Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 51

16 to 22 Dec 2024

This weekly bulletin presents the epidemiological status of priority diseases, events, and conditions under surveillance in South Sudan. The data comes from various actors involved in preparedness and response to public health events in the country. Special thanks to all the health implementing partners and health cluster humanitarian agencies supporting integrated disease surveillance and response.

Key highlights

- In week 51 of 2024, the IDSR reporting timeliness was 70%, and completeness was 85%. There is no increase from reporting week 50 in timeliness, while completeness declined from 87% in week 50 to 85% in week 51, but still maintained consistent improvement in completeness since week 31. Seven (7) states and 3 administrative areas attained completeness of reporting above 80%. Greater Pibor Administrative area, Lakes, Ruweng Administrative area, Unity and Western Equatoria State achieved 100% completeness of reporting. However, only 4 of the 13 states/administrative areas attained timeliness of reporting above 80%.
- At the EWARN mobile reporting sites, the Timeliness and Completeness of IDSR performance were both at 27% and 47% respectively. Timeliness decreased from 47% in week50 to 27% in week 51.
- In week 51, 164 EWARS alerts were triggered, and the proportion of verified alerts decreased from 63% in Week 50 to 59% in Week 51. Most of the alerts were for Guinea Worm (20%), cholera (19%) ARI (18%), AWD (12%), ABD (12%), and Malaria (12%).
- The cholera outbreak is now confirmed in 33 counties, across 7 states and Ruweng Administrative Area. As of 20 January 2025, total of 22 628 cases including 459 deaths giving a CFR of 2.03 percent which is above recommended of less than 1 %
- South Sudan has secured Oral cholera vaccines for reactive vaccination campaigns for several affected counties. OCV Campaign have been conducted in Renk with a coverage of 98.5% and campaigns are ongoing in Juba, Malakal, and Rubkona counties.

Surveillance System Performance

The epidemic alert and response system in South Sudan currently relies mainly on immediate alert notifications and weekly aggregate reporting of cases 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 51 were at 70% and 81%,** respectively, which was an improvement from the attainments from the previous week.

Table 1*: Timeliness and completeness of IDSR reporting by State for week 50 compared to 51 of 2024*

State	Total facilities	Number of facilities reported (Completeness Wk51)	Comparison of the reporting period				Cumulative since year start (2024 level)	
			Timeliness		Completeness			
			Week 51	Week 50	Week 51	Week 50	Timeliness	Completeness
Lakes	112	112	69%	100%	100%	100%	71%	100%
NBGZ	101	73	**59%**	**32%**	72%	66%	60%	80%
Unity	84	84	98%	90%	100%	100%	89%	99%
WBGZ	113	93	**57%**	72%	83%	93%	**46%**	82%
WES	191	199	95%	72%	100%	100%	67%	96%
Jonglei	120	109	83%	93%	91%	93%	74%	87%
Warrap	114	102	71%	**41%**	89%	94%	**51%**	88%
EES	112	73	**40%**	63%	**65%**	83%	**59%**	93%
RAA	16	16	**38%**	75%	100%	100%	**50%**	97%
CES	152	82	**52%**	**59%**	**54%**	**59%**	65%	91%
AAA	17	15	88%	82%	88%	94%	69%	83%
Upper Nile	143	127	72%	73%	89%	85%	**53%**	86%
GPAA	16	16	75%	94%	100%	100%	89%	92%
Total	1291	1101	70%	70%	85%	88%	63%	90%

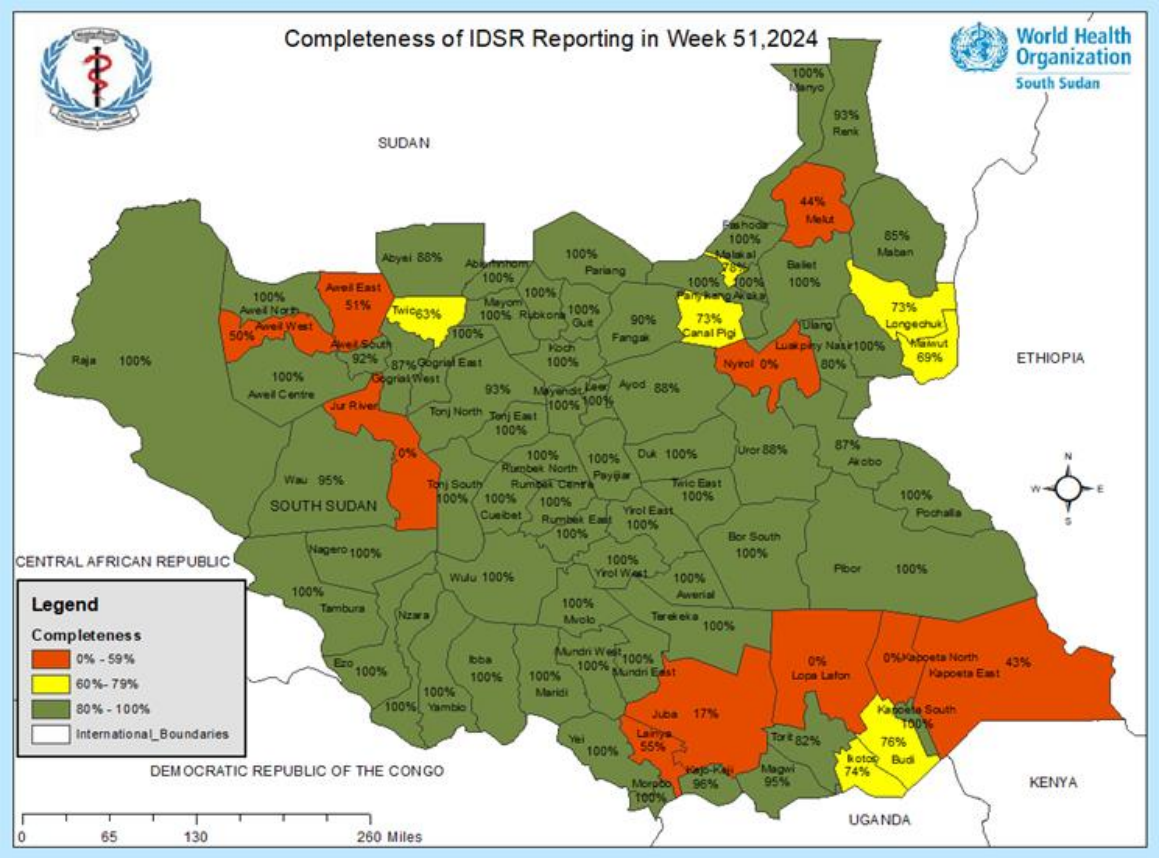
NOTE: Since week 41, the total number of facilities nationwide has decreased following the removal of three duplicate entries

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, Week 51 of 2024.

Partners	# of Reporting Mobile Sites	% of Timeliness in week 51	% of Completeness in Week 51	Payam	# of Reporting Private Health Facilities	% of Timeliness in week 51	% of Completeness in Week 51
IMC	4	**0%**	**0%**	Kator	3	**0%**	**0%**
SSHCO	1	**0%**	**0%**	Marial Baai	1	**100%**	**100%**
SMC	1	**0%**	**0%**	Northern Bari	1	**0%**	**0%**
SCI	2	**50%**	**50%**	Rajaf	3	**0%**	**0%**
HFO	4	**25%**	**75%**	Muniki	12	**0%**	**0%**
WVI	2	**100%**	**100%**	Wau South	20	**100%**	**100%**
CIDO	1	**0%**	**100%**	Wau North	12	**92%**	**92%**
TOTAL	15	**27%**	**47%**	Juba	10	**0%**	**0%**
				Mangala	1	**0%**	**0%**
				TOTAL	63	**51%**	**51%**

An important point to note: The six facilities supported by IMC (4), SSHCO (1), and SMC (1) are no longer reporting due to the end of HPF project funding which has affected the performance of partners reporting sites. The IDSR team is exploring the new implementing partner covering these facilities to re-establish weekly epidemiological reporting.

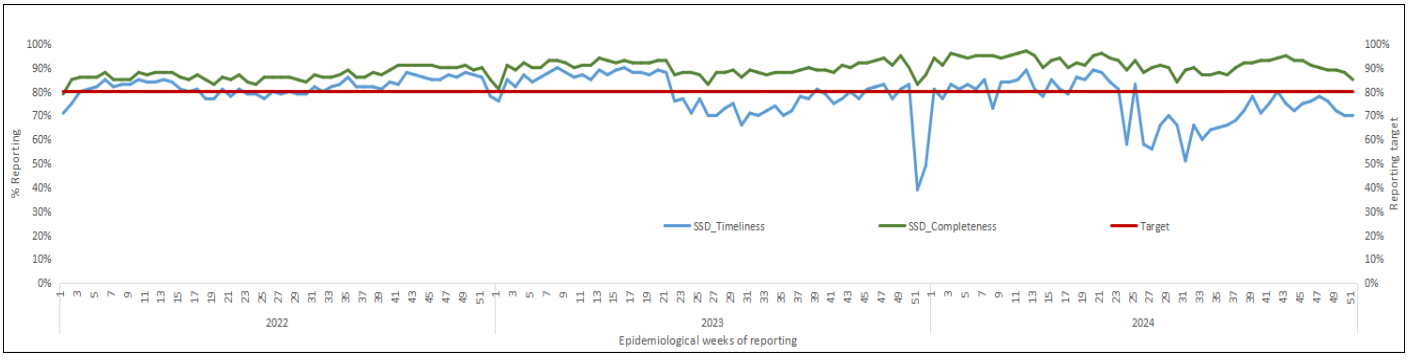
Figure 1: Completeness of IDSR reporting in South Sudan by County in Week 51, 2024.



Given the turbulent declines in timeliness and completeness of IDSR reporting, this week, we continued to analyze the performance over the past three years. We documented that the declines in 2024 (Wk. 21-31) are more pronounced than they were in previous years of 2023 and 2022. In this HSTP transition period, we shall continue to provide targeted support to the newly contracted health implementing partners to recover this surveillance performance indicator. Notably, the IDSR timeliness of reporting continued to improve since week 31 when the lowest reporting rates were observed, thanks to the targeted support to the poorest reporting counties.

The primary reason cited for the inadequate performance in timeliness and completeness indicators was the challenge of staff turnover and inaccessibility to some health facilities.

Figure 1: Timeliness and Completeness of IDSR reporting in South Sudan; 2022-2024.



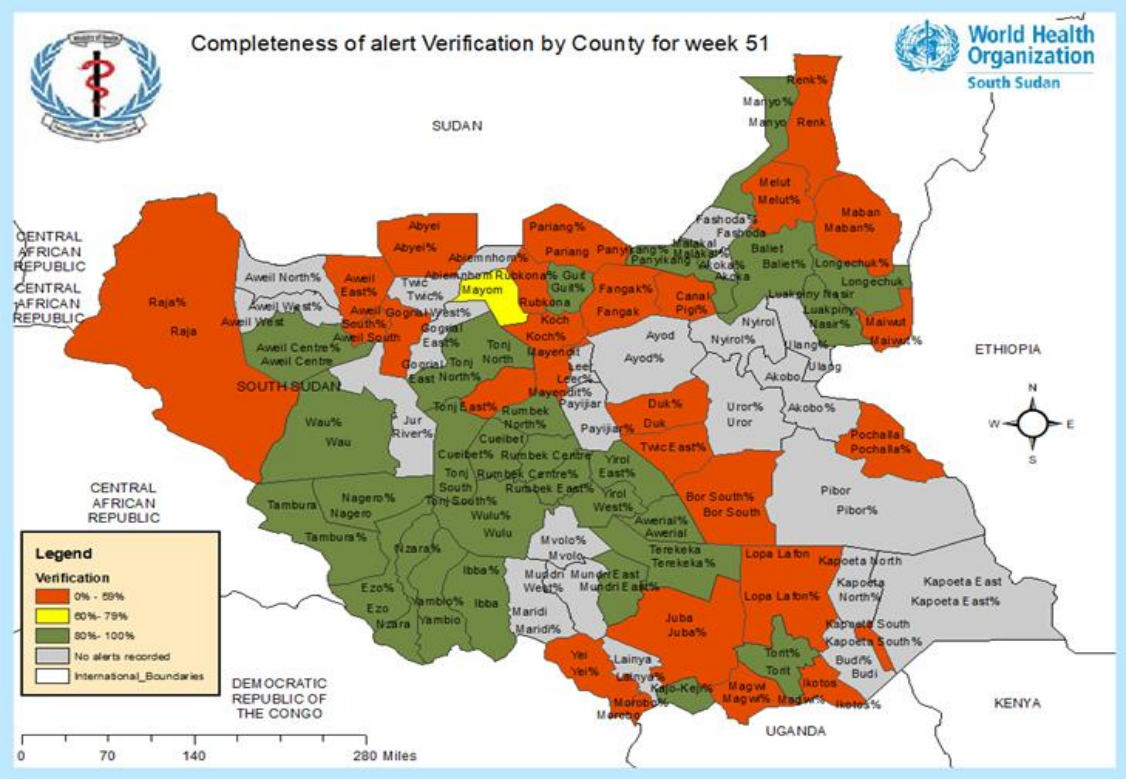
Epidemic alerts

In reporting week 51, 164 alerts were triggered in the EWARS system, with 59% (97 of 164) verified, much lower than the previous week 50, where 63% (142/227) were verified. In Week 51, ten states and administrative areas recorded at least one notifiable disease alert. Most of the alerts were for Guinea Worm (20%), cholera (19%) ARI (18%), AWD (12%), ABD (12%), and Malaria (12%). See Table 3 below.

Table 3*: Summary of EWARS alerts triggered in Epidemiological Week 51, 2024.*

	AJS		ARI		AWD		AFP		ABD		Cholera		Covid-19		EBS		Guinea Worm		Malaria		Measles		Total	
State/Admin	# 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	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1
CES	0	0	3	2	1	1	0	0	0	0	4	0	0	0	1	0	0	0	0	0	1	0	10	3
EES	0	0	0	0	1	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0	4	2
GPAA	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Jonglei	0	0	2	0	1	0	0	0	2	0	9	0	0	0	0	0	0	0	0	0	0	0	14	0
Lakes	0	0	2	2	4	4	0	0	1	1	2	2	0	0	0	0	28	28	2	2	0	0	39	39
NBGZ	0	0	1	1	1	0	0	0	2	1	2	1	0	0	0	0	0	0	0	0	0	0	6	3
RAA	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Unity	1	0	3	0	2	0	0	0	0	0	12	8	0	0	0	0	0	0	1	0	0	0	19	8
Upper Nile	2	0	11	5	2	0	1	1	6	4	1	1	1	1	0	0	0	0	3	1	0	0	27	13
Warrap	0	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	4	1	1	0	2	1	10	3
WBGZ	0	0	2	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	5	3
WES	0	0	2	2	3	3	0	0	3	3	0	0	0	0	0	0	0	0	11	11	3	3	22	22
Grand Total	4	0	29	13	19	10	1	1	20	11	31	12	1	1	2	1	32	29	19	15	6	4	164	97

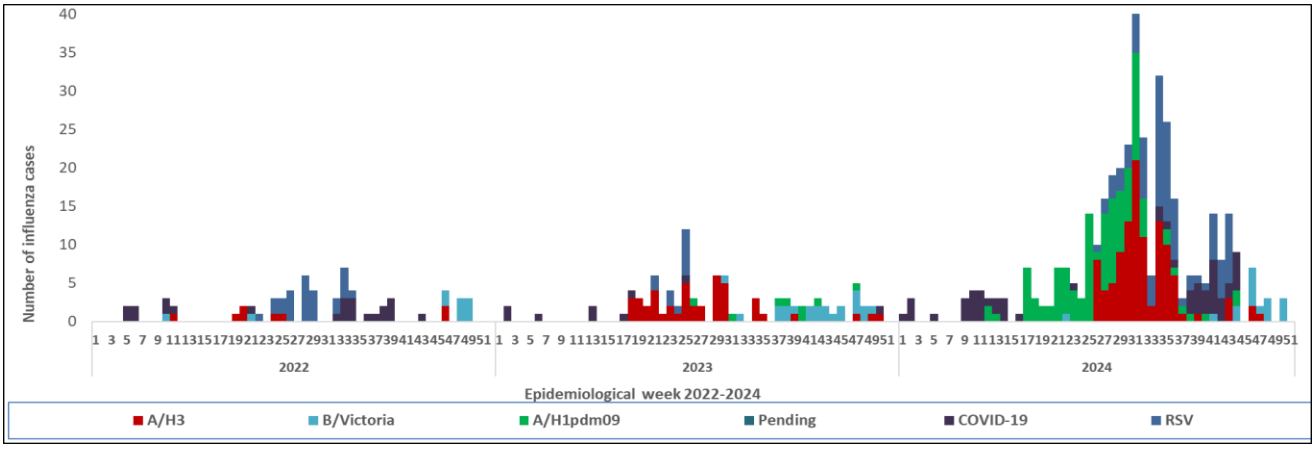
Figure 2*: Completeness of Alerts Verification rates by county of South Sudan for week 51, 2024*



Influenza Sentinel surveillance weekly updates.

Currently, there are six designated Influenza sentinel surveillance sites in the country: Juba Teaching Hospital, Al Sabbah Children's Hospital, Juba Military Hospital, Rumbek State Hospital, Bor State Hospital, and Nimule Hospital. These sentinel surveillance sites are actively collecting epidemiological data and samples from ILI/SARI cases.

Figure 3: Confirmed Influenza, COVID-19, and RSV cases from sentinel sites Epidemiological Week 1 of 2022 to Week 51 of 2024.



In the reporting Epidemiological period of Weeks 1 to 51 in 2024, a cumulative total of 2 607 ILI/SARI samples have been collected; 2 239 tested negative for all pathogens, 55 were positive for COVID-19, 110 for Influenza Type A (H3), 16 for Influenza Type B (Victoria), 95 for Influenza A/(H1N1)pdm09 and an additional 94 were positive for RSV.

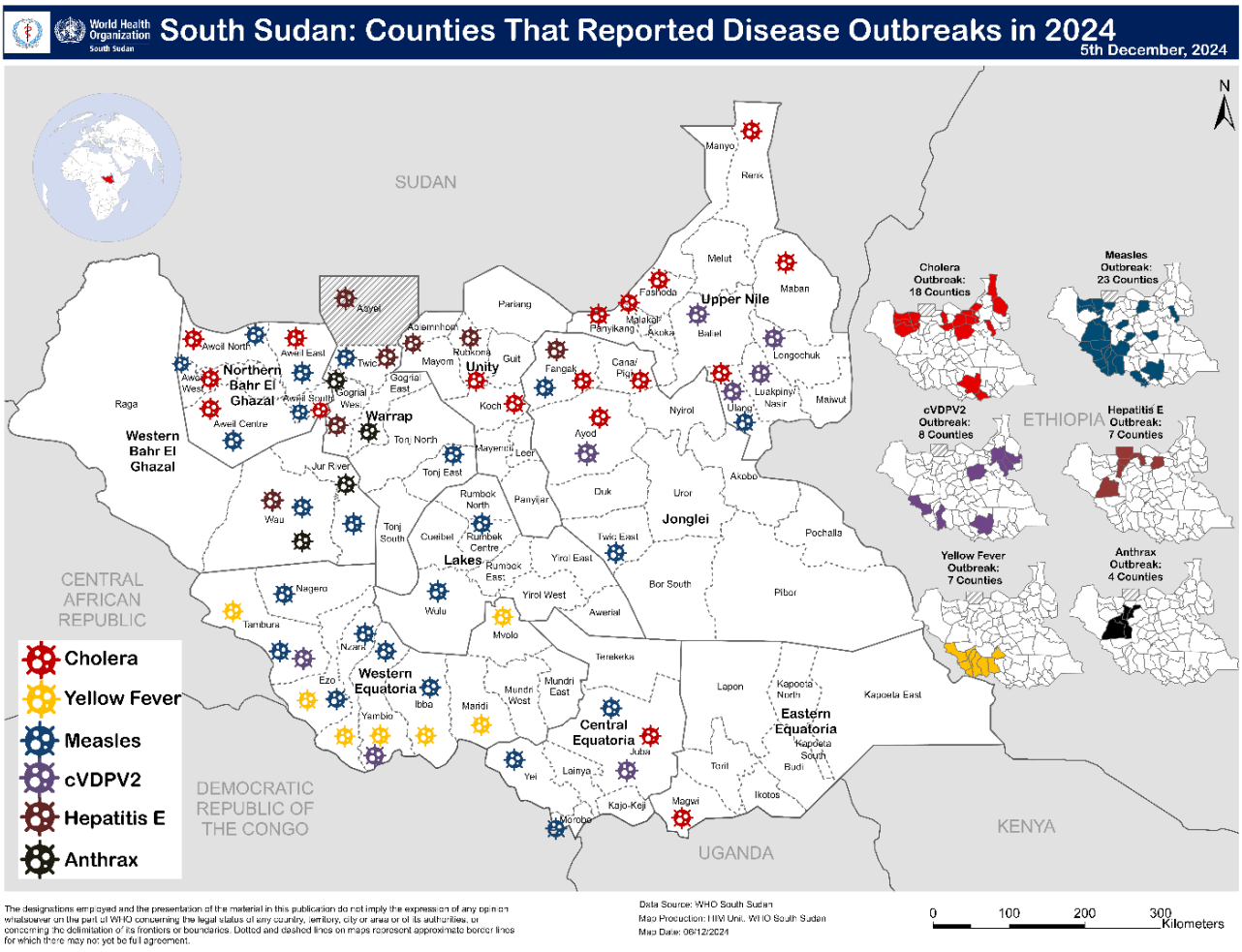
Confirmed and ongoing epidemics in 2024

Table 4*: Summary of ongoing and confirmed epidemics*

Aetiologic agent	Location (county)	Date first reported	New cases since the last bulletin	Cumulative suspected cases	Response activities				
					Surveillance/Lab confirmed	Case management	Vaccination	Health promotion	IPC/WASH
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	0	139	3	Ongoing	Done in 7 counties	Ongoing	Ongoing
Measles	Multiple counties	2024	-	3429	206	ongoing	Completed	ongoing	ongoing
cVDPV2	Yambio, Juba, Ulang, Nasir, Baliet, Ayod, Old Fangak	19/Dec 2023	-	21	21	Not applicable	Completed 2 nOPV2 SIAsand 3rd round is ongoing	ongoing	ongoing
Anthrax	Gogrial West(WRP) and Jur River (NBG)	2022	-	168	3	ongoing	Ongoing in the animalsector	ongoing	ongoing
Hepatitis E	Fangak	2023	0	701*	253	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	-	6, 120	-	ongoing	Done in 2021/22	ongoing	ongoing
Hepatitis E	Twic	Feb 2024	0	32	1	ongoing	Not done	ongoing	ongoing
Hepatitis E	Abyei	June 2024	0	64	3	ongoing	no	yes	yes
Cholera	In 31 counties across six states	September 2024	More than 10,000	22,628	356	ongoing	Ongoing	yes	yes

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 disease outbreaks. These outbreaks included measles, anthrax, meningitis, cholera, hepatitis E virus, and others. Measures have been put in place to mitigate the spread of these outbreaks. Below is a map of the confirmed emergencies as at 6th December 2024

Figure 11*: Map showing confirmed disease outbreaks across the country in 2024.*



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Response activities for ongoing/suspected outbreaks

1. South Sudan Cholera Outbreak Epidemic description as at 20 January 2025

- From 28 September 2024 to 20 January 2025, there have been 22,628 cases including 459 deaths reported from 33 counties, across 7 states and Ruweng Administrative Area.
- Of the 459 deaths, 54 % are community death and 46 % health facility deaths. The overall case facility rate (CFR) is 2.03% and the health facility CFR is 0.94%.
- Majority of the cases 43.9% (n = 9,936) are reported from Rubkona County followed by Juba County 11.2% (n=2,528).
- The sustained response by the Ministry of Health and its partners in Malakal has led to a reduction in reported cases
- The age group with highest case count is 0-4 years (29%).

Figure 4 Epidemic curve and distribution of Cholera Cases in South Sudan by Week, wk39, 2024 to Wk2, 2025

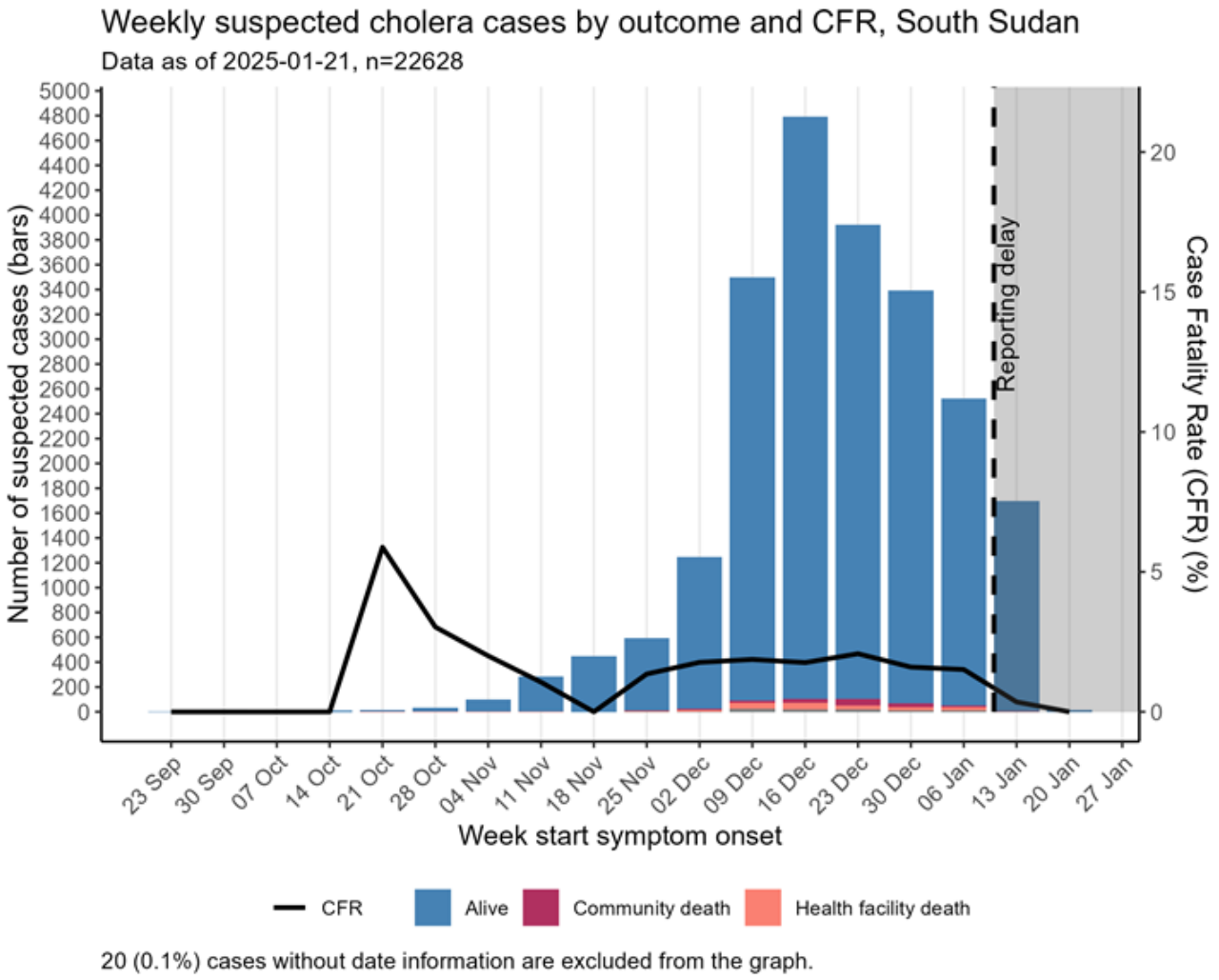


Figure 11: Map showing cholera cases as of 10 January 2025

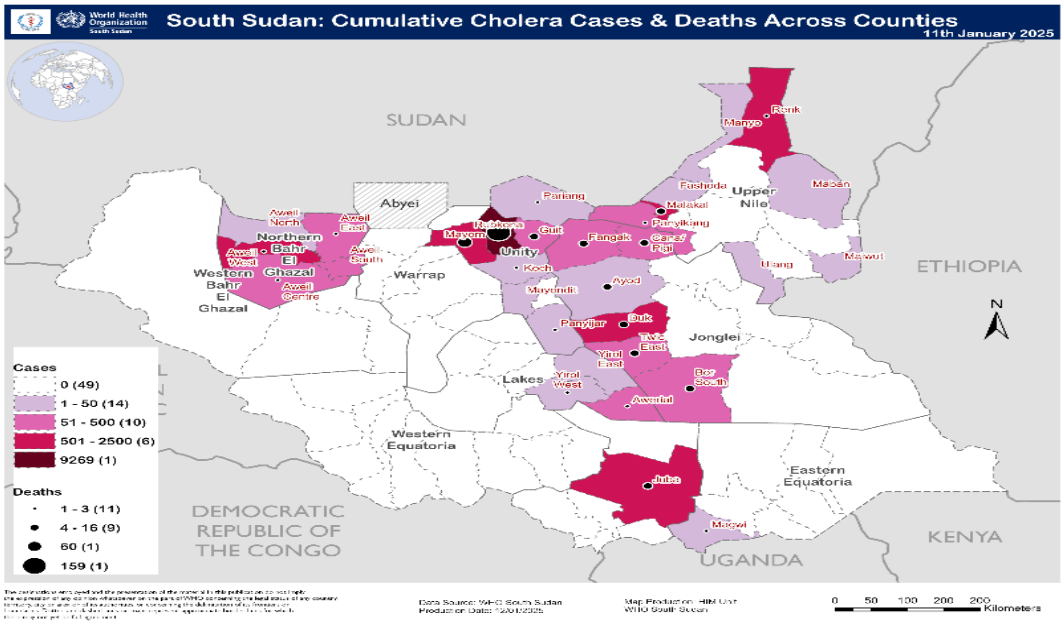
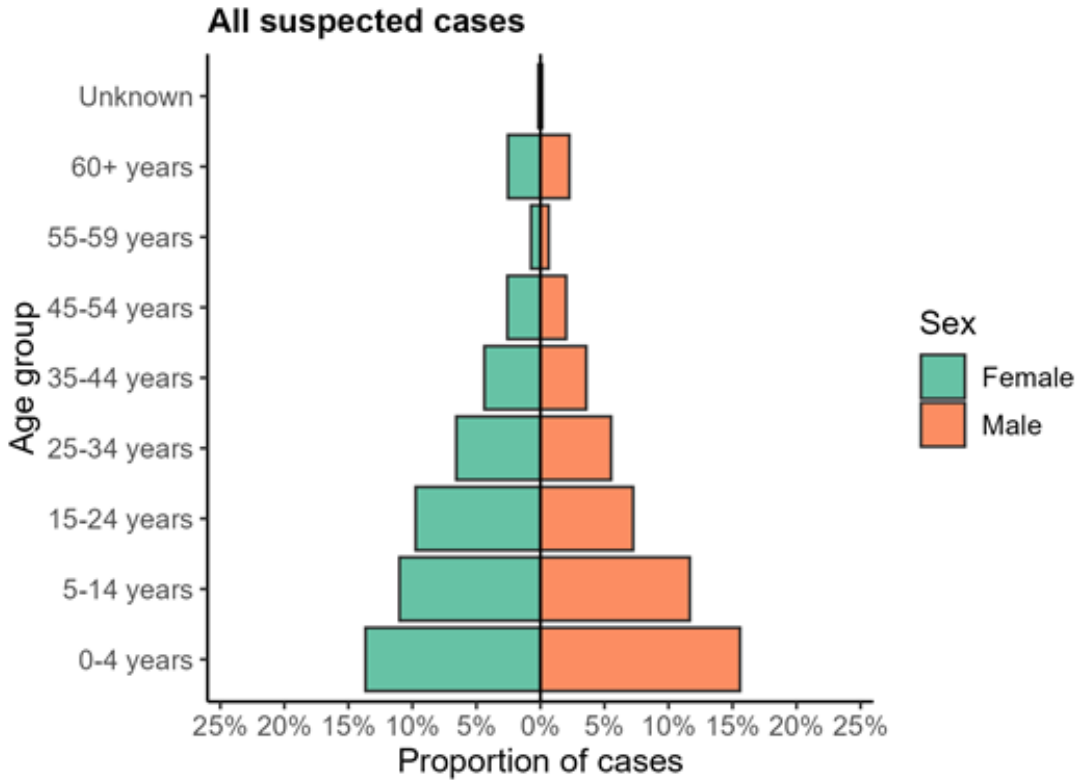


Figure 12: Graph showing cholera cases distribution by age group and sex as of 20 January 2025



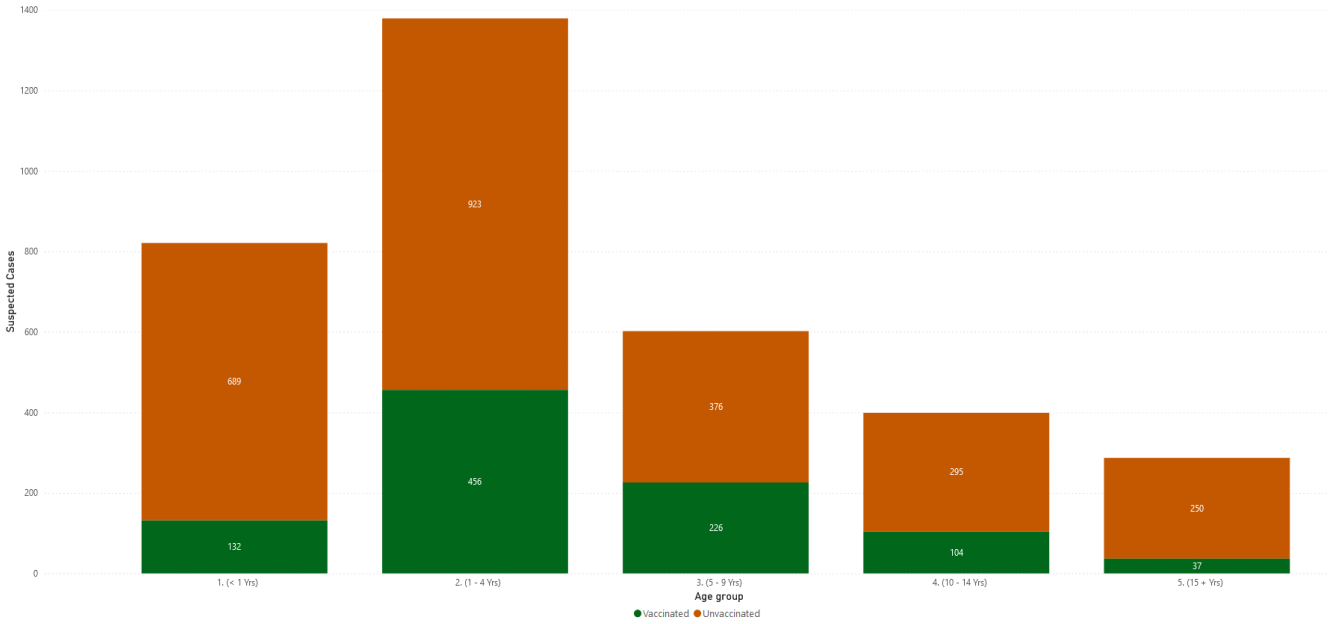
Next Steps

- Continue with OCV campaigns in Juba, Rubkona and Malakal.
- Renk: Advocate for multisectoral collaboration and funding for critical entry points. Maintain active case searches in all health facilities. Address medical supply shortages in Gosfami PHCU, Chemmedi, and Jerbana PHCCs. Ensure consistent RDT kit supply. Expand CATI operations, improve water access, and deploy WASH supplies to underserved areas.
- Unity State: SMoH authorities and the National MoH RRT team have visited Mayom County to support partners' cholera response. Report of the visit is expected next week.

2. Measles Update

- ❑ In the past two weeks (51), there were no reported cases of suspected measles. The cumulative number of suspected measles cases remained 3 488 as of week 48.
- ❑ During week 51, there were no new laboratory confirmed measles cases, therefore the cumulative number of confirmed measles cases remained 228 out 384 cases whose blood serum were sampled for laboratory testing.
- ❑ Children under-five years of age are the most affected, accounting for 64% of measles cases recorded indicating an acute gap in routine immunization plans.
- ❑ Besides, 80% of the measles cases are found amongst children aged between 6 months and 9 years, making this age group the ideal focus for measles outbreaks response and Supplementary Immunization Activities (SIAS).

Figure 5: Vaccination Status and age-grouping of suspected measles cases in South Sudan; Week 1-51 of 2024



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

- During week 51of 2024, there were no new reported cases of Hepatitis E virus and zero deaths reported
- Since the start of outbreak in 2018, a total of 6,180 Hepatitis E virus cases including 34 deaths case fatality ration of 0.55% have been reported.
- Among the cases reported a total of 43 cases were recorded in individuals aged 15 to 44 years old.
- Majority of the cases are Males accounted for 52% (3, 214 cases) while females were 48% (2, 966 cases).
- The charts in figure 15, illustrate the distribution of hepatitis E virus (HEV) cases over time (epidemic curve) and Figure 16, illustrates the cases distribution by patients' place of residence, age and sex, both within and outside the Bentiu Protection of Civilians (PoC) site.
- Mainly, the reported cases of Hepatitis E virus were identified in individuals living outside the Bentiu Internally Displaced Persons (IDP) Camp but were identified in the process of their seeking of healthcare services in the IDP camp.

Figure 65*: Epicure of HEV in Bentiu IDP camp, Unity State; Epi Week 52 of 2018 to Week 51 of 2024*

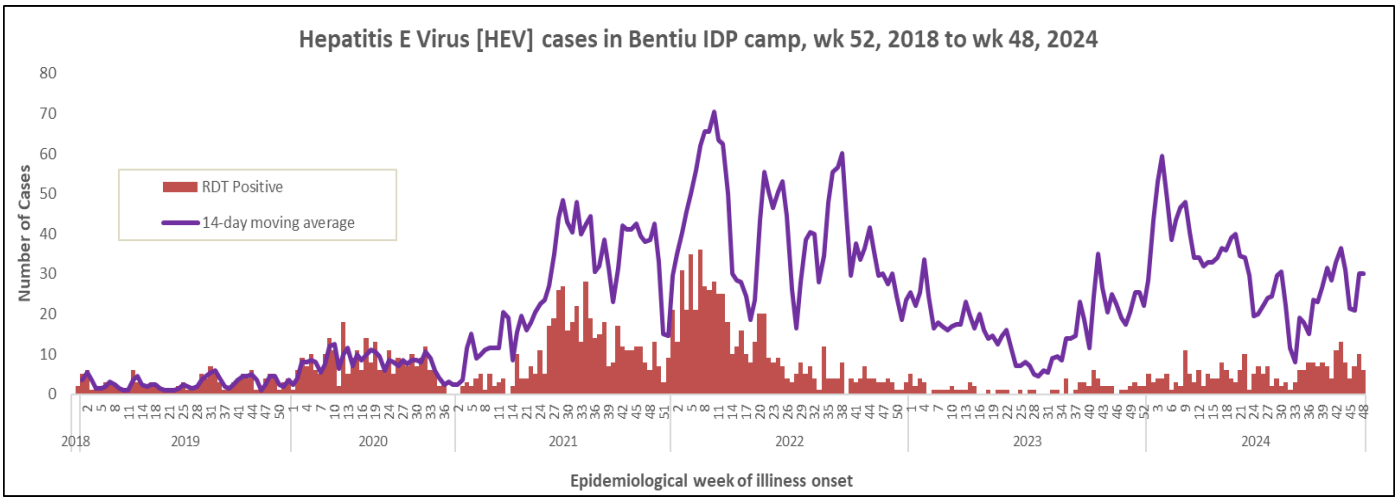
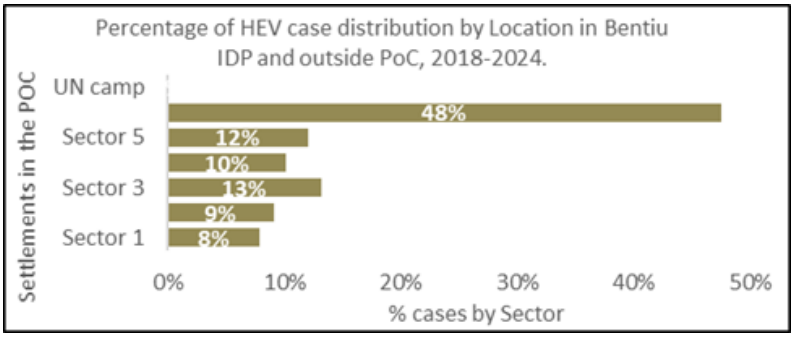
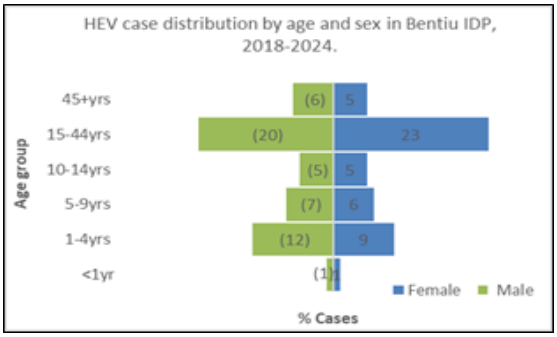


Figure 7: Geography and age distribution of Hepatitis E cases in Bentiu, Unity state of South Sudan





Other Events

Sudan crisis: As of 22nd December 2024, at least ***980 516*** individuals have crossed from 18 different nationalities. Of this number, ***71.17% (697 833)*** are South Sudanese returnees and 28.26% (277, 094) are Sudanese refugees. Only 0.31% are from other nationalities, largely Eritrean population. Currently, 21 PoEs are being monitored, with Joda-Renk accounting for 69% of the reported influx figures. There are currently 58 898 individuals (13 784 in transit centre and 45 114 in host communities) in Renk. Due to the evolving security situation in Joda, the data collection may be incomplete.
Hostcommunities and healthcare systems are struggling to cope with the increased demand for health and other Services, morbidity, and mortality among returnees and refugees. Currently most of the counties receiving returnees including Juba have confirmed cholera outbreaks and interventions have been put in place to mitigate adverse effect including use of Oral cholera Vaccines (OCV) aimed at mitigating the risks of sustained transmission.

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 The expectation of extensive flooding to occur in South Sudan in 2024 due to two separate climatic events became reality with floods affecting 58 health facilities in 41 counties of South Sudan. The tail end of the 2023-24 El Niño event led to significantly above-average rainfall in Uganda, which increased the water level of the White Nile. This phenomenon was responsible for increased flooding downstream in South Sudan. Additionally, the onset of the El Nino event in 2024 led to approximately 50% higher levels of rainfall in the northern and easter parts of South Sudan, which not only further exacerbated the flood risks along the White Nile and its tributaries but also contributed to flooding in more distant regions, like those occurring during the triple-dip La Niña event of 2020-2023. As in historical data, the highest river Nile levels peaked around mid-September.

The flooding was a major threat to the well-being of the communities, with more than one million people

(including 375,000 displaced) affected across 41 counties. Notably, flooding was also associated with an increased number of snake bites (68 in 6 weeks effective epidemiological reporting period 38-44), drowning (of three 3 people reported in week 42) and an upsurge of malaria morbidity (that persisted in epidemiological weeks 38 to 50 nationwide). Flood response was in addition to responding to other existing humanitarian needs in the country and ongoing multiple disease outbreaks.

Ongoing coordination with the Ministry of Health supporting response coordination at national and sub-national levels through weekly cluster and inter-cluster coordination meetings. The MoH, WHO, and Health Cluster used the Health Sector Flood contingency and response plan that had been developed in June/July, when the early warning signals were given by the Ministry of Water and irrigation. The Health Cluster partners supported the Ministry of Health in implementing this plan, although the key limitation waspartial and delayed availability of funding. Of the estimated budget needed for the response given as USD 63 million, only approximately 10 million was realised.

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 aninitiative 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