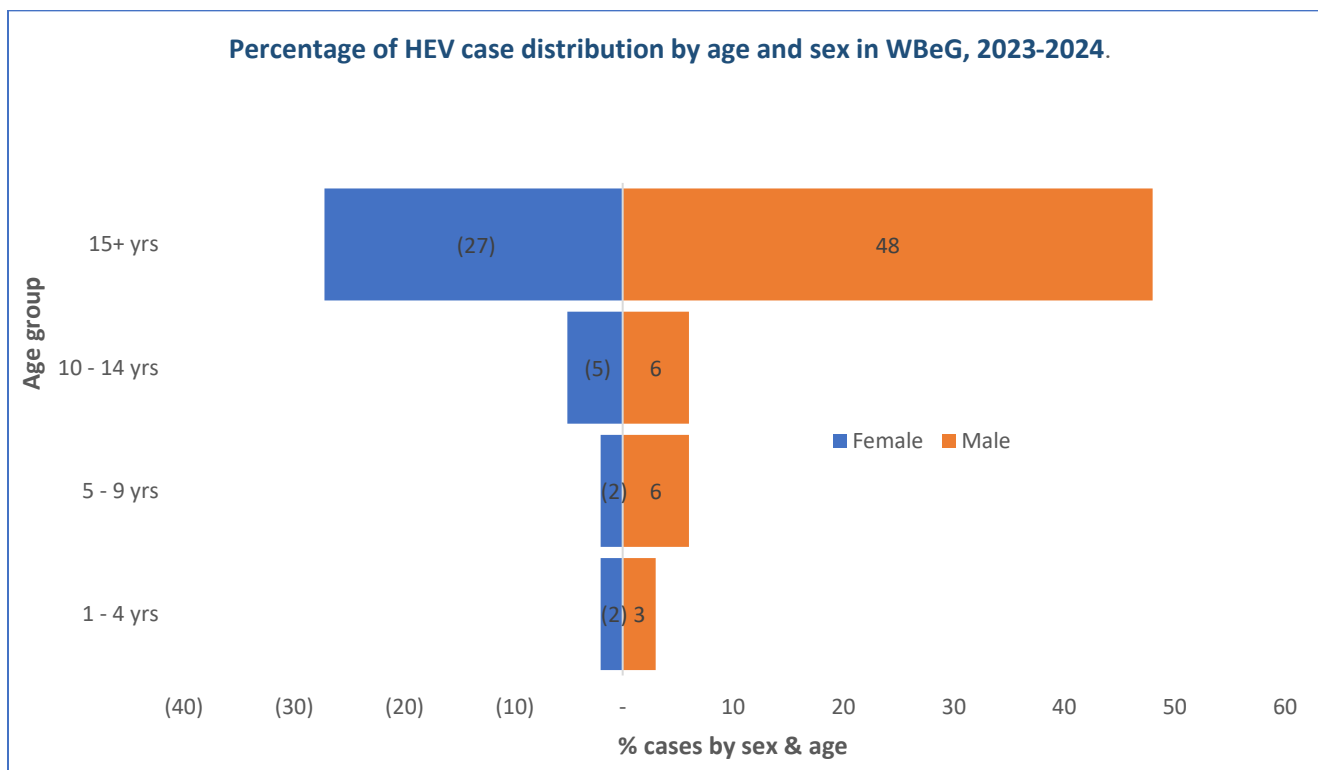


Figure: 8 Distribution of HEV cases by age and sex

# Hemorrhagic Fever

## 1- Yellow fever Outbreak

A total of one hundred and fifteen (115) Yellow Fever cases (112 suspected and 3 confirmed) were reported from seven counties in Western Equatoria state: Yambio (57), Tambura (26), Nzara (11), Ezo (11), Ibba (04), Maridi (04) and Mvolo (02) Counties. In Epi week 15 Five (05) new suspected Yellow Fever cases were reported. The suspected cases were reported from Yambio (3), Tambura (1), and Mvolo (1) counties. Suspected 6 deaths were reported, giving a case fatality ratio of 5.2%.

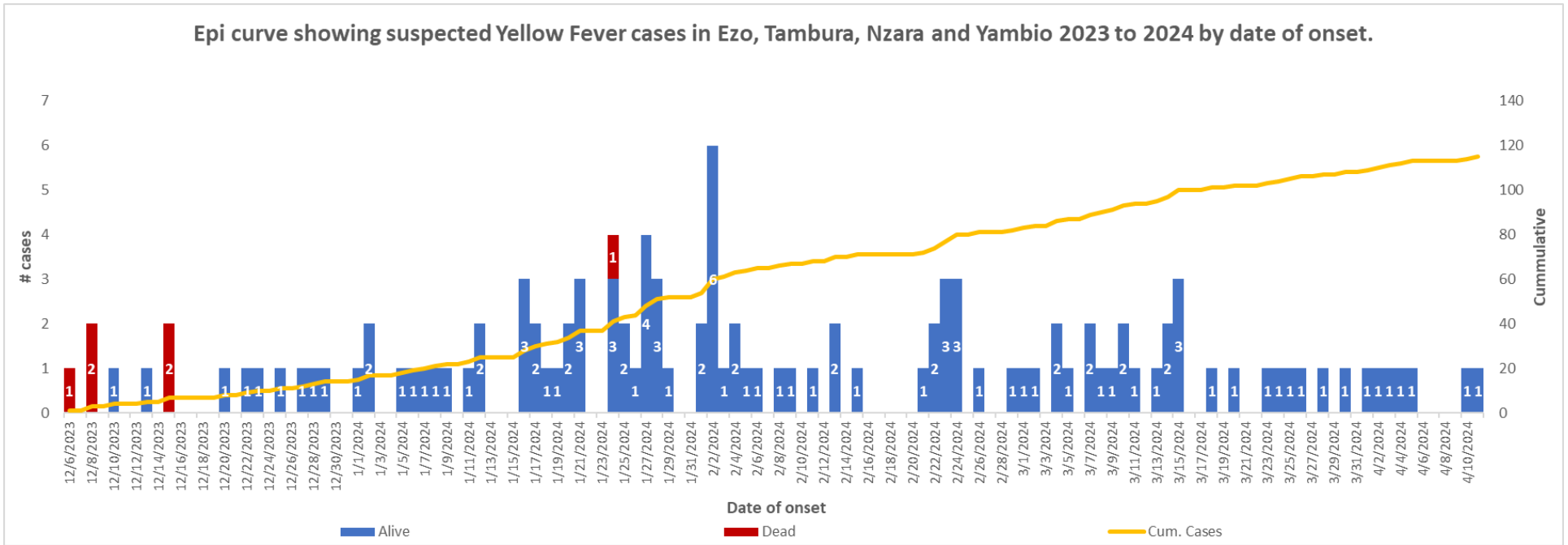


Figure 9: Trend of Yellow fever outbreak in Western Equatoria State

## 2- Suspected viral Hemorrhagic Fever in Rumbek

A 21-year-old female from Hai Malual Bab in Rumbek Town was reported to a private clinic 24 April 2024 with symptoms of fever headache, generalized body pain, and neck pain followed by nasal and ear bleeding. Alert was notified to CHD, SMOH, and WHO Hub office in Rumbek. blood samples have been collected, packed, and stored at the State cold chain, ready for sending to NPHL in Juba  
Three contacts have been identified and advised to stay in self-isolation

## Red-eye (Conjunctivitis) outbreak In Magwi County

The Ministry of Health, Republic of South Sudan, declared to the general public an outbreak of conjunctivitis, commonly known as red eye disease,” Minister of Health Yolanda Awel Deng Juach stated This outbreak was first detected among travelers from Uganda where similar cases have been reported and an outbreak of conjunctivitis declared by the Ministry of Health of Uganda,” she advised Health officials to set up screening at Nimule and other major points of entry. As of April 30, 2024, 1500 suspected cases were screened and managed, with cases also emerging in Juba. The Ministry of Health and partners have implemented measures including hygiene promotion, surveillance, treatment, public awareness campaigns, and healthcare worker training. The public is advised to wash hands frequently, avoid contact with infected persons, refrain from touching eyes or sharing personal items, and seek medical attention for suspected cases

## Other Events

**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** also 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 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).
- Training of RRT 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

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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>

Data source: DHIS-2 and EWARS

