



## Republic of South Sudan

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

Reporting period: Epidemiological Week 43

*21 to 27 October 2024*

This weekly bulletin presents the epidemiological status of priority diseases, events, and conditions under surveillance in South Sudan. The data comes from various actors involved in preparedness and response to public health events in the country. Special thanks to all the health implementing partner and health cluster humanitarian agencies supporting integrated disease surveillance and response.

#### Key highlights

- In week 43 of 2024, the IDSR reporting timeliness was 75%, and completeness was 95%. There is a decline in timeliness from 80% in week 42 to 75% in week 43, while there is consistent improvement in completeness since week 31. All 13 states/administrative areas attained completeness of reporting above 80%. Abyei Administrative area, Lakes, Rweng Administrative areas, and Unity State achieve 100% completeness of reporting. However, only 6 of the 13 states/administrative areas attained timeliness of reporting above 80%
- At the EWARN mobile sites, the Timeliness and Completeness of IDSR performance were at 53% and 53% respectively. There is significant improvement in both timeliness and completeness of reporting from 33% and 40% in week 42 to 53% and 53% in week 43, in terms of timeliness and completeness respectively
- In week 43, 235 alerts were triggered, and the proportion of verified alerts increased from 56% in Week 42 to 82% in week 43. As was in the previous week, most of the alerts triggered were due to similar diseases/conditions namely ARI (30%), Malaria (20%), Guinea Worm (17%), AWD (13%) and ABD (8%)
- Cholera outbreak is now confirmed in 4 of the 80 Counties and 3 States of South Sudan with a cumulative total of 513 cases including 30 laboratory confirmed cases and 7 deaths from 28<sup>th</sup> September to 19<sup>th</sup> November 2024
- In week 43 of 2024, Malaria continued to be the top cause of morbidity, reporting 116 579 cases and 34 suspected deaths, and accounted for 45% of the overall morbidity.
- Other active outbreaks and events in South Sudan include anthrax and a hepatitis E upsurge in Wau and other multiple locations, cVDPV2/Polio now declared a country outbreak, as well as flooding, that has so far affected more than one million people across 52 counties, with 56 health facilities inundated.

#### Surveillance System Performance

The epidemic alert and response system in South Sudan currently relies mainly on immediate alert notifications and weekly aggregate reporting of cases 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 43** were at **75%** and **93%**, respectively, which was an improvement from the attainments from the previous week.

**Table 1: Timeliness and completeness of IDSR reporting by State for week 43 compared to 42 of 2024**

State	Total facilities	Number of facilities reported (Completeness Wk43)	Comparison of the reporting period				Cumulative since year start (2024 level)	
			Timeliness		Completeness		Timeliness	Completeness
			Week 43	Week 42	Week 43	Week 42		
Lakes	112	112	97%	92%	100%	100%	66%	100%
NBGZ	101	97	83%	79%	96%	86%	59%	80%
Unity	84	84	100%	96%	100%	100%	87%	99%
WBGZ	113	96	60%	65%	85%	82%	41%	81%
WES	191	191	64%	90%	100%	100%	64%	95%
Jonglei	120	105	78%	85%	88%	89%	72%	87%
Warrap	114	108	50%	58%	95%	92%	48%	88%
EES	112	94	45%	71%	84%	84%	58%	95%
RAA	16	16	25%	100%	100%	100%	42%	84%
CES	152	151	99%	88%	99%	99%	62%	94%
AAA	17	16	82%	100%	94%	100%	68%	82%
Upper Nile	143	129	78%	69%	90%	90%	49%	87%
GPAA	16	16	100%	75%	100%	75%	90%	92%
<b>Total</b>	<b>1291</b>	<b>1223</b>	<b>75%</b>	<b>80%</b>	<b>95%</b>	<b>93%</b>	<b>62%</b>	<b>93%</b>

KEY:	>80%	Good performance
	60-79%	Fair performance
	<60%	Poor performance

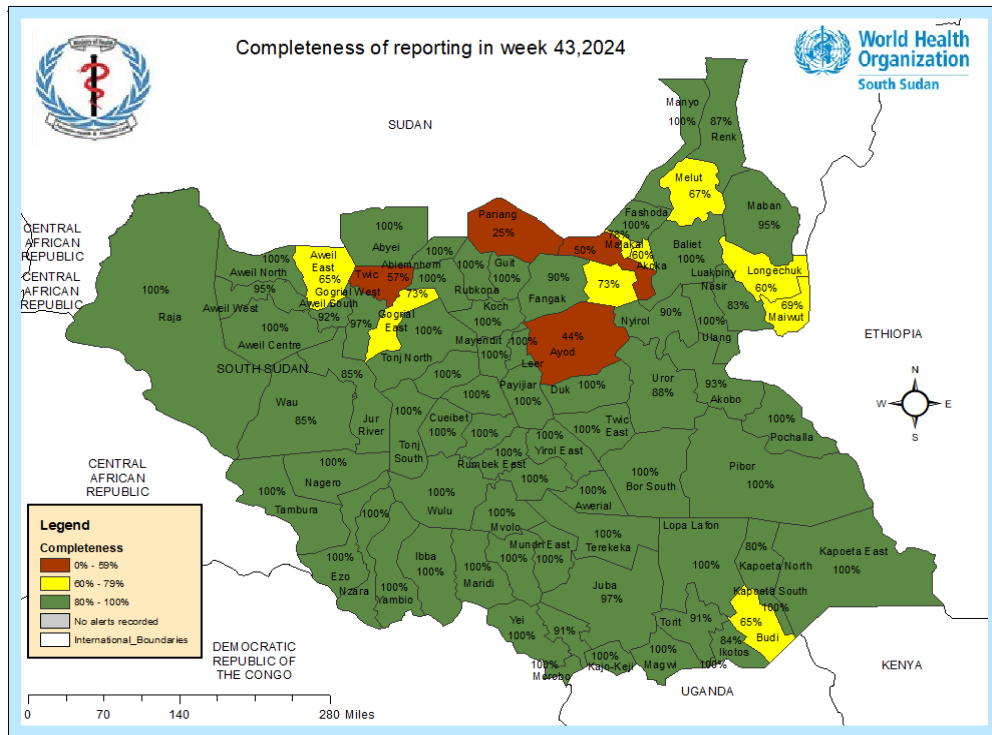
**Table2: Timeliness and completeness of reporting by Payam and Partner of IDSR reporting from NGO-run mobile health facilities and private health facilities in Juba and Wau, Week 43 of 2024.**

Partners	Number of Reporting Mobile Sites	percentage of Timeliness in week 43	percentage of Completeness in Week 43	Payam	Number of Reporting Private Health Facilities	percentage of Timeliness in week 43	Percentage of Completeness in Week 43
IMC	4	0%	0%	Kator	3	100%	100%
SSHCO	1	0%	0%	Marial Bai	1	100%	100%
SMC	1	0%	0%	Northern Bari	1	100%	100%
SCI	2	100%	100%	Rajaf	3	100%	100%
HFO	4	75%	75%	Muniki	12	100%	100%
WVI	2	100%	100%	Wau South	20	55%	85%
CIDO	1	100%	100%	Wau North	12	67%	75%
TOTAL	15	53%	53%	Juba	10	100%	100%
				Mangala	1	100%	100%
				TOTAL	63	79%	90%

**An important point to note:** The six facilities supported by IMC (4), SSHCO (1), and SMC (1) are no longer reporting due to the end of project funding which has affected the performance of partners reporting sites. The IDSR team

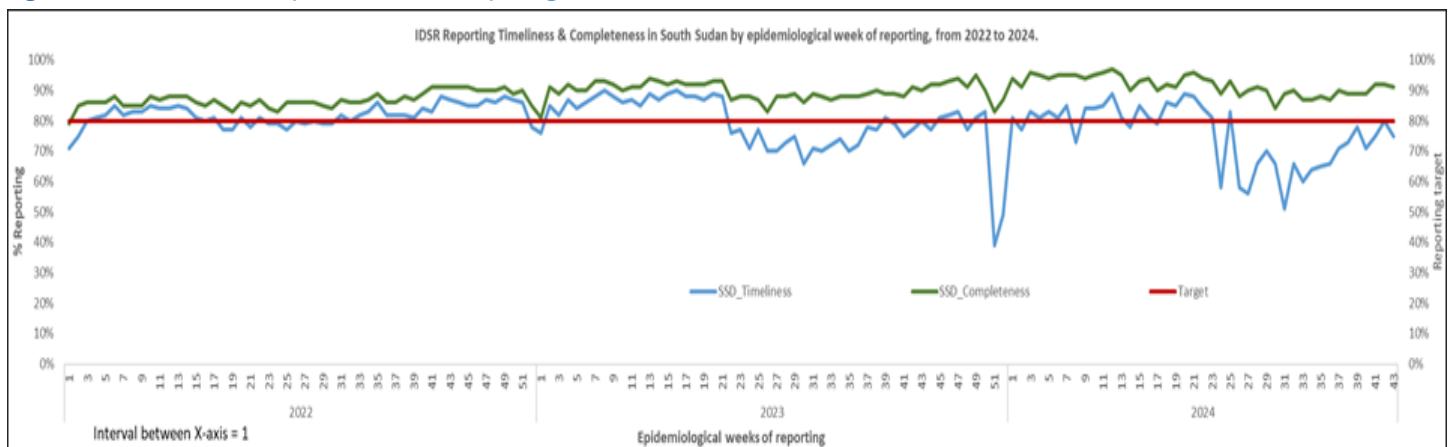
continues to explore the new implementing partners covering these facilities to re-establish weekly epidemiological reporting in these would be blind spots.

Figure 1: Completeness of IDSR reporting in South Sudan; 2022-2024.



To continue tracking the recovery in timeliness and completeness of IDSR reporting, we continued to analyze the performance over the past three years. We documented that the declines in 2024 (Wk. 21-31) are more pronounced than they were in two similar previous years of 2023 and 2022. In this HSTP transition period, we continued to provide targeted support to the newly contracted health implementing partners to recover this surveillance performance indicator. Notably, the IDSR timeliness of reporting continued to improve since week 31 and now staggers around the targeted 80%, although now declined to 75% in week 43. The priority in the forthcoming reporting periods is to push this IDSR performance indicator further up beyond the targeted 80%.

Figure 2: Timeliness and Completeness of IDSR reporting in South Sudan; 2022-2024.



**Epidemic alerts**

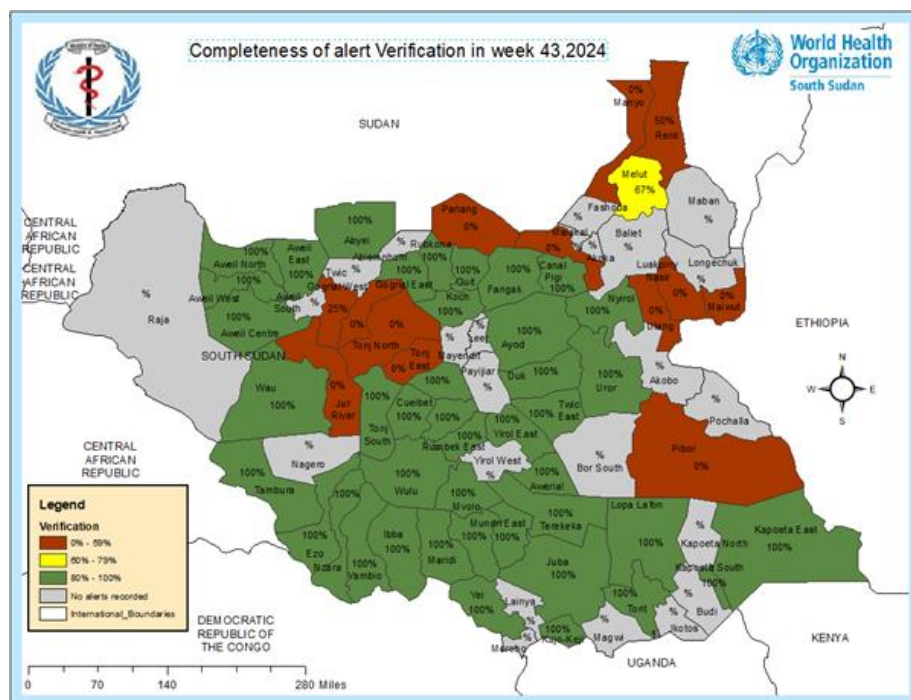
In reporting week 43, a total of 235 alerts were triggered in the EWARS system, with 81% (192 of 235) verified,

which is higher than the previous week 42, where 56% (105/189) were verified. In Week 43, all the ten states and three administrative areas recorded at least one notifiable diseases alert. Most of the alerts were for ARI (30%), Malaria (20%), Guinea Worm (17%), AWD (13%) and ABD (8%). See Table 3 below.

Table 3: Summary of EWARS alerts triggered in Epidemiological Week 43, 2024.

State/ Admin	AJS		ARI		AW D		AFP		ABD		Chole ra		Covid -19		EBS		Guinea Worm		Malaria		Measles		NNT		VHF		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		
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	1	1
CES	0	0	5	5	4	4	0	0	3	3	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	17	17		
EES	0	0	1	1	1	1	0	0	3	3	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	6	6		
GPAA	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0		
Jonglei	0	0	8	8	4	4	0	0	2	2	0	0	0	0	4	4	3	3	1	1	0	0	0	0	0	0	22	22		
Lakes	0	0	0	0	3	3	0	0	3	3	0	0	0	0	3	3	1	31	2	2	0	0	0	0	0	0	52	52		
NBGZ	0	0	2	2	2	2	0	0	3	3	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	9	9		
Ruweng	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0		
Unity	2	2	4	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	12	12		
U/ Nile	0	0	2	1	4	1	0	0	4	0	1	1	1	1	0	0	0	0	3	0	1	0	0	0	0	0	16	4		
Warrap	0	0	3	0	2	0	0	0	0	0	1	1	0	0	0	0	5	2	1	0	1	0	0	0	0	0	13	3		
WBGZ	3	2	2	2	6	0	0	0	0	0	0	0	0	0	1	1	2	0	7	0	0	0	0	0	0	0	21	5		
WES	0	0	1	1	2	2	0	0	0	0	0	0	0	0	1	1	0	0	6	26	1	1	0	0	0	0	61	61		
Grand Total	5	4	0	65	0	9	2	0	9	4	2	2	1	1	0	0	1	4	6	34	6	4	1	1	2	2	235	192		

Figure 3: Completeness of Alerts Verification rates by county of South Sudan for week 43, 2024

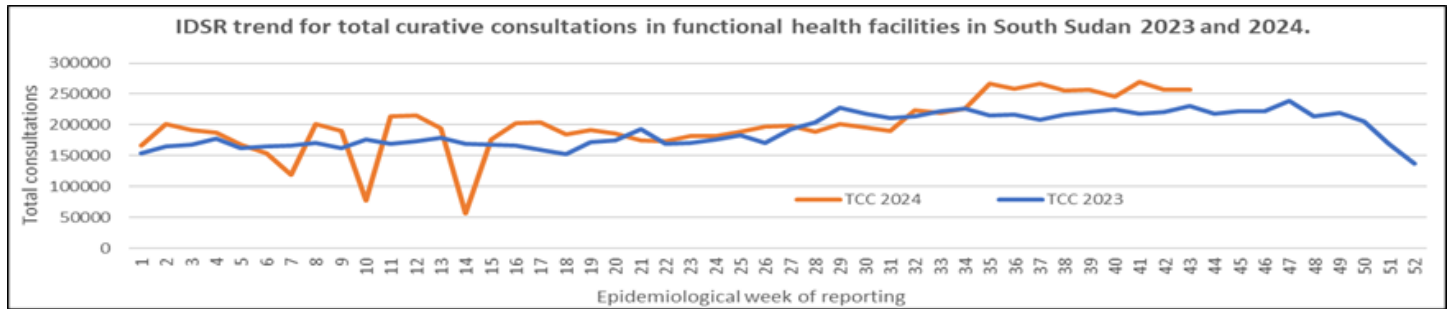


Weekly Update on Indicator-Based Surveillance (Week 43)

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.

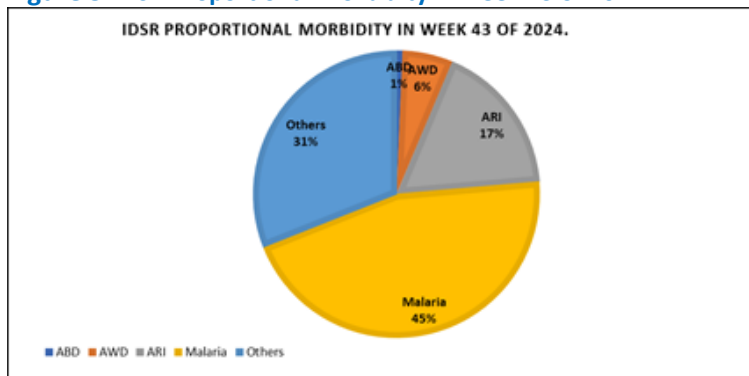
- During week 43 of 2024, individuals aged five years and above had the highest number of consultations at the outpatient departments (OPD).
- Since the beginning of this year, a cumulative total of **8,550,545** patients have been treated in both the outpatient and inpatient departments.
- Comparing the utilization of healthcare services in 2023 and 2024 reveals fluctuating trends, suggesting variations in the weekly number of consultations (Figure 4 below).

Figure 4: Trends of cumulative curative/OPD consultations reported in the Monthly DHIS reporting: 2023-2024.



In week 43, a total of **257,092** morbidities were reported from all over South Sudan from across 1291 health facilities. Malaria constituted 45% of total consultations in week 43 of 2024, maintaining its status as the primary cause of morbidity and **34** suspected deaths attributed to malaria were documented during the week, (Figure 5 below).

Figure 5: IDSR Proportional Morbidity in week 43 of 2024.



## National Malaria Update

- In week 43 of 2024, Malaria maintained its position as the primary cause of illness, reporting 116 579 cases and 34 suspected deaths, representing 45% of the overall morbidity.
- The weekly reported number of Malaria cases at national level in week 43 of 2024 remained above the epidemic threshold. However, continuous monitoring is crucial across at all levels. It is worth noting that a malaria surge was documented in Six states and 55 counties during the specified week, as illustrated in the subsequent sections.
- Disaggregation of data by state level, shows that the number of malaria cases in Upper Nile, Central Equatoria, Western Equatoria, Northern Bahr el Ghazal, and Unity states, consistently exceeded the state-specific alert and epidemic thresholds for most of the periods examined from week 1 to week 43 of 2024.
- Many states have reported shortages of antimalarial. However, the Malaria program in the Ministry of Health through UNICEF has distributed antimalarials for the last quarter of the calendar year (October-December). In flood affected



locations, WHO Emergency kits were provided to the health implementing NGOs to bridge the expected gaps likely to be caused by the surge in cases.

Figure 6: Malaria Incidence in South Sudan, as of Week 43 of 2024

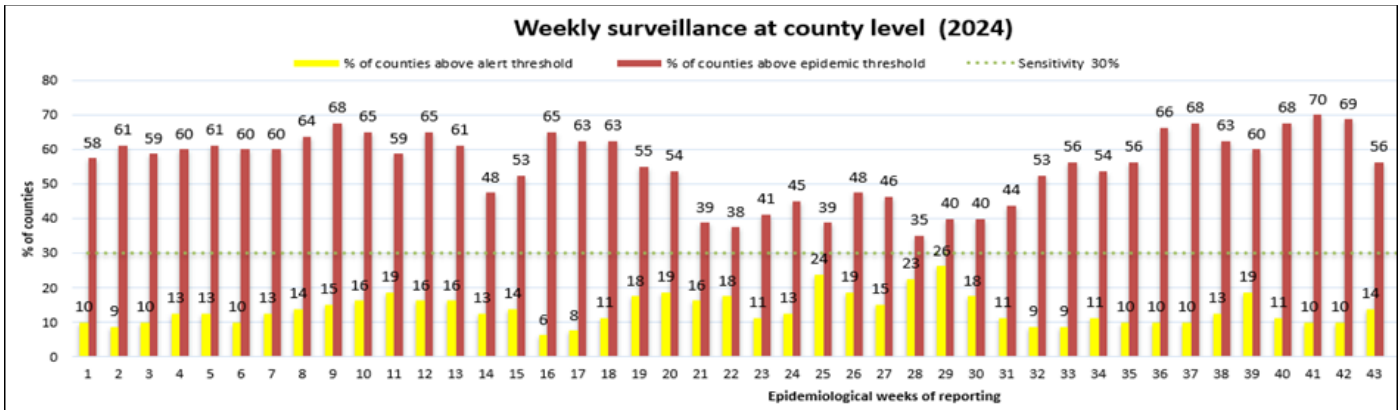
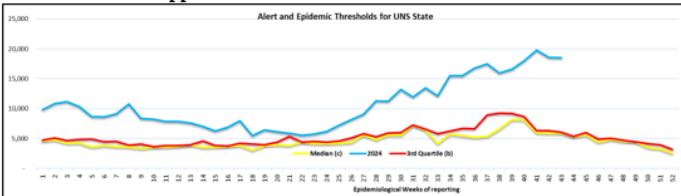
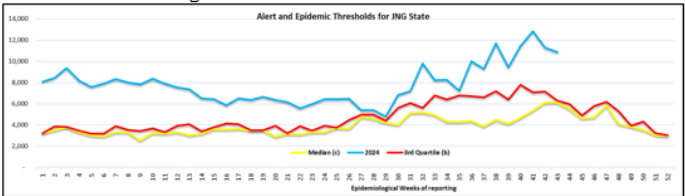


Figure 7: Malaria incidence trends in States of South Sudan that surpassed their normal transmission channels

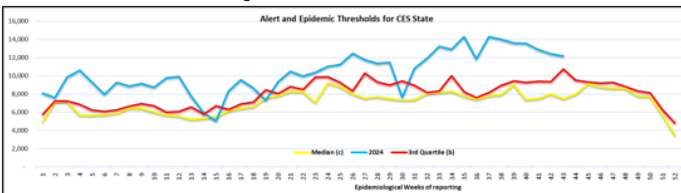
Malaria trend in Upper Nile State 2022 – 2024.



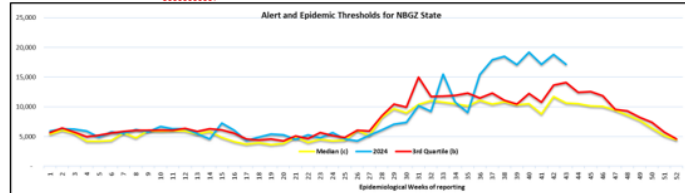
Malaria trend in Jonglei State 2022 – 2024.



Malaria trend in Central Equatoria State 2022 – 2024.



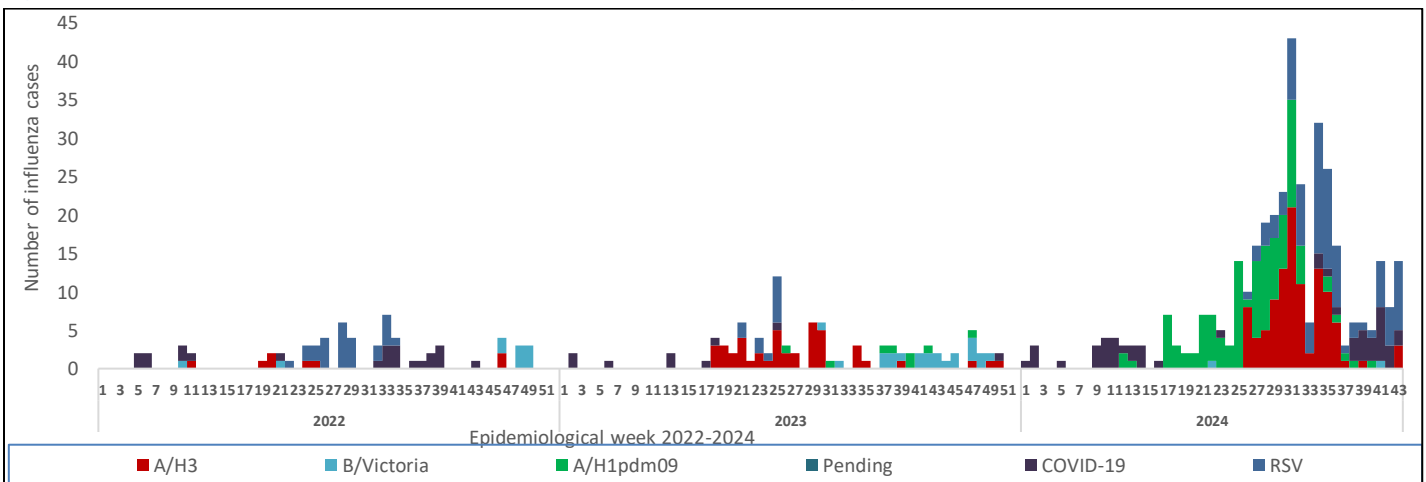
Malaria trend in NBeG State 2022 – 2024.



**Influenza Sentinel surveillance weekly updates.**

Currently, there are six designated Influenza sentinel surveillance sites in the country: Juba Teaching Hospital, Al Sabbah Children’s Hospital, Juba Military Hospital, Rumbek State Hospital, Bor State Hospital, and Nimule Hospital. They are actively collecting epidemiological data and samples from ILI/SARI cases.

Figure 8: Confirmed Influenza, COVID-19 and RSV cases from sentinel sites Epidemiological Week 1 of 2022 to Week 43 of 2024.



During Epidemiological Weeks 1 to 43 in 2024, a total of 2076 ILI/SARI samples have been collected; 1730 tested negative for all pathogens, (50) were positive for COVID-19, (107) for Influenza Type A (H3), (2) for

Influenza Type B (Victoria), (93) for Influenza A/(H1N1)pdm09 and (94) for RSV.

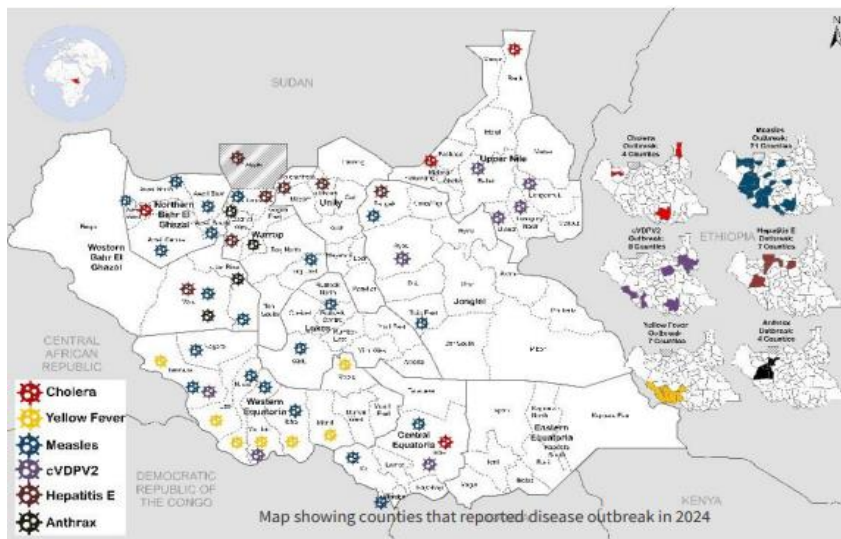
## Confirmed and congoing epidemics in 2024

Table 4: Summary of ongoing and confirmed epidemics, as at 19<sup>th</sup> November 2024

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
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	-	139	3 Laboratory confirmed	Ongoing	Done in 7 counties	Ongoing	Ongoing
Measles	Multiple counties	2022	-	14,507	1,154	ongoing	Completed	ongoing	ongoing
Hepatitis E	Fangak	2023	3	693*	253	ongoing	ongoing	ongoing	ongoing
cVDPV2	Yambio, Juba, Ulang, Nasir, Baltet, Ayod	19/Dec 2023	-	11	20	Not applicable	Completed 2 SIAs and 3 <sup>rd</sup> round Planning is ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	35	5,922	-	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 (NBG)	2022	0	146	3	ongoing	Ongoing in the animal sector	ongoing	ongoing
Hepatitis E	Abyei	June 2024	-	32	3	ongoing	no	yes	yes
Cholera	Renk Malakal Juba Aweil West	October 2024	365	513	30	ongoing	no	yes	yes

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, recently 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 confirmed emergencies since

Figure 9: Map showing confirmed disease outbreaks across the country in 2024.

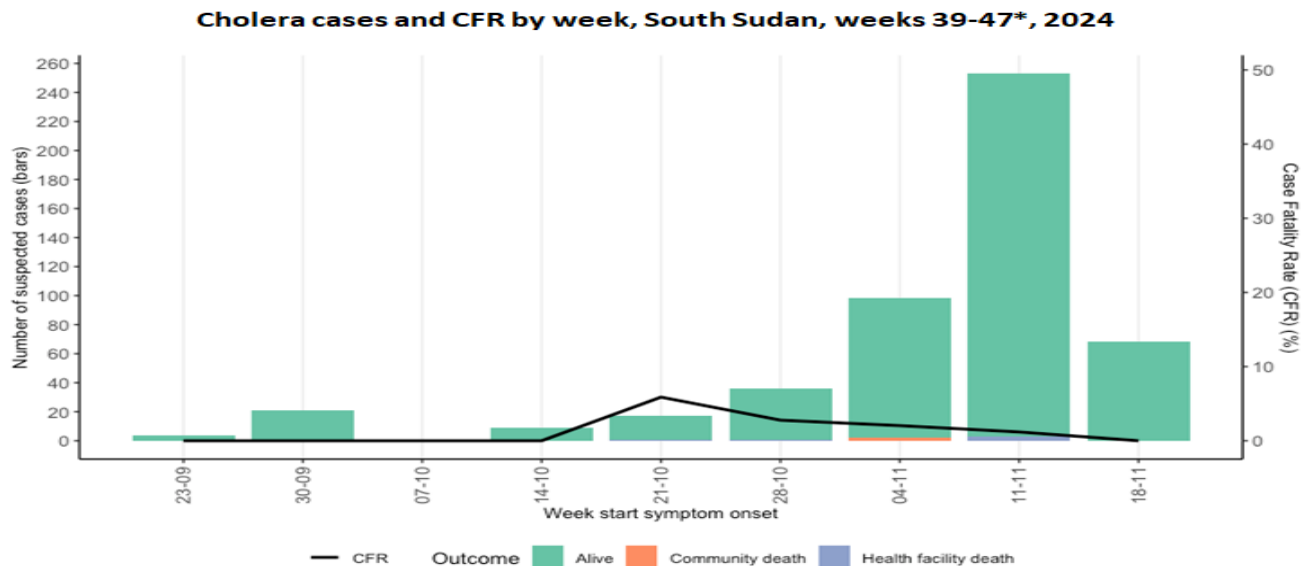


## Response activities for ongoing/suspected outbreaks

### 1. South Sudan Cholera Outbreak Epidemic description as at 19<sup>th</sup> November, 2024

- On 28 September 2024, the WHO team in Renk received a notification of suspected cholera cases in Joda.
- Samples sent to NPHL showed growth in 6 cases by culture for the *vibrio cholerae* serogroup 01 sub-type Ogawa suspected cases
- The Ministry of Health declared an outbreak in Renk on the 28<sup>th</sup> day of October activating IMS for the coordination of the outbreak.
- From 28 Sept to 19 November, there were 513 cases, including 30 confirmed by culture. 7 deaths have been reported: Five (5) in health facilities with CFR of 1.0% and two (2) in the community case fatality rate (CFR of 0.04%).
- The outbreak has been confirmed in 4 of 80 counties and 3 states. Malakal county (n = 306) accounts for 59.6% of the cases, followed by Renk (n=162, 31.6%). The most affected age group with highest case count is 15-44 years, making up 42% of all cases. Females represent 46.4% of all cases.
- The epidemic evolution in the different counties has been varied. The outbreak in Malakal has been explosive with a point-source epidemic curve while Juba and Renk have near flat epidemic curves.

Figure 10 Cholera Cases and CFR by Week in South Sudan, week39-47\*,2024



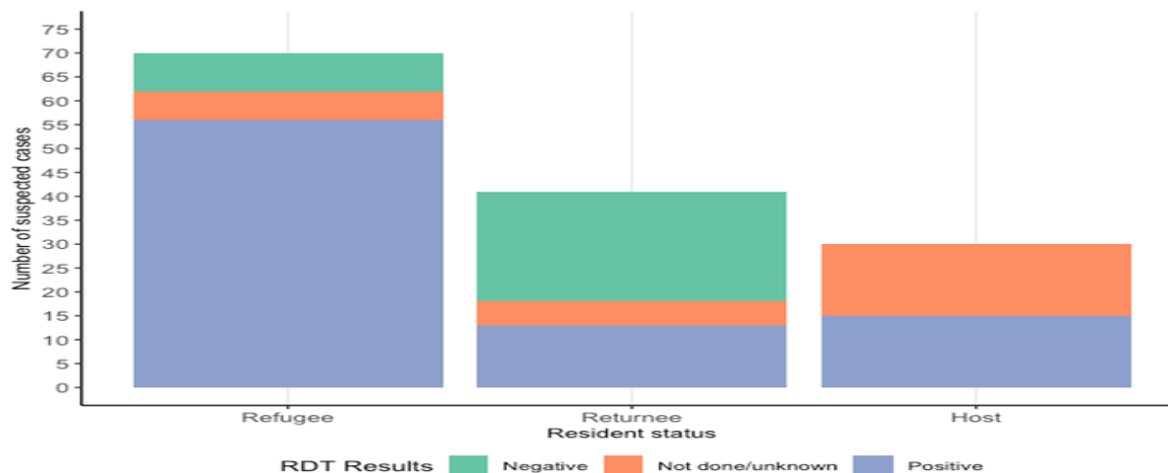
\*Week 47 is not yet complete (data as of November 19)

### RSS Cholera Outbreak Situation Update as of 18th November 2024

- Out of 141 cholera suspected cases with known resident status; 50% of them were refugees, 29% were returnees, while 21% were members of the host community
- Out of 174 RDT positive cases; 56% were refugees, 16% were returnees and 28% were people from the host community



Figure 11: Reported Cholera cases by Resident status and RDT results in Renk as of 19<sup>th</sup> November 2024



## Cholera Outbreak Response Strategy and Key Interventions

3-Pronged strategy:

- 1) Heightened surveillance and effective preventive interventions
  - Early detection and containment of suspected cases
  - Maintain / expand the coordination platforms at national, state and county levels
  - Water quality testing and chlorination at points of use
  - RDT kits pre-positioning in all States
  - Cross-border surveillance and coordination
  - Training and training of health workers, prioritizing the outbreak confirmed geographies
- 2) Immediate clinical care for any suspected cases - within 24 hours of onset of symptoms:
  - Cholera treatment units to be set up at all high-risk areas
  - Urgent improvement in WASH facilities at-risk areas
- 3) Vaccination with OCV
  - ICG approved 151,208 doses for Renk.
  - OCV requests for Malakal and Juba response vaccination submitted to ICG on 18th November
  - Regular Coordination: Ongoing meetings with MOH, WHO, and partners to enhance vaccine rollout and response efforts

## Cholera Outbreak Response Activities conducted

1. Coordination
  - Emergency Operations Center (EOC): Activated with the Incident Management System (IMS) established.
  - Cholera Taskforce: Activated at National, States and at the affected county level to enhance coordination and response
  - Multisectoral Response Plan: Developed with a cost estimate of \$32.6 million/6months.
  - Cross-Border Collaboration: Established mechanisms for coordination with Sudan.
2. Rapid Response Mechanism
  - Deployment of RRT: Renk, Malakal, Aweil, and Juba

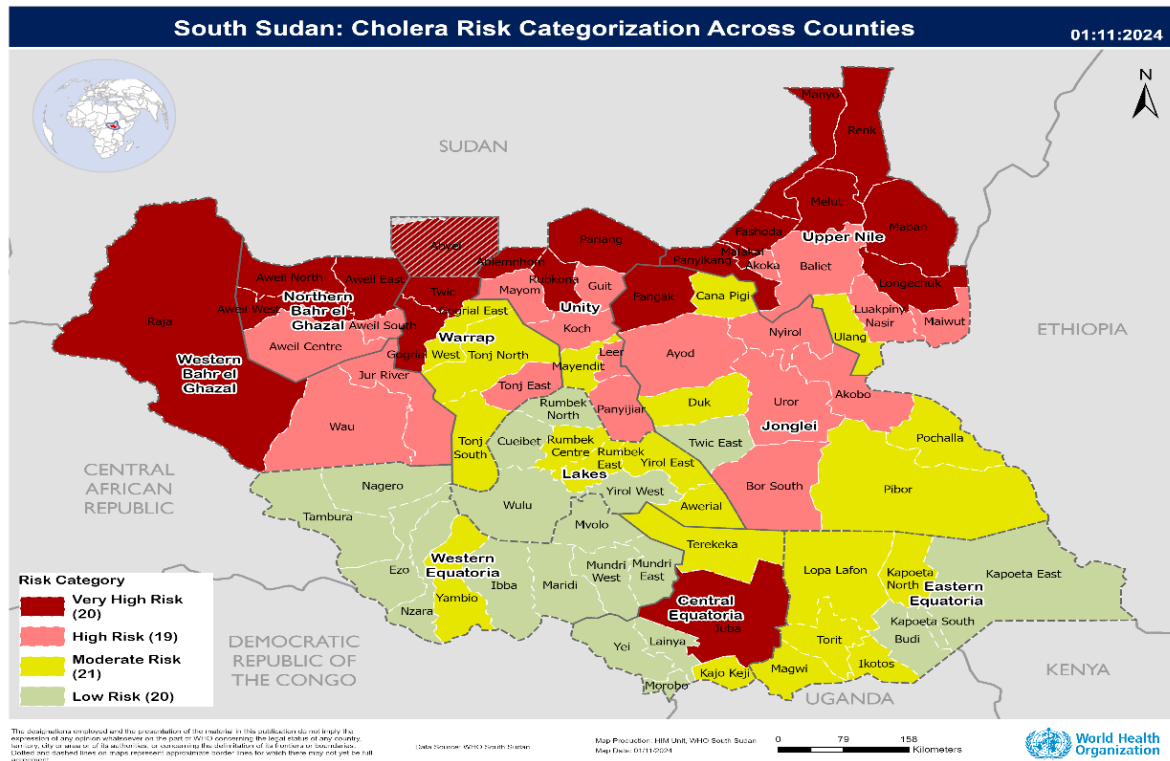
- Logistics Support: 22 metric tons of cholera supplies shipped to Renk, Malakal, Juba and Bentiu with WHO and Logistics Cluster support

### 3. Case Management and IPC/WASH

- Cholera Treatment Units (CTUs/CTCs): 2 units in Renk, 3 in Malakal, and 1 in Juba
- Oral Rehydration Points (ORPs): Established in strategic locations

### Key Challenges to Cholera Outbreak Response

- Uncontrolled outbreak in Sudan, with free and porous border
- Population Displacement caused by Sudan crisis
- Competing priorities (floods, Mpox) leading to inadequate response capacities and resource division.
- Overwhelmed Healthcare Systems
- Limited Access to Clean Water and Sanitation in South Sudan
- Weak Community Engagement and Misinformation



### The cost of inaction in the ongoing cholera outbreak response

#### Mortality and Morbidity

- High fatality in displaced areas: leads to increased deaths among IDP, refugees, and remote populations with limited access to healthcare.
- Increased child mortality adds to the high child mortality rate, as children are highly susceptible to dehydration and fatal complications from the disease.

#### Healthcare Strain

- Overloaded healthcare facilities: Cholera quickly overwhelms the fragile healthcare system, which already struggles with limited facilities and resources.
- Burnout of Healthcare Workers: High demand during outbreaks accelerates exhaustion among healthcare workers, affecting their capacity to respond to other health needs.

## Food Security Impact

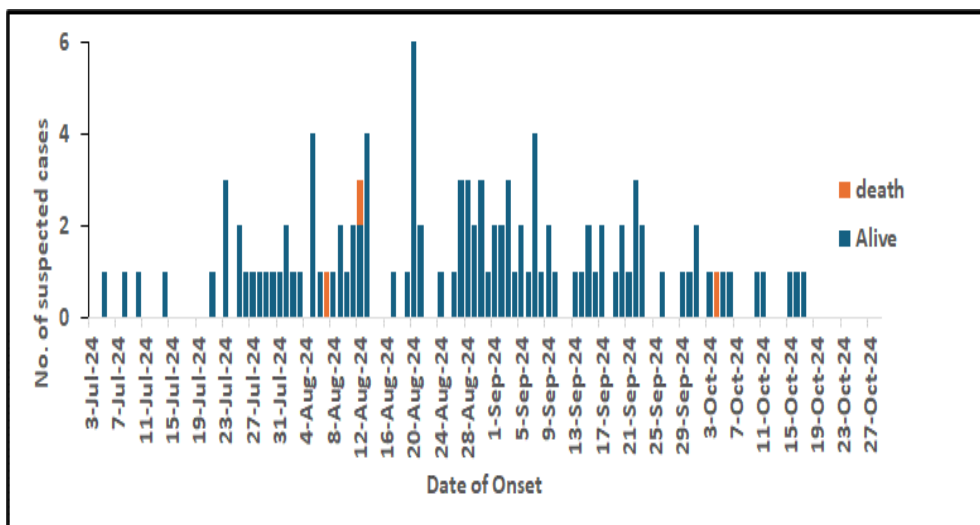
- Disrupted agriculture: Outbreaks interrupt farming activities, which delays planting or harvesting and worsens food insecurity in an already famine-prone region.
- Increased malnutrition: Malnutrition and cholera form a vicious cycle, where malnutrition raises susceptibility to cholera, and cholera worsens nutritional deficiencies.

## 2. Updates on Suspected Monkeypox Outbreak

The latest update on the suspected Mpox cases is as follows:

Figure 12; Epidemic curve for Suspected Mpox Cases Detected/reported in South Sudan as at Epi Week 39 of 2024.

In week 43 of 2024, there were no reported suspected cases and suspected deaths reported due to Mpox. The cumulative number of suspected Mpox cases remained at 112. The suspected cases had been reported across 10 states and three(3) administrative area. Out of these, 93 cases have been verified, and samples collected. One sample was discarded. Alerts have been received from 24 counties. Out of 93 tested samples, all turned negative for Mpox using the PCR. Thirty-three samples were sent for meta-genomic sequencing, and all tested negative for Mpox.)



Majority of the suspected cases are less than 15 years of age and Males accounted for (56%) compared to females (44%). Ongoing sensitization of health care workers in Juba and Nimule are under way.

## 3. 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 confirmation of PV2 Yambio. The total number of laboratory-confirmed cVDPV2 isolates from AFP cases are 12. Cases are reported from Yambio in Western Equatoria, Juba in Central Equatoria, Ayod and old Fangak in Jonglei, Baliet, Luakpiny/Nasir, Longechuk, and Maban in Upper Nile, and Tambura in Western Equatoria state. Four additional viruses were isolated from samples collected from healthy children sampled during outbreak investigation. Another three samples collected from contacts of AFP children also tested positive for the cVDPV2.

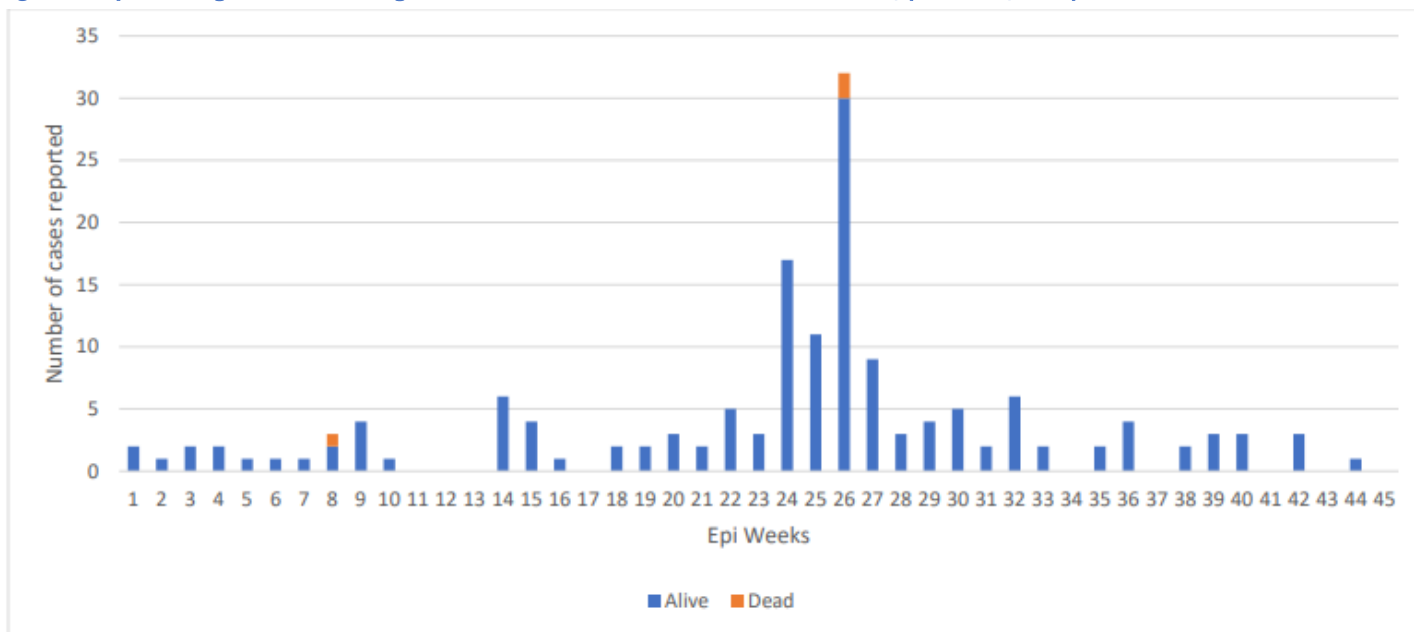
In the last two months, only one cVDPV2 viruses were isolated from environmental samples collected from Lobulet environmental surveillance site in Juba. The latest cVDPV2 virus isolates were from an ES sample collected on 22/10/2024 and confirms sustained breakthrough transmission of circulating Vaccine Derived Polio Virus Type 2 (belong to the RSS-JON-1 emergence group). The third response round started on 12<sup>th</sup> November and the delayed response was due to a) flooding, b) Vaccine availability in the global stockpiles and c) Readiness of the counties as obtained from the Preparedness checklist for all the counties to fill. To date, a tally sheet total of 2,863, 475 children had been vaccinated. This translates into 87% of the targeted 3,307,915 children under 5 years of age.

## 4. Anthrax

In Week 43, three new human anthrax cases with no deaths were reported in WeBG State, with no cases from Warrap State. A cumulative total of 165 human anthrax cases have been reported since the start of the outbreak in 2024, Jur

river in Western Bahar el Ghazal reported 90 cases. with the attack ratio of 36.6/100,000 population, Gogrial West in Warrap with an attack rate of 11.7/100,000 population, Wau in WBeG 2.9 with an attack rate of 2.9/100,000 population and Gogrial East in Warrap state with an attack rate of 0.5 per 100,000 population. Majority of the cases are males accounting for 65.4% of the cases and the most affected age group was age between 15-57 years old. All the cases reported had no history of any vaccination with anthrax vaccine hence showed deficit immunity against the disease. Majority of the cases reported had history of exposure to dead animal carcass or meat obtained from a dead animals. Farmers account for 27.2% of the total cases reported while children account for (27.8%) of the affected group. Most cases were reported from Kuach North Payam in Warrap State, where IPC/WASH services are minimal. In 2024 alone, the veterinary sector reported 36,947 animals to have contracted anthrax and 36,763 deaths due to Anthrax (CFR of 99.5%)

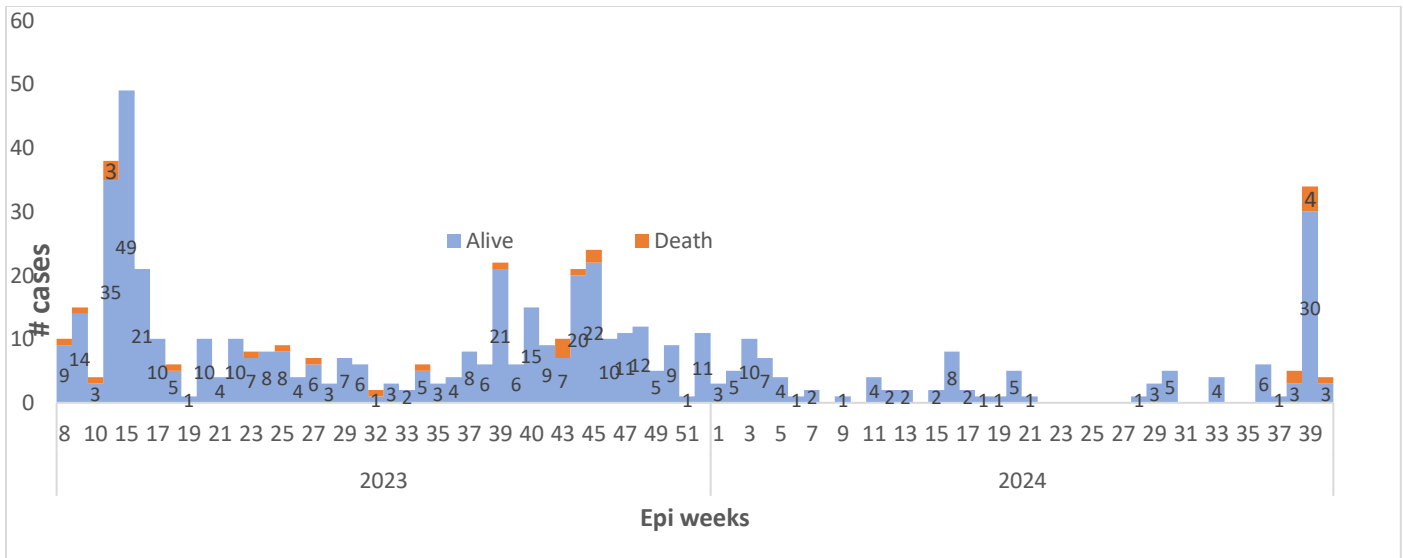
Figure 12: Epidemiological Curve showing Cases and Death of Anthrax cases in South Sudan; (Wk. 1 -44, 2024).



### 5. Hepatitis E outbreak in Wau Western Bahr el Ghazal State

The Ministry of Health declared Hepatitis E virus outbreak in Wau, Western Bahr el Ghazal state in April 2023. There had been a significant decline in the number of HEV cases reported between week5-38 of 2024, however there was a sudden upsurge of cases in week39 of 2024. Since the onset of the outbreak in week8 of 2023 to week40 of 2024, A total of 556 cases, including 26 deaths Have been reported. The reported cases have all been managed in Wau Teaching Hospital with support from MSF and partners. The state has reactivated the task force with all pillars activated for coordination of outbreak response activities. Building on the recommendations from the Intra Action Review conducted in Wau from 17<sup>th</sup> to 18<sup>th</sup> October 2023, emphasis was put on the active case search and community awareness using the Boma Health Initiative (BHI) teams.

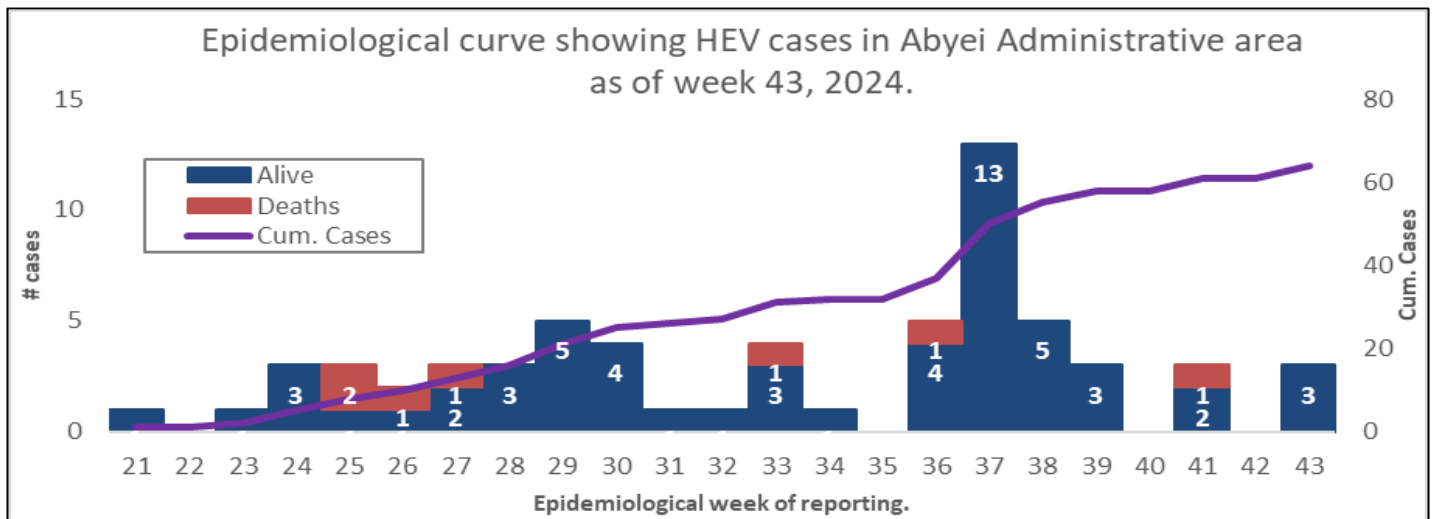
Figure 13: Epidemiological Curve showing Cases and Death of Hepatitis E Outbreak in Wau Western Bahr el Ghazal state, South Sudan; (Wk. 8, 2023 to Week 40, 2024).



### 6. Hepatitis E in Abyei

In week 43 of 2024, there were three newly reported cases of Hepatitis E, with none testing positive using the Rapid Diagnostic Test (RDT) and no fatalities reported. Most cases were among individuals aged 15 years and older, with Wunrok Payam recording the highest number of cases and deaths. Age distribution shows that 73% of the cases were in individuals aged 15 and above. Females accounted for 53% of the confirmed Hepatitis E cases in the Abyei Administrative Area. Currently, Médecins Sans Frontières (MSF) is providing support for Hepatitis E case management. The Ministry of Health in Abyei, in consultation with the national Ministry of Health, declared an outbreak of Hepatitis E in the state.

Figure 13: Epidemiological curve showing HEV cases in Abyei Administrative area as of week 39, 2024.

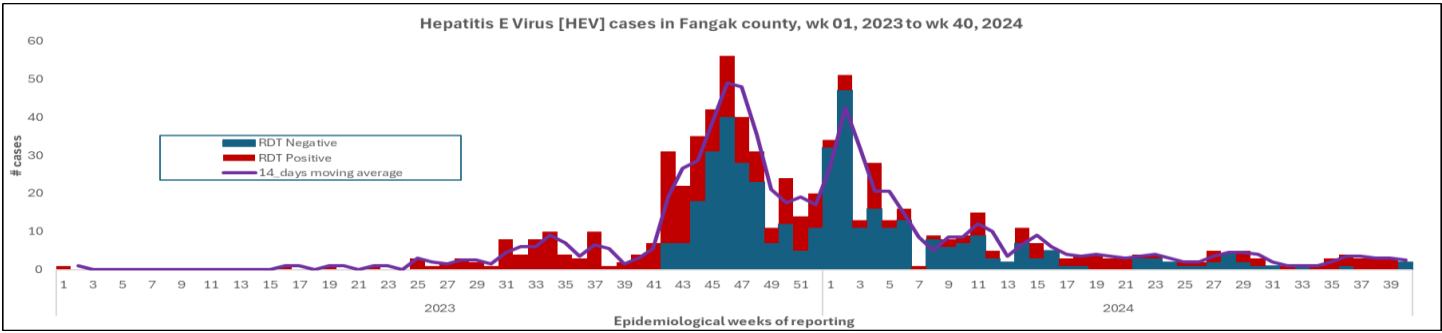


### 7. Hepatitis E Virus in Fangak county Jonglei State

- Since the outbreak began in 2024, a total of 701 cases have been documented, resulting in 28 deaths.
- Most cases occurred among individuals aged 15 years and older (see figure 28 below). Females accounted for 64% of the total cases (446 cases), while males represented 36% (255 cases).
- Regarding location, most cases and deaths were reported in Old Fangak Payam.

Figure 14: Epidemiological curve showing HEV cases in Fangak County area as of week 39, 2024





**1. Hepatitis E outbreak in Bentiu IDP Camp in Unity State.**

- During week 43 of 2024, there were 36 newly reported cases, with 13 testing positives using rapid diagnostic tests (RDT), and there were no fatalities reported.
- Cumulatively, a total of 6,052 cases including 33 deaths case fatality ration of 0.55% have been reported since the outbreak started in 2018
- Among the cases reported a total of 43 cases were recorded in individuals aged 15 to 44 years old.
- Majority of the cases are Males accounted for 52% (3, 172 cases) while females were 48% (2, 880 cases).
- The charts in figure 16, illustrate the distribution of hepatitis E virus (HEV) cases based on the patients' place of residence and age, both within and outside the Bentiu Protection of Civilians (PoC) site.
- Predominantly, the reported Hepatitis E virus cases were identified in individuals living outside the Bentiu Internally Displaced Persons (IDP) Camp, who then sought medical assistance at the healthcare centers located within the camp.

Figure 15: Epicure of HEV in Bentiu IDP camp, Unity State; Epi Week 52 of 2018 to Week 43 of 2024

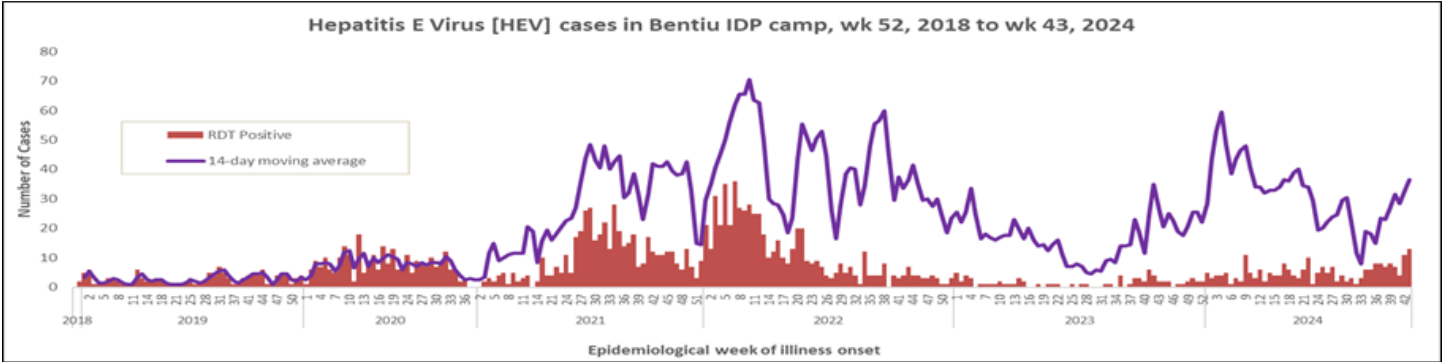
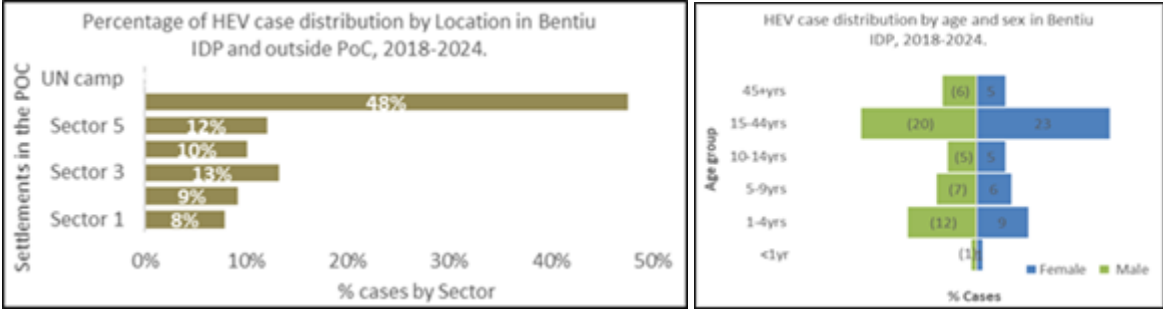


Figure 16: Geography and age distribution of Hepatitis E cases in Bentiu, Unity state of South Sudan



**Other Events**

**Sudan crisis:** As of Week43, at least **866 232** (422,835 Males and 443,397 females) individuals have crossed from 18 different nationalities. Of this number, **75.86% (657127)** are South Sudanese returnees and 23.52% (203,746) are Sudanese refugees. Only 0.35% are from other nationalities, largely Eritrean population. Currently, 21 PoEs are being monitored, with Joda-Renk accounting for 69% 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. There are currently 58 898 individuals in Renk, both in the host community and the collective centers. During week 39, there was an alert of cholera, which was later confirmed and declared by the Ministry of Health. The cholera situation in Sudan is very alarming, necessitating cross-border collaborations by all stakeholders involved in the response in Renk County.

**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** The expectation of extensive flooding to occur in South Sudan in 2024 due to two separate climatic events remains reality with floods affecting 58 health facilities. 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 Nino 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.

The ongoing flooding in the affected areas is a major threat to the well-being of the communities, with more than one million people (including 375,000 displaced) affected across 41 counties. Notably, flooding has submerged 58 health facilities and has been associated with an increased number of snake bites (68 in 6 weeks), drowning (3 in week 42) and an upsurge of malaria morbidity (refer to Figure 7). This is compounded by existing humanitarian needs in the country and ongoing multiple disease outbreaks.

Ongoing coordination with the Ministry of Health supporting response coordination at national and sub-national levels through weekly cluster and inter-cluster coordination meetings. 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>

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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

