



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 19
06 -12 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 come from various actors involved in preparedness and response to public health events in the country.

Highlights for the current reporting period

- In week 19 of 2024, the IDSR reporting timeliness and completeness were 84% and 88%, respectively. The timeliness and completeness are less than 88%, and 92% reported in the previous week.
- IDSR performance at the EWARN mobile sites was 86%, the same as what was reported in the previous week 18.
- Completeness of IDSR reporting at private Health facilities in Juba and Wau was at 65%, which has decreased from 98% in the previous week.
- The alerts triggered in the EWARS system increased from 186 in week 18 to 191 in the reporting week 19 and the proportion of verified alerts decreased from 65% (121/186) to 47% (92/191) in weeks 18 and 19, respectively. Most of the alerts in week 19 were for Guinea Worm (26%), Measles (18%) and AWD (15%).
- As of Epi week 19, a cumulative total of 2,407 suspected measles cases, 164 (6.8%) were lab-confirmed, 772 (32.1%) epi-linked, 1,335 (56.1%) clinically compatible, and 121 (5.0%) discarded.

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 19** were at **84% and 88%**, respectively.

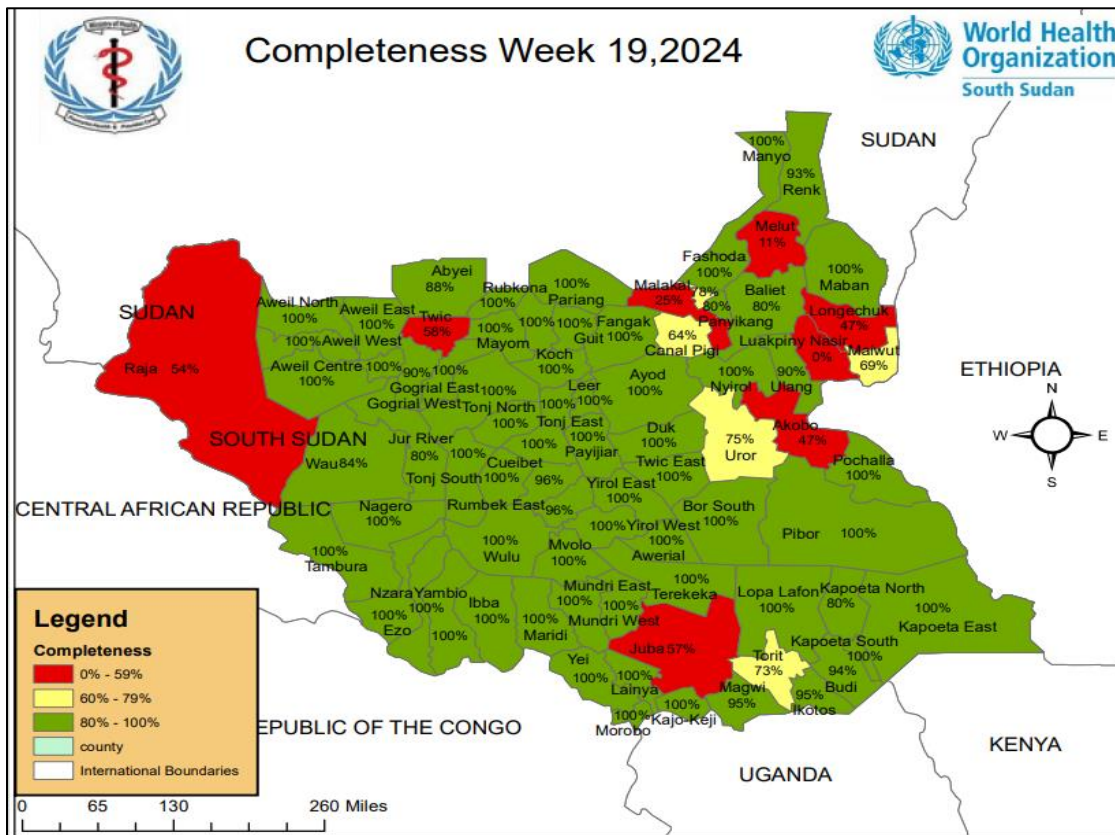
Table 1: Timeliness and completeness of IDSR reporting by State for week 19, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Timeliness		Completeness		Cumulative since year start (2024 level)	
			Wk18	Wk19	Wk18	Wk19	Timeliness	Completeness
Lakes	112	112	96%	96%	99%	99%	89%	98%
NBGZ	89	80	96%	97%	96%	100%	87%	92%
Unity	84	84	100%	100%	100%	100%	92%	100%
WBGZ	81	59	70%	69%	72%	72%	77%	80%
WES	183	146	90%	100%	100%	100%	88%	95%
Jonglei	119	101	84%	87%	86%	88%	86%	89%
Warrap	111	105	88%	75%	91%	87%	83%	92%
EES	107	101	94%	88%	98%	93%	88%	95%
RAA	16	7	44%	31%	44%	44%	54%	68%
CES	122	119	98%	69%	99%	73%	90%	94%
AAA	17	17	100%	88%	100%	88%	70%	76%
Upper Nile	141	107	62%	65%	76%	73%	65%	78%
GPAA	15	15	100%	100%	100%	100%	99%	99%
Total	1197	1053	88%	84%	92%	88%	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 19	% Of Completeness in week 19	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 19	% Of Completeness in week 19
IMC	4	100%	100%	Kator	3	100%	100%
SSHCO	1	100%	100%	Marial Baai	1	100%	100%
SMC	1	100%	100%	Northern Bari	1	0%	0%
SCI	2	0%	0%	Rajaf	3	0%	0%
HFO	3	100%	100%	Muniki	12	0%	0%
WVI	2	100%	100%	Wau South	20	80%	80%
CIDO	1	100%	100%	Wau North	12	83%	83%
TOTAL	14	86%	86%	Juba	10	100%	100%
				TOTAL	62	65%	65%

Figure 1: Completeness of IDSR reporting by county for week 19, 2024



Epidemic alerts

In Week 19, a total of 191 alerts were triggered in the EWARS system, with 47% (92/191) verified. Most of the alerts were for Guinea Worm (26%), Measles (18%) and AWD (15%). See Table 3 below for more details.

Table 3: Summary alerts triggered week 19, 2024

Admin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		Bloody Diarrhoea		Cholera		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	# R	# V	% V	% P	
AAA	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0%	100%
CES	0	0	2	1	5	4	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	8	6	75%	25%
EES	0	0	1	1	2	2	2	2	0	0	0	0	0	0	3	3	0	0	0	0	0	8	8	100%	0%
GPAA	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0%	100%
Jonglei	2	1	2	1	1	0	1	0	0	0	2	0	1	0	2	1	6	1	0	0	0	26	4	15%	85%
Lakes	1	0	3	1	2	2	0	0	0	0	6	6	2	8	7	1	1	0	0	0	0	41	17	41%	59%
NBGZ	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	1	6	6	0	0	10	10	100%	0%	
RAA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0%	100%	
Unity	3	1	4	3	1	0	2	1	1	0	0	0	0	0	0	0	1	0	0	0	12	5	42%	58%	
Upper Nile	0	0	3	0	4	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	12	0	0%	100%	
Warrap	0	0	1	0	1	1	3	1	0	0	4	0	7	3	0	0	8	0	1	0	25	5	20%	80%	
WBGZ	0	0	1	1	1	1	2	1	0	0	1	1	4	0	2	1	1	1	1	1	13	7	54%	46%	

WES	0	0	0	0	10	10	3	3	0	0	0	0	1	1	4	4	12	1	0	0	30	3	100%	0%	
Grand Total	6	2	21	11	28	20	18	8	1	0	1	4	8	5	1	1	11	35	2	2	1	191	9	48%	52%

#R= reported
 #V= verified
 # =Pending

Weekly Update on Indicator-Based Surveillance (Week 19)

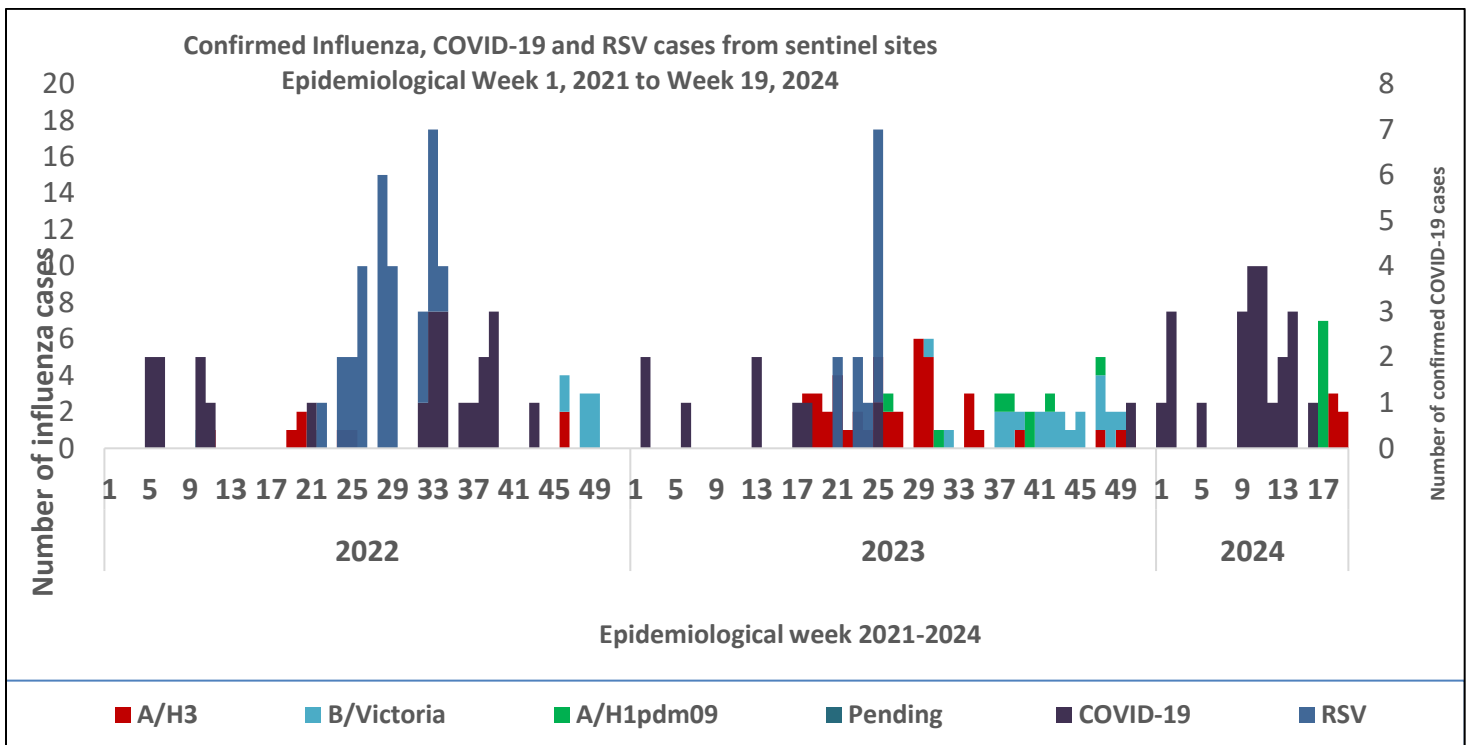
Indicator-based surveillance is implemented in South Sudan through the EWARS platform according to the 3rd IDSR technical guidelines, where approximately 59 priority diseases and public health events are regularly monitored and reported from health facilities across the country.

Influenza update

Currently, there are four 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.

During Epidemiological Weeks 1 to 19 in 2024, a cumulative total of 490 ILI/SARI samples were collected; 456 tested negative for all pathogens, twenty-three (23) were positive for COVID-19, zero (0) for Influenza Type A (H3), one (1) for Influenza Type B (Victoria), nine (9) for Influenza A/(H1N1) pdm09, and zero (0) for RSV.

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



Ongoing confirmed epidemics

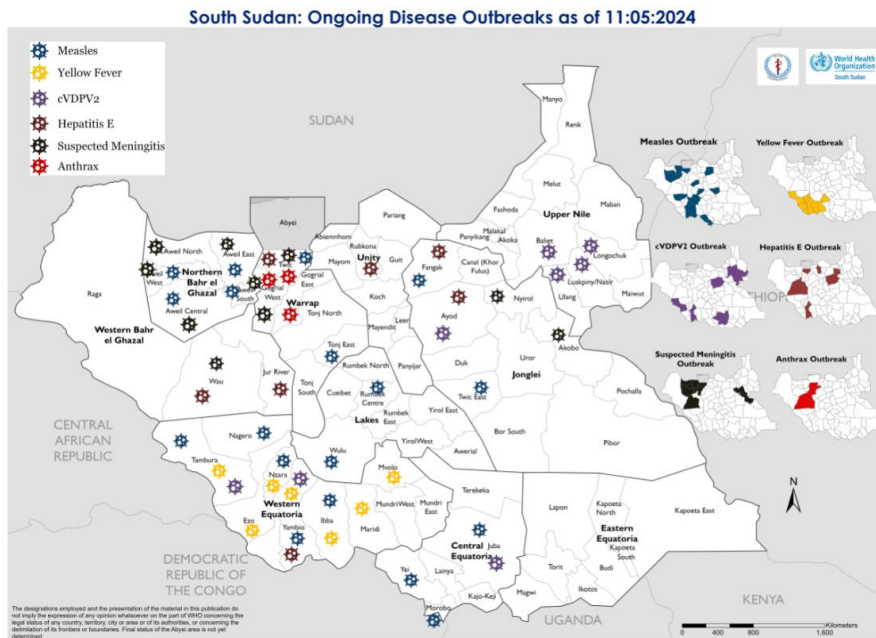
Table 4: Summary of new and ongoing confirmed epidemics

Aetiologic agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date	Response activities				
					Surveillance/Lab	Case management	Vaccination	Health promotion	IPC/WASH
<i>Ongoing outbreaks</i>									
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	2	122	3 Laboratory confirmed	Ongoing	Done in 5 counties	Ongoing	Ongoing
Measles	69 counties	2022	131	14,507	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	Not applicable	Completed 2 SIAs and 3 rd round planning is 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 2: Map showing ongoing disease outbreaks across the country



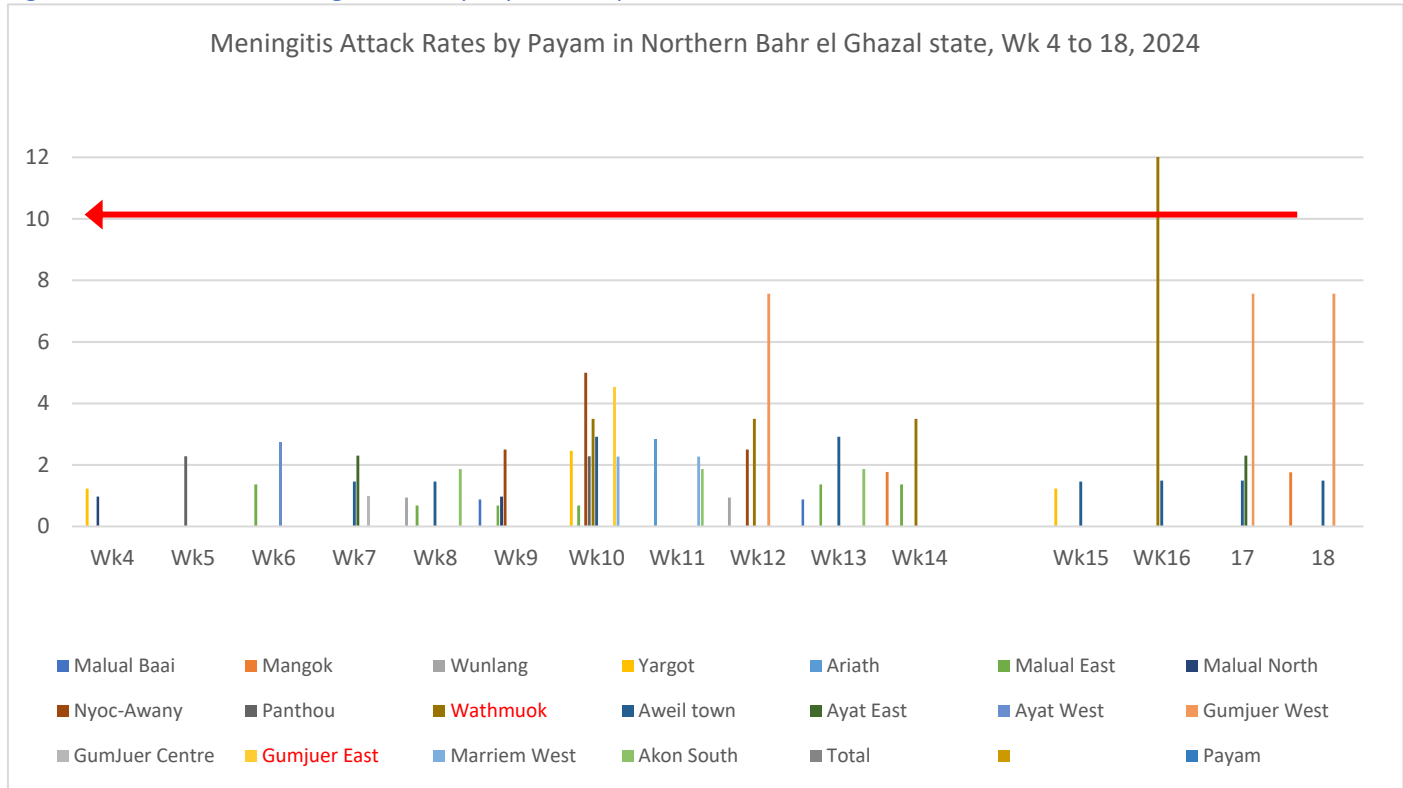
Response activities for ongoing/suspected outbreaks

Vaccine-preventable Diseases

1- Meningitis Situation Updates

In week 19, two cases were reported from Aweil West County. This brings the cumulative total of suspected Meningitis cases to 75 as of week 19. The two cases were from two different payams, Nyamlel and Udhum 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.

Figure 6: Attack rate of Meningitis cases by Payam and Epi-week 4 to 18, 2024



Response activities

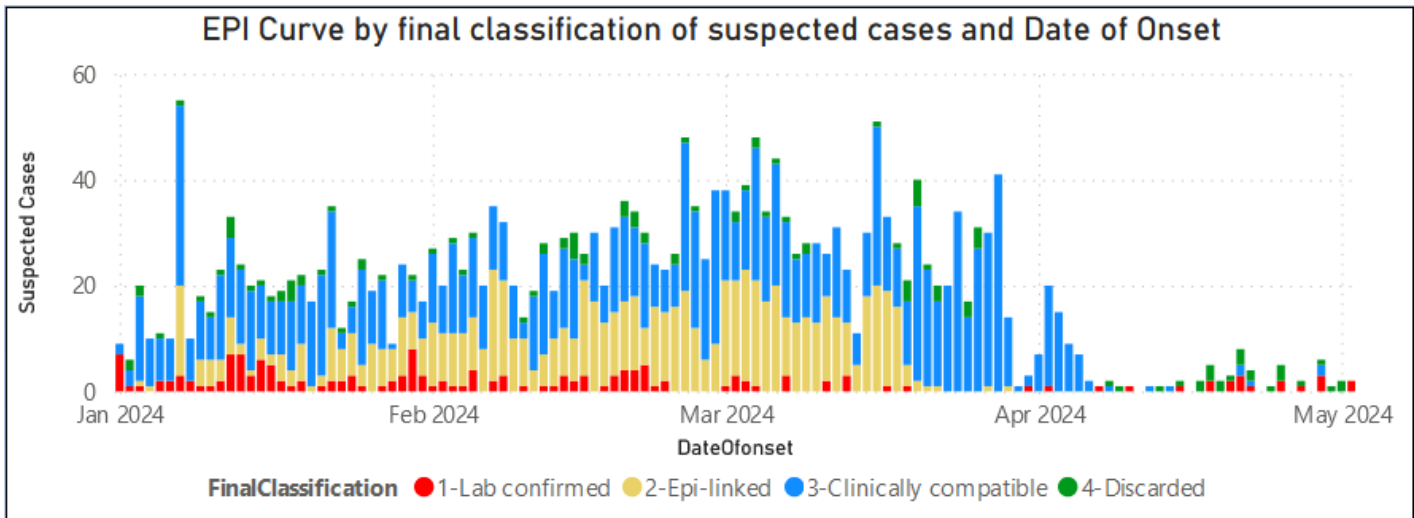
The Public Health Emergency Operations Center (PHEOC) is currently in alert phase due to a potential meningitis outbreak. Coordination efforts are underway both at the national and sub-national levels. The Meningitis Response Plan is being reviewed, and an in-depth investigation is being conducted by the SRRT and NRRT in Northern Bahr el Ghazal and Warrap states to improve active case search, safe sample collection, and RCCE. TI Media is being prepositioned at the subnational level, and an application for Ceftriaxone from ICG was finalized but is pending clearance from the MOH. Additionally, healthcare workers were oriented on early case detection, sample collection, testing, packaging, and case management.

2- Measles outbreak

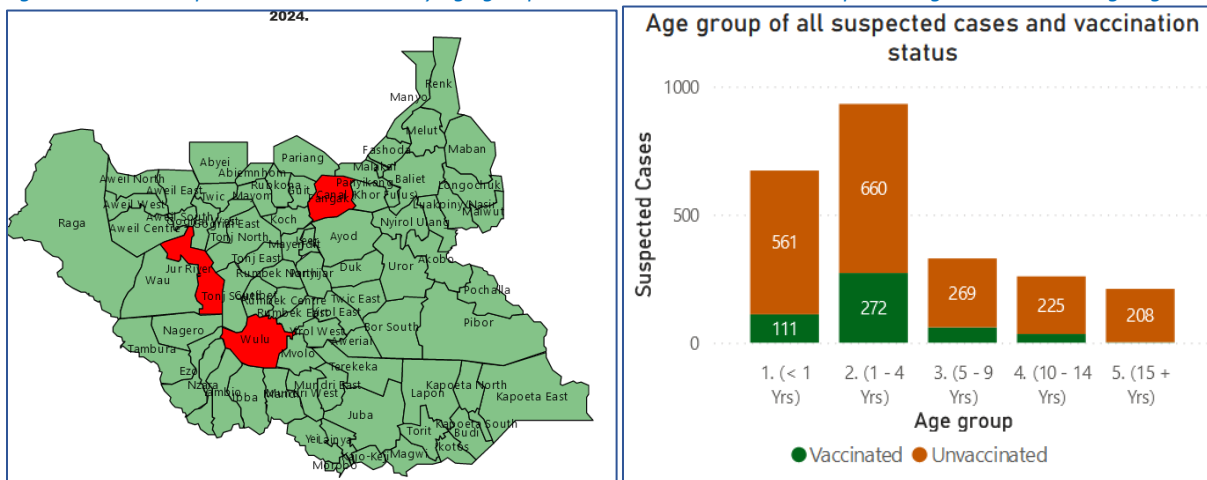
As of Epi week 19, a cumulative total of 2,407 suspected measles cases have been reported, 164 (6.8%) were lab-

confirmed, 772 (32.1%) epi-linked, 1,335 (56.1%) clinically compatible, and 121 (5.0%) discarded. A total of 30 rubella-positive cases were discarded (negative measles cases). About 66% (1604 out of 2407) of all cases were in children under 5 years old, and only 23% of those cases involved children who had received at least one dose of the measles vaccine. In the last four weeks, 16-19 of 2024, a total of 46 suspected cases were recorded, with 40 samples collected, and data shows ongoing outbreaks in Fangak, Jur-River, and Wulu counties.

Figure 7: Epi-curve of suspected measles cases against their residential status by Epi week



Figures 8 and 9: Suspected Measles Cases by age group and vaccination status and map showing counties with ongoing transmission



Measles Vaccination Updates

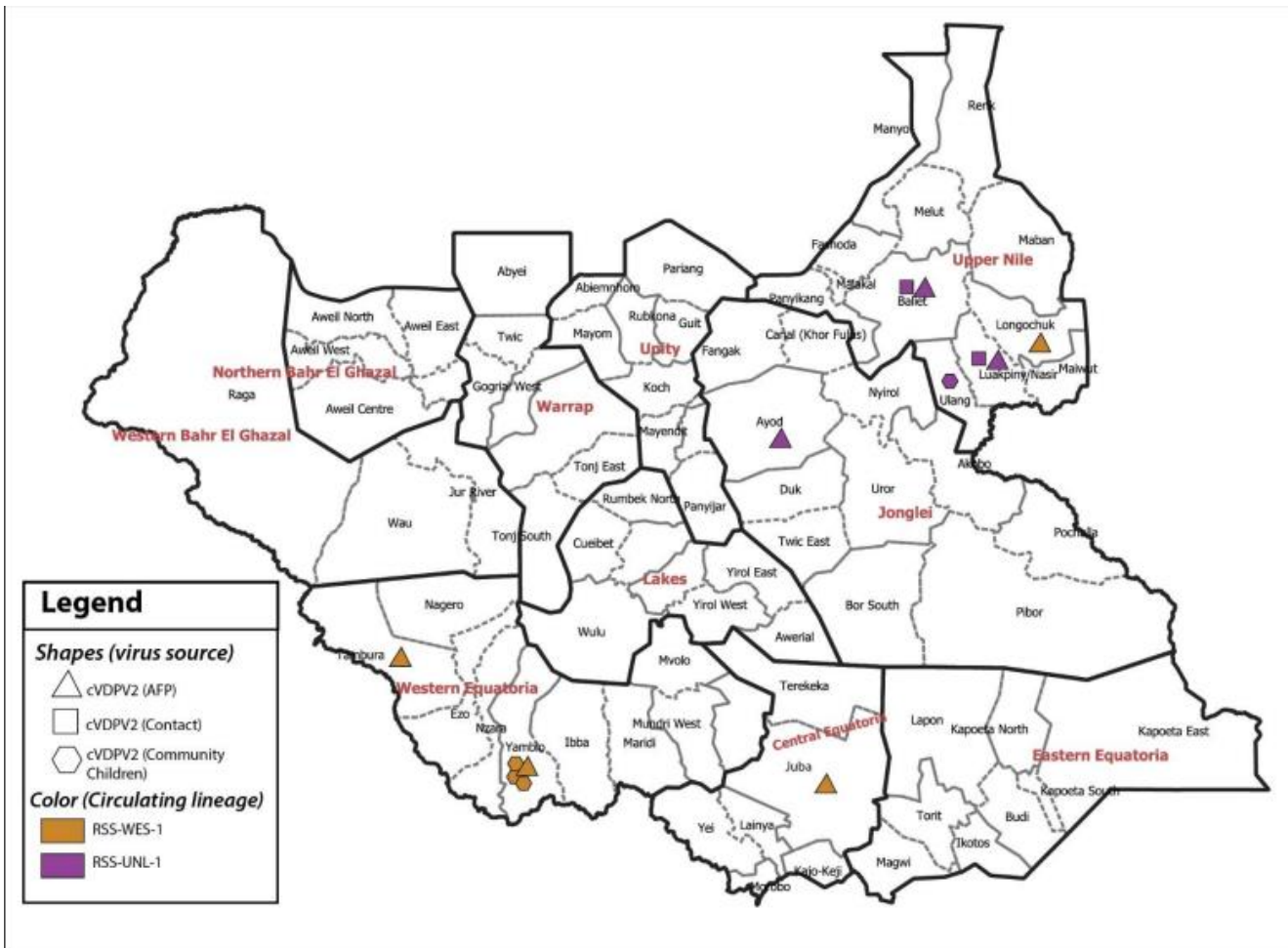
As of Epi week 19, thirteen counties had implemented a non-selective Measles reactive campaign to vaccinate 447,988 (90%) under five children. Out of the total vaccinated, 10,299 (2.3%) are returnees from Sudan. The 13 counties that completed their response vaccination SIAs were Aweil Centre, Aweil East, Aweil North, Aweil South, Aweil West, Ibba, Maridi, Mundri East, Nzara, Tonj North, Tonj South and Yambio. The campaign is ongoing in Tambura in the six IDP camps. It will be extended outside the camp once the security situation improves in the remaining payams of the county. Ezo County also delayed the campaign due to insecurity related to Tambura conflict. The state and County teams are discussing dates for the implementation depending on the security situation.

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 Baliet, Longechuk, Nasir and Ulang counties of UNL but also was detected in Tambura/WES and Ayod of Jonglei state. Two nationwide response SIAs using nOPV2 have already been completed and the LQAS results have been completed in 40 counties. The LQAs pass rate was reported as 38% and 48% in round one and two respectively. In addition to enhancing active surveillance for suspected AFP/Polio cases in all states, counties, Payams and villages for early detection, a 3rd response vaccination campaign has been proposed as soon as the global vaccine supply stabilizes.

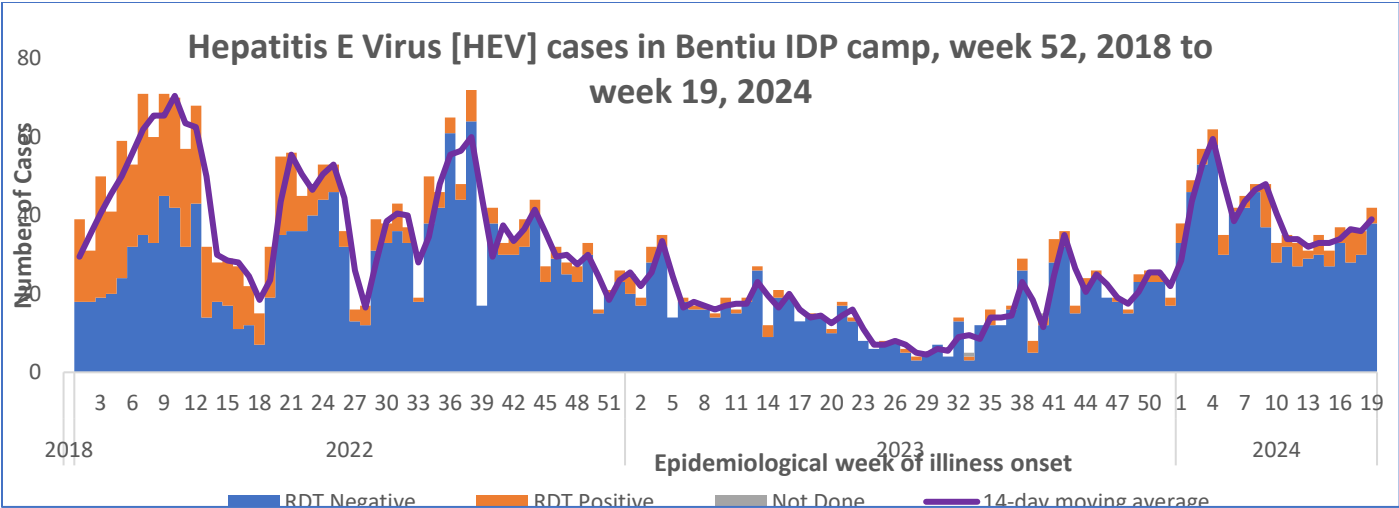
figure 8: Distribution of cVDPV2 cases isolates (All sources)



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

A total of 42 new cases were reported, including 4 RDT positive and zero deaths in week 19, 2024; Total of 5451 cases, including 27 deaths reported since the outbreak began in 2018; 43% of the cases were reported among age group 15 – 44 years; Male account for 52% (2, 853 cases) while female accounted 48% (2, 598 cases). Overall 47% of all cases are from outside the Camp

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

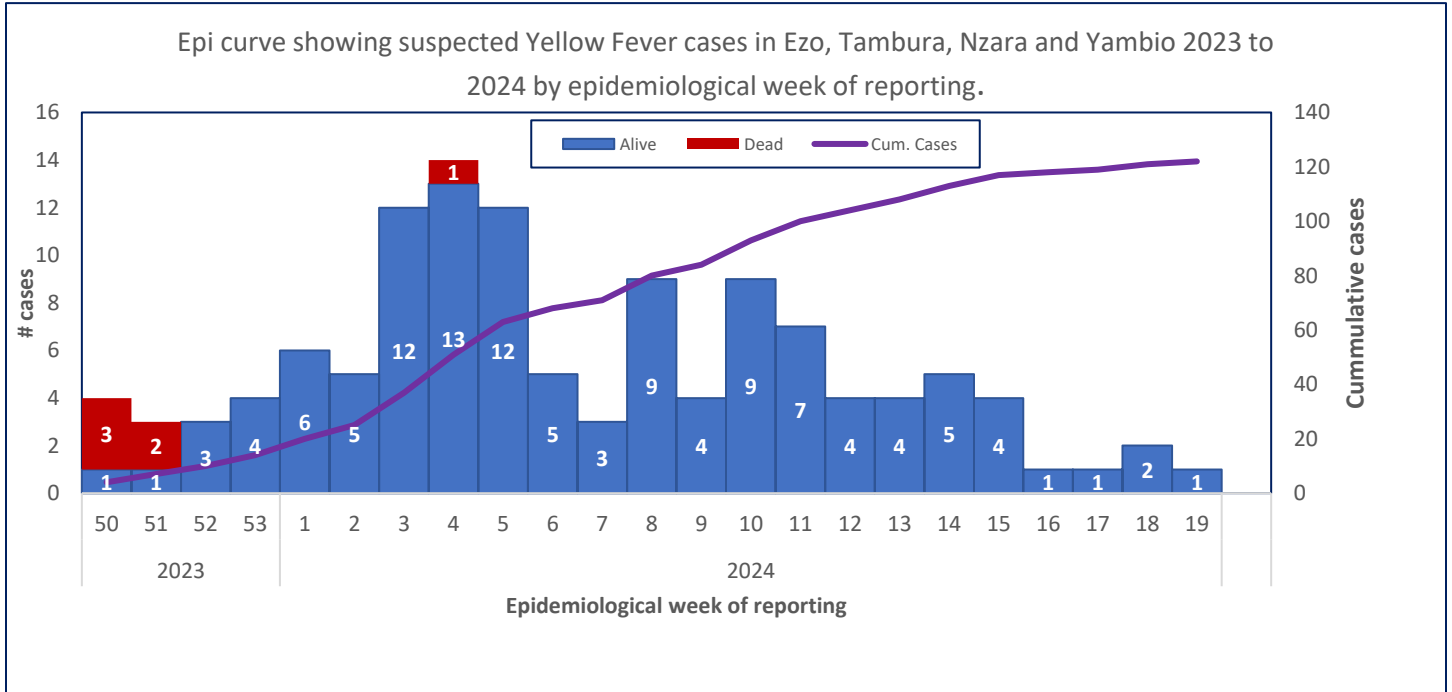


Hemorrhagic Fever

1- Yellow fever Outbreak

In Week 19 two (2) additional cases were reported from MA 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: Epicurve of Yellow fever outbreak in Western Equatoria State



Other Events

Sudan crisis: In Week 19, 9,313 individuals crossed into South Sudan from at least 21 different Points of Entry (PoEs). Since the start of the influx, at least 674,475 individuals have crossed from 19 different nationalities. Of this number, 78.4% (528,923) are South Sudanese returnees. 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 otherservices, 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. The El Nino Southern Oscillation predictions in 2024 indicate that there is now a 69% chance of a transition to La Niña by July-September, and 85% chance by the end of the year. The expected flooding is been projected to affect at least 532 health facilities in addition to very high risks of Cholera & other diarrheal diseases, malaria, malnutrition, Dengue, Measles, Rift Valley Fever, and other vaccine preventable diseases.

Next step

- Conduct Supportive supervision and mentoring of state and county surveillance officers. Special attention will be given to counties with the lowest alerts verifications.
- Strengthening active surveillance across the counties boarding 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
- Develop a preparedness and response plan for possible severe flooding situation in South Sudan

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

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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

