



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 28
08-14 July 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 28 of 2024, the IDSR reporting timeliness and completeness were 67% and 91% respectively, which is an increase from the 56% and 87% reported in the previous week.
- At the EWARN mobile sites, the Timeliness and Completeness of IDSR performance were both at 100% while the private facilities reporting of Timeliness and Completeness in Juba and Wau stands at 70% and 98% respectively.
- In week 28, 192 alerts were triggered, and the proportion of verified alerts remains as 69% (135/196) in week 27 to 69% (192/133) in week 28. Most of the alerts in week 28 were for Guinea Worm (22%), Malaria (20%), AWD (19%), ABD (14%), ARI (12%) and Measles (6%).
- Malaria constituted 31% of total consultations in week 28 of 2024, maintaining its status as the primary cause of morbidity.
- The Ministry of Health in Abyei declared Hepatitis E outbreak following the confirmation from the National Public Health Laboratory.
- Updates on ongoing outbreaks in multiple counties (Anthrax, cVDPV2 Hepatitis E, Measles and Yellow fever).

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 28 were at 67% and 91%, respectively.

Table 1: Timeliness and completeness of IDSR reporting by State for week 28,2024

State	Total facilities	Number of facilities reported (Completeness)†	Current reporting period				Cumulative since year start (2024 level)	
			Timeliness wk28	Timeliness wk27	Completeness wk28	Completeness wk27	Timeliness	Completeness
Lakes	112	112	65%	76%	100%	100%	88%	99%
NBGZ	89	87	84%	81%	98%	94%	86%	93%
Unity	84	84	92%	100%	100%	100%	95%	100%
WBGZ	81	58	68%	13%	72%	59%	67%	77%
WES	191	191	81%	59%	100%	96%	87%	96%
Jonglei	119	87	61%	65%	73%	73%	84%	88%
Warrap	111	93	44%	33%	84%	70%	77%	89%
EES	107	94	70%	44%	88%	79%	84%	93%
RAA	16	7	19%	13%	44%	44%	49%	67%
CES	122	122	61%	49%	100%	100%	88%	95%
AAA	17	15	53%	82%	88%	82%	71%	80%
Upper Nile	143	130	50%	50%	91%	94%	61%	80%
GPAA	15	14	93%	93%	93%	93%	100%	98%
Total	1207	1094	67%	56%	91%	87%	81%	91%

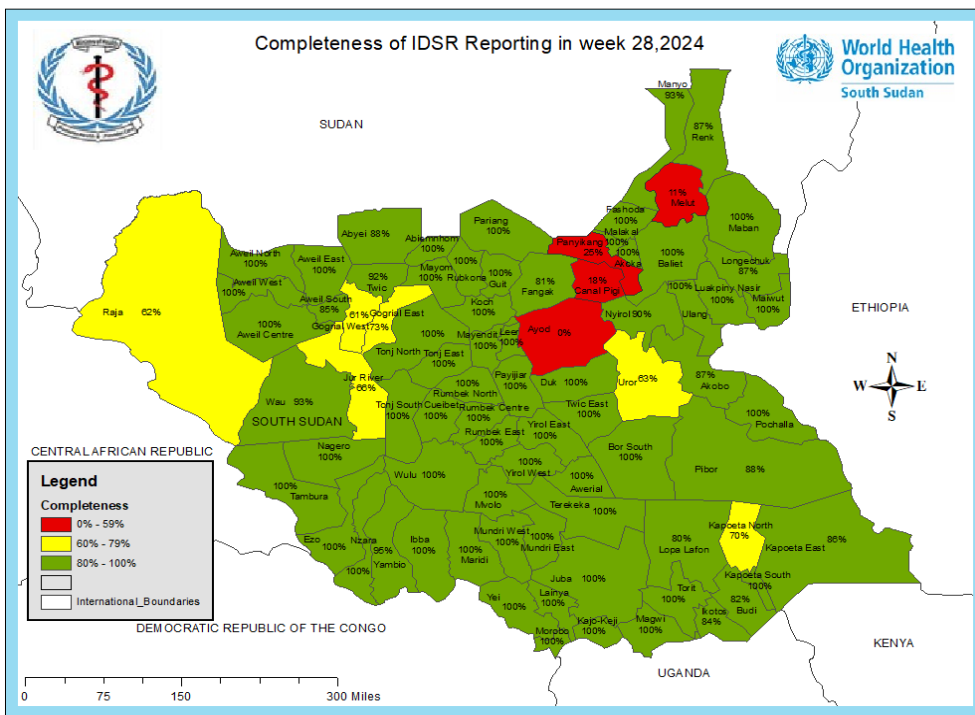
Key to epidemiological Reporting

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

Table 2: Timeliness and completeness of reporting by Payam and Partner of IDSR reporting from NGO-run mobile health facilities and private health facilities in Juba and Wau.

Figure 1: Completeness of IDSR reporting by county for week 28, 2024

Admin area	# Of Reporting Mobile Sites	% of Timeliness in week 28	% Of Completeness in week 28	Payam	# of Reporting Private Health Facilities	% Of Timeliness in week 28	% Of Completeness in week 28
IMC	4	100%	100%	Kator	4	100%	100%
SSHCO	1	100%	100%	Marial Baai	1	100%	100%
SMC	1	100%	100%	Northern Bari	1	0%	100%
SCI	2	100%	100%	Rajaf	3	0%	100%
HFO	3	100%	100%	Muniki	12	8%	100%
WVI	2	100%	100%	Wau South	20	95%	100%
CIDO	1	100%	100%	Wau North	12	75%	92%
TOTAL	14	100%	100%	Juba	10	100%	100%
				TOTAL	63	70%	98%



Epidemic alerts

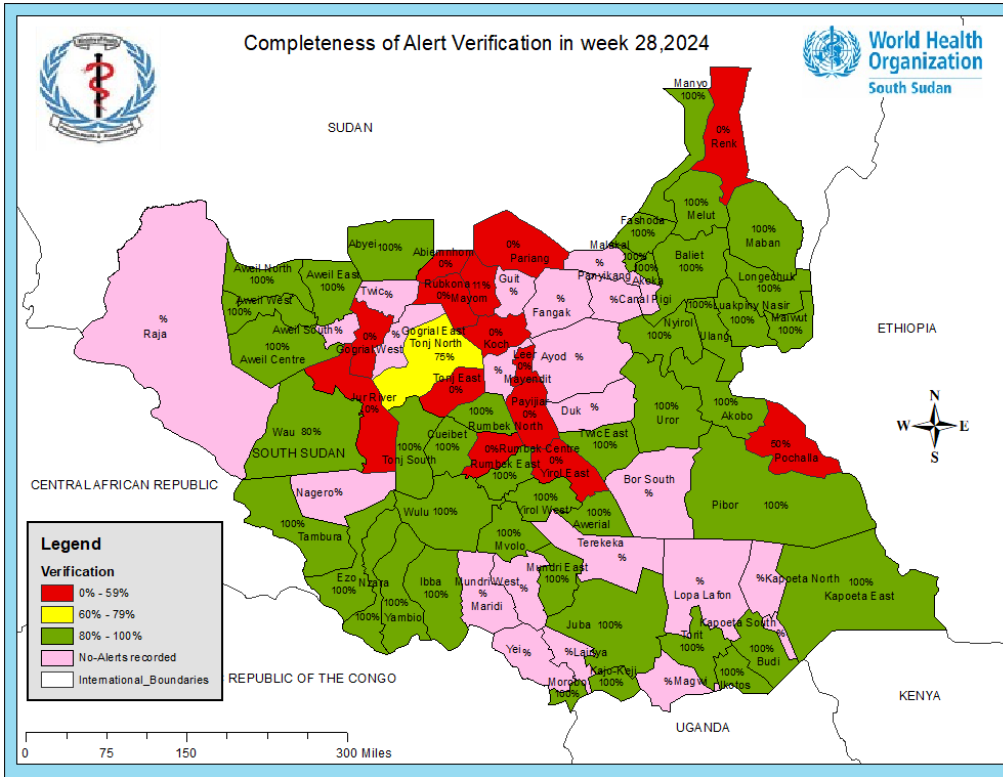
A total of 192 alerts have been triggered in the EWARS system, with 69% (192/133) verified in the system same as the previous week (27). Most of the alerts were for Guinea Worm (22%), Malaria (20%), AWD (19%), ABD (14%), ARI (12%) and Measles (6%). See Table 3 below for more details.

Table 3: Summary alerts triggered week 28, 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		Relapsing Fever		Viral Hemorrhagic 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	# R	# V	# R	# V	
AAA	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
CES	0	0	2	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	7	7
EES	1	1	0	0	2	2	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	
GPAA	0	0	0	0	2	2	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	
Jonglei	0	0	2	2	2	2	0	0	1	1	0	0	0	0	0	0	2	2	3	3	0	0	1	1	0	0	11	11	
Lakes	0	0	2	1	4	3	0	0	0	0	0	0	0	0	0	0	32	13	3	2	0	0	0	0	0	0	41	19	
NBGZ	0	0	5	5	4	4	1	1	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	13	13	
RAA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	
Unity	2	0	8	0	3	0	0	0	4	1	0	0	1	0	0	0	0	0	5	0	0	0	0	0	0	1	0	24	1
Upper Nile	0	0	2	2	4	3	0	0	11	11	1	1	1	1	1	1	0	0	10	10	3	3	0	0	0	0	33	32	
Warrap	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3	3	4	3	2	0	0	0	0	0	0	0	11	6	
WBGZ	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	5	0	1	1	0	0	0	0	0	0	9	4	
WES	0	0	2	2	7	7	0	0	2	2	0	0	0	0	0	0	0	0	11	11	6	6	0	0	0	0	28	28	
Grand Total	3	1	23	14	36	30	1	1	27	22	1	1	2	1	5	4	43	18	38	30	11	10	1	1	1	0	192	133	

#R= reported #V= verified

Figure2: Alerts Verification rates by county of South Sudan for week 28, 2024



Weekly Update on Indicator-Based Surveillance (Week 22)

Indicator-based surveillance is implemented in South Sudan through the EWARS platform according to the IDSR 3rd guidelines, where approximately 59 priority diseases and public health events are regularly monitored and reported from health facilities across the country.

In week 28, a total of **188,307** morbidities reported from all over South Sudan from across 1207 health facilities. Malaria as the top cause of morbidity accounting for 31% of all cases followed by Acute respiratory illnesses and acute watery diarrhea as seen in table 4 below.

Figure 3: Summary of Top causes of morbidity for week 28

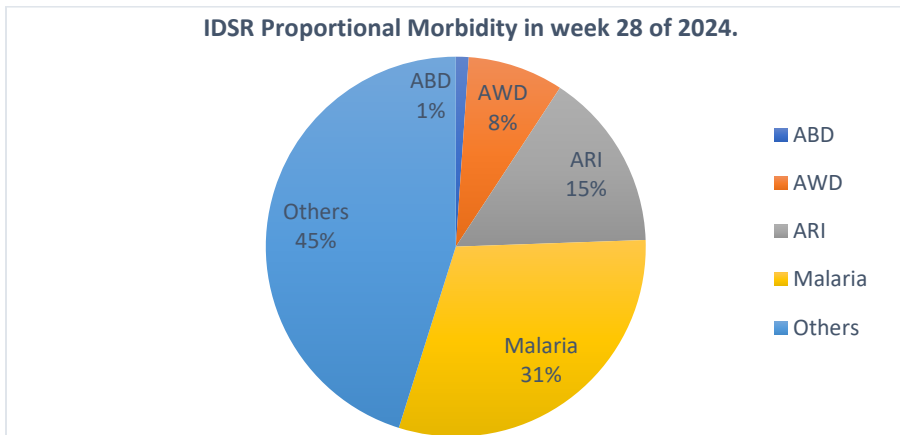
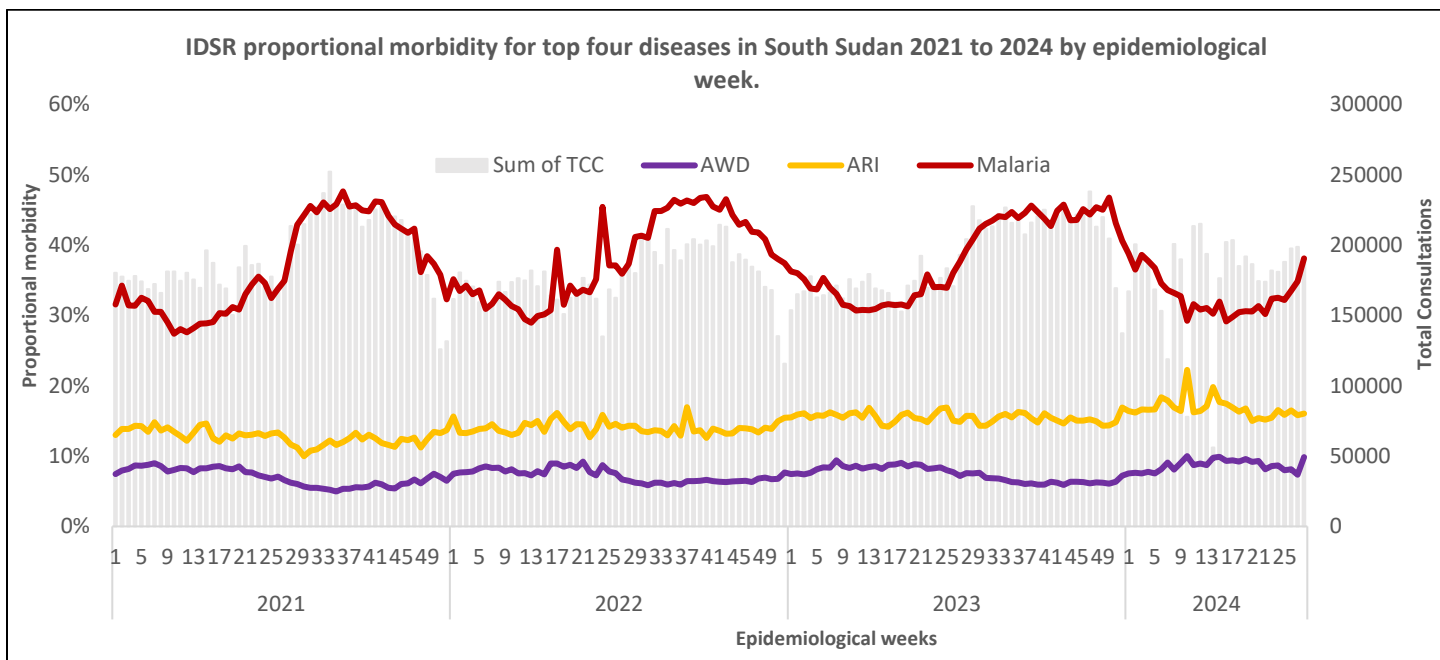


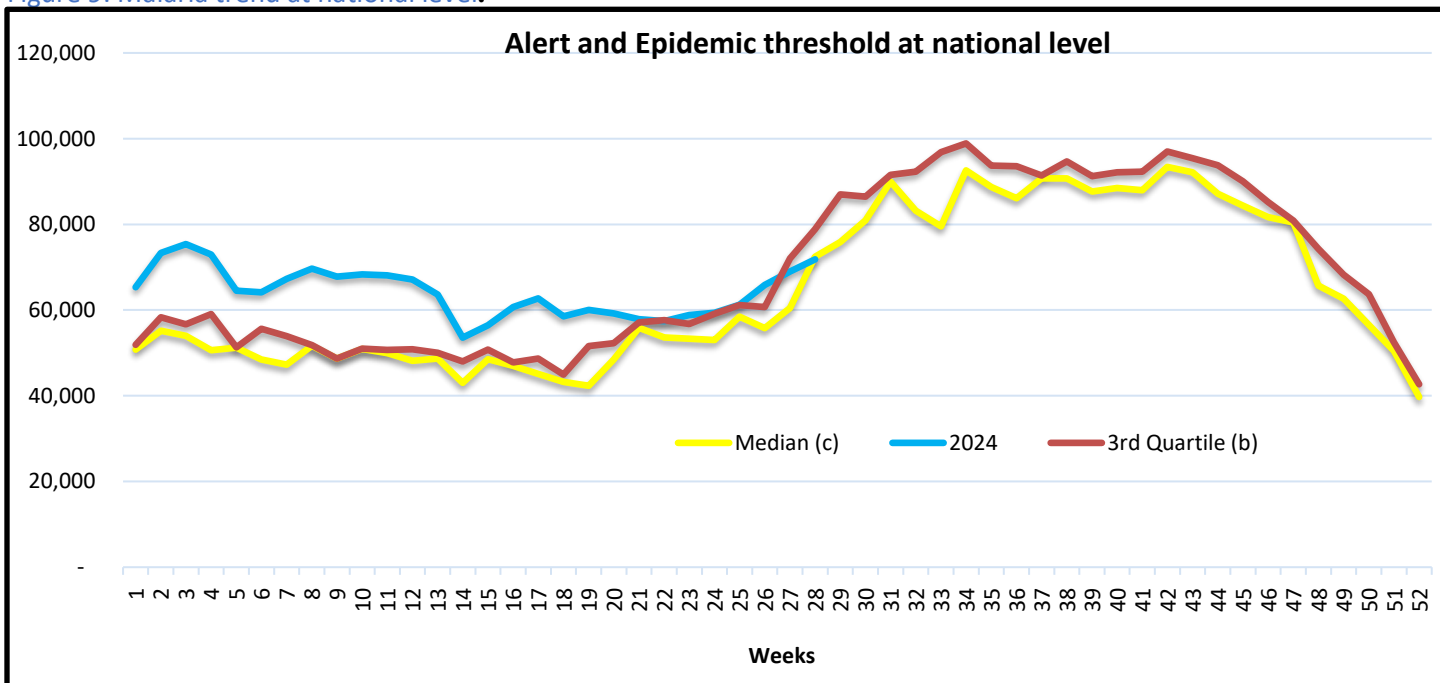
Figure 2: Indicator-Based Surveillance (IBS) Topr causes of morbidity reported through EWARS

Upon analyzing the proportional morbidity rates of the three primary illnesses in South Sudan, Malaria stood out as the predominant health burden within the community. ARI, AWD, follow closely behind in terms of disease prevalence within the population, as shown in the below chart



- In the 28th week of 2024, Malaria surfaced as the primary cause of illness, reporting 71,765 cases and 29 suspected fatalities, representing 31% of the overall morbidity and 61% of the total mortality.
- Nationally in week 28 of 2024, malaria incidence is deemed to be in normal range; however, continuous monitoring is crucial across all levels. It is worth noting that a high incidence of malaria was documented in three states and 27 counties during the specified week, as shown below

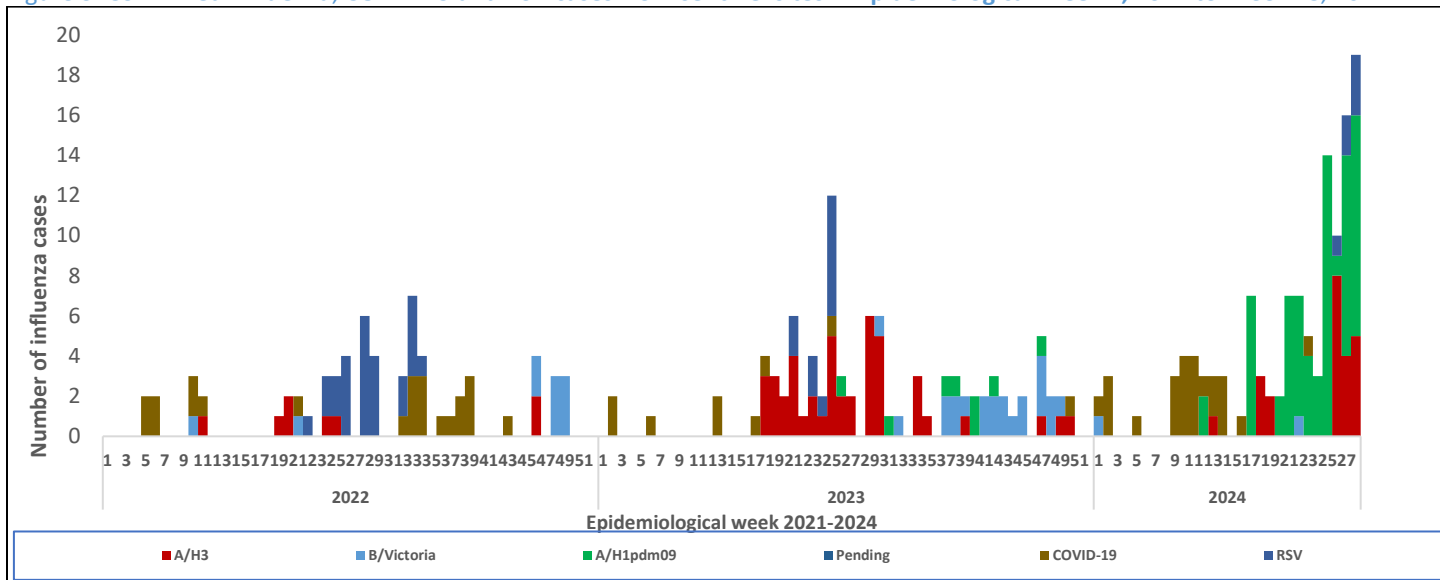
Figure 9: Malaria trend at national level.



Influenza update

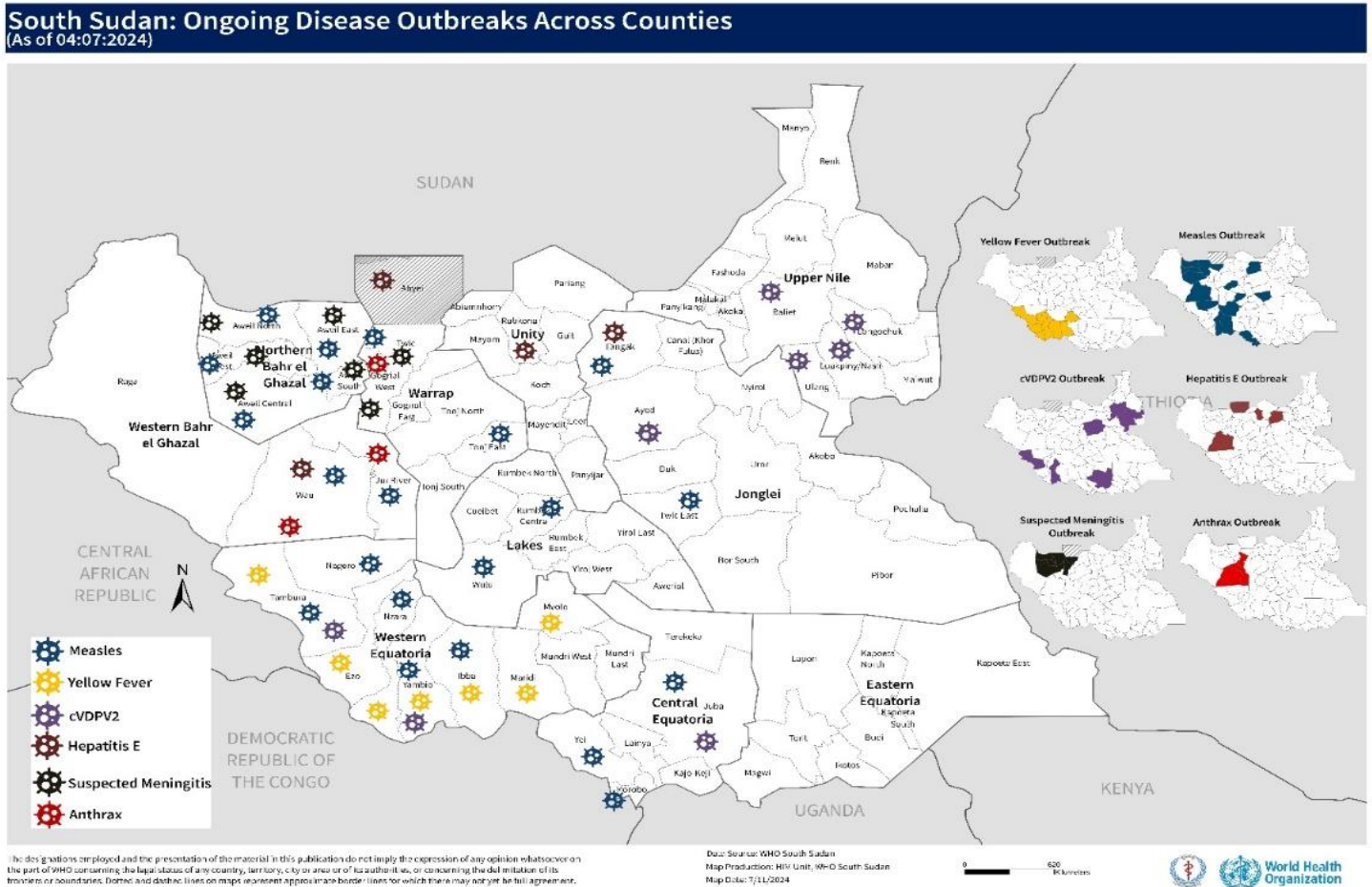
Currently, four (4) designated Influenza sentinel surveillance sites in the country, three (3) in Juba (Juba Teaching Hospital, Al Sabbah Children’s Hospital, Juba Military Hospital) and one (1) in Rumbek State Hospital in Lakes State are collecting epidemiological data and samples from ILI/SARI cases.

Figure 3: Confirmed Influenza, COVID-19 and RSV cases from sentinel sites in Epidemiological Week 1, 2021 to Week 28, 2024



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 5: Map showing ongoing disease outbreaks across the country

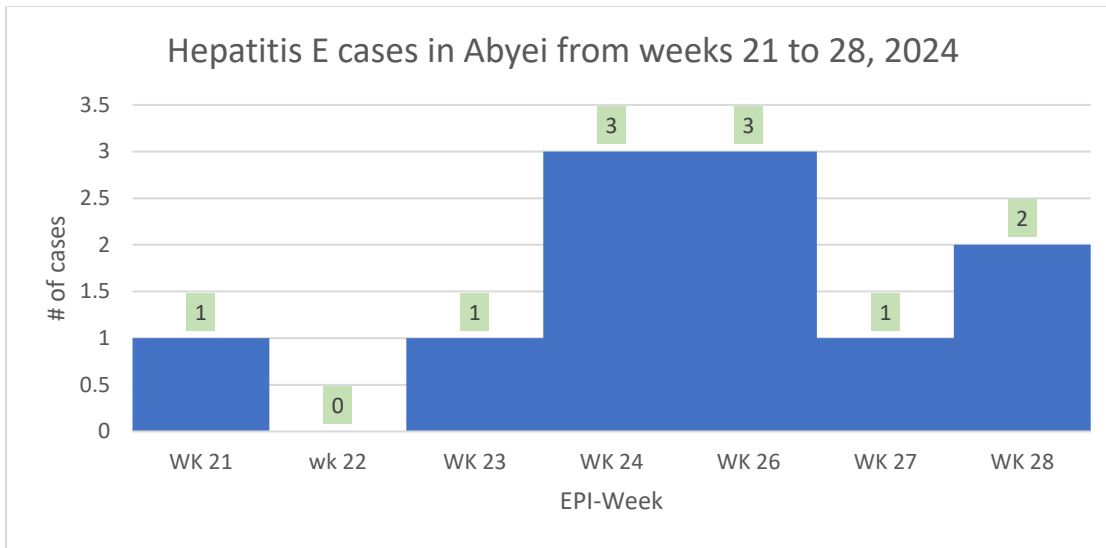


Response activities for ongoing/suspected outbreaks

1. Hepatitis E in Abyei

As of the beginning of week 28 of 2024 a total of 13 suspected Hepatitis E cases were line listed including (4) four deaths. Three tested positive by PCR out of the 5 samples sent to the National Public Health Laboratory in Juba. Most of the cases came from different villages in Ameth agouth payam with Aybei.

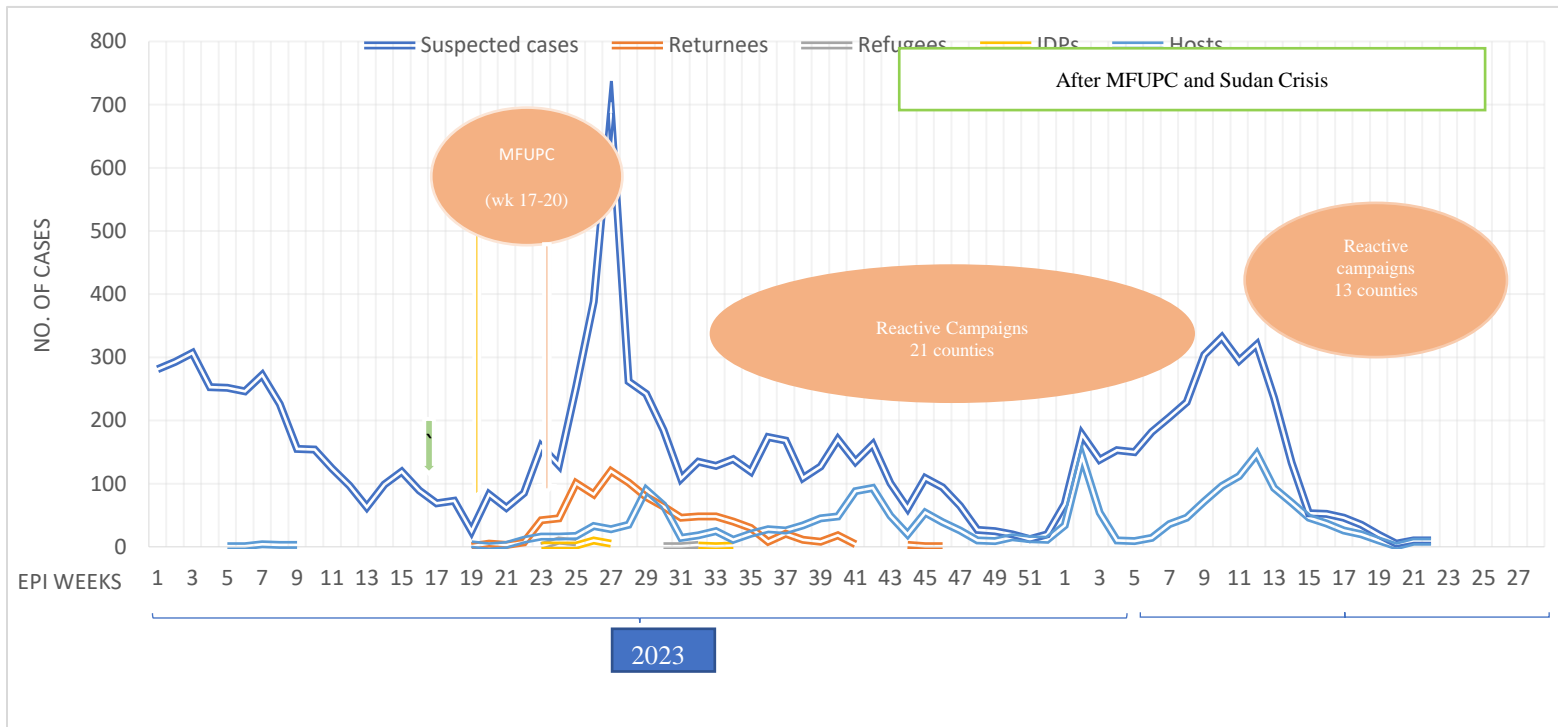
Majority of the cases were 15 years and above except one case is 12 years of age. Females accounted 76% (9/13) and males 34% (4/13) currently Msf is currently supporting with case management at the hospital in Agok. The Ministry of health in Abyei in consultation and guidance from the Ministry of Health 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.



2. Measles

In 2024, there was a significant rise in suspected measles cases, reaching a peak in week 10 before gradually decreasing. This suggests that efforts to control the spread of measles have been effective. Currently, we have received 8 alerts related to measles. Root Cause Analysis updates for measles are ongoing in 3 counties in WES (Ibba, Yambio, and Nzara) and 3 counties in NBS. Teams will travel to Fangak and Lakes. There are also plans to gather data from Juba, Terekeka, and Renk counties.

Figure 6: Distribution of measles cases 2023 to 2024



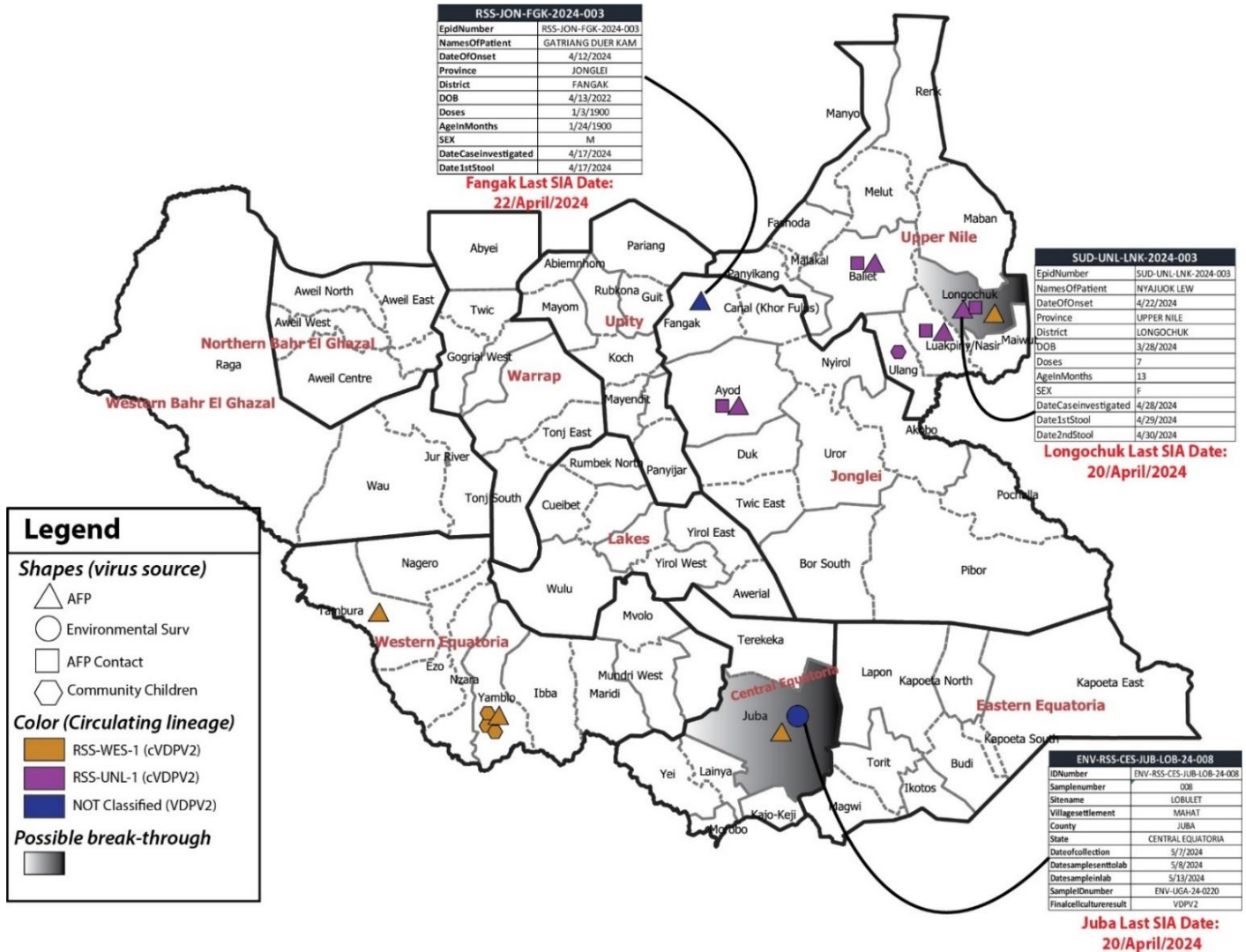
Poliomyelitis

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

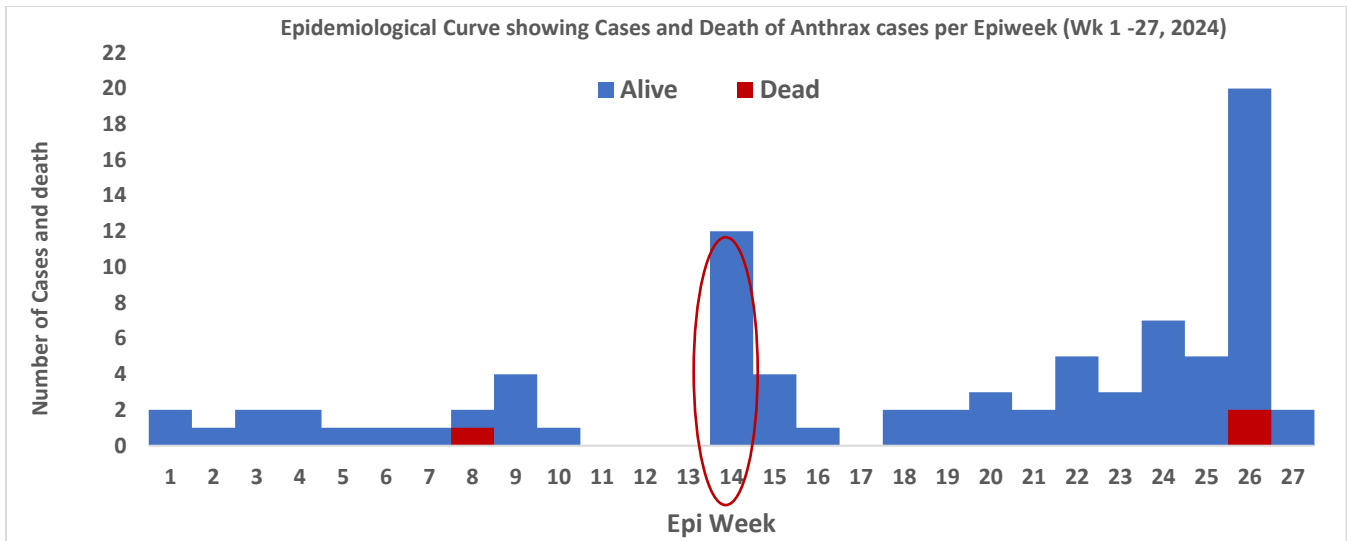
of PV2 Yambio. The total number of laboratory-confirmed cVDPV2 isolates from AFP cases is 9. Cases are reported from Yambio in Western Equatoria, Juba in Central Equatoria, Ayod in Jonglei, Baliet, Luakpiny/Nasir, and Longechuk in Upper Nile, and Tambura in Western Equatoria state. Four additional viruses were isolated from samples collected from healthy children and contacts during outbreak investigation. Four viruses were isolated from environmental samples collected from one site in Juba. The latest cVDPV2 virus isolates from Juba and Longechuk were collected after completion of the 2nd round of nOPV2 SIAs and therefore indicate a high risk of possible breakthrough transmission.

Figure 8: Distribution of cVDPV2 cases isolates (All sources)



4. Anthrax

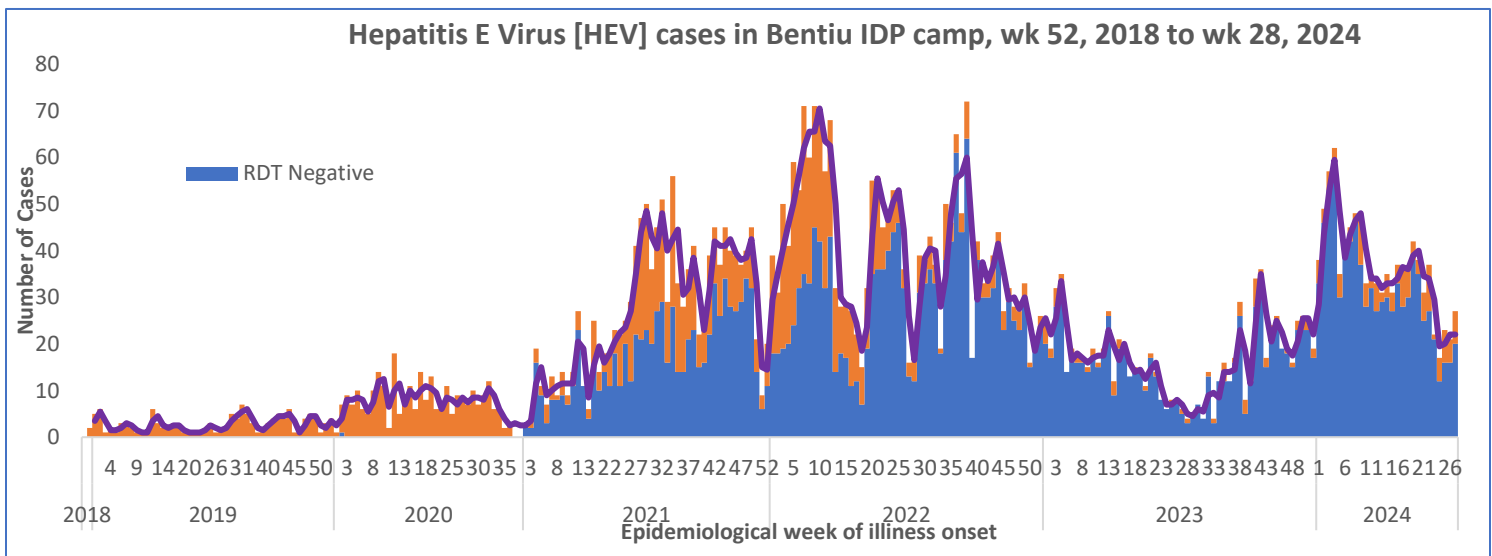
In 2024, a total of 111 human cases, resulting in three deaths (with a case fatality rate of 2.7%), have been reported in four counties across two states. Most reported cases (71, 64.0%) have occurred in the Jur River area of Western Bar El Ghazal State, with 38 cases (34.3%) reported from Gogrial West in Warrap State. Additionally, one case (0.9%) has been reported from Wau in Western Bar El Ghazal State, and another case (0.9%) from Gogrial East in Warrap State. No new data has been received from the FAO regarding the number of animal infections and deaths during week 28, 2024. 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.



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

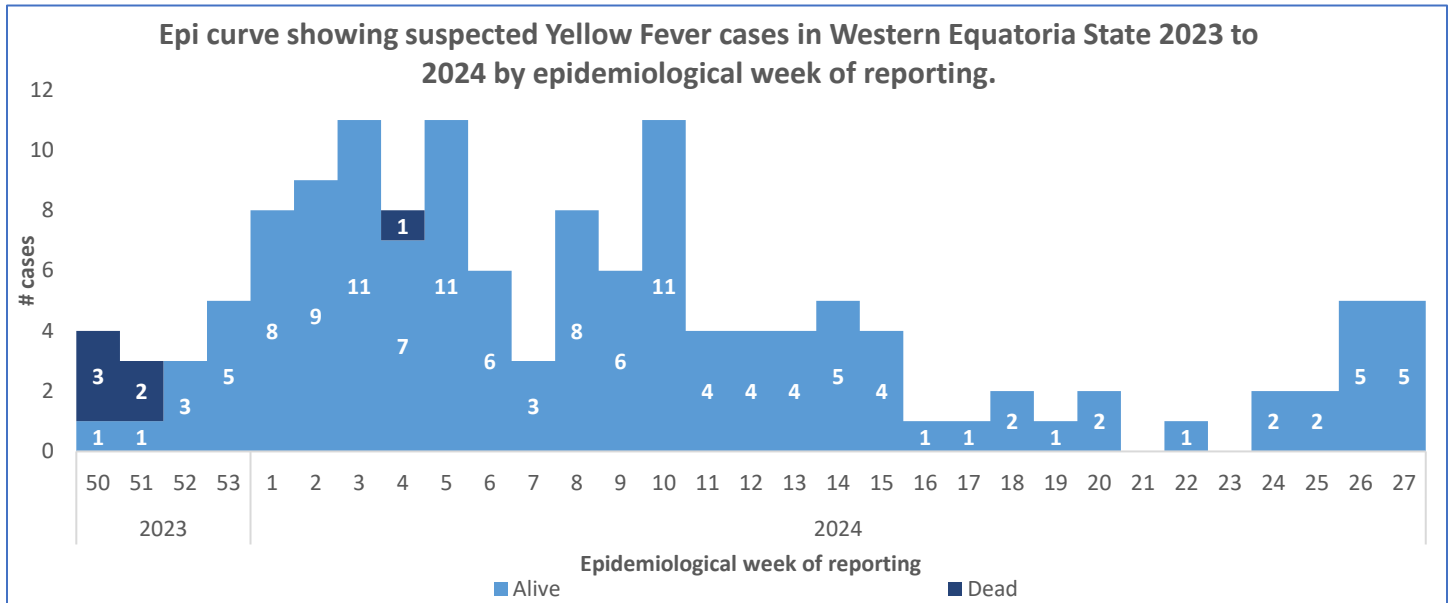
- In the 28 week of 2024, there were 27 newly reported cases, with 7 being RDT positive and no fatalities.
- Since the outbreak began in 2018, 5667 cases have been documented, 29 of which resulted in deaths.
- Among individuals aged 15 to 44 years, 43% of the reported cases were recorded (figure 16 below).
- Males represented 52% (2 963 cases) of the total cases, while females accounted for 48% (2,704 cases). See Figure 16 below.
- The data illustrated in the provided chart displays the distribution of HEV cases based on the patients' place of residence, both within and outside Bentiu PoC (see figure 15 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 (see figure 15 below).

Figure 10: Epicure of HEV in Bentiu IDP camp, Unity State; Epi Week 52 of 2018 to Week 28 of 2024



6. Yellow fever Outbreak

A total of 10 suspected cases were reported in weeks 26 and 27. The cumulative number of cases stands at 139 suspected cases, including six (6) deaths from week 50, 2023, to week 27, 2024. Suspected cases continue to be reported, and surveillance and investigation of suspect cases are being strengthened. Discussions are ongoing regarding closing the outbreak and implementing the IAR recommendations.



Other Events

Sudan crisis: As of Week 27, at least **744,545** individuals have crossed from 19 different nationalities. Of this number, **77% (578,192)** are South Sudanese returnees and 21% are Sudanese refugees. 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. Notably, morbidity, and mortality among returnees and refugees is significantly higher than in the host populations. During week 27, 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 1st and 9th of July 2024, a total of 9,419 individuals (comprising 2456 households) entered South Sudan. Among these recent arrivals, 57% (5414 individuals) are South Sudanese returnees, 39% (3734 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 Niño 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 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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Notes

WHO and the Ministry of Health gratefully acknowledge the surveillance officers [at state, county, and health facility levels], health cluster and healthpooled fund (HPF) partners who have reported the data used in this bulletin. We would also like to thank ECHO, USAID and the World Bank for providing financial support.

The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert, and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

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

Data source: DHIS-2 and EWARS

