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

World Health Organization
South Sudan

Epidemiological Bulletin Week 44, 2022 (October 30- November 5)

Major epidemiological highlights in week 44 of 2022

- In week **44, 2022, the** IDSR reporting timeliness and completeness were **82%** and **88%** respectively while the timeliness and completeness for EWARN sites were at **85% and 96%**

- A total of 30 alerts were reported in week 44,2022; Malaria (7), AWD (7), ARI (3), measles (3), COVID-19(3) and ARI(3)

- Confirmed outbreak of Sudan Ebolavirus in Uganda with eight districts affected. As of **November 16, a total of 141 confirmed** cases and **55 confirmed deaths** giving a **CFR of 39%.**

- A total of 22 suspected Ebola Virus Disease (EVD) cases were reported from Nimule, Yei, Yambio, Kajo-keji, Juba, and Rubkona with samples collected from 07 samples collected and all tested negative for EVD.

- On other emergencies, floods have affected over **1.1 million** people in **36 c**ounties, and high cases of Acute Malnutrition in South Sudan due to **food insecurity**.

- Confirmed measles outbreaks in 15 counties since the beginning of the year 2022 with the latest counties affected including Leer, Rubkona (Bentiu camp), Bor South and Melut

- Hepatitis E virus cases continue to be reported in Bentiu IDP Camp with 44 cases reported in week 44 giving a cumulative of **3,592** cases and **26** deaths (CFR **0.72**%) reported since week 1, 2019

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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 44 &

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Timelinesss States Ranking	States	Number of reporting sites	No. of HFs Reported on Time in WK 44	Timeliness Percentage of WK 44	No. of HFs Reported on Time in WK 43	Timeliness Percentage of WK 43
1st	WES	218	218	100%	218	100%
2nd	Lakes	113	108	96%	89	79%
3rd	CES	129	117	91%	117	91%
4th	EES	105	94	90%	90	86%
5th	WBGZ	79	64	81%	66	84%
6th	Unity	95	75	79%	74	78%
7th	Jonglei	127	90	71%	90	71%
8th	NBGZ	89	58	65%	77	87%
9th	Upper Nile	98	60	61%	51	52%
10th	Warrap	124	72	58%	95	77%
	South Sudan	1177	956	81%	967	82%

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 44 stands at 81% while in week 43 it was at 82% and 5 states were above the target of 80% in week 44.

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

IDSR Completeness performance at State level for week 44 & 43 of 2022

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Completeness States Ranking	States	Number of reporting sites	No. of HFs Reported regardless of time in WK 43	Completeness Percentage of WK 43	No. of HFs Reported regardless of time in WK 42	Completeness Percentage of WK 42
1st	Lakes	113	113	100%	113	100%
2nd	WES	218	218	100%	218	100%
3rd	EES	105	102	97%	92	88%
4th	CES	129	121	94%	118	91%
5th	Unity	95	89	94%	77	81%
6th	NBGZ	89	79	89%	83	93%
7th	Jonglei	127	109	86%	108	85%
8th	WBGZ	79	66	84%	71	90%
9th	Upper Nile	98	77	79%	62	63%
10th	Warrap	124	91	73%	98	79%
	South Sudan	**1177**	**1065**	**90%**	**1040**	**88%**

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 44 stands at 90% and in week 43 it was at 88% and 8 states were above the target of 80% in week 44.

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

Surveillance: EWARS Timeliness performance indicator by partner for week 44 and 43 of 2022

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Partner	HFs	Reporting	Performance		
PARTER	Number of reporting sites	# of reports received on Time in Week 44	Timeliness of Week 44	# of reports received on Time in Week 43	Timeliness of Week 43
Medicair	3	3	100%	3	100%
UNH	2	2	100%	2	100%
CIDO	1	1	100%	1	100%
ADA	1	1	100%	1	100%
IRC	1	1	100%	1	100%
SMC	6	6	100%	6	100%
SSHCO	1	1	100%	1	100%
UNIDOR	2	2	100%	2	100%
Medair	2	2	100%	2	100%
World Relief	2	2	100%	2	100%
MC	2	2	100%	2	100%
TRI-SS	2	2	100%	2	100%
HFO	8	8	100%	4	50%
IMC	24	20	83%	19	79%
Islamic Relief	5	4	80%	4	80%
MSF-H	4	3	75%	3	75%
MSF-E	6	4	67%	4	67%
CMA	14	9	64%	14	100%
AFAA	2	1	50%	0	0%
IOM	10	0	0%	10	100%
HAA	4	0	0%	0	0%
TOTAL	102	74	73%	83	81%

The Timeliness of EWARS in partners' supported sites stands at 73% in week 44 and 81% in week 43 .

Surveillance: EWARS completeness performance indicator by partner for week 44 and 43 of 2022

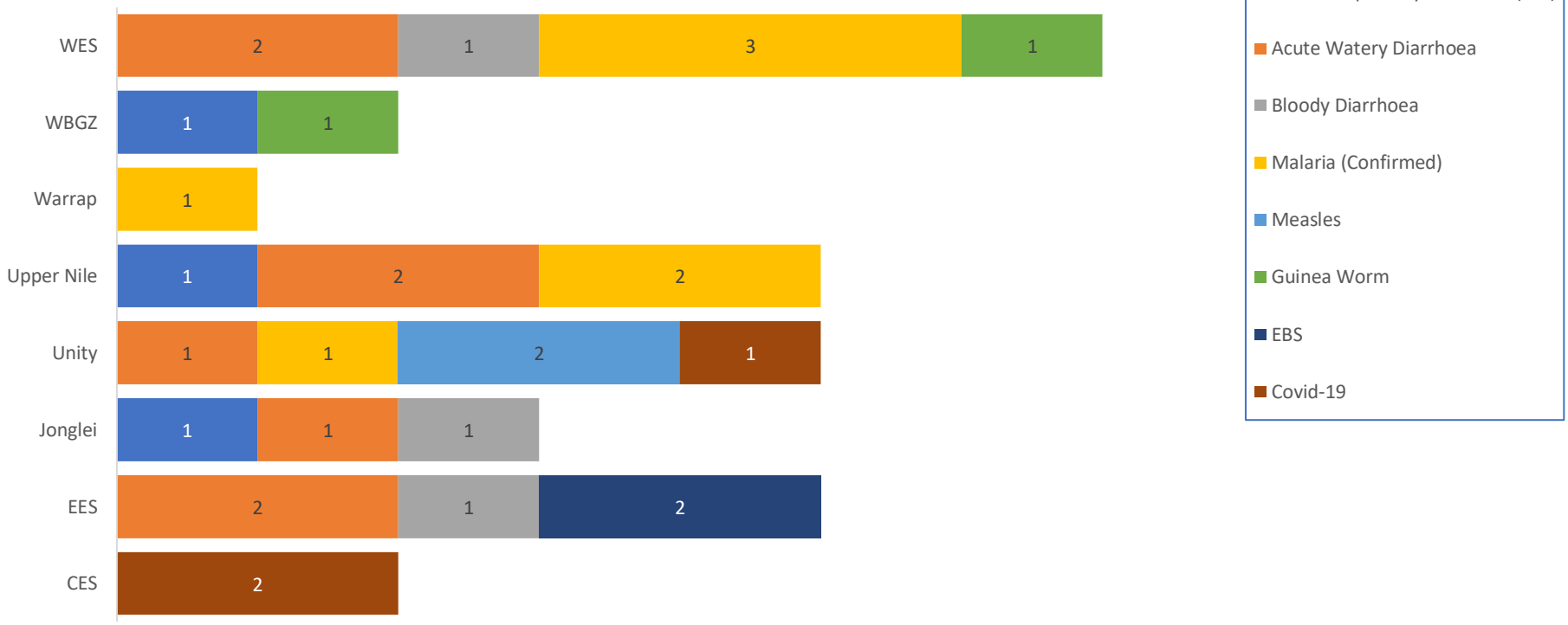
Partner	HFs	Reporting	Performance		
PARTER	Number of reporting sites	# of reports received regardless of Time in Week 44	Completeness of Week 44	# of reports received regardless of Time in Week 43	Completeness of Week 43
UNH	2	2	100%	2	100%
CIDO	1	1	100%	1	100%
TRI-SS	2	2	100%	2	100%
ADA	1	1	100%	1	100%
Medicair	3	3	100%	3	100%
IRC	1	1	100%	1	100%
SMC	6	6	100%	6	100%
SSHCO	1	1	100%	1	100%
UNIDOR	2	2	100%	2	100%
Medair	2	2	100%	2	100%
MSF-H	4	4	100%	4	100%
IOM	10	10	100%	10	100%
MC	2	2	100%	2	100%
World Relief	2	2	100%	2	100%
HFO	8	8	100%	4	50%
IMC	24	22	92%	19	79%
Islamic Relief	5	4	80%	3	60%
MSF-E	6	4	67%	5	83%
CMA	14	9	64%	14	100%
AFAA	2	1	50%	0	0%
HAA	4	0	0%	0	0%
TOTAL	102	87	85%	84	82%

The Completeness of EWARS in partners' supported sites stands at 85% in week 44 and 82% in week 43.

INDICATOR-BASED SURVEILLANCE

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

Alert by disease and States in week 44 of 2022 [a total of events specific alerts generated by state



<u>This week a total of 30 Alerts were triggered from the EWARS System with some brokendown as below:</u>

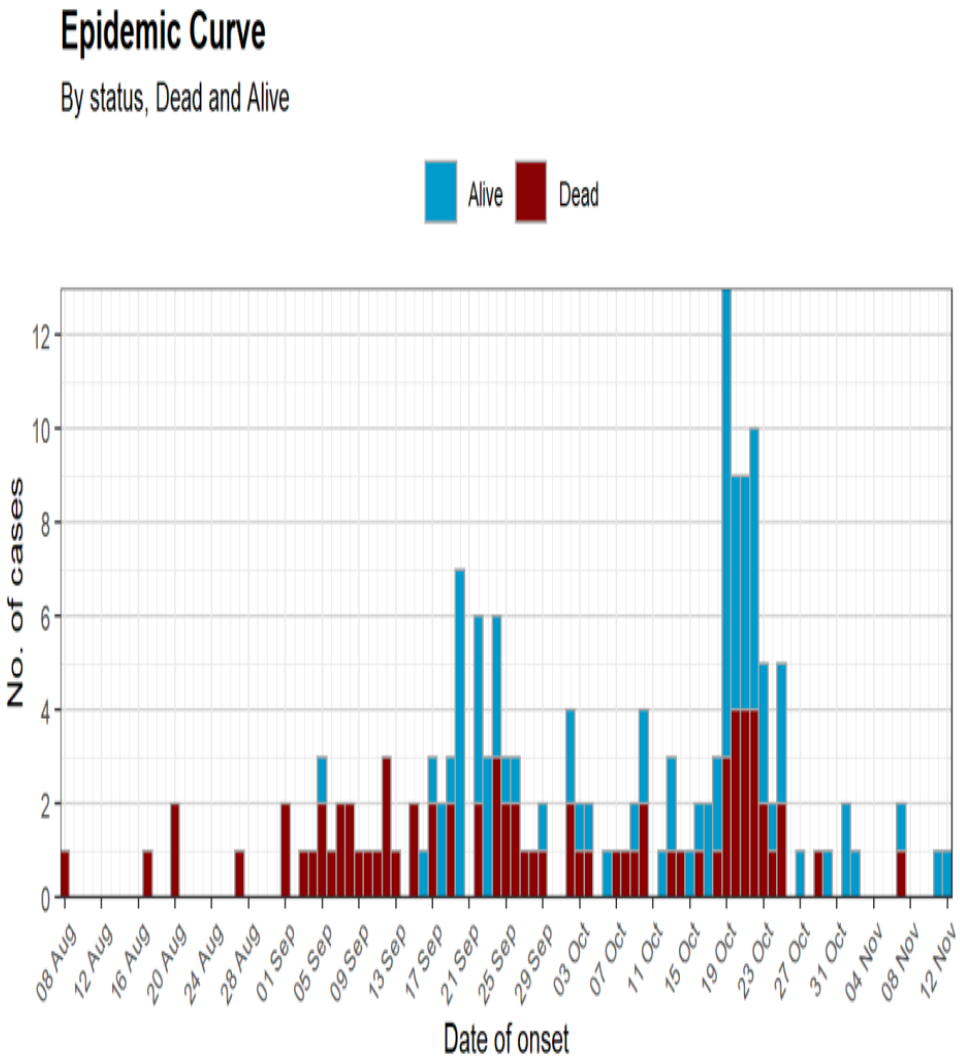
- 2 Guinea Worm alert: these were triggered Marial Ajeth PHCU in Jur River County and Bitti PHCU in Mundri West County
- 1 EBS alerts: This was from Kapoeta Civil Hospital in Kapoeta South County of a 36-years-old male, resident of Palakal boma came to the Kapoeta Civil Hospital on the 28/10/2022.Presented with signs and symptoms consistent with COVID-19 suspect case definition, sample was collected and tested for COVID-19 using Gen Xpert and confirmed Positive
- 2 Measles alerts: these were triggered Koch PHCC (2) in Unity State

SUDAN EBOLAVIRUS IN UGANDA AND READINESS IN SOUTH SUDAN

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

Sudan Ebolavirus Disease in Uganda as 16 November 2022

- On 20th September 2022, the Ministry of Health declared an outbreak of Sudan ebolavirus (SVD) after a case managed at Mubende Regional Referral Hospital (MRRH) in Mubende district was confirmed through testing at the Uganda Virus Research Institute (UVRI)
- November 16, 2022 marks 55 days of response to the Sudan EVD outbreak in Uganda, first case was confirmed on 19-September 2022.
- Cumulatively there are **141 confirmed EVD cases and 55 confirmed death giving a Case Fatality Rate (CFR) of (39%) and a total recovery is 76 out of the total confirmed cases**
- A total of 9 districts were affected with most cases reported from Mubende, Kassanda and Kampala.
- As of16th November there were zero new cases and deaths reported from all districts 03 new recoveries from one from Mubende district and two from Kassanda district.
- A total of 607 contacts actively being followed-up in seven districts, follow-up rate in the past 24 hours was 85%



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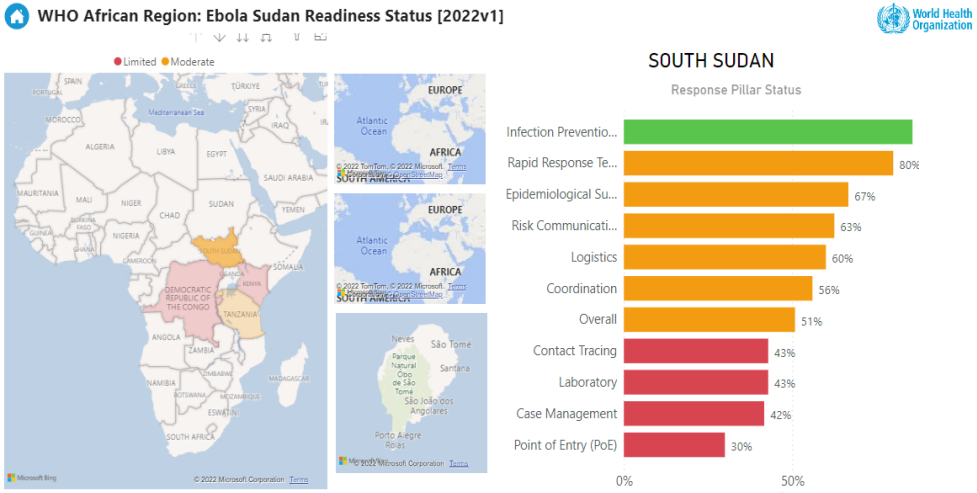
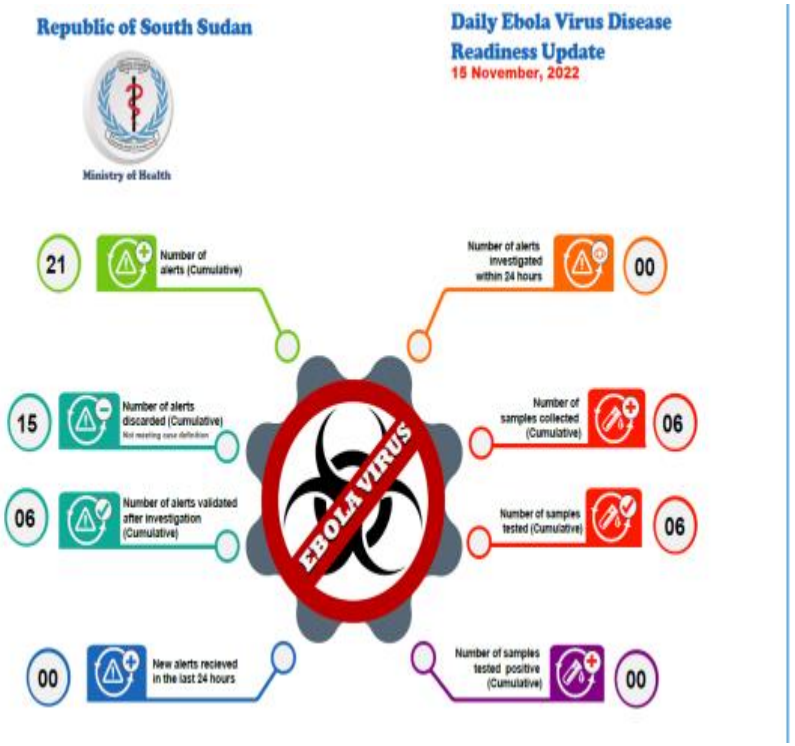
Checklist scores and update for EVD operational readiness in South Sudan

A national level Ebola Virus Disease readiness assessment at the start of the outbreak indicated a few pillars needed urgent strengthening, with PoE, case management, laboratory and contact tracing targeted for priority actions from the start for EVD preparedness



Country	Response Pillar	Comments
SOUTH SUDAN	01 - Coordination	n/a
SOUTH SUDAN	02 - Rapid Response Teams (RRT)	n/a
SOUTH SUDAN	03 - Risk Communication and Community Engagement	n/a
SOUTH SUDAN	04 - Infection Prevention and Control and safe burial	Isolation units are establish but not ready to receive patients
SOUTH SUDAN	05 - Case Management	n/a
SOUTH SUDAN	06 - Case Management - Safe and dignified burials	n/a
SOUTH SUDAN	07 - Epidemiological Surveillance	n/a
SOUTH SUDAN	08 - Contact Tracing	n/a
SOUTH SUDAN	09 - Laboratory	n/a
SOUTH SUDAN	10 - Point of Entry (PoE)	Port health teams at all designated POEs are trained to screen only in Nimule border population mobility
SOUTH SUDAN	11 - Logistics	n/a
SOUTH SUDAN	12 - Vaccination	n/a



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South Sudan: Public Health Coordination

- An outcome of the ministerial meeting co-convened by WHO and Africa CDC in October was for A Regional Ebola Task Force to be established and chaired by South Sudan with coordination support from WHO, Africa CDC and the RECs (EAC, IGAD) to facilitate joint plan of action and monitoring. The first Task Force meeting was held 11 November 2022 during which ToRs where discussed
- A regional functional simulation exercise on public health emergency operations center (PHEOC) 06 - 07 December 2022
- The concept for comprehensive simulation exercise to test operational readiness at national and subnational levels is being developed.
- The comprehensive national EVD plan is the guiding document for EVD preparedness and response. Based on the evolution of the situation in Uganda, WHO is looking to support an technical review and in-depth budgetary review of the national EVD plan.

- ToRs for the EVD task force and for subnational operational readiness strengthening has been updated and developed respectively, with teams already deployed in Nimule and Yei, and to be deployed to other high risk locations

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South Sudan: Surveillance updates

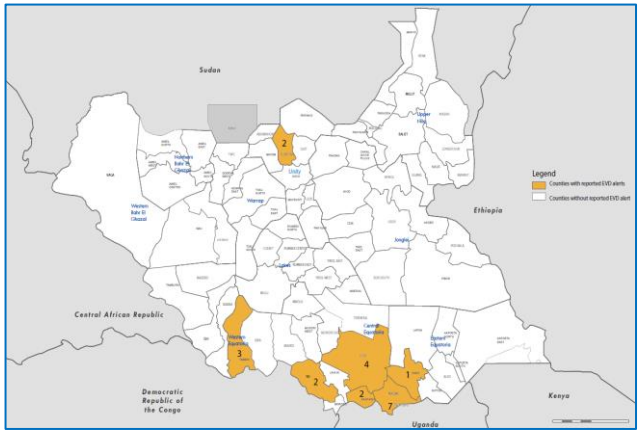
- Cumulatively, a total of 22 alerts have been reported and investigated from seven locations in the country since September 2022: 15 were discarded because they didn't meet case criteria, 6 tested negative
- Nimule (7), Juba (5), Yambio (3), Yei (2), Kajo-keji (2) Rubkona (2) Torit (1),
- 56 frontline healthcare workers for both private (05) and public (10)health facilities in Gumbo Shirikhat and adjacent areas have been sensitized (10 health
- RRT and IPC trainings conducted Kajo-Keji

Surveillance indicator table

Indicator	#
Number of alerts (cumulative)	22
Number of alerts discarded (cumulative) (not meeting case definition)	15
Number of alerts validated after investigation (cumulative)	07
Number of alerts received in the last 24 hours	00
Number of alerts to be investigated within the 24 hours	00
Number of samples collected (cumulative)	07
Number sample tested (cumulative)	07
Number of samples tested positive (cumulative)	00

HCW sensitization in Juba

Case Management training at the IDU



map showing all EVD alerts to date

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South Sudan Case management Updates

Case management and Infection prevention and control (IPC) updates

- Isolation and treatment facilities have been established in Nimule and Juba (No. of beds = 16 in Nimule and 20 in Juba)
- Referral system and ambulance team established and trained including the availability of a standby ambulance with support from WHO in Juba and Nimule.
- Comprehensive case management training at the Juba Isolation facility
- Isolation tent set up in Yambio Hospital
- Yei Isolation center under renovation with support from ICRC

Pics.1&2 Juba new IDU

Pic.2 Isolation and management set up within Yambio hospital

Pic.3 Training of Staff and drill at Nimule facility

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South Sudan: Risk Communication & Community Engagement (RCCE)

- National Level EVD **RCCE TWG** has been activated and is ongoing on weekly basis
- The **Risk Communication strategy** updated, RCCE SOP under review
- 72 hrs Plan finalized and shared – RCCE response plan captured
- EVD **Training Module** for front line worker has been developed and under review
- Ebola **IEC materials**, soft copies shared with partners for
- Produced **Radio talk shows, jingles and spots** in English, Arabic and translated to local languages
- **Toll free hotlines MoH** 6666 and UNICEF sponsored hotline under SSCC; 2222 is active and continues to receive community feedback on key issues including disease outbreaks.
- EVD Bulletin prepared and circulated

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South Sudan: PoE and Cross-border collaboration updates

- The border authorities at the busiest point of crossing between Uganda and South Sudan (Nimule) have leveraged and improved existing formal and informal collaboration in the wake of the emergency.
- The screening site setup at the river side crossing point (well know unofficial) in Nimule is functional

Days/dates	Total screened at the Main PoE	Total screened at the riverside PoE
Monday 7th.11.2022	3075	155
Tuesday 8th.11.2022	3210	104
Wednesday 9th.11.2022	3872	99
Thursday 10th.11.2022	4147	95
Friday 11th.11.2022	3074	105
Saturday 12.11.2022	2673	145
Sunday 13th.11.2022	1790	139

South Sudan is at high risk for importation of the virus due to proximity, trade and people ties with Uganda. This is NOT related to South Sudan's public health capacities

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South Sudan: Operations and logistic support (OSL) updates

- PPE prepositioned at each of the 9 hub offices to support EVD readiness activities; re-stocking of PPEs at sub-national level is ongoing.
- A second mobile storage unit (rub-hall tent) donated by WFP to support EVD readiness at the new IDU site in Juba.
- The national logistics TWG is coordinating the PPEs stock and supplies distribution using the already existing supply request portal https://ee.humanitarianresponse.info/sddy70c6

New isolation site Rub-Hall tent donated by WFP to support EVD readiness in Juba

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Challenges and opportunities for improvement

- Inadequate partner participation in the incident management system.
- Inadequate funding to support EVD readiness activities. To ensure adequate preparedness in SSD, there is need for a for financing in a no-regrets manner (as if it is a response)
- Inadequate screening at points of entry in high-risk areas (Yei, Kaya, Yambio, Maridi, Kapoeta, Ikotos, Torit, and Magwi), other PoEs (Kenya, Ethiopia, Sudan, CAR, and DRC), Major hospitals, and healthcare facilities including private healthcare facilities.
- Inadequate number or composition of rapid response teams (RRTs) in some EVD high-risk areas (Kaya, Morobo, Yei & Yambio)

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EVENT-BASED SURVEILLANCE

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

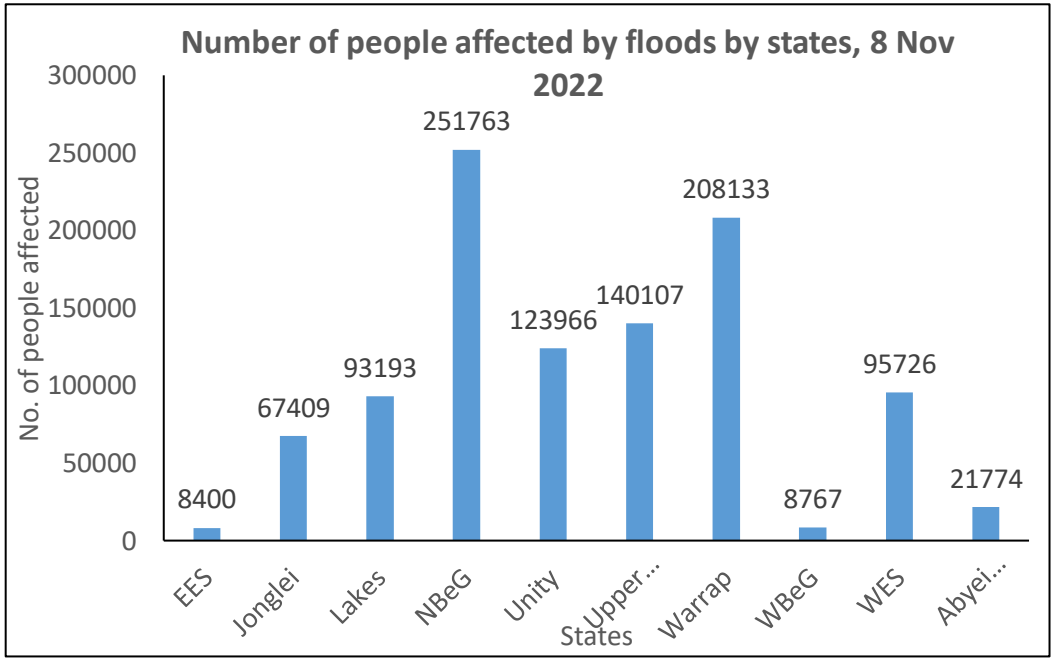
Updates on Floods situation in South Sudan as of November 8, 2022

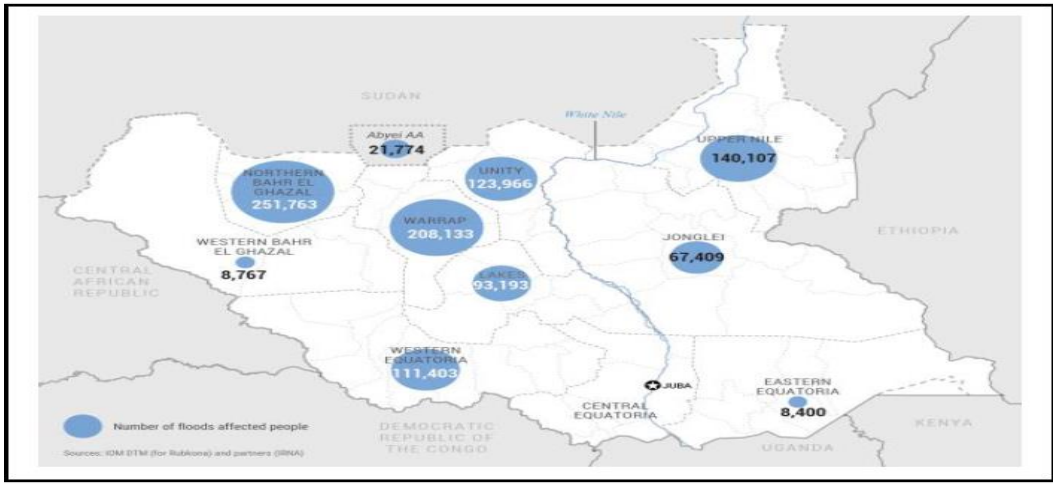
Updates

- Flooding declared a national emergency by the Govt- 10 Sept 2022
- More **1.01 million** people affected in 36 counties and Abyei Administrative Area across 9 states
- Majority of people affected are in Northern Bahr el Ghazal, Warrap, Upper Nile and Unity
- Impact of floods
  - A total of 62 deaths related to the current flooding
  - Increased cases of snake bite cases (468 cases)
  - 45 HFs and 25 nutrition facilities affected (submerged, cut-off or structural damage sustained)
  - Increased caseload of malaria, Acute Watery Diarrhea, Acute Respiratory Infections
  - Depletion of essential drugs/supplies in health facilities & BHWs

Public Health Response (October)

- Health service delivery: WHO supported the provision of primary health services in Leer, Mayendith, Pibor and Fangak (counties with IPC 5 populations) by supporting 11 static and mobile health facilities in collaboration with implementing partners.
- Outbreak prevention and response: WHO supported 41 600 (first round) during a pre-emptive oral cholera vaccination campaign in Malakal County (including Malakal PoC) in October 2022.





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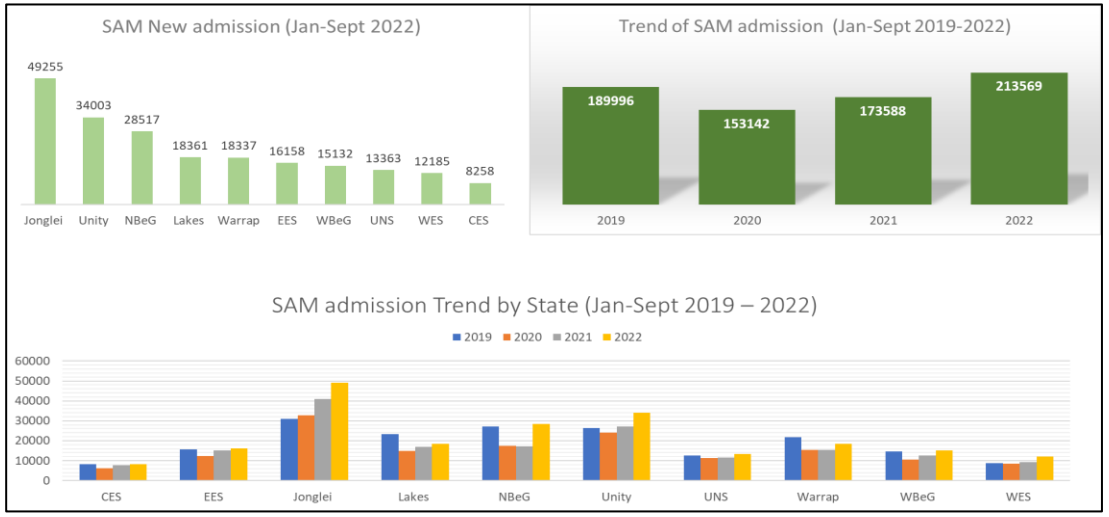
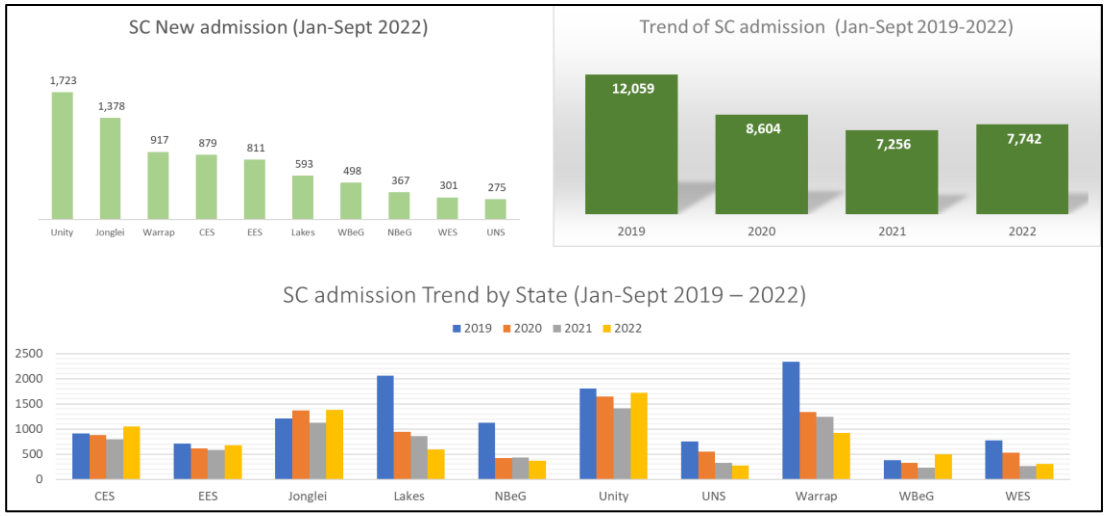
Food insecurity and Acute Malnutrition in South Sudan Jan to Sept. 2022

- **A total of 6.6 million** (53.6% of the population) people are currently facing IPC Phase 3 (Crisis),
- Out of which **2.22 Million** are in IPC Phase 4 (emergency) Acute food insecurity
- **A total of 61,000** people in IPC Phase 5 in Fangak, Canal/Pigi and Akobo and Pibor counties of Jonglei State and Greater Pibor Administrative A
- **1.4 M** U5 children are acutely malnourished of these 345,893 children severely malnourished





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Public Health Response, Challenges and Achievements

Public Health Response

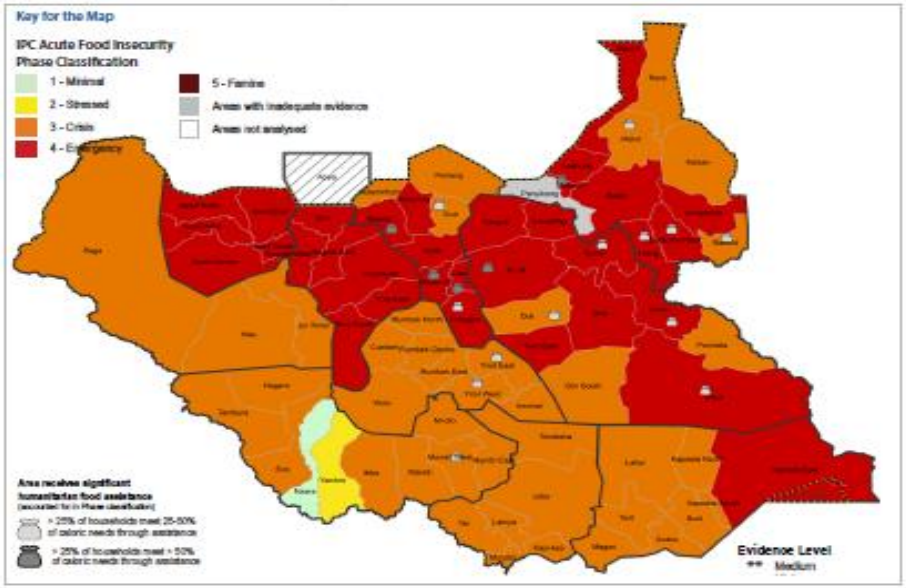
- Core pipeline support for service provision
  - **85** Severe acute malnutrition with Medical Complication kits distributed to stabilization centers in IPC4&5 locations
  - **341** Interagency Emergency Health Kits and **70** pneumonia kits distributed to health facilities and implementing partners in priority locations
  - **170** Cholera investigation and treatment kits prepositioned and distributed to priority locations
- Assessment conducted to evaluate inpatient management of SAM in the health facilities in IPC4&5
- Capacity building of health workers
  - **26** health workers trained on inpatient management of Severe acute malnutrition with Medical Complication
  - **50** health workers trained on nutrition surveillance (**Aweil South** and **Panyijiar**)
- **11** health facilities (static and mobile) supported to provide primary health care in four priority IPC 5 locations (through sub-granted implementing partners)

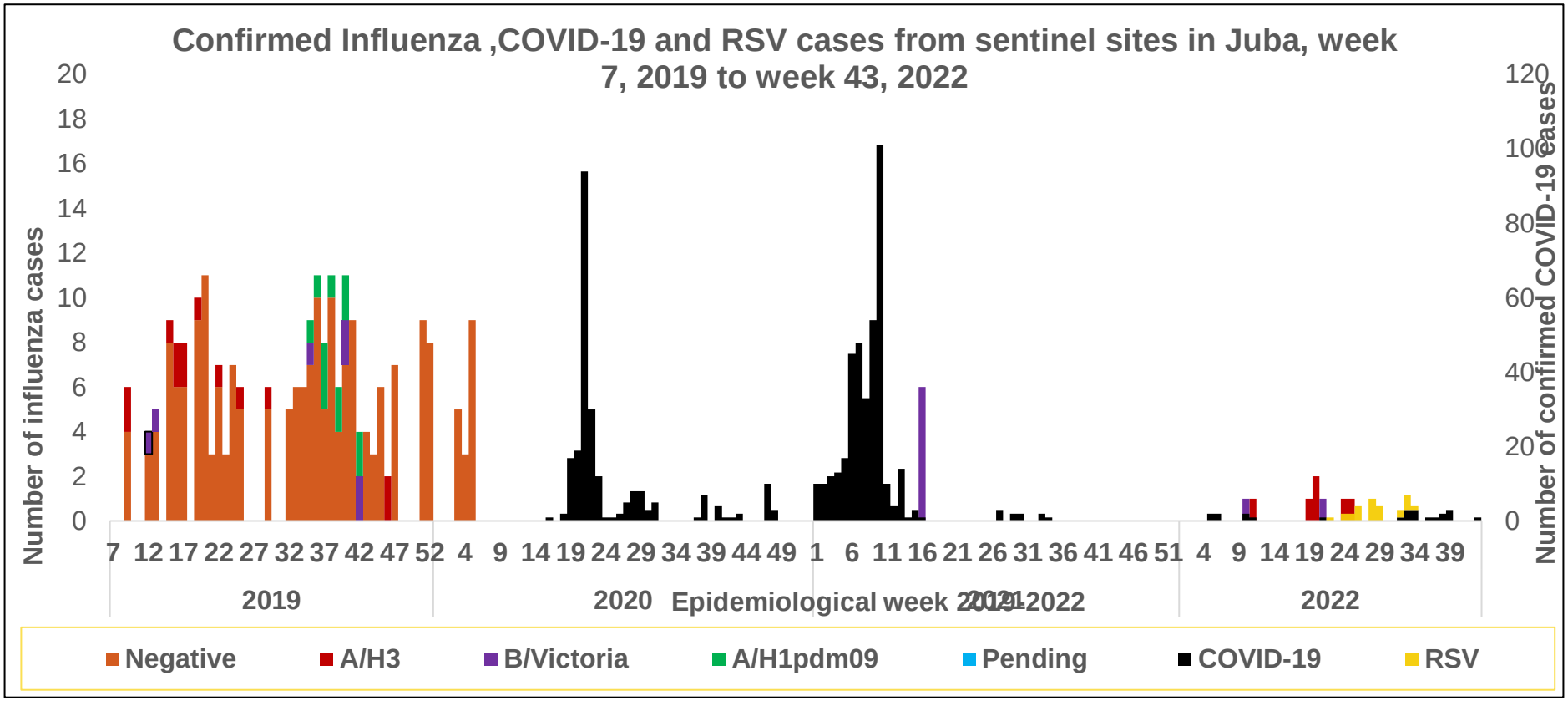
Challenges

- Multiple emergencies-overstretching capacities in-country
- Inadequate emergency health kits and other supplies
- Long lead time for international procurements for emergency health kits
- Limited accessibility to basic health care services owing to flooding and insecurity

Achievements Vs Target and People in Need

Program	People in need	Cluster Target	New Admission (Jan-Sept 2022)	Achieved Vs People in Need	Achieved Vs Target
SC	45,324	36,249	7,787	17%	21%
SAM	302,163	241,662	213,569	71%	88%
MAM	1,039,472	6,754,189	464,879	45%	7%
PLW	675,710	540,438	409,521	61%	76%





- 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 wk. 52 of 2021, a total of 266 ILI/SARI samples have been collected and tested in NPHL, 257 being negative; 6(2%) positive for Influenza B (Victoria); 3 (1%) positive for Influenza A (H3) and zero(0%) positive for Influenza A (H1)pdm09.
- From week **1-to 43,2022**; a total of **484 ILI**/SARI samples were collected,**429 samples** tested negative, and Cumulatively, **21 tested positive for covid-19,1 positive for Influenza B (Victoria), and 5 positive for influenza A(H3). 26 RSV was confirmed in Week 43**

ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

Brief epidemiological description and public health response for active outbreaks and public health events`

Response| Summary of major ongoing outbreaks in 2022

Aetiological agent	Location (county/ state)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	IPC/WASH
Ongoing epidemics								
Hepatitis E	Bentiu PoC	03/01/2019	44	3,592(0.82%)	Yes	yes	Yes	Yes
COVID-19	35 counties	05/4/2020	15	18,313 (0.77%)	yes	yes	yes	yes
Cholera	Bentiu	20/3/2022	00	424(0.32)	yes	yes	yes	yes
Measles	Aweil West	11/5/2022	**4**	426(0.030)	Yes	yes	Yes	NA
Measles	Aweil East	12/3/2022	8	159(0.013)	Yes	yes	Yes	NA
Measles	Aweil Center	24/4/2022	**4**	96(0.32)	Yes	yes	Yes	NA
Measles	Juba	19/7/2022	26	406(0.66)	yes	yes	yes	NA
Anthrax	**Gogrial west**	NR	3	131		Yes Partial in animals	yes	
measles	**Malakal**				yes	yes	yes	
Measles	**Terekeka**				yes	yes	yes	
Measles	**Leer**				yes	planned	yes	
Measles	**Bentiu (Rubkona)**				yes	planned	yes	
Measles	**Bor South**				yes	Not yet	yes	

Measles Cases in South Sudan 2021 and 2022

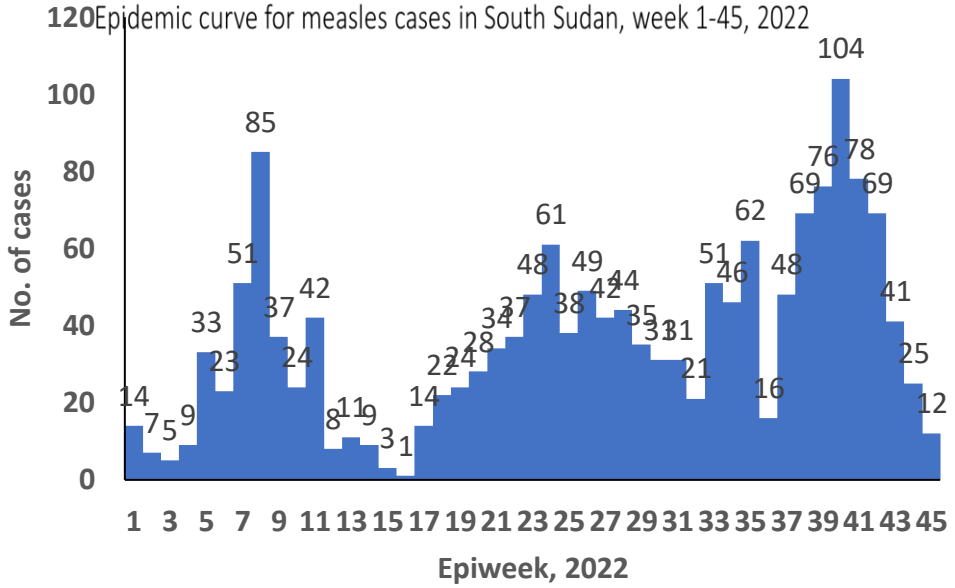
Descriptive Epidemiology

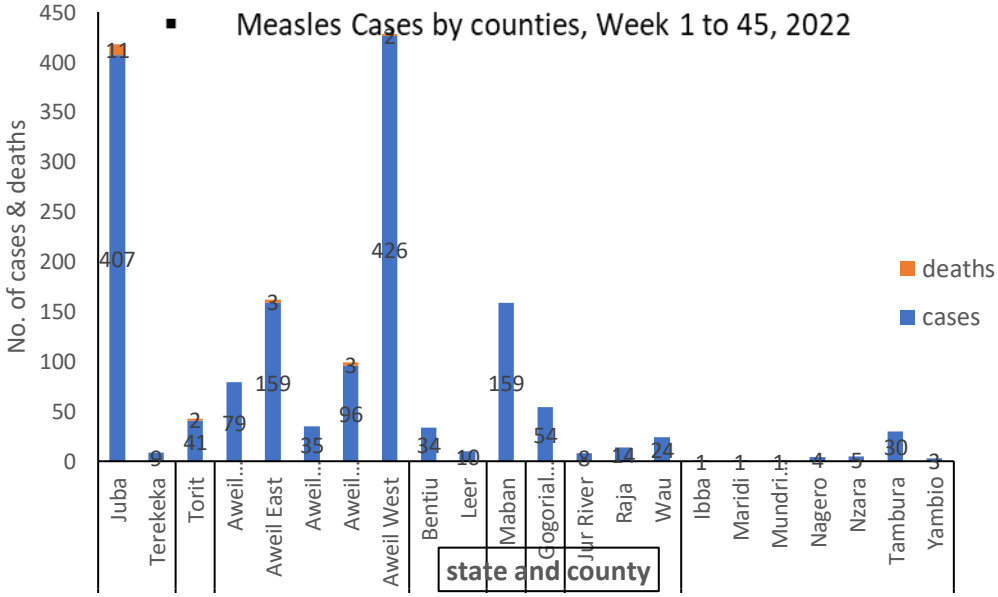
- A total of 1621 cases, of and 21 deaths (CFR, 1.2%) were reported since the beginning of 2022
- However, measles outbreaks were confirmed in 15 counties since the beginning of the year 2022
- Highest number of cases were reported from Aweil West (426) and Juba (406) counties
- Measles cases is being reported from (11 counties) Juba, Terekeka, Malakal, Rubkona, Leer, Aweil North, Aweil East, Aweil South, Aweil North, Aweil Centre, and Melut
- Measles cases is still being reported in Northern Bahr el Ghazal despite the vaccination campaigns conducted in all (5)counties.
- The surge in measles transmission is can be attributed to the accumulation of susceptible children due to low routine vaccination coverage in the country.

Public Health Response

- A total of 755,768 children aged 6 months to 14 years have been vaccinated in (12) counties during the reactive campaigns
- Plans are underway to conduct a vaccination campaign in Leer county, Rubkona, Wau and Bor South counties
- Reactive vaccination campaigns have been conducted underway in Juba and Malakal
- Measles risk assessment conducted by EPI and counties were risk assessed according to the

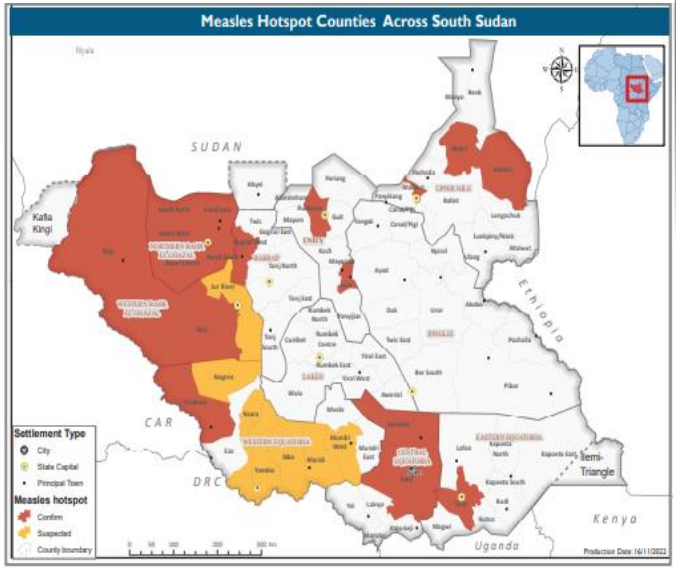
- Nationwide catchup campaign planned to take place in April 2023

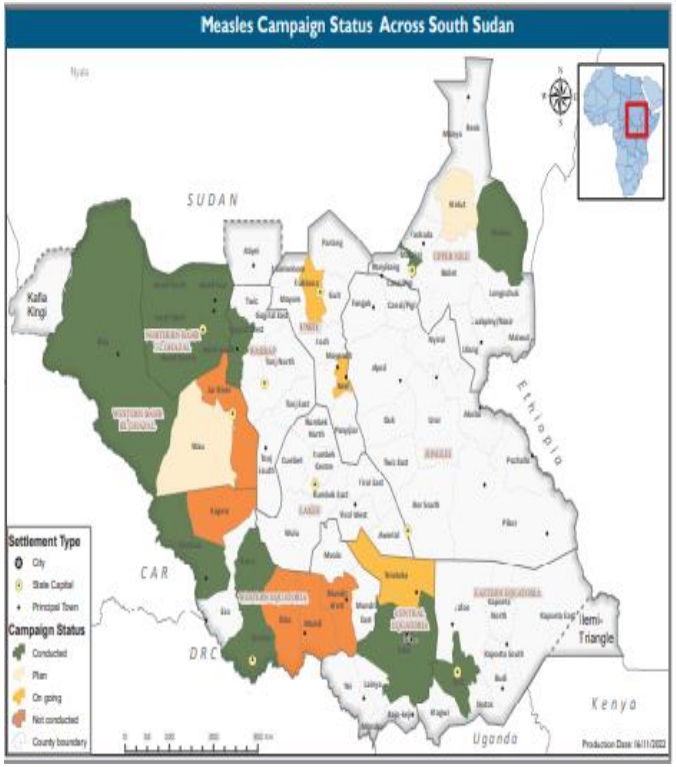




Measles Reactive campaigns conducted in 2022

World Health Organization
South Sudan



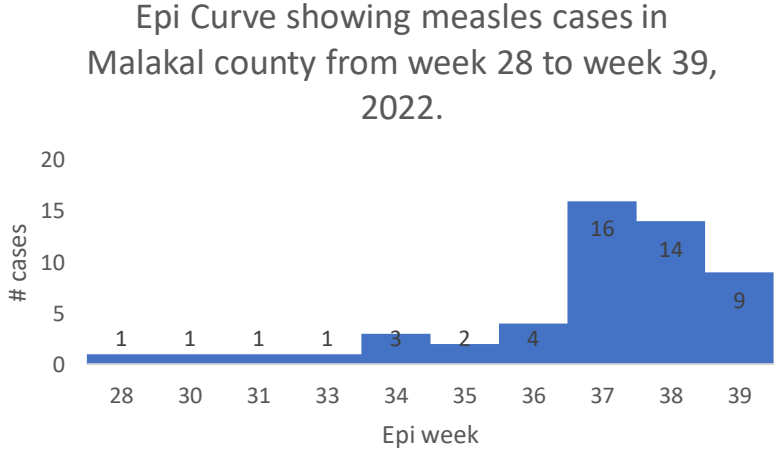


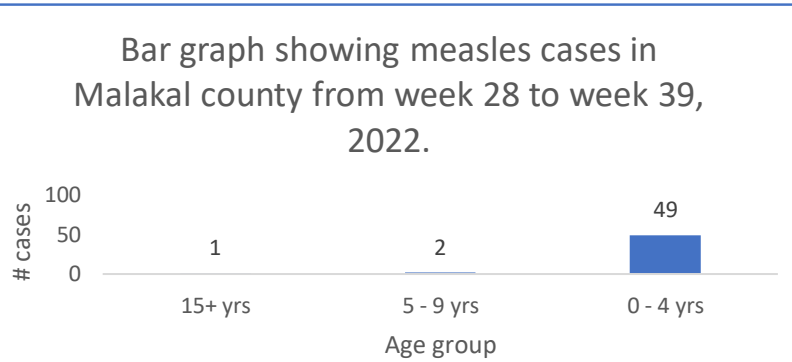
State	County/Payam	Date of Outbreak confirmed	NO. of Cases	Death	CFR%	NO. of sample collected	No. of sample +ve IgM	NO. of sample - ve IgM or Others	Organization responsible for MRC	Date of MRC starting	Date of MRC ending	% MRC coverage	% PCE	Status
WES	Yambio								IOM			62.40%		
WES	Nzara								IOM			87.30%		
EES	Torit	9-Feb-22	43	2	4.70%	10	7	3	Medair	9-Mar-22	31-Mar-22	95%	98%	
UNS	Maban (Refugee)		161	0	0%				Relief int.	7-Mar-22	15-Mar-22	97.70%		
UNS	Maban (Host)		161	0	0%				Relief int.	7-Mar-22	15-Mar-22	98%		
WES	Tambura	1-Mar-22	29	0	0%		3		IOM	6-Apr-22	1-Apr-22	102%	93%	
WBGz	Raja	4-Jun-22	21	0	0%	16	5	5	Medair	2-May-22	5-Jul-22	70.70%	95%	Active
Warrap	Gogrial west	27-Apr-22	100	0	0%		13		IOM	1-Jun-22	8-Jun-22	95%		
NBGz	Aweil center		31	0	0%		14		IOM	14-Jun-22	22-Jun-22	155%		Active
NBGz	Aweil east		60	0	0%									
NBGz	Aweil west		65	0	0%		14		IOM	14-Jun-22	22-Jun-22	94%		
NBGz	Aweil North	22-Apr-22	432	4	93%		18		MSF-France	14-Jul-22	21-Jul-22	97%		
CES	Juba Rajaf		110	0	0%	11	6	4	WHO	5-Sep-22	9-Sep-22	173.80%		
CES	Juba Munuki								MEDAIR					Active
UNS	Malakal		19	0	0%	4	3	1 Rubella	MSF-Spain, IMC and IOM			73%		Active
WBG	Wau													Active
CES	Terekeka		9						IOM					Active
Unity	Leer		10				3		MEDAIR					Active
Unity	Rubkona		17				2		MSF					Active
Unity	Koch													Active

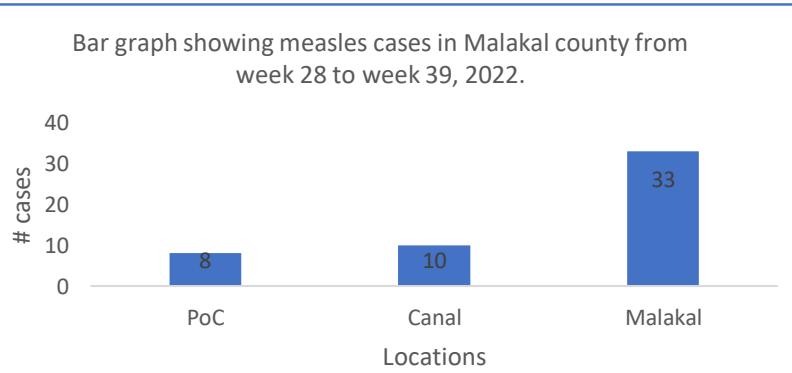
Measles cases reported from Malakal County of Upper Nile

Descriptive

- Total of 52 cases reported from Malakal between week 28 and week 39, 2022.
- Peak of cases reported in week 37 with
- Majority of the cases (94%) were reported in children less than 5 years of age
- (50%) males and (50%) females
- 41.9% (17 cases) of the cases were admitted for inpatient management; with no deaths reported so far.
- **Ongoing response**
- Active case search and line listing of cases are ongoing, and cases have been referred to the health facilities.
- Cases are being managed in different health facilities; this includes the provision of supportive management, vitamin A supplementation, and treatment of secondary infections
- Reactive vaccination campaigns conducted in affected payams by, conducted by partners
- Refresher training on measles surveillance and treatment is planned for state RRTs and frontline health workers
- Efforts underway to strengthen routine immunization services







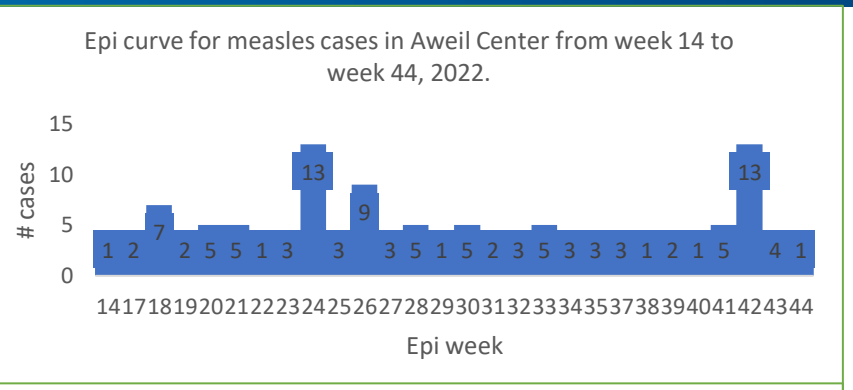
Ongoing Measles Outbreak in Northern Bahr el Ghazal

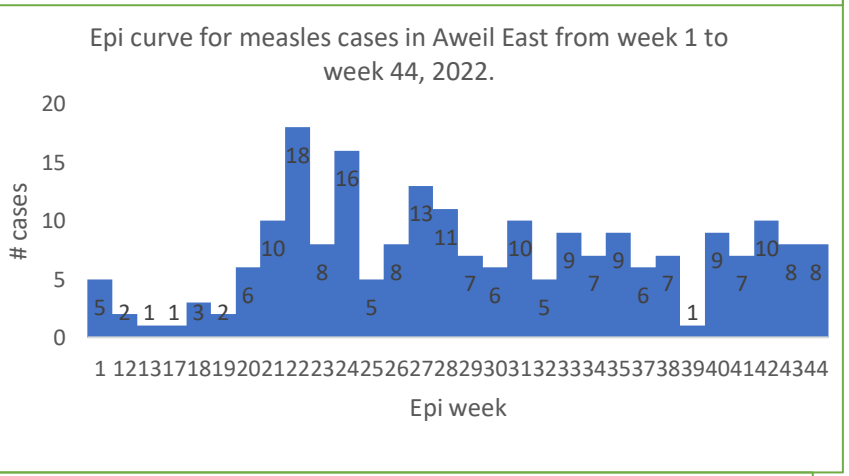
Descriptive

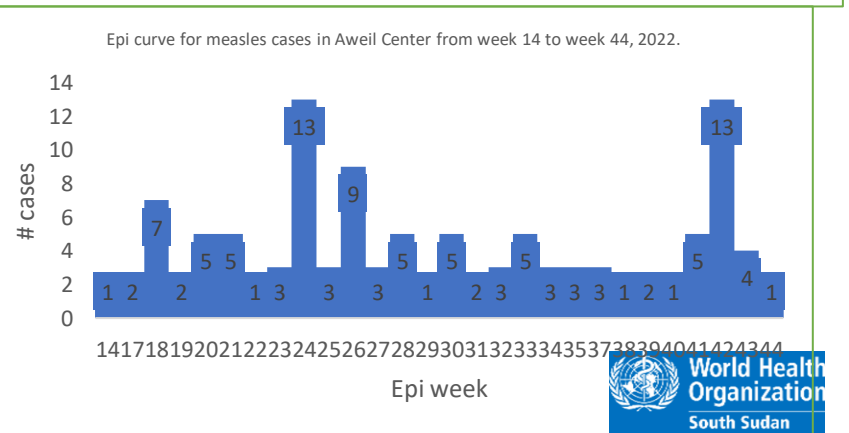
- Northern Bahr el Ghazal state continues to report suspected measles cases despite reactive campaigns conducted in the middle of the year
- Active cases being reported in all 5 counties of Northern Bahr el Ghazal with the majority of cases reported from Aweil East
- Majority of the cases are (90%) were reported from children less than 5 years of age.
- Majority of the cases are admitted for inpatient management; with no deaths reported so far.

Ongoing response

- Active case search and line listing of cases are ongoing, and cases have been referred to the nearest health facilities.
- Cases are being managed in different health facilities; this includes the provision of supportive management, vitamin A supplementation, and treatment of secondary infections
- Reactive vaccination campaigns conducted previously in affected payams by
- Routine immunization services need to be strengthened







World Health Organization
South Sudan

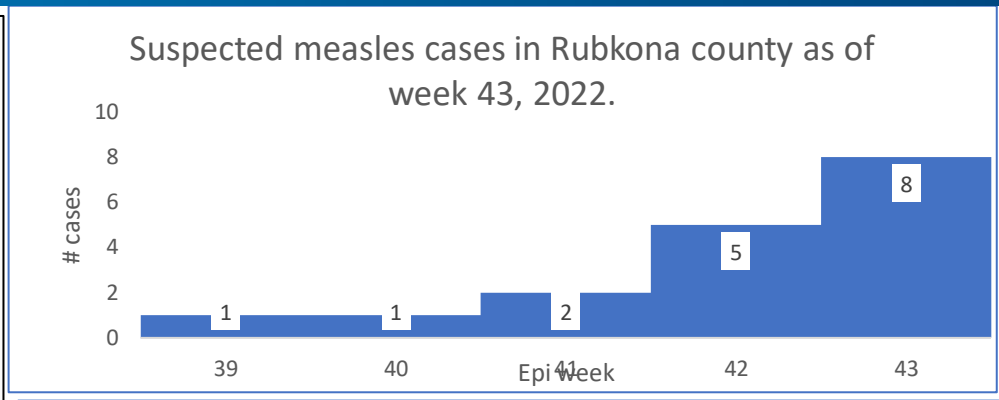
Measles cases in Bentiu Camp, Rubkona County as of week 43

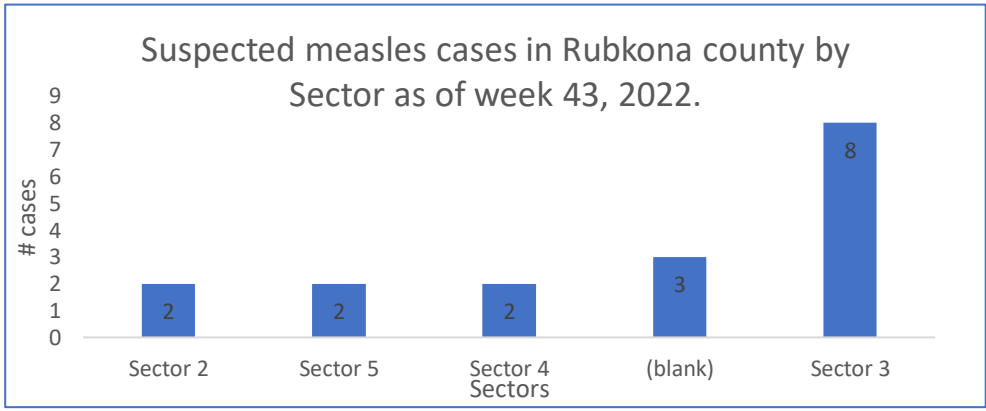
Descriptive EPI

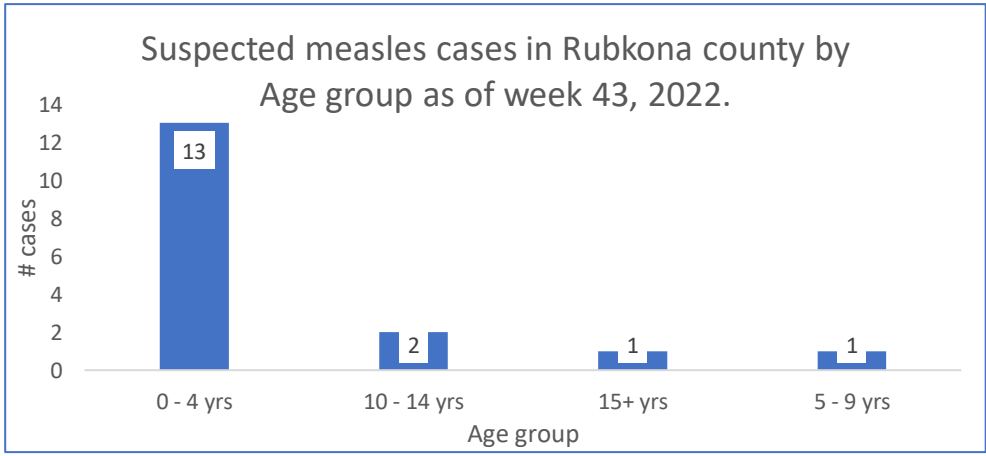
- 17 cases of measles were reported from Bentiu camp, Rubkona county from week 39 to 43, 2022
- Majority of the cases, 8 out of 17 were reported from sector 3 within Bentiu camp
- Children age 0 to 4 years accounted for majority of the cases
- Majority of the cases are admitted for inpatient management; with no deaths reported so far.
- Of the 17 cases reported, 7/17 (58%) have indicated that they have received vaccination against measles and 10/17(42%)reported no against the vaccination status

Ongoing response

- Active case search and line listing of cases are ongoing, and cases have been referred to the nearest health facilities within the camp.
- Cases are being managed in different health facilities; this includes the provision of supportive management, vitamin A supplementation, and treatment of secondary infections
- Reactive vaccination campaign is planned for by the state Ministry of Health and MSF
- Routine immunization services to be strengthened through RCCE and health promotion activities





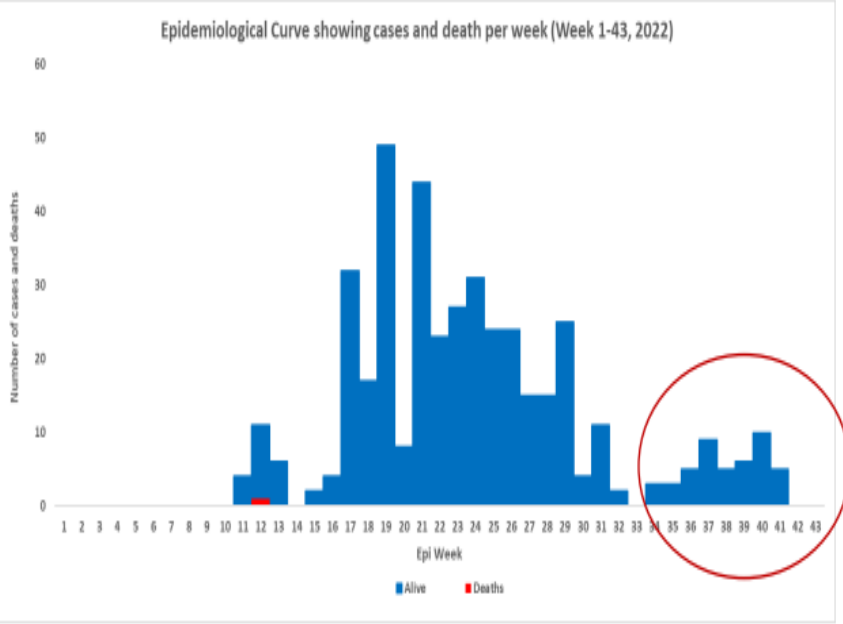


Confirmed Cholera Outbreak in Bentiu, Unity State and OCV updates

- V. cholerae case confirmed on 14 Apr 2022 in Bentiu.
- Since the last update in week 42, Zero new cases have been reported from Rubkona county. Zero cases in admission in cholera treatment units as of 30 October 2022
- Zero new deaths were reported during week 43, 2022.
- Cumulatively, a total of **424 cholera cases** including one death have been reported since March 2022

OCV Implementation

- 1,677,500 doses of OCV have been received
- 1,584,147 doses have been administered
  - Concept note on need for OCV the doses
  - And additional resources for flooded hotspot locations
- Round 2 in Malakal and Awerial counties are planned for;



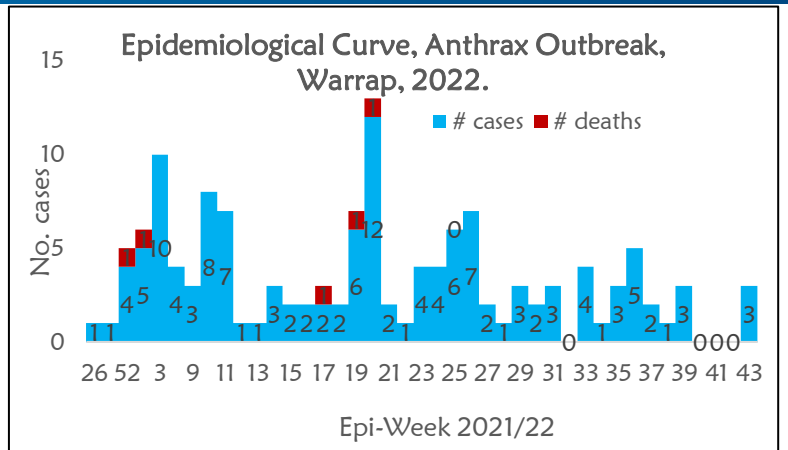
S/N	LOCATION	TARGET	POPULATION VACCINATED		COVERAGE	
			1st round	2nd Round	1st round	2nd Round
1	Rubkona Phase 1 (Category 1)	202,627	173,170 (24- 31 Jan 2022)	175,044 (14-20 Mar 2022)	85%	86%
2	Rubkona Phase 2 (category 1)	31,680	25,196 (12-18 May 2022)	32,075 (4-10 June 2022)	80%	101%
3	Leer	75,333	64,033 (April 2022)	35,375 (31 May 2022)	85%	47%
4	Yirol East	118,163	109,206 (2-9 August 2022)	111,509 (14-19 Sept 2022)	92%	94%
5	Awerial	94,149	84,184 (16 Aug 2022)	Planned	89%	TBD
6	Juba	633,335	400,584 (10-19 June 2022)	373771 (5 Sept 2022)	63%	59%
7	Malakal	63,476	32,624 (29 Oct -2 Nov 2022)	Planned	51%	TBD

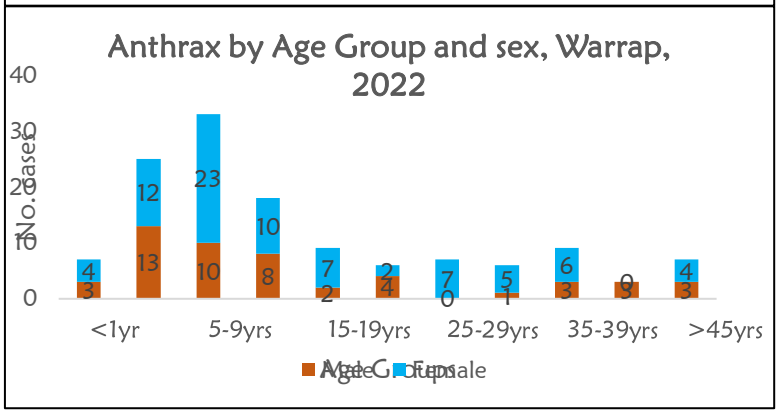
Confirmed Anthrax Cases in Gogrial West, Warrap State as of week 43

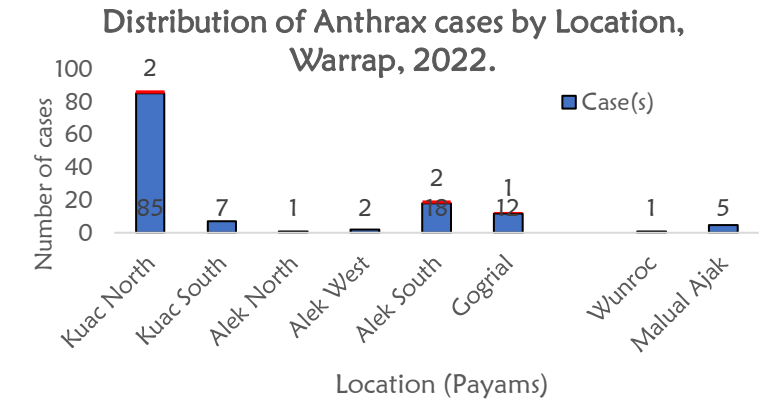
- Suspected anthrax cases were detected at the Kuajok hospital, and a retrospective review of the facility registers revealed over cases in the past two months.
- On 18th May 2022, a national team composed of MOH, MOAF, WHO, ICAP, and FAO visited the state to conduct an in-depth epidemiological investigation and response. The team visited Kuajok hospital, Gogrial PHCC, and Alak PHCC to review register books. The team also visited 24 villages where Anthrax suspected cases come from
- three new cases were reported in week 43, 2022 bringing the total number of cases line-listed to **131 cases and 5 deaths,** case fatality rate (**CFR 3.2%**).
- All cases are from one County of Gogrial West. **62.9%** of the cases are from Kuac North Payam. **62%** of the cases are among females and **38 %** among Males.
- Out of the 18 samples collected, 8 tested positive by PCR for bacillus anthracis.
- A total of 10 animal samples were collected by the animal health experts and 3 soil samples for further analysis.

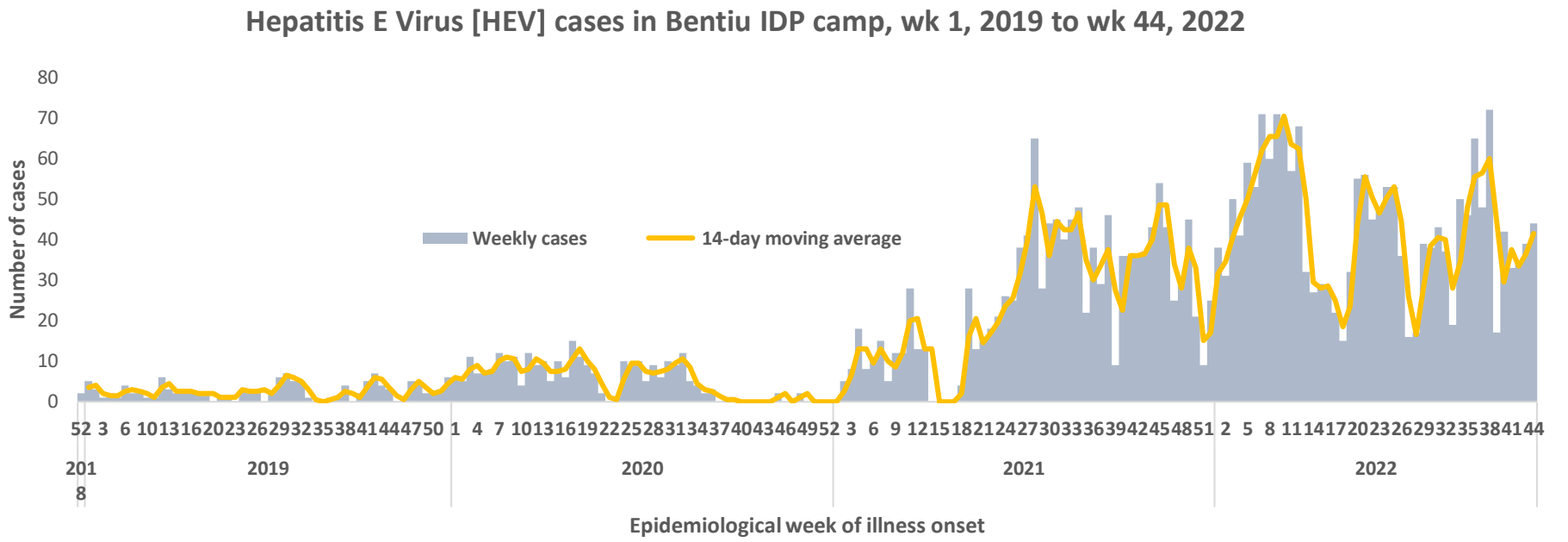
Ongoing response

- partial vaccination campaign in the three (3) counties of Gogrial East and West in addition to Tonj North where 180,000 ruminants were targeted (2nd – 18th August 2022) ; coverage was at a low 42% and more remains to be done given a balance of Anthrax vaccines.
- Active case search and line listing of cases in the affected county and the surrounding and Case management is underway at Kuajok hospital.
- Risk communications and community engagements activities are ongoing through local radios to reduce the risk of exposure
- Ongoing multisectoral coordination meetings at state and national levels.









Descriptive epidemiology

- The persistent transmission of HEV in the Bentiu IDP camp continues with **3,592** cases since the beginning of 2019
- **44 AJS new** cases with (zero deaths) were reported in week 44, bringing the cumulative cases to 3,592 (26 deaths) since the onset of the outbreak in 2018.
- **HEV transmission has reduced from a peak of 60 cases every fortnight by week 8, 2021 to 44 cases every fortnight by week 44, 2022**.
- All the cases have been managed as outpatient cases except for seven cases that were admitted
- No death was reported in 2022
- 46% are female and 54% are male. Within the IDP camp, the sector-specific attack rates for HEV disease for the period week 1, 2022 are highest in sectors 3 and 5.

HEV response update

1. Multisectoral joint cholera and HEV response coordination at the state level; 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); the third round is expected to be conducted in October 2022
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. Upcoming flooding season will likely worsen the WASH situation

Response| Summary of major controlled outbreaks in 2020 and 2021

Aetiological agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
Controlled epidemics								
Measles	**Pibor**	27/1/2020	NR	355 (0.0028)	Yes	Yes		Yes
Measles	**Wau**	5/1/2020	NR	39 (0.051)	Yes	Yes		Yes
Measles	**Ibba**	25/1/2020	NR	55 (0.36)	Yes	Yes		Yes
Rubella	**Tambura**	11/1/2021	NR	23 (0.13)	Yes	No		Yes
Rubella	**Nagero**	01/03/ 20201	NR	5 (0.25)	Yes	No		Yes
cVDPV2	**25 counties**	11/06/2020 18/09/2020	NA	59	Yes	Yes		Yes
Measles	**Torit**	8/2/2022	NR	1 (0.023)	Yes	Yes		Yes
Measles/ Rubella	**Maban- Doro Camp**	5/01/2022	NR	20 (0. 124)	Yes	Yes		Yes
Measles/ Rubella	**Tambura**	20/02/2022	NR	5 (0.4)	Yes	Yes		Yes
Rubella	**Gogrial West**		NR	76(0.13)	Yes	No		Yes
Measles	**Raja**		NR	14 (0.10)	Yes	Yes		No
Meningitis	**Norther Bahr el Ghazal**		NR		Yes			No

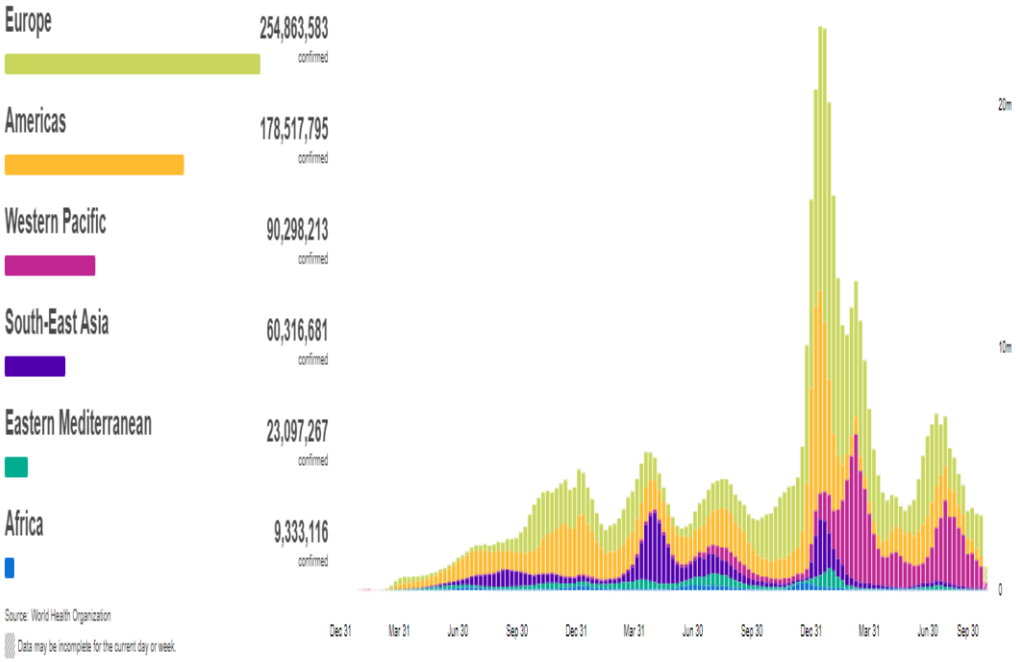
COVID-19 UPDATES

COVID-19 Virus Situation Summary

Situation update as of 18, Nov 2022

- **Globally as of 18 November 2022, there have been 633,601,048** confirmed cases of COVID-19, including **6,596,542** deaths, reported to WHO**.** As of 15 November 2022, a total of **12,943,741,540 vaccine doses** have been administered..

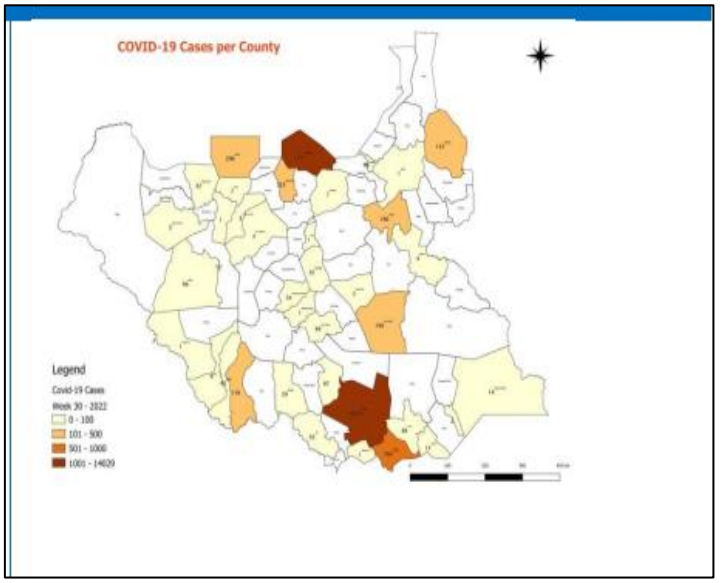
- **In Africa**, as of **18 November 2022** there have been **9,381,366** confirmed cases of COVID-19, including **175,038 deaths** reported to the WHO

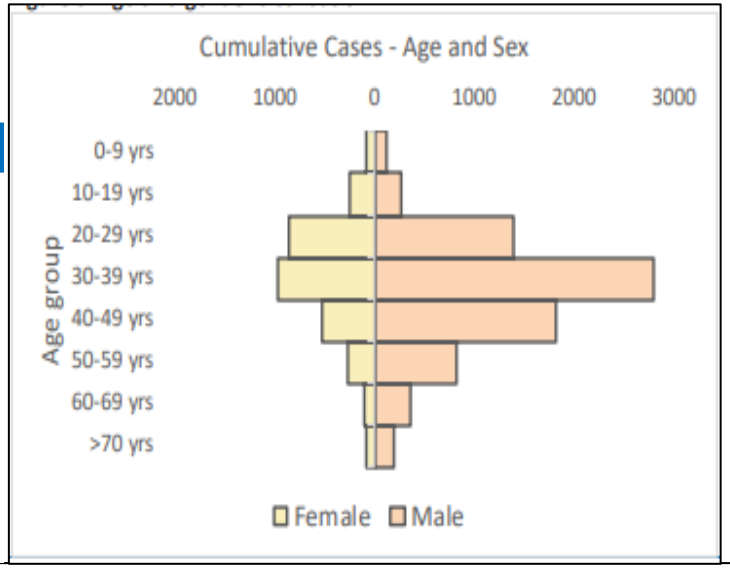


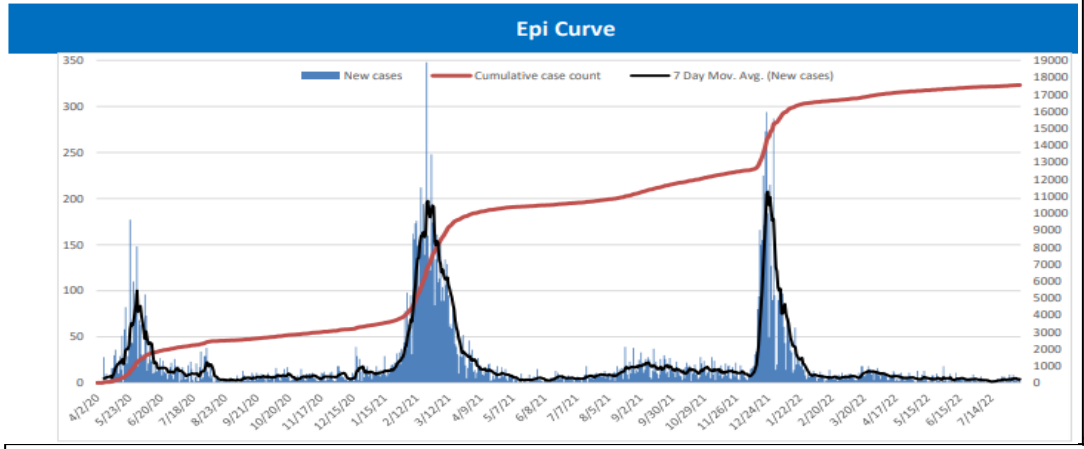
WHO: **https://www.who.int/health-topics/coronavirus**

COVID-19 Response in South Sudan as of week 43, 2022

- 18 313 COVID-19 cases, 18 126 recoveries, and 138 deaths (case fatality rate of 0.75%) have been reported as of the end of October 2022 (epidemiological week 43).
- Detection and testing of COVID-19 are inadequate; the testing level is low at about 300 per day. Antigen rapid testing, PCR testing and GeneXpert platforms in public health and private facilities are being utilized to scale up testing capacity in the country.
- 15 new cases were confirmed in epidemiological week 43 (ending on 30 October), an 11.8% decrease in reported cases compared to epidemiological week 42 (ending on 23 October). This is the fifth consecutive week of the observed decrease in the weekly COVID-19 case tally.
- The low test positivity rate of 0.7% in epidemiological week 43 is a decrease from the 1.0% positivity rate reported in epidemiological week 42
- 15.36% (2 101 283 individuals) have been fully vaccinated using different antigens delivered through several vaccination strategies. Notably, more than 91.3% of healthcare workers have been vaccinated.
- For more information on the COVID-19 outbreak and public health response measures, refer to the national weekly situation update







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OVERALL CONCLUSIONS AND RECOMMENDATIONS

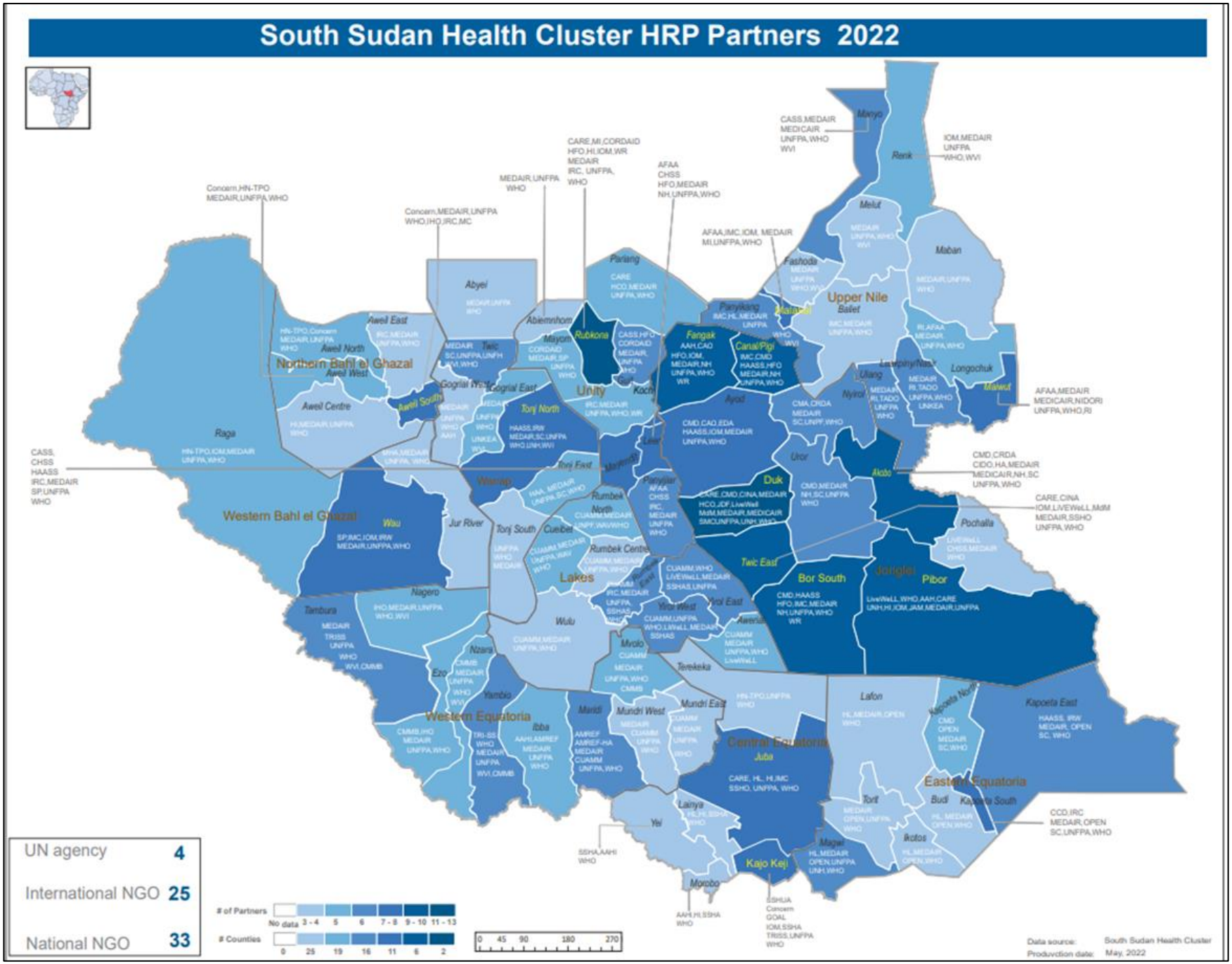
Conclusions

- The overall performance of IDSR and EWARN reporting sites in week 44, 2022 is above 80% for both IDSR sites and EWARN sites
- Onlyof 30 alerts were reported in week 44,2022; Malaria (7), AWD (7), ARI (3), measles (3), COVID-19(3) and ARI(3)
- Confirmed outbreak of Sudan Ebolavirus in Uganda Mubende district as the epicenter with other four districts with at least a confirmed case. As of November 11, a total of 141 cases and 55 confirmed deaths giving a CFR of 39%.
- A total of 22 suspected Ebola Virus Disease (EVD) cases were reported from Nimule, Yei, Yambio, Kajo-keji, Juba, and Rubkona with samples collected from 06 samples collected and all tested negative for EVD.
- Other emergencies like floods and food insecurity have affected 1.1 million people and 6.6 million people respectively
- Confirmed measles outbreaks in 15 counties since the beginning of the year 2022 with the latest counties affected including Leer, Rubkona (Bentiu camp), Bor South and Melut
- Hepatitis E virus cases continue to be reported in Bentiu IDP Camp with 44 cases reported in week 44 giving a cumulative of **3,592** cases and **26** deaths (CFR **0.72**%) reported since week 1, 2019

Recommendations

- Partners to continue supporting County Health Departments (CHD) & State Ministries of Health on timely IDSR/EWARN reporting
- Health facilities to conduct an initial investigation on suspected cases of epidemic-prone diseases and collect samples
- Strengthen EVD surveillance, Infection Prevention and Control (IPC) and Risk communication and community engagement (RCCE) in high-risk areas of Juba, Yei, Yambio, Kaya, Nimule and Kako-keji
- Conduct reactive measles vaccination campaign in counties with confirmed outbreaks and advocate for enhanced routine immunization through PIRI
- Support the multicluster HEV response strategy in the Bentiu IDP camp and the ongoing cholera outbreak

South Sudan Health Cluster HRP Partners 2022



IDSR timeliness & completeness performance at county level for week 44 and 43 of 2021 (1)

World Health Organization South Sudan

STATE	COUNTY	Number of reporting sites	No. of HFs Reported on Time in WK 44	Timeliness Percentage of WK 44	No. of HFs Reported regardless of time in WK 44	Completeness Percentage of WK 44	No. of HFs Reported regardless of time in WK 43	Completeness Percentage of WK 43
Lakes	Cueibet	15	15	100%	15	100%	15	100%
Lakes	Rumbek North	7	7	100%	7	100%	7	100%
Lakes	Wulu	14	14	100%	14	100%	14	100%
Lakes	Rumbek East	24	24	100%	24	100%	24	100%
Lakes	Awerial	7	7	100%	7	100%	7	100%
Lakes	Rumbek Centre	23	23	100%	23	100%	23	100%
Lakes	Yirol West	12	12	100%	12	100%	12	100%
Lakes	Yirol East	11	11	100%	11	100%	11	100%
NBGZ	Aweil South	15	15	100%	15	100%	9	60%
NBGZ	Aweil North	15	15	100%	15	100%	15	100%
NBGZ	Aweil West	20	20	100%	20	100%	20	100%
CES	Juba	48	48	100%	48	100%	42	88%
CES	Yei	18	18	100%	18	100%	16	89%
CES	Kajo Keji	28	26	93%	26	93%	17	61%
NBGZ	Aweil Centre	13	12	92%	12	92%	13	100%
CES	Morobo	10	9	90%	9	90%	4	40%
WBGZ	Wau	29	25	86%	25	86%	28	97%
CES	Terekeka	11	9	82%	10	91%	11	100%
WBGZ	Raja	11	9	82%	9	82%	11	100%
WBGZ	Jur River	40	32	80%	32	80%	35	88%
CES	Lainya	14	10	71%	10	71%	14	100%
NBGZ	Aweil East	26	17	65%	17	65%	26	100%

STATE	COUNTY	Number of reporting sites	No. of HFs Reported on Time in WK 44	Timeliness Percentage of WK 44	No. of HFs Reported regardless of time in 44	Completeness Percentage of WK 44	No. of HFs Reported regardless of time in WK 43	Completeness Percentage of WK 43
Unity	Abiemnhom	4	4	100%	4	100%	4	100%
Unity	Koch	7	7	100%	7	100%	5	71%
Unity	Mayom	13	13	100%	13	100%	9	69%
Unity	Pariang	12	12	100%	12	100%	10	83%
Unity	Guit	6	6	100%	6	100%	6	100%
WES	Nzara	21	21	100%	21	100%	20	95%
WES	Nagero	10	10	100%	10	100%	10	100%
WES	Mundri West	21	21	100%	21	100%	21	100%
WES	Maridi	26	26	100%	26	100%	25	96%
WES	Ibba	11	11	100%	11	100%	11	100%
WES	Mundri East	19	19	100%	19	100%	19	100%
WES	Yambio	42	42	100%	42	100%	42	100%
WES	Ezo	32	32	100%	32	100%	27	84%
WES	Mvolo	10	10	100%	10	100%	10	100%
WES	Tambura	26	26	100%	26	100%	26	100%
Unity	Panyijiar	15	14	93%	14	93%	15	100%
Unity	Leer	15	13	87%	13	87%	7	47%
Unity	Rubkona	13	11	85%	11	85%	13	100%
Unity	Mayendit	11	9	82%	9	82%	11	100%

IDSR timeliness & completeness performance at county level for week 44 and 43 of 2021 (2)

World Health Organization South Sudan

STATE	COUNTY	Number of reporting sites	No. of HFs Reported on Time in WK 44	Timeliness Percentage of WK 44	No. of HFs Reported regardless of time in WK 44	Completeness Percentage of WK 44	No. of HFs Reported regardless of time in WK 43	Completeness Percentage of WK 43
Jonglei	Nyirol	10	10	100%	10	100%	9	90%
Jonglei	Bor	19	19	100%	19	100%	19	100%
Jonglei	Pochalla	7	7	100%	7	100%	7	100%
Jonglei	Twic East	9	9	100%	9	100%	5	56%
Jonglei	Canal Pigi	10	10	100%	10	100%	0	0%
Jonglei	Duk	13	13	100%	13	100%	11	85%
EES	Magwi	17	17	100%	17	100%	17	100%
EES	Torit	11	11	100%	11	100%	11	100%
EES	Kapoeta South	9	9	100%	9	100%	9	100%
EES	Kapoeta East	7	7	100%	7	100%	5	71%
EES	Kapoeta North	10	10	100%	10	100%	10	100%
EES	Ikotos	19	18	95%	18	95%	19	100%
Jonglei	Fangak	18	17	94%	17	94%	14	78%
EES	Budi	17	16	94%	16	94%	17	100%
EES	Lopa Lafon	15	14	93%	14	93%	13	87%
Jonglei	Ayod	13	9	69%	9	69%	11	85%
Jonglei	Akobo	15	10	67%	10	67%	2	13%
Jonglei	Pibor	7	4	57%	4	57%	1	14%
Jonglei	Uror	6	1	17%	1	17%	1	17%

STATE	COUNTY	Number of reporting sites	No. of HFs Reported on Time in WK 44	Timeliness Percentage of WK 44	No. of HFs Reported regardless of time in WK 44	Completeness Percentage of WK 44	No. of HFs Reported regardless of time in WK 43	Completeness Percentage of WK 43
Warrap	Gogrial East	15	9	60%	9	60%	15	100%
Warrap	Abyei	14	5	36%	5	36%	8	57%
Warrap	Gogrial West	31	29	94%	29	94%	28	90%
Warrap	Tonj East	12	11	92%	11	92%	12	100%
Warrap	Twic	25	10	40%	10	40%	23	92%
Warrap	Tonj North	15	15	100%	15	100%	14	93%
Warrap	Tonj South	12	12	100%	12	100%	12	100%
Upper Nile	Baliet	4	4	100%	4	100%	0	0%
Upper Nile	Maban	13	11	85%	11	85%	13	100%
Upper Nile	Manyo	11	6	55%	6	55%	10	91%
Upper Nile	Maiwut	4	4	100%	4	100%	4	100%
Upper Nile	Luakpiny Nasir	9	7	78%	7	78%	9	100%
Upper Nile	Ulang	10	9	90%	9	90%	7	70%
Upper Nile	Fashoda	11	10	91%	10	91%	11	100%
Upper Nile	Renk	6	6	100%	6	100%	6	100%
Upper Nile	Makal	7	4	57%	4	57%	6	86%
Upper Nile	Melut	6	0	0%	0	0%	6	100%
Upper Nile	Panyikang	3	2	67%	2	67%	3	100%
Upper Nile	Longechuk	9	9	100%	9	100%	9	100%
Upper Nile	Akoka	5	5	100%	5	100%	5	100%

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-2022

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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

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