



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 02

08 January 2024 14 January 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 Epi week 02 of 2024, the IDSR reporting timeliness and completeness were both at 89%, and IDSR performance at the EWARN mobile sites were both at 100% for the EWARN sites
- Completeness of reporting for IDSR at private Health facilities in Juba and Wau was only at 72%
- A total of 239 alerts have been triggered in the EWARS system, with 68.4% (164/239) verified in the system in week 02, 2024, and the majority were for Acute Watery Diarrhea, Measles, Malaria and ARI
- As of Epi week 02, 2024, a total of 22 suspected cases of Yellow Fever Cases were reported and investigated in Western Equatoria
- Ongoing preparedness measures and readiness are underway in Renk County, Upper Nile State, in response to a Ministry of Health statement on imported cholera case from Sudan in November 2023.
- As of Epi week 02, 2024, 154 suspected measles cases were reported, with 19 (12.3%) lab-confirmed, 0 deaths, and a case fatality rate of 0.0. Cumulatively, there were 8,113 cases reported from 2023 to 2024 with 227 deaths giving a case fatality rate (CFR) of 2.7%.
- Other emergencies during the reporting include circulating Vaccine Derived Polio Virus type 2 (cVDPV2) in Yambio and Juba counties, Hepatitis E in Fangak county, the Sudan crisis, and ongoing food security

Surveillance system performance

Timeliness and Completeness of IDSR in week 02

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 reports received) 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 03 at 83% and 95% respectively.

Table 1: Timeliness and completeness of IDSR reporting by State for week 03 2024

State	Total facilities	Number of facilities reported†	Current reporting period		Cumulative since year start (2024 level)	
			Completeness	Timeliness	Timeliness	Completeness
CES	151	114	75%	75%	83%	71%
WES	183	175	85%	85%	90%	86%
EES	107	100	93%	93%	97%	85%
JS	115	104	90%	90%	91%	90%
US	90	87	97%	97%	96%	81%
UNS	136	110	81%	81%	85%	72%
WS	111	107	96%	96%	96%	92%
WBG	112	104	93%	93%	91%	75%
LS	112	112	100%	100%	100%	96%
NBG	89	84	94%	94%	94%	89%
GPAA	15	15	100%	100%	100%	100%
AAA	17	14	82%	82%	53%	50%
RAA	16	12	75%	75%	88%	81%
Total	1254	1119	89%	89%	91%	83%

Table 2: Timeliness and completeness of reporting by State and completeness of IDSR reporting from private health facilities in Juba and Wau

Admin area	# Of Reporting Mobile Sites	Completeness in week 02	Completeness in week 01	Payam	Number of Private facilities reported	Completeness in week 02	Completeness in week 01
IMC	4	100%	100%	Kator	3	100%	100%
SSHCO	1	100%	100%	Marial Baai	1	100%	100%
SMC	1	100%	100%	Juba	10	100%	100%
SCI	2	100%	100%	Wau South	20	100%	85%
WVI	2	100%	100%	Wau North	13	92%	92%
SP	4	100%	75%	Northern Bari	1	0%	100%
HFO	3	100%	33%	Rajaf	4	0%	100%
TOTAL	17	100%	82%	Munuki	12	0%	100%
IMC	4	100%	100%	TOTAL	64	72%	94%

Epidemic alerts

A total of 239 alerts have been triggered in the EWARS system, with 68.4% (164/239) have been verified in the system. Majority of the alerts were for Acute Watery Diarrhea (24.6%), Measles (15.8%), Malaria (15.8%) and ARI (15.4%). There were other significant alerts of AJS, cholera and neonatal tetanus. See table 3 below for more details.

Table 3: Summary alerts for week 02

State/Admin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		Bloody Diarrhoea		Cholera		Covid-19		EBS		Guinea Worm		Malaria (Confirmed)		Measles		Neonatal Tetanus		Grand Total	
	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V
CES	0	0	3	3	2	2	1	1	0	0	0	0	0	0	1	1	3	3	1	1	0	0	11	11
EES	0	0	6	6	8	7	5	5	0	0	0	0	0	0	0	0	0	0	3	3	0	0	22	21
GPAA	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Jonglei	0	0	2	0	3	0	7	0	0	0	1	0	0	0	4	0	0	0	4	0	0	0	21	0
Lakes	0	0	3	3	9	9	3	3	1	1	0	0	2	2	7	7	4	4	2	2	0	0	31	31
NBGZ	0	0	5	5	7	7	5	5	0	0	0	0	0	0	0	0	1	1	6	6	0	0	24	24
RAA	0	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0
Unity	2	0	5	0	6	1	3	0	0	0	0	0	0	0	0	0	6	0	4	0	1	0	27	1
Upper Nile	0	0	3	3	4	4	3	3	0	0	1	1	0	0	0	0	2	2	4	4	0	0	17	17
Warrap	0	0	2	0	4	3	0	0	0	0	0	0	0	0	3	3	4	3	7	2	0	0	20	11
WBGZ	0	0	3	3	4	1	1	1	0	0	0	0	3	0	6	1	7	5	2	2	0	0	26	13
WES	0	0	4	4	9	9	6	6	0	0	0	0	0	0	0	0	11	10	5	5	0	0	35	34
Grand Total	2	0	37	27	59	44	34	24	1	1	2	1	6	2	21	12	38	28	38	25	1	0	239	164

#R= reported

#V= verified

Weekly Update on Indicator-Based Surveillance (Week 02)

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 monitored and reported from health facilities across the country on regular basis.

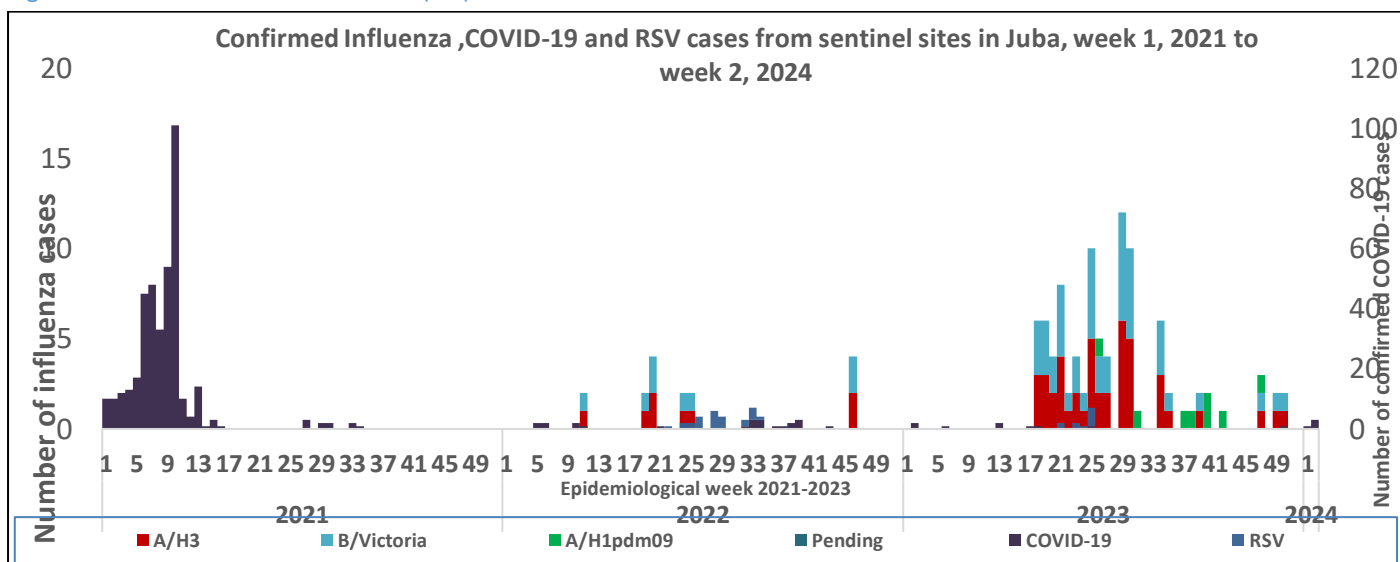
Influenza update

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

By the end of week 52; 2023, a total of 955 ILI/SARI were collected all 861 tested negatives, (8) positives for COVID-19, (40) Influenza types A (H3), (21) B (Victoria), (8) for A/H1pdm09 and 13 for RSV in weeks 52,2023

From week 2 2024, a total of (39) ILI/SARI were collected (34) tested negative, (4) positive for COVID-19, (0) Influenza types A (H3), (1) B (Victoria), (0) for A/H1pdm09 and (0) for RSV in week 2,2024

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



New and ongoing confirmed epidemics

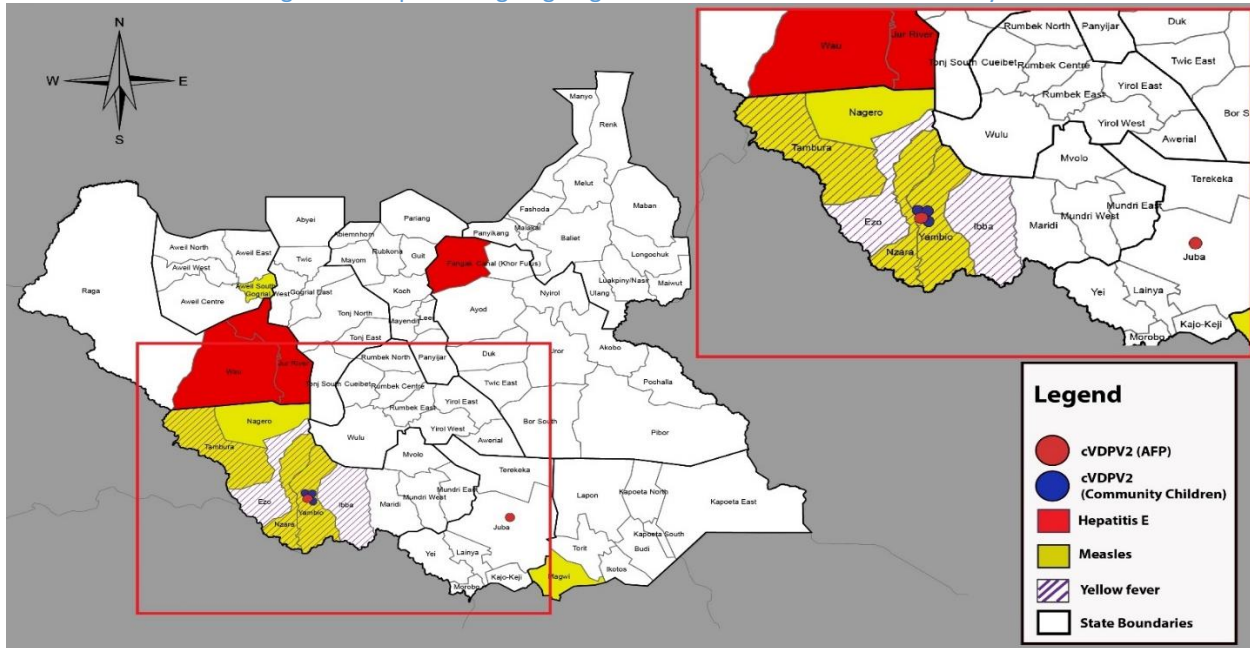
Confirmed epidemics

Table 4 below lists ongoing and newly confirmed epidemics since the last reporting period. Cases are as reported to the epidemic alert and response system.

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>New epidemics</i>										
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba	21 Dec 2023	2	22	1 Laboratory confirmed	Ongoing	Planned	Ongoing	Ongoing	
<i>Ongoing epidemics</i>										
Measles	69 counties	2022	19	7964	609	ongoing	ongoing	ongoing	ongoing	
Hepatitis E	Fangak	2023		502		ongoing	ongoing	ongoing	ongoing	
cVDPV	Yambio and Juba	19/Dec 2023	2	2	2	ongoing	ongoing	ongoing	ongoing	

Figure 2: Map showing ongoing disease outbreak across the country



Weekly Update on Event-Based Surveillance (Week 03)

EBS is the organized collection, monitoring, assessment, and interpretation of mainly unstructured ad hoc information regarding potentially risky events to public health. This information could be rumours and other ad hoc reports transmitted through formal and informal channels, including media, health workers, community structures, NGOs, etc. During Week 3, there were 3 alerts received from the community through media scan. These alerts were for suspected meningitis, increased AWD cases in Aweil East and Acute Jaundice syndrome in Aweil West.

Response activities for ongoing outbreaks

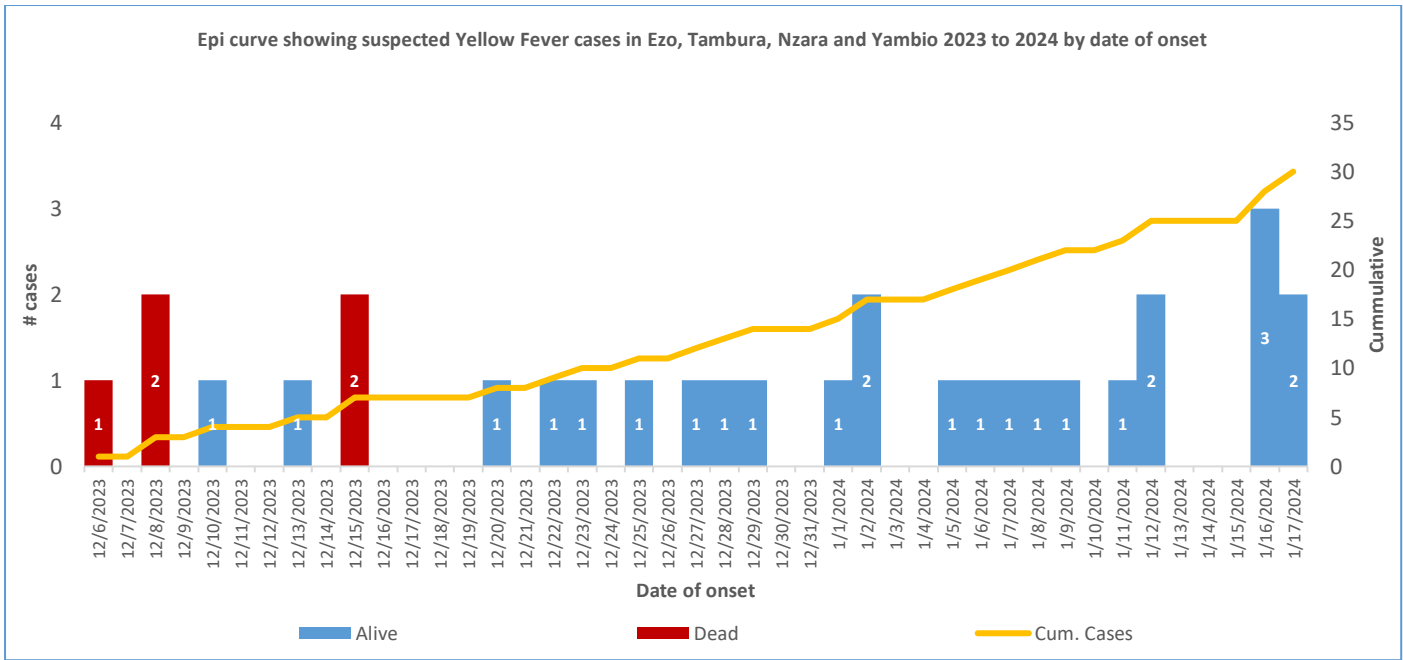
Yellow Fever outbreak in Yambio December 2023 to January 2024

On December 14, 2023, an 18-year-old male from Gangura Centre Village in Gangura Payam, Yambio County, developed an illness characterized by generalized body weakness, headache, epigastric discomfort, fever, and vomiting. Initially, the patient was diagnosed with typhoid and received treatment on the same day. However, a sample was collected on December 21, 2023, and tested positive for yellow fever virus on December 24 at the National Public Health Laboratory using RT-PCR. Consequently, the Minister declared a yellow fever outbreak in Yambio County.

As of 16 January 2024, a total of 05 yellow fever suspected deaths reported A cumulative of twenty (22) Yellow Fever cases (21 suspected and 01 confirmed) were reported from four Counties in Western Equatoria state: Yambio County (11), Nzara County (05), and Tambura County (05) and Ezo (01) as of 16 January 2024.

Among the total cases, 57% are males, and 43% are females. The majority (83%) of the reported cases are 15 years and above, while 17% are among 1 to 4-year-olds.

Figure 3: Epi curve showing suspected Yellow Fever cases 2 by date of onset



Response update

The Ministry of Health, in collaboration with the World Health Organization (WHO) and other partners, has prepositioned essential medical supplies in the affected areas to strengthen the management of Yellow Fever cases. Frontline healthcare workers are given refresher training on case definition, diagnosis, and treatment of Yellow Fever. A vaccine request has been submitted to the International Coordinating Group (ICG), and 410,596 doses have been approved for Yambio, Nzara, Tambura, Ezo, and Ibba Counties. A vaccination campaign is planned for February 2024. An entomological assessment was concluded, and the preliminary findings reveal the presence of Yellow Fever vector (mosquito) larvae in many residential areas in the affected counties.

Measles Update

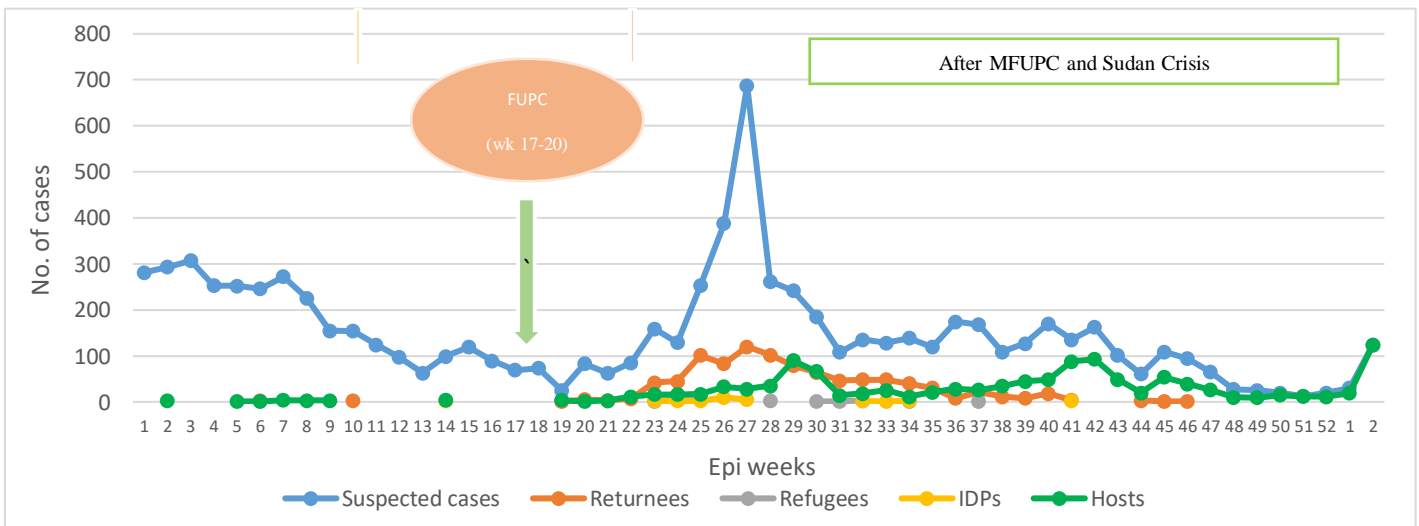
Measles cases have been reported from different counties throughout 2023-2024. The observed peaks are driven by different counties that experienced a surge in measles cases at different times. The Sudan crisis started in week 14 of 2023 with the influx of returnees and refugees since then. The nationwide MFUPC also took place from week 17-20.

A total of 124 New cases for week2 of 2024 have been added since the last update.

An addition of recent 9 lab confirmed measles cases for week 02, 2024 have been reported from Tambura (3), Nzara (2), Yei (1), Rumbek North (1), Torit (1), & Nagero (1) Two (2) ongoing outbreaks in the week under review (Tambura, & Yambio) involving two (2) payams

Nagero, Nzara, Rumbek North, Torit, Aweil South, Aweil West, Aweil East, Yei, Maridi & Wau continue to report suspected/confirmed cases that have not reached the outbreak threshold in the last four weeks and need to collect more samples for testing as per the revised SOP.

Figure 4: Trend of suspected measles cases against their residential status by epi week



As of Epi week 2, 2024, 154 suspected measles cases were reported, with 19 (12.3%) lab-confirmed, 0 deaths, and a case fatality rate of 0.0. Out of the 154 suspected measles cases, 19 (12.3%) are lab-confirmed, 40 (47%) epi-linked, 147 (95.5%) clinically compatible, and 7 (4.5%) discarded cases have been reported from epidemiological week 02, 2024. A total of 0 rubella positive cases from the discarded (negative measles cases).

Table 5: Distribution of cases by final classification 2024

FINAL CLASSIFICATION	NO. OF CASES	%
Lab confirmed	19	12.3
Epi-linked	40	26.0
Clinically Compatible	88	57.1
Total	147	95.5
Discarded (-ve)	7	4.5
Grand Total	154	100.0

Response activities (measles)

In Phase I; over 65,000 children under 15 years were vaccinated in five counties (Renk, Aweil East, Aweil North, Aweil West, and Rubkona)

Phase II: 17 counties had implemented the reactive campaign to vaccinate over 910,728 (92%) children under 15 years, of which 150,202(16%) are returnees and refugees. Seven counties (Ayod, Leer, Fangak, Abyei, Gogrial West, Bentiu POC, and Malakal) were supported by Partners (MEDAIR, IMA, HFO, IHO, MSF, and Save the Children). Kapoeta East: the campaign is completed late last year, and final data is yet to be submitted.

Sudan Crises response updates

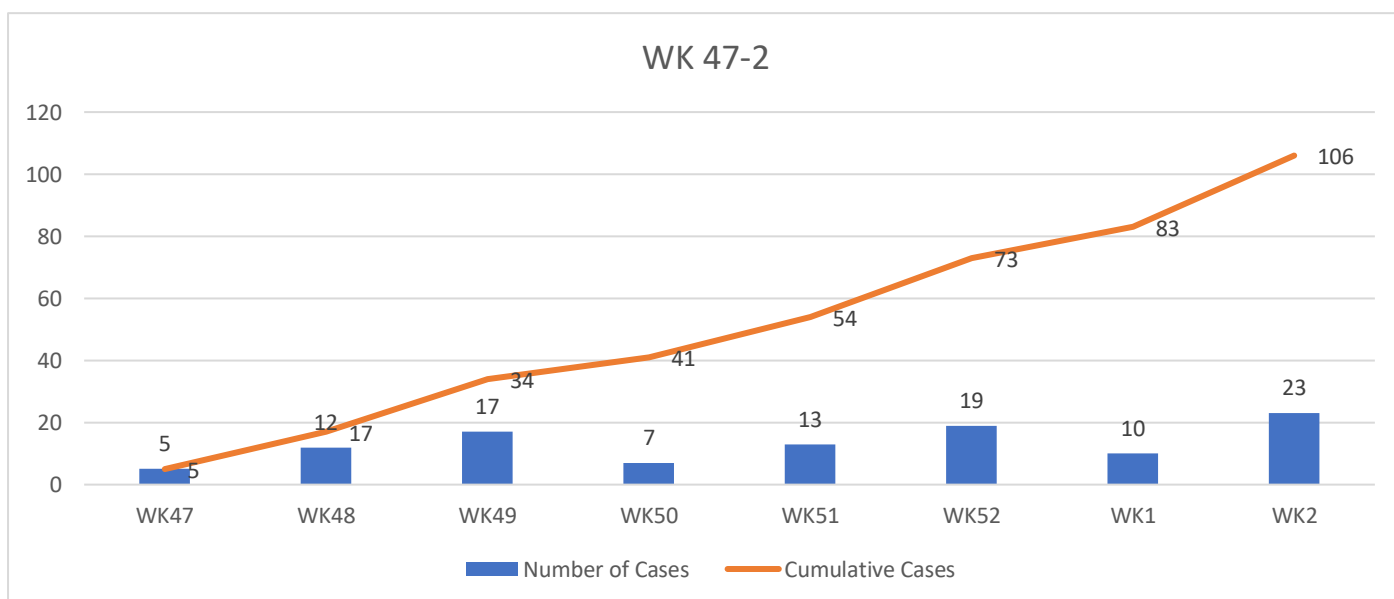
As of 7 February, 1,228 individuals have entered South Sudan. The cumulative number of arrivals since 16 April 2023 is 548,195. Of this number, 437,762 individuals (79.8%) are returnees, while 110,433 individuals (20.2%) are refugees.

Currently, 22 points of entry (PoEs) are being monitored, accounting for 83% of the total reported influx figures.

Cholera Preparedness and Readiness updates in Renk

A health screening desk was established at Wanthou/Joda. 7,847 consultations were conducted, with ARI being the leading morbidity cause at 26%, followed by Malaria at 17%, and AWD at 6%. A total of 106 AWD alerts have been triggered since week 47 and all of the samples collected tested negative by culture.

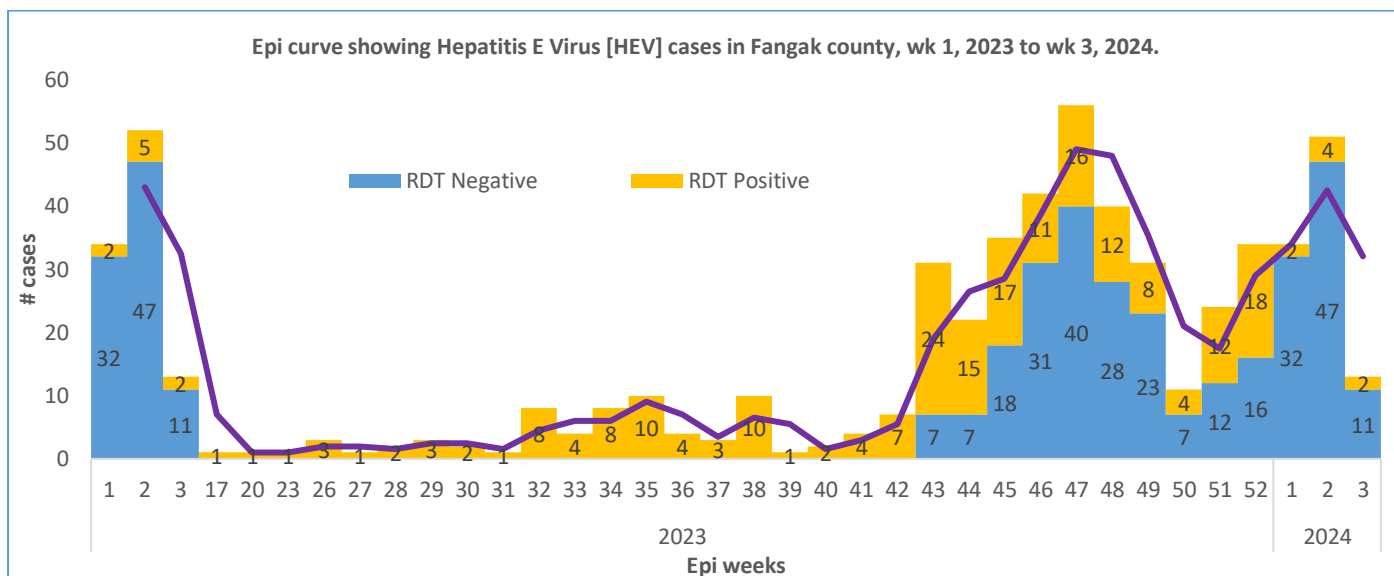
Figure 5: Alerts of Acute Watery Diarrhea Surveillance in Renk County from week 47 of 2023 to week 02 of 2024



Hepatitis E Virus in Fangak county Jonglei State

A total of 501 cases, including 21 deaths, have been reported from week 1 of 2023 to week 3 of 2024. Most of the cases were reported among people aged 15 years and above. Regarding sex, females accounted for 68% (340) of the cases, while

males accounted for 32% (161). The RDT positivity rate was high from week 17, 2023, to week 42, 2023, when there was a sharp increase in cases due to the intervention by National RRT through active case search and risk communication activities



Response activities include WASH intervention through community engagement, the First round of vaccination using Hecolin has been concluded and plans are underway to conduct the second and 3rd round of vaccination the

Circulating Vaccine Derived Polio Virus type-2 (cVDPV2)

As of 31 January 2024, a total of 02 cVDPV2 cases were reported from Yambio – Western Equatoria and Juba – Central Equatoria. Three (3) Samples from healthy children from Western Equatoria were also confirmed as cVDPV2, and the virus is closely matched with the index case from West Equatoria State. The most recent cVDPV2 case from the AFP sample was reported from Juba County, Central Equatoria state, with the date onset of paralysis on 4th November 2023. However, there are samples in the laboratory pending testing. There’s an ongoing preparation to conduct a nationwide outbreak response campaign using the nOPV2 vaccine tentatively planned for 20-23 Feb 2024.

Other events

Meningitis: There has been a suspected meningitis outbreak in Akobo and Nyirol counties. In Nyirol County, five cases have been recorded, including two deaths. Meanwhile, Akobo County (Walgak Payam) has reported a total of eight cases as of January 22, 2024, with three deaths reported among these cases. To investigate the outbreak, two teams, consisting of members from WHO and NMOH, will travel to both locations this week. To enhance surveillance, WHO has prepositioned meningitis investigation kits in the region for suspected meningitis.

Flooding: During the last four consecutive years, South Sudan has experienced consecutive years of devastating floods, affecting over 1 million people. The most impacted states include Northern Bahr el Ghazal, Warrap, Unity, Western Equatoria, Jonglei, and Upper Nile. These recurring floods have worsened an already dire situation, leaving people without food and viable land for cultivation. The same states affected by severe flooding are now receiving refugees and returnees from Sudan, further straining the capacity to respond. With the onset of the rainy season, the re-prioritization of limited resources to address people’s needs because the Sudan crisis has created gaps in flood preparedness efforts, posing challenges in effectively responding to ongoing emergencies and preparedness measures. Insufficient funding and access limitations have constrained the humanitarian response in 2023.

Sudan crises: South Sudan has received 512,002 individuals at several (21) points of entry along the border with Sudan since April 2023. More than 81% (414,722) of these arrivals are South Sudan returnees, 433,609 are arriving through Joda in Renk County, 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 the 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 point of entry. Suspect cholera cases are further screened and tested with the use of rapid diagnostic test (RDT). Of the 85,391 individuals that crossed through Wunthou point of entry since 19 December 2023, 16,889 were screened for AWD 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 potential cholera outbreak. Surveillance activities will also be strengthened in counties reporting disease outbreak 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 going outbreaks.

Acknowledgments

Thanks to the State Surveillance Officers, Health Cluster partners for sharing the weekly IDSR data.

To access the IDSR bulletins for 2023 use the link below:

<https://www.afro.who.int/publications/south-sudan-weekly-disease-surveillance-bulletin-2023>

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

