



## Republic of South Sudan

### Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 52

*23 to 29 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 52 of 2024, the IDSR reporting timeliness was 70%, and completeness was 85%. There was no change in timeliness and completeness of IDSR/EWARS reporting in the two consecutive weeks (51 and 52). IDSR timeliness and completeness of reporting for week 52 was higher than all two previous years (2023 and 2022). 7 states and 3 administrative areas attained completeness of reporting above 80%. Greater Pibor Administrative area, Lakes, Ruweng Administrative area, Unity and WES achieved 100% completeness of reporting. However, only 4 of the 13 states/administrative areas attained timeliness of reporting above 80%.
- At the EWARN mobile sites, the Timeliness and Completeness of IDSR performance were both at 40% respectively. Timeliness increased from 27% in week 51 to 40% in week 52.
- In week 52, 111 EWARS alerts were triggered, and the proportion of verified alerts decreased from 59% in Week 51 to 52% in Week 52. Most of the alerts were for AWD (19%), ARI (18%) Guinea Worm (17%), ABD (16%), and Malaria (15%). Special thanks to the surveillance team in Lakes, Western Equatoria and Western Bahr el Ghazaal for verifying all the reported alerts in the county.
- As at January 20<sup>th</sup>, 2025, cholera outbreak was confirmed in 33 counties, across 7 states and Ruweng Administrative Area. A cumulative total of 22 628 cases including 459 deaths giving a case Fatality Ratio (CFR) of 2.03 percent which is above the recommended CFR of less than 1 %. The facility-based CFR calculations indicate that it was 0.9%, suggesting that delayed reporting to cholera treatment units/centres is the major driver for the high morbidity.
- South Sudan has so far received approximately 5 million doses of Oral cholera vaccines for reactive vaccination campaigns in several affected counties. OCV Campaign have been completed 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 52 were at 70% and 79%**, respectively, which was an improvement from the attainments from the previous week.

**Table 1: Timeliness and completeness of IDSR reporting by State for week 51 compared to 52 of 2024**

State	Total facilities	Number of facilities reported (Completeness Wk52)	Comparison of the reporting period				Cumulative since year start (2024 level)	
			Timeliness		Completeness		Timeliness	Completeness
			Week 52	Week 51	Week 52	Week 51		
Lakes	112	112	96%	69%	100%	100%	71%	100%
NBGZ	101	67	56%	59%	66%	72%	60%	79%
Unity	84	84	100%	98%	100%	100%	89%	99%
WBGZ	113	98	81%	57%	88%	83%	46%	82%
WES	191	196	79%	95%	100%	100%	67%	96%
Jonglei	120	102	78%	83%	85%	91%	74%	87%
Warrap	114	104	61%	71%	91%	89%	51%	88%
EES	112	78	42%	40%	70%	65%	59%	93%
RAA	16	16	38%	38%	100%	100%	49%	97%
CES	152	82	51%	52%	54%	54%	65%	91%
AAA	17	15	76%	88%	88%	88%	69%	83%
Upper Nile	143	123	62%	72%	86%	89%	53%	86%
GPAA	16	16	100%	75%	100%	100%	90%	92%
<b>Total</b>	<b>1291</b>	<b>1095</b>	<b>70%</b>	<b>70%</b>	<b>85%</b>	<b>85%</b>	<b>63%</b>	<b>90%</b>

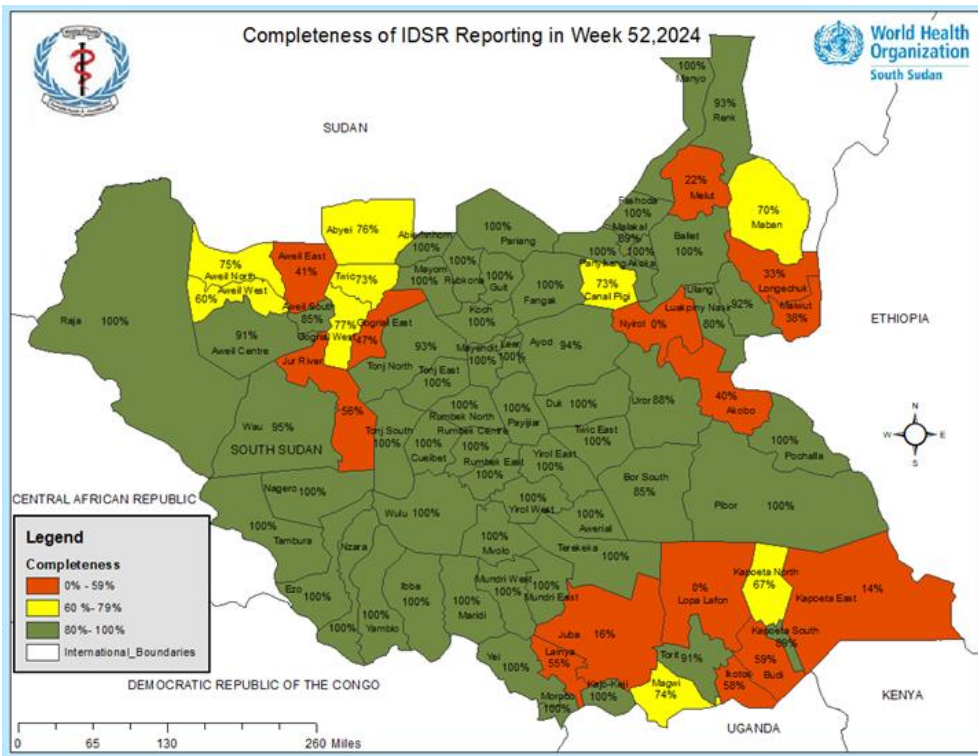
NOTE: Since week 41, the total number of facilities nationwide has decreased following the removal of three duplicate entries

**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 52 of 2024.**

Partners	# of Reporting Mobile Sites	% of Timeliness in week 52	% of Completeness in Week 52	Payam	# of Reporting Private Health Facilities	% of Timeliness in week 52	% of Completeness in Week 52
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	0%	0%	Rajaf	3	0%	0%
HFO	4	75%	75%	Munuki	12	0%	0%
WVI	2	100%	100%	Wau South	20	100%	100%
CIDO	1	100%	100%	Wau North	12	92%	92%
<b>TOTAL</b>	<b>15</b>	<b>40%</b>	<b>40%</b>	Juba	10	0%	0%
				Mangala	1	0%	0%
				<b>TOTAL</b>	<b>63</b>	<b>51%</b>	<b>51%</b>

**An important point to note:** The six facilities supported by IMC (4), SSHCO (1), and SMC (1) remained silent in the reporting period due to the end of HPF project funding which has affected the performance of OPDs at these reporting sites. The IDSR team will continue to explore new implementing partners to cover the functional and non-reporting facilities to re-establish weekly epidemiological reporting across the country.

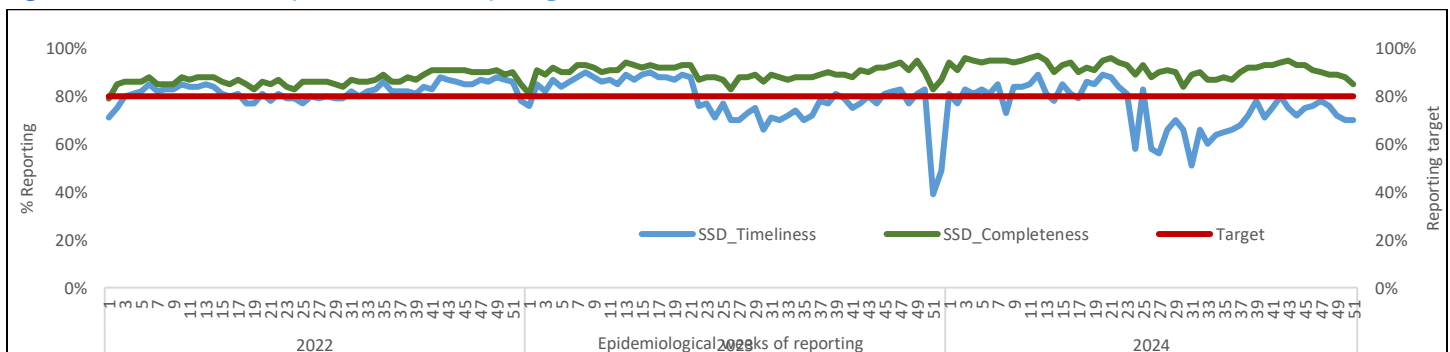
Figure 1: Completeness of IDSR reporting in South Sudan by County in Week 52, 2024.



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.



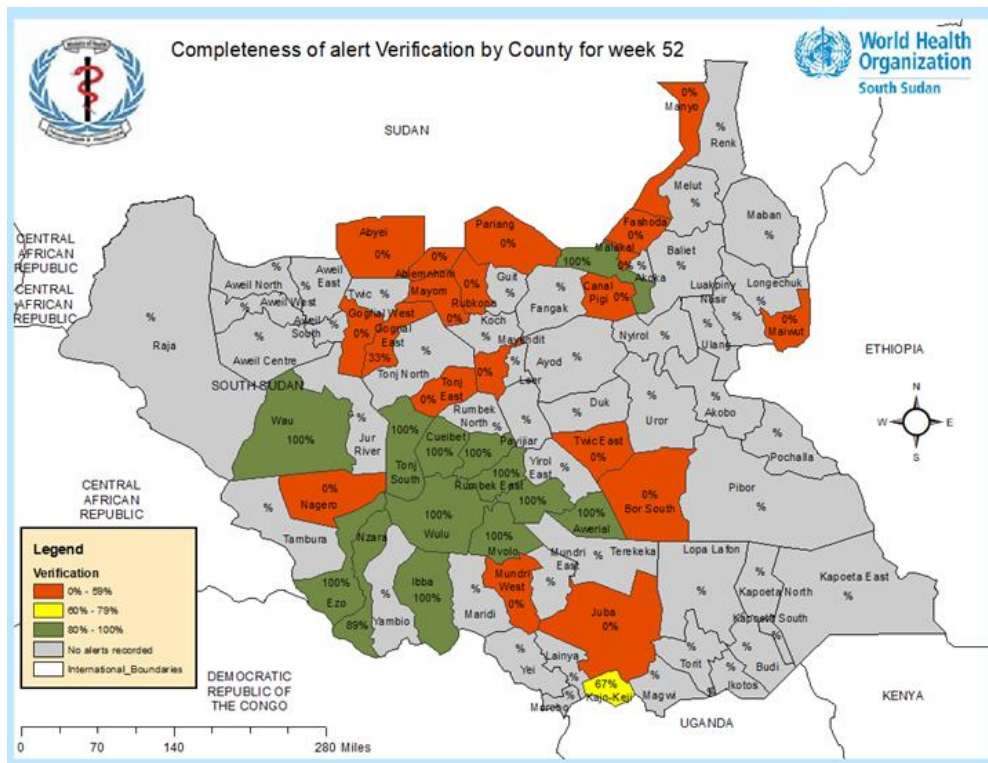
**Epidemic alerts**

In epidemiological reporting week 52, One hundred and eleven (111) alerts were triggered in the EWARS system, with 52% (58 of 111) verified, which was lower than the previous week 51, where 59% (97/164) were verified. In Week 52, Nine states and two administrative areas recorded at least one notifiable disease alert. Most of the alerts were for AWD (19%), ARI (18%) Guinea Worm (17%), ABD (16%), and Malaria (15%). See Table 3 below.

Table 3: Summary of EWARS alerts triggered in Epidemiological Week 52, 2024.

State/Admin	AJS		ARI		AWD		ABD		Cholera		EBS		Guinea Worm		Malaria		Measles		Total		
	# 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
CES	1	0	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	2
Jonglei	0	0	1	0	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0	10	0
Lakes	0	0	1	1	5	5	0	0	2	2	0	0	15	15	3	3	0	0	0	26	26
NBGZ	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	1
RAA	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	4	0
Unity	1	0	1	0	2	0	0	0	5	0	0	0	0	0	1	0	0	0	0	10	0
Upper Nile	0	0	3	0	1	0	2	0	3	0	0	0	0	0	2	0	0	0	0	11	0
Warrap	0	0	1	0	3	1	1	0	0	0	0	0	4	2	2	0	1	0	0	12	3
WBGZ	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	2
WES	0	0	8	7	5	4	3	3	0	0	0	0	0	0	9	8	2	2	0	27	24
EES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GPAA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	3	0	20	12	21	10	9	4	18	2	1	0	19	17	17	11	3	2	0	111	58

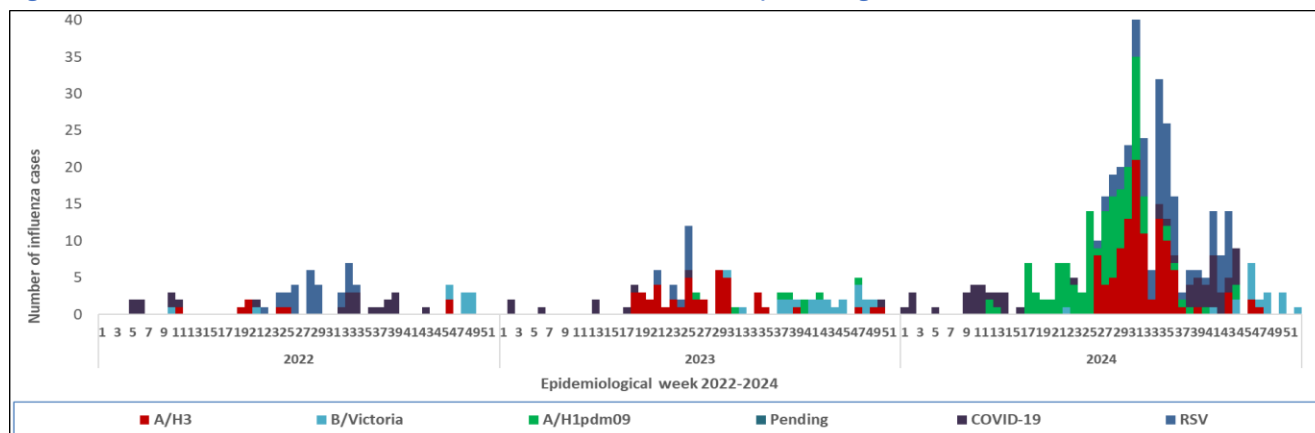
Figure 2: Completeness of Alerts Verification rates by county of South Sudan for week 52, 2024



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. They 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 52 of 2024.



During Epidemiological Weeks 1 to 52 in 2024, a total of 2 645 ILI/SARI samples have been collected; A whopping 2 276 samples tested negative for all pathogens, 55 were positive for COVID-19, 110 for Influenza Type A (H3), 17 for Influenza Type B (Victoria), 95 for Influenza A/(H1N1)pdm09 and 94 for RSV.

### Confirmed and ongoing epidemics in 2024

Table 4: Summary of ongoing and confirmed epidemics

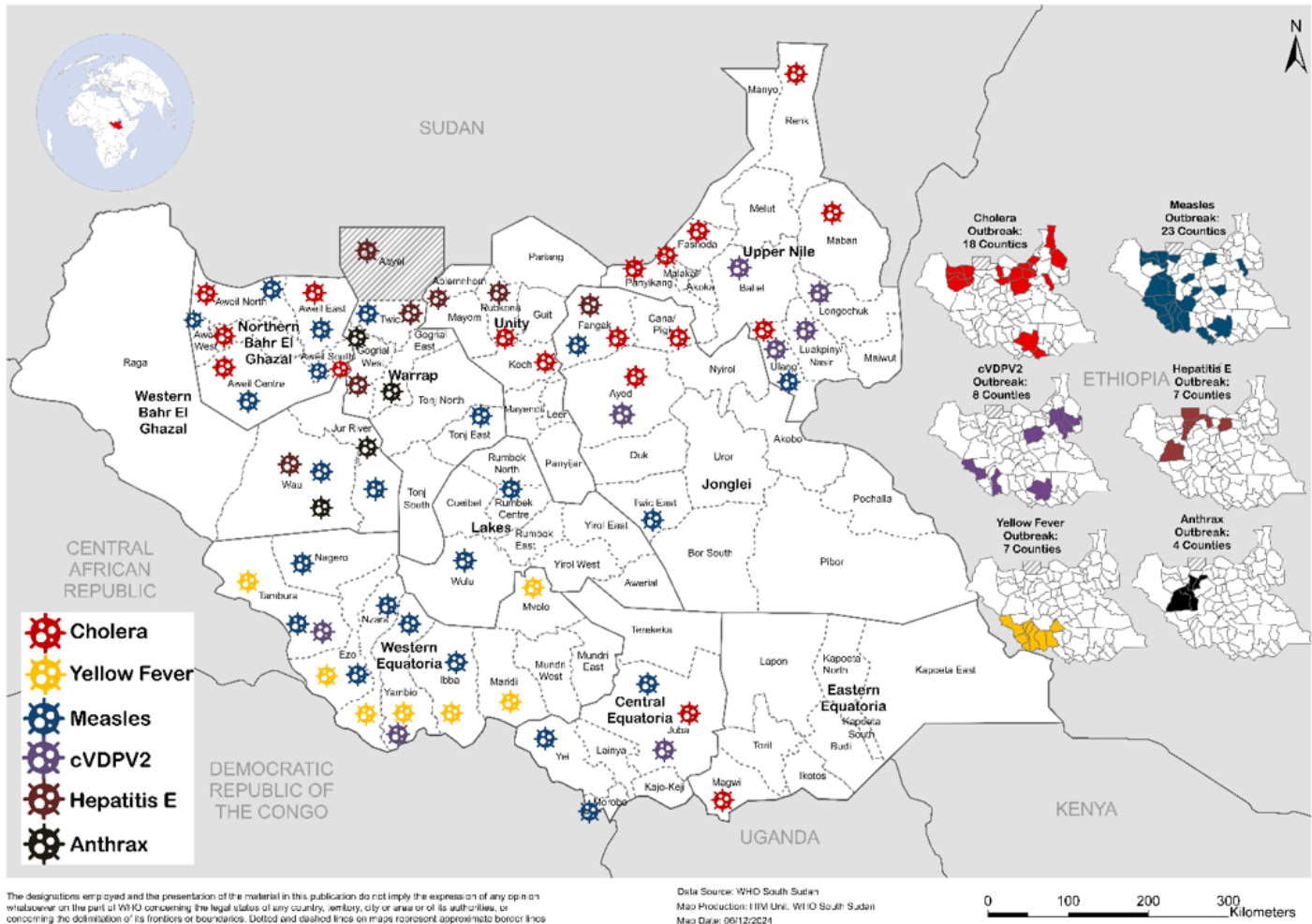
Aetiologic agent	Location (county)	Date first reported	New cases since the last outbreak	Cumulative suspected cases	Response activities				
					Surveillance/Lab confirmed	Case management	Vaccination	Health promotion	IPC/WASH
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	0	139	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 SIAs and 3 <sup>rd</sup> round is ongoing	ongoing	ongoing
Anthrax	Gogrial West(WRP) and Jur River (NBG)	2022	-	168	3	ongoing	Ongoing in the animal sector	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 ongoing disease outbreaks. These outbreaks included 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 confirmed emergencies as at 6<sup>th</sup> December 2024

Figure 11: Map showing confirmed disease outbreaks by county of South Sudan; as at 29<sup>th</sup> Dec 2024.



## Response activities for ongoing/suspected outbreaks

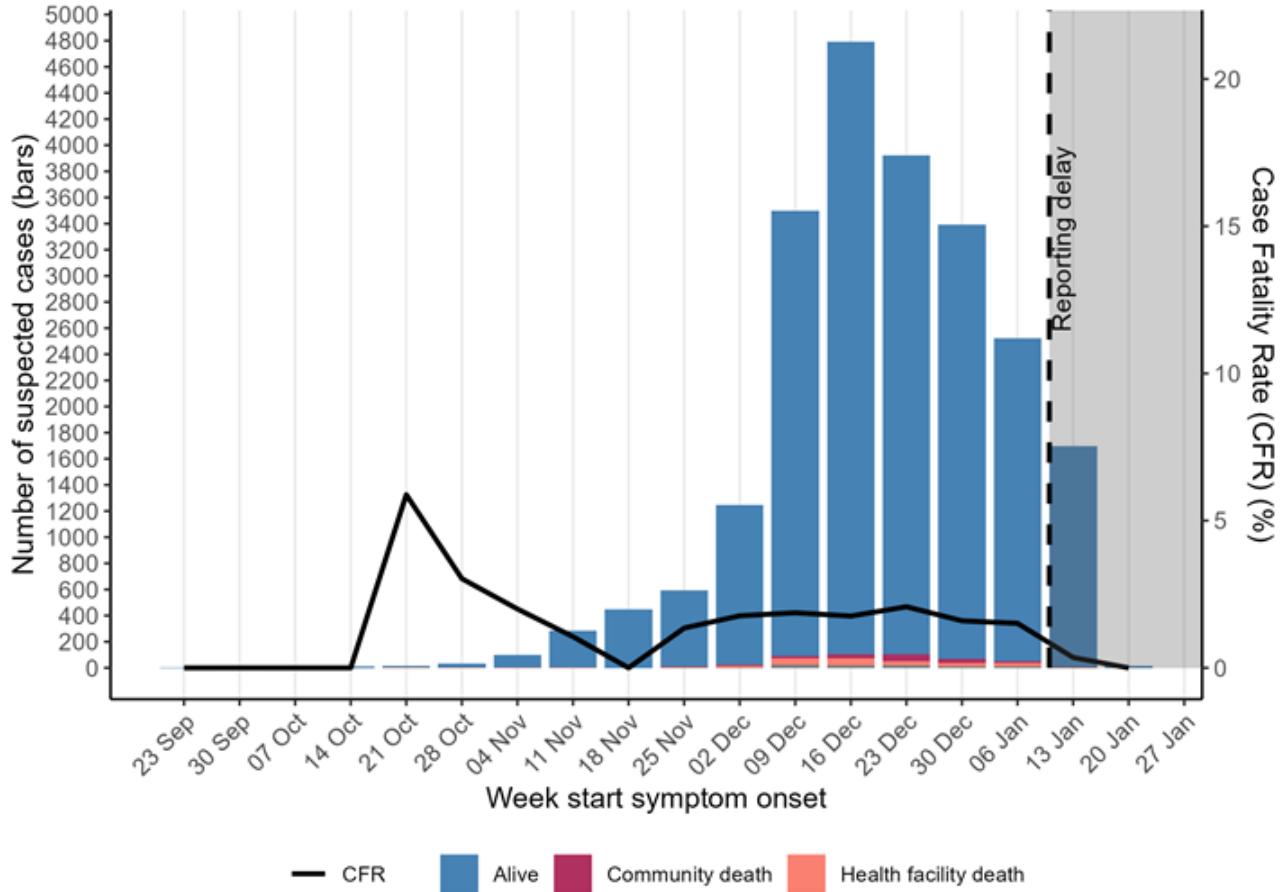
### 1. South Sudan Cholera Outbreak Epidemic description as at 20 January 2025

- From 28 September 2024 to 20 January 2025, the cumulative number of reported Cholera cases was 22,628 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 fatality rate (CFR) is 2.03% and the health facility CFR is 0.94%. The majority of deaths occurred amongst males (55%).
- Majority of the cases 43.9% (n = 9,936) are reported from Rubkona County followed by Juba County 11.2% (n=2,528) and Mayom County at 9.5% (n=2205).
- 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

# Weekly suspected cholera cases by outcome and CFR, South Sudan

Data as of 2025-01-21, n=22628



20 (0.1%) cases without date information are excluded from the graph.

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

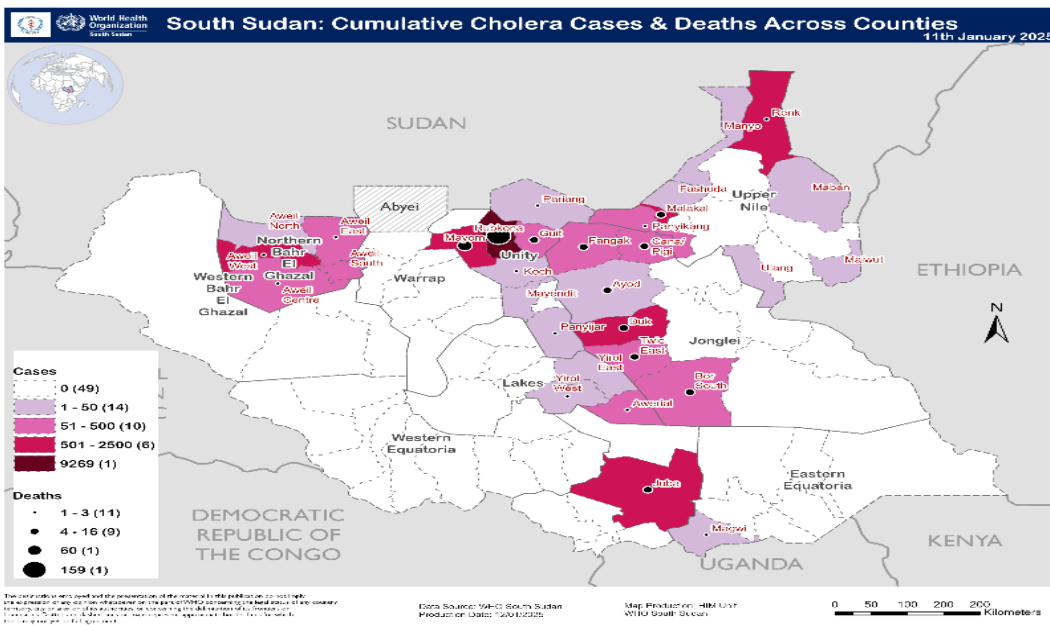
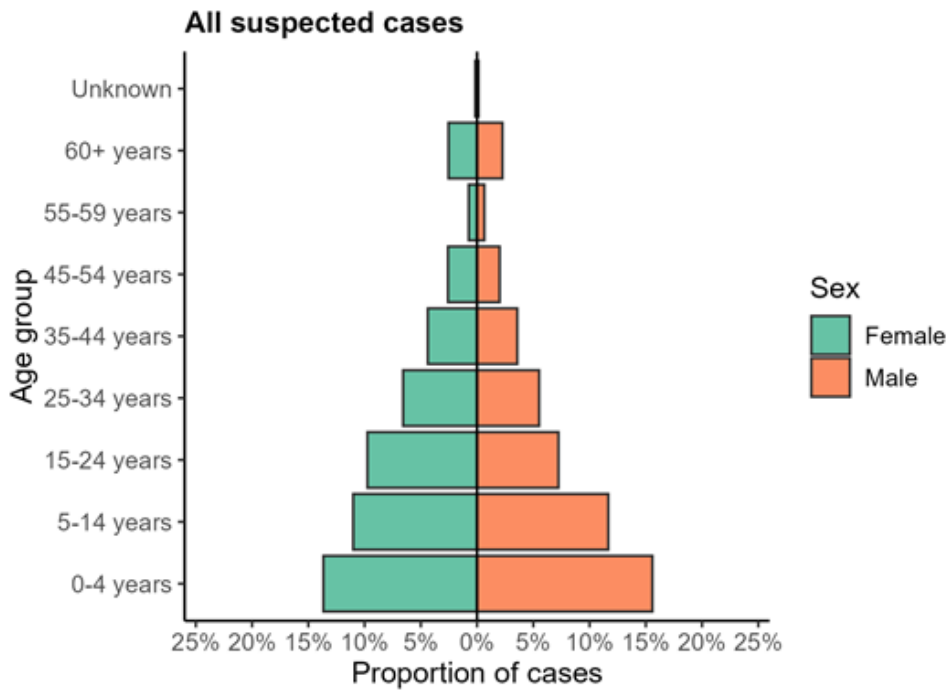


Figure 12: Graph showing cholera cases distribution by age group and sex as of 20 January 2025



## Next Steps

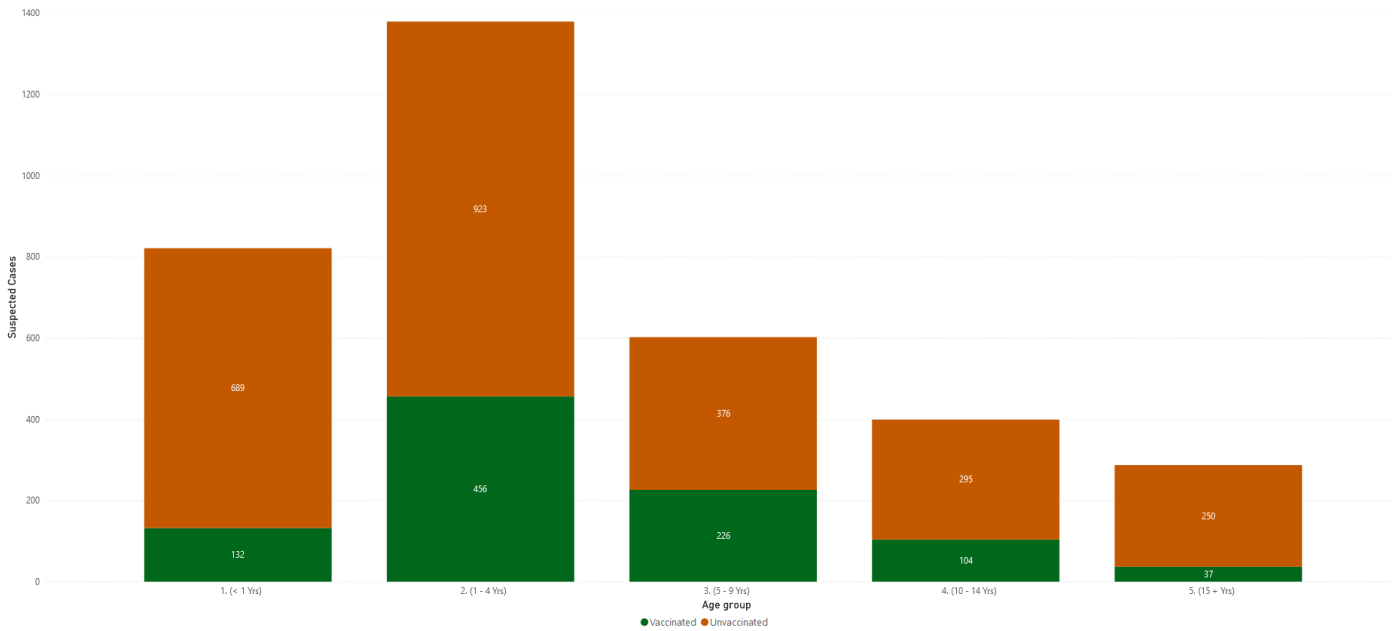
- Continue with OCV campaigns in Juba, Rubkona and Malakal.
- Renk: Advocate for multisectoral collaboration and funding for critical entry points. Maintain active case searches in all health facilities. Address medical supply shortages in Gosfami PHCU, Chemmedi, and Jerbana PHCCs. Ensure consistent 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 and 52), there were no reported cases of suspected measles. The cumulative number of suspected measles cases remained 3 488 since week 48 of 2024.
- ❑ During epidemiological week 52, 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 were the most affected, accounting for 64% of the overall measles cases recorded indicating a crack in routine immunization performance and coverage.
- ❑ As well, 80% of the measles cases were found amongst children aged between 6 months and 9 years, making this age group the ultimate emphasis for measles outbreaks response and Supplementary Immunization Activities (SIAS).
- ❑ By residential status, the majority of the suspected measles cases occurred in resident/host populations. However, the importance of immune dilution that occurred in 2023 Sudan Crisis cannot be underestimated.
- ❑ The measles outbreak root cause analysis that was initiated in July 2024 was finalized and a report is undergoing MOH clearance, prior to official publication of the report.

Figure 5: Vaccination Status and age-grouping of suspected measles cases in South Sudan; Week 1-52 of 2024





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

- In week 52 of 2024, there were no new Hepatitis E virus cases reported and no deaths reported
- A cumulative total of 6,180 Hepatitis E virus cases have been reported including 34 deaths with CFR of 0.55% since the onset of the outbreak in 2018
- Among the cases reported a total of 43 cases were recorded in individuals aged 15 to 44 years old.
- Male sex is the most affected accounting for 52% (3,214 cases) whereas female represents 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.
- The reported cases of Hepatitis E virus were largely identified in individuals living outside the Bentiu Internally Displaced Persons (IDP) Camp seek healthcare services in the Internally Displaced Persons (IDP) camp.

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

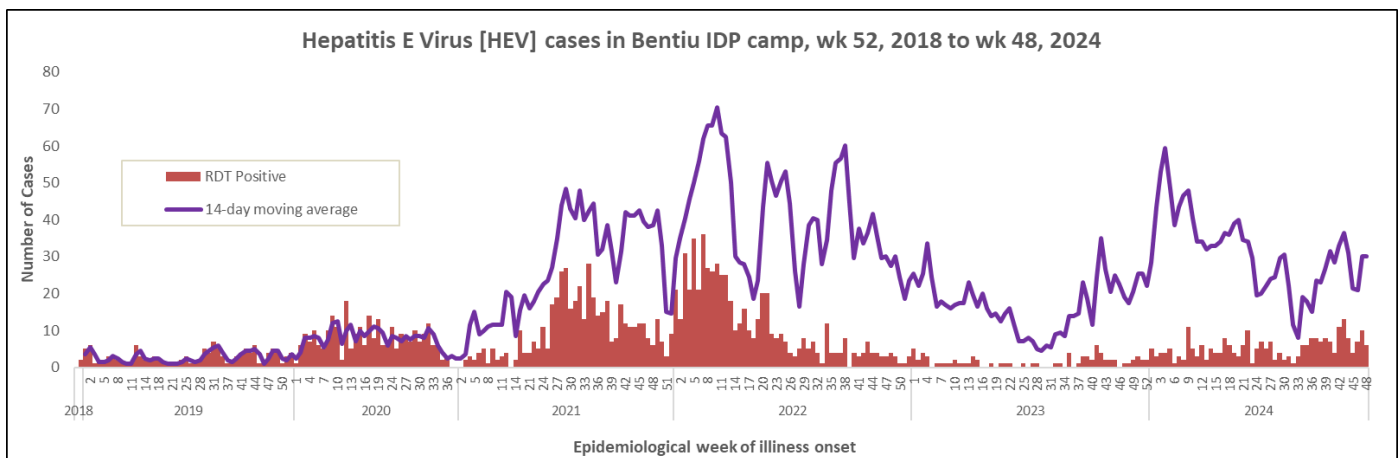
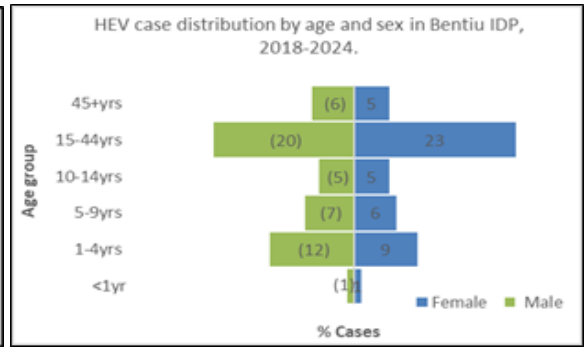
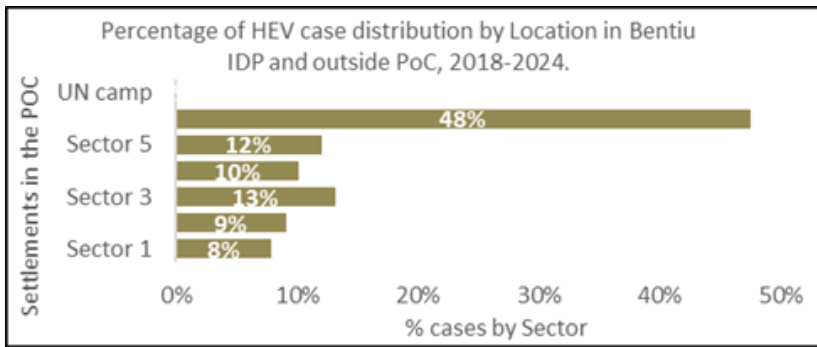


Figure 7: Geography and age distribution of Hepatitis E cases in Bentiu, Unity state of South Sudan



## Other Events

**Sudan crisis:** As of the end of the year 31 December 2024, a cumulative total of **996 562** individuals had crossed from 18 different nationalities. Of this number, **70.44% (701 978)** are South Sudanese returnees and 29% (289, 003) are Sudanese refugees. Only 0.3% 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 was partial and delayed availability of funding. Of the estimated budget needed for the response given as USD 63 million, only approximately 10 million was realized.

## 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

WHO and the Ministry of Health gratefully acknowledge the surveillance officers [at state, county, and health facility levels], health cluster and healthpooled fund (HPF) partners who have reported the data used in this bulletin. We would also like to thank ECHO, USAID and the World Bank for providing financial support.

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

