

# South Sudan

**Integrated Disease surveillance and response (IDSR)**

**Epidemiological Bulletin Week 19, 2021 ( May 10- May 16)**



World Health  
Organization  
South Sudan



- In week 19, 2021 IDSR reporting completeness was 93% at health facility level and was 90% for EWARS partners supported sites
- Of the 101 alerts in week 19, 2021; 68% were verified 5% were risk assessed and 5% required a response . Malaria (48), AWD (14), ARI (24), measles (1) and bloody diarrhea (11) were the most frequent alerts in week 19, 2021
- Confirmed Rubella Outbreak in Nagero County, Western Equatoria State as all 3 samples tested positive for Rubella IgM
- Malaria remains the top cause of morbidity and accounted for 50,747 cases (49.7% of OPD cases)
- Total of 10 653 COVID-19 confirmed cases and 115 deaths, CFR of 1.09%
- Other hazards include floods (unseasonal) in over 4 counties; Malaria in 2 counties, HEV in Bentiu PoC and Rubella in 2 counties.

# SURVEILLANCE PERFORMANCE



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



# IDSR completeness performance at State level for week 19 & 18 of 2021



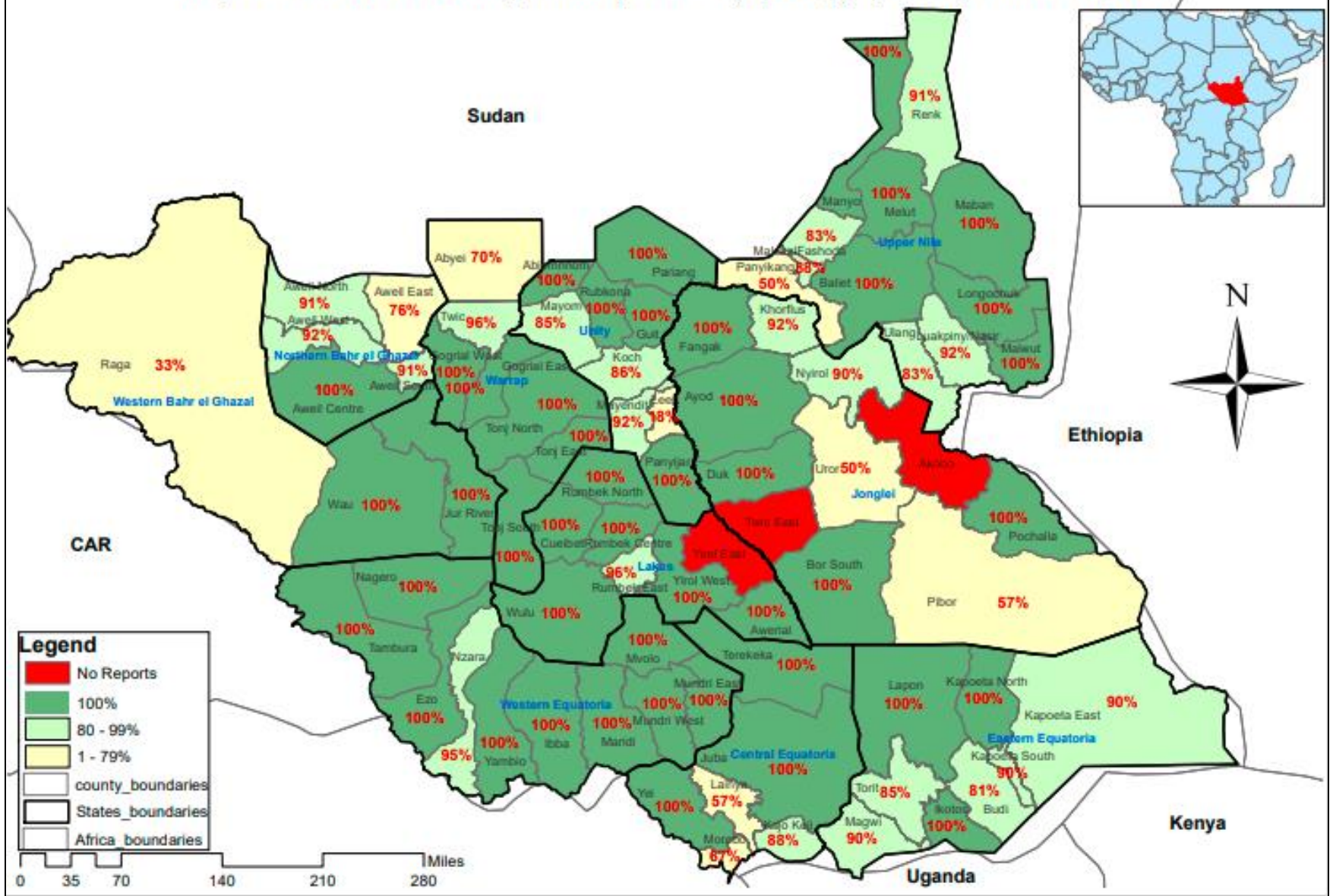
Completeness States Ranking	States	Number of reporting sites	No. of HF's Reported regardless of time in WK 19	Completeness Percentage of WK 19	No. of HF's Reported regardless of time in WK 18	Completeness Percentage of WK 18
1	Warrap	119	119	100%	119	100%
2	WES	213	212	100%	213	100%
3	CES	117	108	92%	109	93%
4	EES	142	131	92%	135	95%
5	Lakes	113	101	89%	107	95%
6	Upper Nile	122	109	89%	110	90%
7	NBGZ	131	117	89%	121	92%
8	Unity	94	82	87%	88	94%
9	WBGZ	78	68	87%	70	90%
10	Jonglei	112	95	85%	107	96%
	South Sudan	1241	1142	92%	1179	95%

## KEY

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

**The completeness of IDSR reporting (supported by EWARS mobile) at health facility level was 92% in week 19 compared to 95% in week 18. All states were above the target of 80%.**

Map of South Sudan Showing the completeness (reporting) by County in week 19, 2021.



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# Surveillance: EWARS performance indicator by partner for week 19 of 2021

Partner	HF's	Reporting		Performance	
PARTER	Number of reporting sites	# of reports received on Time	No. of HF's Reported regardless of time	Timeliness	Completeness
World Relief	2	2	2	100%	100%
RHS	1	1	1	100%	100%
HFD	6	6	6	100%	100%
UNIDOR	2	2	2	100%	100%
UNH	2	2	2	100%	100%
ALIMA	3	3	3	100%	100%
TRI-SS	2	2	2	100%	100%
TADO	6	6	6	100%	100%
CMD	1	1	1	100%	100%
IRC	1	1	1	100%	100%
SSHCO	1	1	1	100%	100%
IHO	2	2	2	100%	100%
Medicair	2	2	2	100%	100%
HFO	2	2	2	100%	100%
MSF-E	1	0	1	0%	100%
MSF-H	2	0	2	0%	100%
IOM	12	10	11	83%	92%
IMC	24	19	22	79%	92%
HAA	6	5	5	83%	83%
GOAL	2	0	0	0%	0%
Medair	2	0	0	0%	0%
<b>TOTAL</b>	<b>82</b>	<b>67</b>	<b>74</b>	<b>82%</b>	<b>90%</b>

The Completeness for EWARS partners supported sites was at 90% in week 19, 2021

# EVENT-BASED SURVEILLANCE



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





Location	ARI	AWD	AFP	ABD	Malaria	Measles	COVID-19	Total
CES	1	1	0	2	1	0	0	5
EES	0	1	0	0	8	0	0	9
Jonglei	5	1	0	0	2	0	0	8
Lakes	3	1	0	0	3	0	0	7
NBGZ	6	1	0	3	2	0	0	12
Unity	4	1	0	2	1	0	2	10
Upper Nile	3	1	0	0	4	0	0	8
WBGZ	1	3	0	1	3	0	0	8
WES	0	4	0	1	23	1	0	29
Warrap	1	0	0	2	1	0	1	5
<b>TOTAL</b>	<b>24</b>	<b>14</b>	<b>0</b>	<b>11</b>	<b>48</b>	<b>1</b>	<b>3</b>	<b>101</b>

#### During this week:

- **9 ARI alert:** 4 from CES sample was collected and tested positive for COVID-19 , 1 from EES sample was collected tested negative for COVID-19 in the state Sentinel Site, 1 from Lakes State sample collected and tested positive for COVID-19, 1 from Unity state sample collected and tested positive for COVID-19, 1 from WBGZ sample collected, 1 from WES sample collected and tested positive for COVID-19.
- **19 AWD alert:** 3 from CES , 4 from EES, 1 from Unity, 2 from Upper Nile State, 1 from Warrap, 5 WBGZ State, 3 WES State, all treated for diarrhea.
- **13 ABD alert:** 3 from EES, 1 from Lakes investigation is underway, 1 from Unity investigation under way, 4 from Upper Nile sample were collected, 3 from Warrap State and 1 from WBGZ State
- **19 Malaria alerts:** 1 from CES, 3 from EES, 1 from Warrap, 2 from Lakes State, 1 from Unity State, 6 from WBGZ, 5 from WES, all these are due to the high increase of malaria cases in the Country.
- **2 AFP alert:** from Unity State, Mayom County in Mankien PHCC and Mayom PHCC.
- **2 COVID-19 alert:** 1 from Jonglei state and 1 from Unity all tested positive for COVID-19
- **1 Measles alert:** from Unity State, Rubkona, County ,Bentiu State Hospital sample collected for testing.



# SUSPECTED OUTBREAKS



Major suspected outbreaks in South Sudan in  
2020



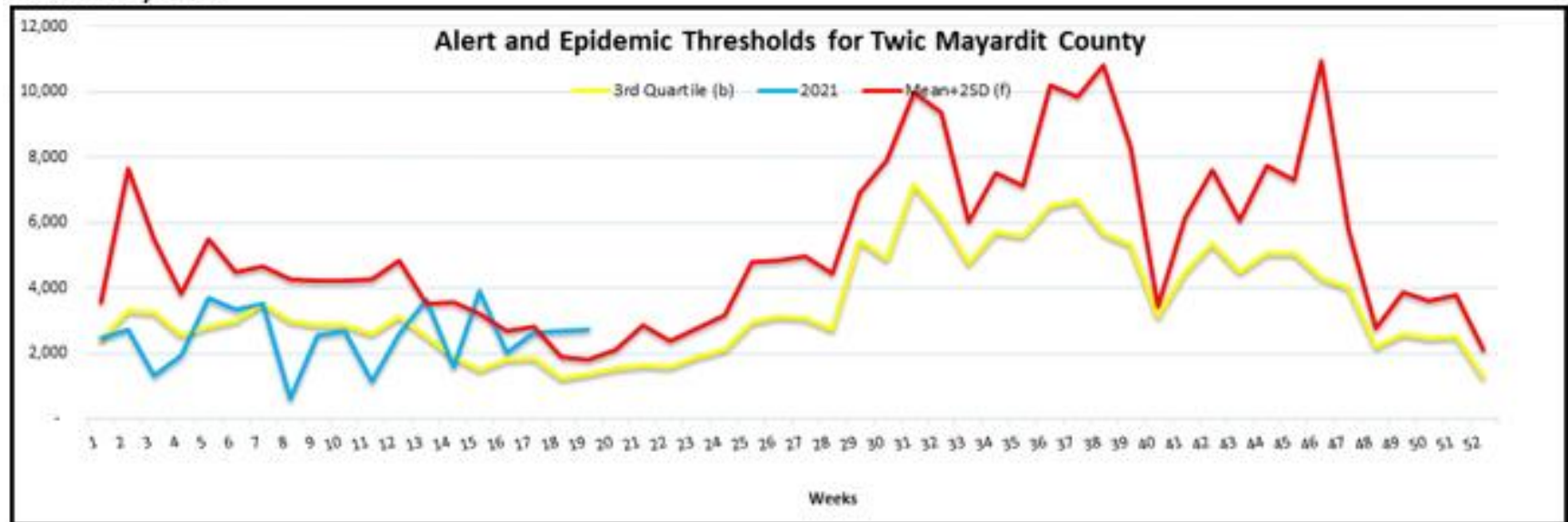


Malaria was the leading cause of morbidity and mortality, accounting for **50.7%** of all morbidities and **50.0%** of all Mortalities this week 19.

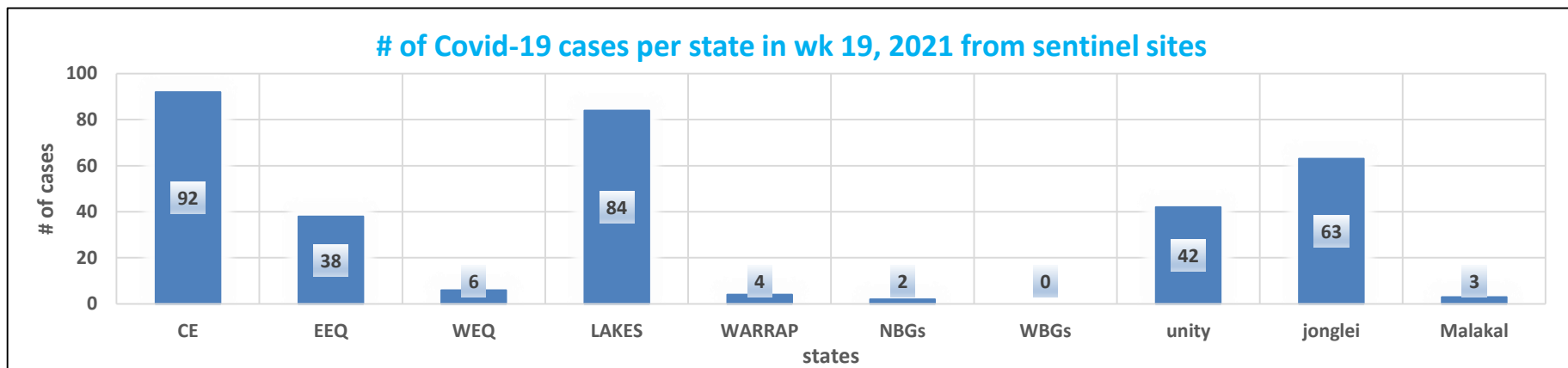
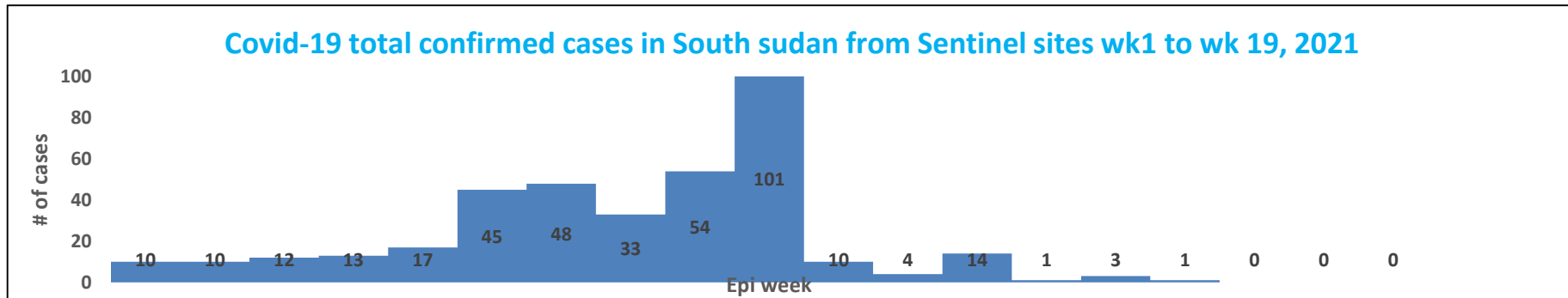
There were 2 counties with malaria trends that exceeded the threshold (third quartile of trends for the period 2013-2017):

**1. Warrap state (Twic Mayardit)**

Twic Mayardit



# Routine Sentinel Surveillance | Human Influenza



- As of 28th April 2021, a total of 138 samples were collected from three sentinel sites in Juba with 131 samples testing negative for influenza; one (1) positive for COVID-19; and six (6) positive for influenza B (Sub-typing pending)
- There are currently 13 Covid-19 designated sentinel surveillance sites in Juba and States Hospitals that are collecting epidemiological data and samples from Covid-19/ILI/SARI cases. A total of 7715 samples have been collected in 2021 with 546 (7.0%) being positive for COVID-19 from sentinel sites.

# ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS



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





## Update on floods and response

- The flooding forecast continues to be monitored. Rainfall forecast for 25 May to 1 June 2021 projects a moderate rainfall between 50 - 200 mm in western South Sudan (Western Bahr el Ghazal, Northern Bahr el Ghazal, Warrap and Western Equatorial states), parts of south-western Ethiopia and a few areas in central and western Kenya.
- Updating of flooding contingency planning and prepositioning of essential supplies including emergency health kits are underway.
- The locations affected by recent flooding include Ayod (25 000 people), Fangak (67 000 people) and Canal/Pigi (unknown).



### Updates on Public Health Response

1. Health partners continue to expand access to health services through the re-establishment of critical static primary health care and mobile service delivery across the six 'Priority 1' counties of Pibor, Akobo, Tonj East, Tonj South, Tonj North, and Aweil South
2. WHO secured 1.3 M USD from UN CERF for rapid response scale-up in Pibor and Akobo by supplementing the available funding for three responding partners. The support will go towards the provision of emergency obstetric and neonatal care, and integrated mobile outreaches in areas with critical response gaps.
3. Weekly trends of the top causes of morbidity and mortality are being monitored for potential upsurges and timely investigation. New reporting sites have been created for emergency partners who have begun response scale-up in Akobo, Tonj East, Tonj South and Aweil South.
4. Integrated Disease Surveillance and Response (IDSR) training for healthcare workers and rapid response teams targeting 40 participants are planned to kick off on 29 May 2021 in Pibor.



5. Emergency Mobile Medical team continues to provide integrated mobile health and nutrition services in Greater Pibor Administrative Area (GPAA). So far, 3 281 outpatient consultations, 250 measles vaccination, 200 oral cholera vaccination and 778 under-five children screened for malnutrition were done in Lekuagule and Gumuruk in the Greater Pibor Administrative Area.

6. After completion of two rounds of polio vaccination campaigns in the counties, mop-up vaccination activities are planned to take off in Akobo where the post-campaign evaluation indicated low coverage.

7. The cholera preparedness and readiness measures are ongoing in Pibor, Akobo and other counties bordering Ethiopia where there was an active cholera outbreak. WHO continues to support health partners to step up investigation and sample collection from the alerts generated from the priority counties.

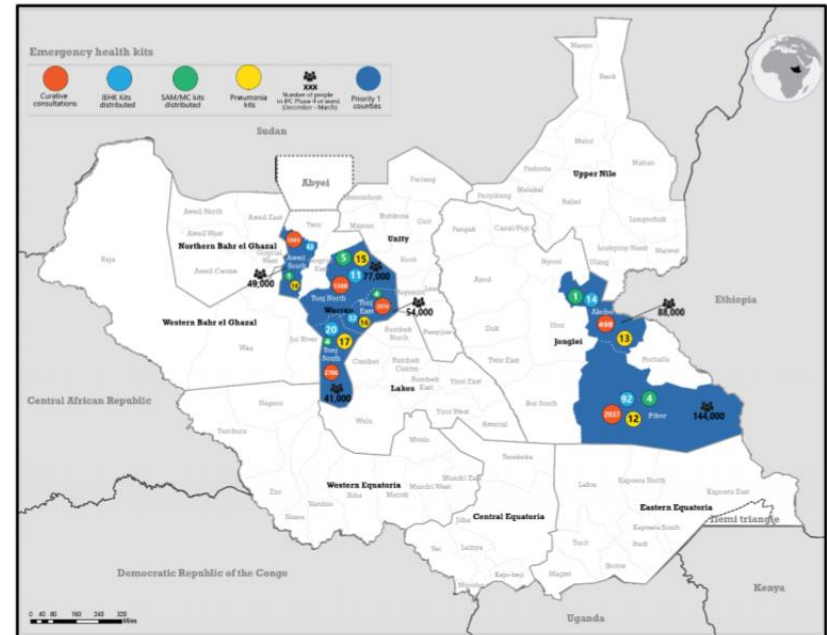
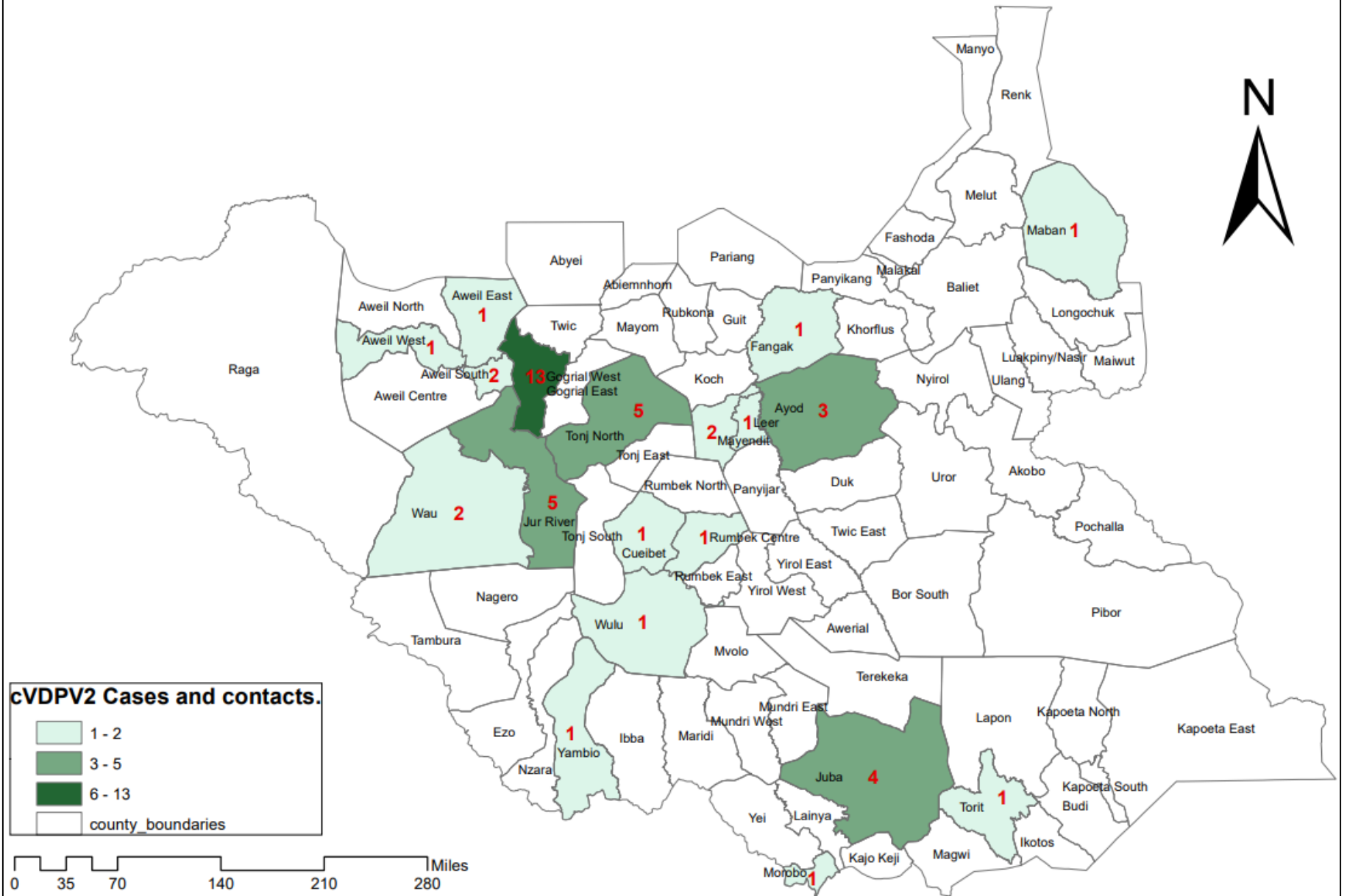


Figure 2: Emergency health kits delivered, and weekly consultations conducted in the six priority IPC 5 counties as of week 19 2021

# Distribution of cVDPV2 cases and contacts by county.



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# Bacteriology lab updates as of 6 May,2021

Epi-week	County (no. of samples)	Specimen tested (n)	Sample type	Suspected diseases	Lab Results	Comment
52	Bor South	2	stool	Cholera	No Growth for all enteric pathogens	
1	Juba	1	stool	Cholera	Growth for E Coli	
1	Juba	1	stool	Cholera	No Growth for V. Cholerae	
1	Ibba	1	stool	Cholera	No Growth	
1	Rumbek East	1	CSF	Meningitis	No Growth	
1	Aweil Centre	1	stool	Shigellosis	Growth of <i>Shigella Spp</i>	
2	Abyei (Agok)	1	stool	Cholera	Growth for non V. Cholerae	
5	Ibba	2	stool	Cholera	Growth for E.Coli	E.coli normally cause diarrhea in children < 5
5	Gogrial west	7	stool	Cholera	No Growth for V. Cholerae	
15	Torit	5	Stool	Shigellosis	Growth for <i>Shigella Spp</i> In 2 specimen	Non Pathogenic bacteria isolated in other 4 samples
16	Wau	2	Stool	Cholera	Non pathogenic bacteria isolated	
16	Juba (Mangalla IDP Camp)	6	Stool	Shigellosis	Growth for <i>Shigella Spp</i> In 3 specimen	No Growth in the other 3 specimens

- From week 1 to week 16 2021, 16 samples of acute watery diarrhea samples were received from around 6 counties. Samples were cultured and results showed no growth for *V. Cholerae* in all samples; 05 samples shows growth for *E. Coli* but serotype testing is pending for further characterisation
- The same period, 11 bloody diarrhea samples were cultured and 06 samples show growth for *Shigella species* for samples from Torit, Juba and Ibba counties; but serotype testing is also pending for further characterisation

# Measles Lab update 3 May 2021

S/N	County	Total Number of Samples tested	Measles IgM Positive	Rubella IgM Positive	Comment
1	TAMBURA	3	0	1	One indeterminate results
2	IBBA	1	0	0	
3	Nagero	3	0	3	
4	MUNDRI East	1	0	0	
5	Tonj South	2	0	0	
6	Pibor	1	1	0	
7	Ezo	2	0	1	One indeterminate results
8	Kapoeta North & East	2	0	0	Indeterminate K. East
9	Magwi	1	0	0	
10	Yei, Yambio & Maridi	3	0	0	
11	Aweil Center	2	0	0	
	<b>TOTAL</b>	<b>21</b>	<b>1</b>	<b>5</b>	

- **21 samples sent in March and April , only one sample tested positive for Measles IgM from Greater Pibor, and five other results are indeterminate**
- **New Rubella Outbreak in Nagero County as all 3 samples tested positive for Rubella Igm**

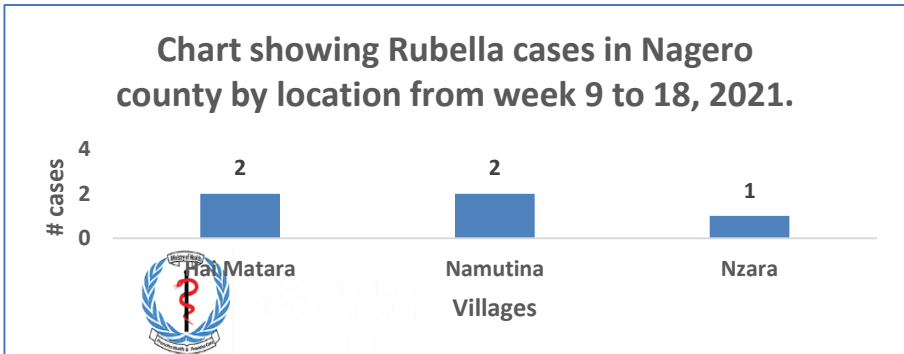
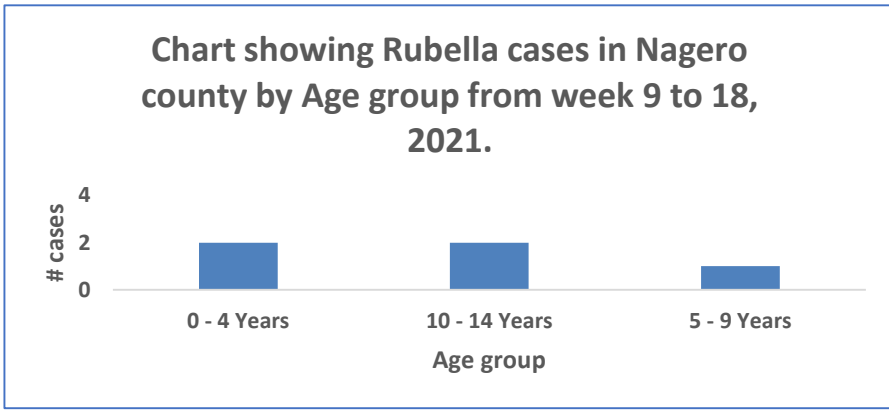
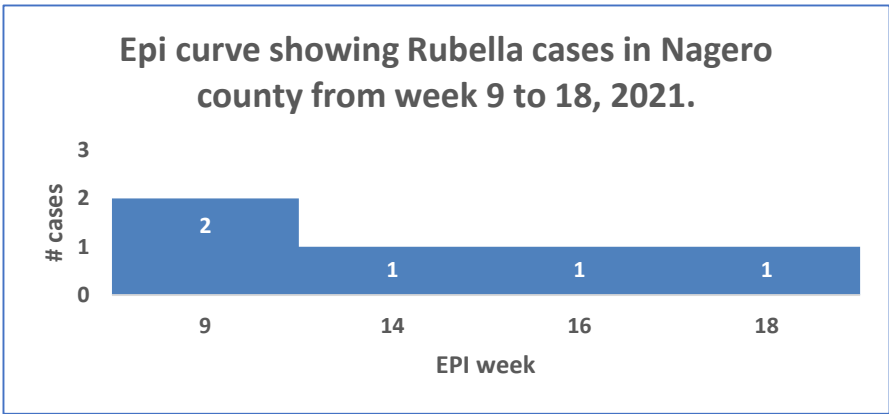


Aetiological agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
<b>Ongoing epidemics</b>								
Hepatitis E	Bentiu PoC	03/01/2018	0	556 (0.013)	Yes	No	Yes	Yes
cVDPV2	25 counties	11/06/2020 18/09/2020	0	54	Yes	Yes	Yes	Yes
Rubella	Tambura	11/1/2021	0	23 (0.13)	Yes	No	Yes	Yes
Rubella	Nagero	01/03/ 20201	0	3	Yes	No	Yes	N/A





## Confirmed Rubella outbreak in Nagero County, WES

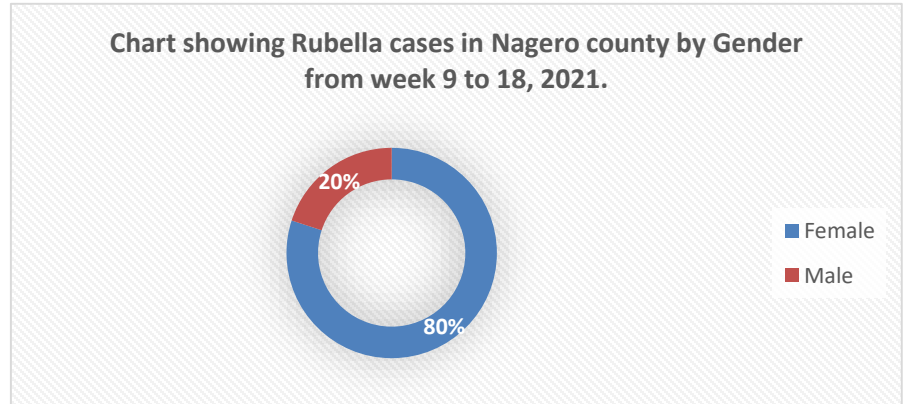


**Descriptive epidemiology**

- Nagero County started to report cases of suspected measles in week 9, 2021
- 3 samples were collected for testing and all **3 samples tested Rubella IgM positive**
- Total of 5 cases reported from week 9, there was **(1)** new case reported in week 18, 2021
- No deaths were reported
- 80% are female and 20% are male.
- Age group 0- 14 years had the most cases
- Most affected area are Hai Matara and Namutina with 4 cases.

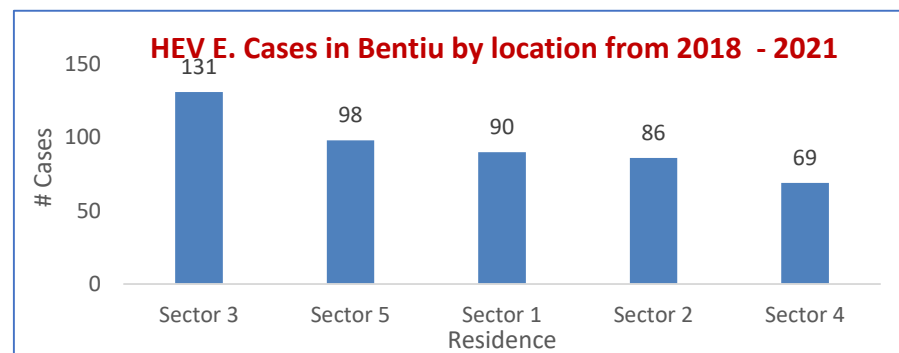
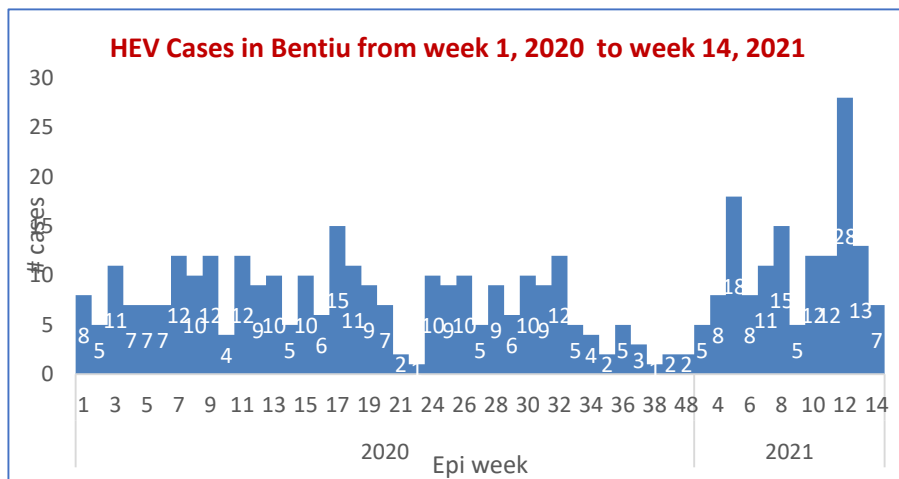
**Response Actions:**

- Surveillance and line-listing are ongoing
- Case management is ongoing





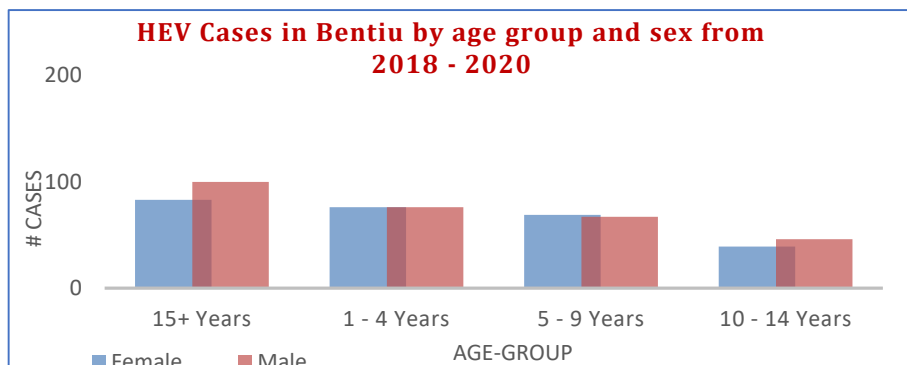
## Hepatitis E, Bentiu PoC (1)



Age-Group	Alive	Dead	Grand Total	Percentage	CFR	Cum. %2
1 - 4 Years	152	0	152	27%	0%	27%
10 - 14 Years	85	0	85	15%	0%	43%
15+ Years	180	3	183	33%	2%	76%
5 - 9 Years	134	2	136	24%	1%	100%
<b>Grand Total</b>	<b>551</b>	<b>5</b>	<b>556</b>	<b>100%</b>	<b>0.01</b>	

**Descriptive epidemiology**

- The persistent transmission of HEV in Bentiu PoC continues with **556** cases since beginning of 2019
- There were **(7)** new cases reported in week 14, 2021
- All the cases were managed as outpatient cases except for seven cases who were admitted
- 5 deaths reported in 2019 and 2020
- 48% are female and 52% are male.
- Age group less than 15 years had the most cases with (67%) cases.
- At risk of adverse outcomes when infected in the 3rd trimester of pregnancy
- Use of unsafe drinking water likely to be source of infection
- Up to week 14, 2021; there were 556 cases of HEV in Bentiu PoC including 5 deaths (CFR 0.9%)
- There is an upsurge of HEV cases since the beginning of 2021. **There-fore calls for review to establish and address the WASH gaps.**



### Recommendations

- Supportive case management guided by the HEV protocol is ongoing
- Key messages on HEV prevention should continue within the community through HPs, CHWs and Kondial Radio
- With current COVID -19 Pandemic Outbreak, WASH partners to increase the coverage of hand washing facilities within the PoCs community.
- Other Wash intervention like increasing the access for clean water and improving the water storage in the affected individuals should be made urgently by distributing the water storage containers that will be the only way to mitigate this problem and stop the HEV outbreak.
- The WASH Cluster/HEV task force should engage in group discussion with Community leaders and woman group at water distribution points to understand their opinions on issue of Collapsing Jerry cans distribution.
- Monitoring the FRC levels at the taps stands in the different sectors, and the concentration of chlorination should maintain at 0.5-1mg/L as the point of collection
- There is an upsurge of HEV cases since the beginning of 2021. This therefore calls for review to establish and address the WASH gaps.



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
<b>Controlled epidemics</b>								
Measles	Juba	21/11/2019	NR	6( 0.1667)	Yes	No	Yes	N/A
Measles	Tonj East	12/12/2019	NR	61(0.98)	yes	Yes	Yes	N/A
Measles	Bor	17/01/2020	NR	14(0.214)	yes	No	yes	N/A
Measles	Jebel Boma	10/12/2019	NR	96(0.063)	yes	No	Yes	N/A
Measles	Kapoeta East	18/01/2020	NR	16(0.625)	yes	No	Yes	N/A
Measles	Aweil East	29/12/2019	NR	664 (0.127)	Yes		No	Yes
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	0	55 (0.36)	Yes		Yes	Yes



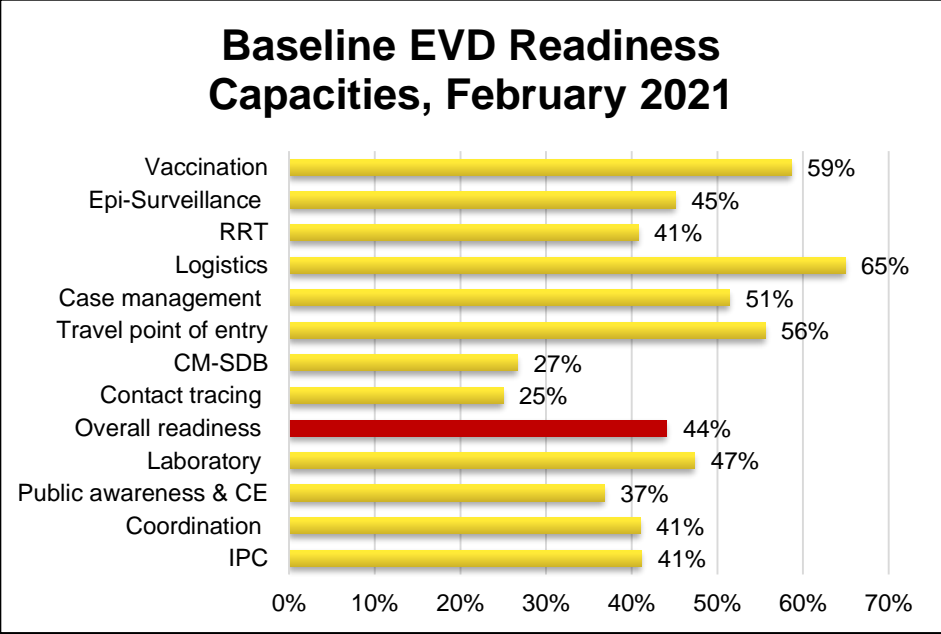
# EBOLA VIRUS DISEASE (EVD)



## **Guinea – The 42 – day county down to declare the outbreak over started on 8 May 2021**

- Situation remains stable with no new cases confirmed in the past 21 days
- Appearance of 19 new suspected cases and alerts is a concern
- As of 1 May 2021: 23 cases (16 confirmed, 7 probable cases), and 12 deaths (CFR 52%) reported

## South Sudan Level of EVD preparedness



## What is the next plan for South Sudan?

- Finalized the EVD preparedness checklist
- Finalized the risk assessment
- Finalized the 72 hours plan
- Prioritized activities based on the checklist
- EVD preparedness operational plan developed
- Drafted resource mobilization strategy
- Mapped potential donors

## Operation plan with estimated cost

Pillars	Cost
Coordination	\$ 296,000
EP and S	\$ 318,000
RRT	\$ 316,000
RCCE	\$ 265,000
Case Management	\$ 400,000
Contact tracing	\$ 73,000
Laboratory	\$ 227,350
Vaccination	\$ 163,000
IPC	\$ 125,000
Logistic	\$ 115,000
PoE	\$ 260,000
	\$ 2,558,350

# COVID-19 Updates

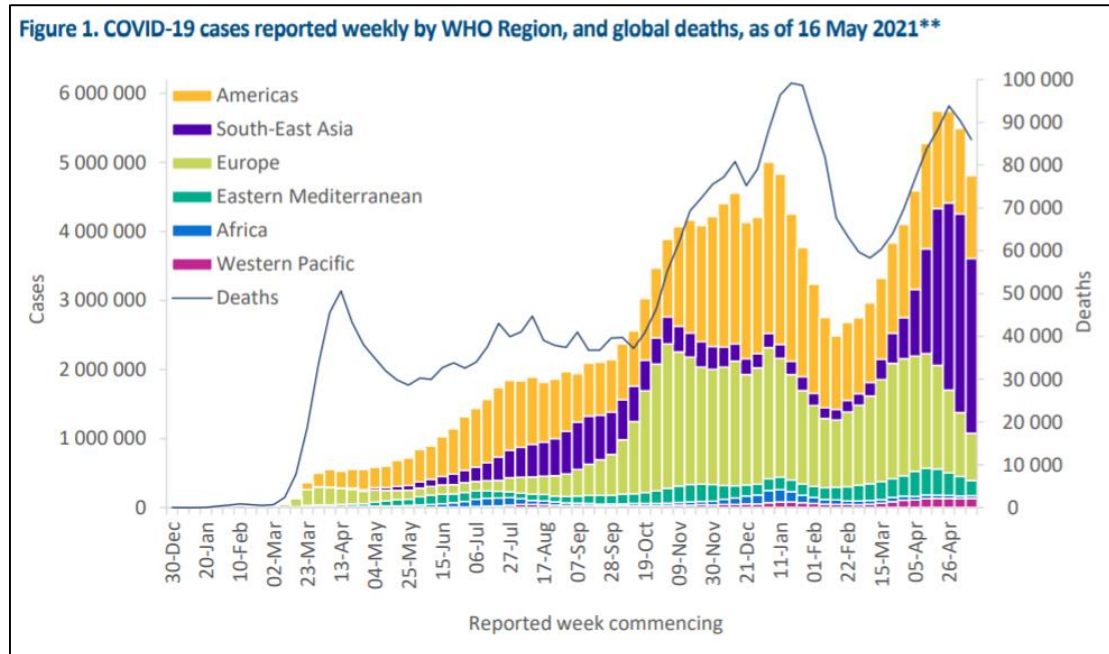


# COVID-19 Virus Situation Summary



Situation update as of 9<sup>th</sup> May 2021

- **Globally, as of 16 May 2021, there have been 162 184 263 confirmed cases of COVID-19, including 3 364 446 deaths reported to WHO.**
- **In Africa, as of 16 May 2021, there have been 3 399 382 confirmed cases of COVID-19, including 84 844 deaths reported to WHO**



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



- **10 653** confirmed cases, including **337** imported cases, and **115** (case fatality rate of **1.1%**) deaths have been reported in South Sudan since the beginning of the outbreak. The case count in the country has been decreasing for the past ten epidemiological weeks.
- 35 (44%) counties out of the 80 counties in the country have confirmed COVID-19 case as of the end of week 18 2021.
- This week showed a 69.2% decrease in the number of reported cases compared to Week 18. This is the twelfth consecutive week of a decreasing trend in case count. There were no new confirmed deaths in Week 19
- Average positivity peaked at 22.4% in Week 07. However, average positivity yields have been declining for the last eleven epi weeks, reaching a low of 0.4% this week, likely indicating that the second wave has ended.
- No alert tested positive for COVID-19 this week. Cumulatively, 26952 alerts have been reported, of which 2572 (95.4%) have been verified, and 2491 (96.9%) of the verified alerts were sampled.
- Two SARS-CoV-2 lineages were detected in South Sudan. The first variant of interest (VOI) detected in the South Sudan samples is the A.23.1 lineage and the second one is the B.1.525 lineage
- At the end of Week 19, 6403 persons (5212 males, 1191 females) have been vaccinated in Juba county. Of those vaccinated, 1350 (21.1%) were healthcare workers.

# Overall Conclusions and Recommendations



## Conclusion

- The overall performance of IDSR and EWARN reporting sites in week 19, 2021 is above the target of 80% in both Timeliness and Completeness
- **10 653** confirmed cases, including **337** imported cases, and 115 (case fatality rate of 1.09%) deaths Total **15,908** contacts identified, quarantined, & undergoing follow up as of week 19
- New Rubella Outbreak in Nagero County, Western Equatoria State
- Given the COVID-19 pandemic, it is critical that measures are stepped up to contain its spread.

## Recommendations

- All partners should support CHDs & State Ministries of Health to undertake IDSR/EWARN reporting
- All health facilities should report, and conduct case-based investigation of suspect measles cases and routine measles immunization should be strengthened in all counties
- Strengthen capacities for COVID-19 containment through identifying and testing suspect cases, isolating confirmed cases, and quarantining contacts





**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 2020 use the link below:**

**<https://www.afro.who.int/publications/south-sudan-weekly-disease-surveillance-bulletin-2020>**





## Supporting Partners

<b>WES</b>	AMREF, World Vision, CUAMM, CDTY, OPEN
<b>NBGZ</b>	Malaria Consortium, Healthnet TPO, IRC, CEDS, IHO
<b>CES</b>	HLSS, SSUHA, Healthnet TPO, IHO, GOAL, TRI-SS, THESO, IMA, SSHCO
<b>WBGZ</b>	Cordaid, Healthnet TPO, CARE International, IOM, ALIMA
<b>Warrap</b>	GOAL, CCM, WVI, Malaria Consortium, UNKEA, Save the Children, MSF
<b>Jonglei</b>	Nile Hope, MDM, JDF, Livewell, CMD, HFO, EDA, CRADA, Malaria Consortium, CMA, ACSO, MEDAIR, CARE, World Relief
<b>EES</b>	Cordaid, HLSS, CCM
<b>Lakes</b>	Doctors with Africa (CUAMM)
<b>Unity</b>	Cordaid, UNIDOR, IRC, CHADO, CARE International, CRADA, CASS, IOM, Samaritan's Purse
<b>Upper Nile</b>	Cordaid, WVI, RI, IMC, NIDO, UNKEA, MC, SSAID, CORDAID, IOM, HFD, TADO

## This bulletin is produced by the Ministry of Health with Technical support from WHO

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## Notes

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

The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

More information can be found at <http://ewars-project.org>

