



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 18
29 April -05 May 2024

Background

This weekly bulletin presents the epidemiological status of priority diseases, conditions under surveillance, and public health events in South Sudan. The data presented in the bulletin comes from various actors involved in preparedness and response to public health events in the country.

Highlights for the current reporting period

- In week 18 of 2024, the IDSR timeliness and completeness of reporting were 88% and 92%, respectively. This is more than 78% and 88% reported in the previous week 17 of 2024.
- IDSR performance at the EWARN mobile sites was 86%, less than the 93% that was reported in the previous week 17.
- Completeness of IDSR reporting at private Health facilities in Juba and Wau was at 92%, which is a decrease from the 97% reporting rate in the previous week.
- A total of 186 alerts were triggered in week 18 compared to 234 in week 17, and the proportion of verified alerts increased from 44% (103/234) to 65% (121/186) in the current week. Most of the alerts in week 18 were for Measles (20%), Malaria (16%), and Guinea Worm (15%).
- The cumulative total of suspected measles cases as of Epi week 18, 2024, was 2,396 including 152 (6.4%) lab-confirmed of the 266 samples collected. Of the 114 serum negative samples for measles IgM, 25 were positive for Rubella IgM. In the previous four weeks (Epi week 15-18), three counties (surpassed the threshold of 5 cumulative suspected cases).
- Suspect anthrax cases reported from Jur River county in Western Bahr el Ghazal state with 12 cases from week 14-18, 2024.

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 18 were at 88% and 92%, respectively.

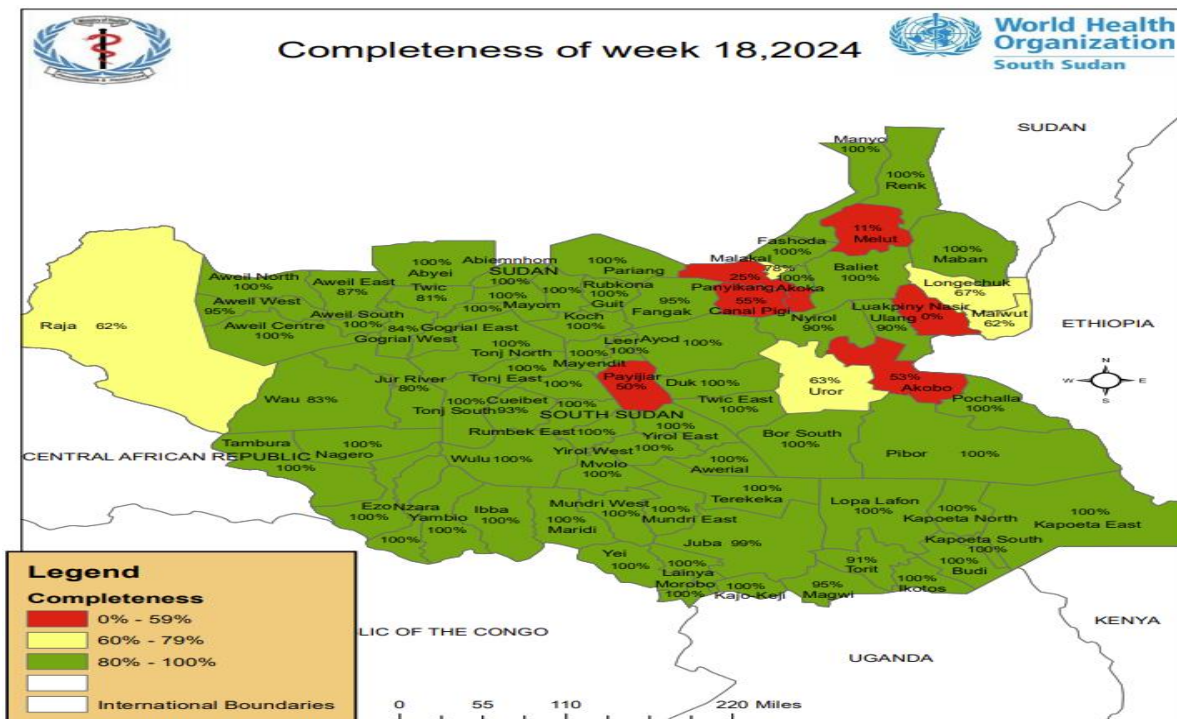
Table 1: Timeliness and completeness of IDSR reporting by State for week 18, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Timeliness		Completeness		Cumulative since start of year (2024 level)	
			Wk 17	Wk18	Wk 17	Wk18	Timeliness	Completeness
Lakes	112	112	82%	96%	100%	99%	89%	98%
NBGZ	89	80	89%	96%	90%	96%	86%	92%
Unity	84	84	100%	100%	100%	100%	92%	100%
WBGZ	81	59	72%	70%	73%	72%	77%	80%
WES	183	146	64%	90%	80%	100%	87%	95%
Jonglei	119	101	75%	84%	85%	86%	85%	89%
Warrap	111	105	71%	88%	95%	91%	83%	92%
EES	107	101	91%	94%	94%	98%	88%	95%
RAA	16	7	38%	44%	44%	44%	56%	69%
CES	122	119	97%	98%	98%	99%	91%	95%
AAA	17	17	82%	100%	100%	100%	69%	75%
Upper Nile	141	107	61%	62%	76%	76%	64%	78%
GPAA	15	15	100%	100%	100%	100%	99%	99%
Total	1197	1053	78%	88%	88%	92%	84%	91%

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 18	% Of Completeness in week 18	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 18	% Of Completeness in week 18
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	0%	0%	Rajaf	3	100%	100%
HFO	3	100%	100%	Muniki	12	100%	100%
WVI	2	100%	100%	Wau South	20	95%	95%
CIDO	1	100%	100%	Wau North	12	67%	67%
TOTAL	14	86%	86%	Juba	10	100%	100%
				TOTAL	62	92%	92%

Figure 1: Completeness of IDSR reporting by county for week 18, 2024



Epidemic alerts

A total of 186 alerts have been triggered in the EWARS system, with 65% (121/186) verified in the system. Most of the alerts were for Measles (20%), Malaria (16%) and Guinea Worm (15%). See Table 3 below for more details.

Table 3: Summary alerts triggered week 18, 2024

States/Admin Areas	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		Bloody Diarrhoea		Cholera		EBS		Guinea Worm		Malaria (Confirmed)		Measles		Meningitis		Neonatal Tetanus		Relapsing Fever		Yellow 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	% V	% P
AAA	0	0	2	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	1	20%	80%
CES	0	0	1	1	2	2	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	7	7	100%	0%
EES	1	1	1	1	3	3	4	4	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	100%	0%
GPA	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	50%	50%
Jonglei	0	0	2	0	2	0	1	0	0	0	0	0	5	0	3	0	2	0	0	0	0	0	0	0	0	0	1	5	0%	100%
Lakes	0	0	4	4	3	3	0	0	0	0	4	4	1	4	4	4	1	1	0	0	0	0	0	0	1	1	3	3	100%	0%
NBGZ	0	0	6	6	1	1	3	3	0	0	0	0	0	0	2	2	9	9	0	0	0	0	0	0	0	0	2	2	100%	0%
RAA	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0	0%	100%

Unit y	1	1	3	2	1	1	3	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	1	6	55%	45%
Upper Nile	0	0	4	0	3	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0%	100%	
Warrap	0	0	0	0	0	0	1	0	1	1	0	0	6	4	1	1	1	1	0	0	1	0	0	0	2	7	32%	68%	
WBGZ	1	1	1	1	6	2	0	0	0	0	0	0	2	0	6	3	3	3	1	1	1	1	1	1	0	0	59%	41%	
WES	0	0	2	2	5	5	3	3	0	0	0	0	0	6	6	8	8	0	0	0	0	0	0	0	2	4	100%	0%	
Grand Total	4	3	2	1	2	1	2	1	1	1	5	4	2	1	3	2	3	2	1	1	2	1	1	1	1	1	65%	35%	

#R= reported
 #V= verified
 # =Pending

Weekly Update on Indicator-Based Surveillance (Week 18)

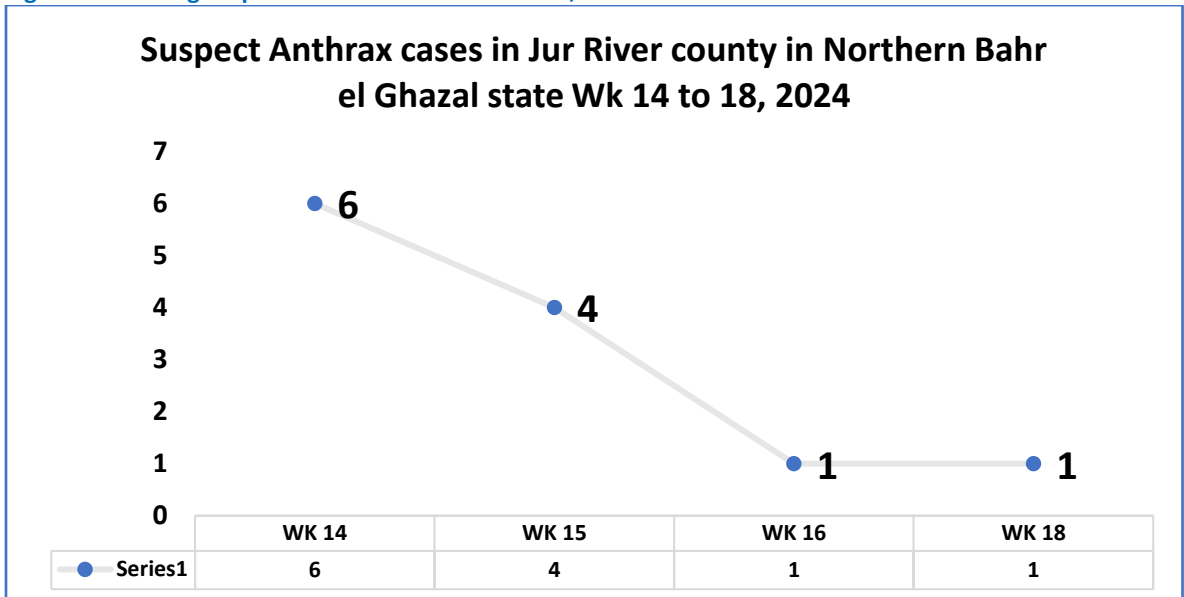
Indicator-based surveillance is implemented in South Sudan through the EWARS platform according to the IDSR 3rd guidelines, where approximately 59 priority diseases and public health events are regularly monitored and reported from health facilities across the country.

Suspect Anthrax in Jur River County Western Bahr el Ghazal state

The Ministry of Health and WHO was notified of suspect anthrax cases in Jur River county, Western Bahr el Ghazal state. As of week 18 of 2024, a total of 12 case were reported of which 8 (66%) were in children less than 10 years of age. By gender 83% (10/12) of all the suspect cased were males and 17% (2/12) were females. Almost all the cases (11/12) representing 92% were reported having domestic animals.

Plans are underway to deploy State Rapid Response teams from Wau to conduct investigations and collect lesion swabs for testing.

Figure 2: showing suspect anthrax cases in Jur river, NBG state

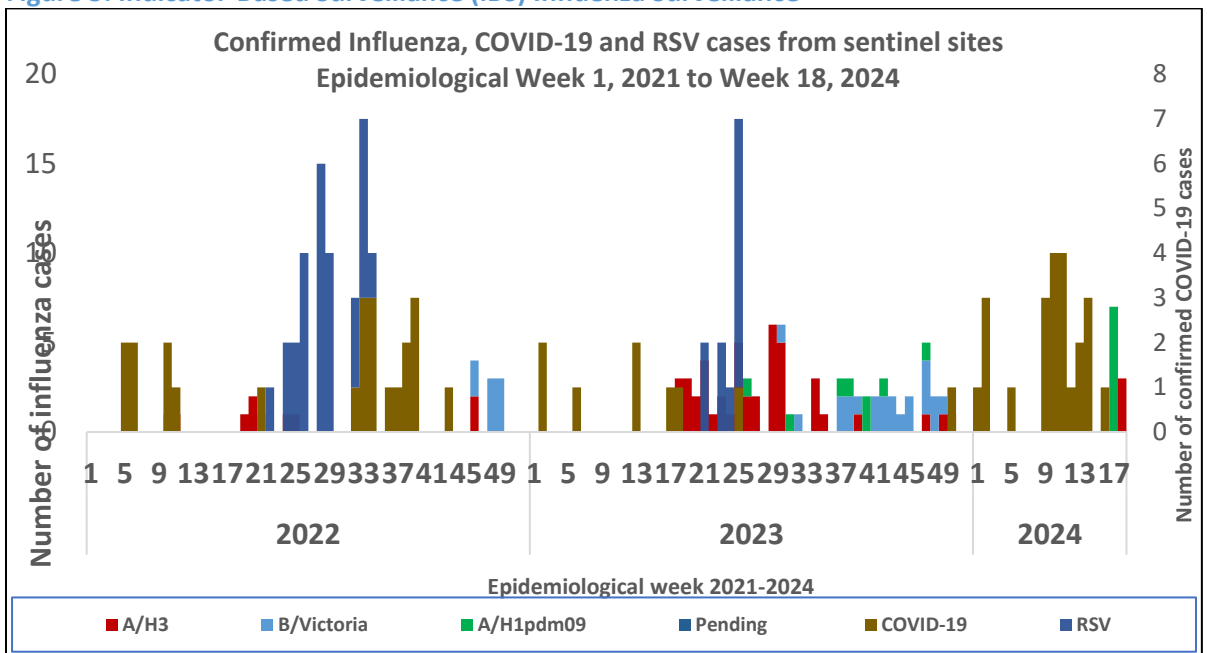


Influenza update

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

During Epidemiological Weeks 1 to 18 in 2024, a cumulative total of 528 ILI/SARI samples have been collected; 491 tested negatives for all pathogens, **23 were positive for COVID-19**, zero 1 for Influenza Type A (H3), four (4) for Influenza Type B (Victoria), nine (9) for Influenza A/(H1N1) pdm09 and zero (0) for RSV. Influenza Type B (Victoria), nine (9) for Influenza A/(H1N1) pdm09, and zero (0) for RSV. The national ILI/SARI surveillance notes the low positivity ratios which is attributable to a) poor adherence to the case definition at sentinel sites; b) improper specimen handling/storage between collection sites and the analysis laboratory and c) poor specimen handling in the laboratory.

Figure 3: Indicator-Based Surveillance (IBS) Influenza Surveillance



Ongoing confirmed epidemics

Table 4: Summary of new and ongoing confirmed epidemics

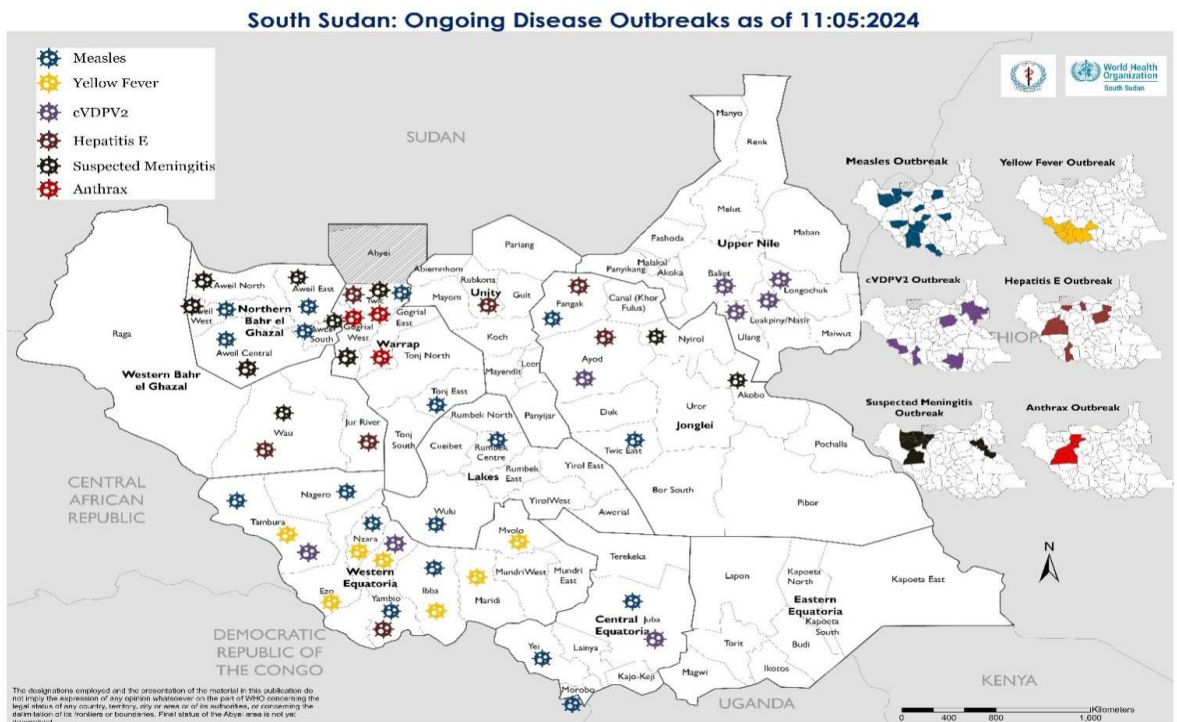
Aetiologic agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date	Response activities				
					Surveillance /Lab	Case management	Vaccination	Health promotion	IPC/WASH
Ongoing outbreaks									

Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	0	120	3 Laboratory confirmed	Ongoing	Done in 5 counties	Ongoing	Ongoing
Measles	69 counties	2022	125	14,376	1,154	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Fangak	2023		617	253	ongoing	ongoing	ongoing	ongoing
cVDPV	Yambio, Juba, Ulang, Nasir, Baliet, Ayod	19/Dec 2023	0	11	11	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	48	5269	-	ongoing	Done in 2021/22	ongoing	ongoing

Ongoing Confirmed Outbreaks

Since 2022, South Sudan has experienced several emergencies throughout the country. Based on data provided by the states and the EWARS system, most counties have reported ongoing disease outbreaks. These outbreaks include measles, anthrax, meningitis, cholera, hepatitis E virus, and others. Measures have been put in place to help mitigate the spread of these outbreaks. Below is a map of the current ongoing emergencies

Figure 4: Map showing ongoing disease outbreaks across the country



Response activities for ongoing/suspected outbreaks

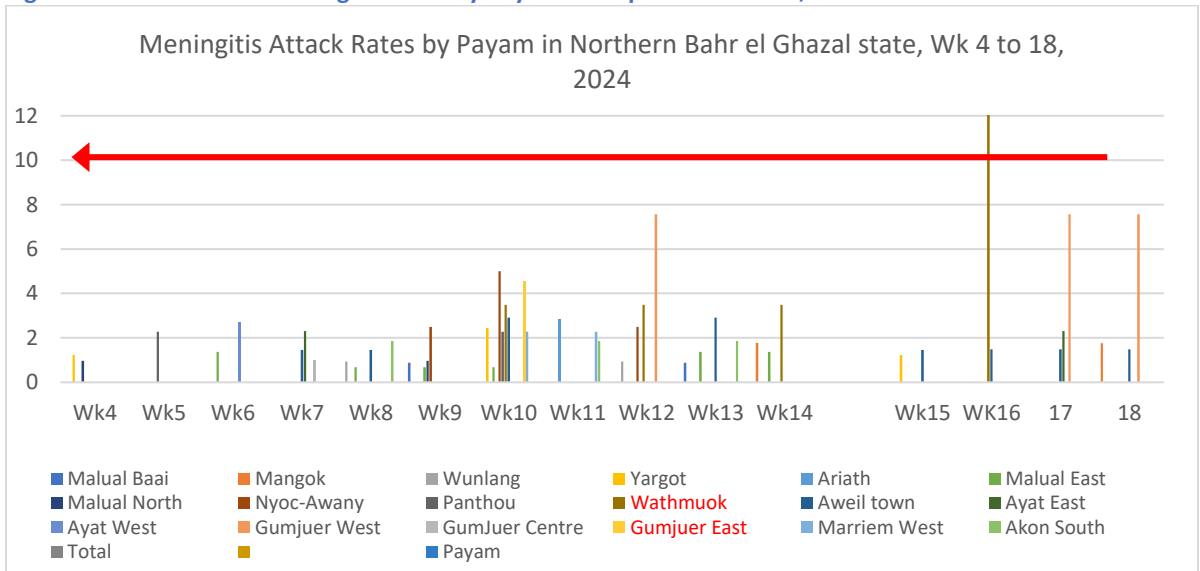
Vaccine-preventable Diseases

1- Meningitis Situation Updates

In week 18 additional three cases were reported from Aweil East and Aweil west counties. This brings the cumulative total of suspected Meningitis cases to xxx as at week 18. The three cases were from 3 different payams. In Payams (sub-counties) with a population of less than 30,000 no more than five cases have been reported in a week, and there has not been a doubling of the NM incidence over two to three consecutive weeks.

A total of 28 samples were sent to the National Public Health Lab from several counties, and 23 of those results showed that 91.3% (21 /23) were positive for bacterial pathogens by PCR panel as follows: Neisseria meningitides W = 56.6 % (13/23).

Figure 5: Attack rate of Meningitis cases by Payam and Epi-week 4 to 17, 2024

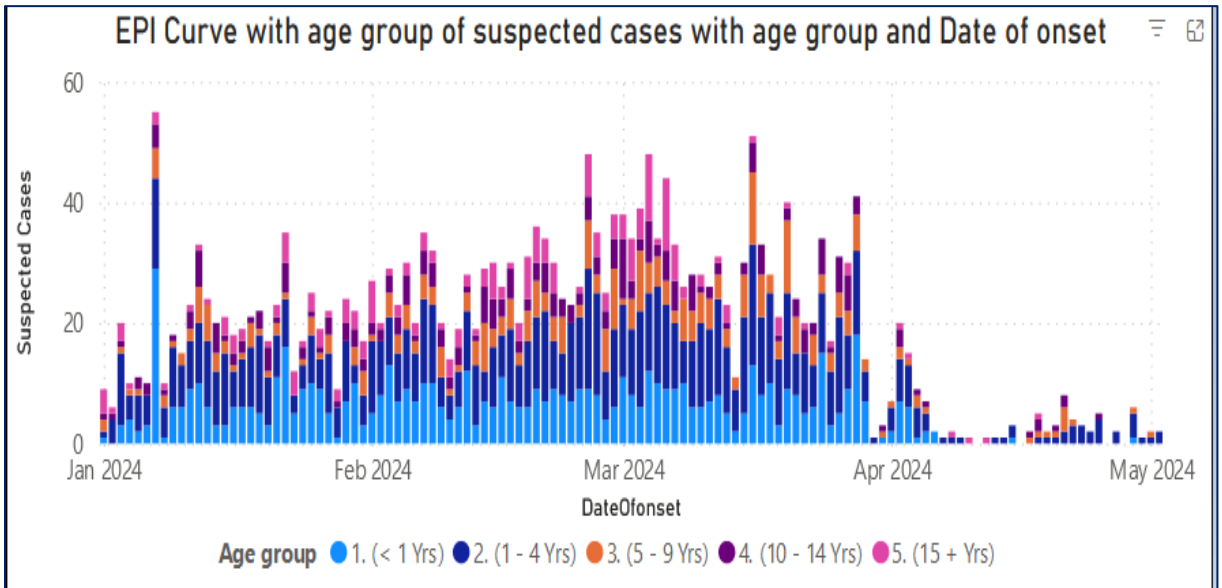


2- Measles outbreak

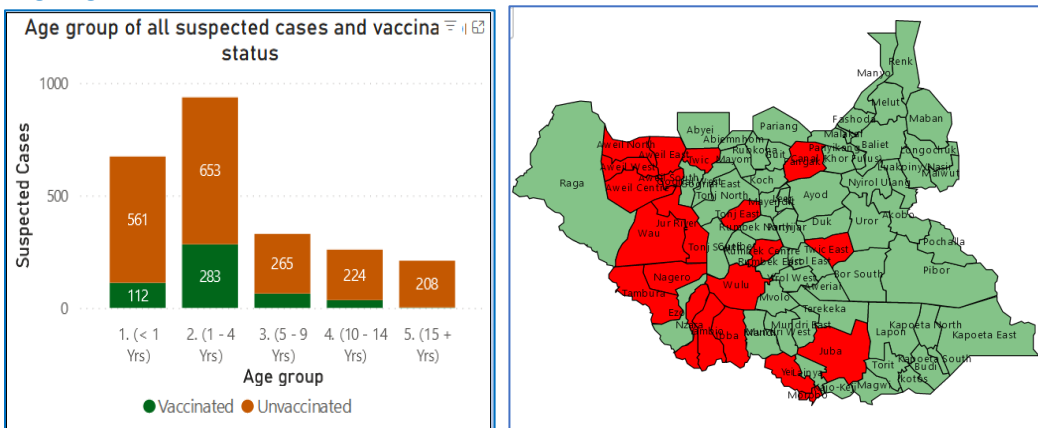
As of Epi week 18, 2024, a cumulative total of 2,396 suspected measles cases were reported including 152 (6.4%) lab-confirmed of the 266 samples collected giving a positivity rate of 57% since the beginning of the year. A total of 25 rubella positive cases were found from the discarded (negative measles cases).

Epi week 18 data shows measles cases (with more than 3 positives in the past 30 days) in 17 counties, all the counties of Northern Bahr el Ghazal, Twic, Twic East, Fangak, Ibba, Wulu, Nzara, Yambio, Nagero, Yei, Morobo and Tambura reporting suspected/confirmed. The observed surges in cases are due to other counties experiencing an increase in measles cases at different times. The Sudan crisis began on week 14 of 2023 and has resulted in an influx of refugees and returnees since then. Additionally, the nationwide Measles Follow UP Campaign occurred from week 17-20 of 2023.

Figure 6: Epi-curve of suspected measles cases by date of onset and age group from



Suspected Measles Cases by age group and vaccination status and map showing counties with ongoing transmission



Measles Vaccination Updates

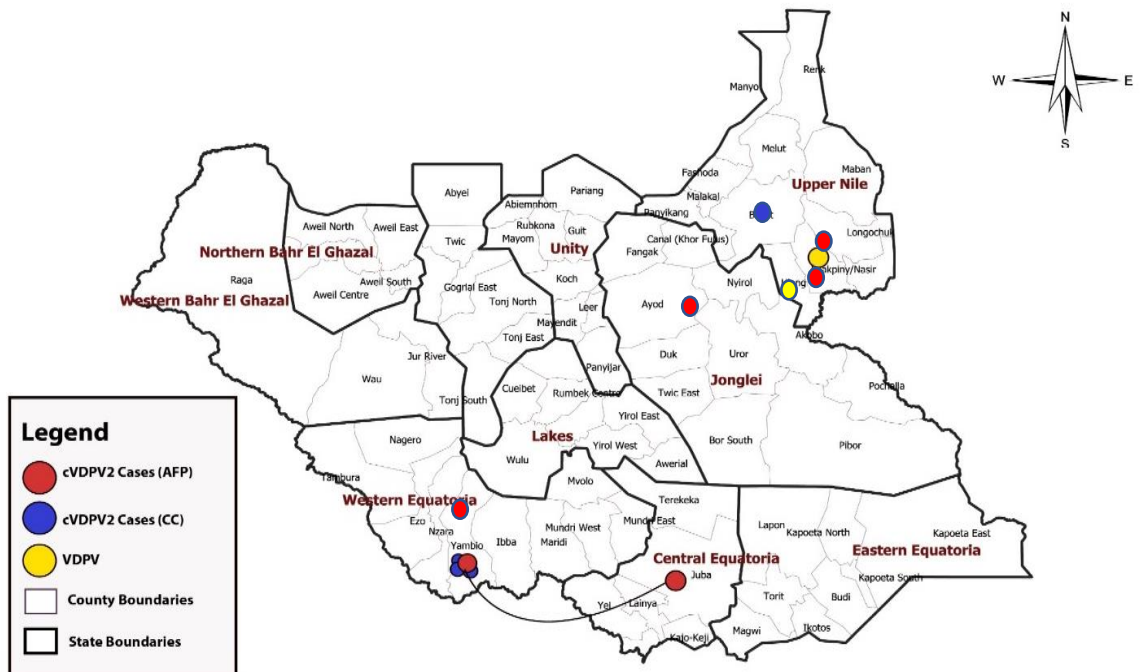
In 2024, the reactive vaccination campaigns against measles continued. By Epi week 17, nine counties had implemented outbreak response vaccination campaigns targeting children under 5 years, vaccinating 347,812 (86%) children under the age of five. The final data from 5 counties of NGB is yet to be submitted. Out of the total vaccinated, 9,119 (2.6%) were returnees from Sudan. Four counties, namely Maridi, Mundri East, Tonj North, and Tonj South, have completed the campaign. The campaign is still ongoing in five counties of NGB, namely AWE, AWS, AWC, AWN, and AWW. It is expected to be finalized next coming weeks. Preparations are currently underway for an additional five counties in WES, namely Yambio, Ezo, Nzara, Ibba, and Tambura. This implementation is scheduled for 7th May 2024. The main reason for the delay is multiple activities ongoing in the state, such as the Yellow Fever mass vaccination, nOPV2 vaccination campaign, and COVID-19 vaccination activities in some counties.

3- Poliomyelitis

Circulating Vaccine Derived Polio Virus type-2 (cVDPV2)

There are two circulating lineages of VDPV2 emergences which are RSS-WEQ-1 detected in Yambio/WEQ and Juba CES and RSS-UNL-1 detected in Ayod, Baliet and Nasir of Upper Nile state. Two nationwide response SIAs using nOPV2 have already been completed and the LQAS results show that 15/40 (38%) and 19/40 (48%) sampled lots passed the quality test in the first and second rounds respectively. An additional 3rd round of nOPV2 SIAs is been proposed, subject to global vaccine supply availability, expected to be in August/September 2024. The country team is enhancing active surveillance activities in all states, counties, Payams and villages to identify any suspected cases promptly.

Figure 7: Distribution of cVDPV2 cases isolates (All sources)

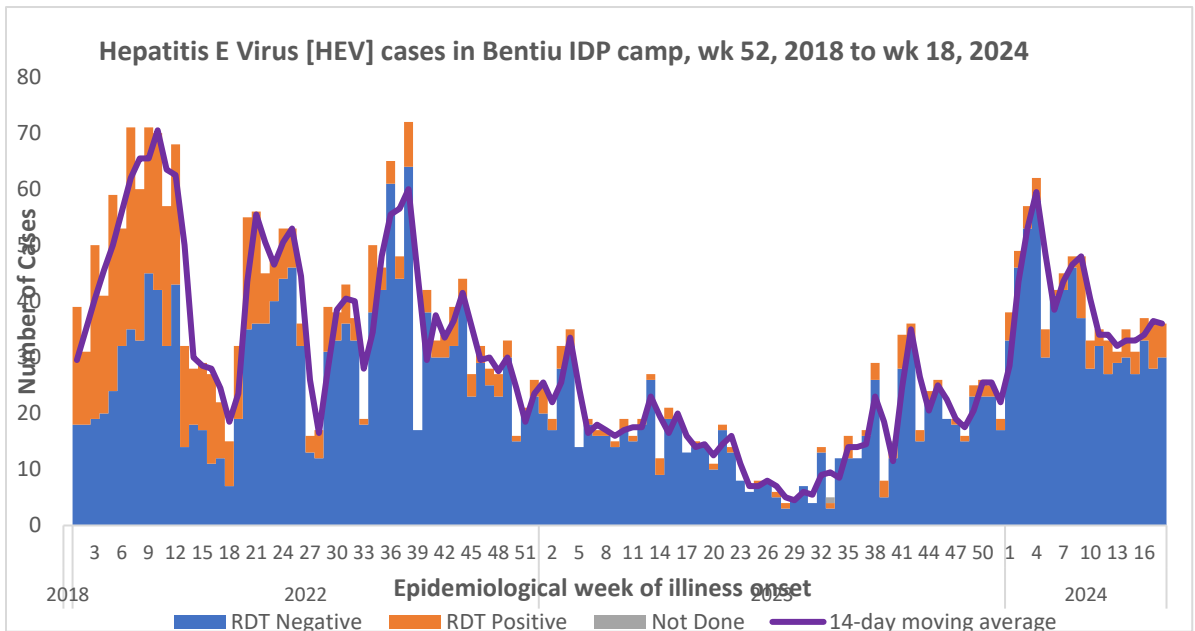


*CC - Healthy community children samples

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

In week 18, there were a total of 30 new cases reported. Out of these, six were RDT positive and there were no deaths. Since the beginning of this current outbreak in 2018, there have been a total of 5,403 cases reported, with 27 deaths. Of all the reported cases, 43% were among people aged 15-44 years and 23% were among children under 5 years of age. Males accounted for 52% of the total cases, while females accounted for 48%.

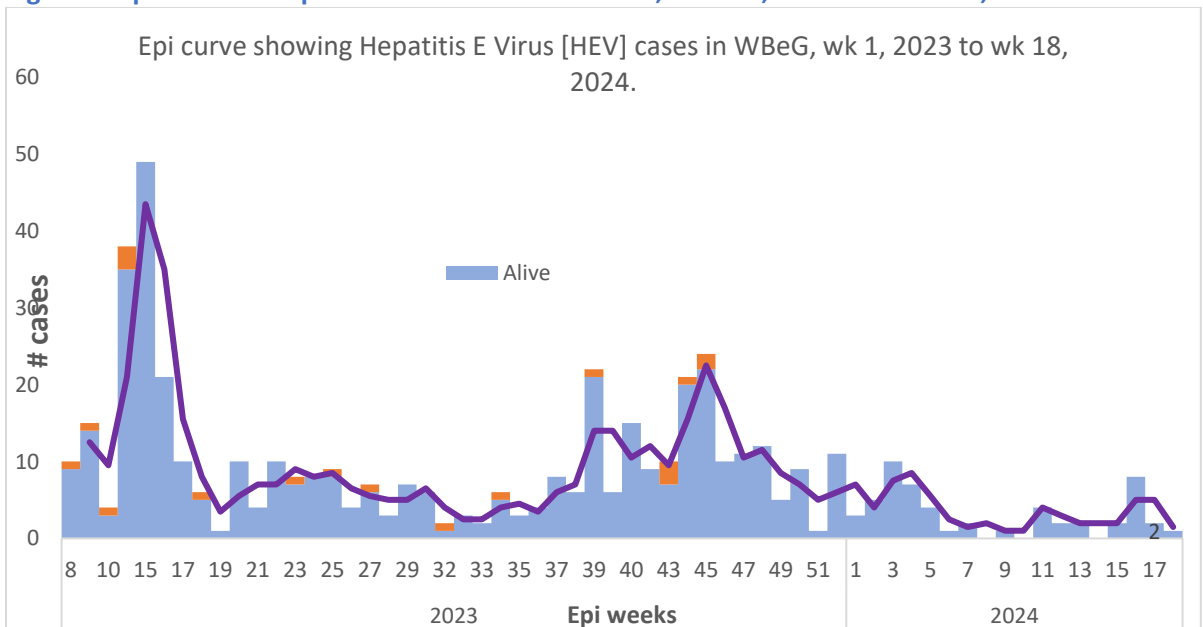
Figure 8: Epi curve of HEV in Bentiu IDP camp, Unity State, Week 52, 2018 to Week 18, 2024



3. Hepatitis E in Western Bahr EL-Ghazal State

In week 18 one case was reported from Wau teaching Hospital giving a total of 482 cases including 19 deaths have been reported from week 18, 2023 to week 16, 2024. Most of the cases were reported among the age group 15 years and above; and Males accounted for 64% (309) while females account for 36% (173).

Figure 9: Epi curve of Hepatitis E Cases in WBeG State, Week 1, 2023 to Week 18, 2024

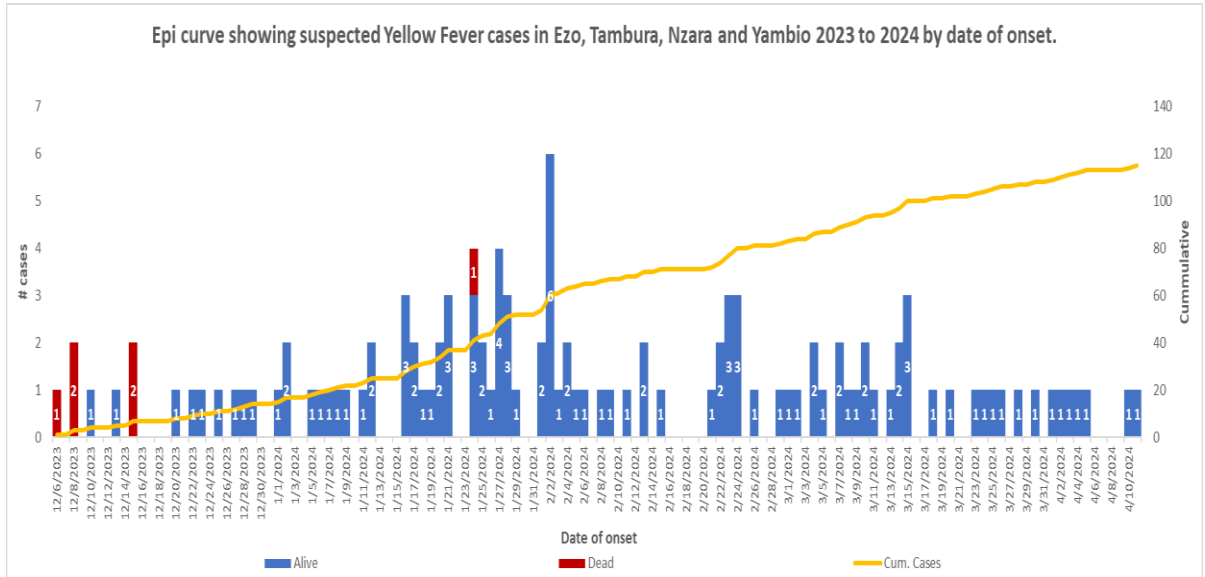


Hemorrhagic Fever

1- Yellow fever Outbreak

A total of one hundred and twenty (120) Yellow Fever cases (117 suspected and 3 confirmed) were reported from seven counties in Western Equatoria state: Yambio (64), Tambura (26), Nzara (11), Ezo (11), Ibba (03), Maridi (03) and Mvolo (02) Counties. In Epi week 16 one (01) new suspected Yellow Fever cases was reported from Yambio.

Figure 10: Trend of Yellow fever outbreak in Western Equatoria State



Other Events

Sudan crisis: In Week 18 of 2024, a total of 6,283 individuals crossed into South Sudan from at least 21 different Points of Entry (PoEs). Since the start of the influx, at least 663,953 individuals have crossed from 19 different nationalities. Of this number, 78.5% (521,589) are South Sudanese returnees. Currently, 21 PoEs are being monitored, with Joda-Renk accounting for 83.4% of the reported influx figures. Host communities and healthcare systems are struggling to cope with the increased demand for health and other services, morbidity, and mortality among returnees and refugees. The interconnectedness between Sudan’s and South Sudan’s economies has resulted in the conflict significantly affecting market prices. According to the Cash Working Group, the average cost of a Multi-Sectoral Survival Minimum Expenditure Basket has risen by 28 percent since April 2023, indicating the extent of the impact.

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). Ongoing screening for AWDs at the public health desk at the Wonthou Point of Entry (POE). Nutritional status assessment (MUAC) conducted on all children less than five years at Wunthou point of entry; referral of the severe acute malnourished children with medical complications for in-patient care in Renk County Hospital is ongoing.

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

