



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 14
01 -07 April 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 14 of 2024, the IDSR reporting timeliness and completeness were 77% and 88%, respectively, and IDSR performance at the EWARN mobile sites was 93%.
- Completeness of IDSR reporting at private Health facilities in Juba and Wau was only at 60%
- A total of 173 alerts have been triggered in the EWARS system, with 72% (124/173) verified in the system. Most of the alerts were for Measles (26%), Guinea Worm (17%), ABD (15%), Malaria (12%)
- State Ministry of Health in Warrap state declared a Hepatitis E outbreak in Twic County following confirmation of the sample by PCR at the National Public Health Laboratory
- In this week 828 suspected measles cases, 140 (16.9%) are lab-confirmed, 224 (27.1%) epi-linked, 391 (47.2%) clinically compatible, and 73 (8.8%) discarded

- A total of **596** suspected cases of Hepatitis E including **22** deaths have been reported from week 1 2023 to week 14, 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 14 were at 77% and 88%, respectively

Table 1: Timeliness and completeness of IDSR reporting by State for week 14, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Current reporting period		Cumulative since year start (2024 level)	
			Timeliness wk14	Completeness wk14	Timeliness	Completeness
Lakes	112	112	97%	100%	88%	99%
NBGZ	89	68	63%	76%	85%	91%
Unity	84	80	90%	95%	91%	100%
WBGZ	81	60	28%	74%	80%	81%
WES	183	175	95%	96%	89%	98%
Jonglei	119	106	87%	89%	87%	90%
Warrap	111	102	86%	92%	84%	92%
EES	107	104	79%	97%	87%	95%
RAA	16	16	31%	100%	56%	78%
CES	122	82	65%	67%	92%	95%
AAA	17	17	100%	100%	63%	68%
Upper Nile	141	115	62%	82%	65%	80%
GPAA	15	15	100%	100%	98%	99%
Total	1196	1051	77%	88%	86%	95%

Figure 1: Completeness of IDSR reporting by county for week 14, 2024

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 14	% Of Completeness in week 14	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 14	% Of Completeness in week 14
IMC	4	100%	100%	Kator	3	0%	0%
SSHCO	1	100%	100%	Marial Baai	1	100%	100%
SMC	1	100%	100%	Northern Bari	1	100%	100%
SCI	2	50%	50%	Rajaf	3	100%	100%
HFO	3	100%	100%	Muniki	12	0%	0%
WVI	2	100%	100%	Wau South	20	95%	95%
CIDO	1	100%	100%	Wau North	12	83%	83%
TOTAL	14	93%	93%	Juba	10	30%	30%
				TOTAL	62	60%	60%

Epidemic alerts

A total of 173 alerts have been triggered in the EWARS system, with 72% (124/173) verified in the system. The majority of the alerts were for Measles (26%), Guinea Worm (17%), ABD (15%), Malaria (12%). It is important to note that there were significant alerts for, AWD, EBS, ARI and AJS. This week, Eastern Equatoria, Central Equatoria, Northern Bahr El Ghazal, Western Equatoria, AAA, and Lake states show high alert verification rates. See Table 3 below for more details.

Table 3: Summary alerts triggered week 14; 2024

Admin Area	Acute jaundice syndrome			Acute Respiratory Infections (ARI)			Acute Watery Diarrhoea			Bloody Diarrhoea			Covid-19			EBS			Guinea Worm			Malaria (Confirmed)			Measles			Neonatal Tetanus			Relapsing Fever			Yellow Fever			Grand Total			Percentage s			
	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	#R	#V	#P	%V	%P		
AAA	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	100%	0%			
CES	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	0	100%	0%			
EES	0	0	0	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	2	2	0	2	2	0	0	0	0	0	0	0	0	0	0	7	7	0	100%	0%			
Jonglei	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	1	3	0	3	0	0	0	0	0	0	0	0	0	9	0	9	0%	100%			
Lakes	1	1	0	2	2	0	0	0	0	0	0	0	0	0	5	5	0	19	9	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	28	28	0	100%	0%				
NBGZ	0	0	0	2	2	0	1	1	0	4	4	0	0	0	0	0	0	0	0	0	1	1	0	7	7	0	0	0	0	0	0	0	0	0	0	0	15	15	0	100%	0%		
RAA	0	0	0	0	0	0	1	0	1	1	0	1	1	0	1	0	1	0	0	0	0	0	0	2	0	2	1	1	0	0	0	0	0	0	0	7	2	5	29%	71%			
Unity	3	2	1	5	3	2	1	0	1	8	3	5	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19	9	0	47%	53%			
Upper Nile	1	0	1	0	0	0	3	0	3	4	3	1	0	0	0	0	0	0	0	0	1	1	0	4	2	2	0	0	0	0	0	0	0	0	0	0	13	6	7	46%	54%		
Warrap	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	0	2	6	4	2	0	0	0	9	1	8	0	0	0	0	0	0	0	0	0	19	5	4	26%	74%			
WBGZ	0	0	0	0	0	0	0	0	0	1	1	0	0	0	4	3	1	2	0	2	2	1	1	2	2	0	0	0	0	0	0	0	0	0	0	11	7	4	64%	36%			
WES	0	0	0	0	0	0	10	10	0	4	4	0	0	0	0	0	0	0	0	0	10	10	0	15	15	0	0	0	0	0	0	0	0	0	0	1	1	0	40	40	0	100%	0%
Grand Total	7	3	4	11	9	2	18	13	5	26	17	9	1	1	0	12	8	4	30	2	7	20	18	2	45	30	5	1	1	0	1	0	1	1	1	0	173	124	49	72%	28%		

#R= reported

#V= verified
 # =Pending

Weekly Update on Indicator-Based Surveillance (Week 14)

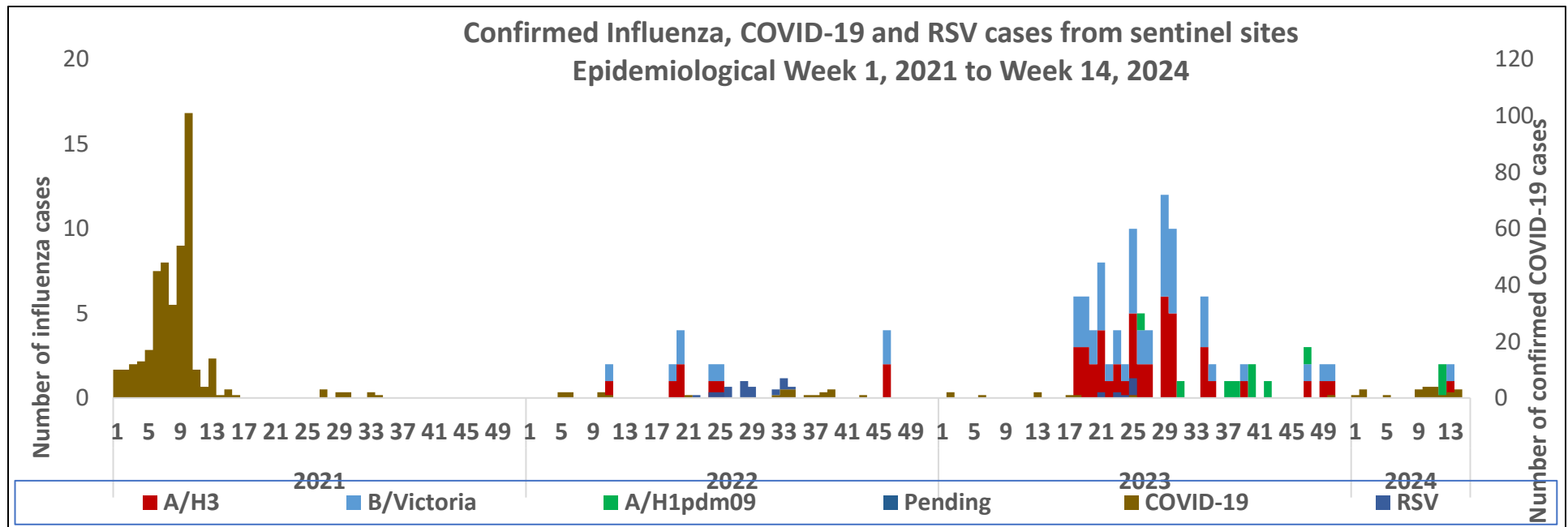
Indicator-based surveillance is implemented in South Sudan through the EWARS platform according to the IDSR 3rd guidelines, where approximately 59 priority diseases and public health events are regularly monitored and reported from health facilities across the country.

Influenza Surveillance

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

During Epidemiological Weeks 1 to 14 in 2024, a total of 416 ILI/SARI samples were collected; 390 tested negative for all pathogens, (22) were positive for COVID-19, zero (1) for Influenza Type A (H3), one (1) for Influenza Type B (Victoria), two (2) for Influenza A/(H1N1) pdm09 and zero (0) for RSV.

Figure 2: Indicator-Based Surveillance (IBS) Influenza Surveillance



Four designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital and, Al Sabah Children’s Hospital, Rumbek State Hospital & Juba Military Hospital) are collecting epidemiological data and samples from ILI/SARI cases.

During Epi weeks 1 to 9 in 2024, a total of 225 ILI/SARI samples were collected; 216 tested negatives for all pathogens, eight (8) were positive for COVID-19, zero (0) for Influenza Type A (H3), one (1) for Influenza Type B (Victoria), zero (0) for Influenza A/(H1N1) pdm09 and zero (0) for RSV.

Ongoing confirmed epidemics

Table 4 below lists ongoing outbreaks

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>									
Hepatitis E	Twic	Feb 2024	0	2	1	ongoing	-	Ongoing	Ongoing
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	7	71	3 Laboratory confirmed	Ongoing	Done in 3 counties (Yambio, Nzara and Tambura)	Ongoing	Ongoing
Measles	69 counties	2022		12,399	828	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Fangak	2023		596		ongoing	ongoing	ongoing	ongoing
cVDPV	Yambio and Juba	19/Dec 2023	0	3	2	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	48	481	-	ongoing	Done in 2021/22	ongoing	ongoing

Ongoing Confirmed Outbreaks

Since last year, South Sudan has been witnessing several emergencies across the country based on the data provided by the states and EWARS system, several ongoing disease outbreaks have been reported in most of the Counties ranging from measles, polio and hepatitis E virus and others

South Sudan: Ongoing Disease Outbreak as of March 2024

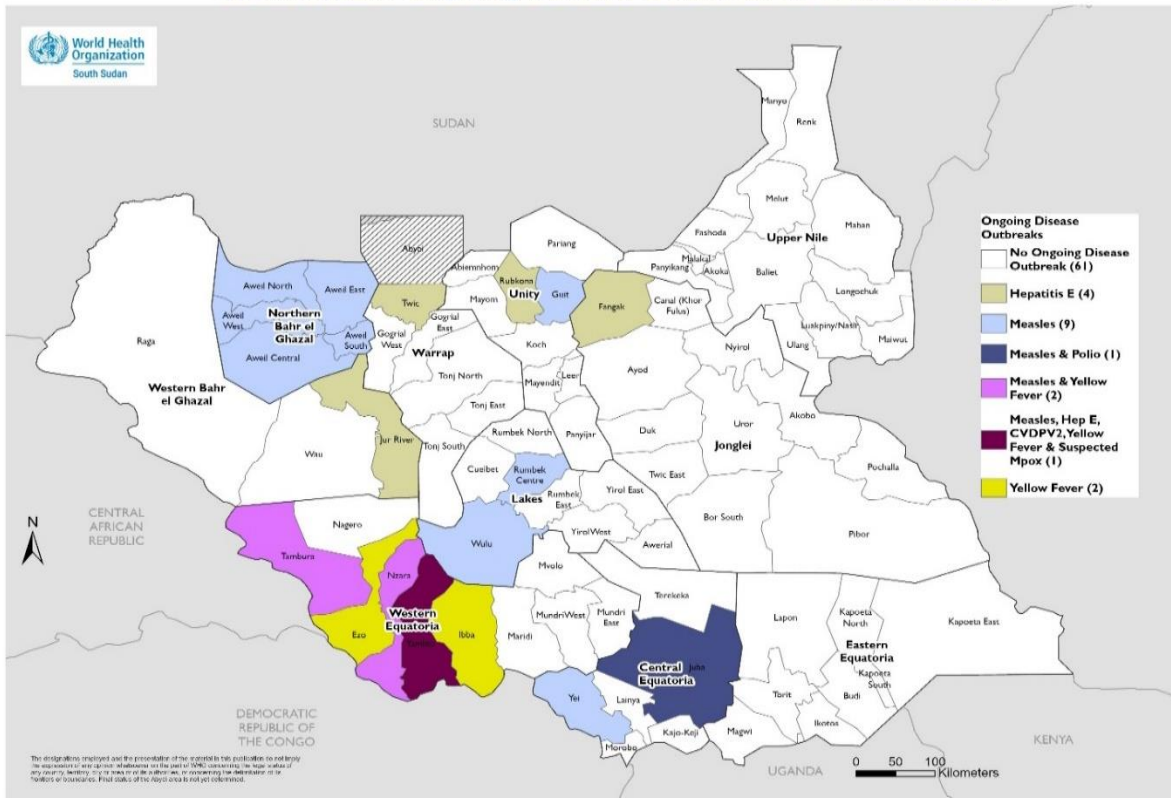


Figure 3: Map showing ongoing disease outbreaks across the Country

Response activities for ongoing outbreaks

Vaccine-preventable disease

1- Measles outbreak

Measles cases have been reported from different counties throughout 2023-2024. The observed peaks are driven by other counties that experienced a surge in measles cases at various times. The Sudan crisis started in week 14 of 2023, with the influx of returnees and refugees since then—the nationwide MFUPC.

Out of the 828 suspected measles cases, 140 (16.9%) are lab-confirmed, 224 (27.1%) epi-linked, 391 (47.2%) clinically compatible, and 73 (8.8%) discarded cases have been reported as of epidemiological week 14, 2024. A total of 14 rubella-positive cases from the discarded (negative measles cases

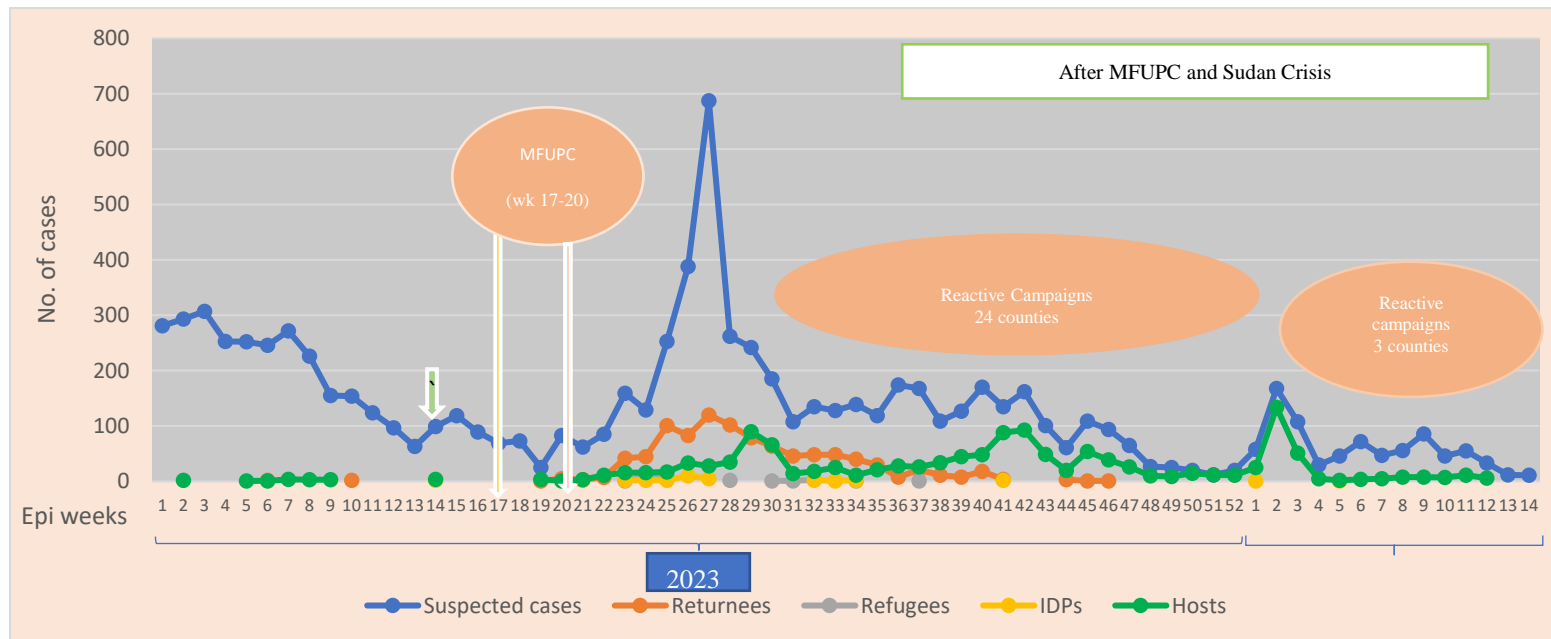


Figure4: suspected measles cases in epi week 14

Acute Jaundice Syndrome

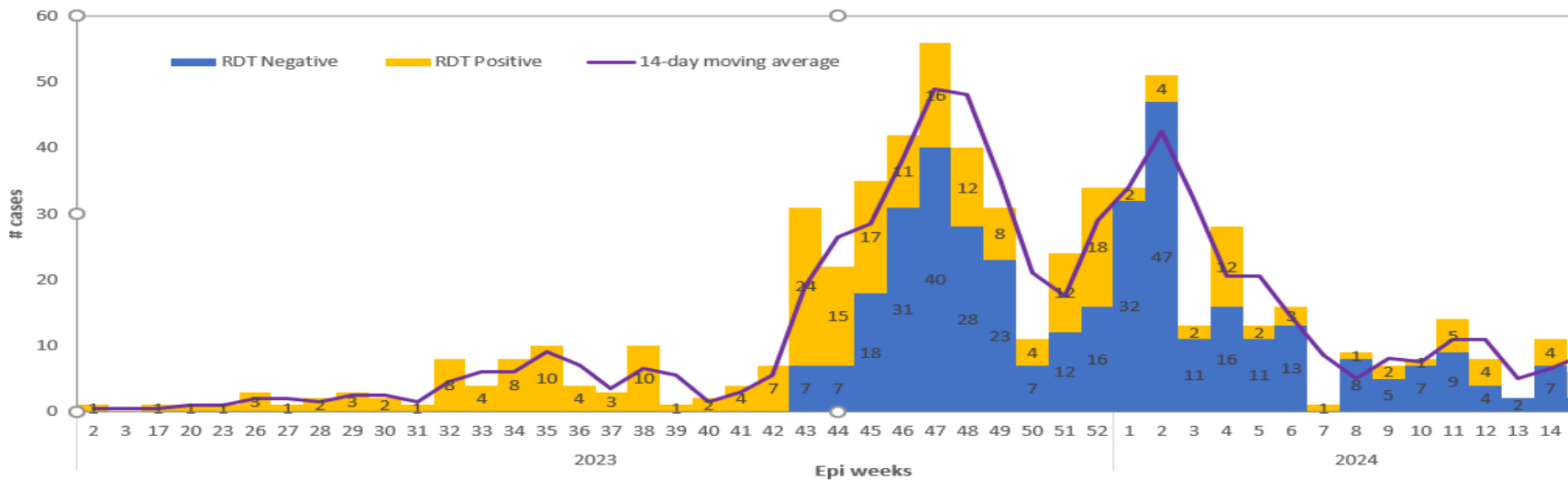
Hepatitis E Virus (HEV) cases have been consistently reported in South Sudan since 2018, with recurrent outbreaks in Bentiu, Rubkona County, in the Unity State, where the Bentiu IDP camp with around 170,000 individuals is located, and Fangak County In Jonglei State. On April 2023, the Ministry of Health of South Sudan declared an outbreak of the hepatitis E Virus in Wau City,

1- Hepatitis E in Fangak County

A total of **596** suspected cases of Hepatitis E including **22** deaths have been reported from week 1 2023 to week 14, 2024. The majority of the cases were reported among the age group 15 years and above, In terms of sex, Females account for **66%** while Males account for **33%** of the cases. The pick of the outbreak was reached in week 47, 2023, and in week 2, 2024 respectively.

Response activities were initiated with partners including WASH intervention through community engagement. The vaccination program using Hecolin has been concluded, with 5,820 and 8,585 persons vaccinated for the first and second rounds respectively and plans are underway to conduct the second and third rounds of vaccination campaigns in Fangak

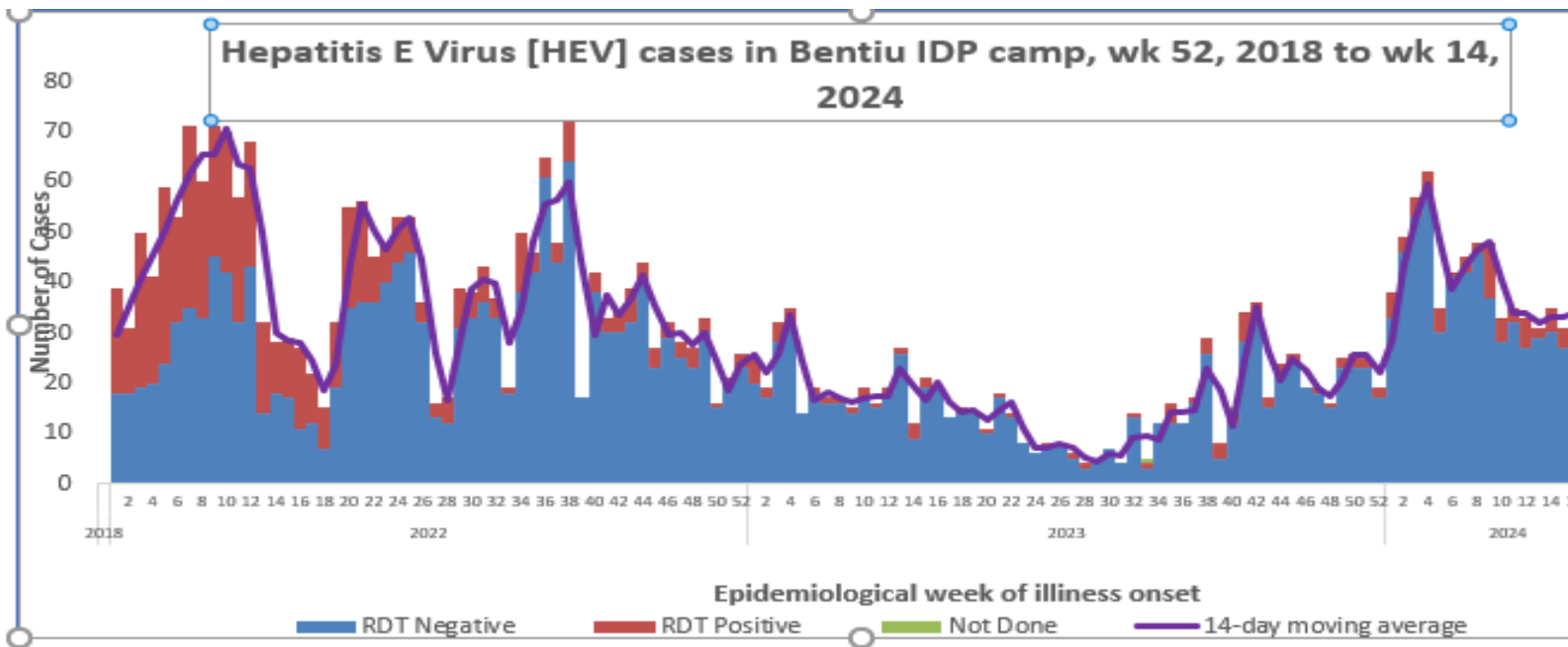
Epi curve showing Hepatitis E Virus [HEV] cases in Fangak county, wk 1, 2023 to wk 14, 2024.



Fuger5: hepatitis E virus cases in Fangak County week 14

2- Hepatitis E In Bentiu IDP Camp

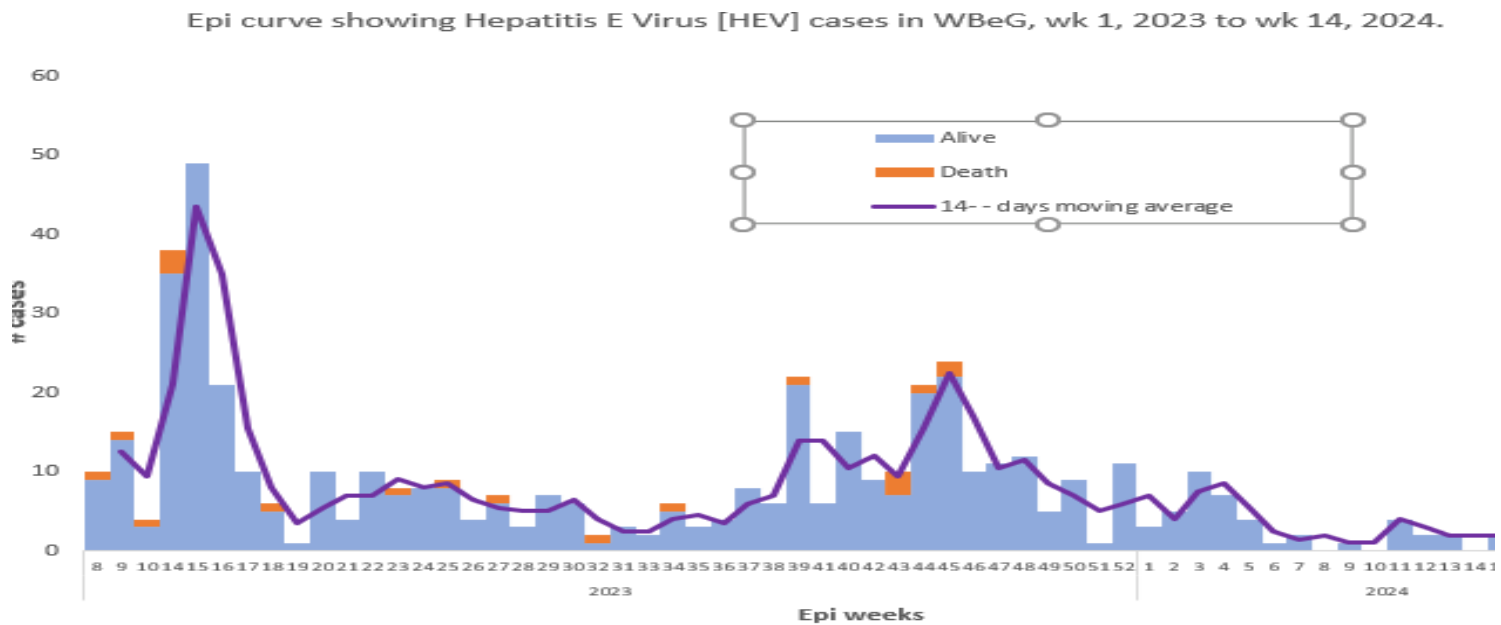
In this week of 14, 2024 a total of 31 new cases were reported including 4 RDT positive and zero death, this makes a cumulative total number of 5300 cases including 27 deaths reported since the outbreak began in 2018; 43% of the cases were reported among the age group 15 – 44 years; In terms of sex, Male's account for 52% (2, 768 cases) while female accounted 48% (2, 501 cases).



Fuger6: hepatitis E virus cases in Bentiu IDP camp week 14

3- Hepatitis E in Western Bahr EL-Ghazal State

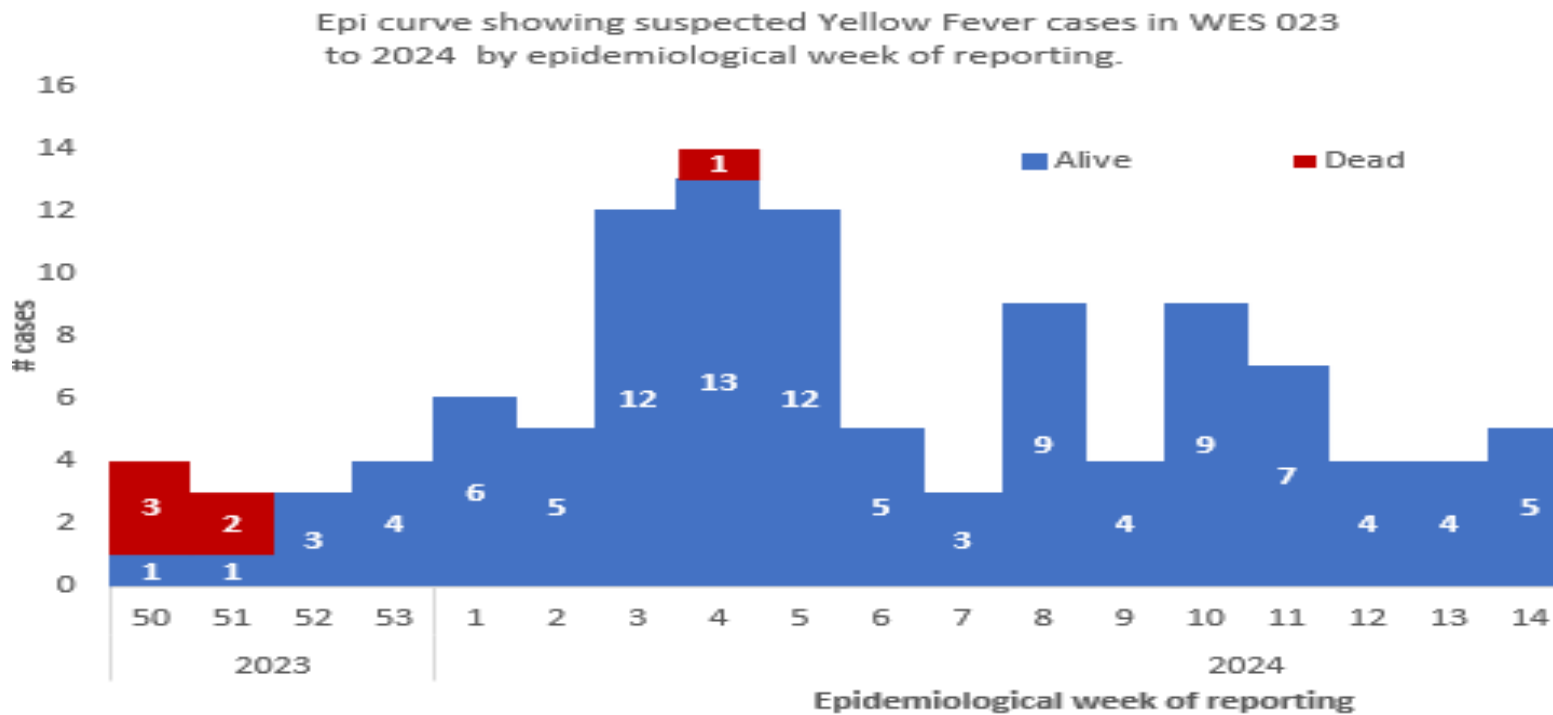
A total of 481 cases including 19 deaths have been reported from week 8, 2023 to week 14, 2024 most of the cases were reported by Wau Hospital. Most of the cases were reported among the age group 15 years and above; In terms of the distribution of the cases by gender; Males account for 64% (308) while females account for 36% (173). Although there has been a decrease in the weekly caseload since the beginning of 2024, there is still an ongoing need for interventions at both the facility and community levels to mitigate this outbreak



Fuger7: hepatitis E virus cases in WBeG week 14

4- Yellow Fever in Yambio

A total of one hundred and fifteen (113) Yellow Fever cases (110 suspected and 3 confirmed) were reported from seven counties in Western Equatoria state: Yambio (56), Tambura (25), Nzara (11), Ezo (11), Ibba (04), Maridi (04) and Mvolo (02) Counties. In Epi week 15 Five (05) new suspected Yellow Fever cases were reported. The suspected cases were reported from Yambio (3), Tambura (1), and Mvolo (1) counties. Suspected 6 deaths were reported, giving a case fatality ratio of 5.2%.



Fuger8: suspected Yellow Fever Cases in WES week 14

Other events

Sudan crisis: South Sudan has received Cumulatively 568,397 individuals since 16th April 2023 who have entered South Sudan at 22 POEs. More than 449,743 (79.1%) returnees and 118,654 (20.9%) refugees of these arrivals are South Sudan returnees; most of them are arriving through Joda in Renk County, and the majority prefer Upper Nile as their destination state. 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 with the use of rapid diagnostic tests (RDT). Of the 85,391 individuals that crossed through the Wunthou point of entry since 19 December 2023, 16,889 were screened forAWD at the public health desk. 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.

Food Insecurity: An estimated 7.8 million people are estimated to be in Crisis (IPC Phase 3) or worse acute food insecurity, with 43,000 people in Catastrophe (IPC Phase 5) in Akobo, Canal/Pigi and Fangak counties of Jonglei State; and Leer and Mayendit counties of Unity State between April and July. In March, several hunger-related deaths were reported in Kapoeta East, which triggered an IRNA and despite varying causes of death, 59% of assessed communities reportedly did not have access to adequate food.

Next step

- 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
- IDSR supportive supervision activities to be conducted
- 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 outbreak

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

