



South Sudan
Ministry of Health
Integrated Disease surveillance
and response (IDSR)



**World Health
Organization**
South Sudan

Epidemiological Bulletin Week 15, 2023 **(10-16 April)**



Major epidemiological highlights in week 15 of 2023

- In week 15, 2023, the IDSR reporting timeliness and completeness were **82%** and **88%** respectively and timeliness and completeness for EWARN sites were both at **90%**
- A total of 119 alerts were triggered in week 15, 2023 majority were for measles 29%(35), malaria 23.5%(28) AWD 17% (21), and (03) AJS alerts
- 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. cumulatively with a total of 115 cases and five deaths giving CFR 4,3% since
- Cholera outbreak in Malakal with a total of **1 223** cases reported and two (2) deaths giving a CFR of 0.16% from February 22 to 22 April 2023 from both the Malakal IDP camp and town
- A total of the **6 027** suspected measles cases, 3 111(49.6%) are epi-linked, 584(9.6%) are lab-confirmed, 1,711(28.3%) are clinically compatible, and 623(10.3) discarded cases have been reported from epidemiological week 1, 2022, to week 14, 2023
- South Sudan celebrated the African vaccination week and launched the integrated measles vaccination, Vitamin A, and Deworming campaign targeting **2.7 million** children age 6 to 59 months of age across South Sudan

SURVEILLANCE PERFORMANCE



For the Integrated Disease Surveillance (IDSR)
network and Early warning alert and response
network (EWARN)



IDSR timeliness performance at State level for week 15 & 14 of 2023



Timeliness States Ranking	States	Number of reporting sites	No. of HFs Reported on Time in WK 15	Timeliness Percentage of WK 15	No. of HFs Reported on Time in WK 14	Timeliness Percentage of WK 14
1st	WES	217	217	100%	194	89%
2nd	NBGZ	89	87	98%	81	91%
3rd	Warrap	127	116	91%	104	82%
4th	CES	128	115	90%	125	98%
5th	EES	105	86	82%	60	57%
6th	Lakes	113	88	78%	97	86%
7th	WBGZ	78	59	76%	45	58%
8th	Jonglei	129	91	71%	84	65%
9th	Unity	97	56	58%	68	70%
10th	Upper Nile	113	63	56%	50	44%
	South Sudan	1196	978	82%	908	76%

KEY

	<60%	Poor
	61%-79%	Fair
	80%-99%	Good
	100%	Excellent

The Timeliness of IDSR Reporting (Supported by EWARS Web and Mobile) at health facility level in week 15 stands at 82% while in week 14 it was 76% with 5 states above the National target of 80% .

Reporting Challenges in the poorly performed States are; insecurity, internet inaccessible; Turnover of Partners.



IDSR Completeness performance at State level for week 15 & 14 of 2023



Completeness States Ranking	States	Number of reporting sites	No. of HFs Reported regardless of time in WK 15	Completeness Percentage of WK 15	No. of HFs Reported regardless of time in WK 14	Completeness Percentage of WK 14
1st	WES	217	217	100%	217	100%
2nd	Lakes	113	111	98%	113	100%
3rd	NBGZ	89	87	98%	89	100%
4th	EES	105	96	91%	88	84%
5th	CES	128	117	91%	128	100%
6th	Warrap	127	116	91%	112	88%
7th	WBGZ	78	65	83%	74	95%
8th	Jonglei	129	100	78%	98	76%
9th	Unity	97	70	72%	82	85%
10th	Upper Nile	113	75	66%	90	80%
	South Sudan	1196	1054	88%	1091	91%

KEY

	<60%	Poor
	61%-79%	Fair
	80%-99%	Good
	100%	Excellent

The Completeness of IDSR Reporting (Supported by EWARS Web and Mobile) at health facility level in week 15 stands at 88% while in week 14 it was at 91% with 7 states above the national target of 80%.

Reporting Challenges in the poorly performed States includes; insecurity; internet inaccessible; Turnover of Partners, Floods.



Surveillance: EWARS Timeliness performance indicator by partner for week 15 and 14 of 2023



Partner	HF's	Reporting	Performance		
PARTER	Number of reporting sites	# of reports received on Time in Week 15	Timeliness of Week 15	# of reports received on Time in Week 14	Timeliness of Week 14
AFAA	1	1	100%	1	100%
SSHCO	1	1	100%	1	100%
IRC	1	1	100%	1	100%
World Relief	3	3	100%	3	100%
Medair	2	2	100%	2	100%
ForAfrika	13	13	100%	11	85%
Islamic Relief	5	5	100%	4	80%
MSF-H	4	4	100%	2	50%
CIDO	1	1	100%	0	0%
Medicaire	5	5	100%	0	0%
SCI	2	2	100%	0	0%
IMC	22	21	95%	18	82%
IOM	10	9	90%	9	90%
HFO	10	9	90%	7	70%
SMC	6	5	83%	6	100%
MSF-E	6	4	67%	4	67%
TRI-SS	2	0	0%	2	100%
UNIDOR	2	0	0%	0	0%
TOTAL	96	86	90%	71	74%

The Timeliness of EWARS in partners' supported sites stands at 90% in week 15 while in week 14 it was 74%



Surveillance: EWARS completeness performance indicator by partner for week 15 and 14 of 2023

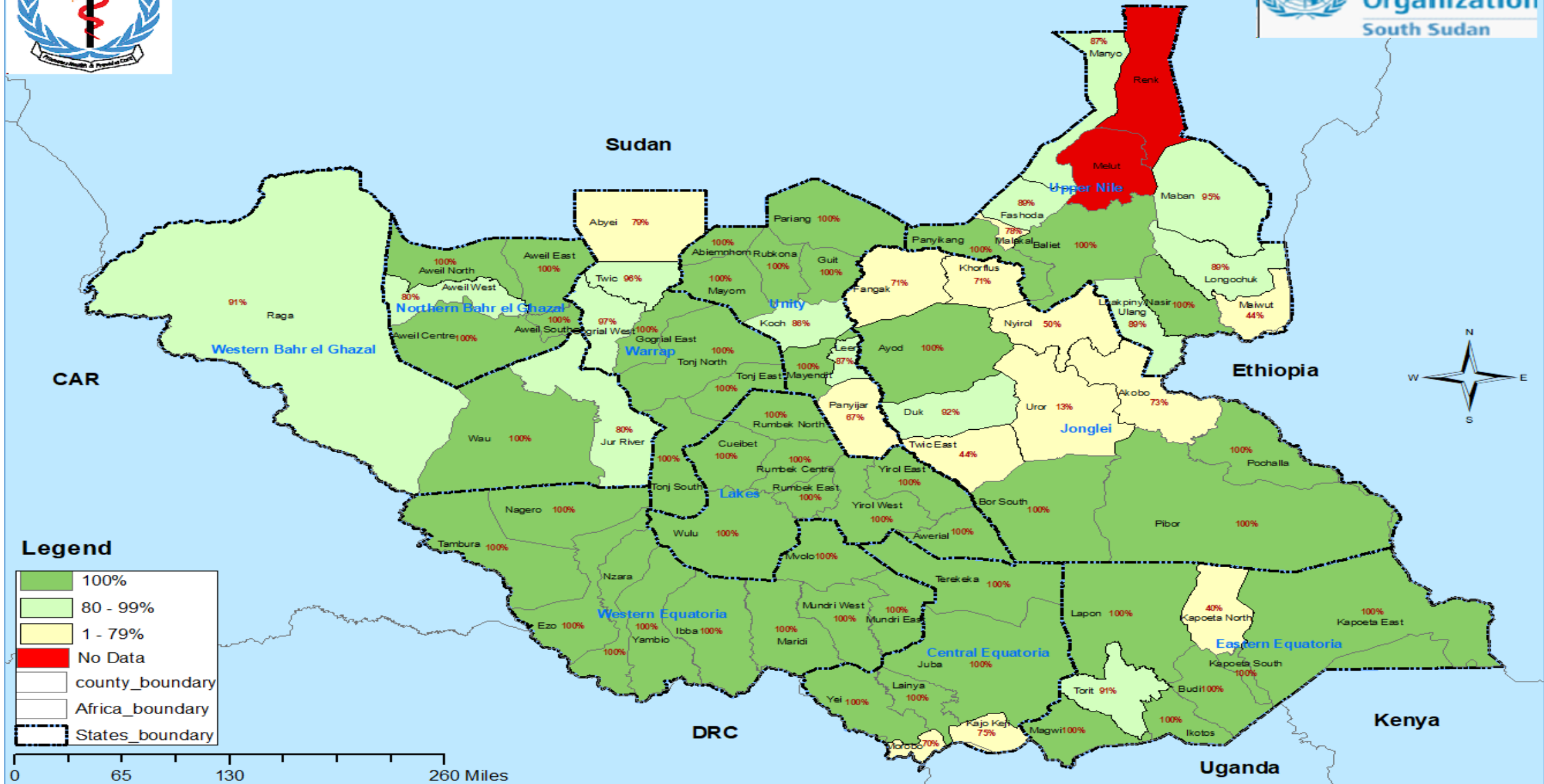


Partner	HFs	Reporting	Performance		
PARTER	Number of reporting sites	# of reports received regardless of Time in Week 15	Completeness of Week 15	# of reports received regardless of Time in Week 14	Completeness of Week 14
AFAA	1	1	100%	1	100%
SSHCO	1	1	100%	1	100%
IRC	1	1	100%	1	100%
Islamic Relief	5	5	100%	5	100%
CIDO	1	1	100%	1	100%
SCI	2	2	100%	2	100%
World Relief	3	3	100%	3	100%
Medair	2	2	100%	2	100%
ForAfrika	13	13	100%	11	85%
MSF-H	4	4	100%	3	75%
Medicair	5	5	100%	0	0%
IMC	22	21	95%	21	95%
HFO	10	9	90%	10	100%
IOM	10	9	90%	9	90%
SMC	6	5	83%	6	100%
MSF-E	6	4	67%	5	83%
TRI-SS	2	0	0%	2	100%
UNIDOR	2	0	0%	0	0%
TOTAL	96	86	90%	83	86%

The Completeness of EWARS in partners' supported sites stands at **90%** in week **15** while in week **14** it was at **86%** .



Percentage of IDSR reporting completeness by county in week 15, 2023.



Disclaimer: The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

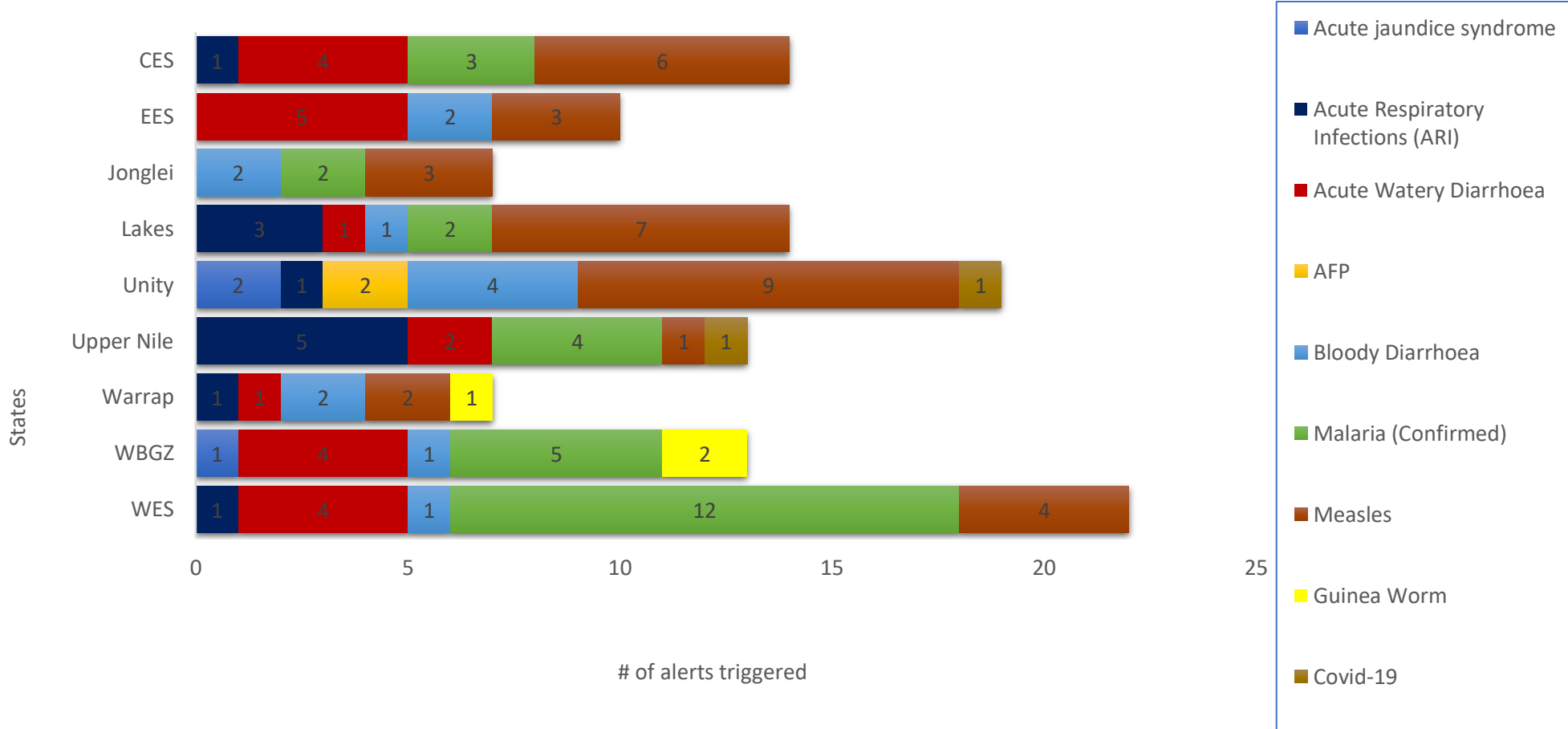
INDICATOR-BASED SURVEILLANCE



Alert management including detection; reporting; verification; risk assessment; & risk characterization



Alert by disease and States in week 15 of 2023 [a total of events specific alerts generated by state



This week a total of 119 Alerts were triggered of which 63 are from outbreak prone diseases as Per the broken-down below

- 21 AWD alerts: these alerts were triggered from the following States, CES(4), EES (5), Lakes (1), UNS(2),Warrap(1), WBGZ(4), WES(4)
- 35 Measles alert: these were triggered from following States ;CES (6), EES(3), Jonglei(3), Lakes (7), Unity(9), UNS(1), Warrap(2), WES(4).
- 3 AJS alert: these were from MSF-H Bentiu IDP Hospital, MSF-H Leer PHCC and Achot PHCU in Jur River
- 2 AFP alert: this was an alert from SP_Wangbuor Mobile Clinic in Manyo and Yida Centre A PHCC in Pariang
- 2 COVID-19 alert: this was from Yomding PHCC in Ulang and Yida Centre A PHCC in Pariang

INDICATOR-BASED SURVEILLANCE



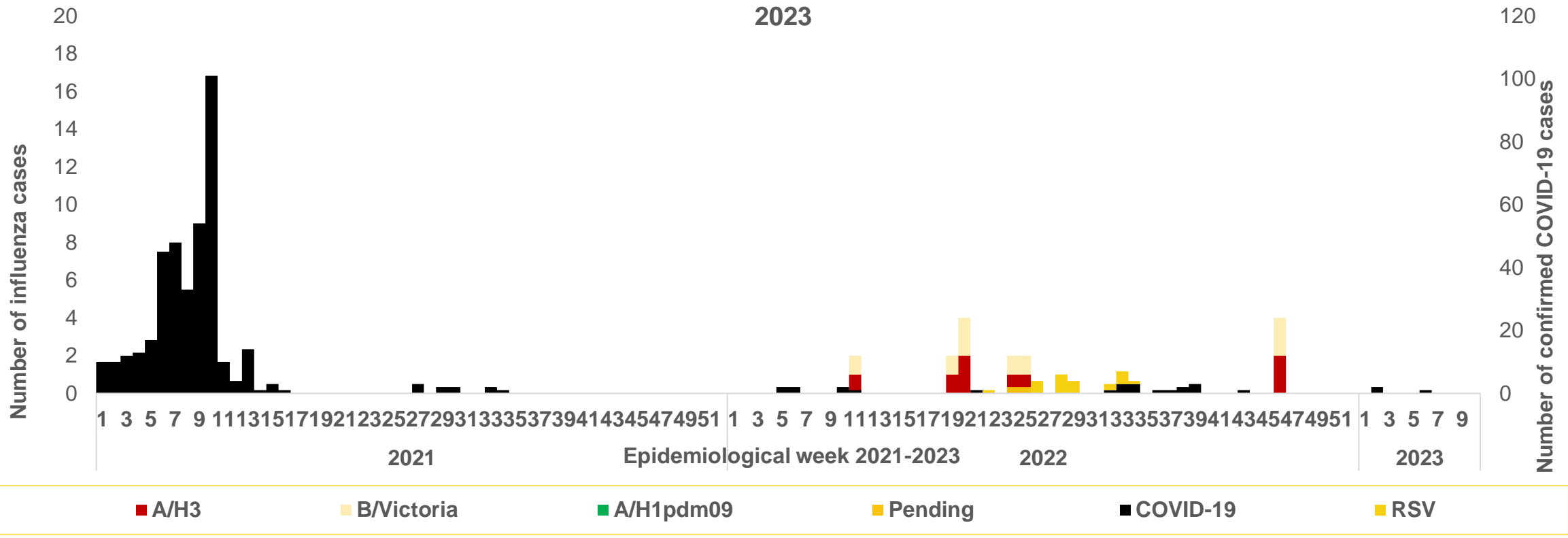
Alert management including detection; reporting; verification;
risk assessment; & risk characterization

Influenza sentinel Surveillance updates





Confirmed Influenza ,COVID-19 and RSV cases from sentinel sites in Juba, week 1, 2021 to week 10, 2023



- 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 **52,2022**; a total of **594 ILI/SARI** samples were collected,**529** samples tested negative, and Cumulatively, **21** tested positive for covid-19,**8** positive for Influenza B (Victoria), and **6** were positive for influenza A(H3).**26** RSV was confirmed in Week 52
- From weeks 1-10 2023, a total of 121 ILI/SARI were collected all 118tested negative,**3** positives for Covid-19, (**0**)Influenza types A (H3), B (Victoria), and **0** for RSV in weeks 10,2023



**ACTIVE OUTBREAKS AND
PUBLIC HEALTH EVENTS**





**HEPATITIS E OUTBREAK
IN WAU AND JUR RIVER
COUNTY**

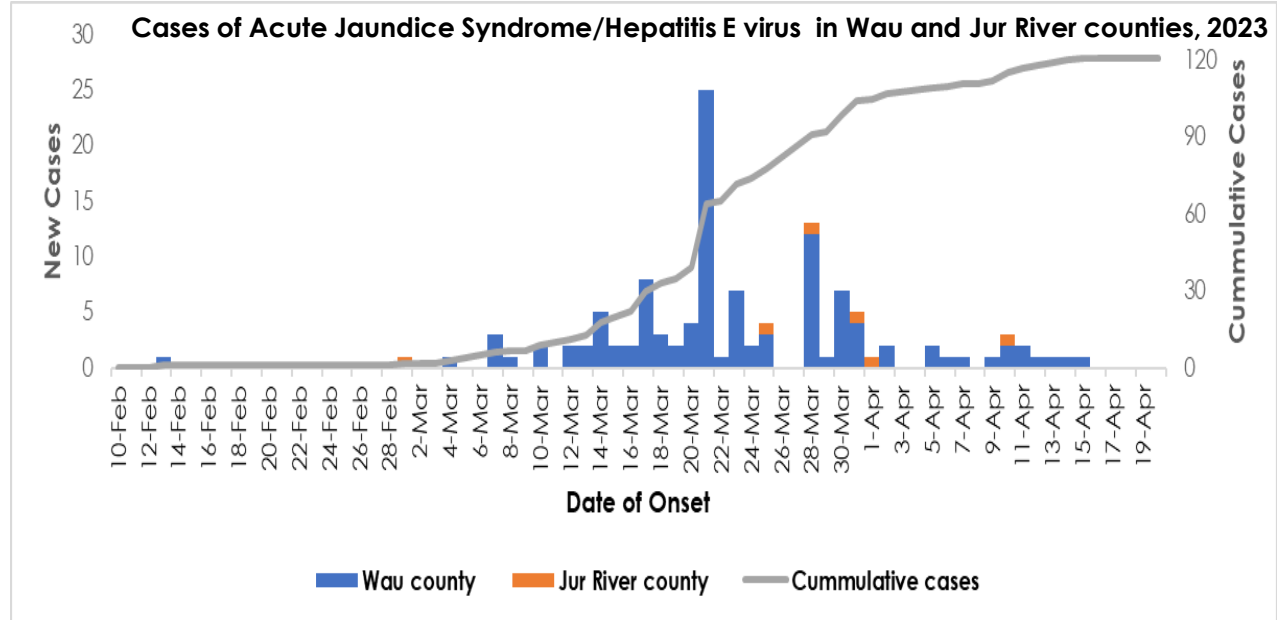


Hepatitis E Virus Outbreak in (Wau and Jur River counties) WBG state updates as of 22 April 2023



Descriptive Epi

- On March 22, 2023, the state Ministry of Health Western Bahr el Ghazal state notified the Ministry of Health in Juba of clusters of cases and deaths in Wau.
- Cases presented with yellowing of eyes (Acute Jaundice Syndrome).
- State MOH and WHO conducted alert verification and collected samples for further investigations.
- On April 14, 2023, the national Ministry of Health declared an outbreak of Hepatitis E Virus (HEV) disease and subsequently activated the PHEOC to response mode and all response pillars.
- A total of 121 AJS Cases including (5 death) were reported since 12 February, 2023 to 19 April 2023
- Of the 121 cases as of April 19, 2023, most (102, 84%) were from Nazareth Village in Wau county. Sporadic cases in six neighboring villages of Mutamadia (1), Taban (1), Massna (1) and a cluster in Kosti (4) New site (6) and Atur village in Jur river county (6)
- Most cases 86 (76%) are males. And the median age is 20 (range:2-71 years)
- Overall, five deaths (3-males) giving CFR=4.3% ve.
- Two patients are in admission in Wau teaching hospital. as of 14 April 2023.
- A total 53 samples had been tested for HEV IgM antibodies and 24 tested by PCR at the Uganda Virus Research Institute and 10 came positive for HEV**
 - using RDTs (15 at NPHL and 38 at Wau teaching hospital).
 - Of these 45 were positive (14 at NPHL and 31 at Wau hospital) yielding an overall positivity rate of 84.9%. With sensitization and active search more cases are detected



Intervention

- MOH and WHO and AFENET deployed a team of 6 people (1 Epidemiologist, 1 WASH, 1 IPC, 1 Surveillance, 1, case management, and 1 Lab) to Wau to support the investigation and initial response for 2 weeks.
- WHO conducted an assessment and mapping of the status of water quality for sources of possible water contamination within Wau town and conduct environmental hygiene risk of transmission surrounding the drinking water points in areas with high incidents of reported cases. In addition to that, WHO also analyzed the water samples collected from different sources in the above areas.
- State MoH and WHO have supported the establishment of an isolation unit at Wau teaching hospital and send additional medical supplies.
- Active case search is ongoing in the community and case management at the Wau teaching hospital.
- Water quality testing report has been shared with WASH/RCCE partners to scale up WASH interventions and RCCE.

WATER TEST RESULTS CONDUCTED IN WAU

Microbiological Analysis						
Items	Total water sample from Public/School		Total water sample from Open Well		Total water sample from Borehole/water Yard	
	+ve	-ve	+ve	-ve	+ve	-ve
Parameter Test Results	+	-	+	-	+	-
# of samples per result	1	5	13	4	2	2
Samples per Setting	6		17		4	
% +Ve and -Ve Rate	17%	83%	77%	23%	50%	50%
Total of Samples Tested +ve	16 (59.3%)					
Total of Samples Tested -ve	11(40.7%)					
Total Samples Tested	27					

Table 2: Basic Physio-chemical Analysis Parameters

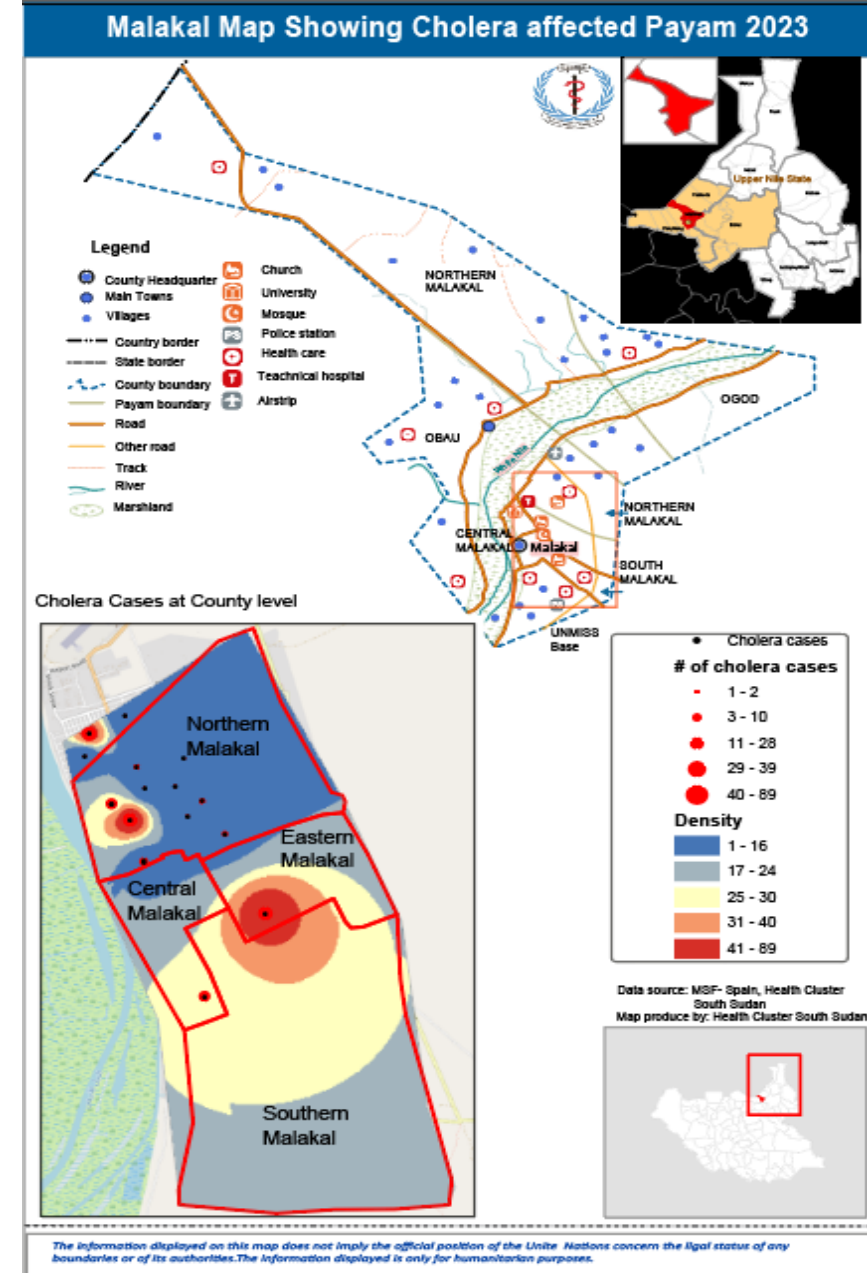
Free Residual Chlorine (FRC) WHO:(0.2-0.5mg/L)		TURBIDITY (WHO: 5 NTU)		pH (WHO: 6.5 - 8.5)	
With FRC	No FRC	At of 5	Out Range	At Range	below/out of Range
0	27	5	22	19	8
0%	100%	19%	81%	70%	30%



CHOLERA OUTBREAK IN MALAKAL



- On 1st March 2023, the National Ministry of Health received information of suspected cholera cases with two (2) RDT positive
- On 2nd March 2023, nine (9) samples were received at the NPHL, and **two (2) samples tested positive for vibrio cholerae** by Polymerase chain reaction (PCR) on 6th March 2023.
- On 7 March 2023, the National Ministry of Health declared a cholera outbreak in Malakal County, Upper Nile State
- Cumulatively, from 22 February to 23 April 2023 a total of 1223 cases with (2) death (**CFR-0.16%**)
- Twenty-Eight (28) new cases and 0 deaths have been reported as of 23 April 2023 (POC = (2) and Town = (16))
- Four (04) cases admitted as of 23 April 2023
- Overall, 331 (54%) of the cases are males and 277(46%) are females.
- Children of age 1 – 4 years old are the most affected accounting for 60 (50%) of the total cases reported followed by 15 years and above 27 (33%).
- Oral Cholera vaccination campaign commenced on 16 March 2023 targeting 66,121 individuals aged 1 year and above in the POC and Malakal town.
- Cumulatively, 54,538 people have been vaccinated (Malakal town and POC) with OCV for 5 days s of the campaign achieving 83% coverage





Key Epidemiological highlights from Malakal as of 30th March 2023



Descriptive Epi

- Twenty-eight (28) new cholera cases have been reported in the last 24 hrs.
- Cumulatively, a total of 1 223 cholera cases and 2 deaths(CFR-0.16%) has been recorded since the onset of the outbreak.
- Overall, 481(53%) of the cases are males and 424(47%) are females.
- Children of age 1 – 4 years old are the most affected accounting for 450(50%) of the total cases reported followed by < 1-year-old 322(36%).
- Oral Cholera vaccination campaign conducted on March 2023 targeting 66,121 individuals aged 1 year and above in the POC and Malakal town.
- Cumulatively, 54,538 people have been vaccinated (Malakal town and POC) with OCV achieving 82% coverage
- The current cholera outbreak is localized in Malakal Upper Nile State on the side boarding Sudan.

Epi curve showing cholera cases in Malakal County as of 23rd April 2023

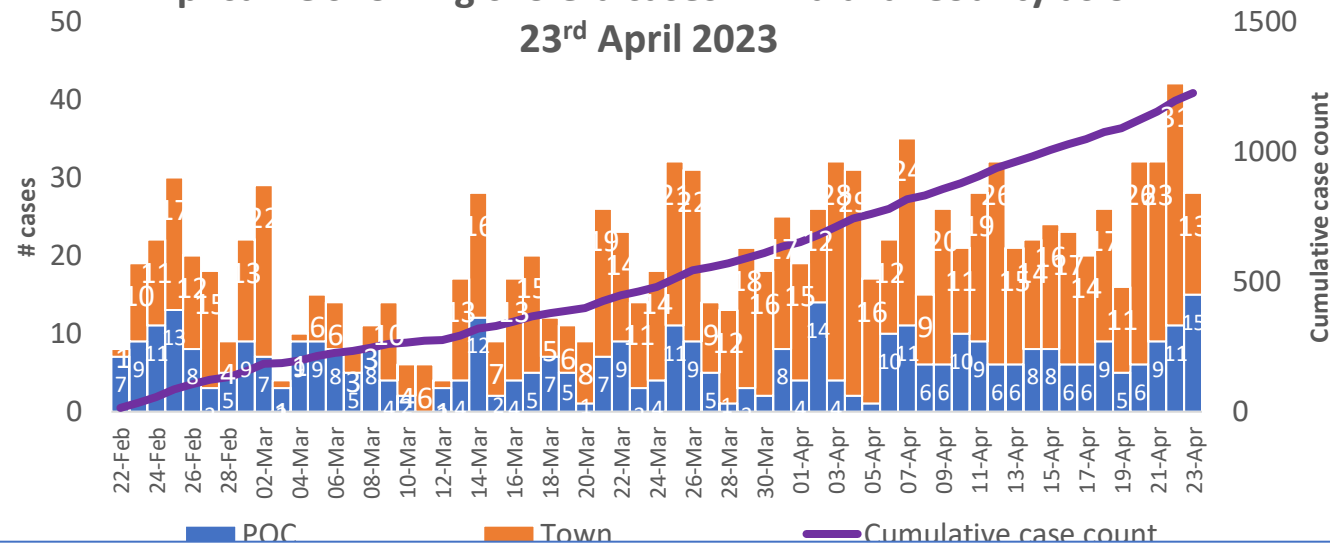
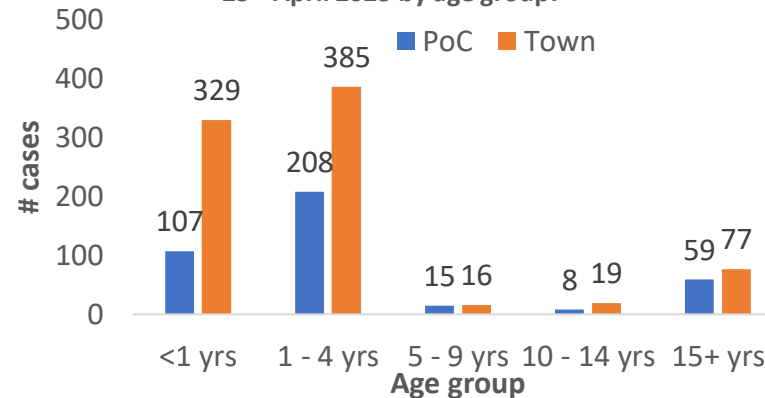
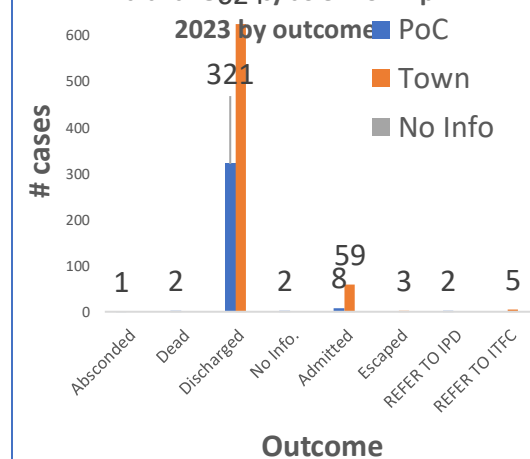


Chart showing cholera cases in Malakal County as of 23rd April 2023 by age group.

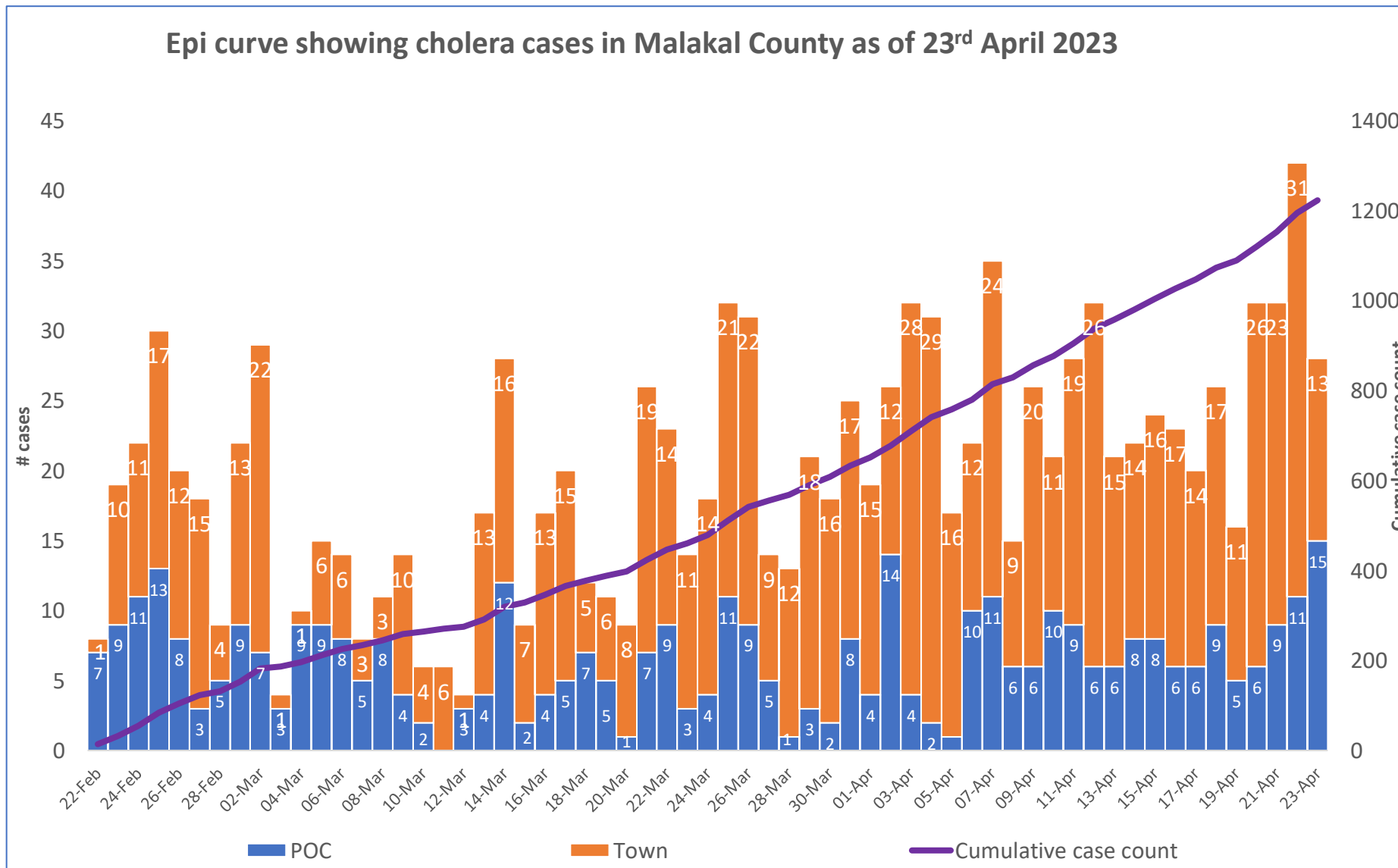


Number of cholera cases in Malakal County as of 16th April 2023 by outcome





Epi curve showing cholera cases in Malakal County



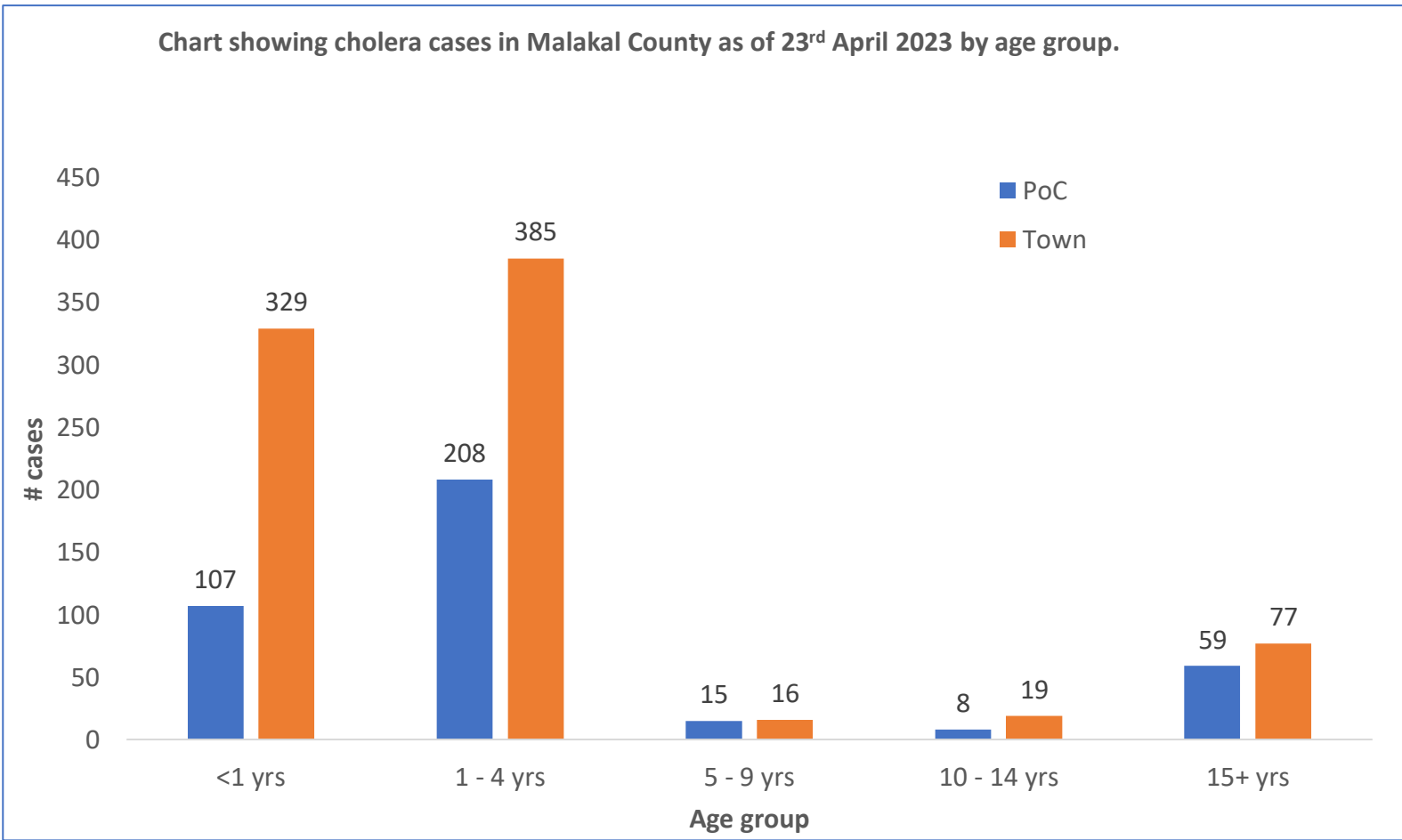
- The cumulative cases up to date stand at 1223.
- Cumulative number of deaths reported = 2 (CFR = 0.16%).
- Malakal town accounted for 67% (826) of all the reported cases, while PoC accounted for 33% (397).
- On 23rd April, there were 28 cases documented in Town (13) and PoC (15).



Cholera cases in Malakal County by age group.



Chart showing cholera cases in Malakal County as of 23rd April 2023 by age group.

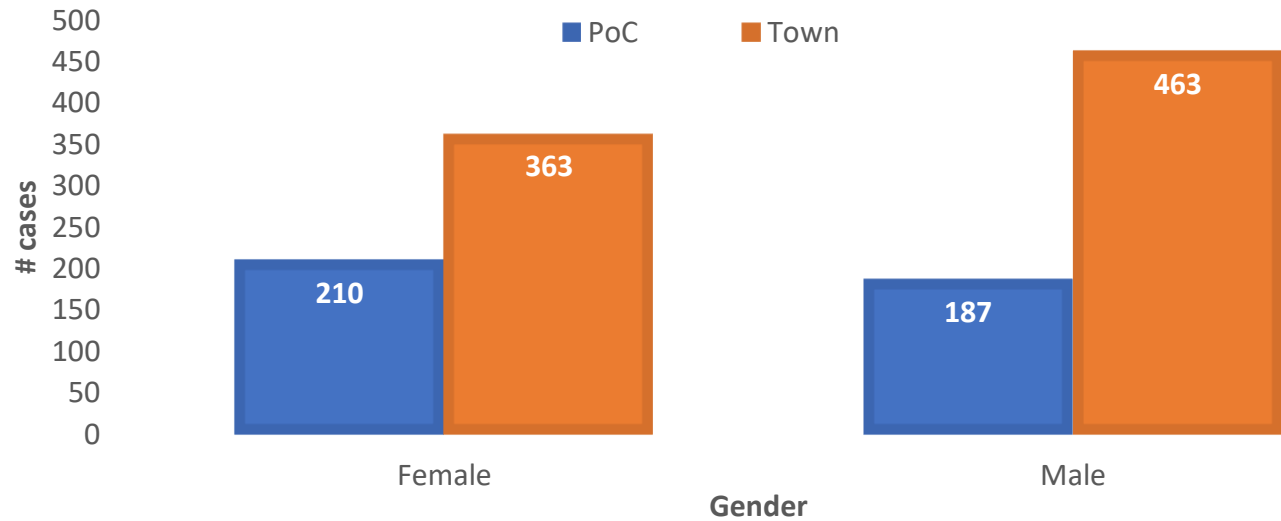


- In terms of case distribution by age group, children of age 1 – 4 years old are the most affected which accounting for 48% (593) of the total cases reported, followed by <1 year old which stand at 36% (436).
- Majority of 1 – 4 years cases were reported from Malakal town (385) and in PoC a total of (208) cases.

Age group	Cases	Percentage	Cum %
<1 yrs	436	36%	36%
1 - 4 yrs	593	48%	84%
5 - 9 yrs	31	3%	87%
10 - 14 yrs	27	2%	89%
15+ yrs	136	11%	100%
Grand Total	1223	100%	



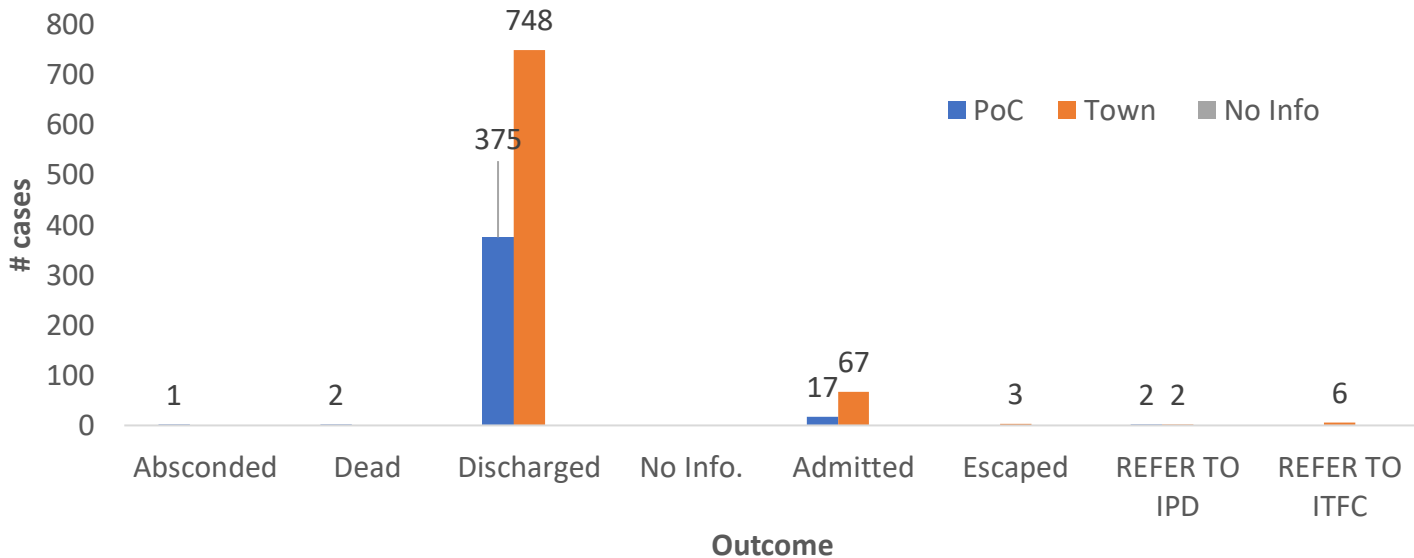
CHART SHOWING CHOLERA CASES IN MALAKAL COUNTY AS OF 23RD APRIL 2023 BY GENDER.



- In terms of aggregation by gender, Male account for majority of the cases 53% (650) as compared to female counter parts 47% (573). With Malakal town leading in the cases reported from both gender.

Gender	Cases	Percentage	Cum %
Female	573	47%	47%
Male	650	53%	100%
Grand Total	1223	100%	

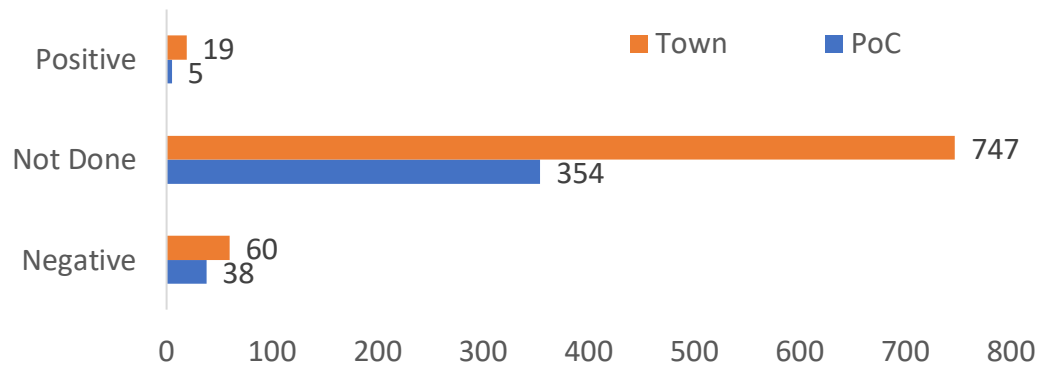
Number of cholera cases in Malakal County as of 23rd April 2023 by outcome.



- Four inpatients were reported on 23rd April 2023. Majority of the cases have been discharged from the cholera treatment centers both in town and PoC as depicted in the graph;
- The cumulative death stand at 2 since the onset of out break;
- Four cases referred to IPD, and Six referred to ITFC.

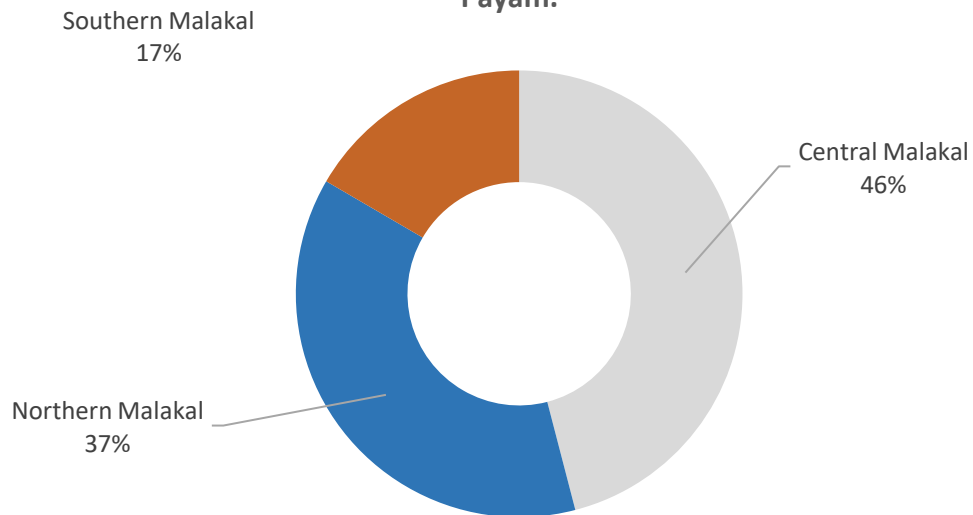


Number of cholera cases in Malakal County as of 23rd April 2023 by Test Conducted (RDT).



- No positive case confirmed by RDT on April 23rd
- Since the onset of outbreak, 24 cases have tested positive on RDT, with 19 cases in the town and 5 cases PoC.
- 98 negative RDT Cholera cases, and 1101 without RDT confirmation.

Number of cholera cases in Malakal County as of 23rd April 2023 by Payam.



- The Cholera cases have been reported from three (3) Payams namely: Central; Northern Malakal and Southern Malakal.
- Malakal Central reported 46% of the total cases and Northern Malakal account for 37% while Southern Malakal recorded 17%.

Key interventions and Challenges in Malakal as of 30th March 2023

Key Interventions

- The National Ministry of Health declared a Cholera outbreak in Malakal county, Upper Nile State on 7th March 2023,
- The National EOC was immediately activated and MOH IMS instituted
- Ongoing coordination at both National and State levels to discuss the ational and State Cholera Taskforce continue to meet regularly to provide operational and strategic guidance to the ongoing cholera outbreak response.
- A multisectoral National and State RRT continue to provide epidemiological investigation and technical support to the response interventions in Malakal County.
- Launching of the Oral cholera vaccination targeting 66,121 individuals aged 1 year and above on 16 March 2023
- Over 54,538 people have been vaccinated both in the POC and Malakal town with a coverage of 83% in 5 days.
- WHO hired 2 additional vehicles to support response activities in Malakal.
- WHO has dispatched 1 x 48sqm and 1 x 24sqm medical tents to Malakal to support the ongoing Cholera response.
- WHO conducting a 5 days Case management training starting on 28 March and 1 April 2023 to support health partners (IMC, IOM, MSF and DRC)
- MSF completed the rehabilitation the Cholera treatment Center (CTC) in PoC and functional from Monday it will be official open
- 7 ORP supported IMC and 2 ORP supported by IOM with a total of 121 patient see, presented with AWD, no dehydration status, treated with ORS and discharged in 4 hours.
- Cumulation of 590 cholera case managed at the MSF facilities sites both for PoC with 215 (36%) and Town with 375 cases (64%).
- WHO/MOH continue to conduct active case searches in three (3) Health facilities (IOM PHCC,IMC PHCC & MSF Isolation in POC
- Cholera-specific training started entered its second day focusing on Case Management, Lab, RCCE, IPC, WASH & Surveillance

Challenges

- Inadequate access to safe and clean water due to limited WASH supplies.
- Sub-optimal risk communication and community engagement in cholera affected high-risk locations.
- Inadequate RDT testing of suspected cholera cases at the subnational level, most especially, in health facilities and treatment centers.
- Inadequate funding for partners to respond to the cholera outbreak in Malakal.
- Lack of designated ambulance to facilitate referral of cholera cases and designated vehicle for the safe dignified burial (SDB) team.
- Identification of personnel to be trained safe and dignified burial (SDB).
- Overcrowding in the POC due to the continued influx of IDPs poses is a major challenge to the limited WASH facilities in the POC.
- Inadequate cholera kits and investigation kits for the cholera outbreak response.
- Case management charts are in English making it difficult for healthcare workers who only understand Arabi
- Rehabilitation of the CTC in Malakal Teaching Hospital (MTH)
- Activation of the State RRT to responses with an active case search and investigation

Risk of Cholera spread to other states

Oral cholera vaccination was conducted only in 6 out of the 20 cholera hotspot counties

Significant population movements within Malakal IDP camps (Estimated Population is 34056) and back and forth movement between the IDPs in Juba and the displacement from the recent Tonga- Panyikang crisis.

There is also a challenge of access to safe and clean water and also the practice of open defecation

Continued flooding due to heavy rain experienced in the past 4 years & the next rainy season is likely to start in April



**World Health
Organization**
South Sudan

ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

MEASLES ` UPDATES



Measles Updates as of week 14 2023

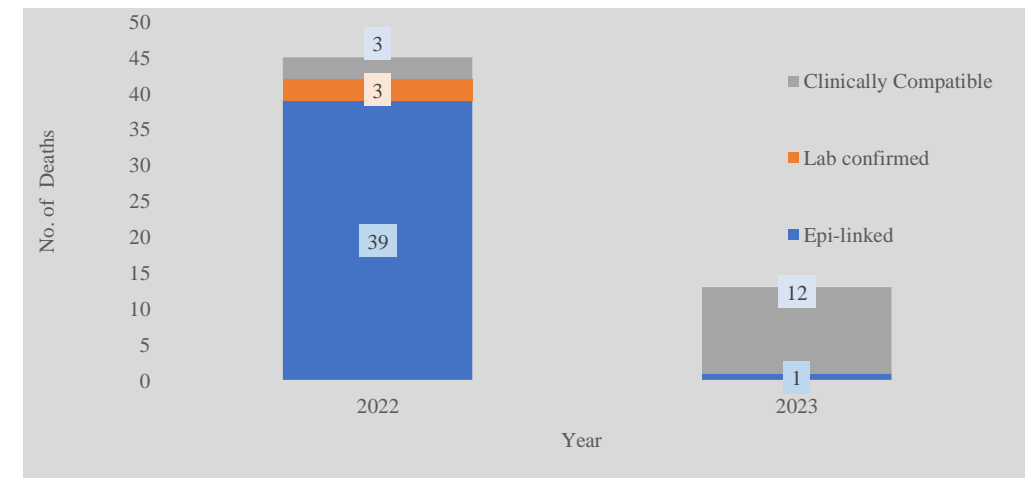


- A total of the 6 027 suspected measles cases, 3 111(49.6%) are epi-linked, 584(9.6%) are lab-confirmed, 1,711(28.3%) are clinically compatible, and 623(10.3) discarded cases have been reported from epidemiological week 1, 2022, to week 14, 2023
- One (01) suspected case have been reported during the reporting week 12
- A total of 58 measles-related deaths were reported since January 2022, with only 3 deaths among the lab-confirmed measles cases. The case fatality rate (CFR) is 1.0%
- No new measles-related death reported this week
- Twenty-three (23) counties have confirmed Measles outbreaks in 2022, and fifteen (15) counties in 2023
- Fifty-one (51) counties have reported suspected measles cases in 2023, of which thirty-four (34) counties have at least one confirmed case
- Sixteen (16) counties (Mvolo, Mundri East, Pariang, Awerial, Rumbek Centre, Kapoeta South Tonj South, Tonj North, Bor South, Aweil Centre, Rumbek East, Gogrial East, Juba, Tonj East Wulu and Lafon) have confirmed outbreaks in 2023.
- Reactive vaccination campaigns were conducted in 21 counties (16 counties in 2022, 5 counties in 2023), with 978,275 children vaccinated
- The latest reactive measles campaigns were conducted in Pamir refugee camp
- EPI-TWG recommends no more reactive campaign rather the focus now is to support the
- Nation wide integrated measles vaccination campaign has been launched on the 25th April 2023 at Al Sabah Hospital targeting 2.7 million children age 6 to 59 months across South Sudan

Table: Yearly distribution of cases by final classification

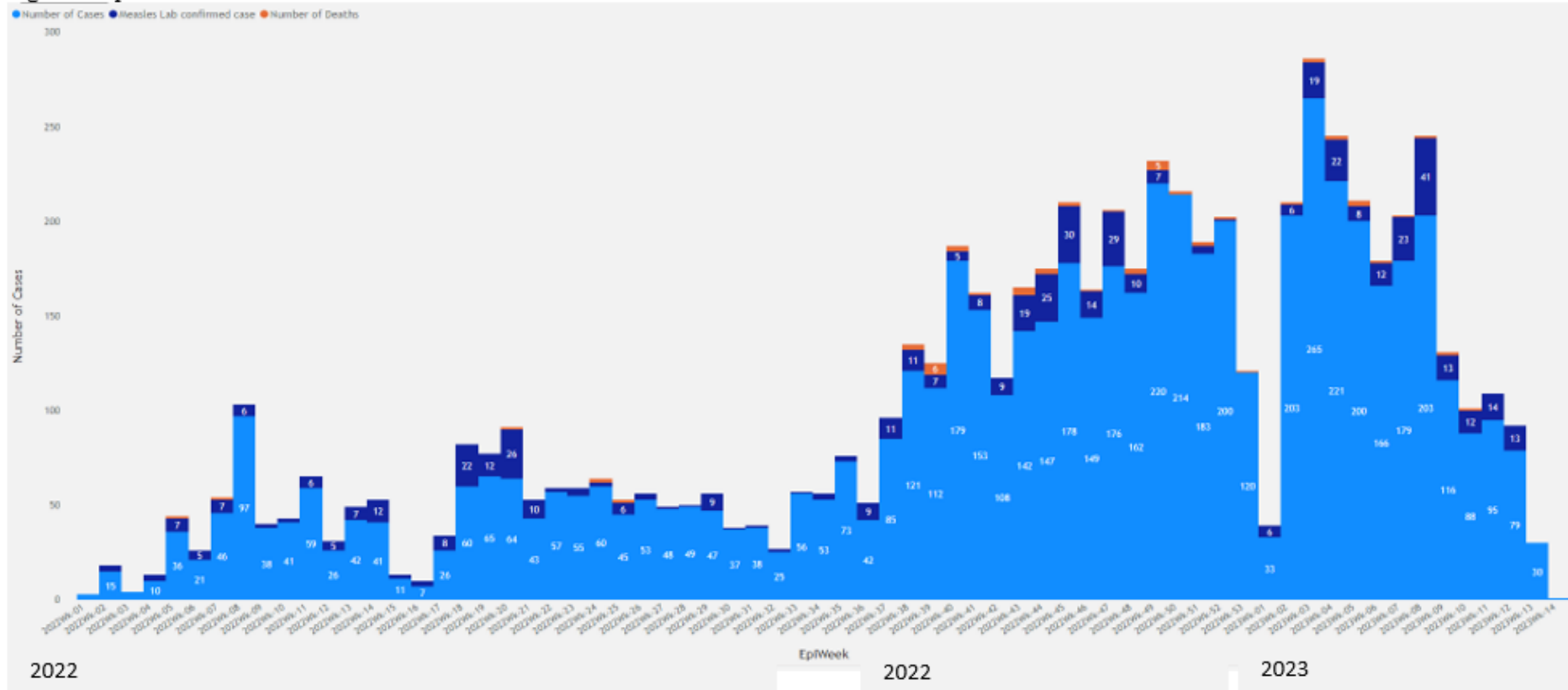
FINAL CLASSIFICATION	2022		2023		TOTAL
	NO. OF CASES	%	NO. OF CASES	%	
Lab confirmed	392	9.5	192	10.3	584
Epi-linked	2825	68.3	284	15.3	3111
Clinically Compatible	391	9.5	1320	70.9	1711
Total	3608	87.2	1796	96.5	5404
Discarded (-ve)	529	12.8	94	5.0	623
Grand Total	4137	100.0	1890	100.0	6027

Deaths by year and final classification



Measles Updates. EPI Curve as of week 14, 2023

Figure 2: Epidemic curve of measles cases in South Sudan from 2022 to 2023



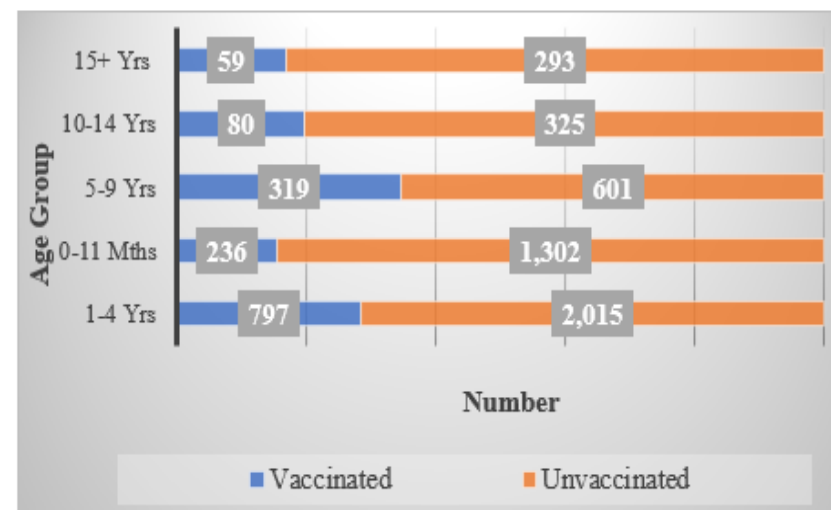
Note: Measles cases have been reported from different counties throughout 2022 and week seven of 2023. The observed peaks are driven by different counties that experienced surge in measles cases at different times/

Table 3: Distribution of reported measles cases and deaths by age groups in South Sudan, 2022-2023

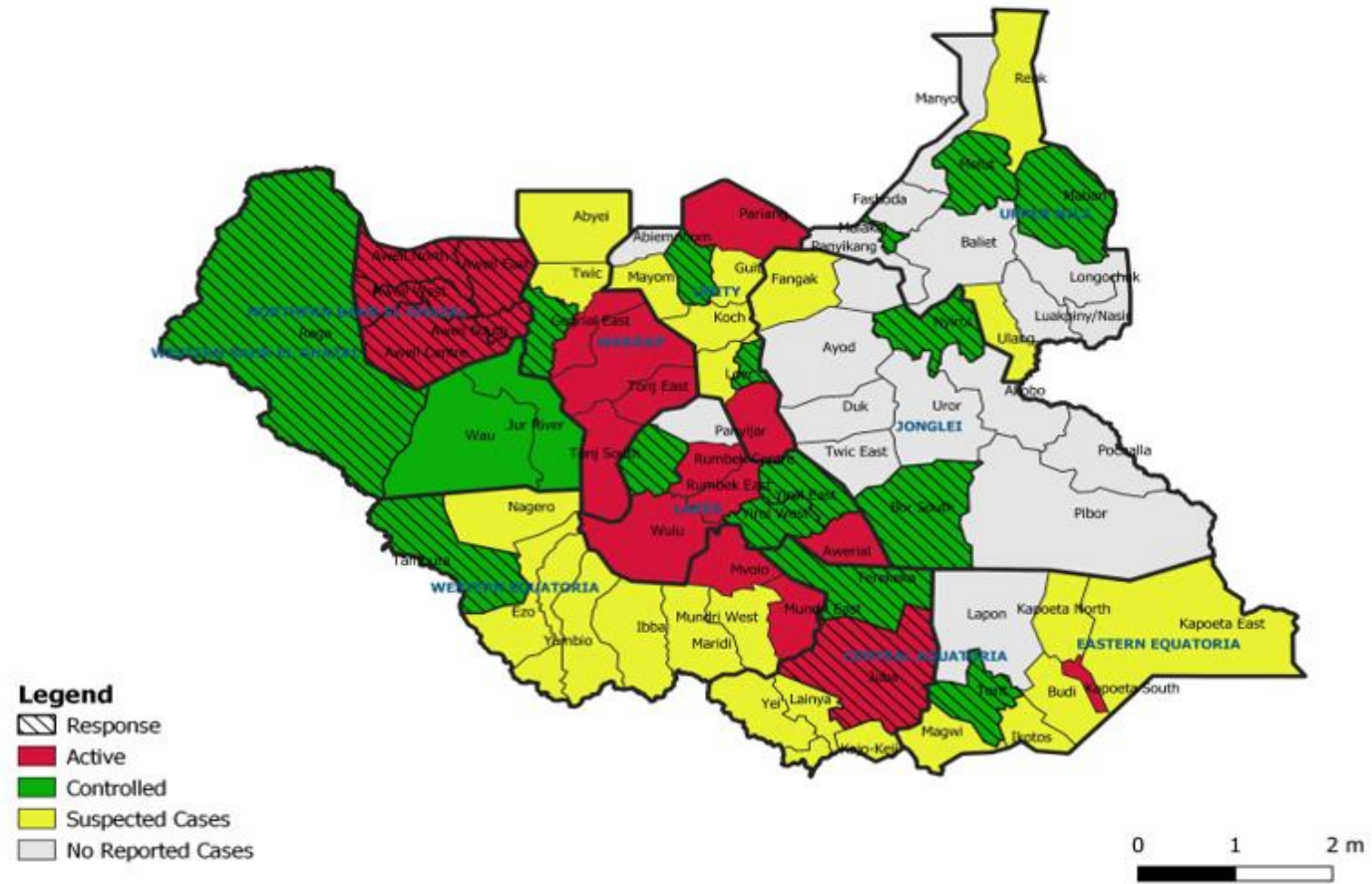
Age Groups	2022				2023			
	No. of cases	%	Deaths	%	No. of cases	%	Deaths	%
0-11 mths	1137	27.5	10	0.9	401	21.2	2	0.5
1-4 yrs	1931	46.7	27	1.4	881	46.6	8	0.9
5-9 yrs	612	14.8	4	0.7	308	16.3	3	1.0
10-14 yrs	277	6.7	2	0.7	128	6.8	1	0.8
15+ yrs	180	4.4	2	1.1	172	9.1	0	0.0
Total	4,137	100.0	45	1.1	1,890	100.0	14	0.7

Note: Majority (72.2%) of all the measles cases (with age variable collected) are children below 5 years of age considering both years. The case fatality rate is highest (1.4% and 1.0%) among children age 1-4 years in 2022 and 5-9 years in 2023. 47 out of the 59 deaths were among children below age 5 years

Figure 3: Distribution of measles cases and their vaccination status, 2022-2023



Note: Generally, 4,536(75.3%) were unvaccinated (zero, unknown) including 3,317(73.1%) children <5 years. Among children less than one year old (1,538 cases), 84.7% (1,302 cases) have not been vaccinated against measles compared with 236(15.3%) vaccinated. This trend is observed across all the age groups.



Note: All the 10 states have been affected as the measles virus spread across the counties in 2022/2023

ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

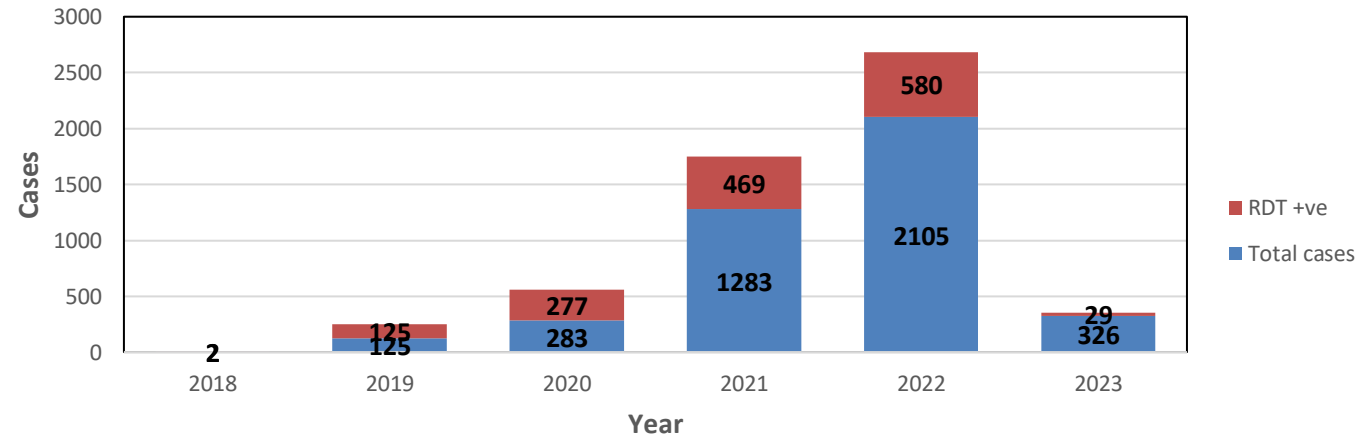
HEPATITIS E VIRUS ` UPDATES



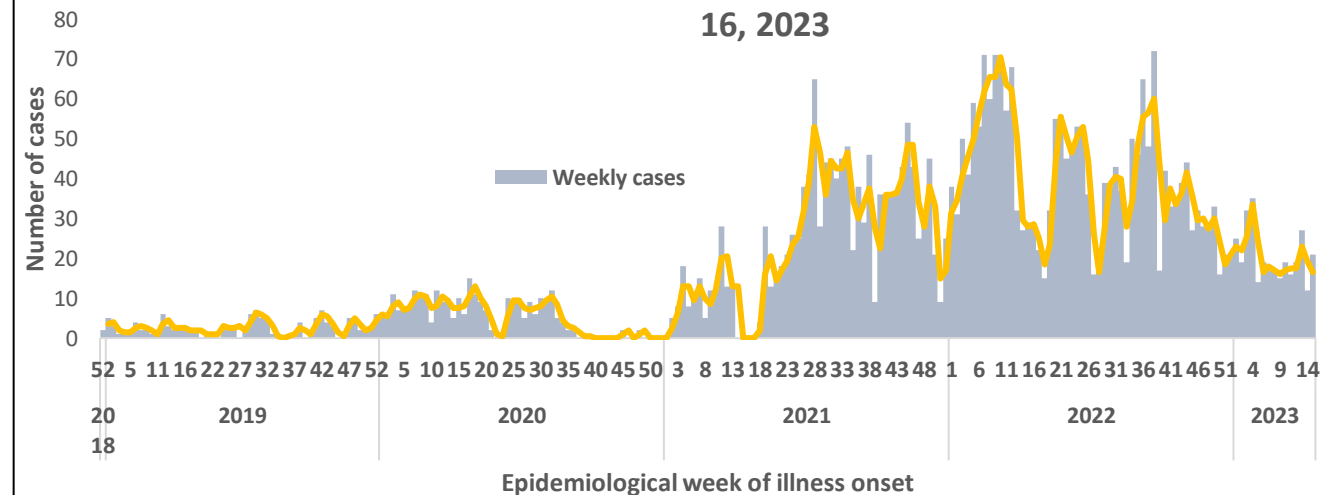
Descriptive Epi

- Cases of Acute Jaundice Syndrome (AJS) in the Bentiu IDP camp continue with an overall total of 4,123 cases since the beginning of 2019 to week 16 2023 with overall 27 deaths.
- Of all the cases, reported, 1482 tested positive for Hepatitis E virus by Rapid Diagnostic Test and ov
- In 2023, of the 326 AJS cases reported, only 29 tested positive for Hepatitis E Virus by RDT.
- Forty (40) AJS cases reported in week 15 and 16 with on 2 tested positive for HEV by RDT. Of all the 40 cases 80% (32) were not resident of the camp (outside)
- Of all the AJS cases reported as of week 16, 2023 only 105 were managed as inpatient cases and the rest were treated as out patients
- 46% are female and 54% are male of all the AJS. 40% of all the cases are in the age-group 15-44 years followed by 24% in children ages 1-4 years

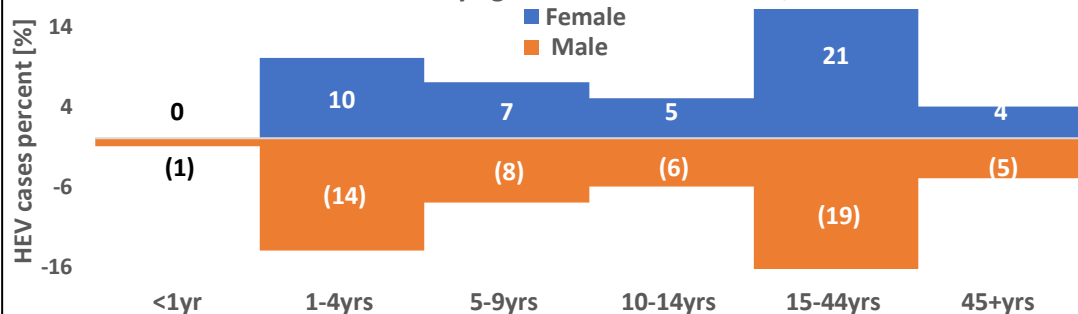
Cases of Acute Jaundice Syndrome and Hepatitis E Virus in Bentiu IDP Camp from December 2018 to week 16, 2023



Hepatitis E Virus [HEV] cases in Bentiu IDP camp, wk 1, 2019 to wk 16, 2023



HEV case distribution by age and sex in Bentiu IDP, 2019-2022



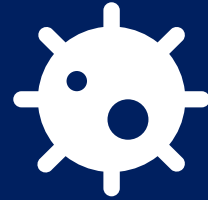
HEV response update

1. Biweekly coordination forum comprising health, WASH, and other clusters
2. Surveillance enhanced through the provision of refresher training, distribution of case definition, and other reporting tools
3. Weekly analytics of the outbreak data to monitor trends and inform decision making
4. Case management for symptomatic cases provided by the PHCCs; severe cases are referred to MSP PoC Hospital
5. The HEV vaccination campaign was conducted in Bentiu IDP Camp; the first round with a coverage of 91% and the second round with a coverage of 82% among those aged 16-40 years (incl. pregnant women).
6. Risk communication and awareness are enhanced through household health promoters/hygiene promoters; radio talk shows and messaging. Cholera and HEV messages were disseminated.
7. Enhanced access to safe drinking water, sanitation facilities such as latrines, mass clean-up campaigns, regular water quality testing, and monitoring

HEV response challenges

1. Lack of long-term investment to improve the WASH situation in the camp
2. Lack of meaningful behavioral changes among the population
3. Frequent population movements between the IDP and host communities; the host community was not vaccinated
4. Floods have worsened the WASH situation in the camp

COVID-19 UPDATES





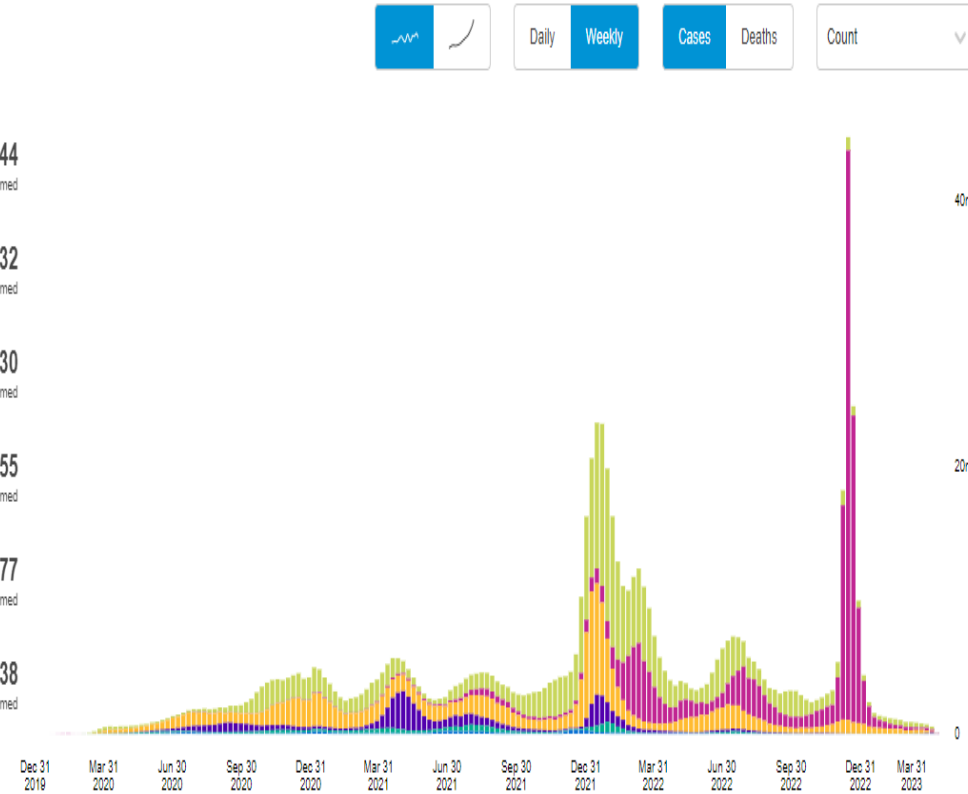
Situation update as of 19, April 2023

- Globally, as of, 19 April 2023, there have been **763,740,140** confirmed cases of COVID-19, including **6,908,554** deaths, reported to WHO. As of 16 April 2023, a total of **13,321,463,740** vaccine doses have been administered.
- **In Africa**, as of 16 March 2023 there have been **9,514,948** confirmed cases of COVID-19, including **175,328** deaths reported to the WHO
- In South Sudan, from 3 January 2020, 19 April 2023, there have been **18,368** confirmed cases of COVID-19 with **138** deaths, reported to WHO.
- As of 16 April 2023, a total of **4,126,834** vaccine doses have been administered.
- **Second round of the COVAX campaign has been launched and the campaign is ongoing in most counties to cover the remaining 72 counties**

Situation by WHO Region



Source: World Health Organization
 Data may be incomplete for the current day or week.



WHO: <https://www.who.int/health-topics/coronavirus>



**OVERALL
CONCLUSIONS AND
RECOMMENDATIONS**

Conclusions



- In week 15, **2023**, the IDSR reporting timeliness and completeness were **82%** and **88%** respectively and timeliness and completeness for EWARN sites were both at **90%**
- A total of 119 alerts were triggered in week 15, 2023 majority were for measles 29%(35), malaria 23.5%(28) AWD 17% (21), and (03) AJS alerts
- 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. cumulatively with a total of 115 cases and five deaths giving CFR 4,3% since
- Cholera outbreak in Malakal with a total of **1 223** cases reported and two (2) deaths giving a CFR of 0.16% from February 22 to 22 April 2023 from both the Malakal IDP camp and town
- A total of the **6 027** suspected measles cases, 3 111(49.6%) are epi-linked, 584(9.6%) are lab-confirmed, 1,711(28.3%) are clinically compatible, and 623(10.3) discarded cases have been reported from epidemiological week 1, 2022, to week 14, 2023
- South Sudan celebrated the African vaccination week and launched the integrated measles vaccination, Vitamin A, and Deworming campaign targeting **2.7 million** children aged 6 to 59 months of age across South Sudan

Recommendations



- Partners to continue supporting County Health Departments (CHD) & State Ministries of Health on timely IDSR/EWARN reporting and involve the boma health workers to support community-based surveillance
- Health facilities to conduct an initial investigation on suspected cases of epidemic-prone diseases and collect samples
- Conduct reactive measles vaccination campaign in counties with confirmed outbreaks and advocate for enhanced routine immunization through PIRI
- Continue with preparedness activities to strengthen surveillance at all levels including conducting after-action reviews and simulation exercises.
- Continue to support the multicluster HEV response strategy in the Bentiu IDP camp and advocate for depopulation of

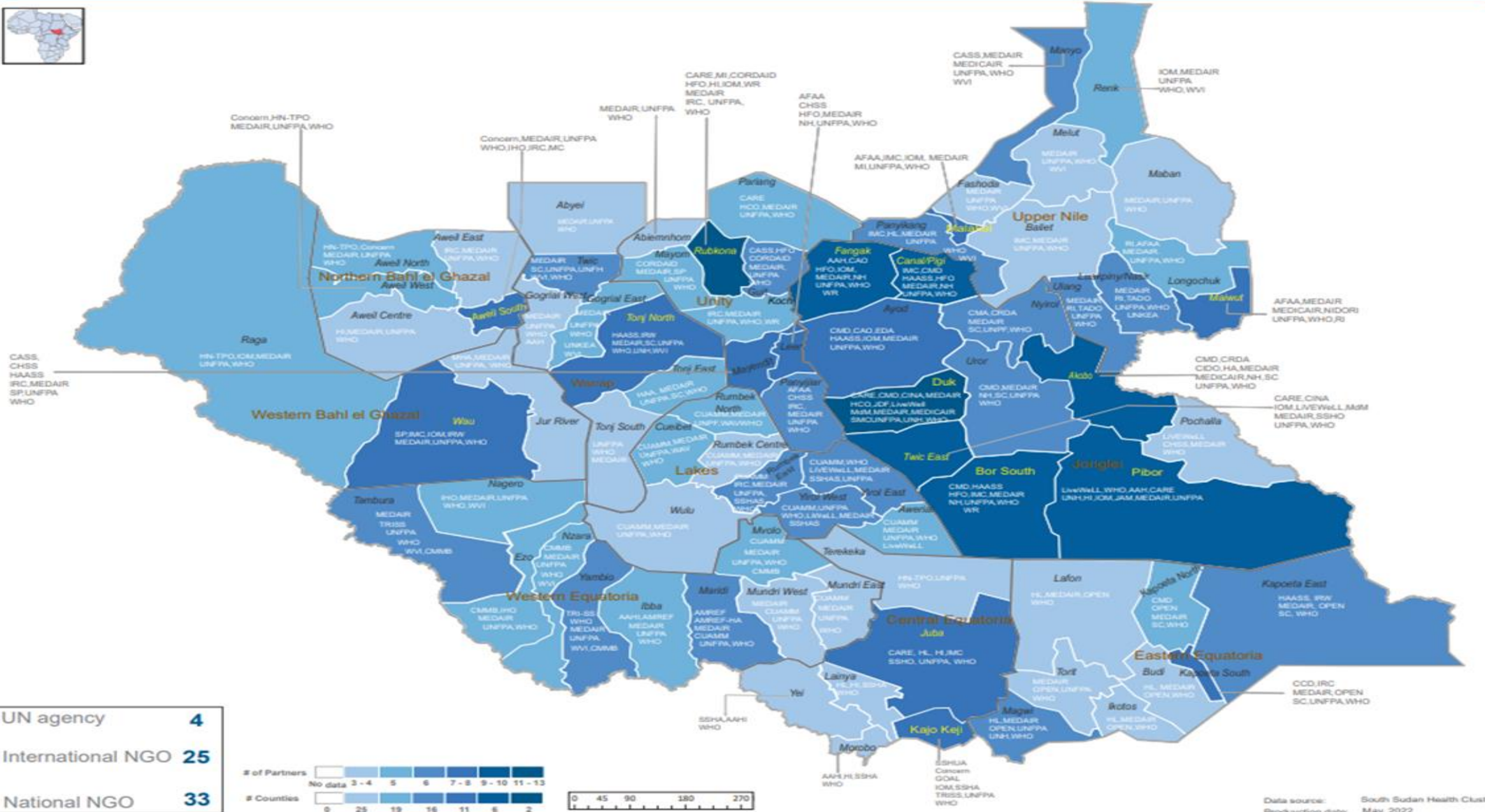


IDSR timeliness & completeness performance at county level for week 15 and 14 of 2023 (2)



STATE	COUNTY	Number of reporting sites	No. of HFs Reported on Time in WK 15	Timeliness Percentage of WK 15	No. of HFs Reported regardless of time in WK 15	Completeness Percentage of WK 15	No. of HFs Reported regardless of time in Wk 14	Completeness Percentage of WK 14	STATE	COUNTY	Number of reporting sites	No. of HFs Reported on Time in WK 15	Timeliness Percentage of WK 15	No. of HFs Reported regardless of time in WK 15	Completeness Percentage of WK 15	No. of HFs Reported regardless of time in WK 14	Completeness Percentage of WK 14
									Warrap	Gogrial East	15	15	100%	15	100%	15	100%
Jonglei	Pibor	8	8	100%	8	100%	6	75%	Warrap	Tonj East	12	12	100%	12	100%	12	100%
Jonglei	Ayod	13	13	100%	13	100%	13	100%	Warrap	Tonj South	12	12	100%	12	100%	12	100%
Jonglei	Bor	19	19	100%	19	100%	19	100%	Upper Nile	Baliet	5	5	100%	5	100%	5	100%
Jonglei	Pochalla	7	7	100%	7	100%	7	100%	Upper Nile	Panyikang	2	2	100%	2	100%	2	100%
EES	Kapoeta East	7	7	100%	7	100%	7	100%	Warrap	Gogrial West	31	30	97%	30	97%	27	87%
Jonglei	Duk	13	12	92%	12	92%	13	100%	Upper Nile	Fashoda	9	8	89%	8	89%	8	89%
EES	Torit	11	10	91%	10	91%	11	100%	Warrap	Twic	28	24	86%	24	86%	21	75%
EES	Ikotos	19	17	89%	17	89%	16	84%	Upper Nile	Maban	19	16	84%	18	95%	19	100%
EES	Kapoeta South	9	8	89%	9	100%	8	89%	Warrap	Tonj North	15	12	80%	12	80%	14	93%
EES	Magwi	17	15	88%	17	100%	17	100%	Warrap	Abyei	14	11	79%	11	79%	11	79%
EES	Budi	17	14	82%	17	100%	12	71%	Upper Nile	Ulang	9	7	78%	8	89%	8	89%
EES	Lopa Lafon	15	11	73%	15	100%	15	100%	Upper Nile	Luakpiny Nasir	10	7	70%	8	80%	7	70%
Jonglei	Canal Pigi	14	10	71%	10	71%	10	71%	Upper Nile	Manyo	15	9	60%	13	87%	15	100%
Jonglei	Akobo	15	10	67%	10	67%	9	60%	Upper Nile	Akoka	5	3	60%	3	60%	5	100%
Jonglei	Fangak	21	12	57%	15	71%	12	57%	Upper Nile	Makal	9	5	56%	5	56%	5	56%
EES	Kapoeta North	10	4	40%	4	40%	2	20%	Upper Nile	Longechuk	9	1	11%	1	11%	9	100%
Jonglei	Nyirrol	2	0	0%	1	50%	1	50%	Upper Nile	Maiwut	9	0	0%	4	44%	7	78%
Jonglei	Twic East	9	0	0%	4	44%	8	89%	Upper Nile	Renk	6	0	0%	0	0%	0	0%
Jonglei	Uror	8	0	0%	1	13%	0	0%	Upper Nile	Melut	6	0	0%	0	0%	0	0%

South Sudan Health Cluster HRP Partners 2022



Thanks to the State Surveillance Officers, County Surveillance Officers and Health Facility in-charges for sharing the weekly IDSR data

Thanks to all partners for supporting IDSR weekly reporting and sharing the line lists

To access the IDSR bulletins for 2022 use the link below:

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

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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>

