



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 11
11 -17 March 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 11 of 2024, the IDSR reporting timeliness and completeness were 84% and 95%, respectively, and IDSR performance at the EWARNS mobile sites was 100%.
- Completeness of IDSR reporting at private Health facilities in Juba and Wau was only at 99%
- A total of 158 alerts have been triggered in the EWARS system, with 65% (158/102) verified in the system. Most of the alerts were for Measles (19%), ABD (17%), AWD (16%), Guinea Worm (16%)
- As of Epi week11, 2024 a total of 452 suspected measles cases were reported, with 126(27.9%) lab-confirmed, 4 deaths and a case fatality rate of 0.9.
- Other emergencies include circulating Vaccine Derived Polio Virus type 2 (cVDPV2) in Yambio and Juba counties and Upper Nile State, Hepatitis E in Twic, Fangak, Rubkona (Bentiu IDP camp) and Wau counties, the Sudan crisis, and ongoing food insecurity.

Surveillance system performance

Timeliness and Completeness of IDSR in week 11, 2024

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 11 were at 84% and 95%, respectively.

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 11	% of Completeness in week 11	Payam	# of Reporting Private Health Facilities	% of Timeliness in week 11	% of Completeness in week 11
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	100%	100%	Rajaf	3	100%	100%
HFO	3	100%	100%	Muniki	12	100%	100%
WVI	2	100%	100%	Wau South	20	90%	95%
CIDO	1	100%	100%	Wau North	12	75%	100%
SP	4	100%	100%	Juba	10	100%	100%
TOTAL	18	100%	100%	TOTAL	62	96%	99%

Epidemic alerts

A total of 158 alerts have been triggered in the EWARS system, with 65% (102/158) verified in the system. The majority of the alerts were for Measles (19%), ABD (17%), AWD (16%), Guinea Worm (16%). It is important to note that there were significant alerts for, Malaria, EBS, ARI and AJS. This week, Eastern Equatoria, Central Equatoria, Northern Bahr El Ghazal, Western Equatoria Western Bahr El Ghazal and Lake states show high alert verification rates. See Table 3 below for more details.

Table 3: Summary alerts triggered week 10; 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		Grand Total	% Of verification	
	# 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0%
CES	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	4	3	75%
EES	0	0	2	2	3	3	1	1	4	4	0	0	0	0	1	1	0	0	0	0	0	0	11	11	100%
Jonglei	1	0	2	0	2	0	0	0	3	0	0	0	1	0	0	0	3	0	2	0	1	0	15	0	0%
Lakes	0	0	3	3	1	1	0	0	4	4	0	0	0	0	2	2	2	2	1	1	0	0	31	31	100%
NBGZ	0	0	3	3	4	4	1	1	3	3	0	0	0	0	0	0	0	0	0	0	5	5	16	16	100%
RAA	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0%
Unity	2	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	8	0	0%
Upper Nile	0	0	3	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	0	12	0	0%
Warra p	0	0	0	0	2	0	0	0	3	2	0	0	0	0	0	0	1	1	1	0	5	0	12	3	25%
WBGZ	1	1	1	1	1	1	0	0	2	2	0	0	0	0	1	1	2	2	1	1	2	2	11	11	100%
WES	0	0	2	2	7	6	0	0	3	1	0	0	0	0	0	0	0	0	10	9	1	3	35	27	77%

Grand Total	4	1	18	11	25	17	2	2	27	16	1	1	1	0	6	4	2	23	18	11	3	16	158	102	65%
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#R= reported
 #V= verified

Meningitis Alert in Aweil Northern Bahr el Ghazal

On March 10th, 2024, the National Ministry of Health in South Sudan received an alert about a suspected meningitis outbreak in Aweil County, Northern Bahr el Ghazal state. The State Surveillance Officer for Northern Bahr-El-Ghazel submitted a list containing 25 suspected cases of meningitis, out of which 4 resulted in deaths (CFR 16%) as of March 11th, 2024. Out of the 15 samples collected from the case-patients, 7 tested positive for meningitis (5 for Neisseria Meningitidis serogroup Y and W, and 2 for Streptococcus Pneumoniae). Three additional samples have been collected from suspected case-patients and are scheduled to be shipped to Juba on March 12th, 2024, for further confirmatory testing to guide response actions.

Suspected meningitis in Twic county Warrap State

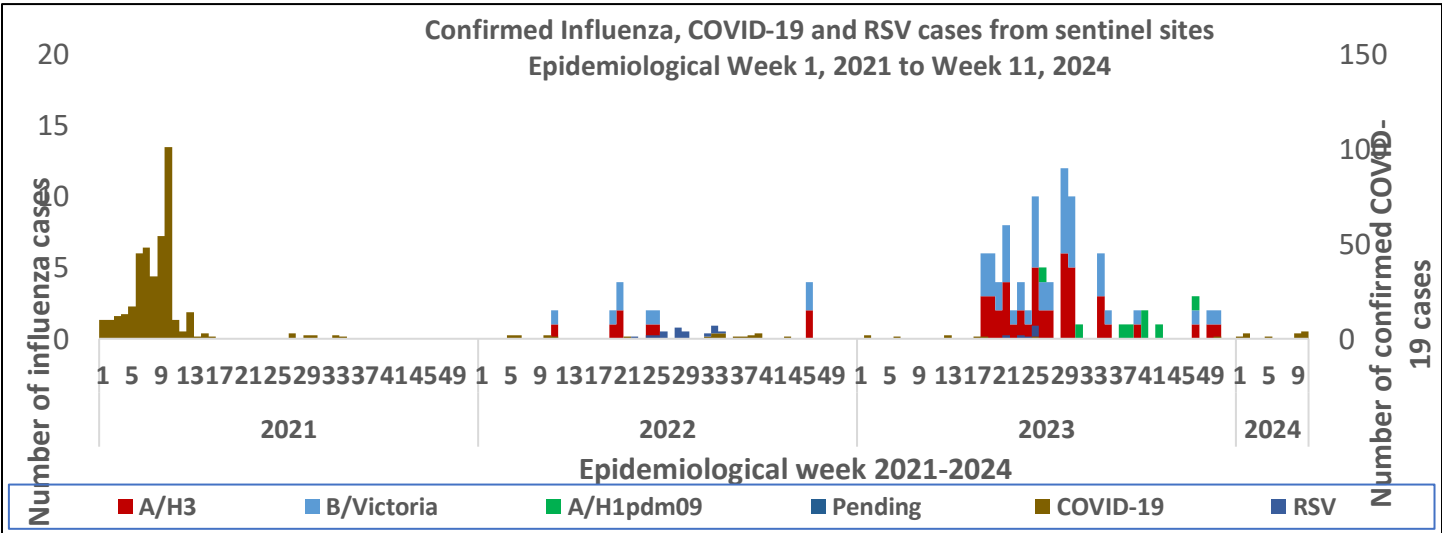
Suspected Meningitis has also been reported from the Mayenabun Primary Health Care Center (PHCC) in Twic County Warrap state. Ten (10) cases have been line-listed and treated, and some were discharged with one mortality (CFR = 10%). All cases were in children 5 years and below except for one. Active case search continues in three Payams of the county, and the National Rapid Response teams have been deployed to conduct further investigation.

Weekly Update on Indicator-Based Surveillance (Week 09)

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 update

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.

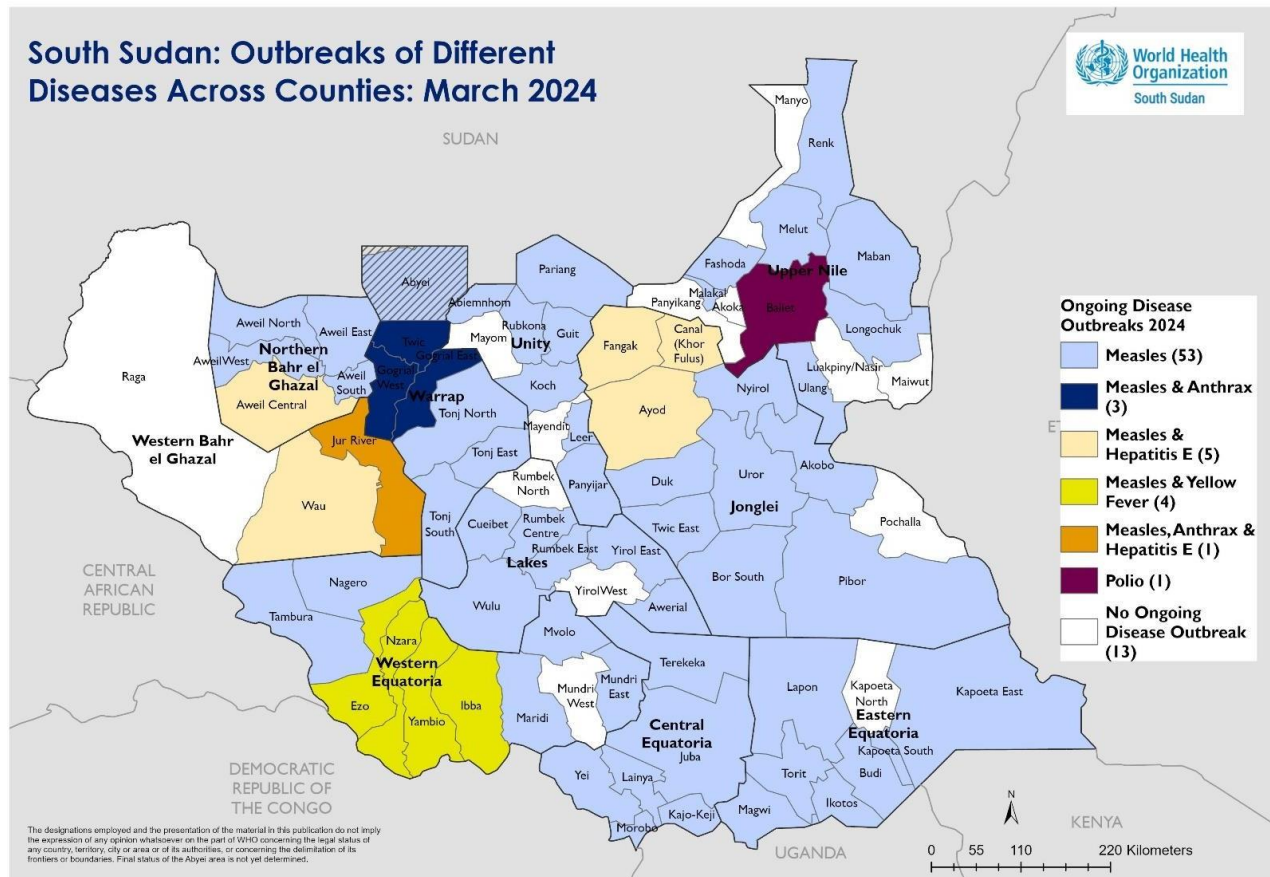
During Epidemiological Weeks 1 to 11 in 2024, a total of 277 ILI/SARI samples have been collected; 260 tested negatives for all pathogens, five (16) were positive for COVID-19, zero (0) for Influenza Type A (H3), one (1) for Influenza Type B (Victoria), zero (0) for Influenza A/(H1N1) pdm09 and zero (0) for RSV.

Ongoing confirmed epidemics

Table 4: Summary of new and ongoing and 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		12,558	1,083		ongoing	ongoing	ongoing	ongoing
Hepatitis E	Fangak	2023		602			ongoing	ongoing	ongoing	ongoing
cVDPV2	Yambio and Juba	19/Dec 2023	0	3	2		ongoing	ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	48				ongoing	Done in 2021/22	ongoing	ongoing

Figure 3: Map showing ongoing disease outbreak across the country



Hepatitis E Outbreak in Twic

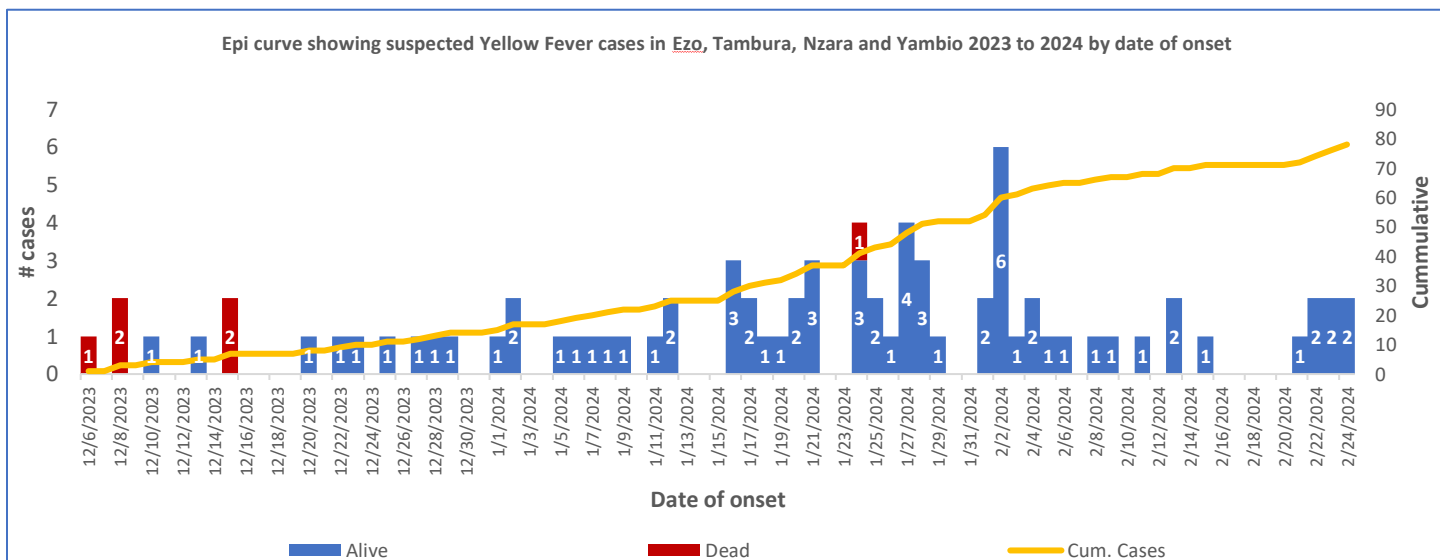
On 28th February 2024, the SMOH declared an HEV outbreak after one of the two samples sent to the NPHL in Juba tested positive for the virus (26th Feb). The county team is conducting an active case search and raising community awareness about HEV. MSF is supporting the Mayenabun PHCC, which received the initial samples and is managing cases. Fortunately, there have been no deaths and no new cases have been reported so far.

Yellow Fever Outbreak in Yambio

Five (05) new suspected Yellow Fever cases reported in the last 07 days). The suspected cases were reported from Tambura (2), and Ezo (3) counties.

As of 24 March 2024, one hundred and one (101) Yellow Fever cases (98 suspected and 3 confirmed) were reported from six counties in Western Equatoria state: Yambio (46), Tambura (25), Nzara (11), Ezo (11), Ibba (04), and Maridi (04) Counties. No new deaths were reported in the last 07 days. A total of six (06) suspected deaths were reported , giving a case fatality ratio of 6.3%. The Honorable Minister for Health launched a reactive Yellow Fever vaccination campaign on 13 February 2024.

Figure 4: Epi curve showing suspected Yellow Fever cases by date of onset



Response update

A total of 288,068 individuals , representing 71% of the targeted population, were vaccinated in phase 1 of the YF campaign. For phase 2 of the YF vaccination campaign, a total of 104,993 individuals are vaccinated so far, representing 52% of the target population. Response activities (coordination, surveillance, laboratory, case management, risk communication and community engagement, vaccination, infection prevention and control, logistics support, etc.) are being reinforced by State Ministry of Health and supported by partners (WHO, UNICEF, WVI-CGPP, CDTY, CMMB, Red Cross South Sudan, AMREF, JRS, IMA and TRI-SS) Active surveillance are being strengthened in states (Lake and Western Bahr El Ghazal) and counties bordering Tambura and Ibba through guidance from Ministry of Health and State Ministry of Health with support from partners (WHO, UNICEF, CARE, Johanitter, AFOD, and CORDAID).

Measles Update

As of Epi week11, 2024 a total of 452 suspected measles cases were reported, with 126(27.9%) lab-confirmed, 4 deaths

and a case fatality rate of 0.9. cumulatively there were 12558 cases with 238 deaths since 2022

South Sudan implemented a reactive vaccination campaign in 21 counties, vaccinating 1 004 230 children under 15 years old, including 169 316 returnees and refugees. Polio vaccine was integrated into 16 counties, reaching 664 526 children. Partners supported seven counties, and WHO provided financial and technical support to MOH to implement in 14 counties, while UNICEF supplied all the vaccines required. Preparation for the reactive campaign is ongoing in Tonj South, and monitoring of confirmed cases is underway. POE/Temporary transit post-vaccination is ongoing in prioritized sites. Phase II POE activities will restart from March 2024.

Measles cases have been reported from different counties throughout 2023-2024. The observed peaks are driven by different counties that experienced a surge in measles cases at different times. The Sudan crisis started in week 14 of 2023, with the influx of returnees and refugees since then contributing to a higher caseload. The nationwide MFUPC took place from week 17-20, and 24 reactive campaigns were conducted from week 29 to 51 of 2023.

.Figure 5: Epicurve of suspected measles cases against their residential status by Epi week

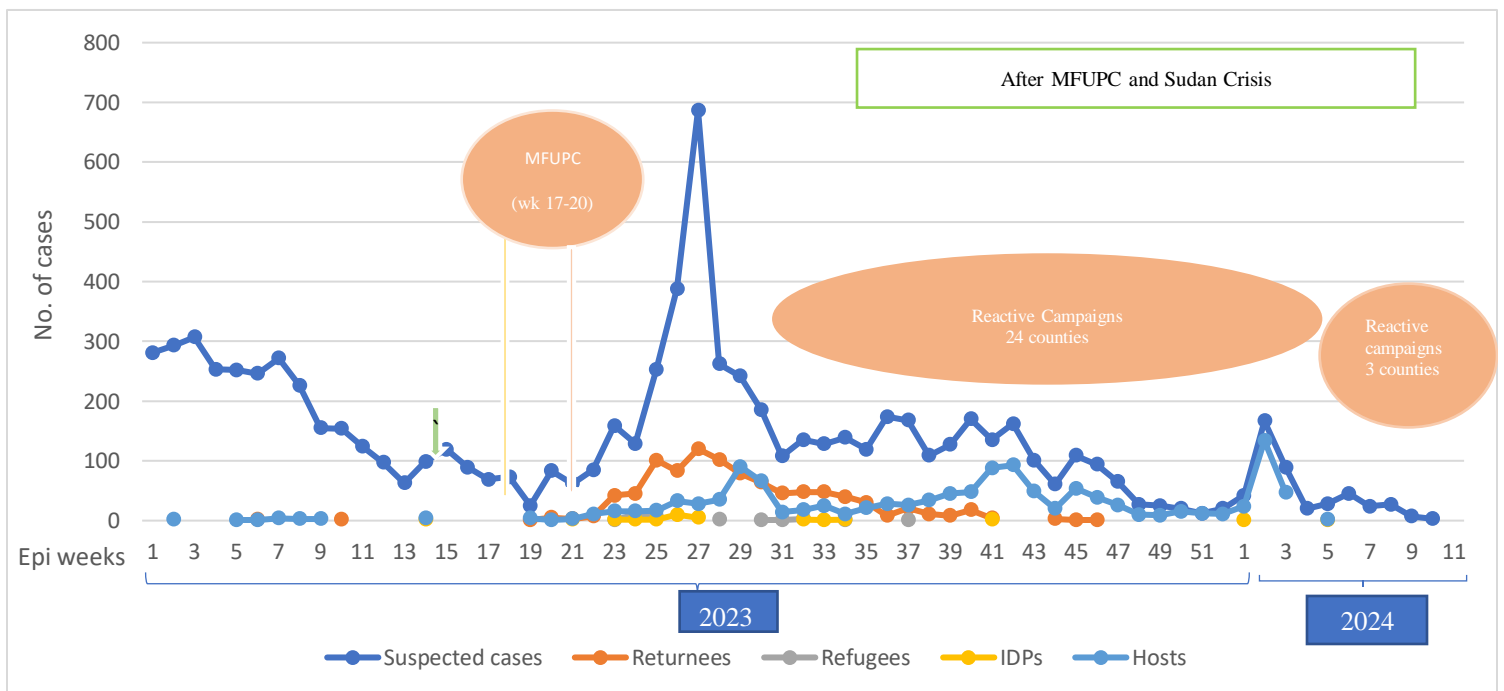


Table 5: Distribution of cases by final classification group in 2024

Final classification	No. of cases	%
Lab confirmed	126	27.9
Epi-linked	78	17.3
Clinically Compatible	184	40.7
Total	388	85.8
Discarded (-ve)	64	14.2
Grand Total	452	100.0

Table 6: Distribution of cases by age group in 2024

Age group in years	No. of cases	%	Deaths	%
<1	122	27.0	1	0.8
1-4	177	39.2	2	1.1
5-9	64	14.2	1	1.6
10-14	43	9.5	0	0.0

15+	46	10.2	0	00
Total	452	100.0	4	0.9

Out of the 429 suspected measles cases, 118 (25.1%) are lab-confirmed, 78 (18.2%) epi-linked, 184 (42.9%) clinically compatible, and 51 (11.9%) discarded cases have been reported as of epidemiological week 7, 2024. A total of 7 rubella-positive cases were identified from among the discarded (negative) measles cases.

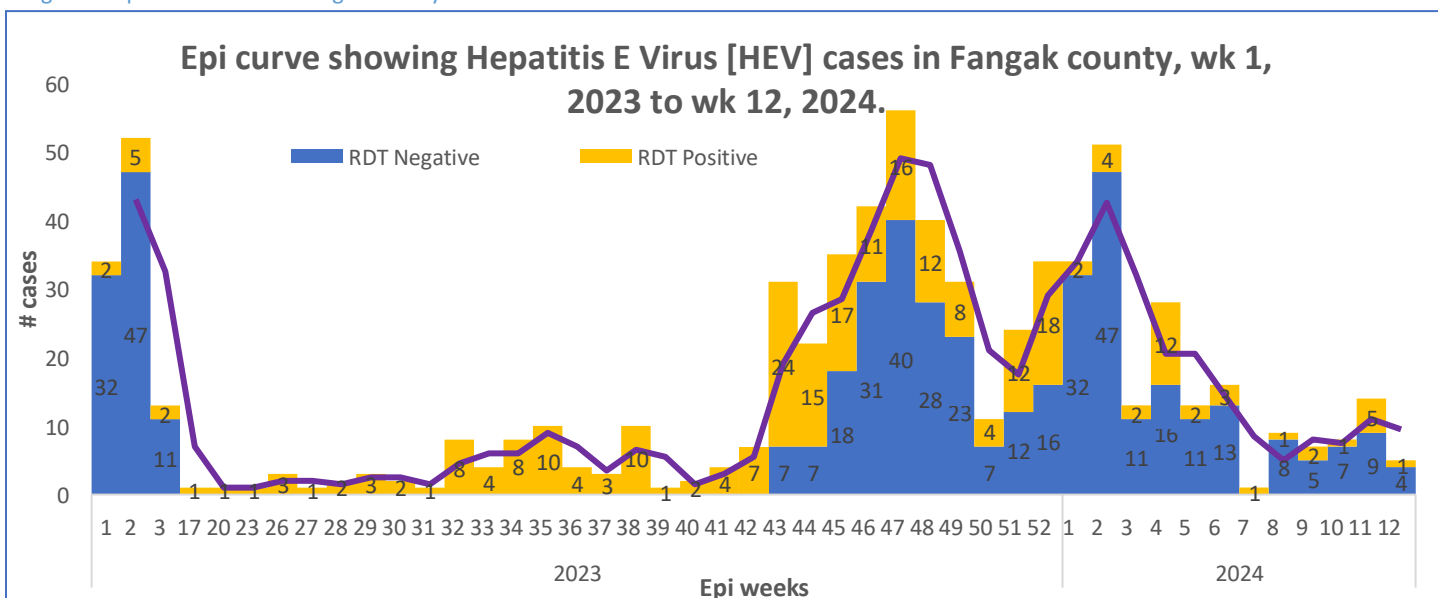
Response activities (measles)

South Sudan implemented a vaccination campaign in 21 counties, vaccinating 1,004,230 children under 15 years old, including 169,316 returnees and refugees. Polio vaccine was integrated into 16 counties, reaching 664,526 children. Partners supported seven counties, and WHO provided financial and technical support to MOH to implement in 14 counties, while UNICEF supplied all the vaccines required. Preparation for the reactive campaign is ongoing in Tonj South, and monitoring of confirmed cases is underway. POE/Temporary transit post vaccination is ongoing in prioritized sites. Phase II POE activities will restart from March 2024.

Hepatitis E Virus in Fangak county Jonglei State

A total of 602 cases, including 22 deaths, have been reported from week 1 of 2023, to week 12 of 2024. Most cases were reported among the age group 15 years and above; females accounted for 66% (398) while Males accounted for 33% (204). Three outbreak peaks were observed in weeks 2 and 47 of 2023 and a similar peak in week 2 of 2024, with an RDT positivity rate of more than 60%.

Figure 6: Epicurve of HEV in Fangak County



Response activities include WASH intervention through community engagement. The vaccination using Hecolin has been concluded, with 5820 and 8585 persons vaccinated for first and second round respectively and plans are underway to conduct the second and third rounds of vaccination campaigns in Fangak

Hepatitis E outbreak in Bentiu IDP Camp in Unity State

A total of 5203 cases, including 27 deaths reported since the outbreak began in 2018; there are significant peaks since 2021, with a peak in week 2. A total of 33 new cases and zero deaths were reported in week

12, 2024; most of the total cases seen are from outside the IDP camp (47%), with 42% of the cases reported among the age group 15 – 44 years. Males account for 51% (2 735 cases), while females account for 49% (2 468 cases).

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

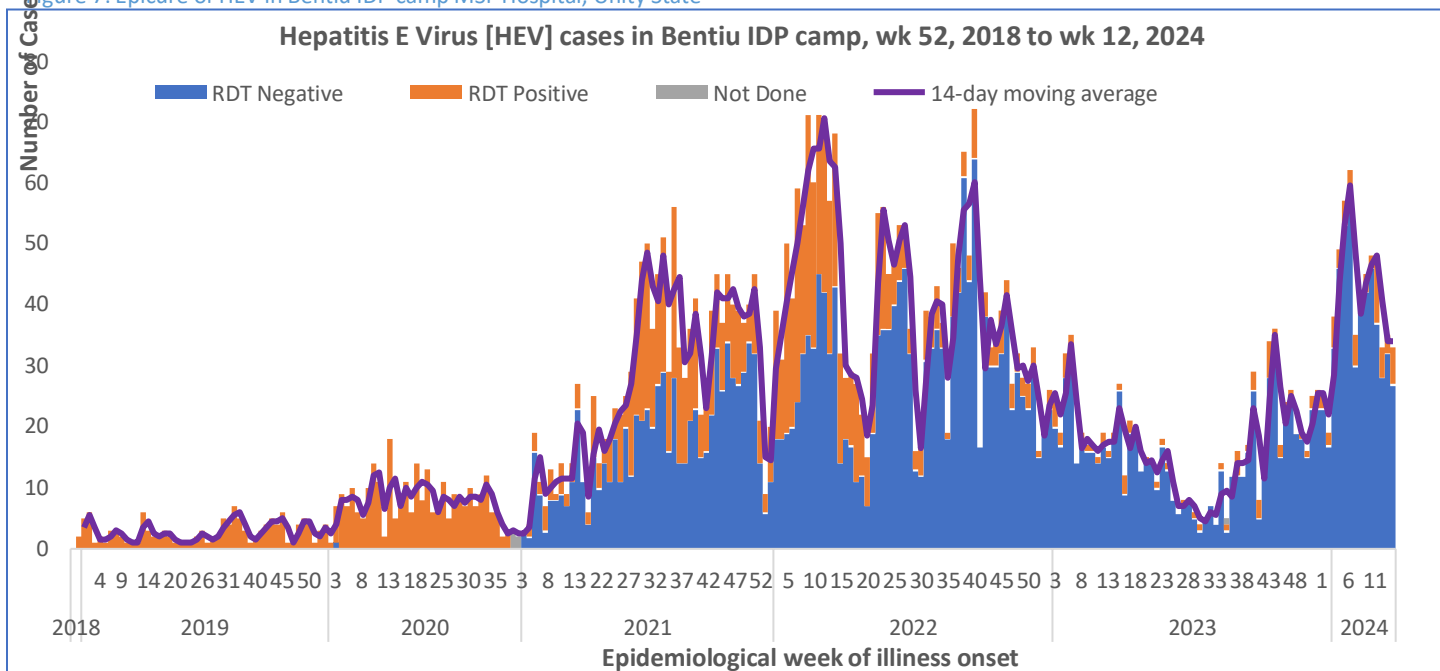
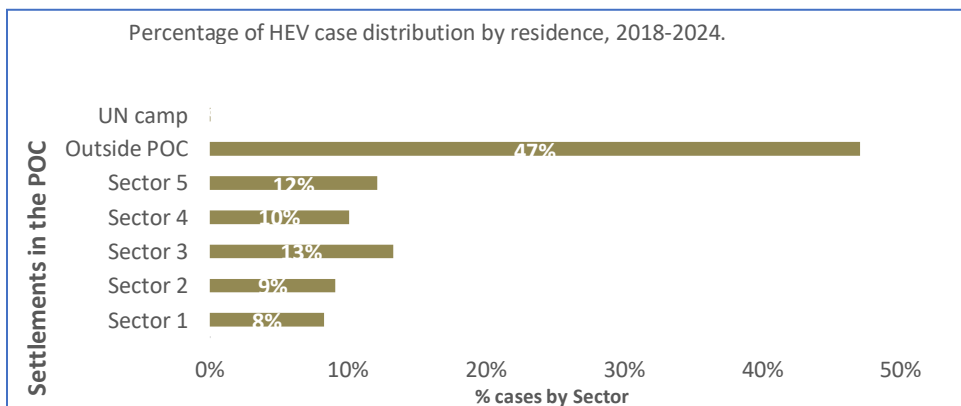


Figure 8: Distribution of HEV by Residence in Bentiu IDP camp MSF Hospital, Unity State



Vaccination Response in 2022 (Hepatitis E Virus in Bentiu)

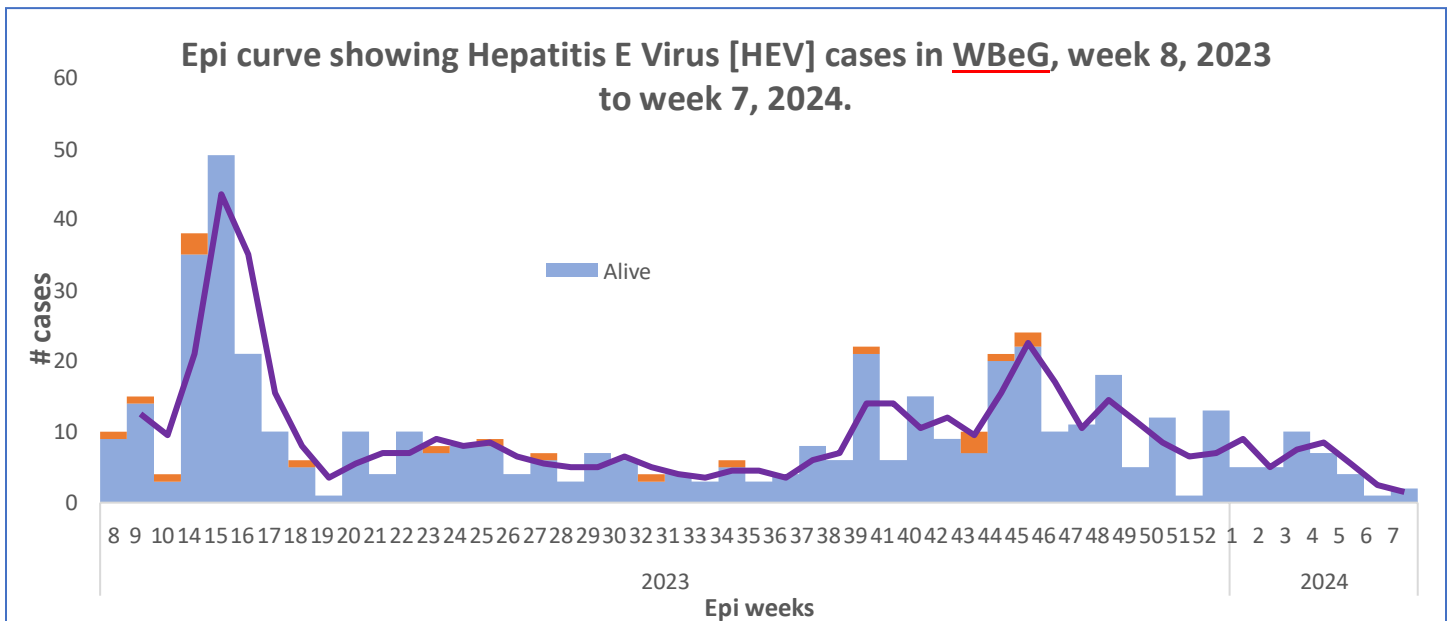
The HEV vaccination campaign was conducted in March 2022; first-round coverage was 91%, and the second round was 82% in Bentiu IDP camp were vaccinated aged 16-40 years (incl. pregnant women) Ongoing case management in the camp hospital supported by MSF. There is a need to continue to engage in community and risk communication to support behavioral changes to meet the WASH investment done by WASH partners.

Hepatitis E Updates in Wau, Western Bahr el Ghazal

Last year, on April 14, 2023, the national Ministry of Health declared an outbreak of Hepatitis E Virus (HEV) disease in Wau Western Bahr el Ghazal state. However, cases have continued to be reported since then. A total of 479 cases, including 19 deaths, have been reported from week 8, 2023, to week 7, 2024.

Most of the cases were reported among people 15 years of age and above, and males accounted for 63% (300), while Females accounted for 37% (179).

Figure 9: Epicurve of HEV in Western Bahr el Ghazal state



Circulating Vaccine Derived Polio Virus type-2 (cVDPV2)

As of April 2024, four AFP laboratory confirmed cases of cVDPV2 were reported from four counties of (Yambio, Juba, Nairand Baliet) in Western Equatoria and Juba in Central Equatoria. Three samples were collected from healthy children in Western Equatoria, and after testing, the cVDPV2 variant was confirmed, which closely matched the index case from West Equatoria State. The most recent case of cVDPV2 was reported from Baliet and Nasir Counties in Upper Nile State. However, there are still samples in the laboratory pending testing. To respond to the nationwide outbreak, a campaign was launched on 27th February 2024, using the nOPV2 vaccine, which has been completed in most counties. And plans are underway for the second round, schedule to start on 16, April 2024

Other events

Sudan crisis: South Sudan has received Cumulatively 629 902 individuals have crossed from at least 19 nationalities 78.9% (496 692) of the influx are South Sudanese returnees since 16th April 2023 who have entered South Sudan. 22 POEs **are currently being monitored, with Joda-Renk accounting for 85% of the reported influx figures**, and the majority prefer Upper Nile as their destination state. 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). Since 19 December 2023, 134,302 individuals have been screened for AWD at the public health desk at the Wunthou point of entry. The distributed kits predominantly include IEHK, Pneumonia, Cholera Investigation, and Treatment Kits (featuring Cholera Investigation Test kits to enhance Cholera Surveillance).

SAM/MC kits and Field Sample Collection Kits. Notably, nine large WHO tents and V-Sat equipment have been delivered to Renk.

Other readiness activities in Renk

Coordination: The Cholera Technical Working Group (TWG) has established a biweekly meeting, which is attended by partners from the WASH, Nutrition, and Health sectors, as well as UN agencies, with WHO serving as the chair.

A comprehensive plan for Cholera Preparedness and Response has been developed, with ongoing coordination meeting taking place between the Health, Nutrition, and WASH Clusters.

Ongoing active case search at all health facilities in the Transit Center, Renk Hospital, and around Renk.

Engaged Behavioral Health Volunteers (BHV) to conduct Community-Based Surveillance (CBS) in payams and boma.

Enhanced health facility reporting through Integrated Disease Surveillance and Response (IDSR), with a recognized improvement in timeliness and completeness.

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. 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 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).
- Support the reactive Yellow Fever vaccination campaigns in the Western Equatoria. Measles reactive vaccination campaigns will also be supported in counties with ongoing outbreaks.
- Support the nationwide Polio (NOPV) for two rounds, with a target of over 3 million children under 5.
- 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>

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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

