Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 33

12-18 August 2024

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

Highlights for the current reporting period

- In week 33 of 2024, the IDSR reporting timeliness was 59%, a decrease from 67% achieved in the previous week, while completeness remained at 87% for the second consecutive week.
- At the EWARN mobile sites, the timeliness and completeness of IDSR performance were 70% and 89% respectively. Meanwhile, private facilities reporting timeliness and completeness in Juba and Wau was at 54% and 90% respectively.
- In week 33, there were 220 alerts, with a higher proportion of verified alerts (78%) compared to 66% in week 32. The most common alerts were for AWD (25%), Malaria (23%), Guinea Worm (19%), ARI (15%), and ABD (12%).
- Malaria continued to be the highest cause of morbidity constituting 46% of total outpatients consultations in week 33 of 2024
- A total of 47 suspected cases of Monkeypox have been reported from 14 counties, with the highest number in Juba (14) and Tambura (14). All samples from 47 suspected Mpox cases all tested negative on PCR assays.
- Other Events including Flooding have affected **472,000 people** across 26 counties with 21 health facilities affected

Surveillance System Performance

The epidemic alert and response system in South Sudan currently relies mainly on immediate alerts notification 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 33 were at 59% and 87%,** respectively, which was an improvement from the

attainments from the previous week

Table 1: *Timeliness and completeness of IDSR reporting by State for week 33 compared to 32, of 2024*

State	Total facilities	Number of facilities reported (Completeness)Wk33	Current Reporting Period				Cumulative
			Timeliness		Completeness		
			Week.33	Week.32	Week.33	Week. 32	Timeliness
Lakes	112	105	80%	79%	94%	94%	86%
NBGZ	89	81	81%	58%	93%	79%	83%
Unity	84	84	94%	93%	100%	100%	94%
WBGZ	81	60	72%	25%	74%	74%	61%
WES	191	185	43%	90%	97%	100%	80%
Jonglei	120	103	70%	82%	86%	85%	81%
Warrap	113	95	31%	25%	83%	82%	70%
EES	112	86	50%	37%	77%	68%	77%
RAA	19	12	21%	53%	63%	53%	40%
CES	122	121	59%	99%	99%	100%	87%
AAA	18	6	39%	78%	35%	78%	71%
U/Nile	143	111	41%	55%	78%	83%	59%
GPAA	15	16	100%	100%	100%	100%	100%
Total	1219	1065	59%	67%	87%	87%	77%

KEY:

≥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, Week 33 of 2024.

Admin area	# Of Reporting Mobile Sites	% of Timeliness in week 33	% Of Completeness in week 33	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 33	% Comple we
IMC	4	0%	0%	Kator	3	0%	1
SSHCO	1	0%	0%	Marial Baai	1	100%	1
SMC	1	0%	0%	Northern Bari	1	100%	1
SCI	2	50%	100%	Rajaf	3	0%	1
HFO	4	75%	100%	Munuki	12	8%	9
WVI	2	100%	100%	Wau South	20	85%	9
CIDO	1	100%	100%	Wau North	12	67%	7
TOTAL	**15**	**46%**	**60%**	Juba	10	50%	1
				Mangala	1	100%	1
				Total	**63**	54%	9

Figure 1: Completeness of IDSR reporting by county for week 33, 2024

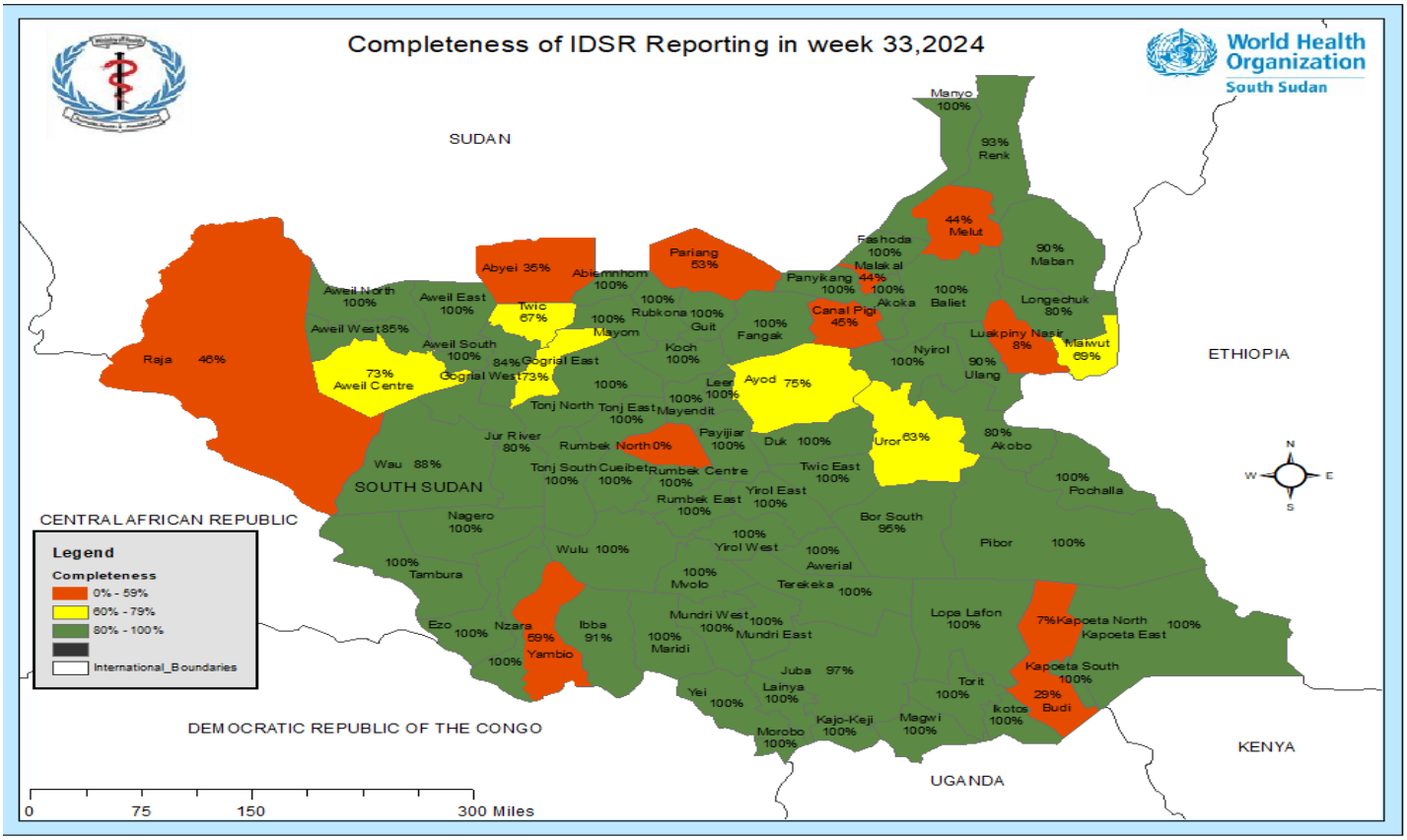
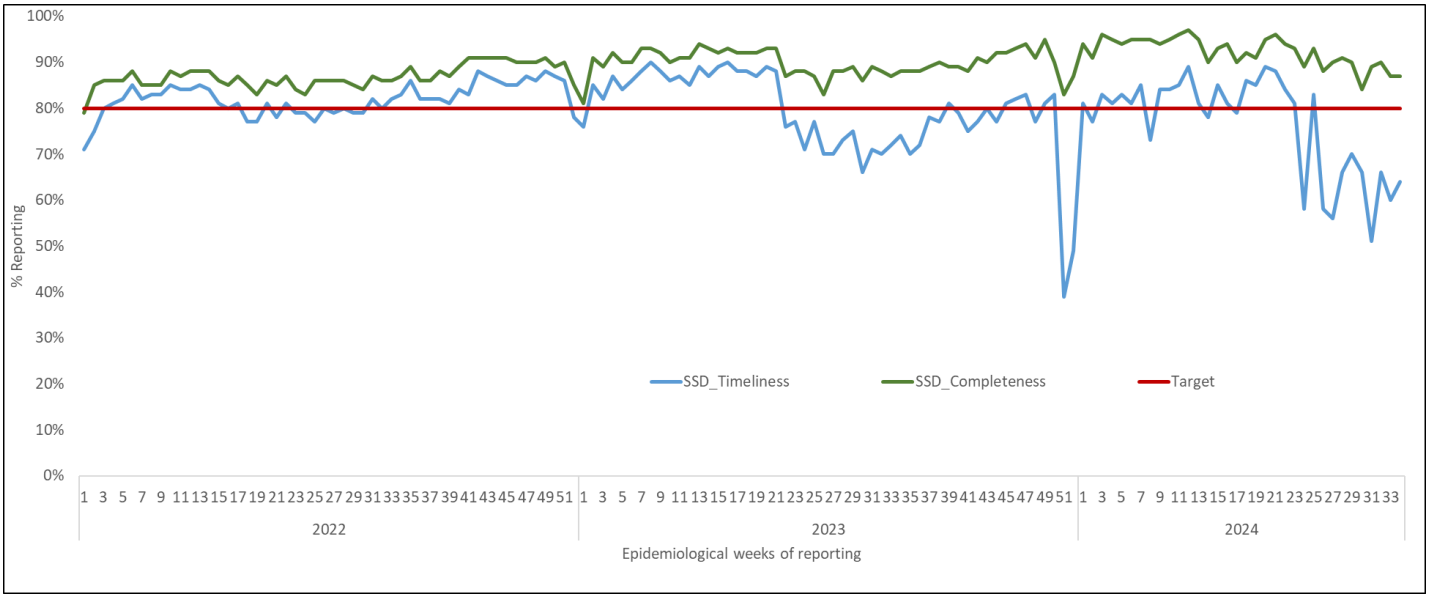


Figure 2: Timeliness and completeness of IDSR reporting in South Sudan; 2022-2024



Epidemic alerts

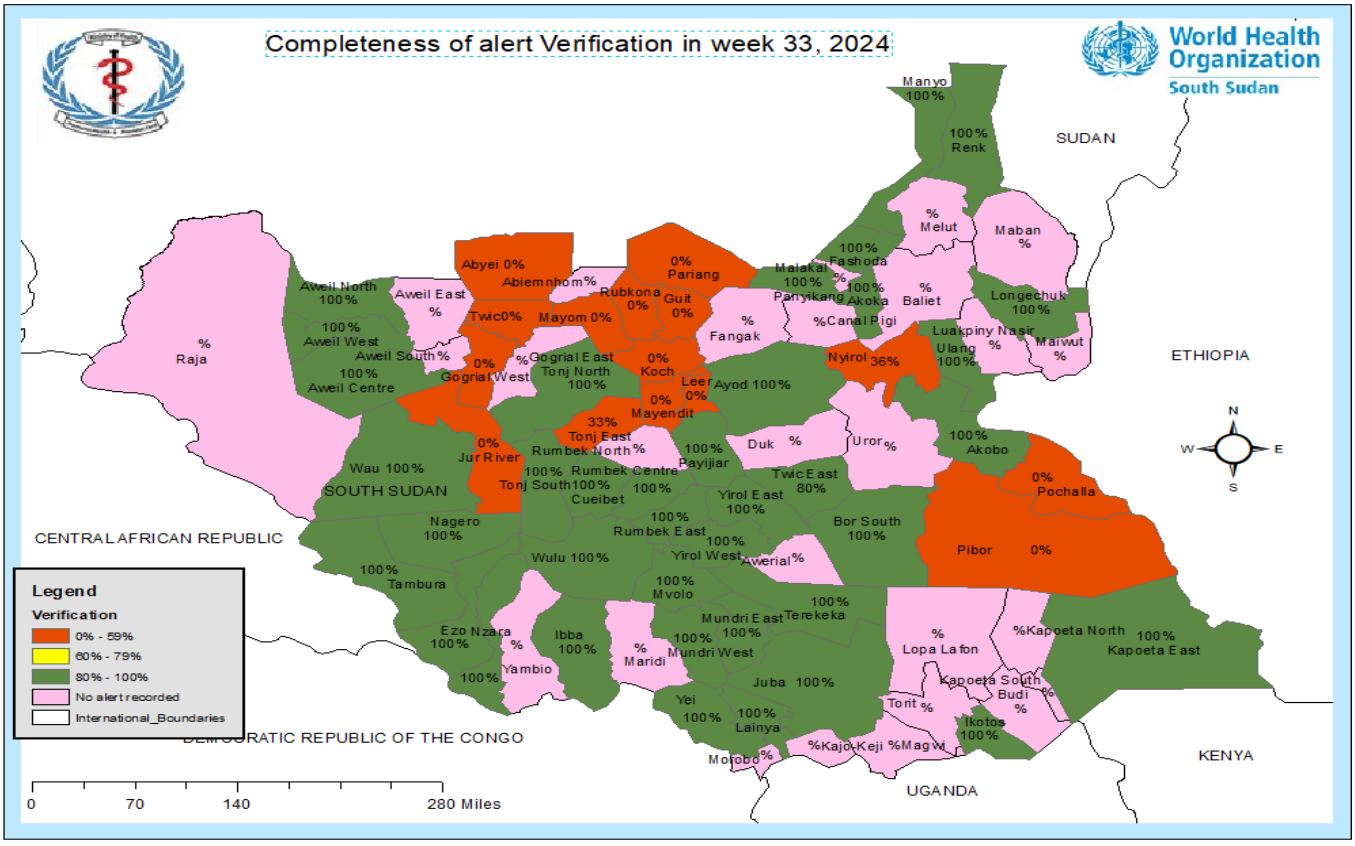
In week 33, a total of 220 alerts have been triggered in the EWARS system, with 78% (172/220) verified in the system which is Higher than 66% reported in the previous week. Majority of the alerts were for AWD (25%), Malaria (23%), Guinea Worm (19%), ARI (15%) and ABD (12%). See Table 3 below for more details

Table 3*: Summary of EWARS alerts triggered in Epidemiological week 33, 2024*

State/Admin	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		Bloody Diarrhoea		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
AAA	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
CES	0	0	1	1	6	6	2	2	0	0	0	0	7	7	1	1	0	0	17	17
EES	0	0	2	2	2	2	3	3	0	0	0	0	0	0	0	0	1	1	8	8
GPAA	0	0	0	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	7	0
Jonglei	0	0	4	4	5	4	3	3	0	0	3	0	3	2	1	1	2	1	21	15
Lakes	0	0	8	8	3	3	1	1	0	0	29	29	4	4	0	0	0	0	45	45
NBGZ	0	0	2	2	2	2	0	0	0	0	0	0	4	4	0	0	0	0	8	8
RAA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Unity	2	0	6	1	3	0	3	0	0	0	0	0	7	0	0	0	0	0	21	1
Upper Nile	0	0	4	3	3	3	2	2	0	0	0	0	5	5	1	1	0	0	15	14
Warrap	0	0	1	0	2	0	2	2	1	1	6	2	0	0	0	0	0	0	12	5
WBGZ	0	0	2	2	6	5	2	2	0	0	4	1	3	2	1	1	0	0	18	13
WES	0	0	2	2	18	18	6	6	0	0	0	0	17	17	3	3	0	0	46	46
Grand Total	2	0	32	25	55	43	27	21	1	1	42	32	50	41	8	7	3	2	220	172

#R= reported #V= verified

Figure2: Completeness of Alerts Verification rates by county of South Sudan for week 33, 2024

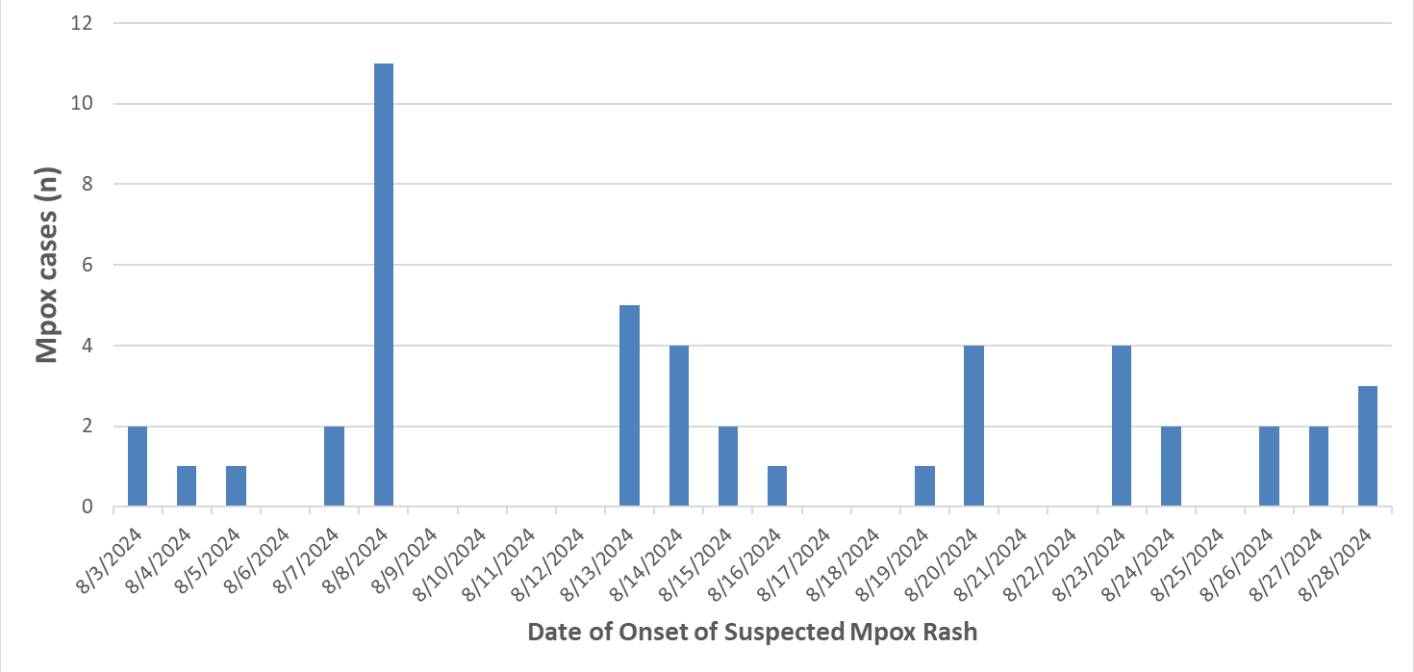


Updates on Monkeypox Readiness

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

- A total of 47 suspected cases have been reported so far, with the highest number in Juba (14) and Tambura (14). Other areas include Nzara (2), Ezo (1), Aweil West (2), Yambio (2), Aweil-Centre (1), Aweil East (1), Aweil North (1), Abyei (1), Warrap (3), Nimule (1), Renk (1), and Yei (3).
- An additional 6 samples were collected as of 30th August 2024, from Aweil (3), Yei (1), Juba (1), and Yambio (1), and the total suspected cases now stand at 53.
- All samples collected have been transported to Juba for testing, and preliminary results indicate that they are negative for Mpox.
- 51 Mpox samples have been tested, with 2 pending results.
- The list of pillar leads, co-leads, and agency representatives for each pillar has been shared.
- Mpox reagents, including 6 Mpox PCR Testing Kits, have been received from EAC, WHO, and CDC.
- No new suspected cases have been reported as of epidemiological week 33, 2024.
- Preparations are underway to conduct a Tabletop Simulation Exercise (TTX) for Mpox.
- The risk assessment team will be deployed pending the receipt of the Ministry of Health's request letter next week.
- An updated Mpox line list has been shared but only includes suspected Mpox cases.

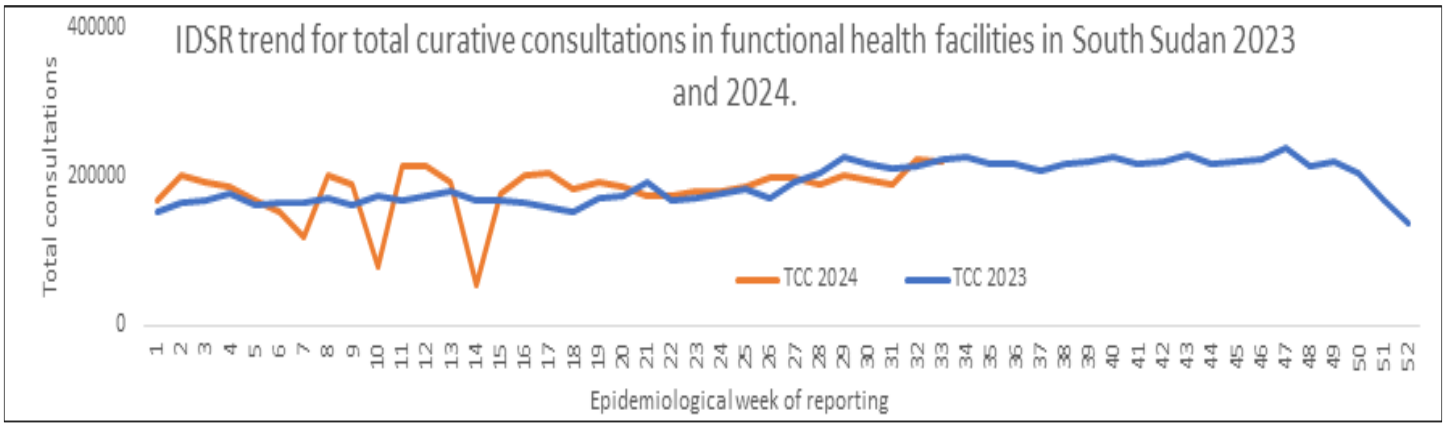
Figure 3; Epidemic curve for Suspected Mpox Cases Detected/reported in South Sudan; as at Epi Week 33 of 2024



Weekly Update on Indicator-Based Surveillance (Week 33)

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.

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



In week 33, a total of **101 262** morbidities were reported from all over South Sudan from across 1207 health facilities. Malaria was the top cause of morbidity accounting for 46% of all cases, followed by Acute respiratory illnesses (18%) and acute watery diarrhea (7%) as seen in Figure 5 below.

Figure 5: **IDSR Proportional Morbidity in week 33 of 2024.**

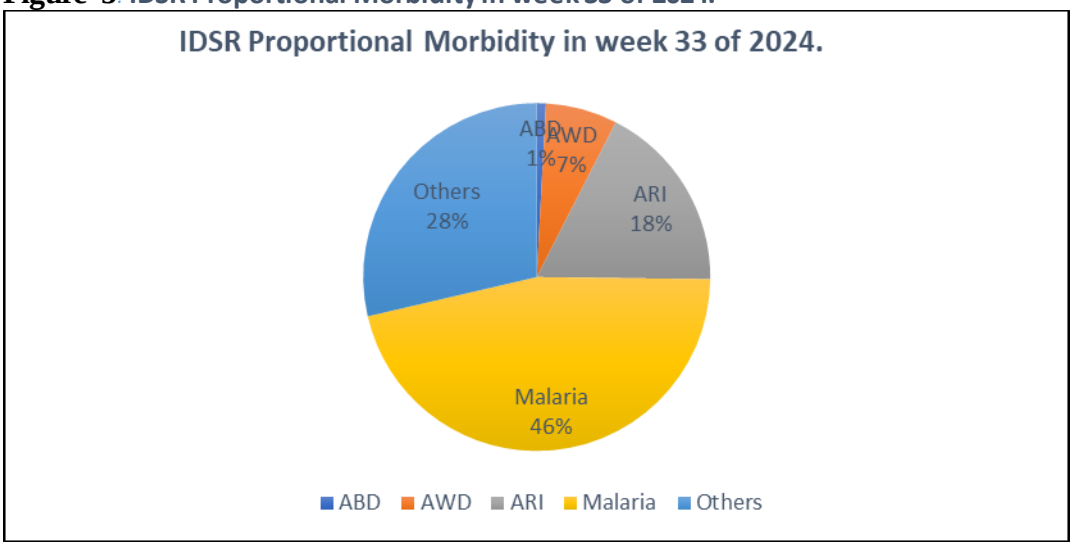
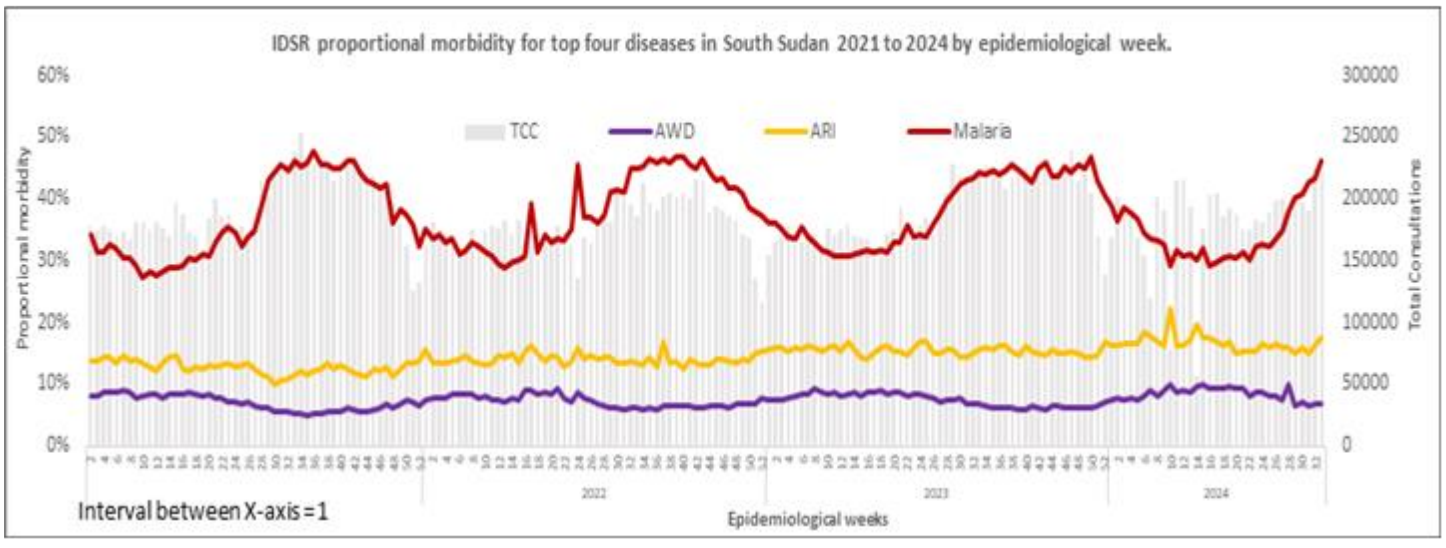


Figure 6: **IDSR proportional morbidity for top three diseases in South Sudan 2021 to 2024 by epidemiological week.**



National Malaria Update

In week 33 of 2024, Malaria emerged as the leading cause of illness, with 101,262 reported cases and 36 suspected fatalities, accounting for 46% of total morbidity. The national Malaria situation has exceeded the epidemic threshold, necessitating continuous monitoring at all levels. During this week, a malaria epidemic was observed in four states and 44 counties. Upon analyzing the data, Upper Nile, Jonglei, Central Equatoria, and Eastern Equatoria states consistently surpassed the specified alert and epidemic thresholds from week 1 to week 33 of 2024.

Figure 7: Malaria trend in Upper Nile State 2022 – 2024.

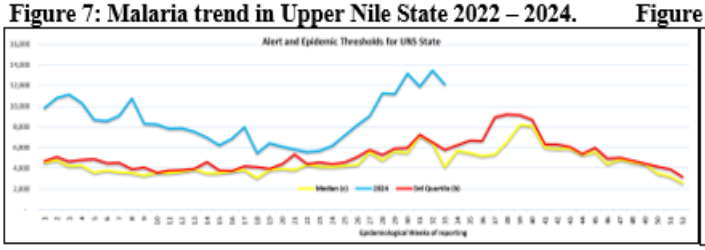


Figure 8: Malaria trend in Jonglei State 2022 – 2024.

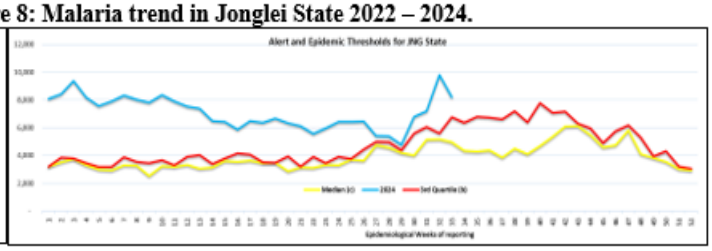


Figure 9: Malaria trend in Central Equatoria State 2022 – 2024.

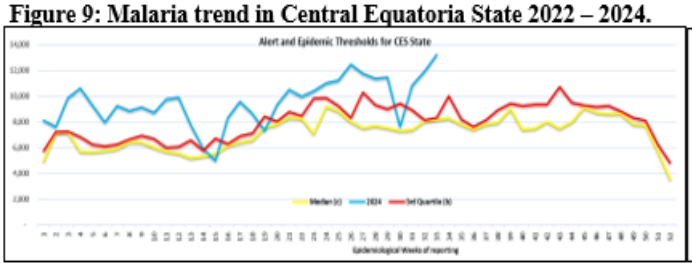
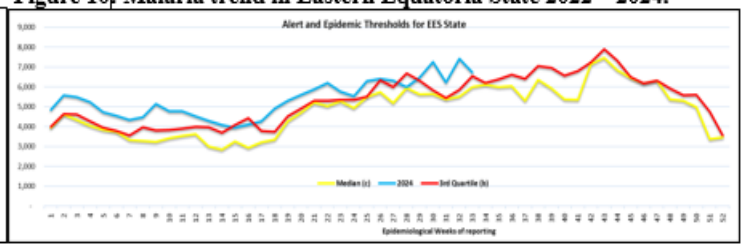


Figure 10: Malaria trend in Eastern Equatoria State 2022 – 2024.

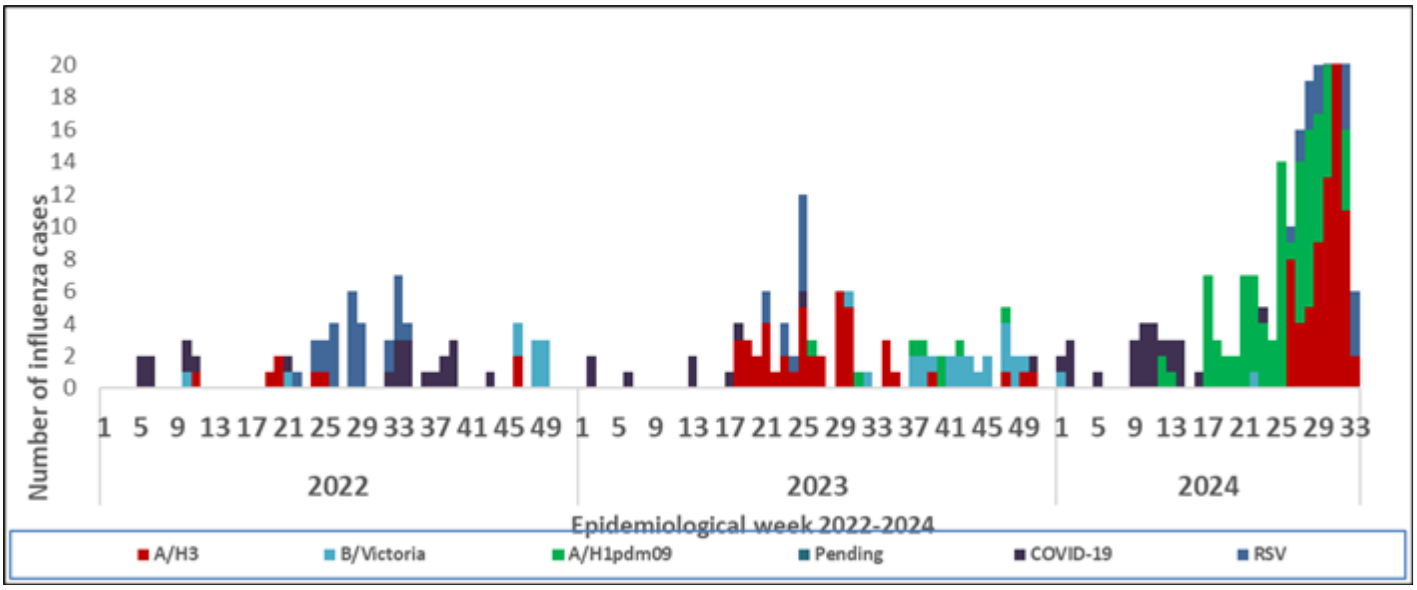


Such a deep dive analysis should be taken to the states and county surveillance officers to dig deep into the analytics to find the counties or even health facilities that reported more than normal case counts when compared to at least 2-3 previous transmission periods

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 10: Confirmed Influenza, COVID-19 and RSV cases from sentinel sites Epidemiological Week 1, 2022 to Week 33, 2024



During Epidemiological Weeks 1 to 33 in 2024, a total of 1265 ILI/SARI samples have been collected; 1028 tested negative for all pathogens, (24) were positive for COVID-19, (73) for Influenza Type A (H3), (2) for Influenza Type B (Victoria), (87) for Influenza A/(H1N1)pdm09 and zero (32) for RSV.

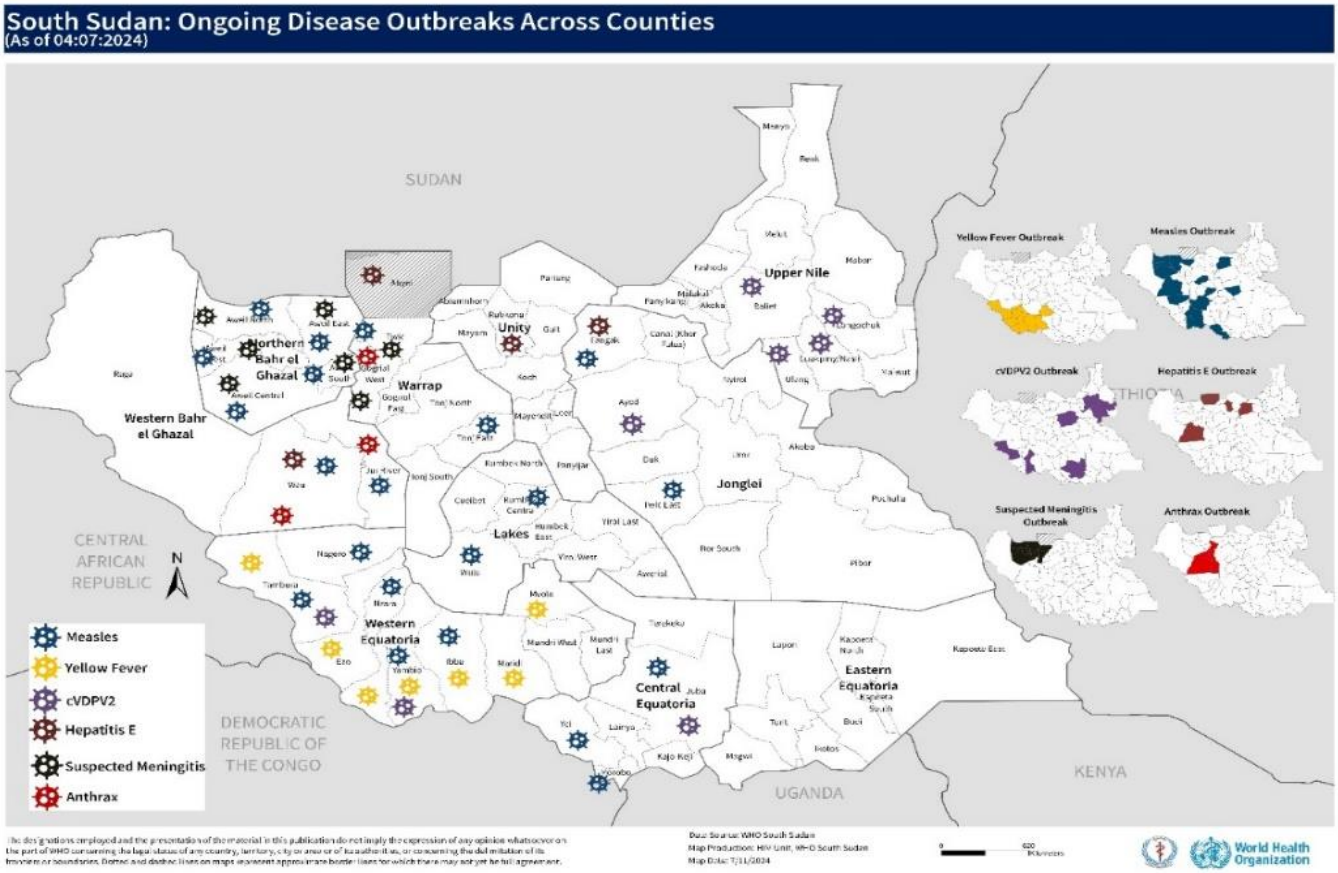
Ongoing epidemics

Table 4: *Summary of ongoing and confirmed epidemics*

Aetiologic agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative casesto date	Response activities				
					Surveillance/Lab	Case management	Vaccination	Health promotion	IPC/WASH
Ongoing outbreaks									
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	-	139	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		655	253	ongoing	ongoing	ongoing	ongoing
cVDPV2	Yambio, Juba, Ulang, Nasir, Baliet, Ayod	19/Dec 2023	-	11	20	Not applicable	Completed 2 SIAs and 3rd round planning is ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	13	5786	-	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	-	127	3	ongoing	Ongoing in animal sector	ongoing	ongoing
Hepatitis E	Abyei	June 2024	4	30	3	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, cholera, hepatitis E virus, and others. Measures have been put in place to help mitigate the spread of these outbreaks. Below is a map of the current ongoing emergencies

Figure 11: *Map showing ongoing disease outbreaks across the country*



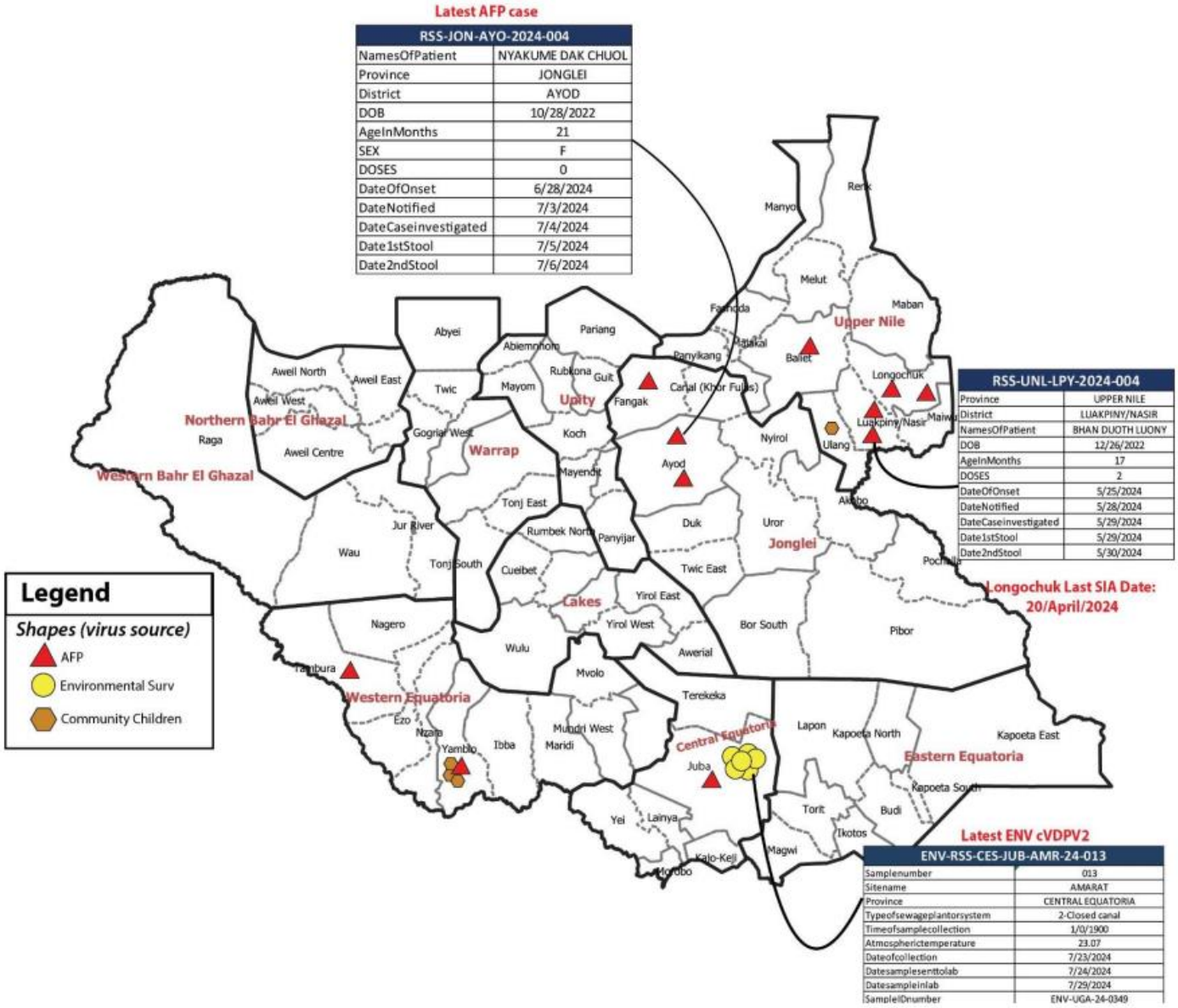
Response activities for ongoing/suspected outbreaks

Poliomyelitis

1. 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 is 11. 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. 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 three cVDPV2 viruses were isolated from environmental samples collected from three environmental sites in Juba. The latest cVDPV2 virus isolates was from an ES sample collected on 23/7/2024 and confirms breakthrough transmission of circulating Vaccine Derived Polio Virus Type 2.

Figure 12: Distribution of cVDPV2 cases isolates (All sources)



2. Anthrax

- Two new human cases of Anthrax were reported in Epi week 33. All two suspected cases were detected and reported by Western Bahr el Ghazal States
- Cumulatively, a total of 142 human cases including three deaths (CFR-2.1%) have been reported across South Sudan.
- Jur River in Western Bar-El Gazal State has the highest recorded 80 cases representing attack rate of 32.6 per 100,000 population, followed by Gogrial West County in Warrap State with an attack rate of 10.3 per 100,000 population.
- The majority of anthrax cases were in the 15-57 age group, accounting for 62 cases (47.9%), followed by the 10 -14 age group with 32 cases (22.5%), the 5-9 age group with 25 cases (17.6%), and the 0-4 age group with 17 cases (12.8%).
- Males accounted for 95 cases (66.9%), while females accounted for 45 cases (31.7%). Overall, the reported cases range in age from 1 to 57 year
- Since 2024, a total of 356 animals have contracted the disease of which 189 have died representing case fatality rate of 53.1% in Animals
- A total of 1,741 animals have been vaccinated across three Boma (Majok-Yienhliet, Malual-lukluk and Waar-Alel/Kuajok).

- The World Health Organization (WHO) has identified 17 health facilities. It has approved the shipment of 11 Interagency Emergency Health Kits (IEHK), containing supplementary medicines and various laboratory materials to the affected state. At the state level, One Health stakeholders are working on community-based waste management initiatives to mitigate the risk of Anthrax transmission.

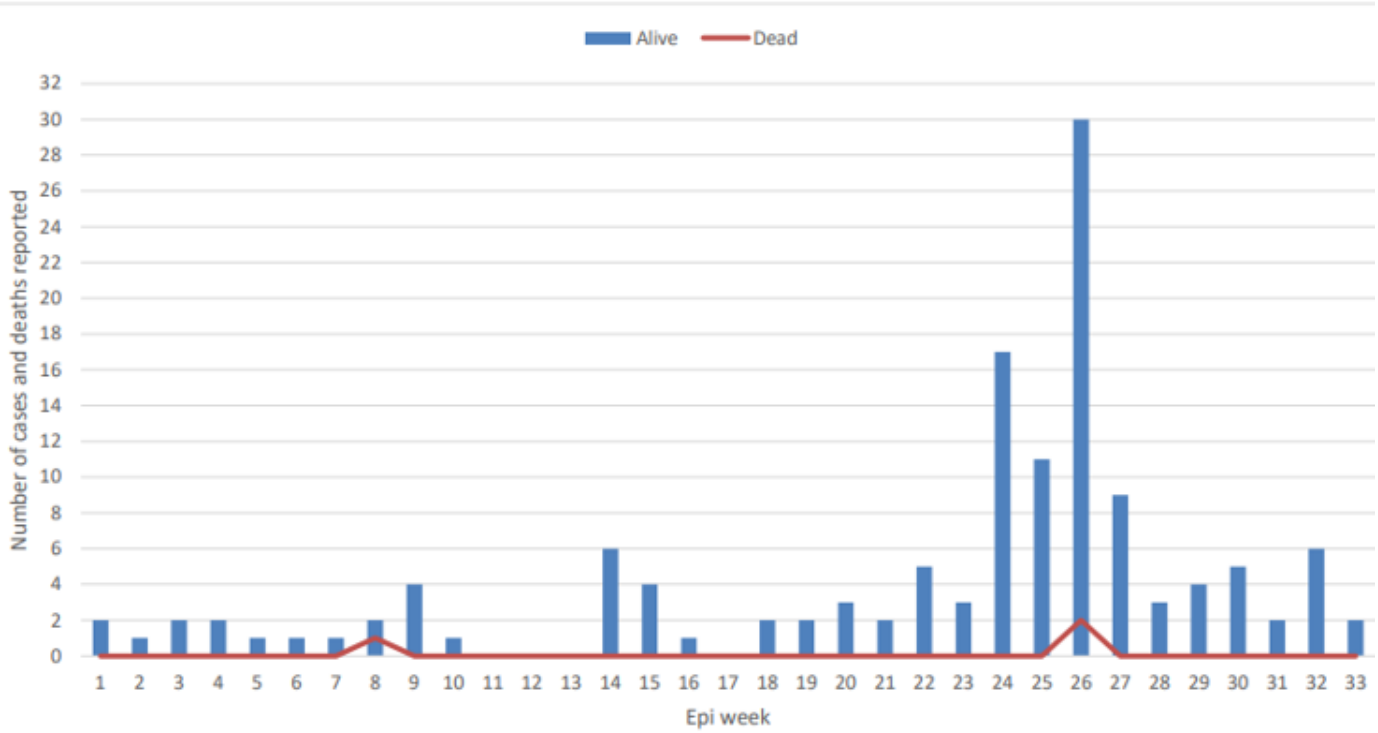


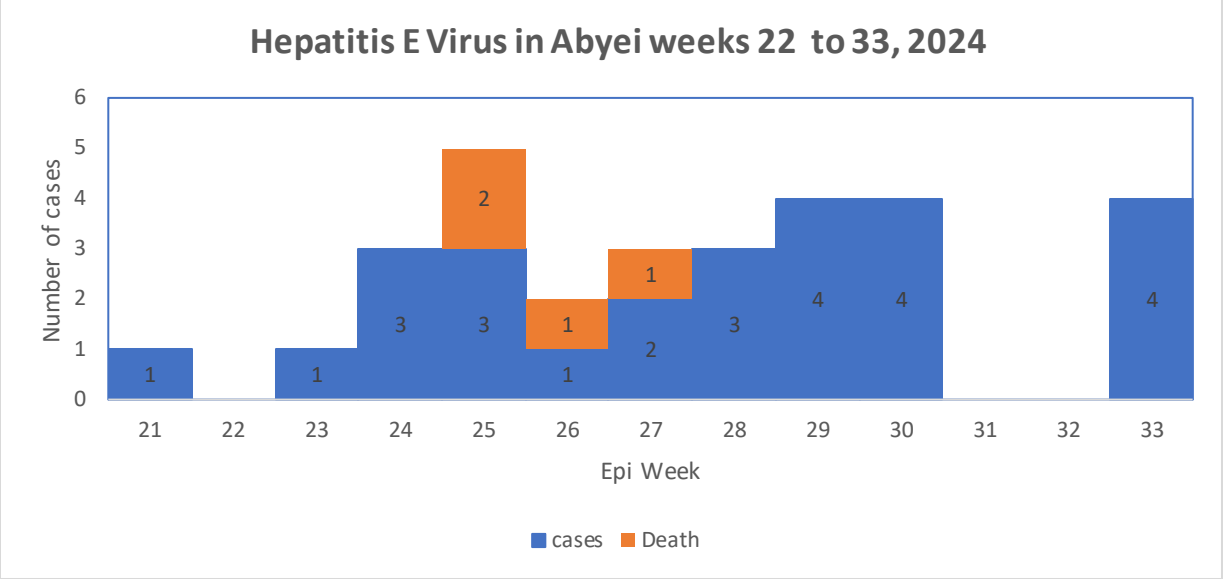
Figure 13: **Epidemiological Curve showing Cases and Death of Anthrax cases in South Sudan; (Wk 1 -33, 2024)**

3. Hepatitis E in Abyei

As of week 33 of 2024 a total of 30 Hepatitis E cases were line listed including (4) four deaths giving case fatality rate of 13.3%. Four new cases were reported in Epid week 33. Three tested positive by PCR out of the 5 samples sent to the National Public Health Laboratory in Juba and almost all samples tested positive by using RDT. Most of the cases came from Ameth agouth payam with Aybei.

Analysis of confirmed Hepatitis E cases by age shows that 93% (28/30) of the cases were 15 years and above. Females accounted for 53% of the detected and confirmed Hepatitis E cased in Abyei Administrative Area. currently MSF is supporting Hepatitis E case management. The Ministry of health in Abyei in consultation and guidance from the Ministry of Health have declared an outbreak of hepatitis E and Plans are underway to conduct complete investigation in the affected location and support risk communication and identify risk factors.

Figure 7: Epidemiological curve showing HEV cases in Abyei Administrative area as of week 33, 2024.



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

- In the week 33, there were 13 newly reported cases, with 3 being RDT positive and one fatality.
- Since the commencement of the outbreak in 2018, a total of 5, 786 cases have been documented, with 30 resulting in mortality.
- Among individuals aged 15 to 44 years, 43% of the reported cases were recorded (figure 19 below).
- Males represented 52% (3, 025 cases) of the total cases, while females accounted for 48% (2,761 cases).
- The data illustrated in the provided chart displays the distribution of HEV cases based on the patie nts' place of residence, both within and outside Bentiu PoC (see figure 18 below).
- Predominantly, the cases were identified in individuals living outside the confines of Bentiu PoC, who subsequently visited the healthcare centers situated within the PoC for medical assistance (Data not shown).

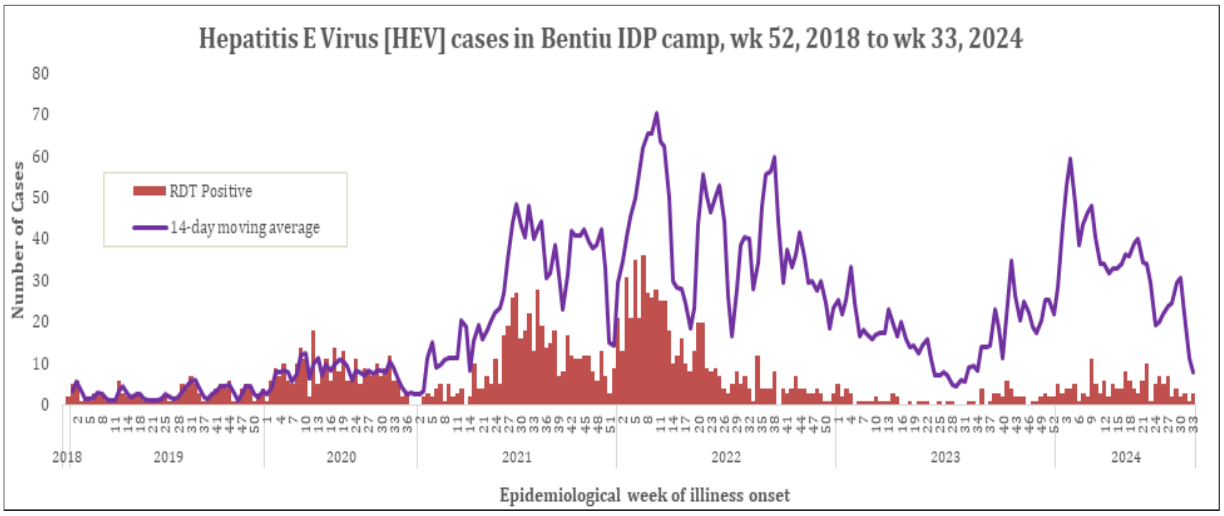


Figure 8: *Epicure of HEV in Bentiu IDP camp, Unity State; Epi Week 52 of 2018 to Week 33 of 2024*

Other Events

Sudan crisis: 774 307 individuals crossed into South Sudan from at least 21 points of entry Cumulatively at least

779 724 individual have crossed into South Sudan from 18 Nationalities 75.94% of the influx were south Sudanese returnees. Currently, 21 PoEs are being monitored, with Joda-Renk accounting for 68% of the reported influx figures. Hostcommunities and healthcare systems are struggling to cope with the increased demand for health and other sservices, morbidity, and mortality among returnees and refugees. During week 29, there was a significant increase in the number of people seeking refuge in Renk Town from the conflict in Sinja, the capital of Sinnar State in Sudan, located east of Renk County.

Between the 15th and 21st of July 2024, a total of 759 792 individuals entered South Sudan. Among these recent arrivals, 76.23% (579212 individuals) are South Sudanese returnees, 23.05% (175, 165 individuals) are Sudanese refugees, and the rest are from five different nationalities. 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 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.

Floods have impacted 472,000 people across 26 counties since the end of August. The affected counties include states that are already grappling with various challenges such as previous floods, ongoing conflict, displacement, food insecurity, and the broader regional impact of the Sudan crisis. A total of 21 health facilities reported flooding by the end of August 2024.

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

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

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Notes

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

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