

South Sudan

Integrated Disease surveillance and response (IDSR)

Epidemiological Bulletin Week 16, 2021 (April 19- April 25)





- In week 16, 2021 IDSR reporting timeliness was 91% and completeness was 94% at health facility level. Both Timeliness and Completeness for EWARS partners supported sites were at 84%
- Of the 164 alerts in week 16, 2021; 77% were verified 3% were risk assessed and 2% required a response . Malaria (47), AWD (38), ARI (27) and bloody diarrhea (38) were the most frequent alerts in week 16, 2021
- New 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 54,288 cases (49.2% of OPD cases)
- Total of 10 605 COVID-19 confirmed cases and 115 deaths, CFR of 1.09%
- Other hazards include floods (unseasonal) in over 4 counties; Malaria in 6 counties and 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 timeliness performance at State level for week 16 & 15 of 2021



Timeliness States Ranking (week 16)	States	Number of reporting sites	No. of HFs Reported on Time in WK 16	Timeliness Percentage of WK 16	No. of HFs Reported on Time in WK 15	Timeliness Percentage of WK 15
1	WBGZ	78	78	100%	78	100%
1	Lakes	113	113	100%	99	88%
2	WES	213	212	100%	213	100%
3	NBGZ	131	127	97%	121	91%
4	Jonglei	101	95	94%	101	100%
5	CES	117	109	93%	109	93%
6	Warrap	119	109	92%	117	98%
7	Upper Nile	122	103	84%	109	89%
8	Unity	94	73	78%	84	89%
9	EES	142	97	68%	125	88%
	South Sudan	1230	1116	91%	1156	94%

KEY

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

The timeliness of IDSR reporting (supported by EWARS mobile) at health facility level in week 16 was 91% compared to 94% in week 15. All states were above the target of 80% except for 2 states Unity and Eastern Equatoria

Reporting challenges: Insecurity, internet access and new partners

IDSR completeness performance at State level for week 16 & 15 of 2021



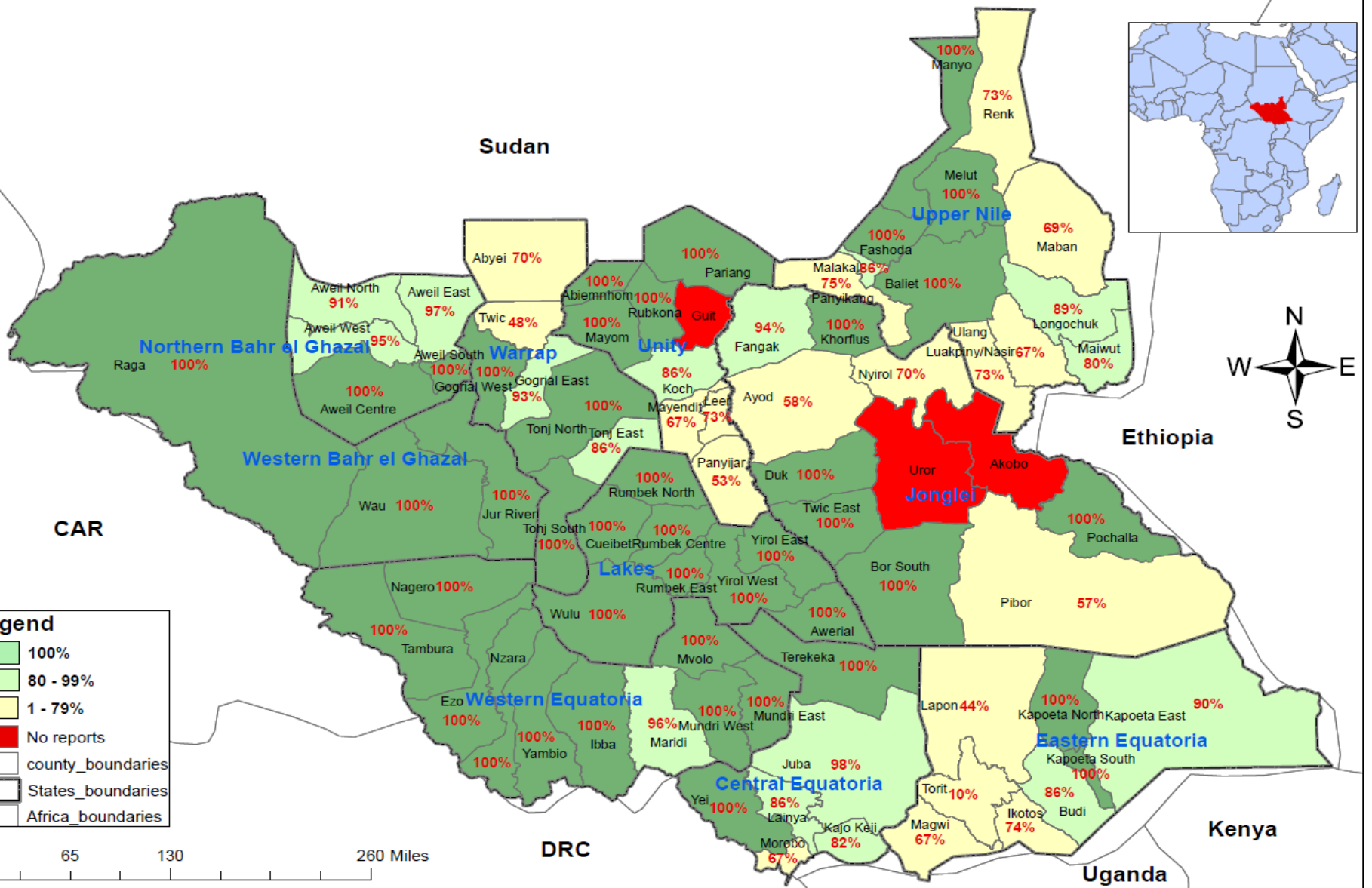
Completeness States Ranking (week 16)	States	Number of reporting sites	No. of HF's Reported regardless of time in WK 15	Completeness Percentage of WK 15	No. of HF's Reported regardless of time in WK 16	Completeness Percentage of WK 16
1	WBGZ	78	78	100%	78	100%
1	Lakes	113	111	98%	113	100%
2	WES	213	213	100%	212	100%
3	NBGZ	131	124	95%	127	97%
4	Jonglei	101	101	100%	95	94%
5	Warrap	119	119	100%	111	93%
5	CES	117	109	93%	109	93%
6	Unity	94	88	94%	83	88%
7	Upper Nile	122	113	93%	106	87%
8	EES	142	128	90%	98	69%
	South Sudan	1230	1184	96%	1132	92%

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 16 compared to 96% in week 15. All states were above the target of 80%

Map showing reporting performance by county in week 16, 2021



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Surveillance: EWARS performance indicator by partner for week 16 of 2021

Partner	HFs	Reporting		Performance	
PARTER	Number of reporting sites	# of reports received on Time	No. of HFs Reported regardless of time	Timeliness	Completeness
Medicair	2	2	2	100%	100%
World Relief	2	2	2	100%	100%
RHS	1	1	1	100%	100%
IMC	24	24	24	100%	100%
HFD	6	6	6	100%	100%
UNIDOR	2	2	2	100%	100%
UNH	2	2	2	100%	100%
MSF-E	6	6	6	100%	100%
Medair	2	2	2	100%	100%
CMD	1	1	1	100%	100%
GOAL	2	2	2	100%	100%
IRC	1	1	1	100%	100%
IHO	2	2	2	100%	100%
IOM	12	11	11	92%	92%
HAA	6	5	5	83%	83%
TADO	6	4	4	67%	67%
HFO	2	1	1	50%	50%
TRI-SS	2	1	1	50%	50%
MSF-H	5	1	1	20%	20%
ALIMA	3	0	0	0%	0%
SSHCO	1	0	0	0%	0%
TOTAL	90	76	76	84%	84%

Both Timeliness and Completeness for EWARS partners supported sites were at 84% in week 16

EVENT-BASED SURVEILLANCE



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



Alert by disease and hubs in week 16 of 2021 [a total of 164 events specific alerts generated by state



State	ARI	AWD	AFP	ABD2	Malaria	Measles	Covid-19	Total
CES	7	3	0	5	5	0	0	20
EES	1	5	0	7	2	0	0	15
Jonglei	2	0	0	3	1	0	1	7
Lakes	4	0	0	3	2	0	0	9
NBGZ	6	3	0	3	0	0	0	12
Unity	0	1	2	3	1	1	5	13
Upper Nile	5	4	0	6	6	0	2	23
WBGZ	1	7	0	1	4	0	0	13
WES	0	9	0	5	23	1	0	38
Warrap	1	6	0	2	3	0	2	14
Total	27	38	2	38	47	2	10	164

During this week:

- **27 ARI alert:** 7 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,6 from NBGZ State sample collected and tested positive for COVID-19, 5 from Upper Nile state sample collected and tested positive for COVID-19, 1 from Warrap State sample collected and tested for COVID-19, 1 from WBGZ sample collected,2 from Jonglei, 4 from Lakes, and 6 from NBGz
- **38 AWD alert:** 3 from CES samples collected from IDP camp in Juba ,5 from EES, 1 from Unity,4 from Upper Nile State, 6 from Warrap, 7 WBGZ State , 9 WES State all cases were treated using antibiotics and no sample collected for bacteriological investigations
- **38 ABD alert:** 5 from CES, 7from EES,3 from NBGZ investigation is underway, 3 from Unity investigation under way, 6 from Upper Nile, 2 from Warrap State and 1 from WBGZ State, 5from WES
- **47 Malaria alerts:** 5 from CES, 2 from EES, 1 from Lakes State, 3 from Warrap, 6 from Upper Nile State, 1 from Unity State, 4 from WBGZ, 23 from WES, all these are due to the high increase of malaria cases in the Country.
- **2 AFP alert:** from Unity State and investigations were conducted
- **10 COVID-19 alert:** 1 from Jonglei state and 5 from Unity, 2 from Upper Nile State, 2 from Warrap state, all tested positive for COVID-19

SUSPECTED OUTBREAKS



Major suspected outbreaks in South Sudan in
2020

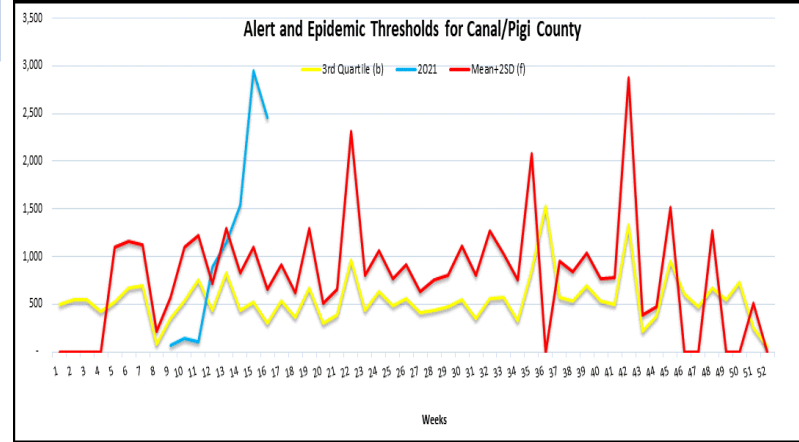
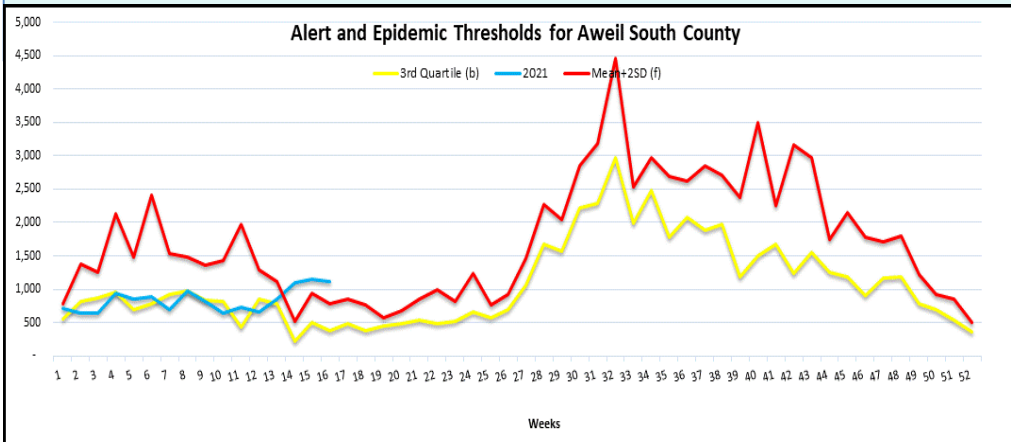
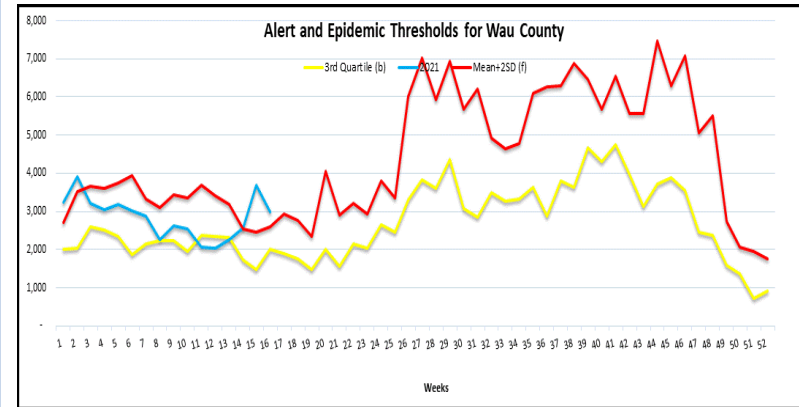
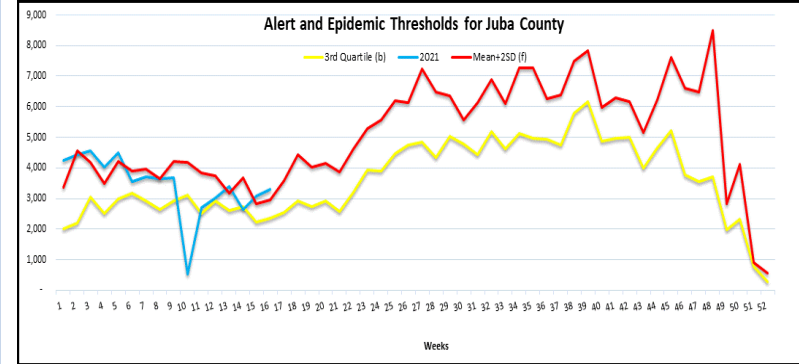




Malaria was the leading cause of morbidity and mortality, accounting for **49.2%** of all morbidities and **9.6%** of all Mortalities this week 16.

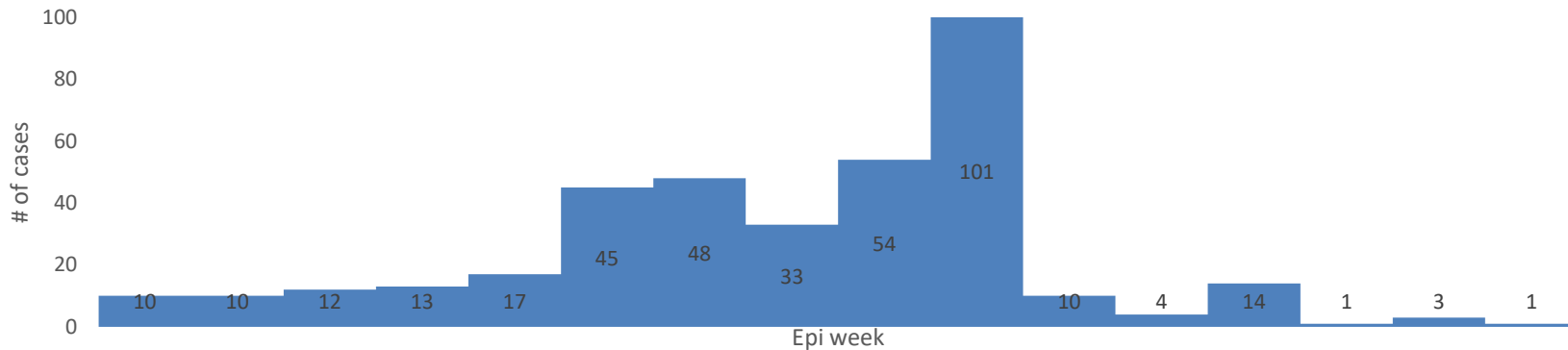
There were 6 counties with malaria trends that exceeded the threshold (third quartile of trends for the period 2013-2017);

Juba, Wau, Canal Pigi, Aweil Center, Aweil South and Jur River county

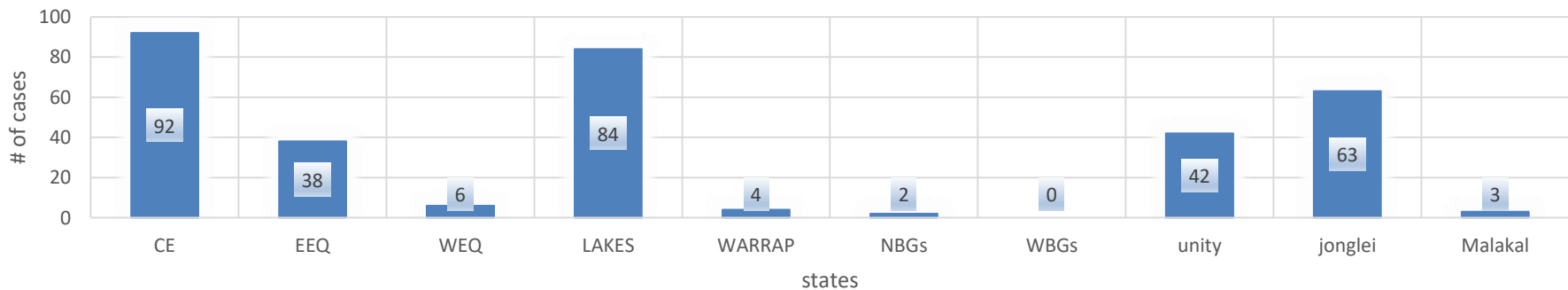


Routine Sentinel Surveillance | Human Influenza

Covid-19 total confirmed cases in South Sudan from Sentinel sites week 1 to week 16, 2021



of Covid-19 cases per state in week 16, 2021 from sentinel sites



- 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. So far a total of **7 705** samples have been collected in 2021 with **545 (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 the first half of May 2021 (4-11 May 2021) projects very heavy to extremely heavy rainfall (over 200 mm) in parts of central South Sudan (Unity northern Jonglei, eastern Northern Bahr el Ghazal and Western Bahr el Ghazal), and in parts of Ethiopia, Somalia and Kenya (ICPAP weather data).
- The government and partners are alerted to take appropriate actions in preparation for the heavy rain.
- Updating of flooding contingency planning and prepositioning of essential supplies including emergency health kits have started..



Updates on Public Health Response

1. Health partners continue to increase access to health services through both static and mobile across the six 'Priority 1' counties of Pibor, Akobo, Tonj East, Tonj South, Tonj North, and Aweil South.
2. Over 165 248 consultations have been conducted by health facilities across the six counties as of the end of week 16 2021.
3. Advocacy to ensure the availability of adequate essential and emergency stocks for responding partners is continuing. WHO is supporting emergency partners in the six "Priority 1" counties to enable them to provide consistent access to the basic health services in the counties.
4. 196 interagency health kits (can support 196 000 people for three months), 90 pneumonia kits, 11 severe acute malnutrition with medical complication (SAM/MC) kits, and 24 cholera investigation kits have been delivered to the responding partners. Additionally, medicines (paromomycin and sodium stibogluconate) and rapid kits (rK39) for management of kala-azar cases were provided to partners in Pibor.



5. Weekly trends of the top infectious diseases are being monitored for potential upsurges and timely investigation. Additional reporting sites by partners establishing response in the priority locations are being registered.

6. WHO mobile team in Pibor trained 25 healthcare workers on Integrated Disease Surveillance and Response, case management of priority diseases including COVID-19, clinical management of rape and infection prevention and control in health facilities.

7. 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.

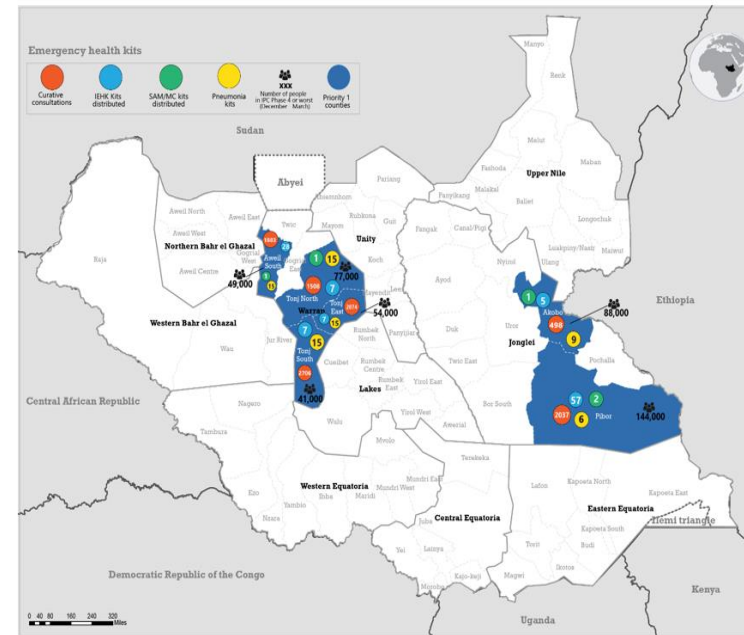


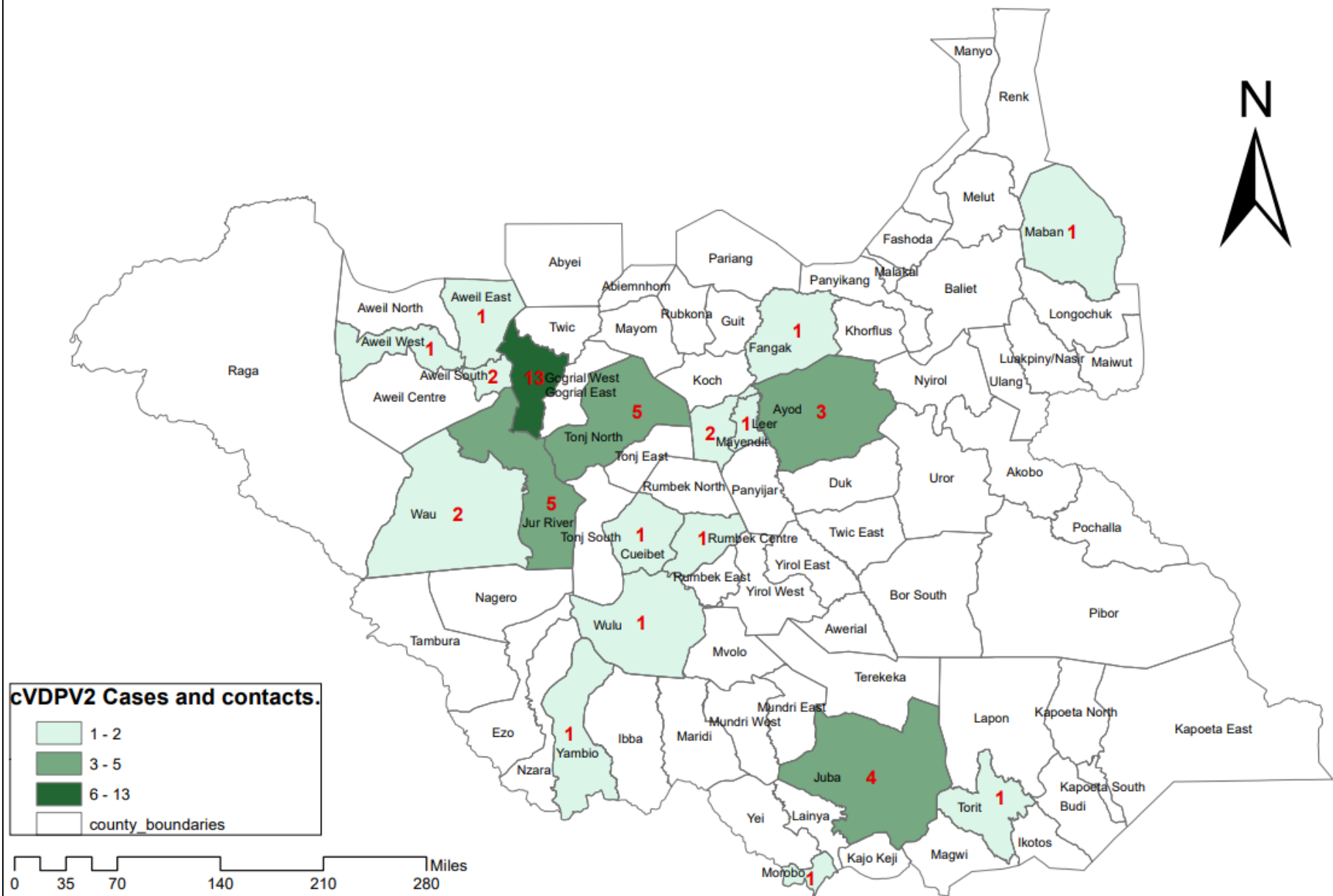
Figure 1: Emergency health kits delivered, and weekly consultations conducted in the six priority IPC-5 counties as of week 14, 2021

Epidemiologic details of ; cVDPV2 and AFP Surveillance performance indicators 2019 -2021

- The country received notification from Ugandan Virus Research Institute about the isolation of Polio Virus Type 2(PV2) from 3 AFP samples, on 4th September 2020, with the sequencing result received on 17 Sept that confirmed cVDPV2 three cases in Jur Rivers County, Western Bahr el Ghazal State and one case in Tonj North County, Warrap State.
- As of 24 April 2021, a total of 56 confirmed cVDPV2 have been reported from AFP cases, 21 from contacts and 5 from environmental samples. 2 new ones in Uror Jonglei state and Juba CES
- The geographical distribution involves all 10 states in the country and 25 out of 80 counties have reported at least 1 case, with 20% of the cases from Warrap state.
- Closest match of the cVDPV2 are from Ethiopia (2%), Sudan (13%) and Chad (17%) with local transmission accounting for 69 % of cases.
- The date of onset for the first case was on 11/06/2020, while the most recent case was on 06/03/2021 from Juba, Central Equatoria state.

Indicator	2019	2020	2021
NPAFP	5.35	6.36	5.31
NPENT	21.6	18	10
Investigation within 2 days	87%	86%	86%
Stool Adequacy	90%	83%	88%
Good Condition	100%	99%	99%
Notification within 7 days	79%	71%	79%

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	
	TOTAL	21	1	5	

- **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 Ig**

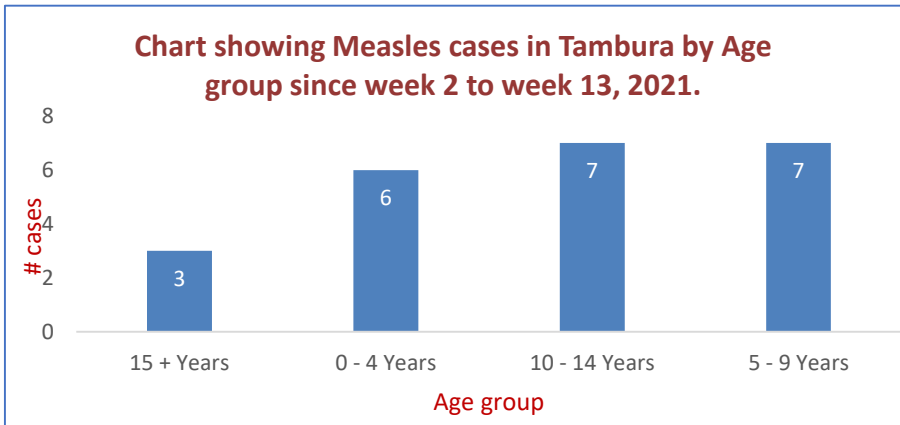
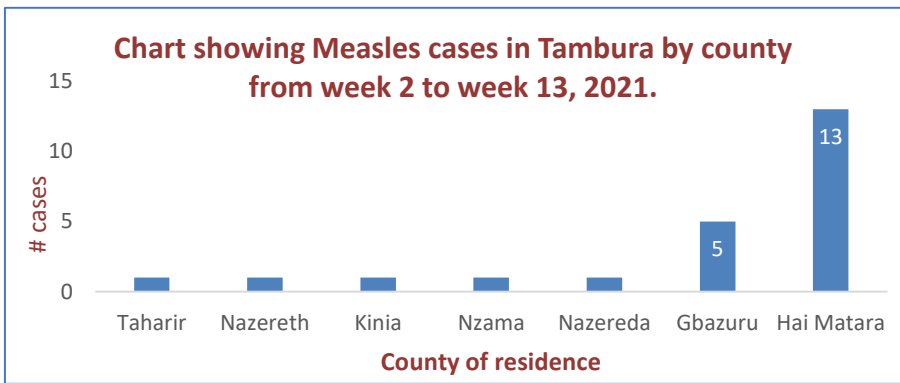
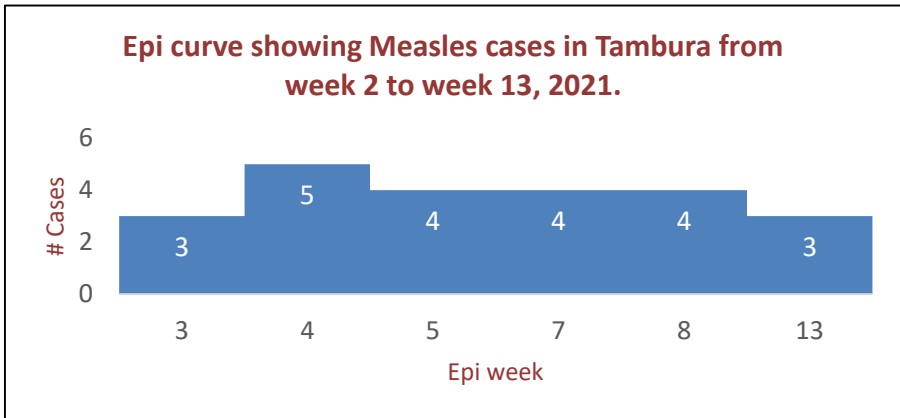


Aetiological agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
Ongoing epidemics								
Hepatitis E	Bentiu PoC	03/01/2018	0	556 (0.013)	Yes	No	Yes	Yes
cVDPV2	25 counties	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 Tambura County



Descriptive epidemiology

- WES started to report cases of suspected Measles in week 2, 2021. Up to week 10, 2021 a total of 32 cases have been listed.
- 12 samples were collected for testing and only one tested measles IgM positive and **5 samples tested Rubella IgM positive**
- There were **(3)** new case reported in week 13, 2021, total of **23** cases.
- No deaths were reported
- 57% are female and 43% are male.
- Age group 0- 9 years had the most cases with (68%) .
- Most affected area is Hai Matara with 13 cases.

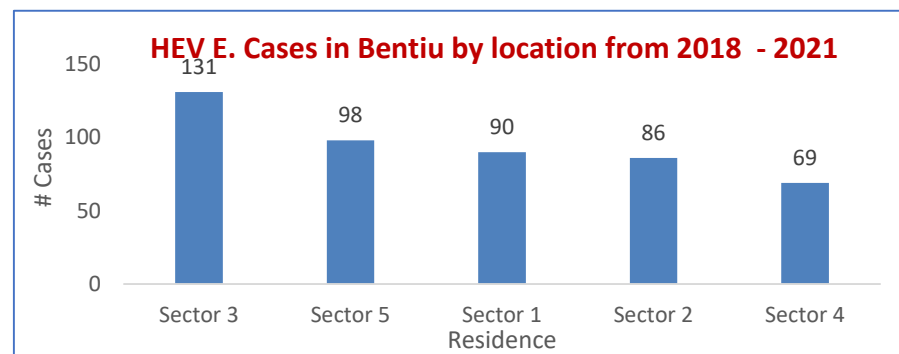
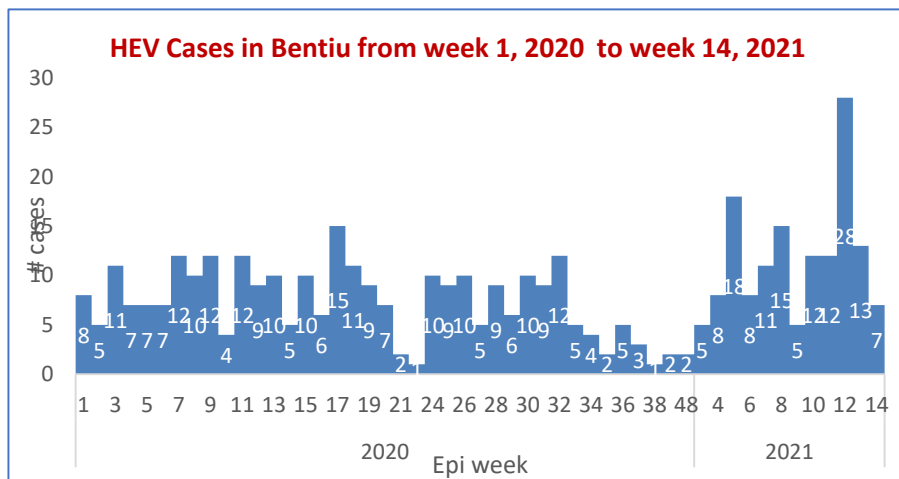
Response Actions:

- Surveillance and line-listing are ongoing
- Case management is ongoing
- Active monitoring for occurrence of cases in women of childbearing age.

Age group	Cases	percentage	CUM. %
15 + Years	3	34%	34%
0 - 4 Years	6	34%	69%
10 - 14 Years	7	21%	90%
5 - 9 Years	7	10%	100%
Grand Total	23	100%	



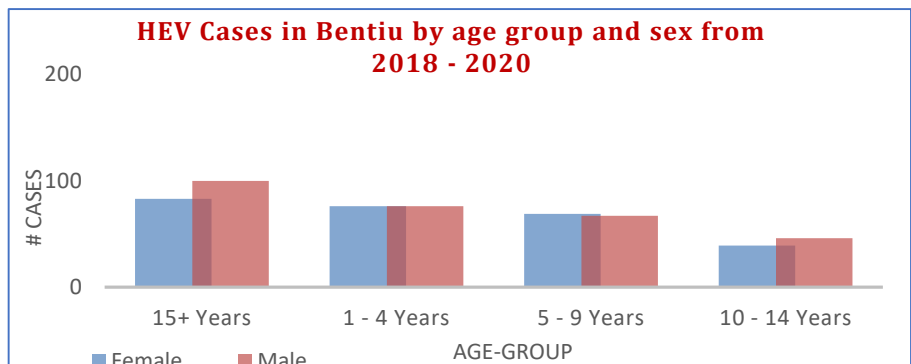
Hepatitis E, Bentiu PoC (1)



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%
Grand Total	551	5	556	100%	0.01	

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
Controlled epidemics								
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)

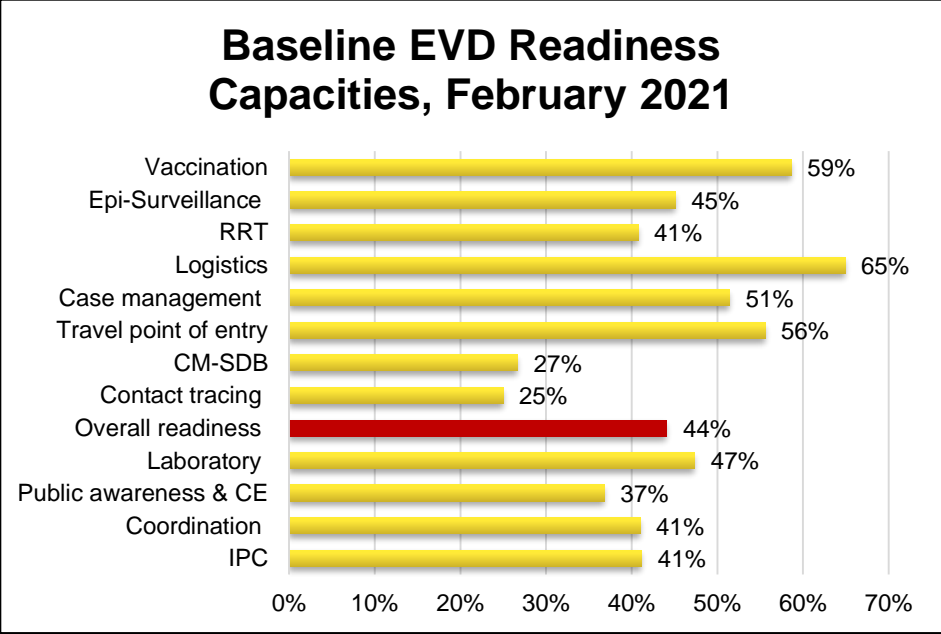
North Kivu, DRC – This outbreak was declared over on 3 May 2021

- On 3 May 2021, the 12th Ebola Virus outbreak in North Kivu DRC was declared over.
- A total of 11 confirmed cases and one probable case with six deaths (CFR 50%) and six recoveries were recorded in four health zones since 7 February 2021
- Swift initial response contributed to rapid conclusion of outbreak

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

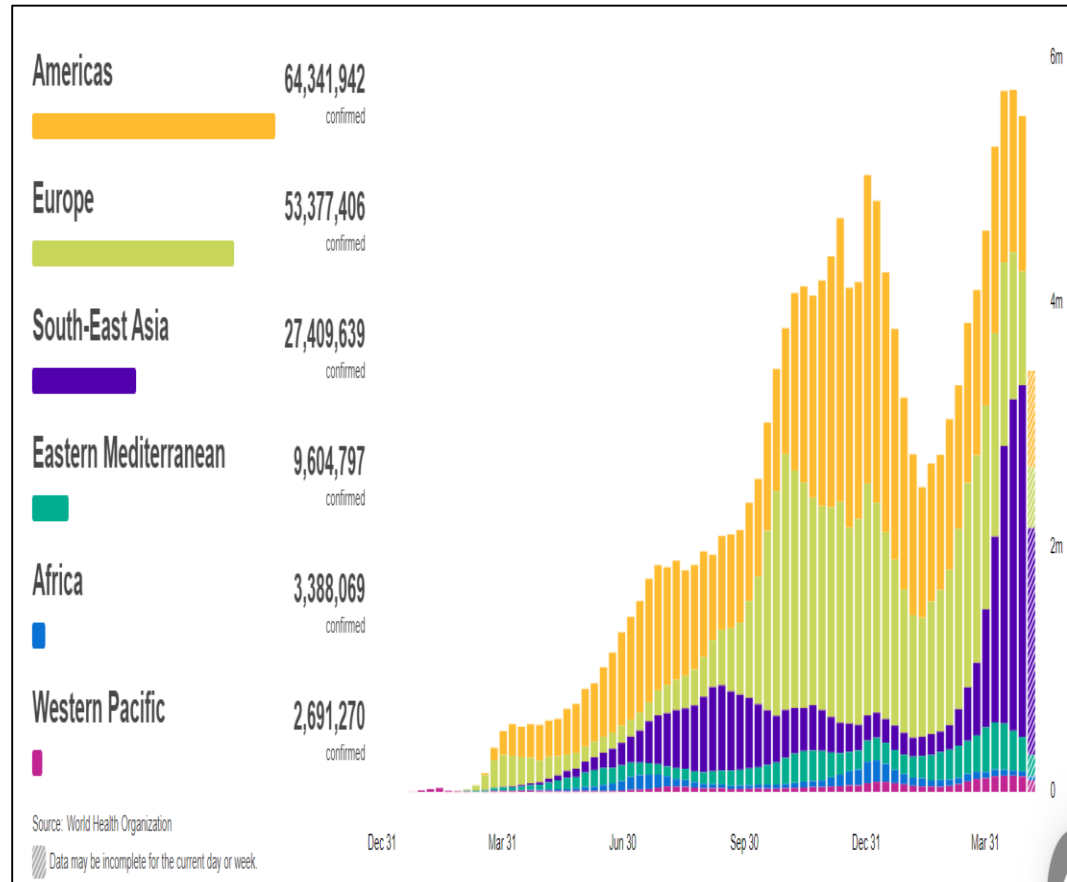


COVID-19 Virus Situation Summary



Situation update as of 14 May 2021, 2020

- **Globally**, as of **14 May 2021**, there have been **160,813,869 confirmed cases** of COVID-19, including **3,339,002 deaths**, reported to WHO. As of **12 May 2021**, a total of **1,264,164,553 vaccine doses** have been administered.

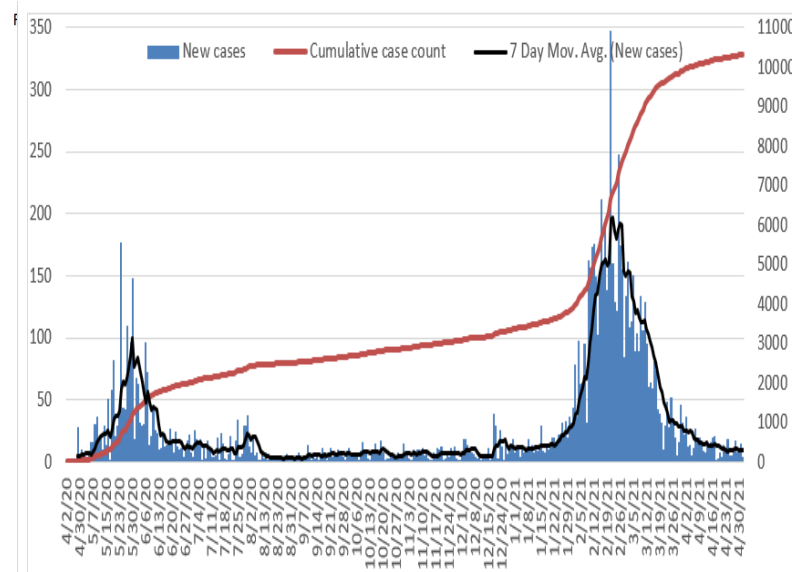
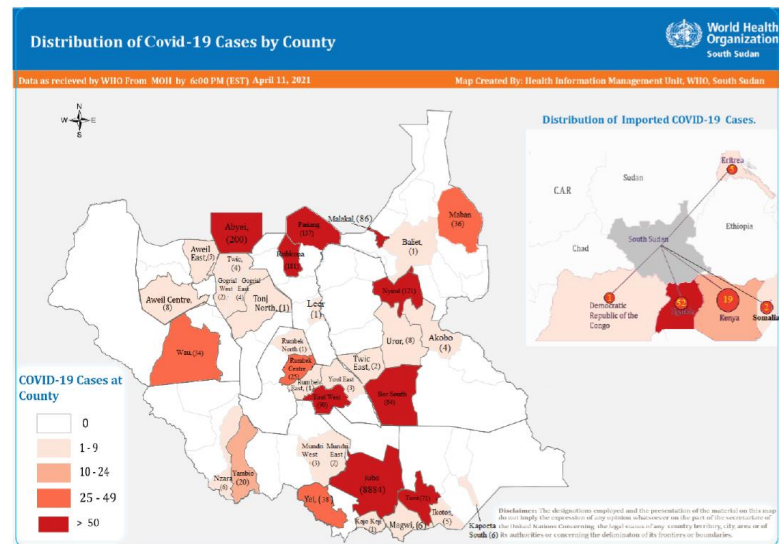


WHO: <https://www.who.int/health-topics/coronavirus>

COVID-19 Response in South Sudan as of 2 May, 2021



- **10 602** 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 17 2021.
- The average positivity rate has been declining for the last nine epidemiological weeks reaching a low of 1.5% in week 17 2021 likely indicating end of the second wave. The highest positivity yield of 22.4% was reported in week 07 2021.
- Further, the trend in number of alerts reported have been declining in the last several weeks since a high of 145 alerts was recorded in Week 6 2021.
- None of the 26 sampled alerts in Week 17 tested positive for SARS-COV 2.



Overall Conclusions and Recommendations



Conclusion

- The overall performance of IDSR and EWARN reporting sites in week 16, 2021 is above the target of 80% in both Timeliness and Completeness
- (**10 602** confirmed cases, including **337** imported cases, and 115 (case fatality rate of 1.09%) deaths Total **15,721** contacts identified, quarantined, & undergoing follow up as of week 17
- 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



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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

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

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For more help and support, please contact:

Dr. John Rumunu

Director General Preventive Health Services
Ministry of Health
Republic of South Sudan
Telephone: +211924767490
Email: ori.moiga@gmail.com

Mr. Angelo Majak Goup

A/Director, Emergency Preparedness and Response
Ministry of Health, RSS
Tell: +211929830530
Emails: majakdegoup99@gmail.com

IDSr Bulletin Editorial Team

1. Mr. Ajak Ater, MoH - Email: ajakater014@gmail.com
2. Ms. Sheila Baya, WHO - Email: bayas@who.int
3. Mr. Robert Lasu Martin, WHO - Email: lasur@who.int
4. Mrs. Rose Dagama, WHO - Email: dagamaa@who.int
5. Dr. Abraham Adut, WHO - Email: abenegoa@who.int
6. Dr. Alice Igale Lado, WHO - Email: ladua@who.int
7. Dr. Joseph Wamala, WHO - Email: wamalaj@who.int
8. Dr. Argata Guracha Guyo, WHO - Email: guyo@who.int

Notes

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

