

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 31, 2019 (July 29 – August 04)



Major Epidemiological Developments W31, 2019

- In week 31, 2019 the Completeness was 45% and the Timeliness was 44% at health facility level, while the cumulative completeness and timeliness was 69% and 54% respectively for 2019.
- A total of 93 alerts received in week 31, 2019 out of which 65% were verified. 4% was risk assessed and 3% required a response.
- Malaria (17), Acute watery diarrhea (15), measles (7) and bloody diarrhea (13) were the top common alerts generated through the EWARS in week 31, 2019
- New outbreak of Rubella in Yirol west was confirmed after four samples turned positive
- A VHF alert was received from Yirol Hospital on 1st August 2019. A 22 years old male from Amethic village, Yali Payam, Yirol East. No history of travel to Ebola-affected Areas, however the patient came from Rifty Valley Fever high-Risk village. Sample was collected and was shipped to Juba.
- From Aweil East, a VHF alert was received on 2nd August from Maluakon hospital involving a 35 yrs old female. On 2nd August, the patient started vomiting fresh blood. Sample was collected and shipped to Juba for laboratory testing.
- Suspected Ebola alert at Morobo Clinic Juba on 3rd August 2019, 35 years old, 4 month pregnant woman presented with cough, headache, lower abdominal and back pain associated with fever of 38.2 c. sample was collected and was negative on PCR for EVD.
- Sudden death in Yambio on 9th August 2019, a male in his forties who was complaining of fever, headache, bloody urine, diarrhea vomiting, generalized body pain, neck and back pain, ecchymosis. Sample was collected and result was negative on PCR for EVD.
- Considering the confirmed EVD outbreak in North Kivu and recently Uganda, the South Sudan EVD contingency plan has been updated and implemented to mitigate the risk of EVD importation and enhance readiness capacities.
- Since week 12 of 2019, a total of 97 ILI/SARI samples have been collected and tested at Uganda Virus Research Institute (UVRI) with 31 being negative; two (2) positive for Influenza B (Victoria); and seven (7) positive for Influenza A (H3), test result is pending for 57 samples.

SURVEILLANCE PERFORMANCE

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

IDSR Timeliness and Completeness Performance at Facility Level for week 31,2019

State	Supporting Partners	Total No. of Health Facility	No. of HFs Reported on Time	Timeliness Percentage	No. of HFs Reported not on Time	Completeness Percentage
Rumbek Hub	Doctors with Africa (CUAMM)	116	99	85%	100	86%
Aweil Hub	Malaria Consortium,HealthNet TPO,IRC,CEDS,IHO,	145	63	43%	65	45%
Bentiu Hub	Cordaid,UNIDOR,IRC,C HADO,CARE International	100	14	14%	14	14%
Wau Hub	Cordaid,HealthNetTPO,CARE International,IHO	85	33	39%	33	39%
Yambio Hub	AMREF,World Vision,CUAMM,CDTY,O PEN,	214	188	88%	188	88%
Bor Hub		168	34	20%	34	20%
Kuajok Hub	GOAL,CCM,WVI,Malaria Consortium,UNKEA	137	29	21%	30	22%
Torit Hub	Cordaid,HLSS,CMD	177	106	60%	115	65%
Juba Hub	HLSS,SSUHA,Healthnet TPO,IHO	155	67	43%	69	45%
Malakal Hub		178	14	8%	14	8%
South Sudan		1479	647	44%	662	45%
Key						
				<60%	Poor	
				61%-79%	Fair	
				80%-99%	Good	
				100%	Excellent	

The timeliness of IDSR reporting (supported by EWARS mobile) at health facility level is 44% and Completeness is 45%. Yambio Hub stands the best with 88% followed by Rumbek Hub with 86% and the rest are below 70%.

Surveillance | EWARS surveillance indicators

Surveillance | EWARS surveillance indicators

Table 4 | EWARS surveillance performance indicators by partner (W31 2019)

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	0	0		
GOAL	2	2	100%	100%
HLSS	1	1	100%	100%
IMA	7	7	100%	100%
IMC	5	6	120%	120%
IOM	11	11	100%	100%
IRC	1	1	100%	100%
Medair	2	2	100%	100%
MSF-E	2	0	0%	0%
MSF-H	3	1	33%	33%
SMC	7	4	57%	57%
UNIDO	1	1	100%	100%
UNKEA	2	0	0%	0%
World Relief	1	1	100%	100%
TRI-SS	2	2	100%	100%
LIVEWELL	3	3	100%	100%
Total	70	57	81%	81%

Table 5 | Summary of key EWARS surveillance indicators

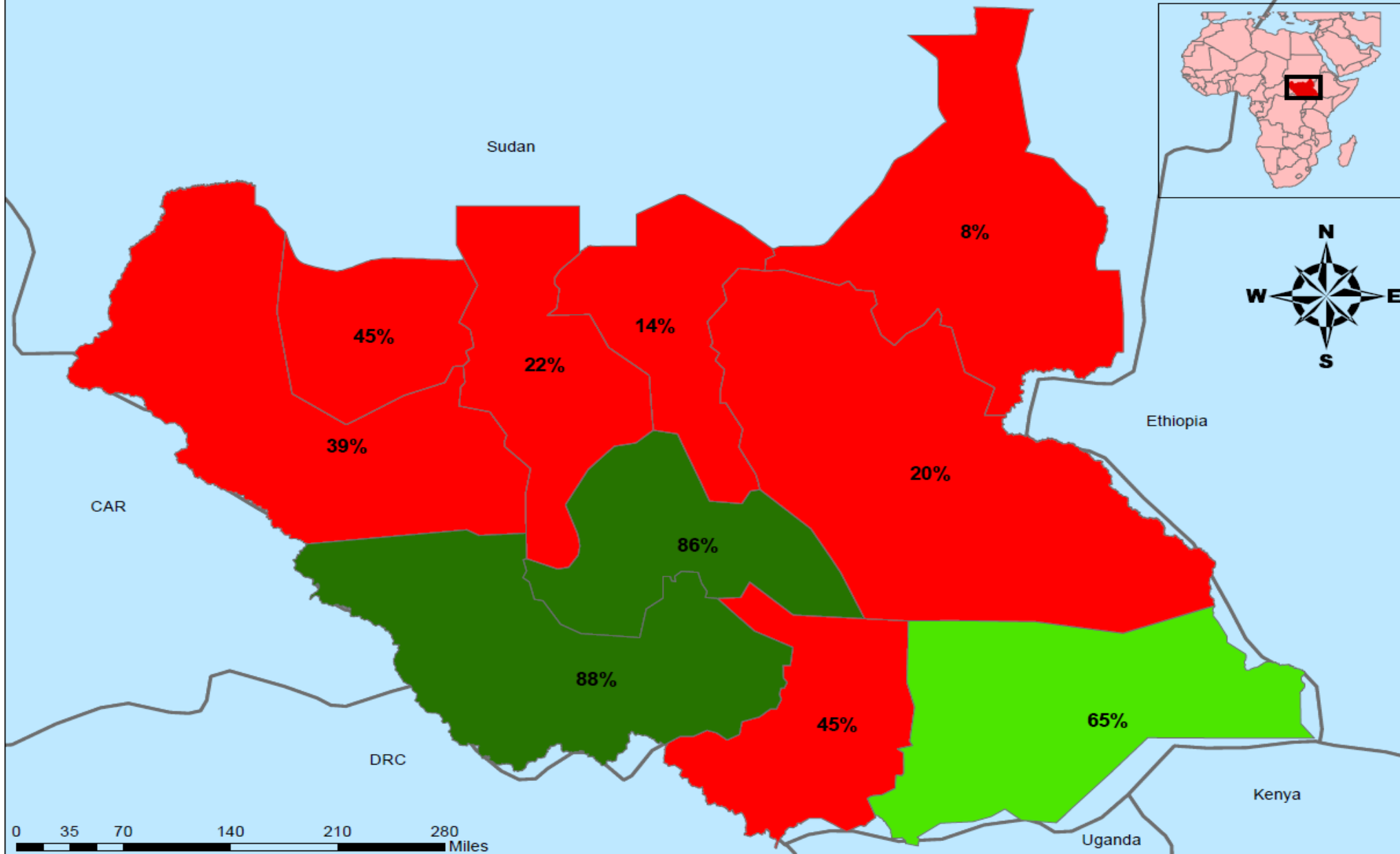
W31	Cumulative (2019)	
70	-	Number of EWARS reporting sites
81%	73%	Completeness
81%	67%	Timeliness

Table 6 | EWARS report submissions

W31	Cumulative (2019)	
57	1,608	total submissions
0	29	submissions by mobile
56	1578	submissions by web

- Completeness was **81%** and timeliness was **81%** for EWARS reporting by partners for week 30, 2019, while the cumulative completeness and timeliness were **73%** and **67%** respectively for 2019

Percentage of Completeness reporting by Hub in week 31, 2019.



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EVENT-BASED SURVEILLANCE

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

Alert | Alert performance indicators

Table 7 | Alert performance indicators by Hub

Hub	W31		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	5	100%	176	80%
Bentiu	9	44%	169	80%
Bor	7	29%	162	32%
Juba	4	50%	215	47%
Kuajok	4	25%	178	27%
Malakal	0	0%	104	67%
Rumbek	10	100%	448	76%
Torit	7	0%	300	57%
Wau	3	33%	165	69%
Yambio	44	98%	456	80%
South Sudan	93	73%	2373	65%

Table 8 Summary of key alert indicators

W31	Cumulative (2019)	
93	2373	Total alerts raised
73%	65%	% verified
0%	0%	% auto-discarded
1%	4%	% risk assessed
1%	3%	% requiring a response

• A total of 93 alerts received in week 31, 2019 out of which 73% were verified. 4% was risk assessed and 3% required a response.

Alert | Event risk assessment

Table 9 | Alert performance indicators by event

Event	W31		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	17	88%	405	65%
AWD	15	80%	645	65%
Bloody Diarr.	13	31%	425	62%
Measles	7	43%	439	64%
Meningitis	0	0%	0	0%
Cholera	1	100%	68	△
Yellow Fever	△	△	△	△
Guinea Worm	1	100%	59	64%
AFP	5	60%	119	65%
VHF	0	0%	21	76%
Neo. tetanus	0	0%	31	58%
Event-based surveillance				
EBS total	0	0%	32	81%

Table 10 | Event risk assessment

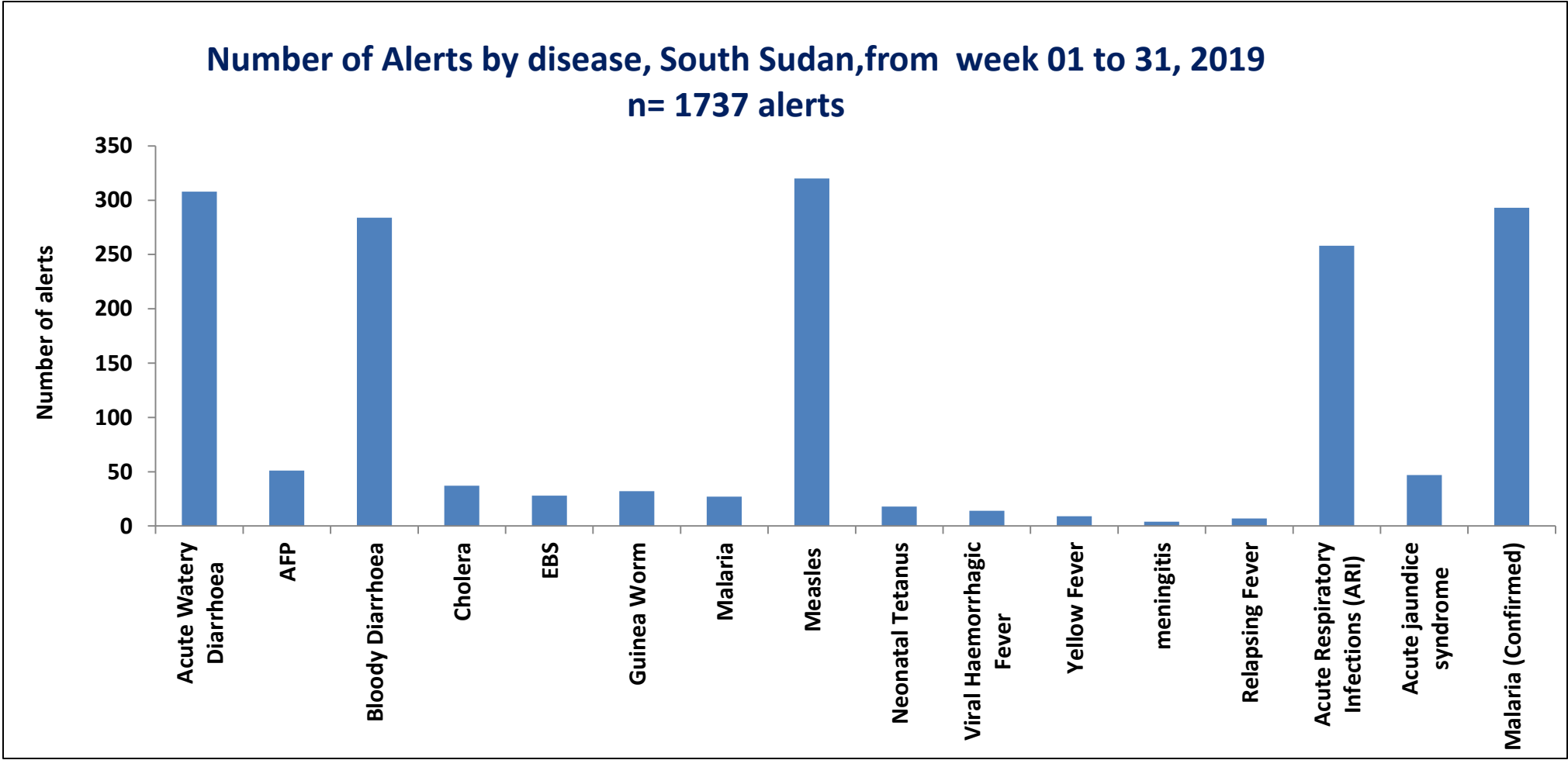
W31	Cumulative (2019)	
1	21	Low risk
27	27	Medium risk
0	30	High risk
0	21	Very high risk

- Malaria (17), Acute watery diarrhea (15), measles (7) and bloody diarrhea (13) were the top common alerts generated through the EWARS in week 31, 2019.

Alert by disease and Hubs in W31, 2019 [A total of 77 event specific alerts generated by Hubs]

Hubs	AJS	ARI	Viral Hemorrhagic Fever	Acute Watery Diarrhea	Bloody Diarrhea	AFP	Guinea Worm	Relapsing Fever	Yellow Fever	EBS	Cholera	Malaria	Meningitis	Neonatal Tetanus	Measles	Total Alerts
Bor- Hub					1	3									3	7
Kuajok Hub					1		1									2
Torit Hub		1		3	3											7
Bentieu Hub	1	3				2						1			1	8
Yambio Hub	1	21		9	3							12				46
Juba Hub		1			2							1			1	5
Aweil Hub		1		2	1						1					5
Rumbek Hub		4		1	2							3			1	11
Wau Hub		1													1	2
Malakal Hub																0
Total Grand	2	32	0	15	13	5	1	0	0	0	1	17	0	0	7	93

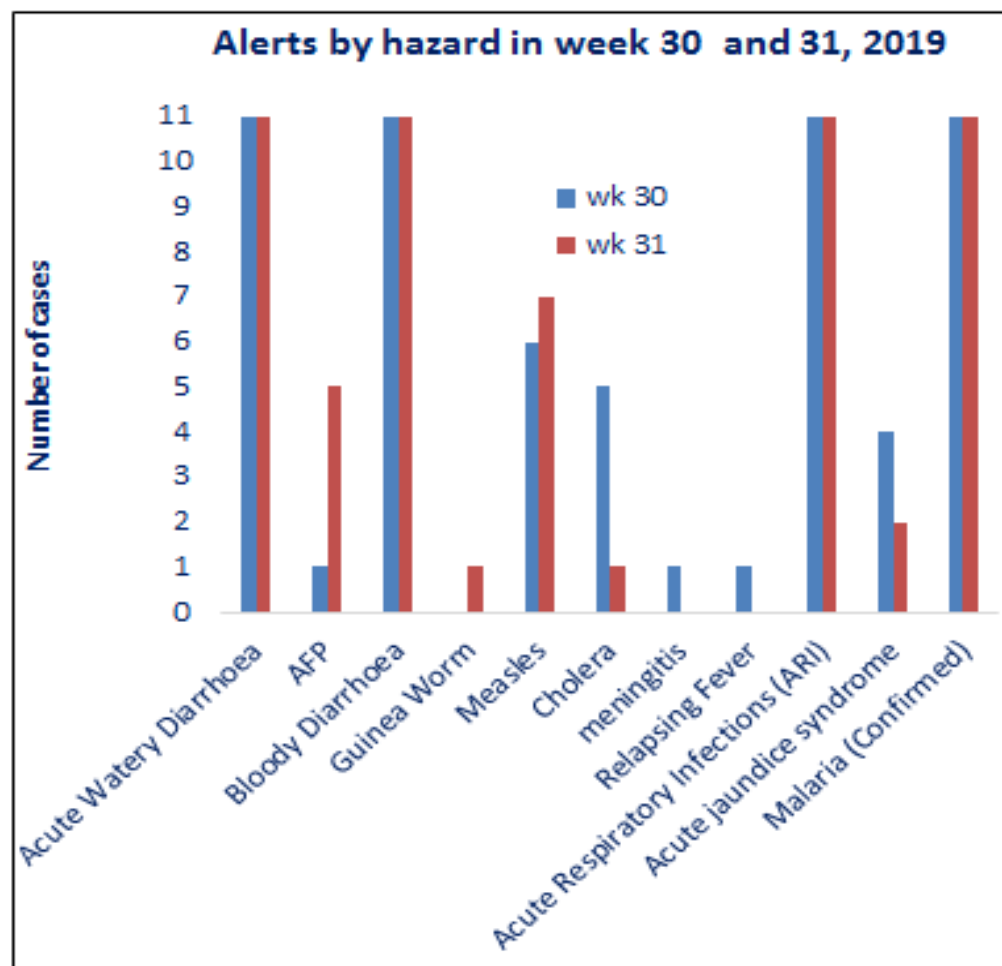
- One alert of cholera were triggered from Aweil Hub which was discarded.
- One Guinea worm was triggered from Gogrial West and was discarded.
- Two alerts of AJS one discarded and one pending verification.
- 31 alerts of ARI are been triggered with 10 discarded, 12 under monitoring , One is under response and 8 pending verification and the highest are from Yambio (21).



There are 1735 alerts triggered since the year began with measles, AWD, malaria , ARI and ABD with more alerts as compared to the rest of the diseases.

Comparison between alerts received in week 30 and 31, by disease

Row Labels	<u>wk 30</u>	<u>wk 31</u>	Total alerts
Acute Watery Diarrhoea	11	15	26
AFP	1	5	6
Bloody Diarrhoea	13	13	26
Guinea Worm		1	1
Measles	6	7	13
Cholera	5	1	6
meningitis	1		1
Relapsing Fever	1		1
Acute Respiratory Infections (ARI)	18	32	50
Acute jaundice syndrome	4	2	6
Malaria (Confirmed)	31	17	48
Total alerts	91	93	184



Week 30 and 31 has same number of alerts but more ARI, AWD were reported in week 31 than the previous week.

Cumulative alerts by risk assessment stage in 2019

County	OUTCOME	RISK ASSESSED	VERIFICATION	Total Alerts
Acute Watery Diarrhoea	6	1	301	308
AFP	2		49	51
Bloody Diarrhoea	3	2	279	284
EBS	4		24	28
Guinea Worm			32	32
Neonatal Tetanus			18	18
Viral Haemorrhagic Fever			14	14
Yellow Fever			9	9
Measles	26	7	287	320
Cholera			37	37
Malaria			27	27
meningitis	2		2	4
Relapsing Fever			7	7
Acute Respiratory Infections (ARI)	8	2	248	258
Acute jaundice syndrome	4		43	47
Malaria (Confirmed)	9	1	283	293
Total Alerts	64	13	1660	1737

Since the year began, there are 1735 alerts triggered of which 1658 were verified, 13 were risk assessed and 64 reached outcome level.

VHF Alert from Amethic Village, Yirol East:

- VHF Alert was received from Yirol Hospital on 1st August 2019. A 22-year-old male from Amethic village, Yali Payam, Yirol East who reported with fever, vomiting, nausea, chest pain, cough and joint pains which started on 29th July 2019, patient was treated at home. On 1st August 2019, the patient started vomiting blood and was transferred to Yirol hospital.
- There was no history of travel to Ebola-affected areas, however the patient came from Rift Valley Fever high-risk village. He had history of meat consumption from a dead cow. No history of a similar condition in the area.
- The patient was isolated in the hospital; sample was collected, and transported to Juba for testing. Results are still pending.

VHF Alert from Malualkon hospital/ Aweil East

An alert was received on 2nd August from Malualkon hospital of a 35 yr old female from Peth. Patient's illness started on 1st August after she attended a food distribution exercise in Malualbai airstrip and in the evening started complaining of fever.

On 2nd August patient started vomiting fresh blood and was brought in to Malualkon hospital where she was isolated. Her temperature was 38.8°C, VDRL which was positive. Sample was collected and shipped to Juba for testing. Patient later died.

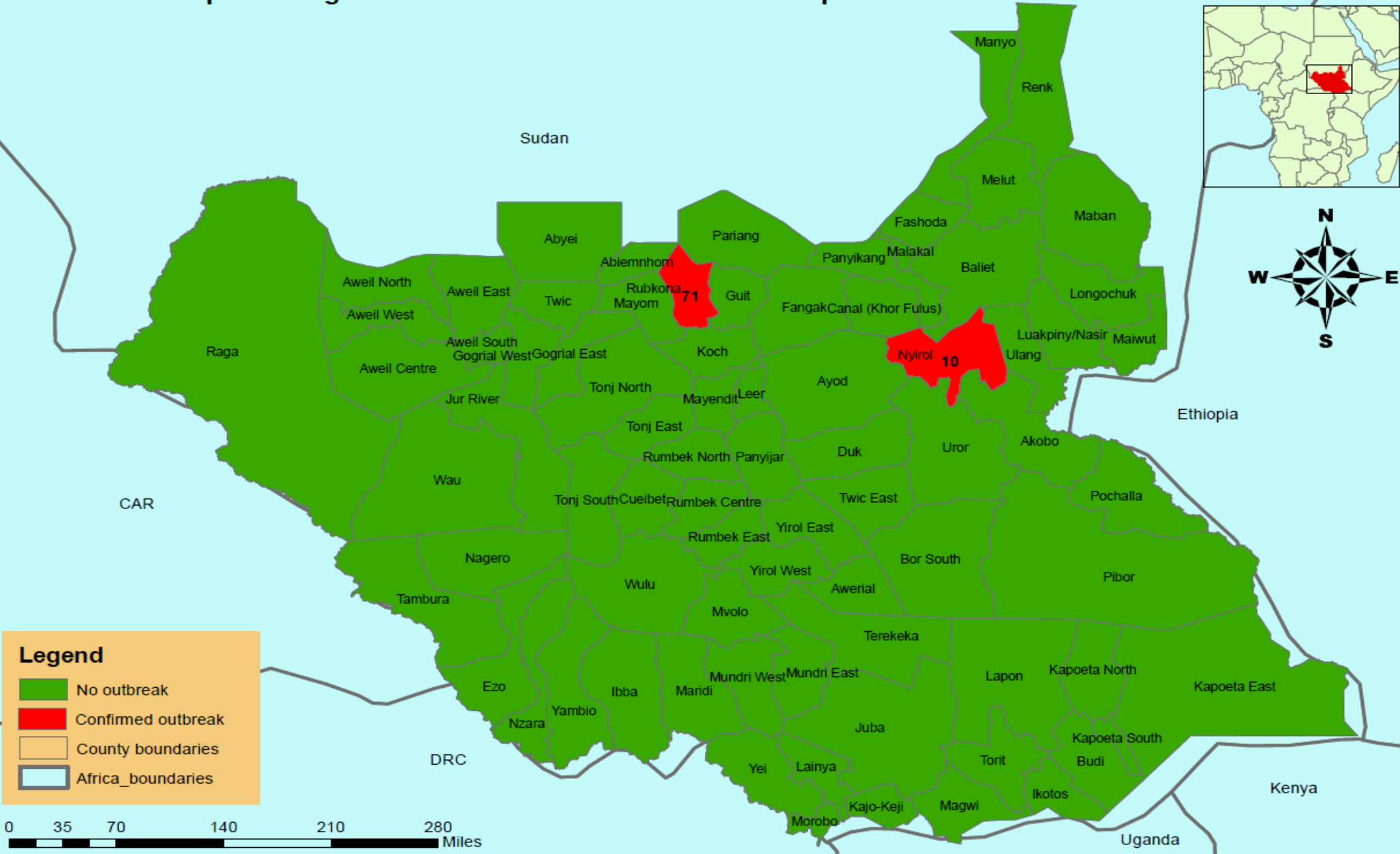
Laboratory Results for week 31, 2019

Location/Health Facility	Date sent to Juba	Date Received at PHL	Suspected Disease	Lab results
Yirol West/Anuol PHCC	8/6/2019	8/7/2019	Measles	Rubella Igm Positive
Yirol West/Anuol PHCC	8/6/2019	8/7/2019	Measles	Rubella Igm Positive
Yirol West/Anuol PHCC	8/6/2019	8/7/2019	Measles	Rubella Igm Positive
Yirol West/Anuol PHCC	8/6/2019	8/7/2019	Measles	Rubella Igm Positive
Yirol West/Anuol PHCC	8/6/2019	8/7/2019	Measles	Measles & Rubella Negative
Rubkona/Bentiu MSF Hospital	7/27/2019	7/29/2019	Measles	Measles & Rubella Negative
Rubkona/Bentiu Dawmoak	7/27/2019	7/29/2019	Measles	Measles Igm Positive
Rubkona/Bentiu POC MSF Hosp	7/30/2019	7/30/2019	Measles	Measles Igm Positive
Tonj South/IDAT	7/29/2019	8/7/2019	Measles	Measles Igm Positive
Tonj South/IDAT	7/29/2019	8/7/2019	Measles	Rubella Igm Positive
Tonj South/IDAT	7/29/2019	8/7/2019	Measles	Measles Igm Positive
Kapoeta East/Lopua PHCC	8/5/2019	8/7/2019	Measles	Measles & Rubella Negative

OUTBREAKS IN 2019

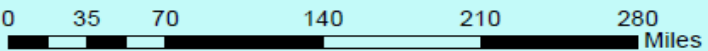
Major suspected and confirmed outbreaks in
South Sudan in 2019

Map showing counties with confirmed cases of Hepatitis E. in 2019.



Legend

- No outbreak
- Confirmed outbreak
- County boundaries
- Africa_boundaries



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Response | Summary of major ongoing outbreaks in 2019

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								
Measles	Renk County	28/2/2019	0	7(0)	yes	Yes	Yes	N/A
Hepatitis E	Lankein	28/2/2019	1	10 (0.1)	yes	No	yes	N/A
Measles	Wau County and PoC-AA	28/1/2019	4	453 (0.008)	yes	Yes	yes	N/A
Rubella	Wau PoC-AA	25/3/2019	0	11(0)	yes	No	yes	N/A
Hepatitis E	Bentiu PoC	03/01/2018	7	74 (0.094)	Yes	No	Yes	Yes
Measles	Juba & PoC	15/01/2019	0	68 (0)	Yes	Yes	Yes	N/A
Rubella	Bentiu Poc	-	0	51 (0)	yes	No	yes	N/A
Measles	Tonj North	2/04/2019	0	20 (0)	Yes	Yes	Yes	N/A
Measles	Pibor	17/01/2019	111	1570 (0.070)	yes	No	yes	N/A
Measles	Aweil West	4/04/2019	0	48 (0)	Yes	Yes	Yes	N/A
Measles	Bentiu PoC	24/04/2019	3	50 (0.06)	Yes	Yes	Yes	N/A
Measles	Aweil East	13/05/2019	2	19 (0.14)	Yes	Yes	Yes	N/A
Rubella	Yirol West	06/08/2018	4	19((0.21)	Yes	No	Yes	N/A

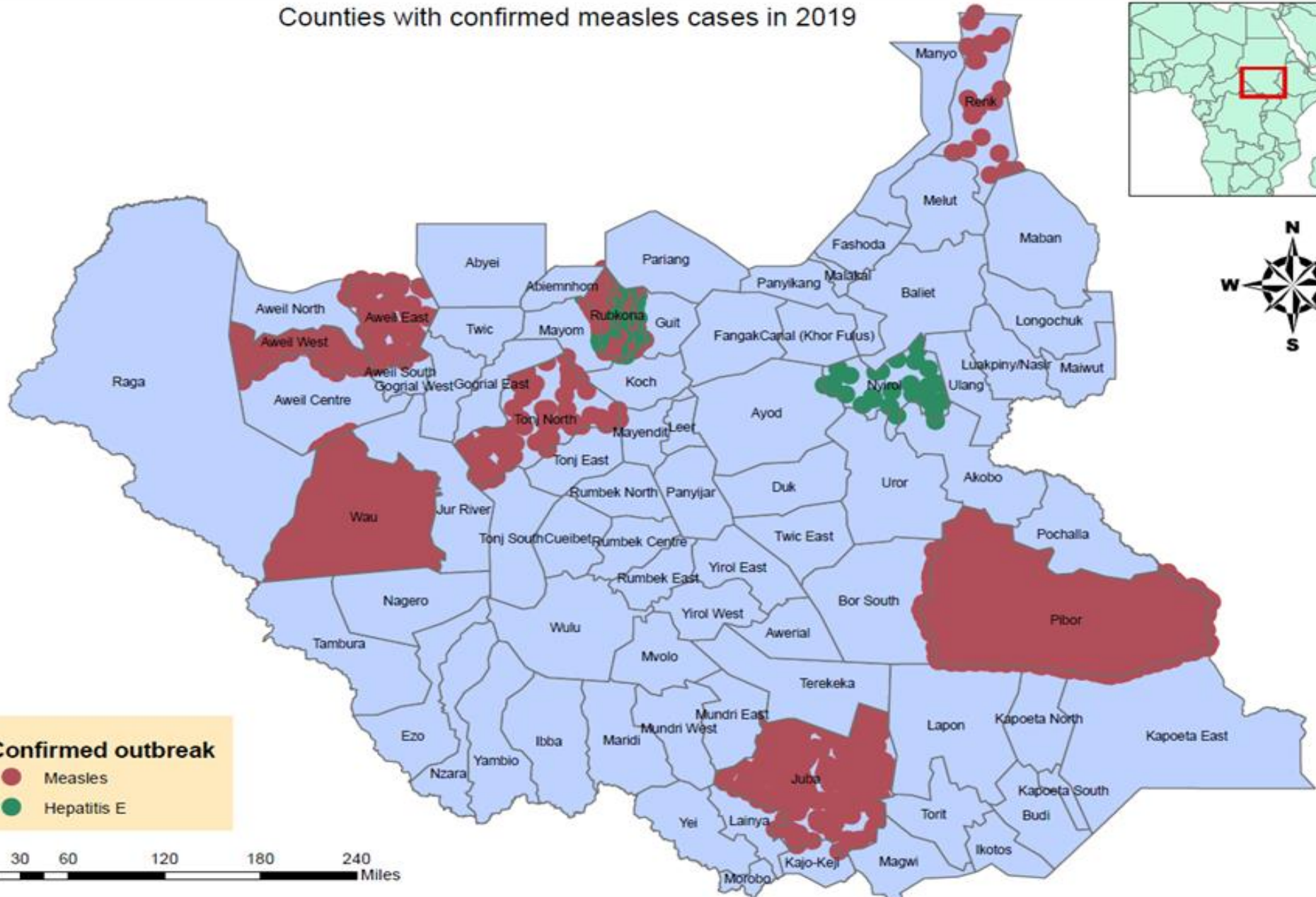
Response | Summary of major Controlled outbreaks in 2019

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
Rubella	Malakal PoC	25/10/2018	0	178 (0.08)	Yes	No	Yes	N/A
Yellow Fever	Nzara	23/11/2018	0	3 (0.001)	Yes	Yes	Yes	N/A
Measles	Abyei	12/02/2018	0	306 (0.40)	Yes	Yes	Yes	N/A
Measles	Mayom	17/01/2019	0	19 (0.010)	Yes	Yes	Yes	N/A
Measles	Gogrial West	04/02/2019	0	156 (0.025)	Yes	Yes	Yes	N/A
Rubella	Aweil Center/NBG		0	35 (0.028)	Yes	No	Yes	N/A
Measles	Aweil South	15/03/2019	0	46 (0.012)	Yes	Yes	Yes	N/A
Measles	Melut	15/03/2019	0	9(0.008)	Yes	Yes	Yes	N/A
Rubella	Bor South		0	4 (0.001)	Yes	No	Yes	N/A
Rubella	Gogrial West		0	5 (0.001)	Yes	No	Yes	N/A
Rubella	Yirol East		0	3 (0.003)	Yes	No	Yes	N/A
Measles	Gogrial East	4/04/2019	0	30 (0.003)	Yes	Yes	Yes	N/A
Measles	Malakal PoC	24/04/2019	0	2 (0.01)	Yes	Yes	Yes	N/A

ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

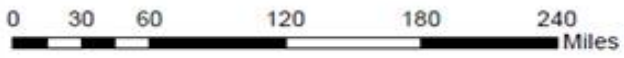
Brief epidemiological description and public health response for active outbreaks and public health events

Counties with confirmed measles cases in 2019

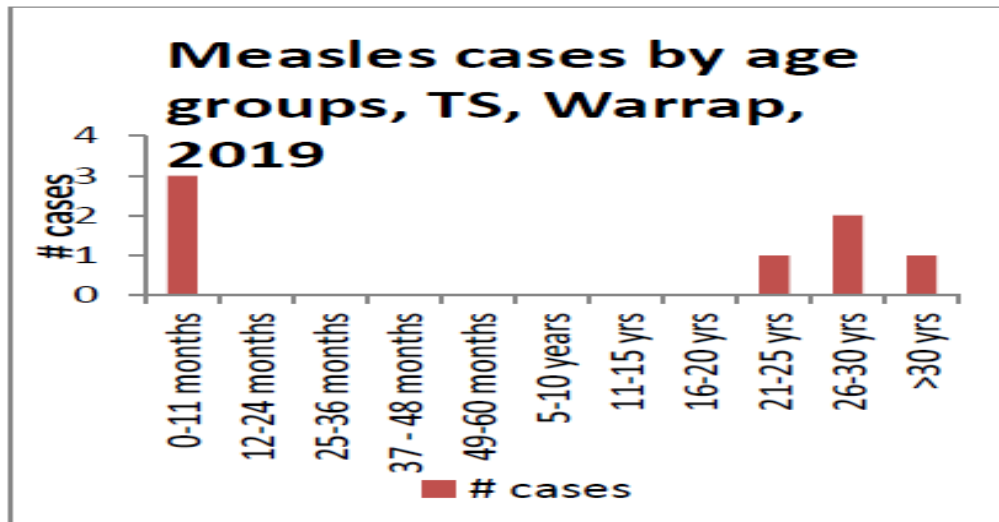
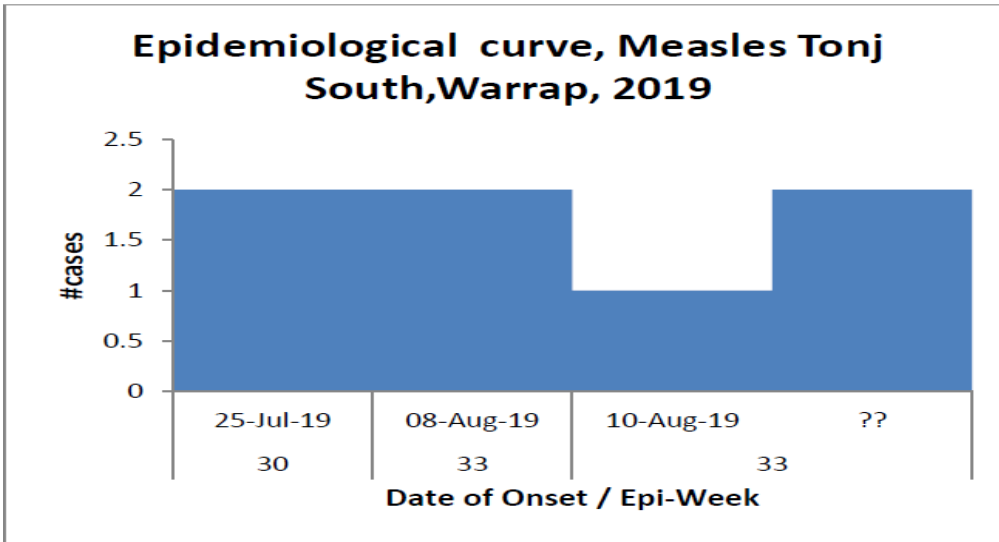


Confirmed outbreak

- Measles
- Hepatitis E



Suspected Measles cases in Tonj South County



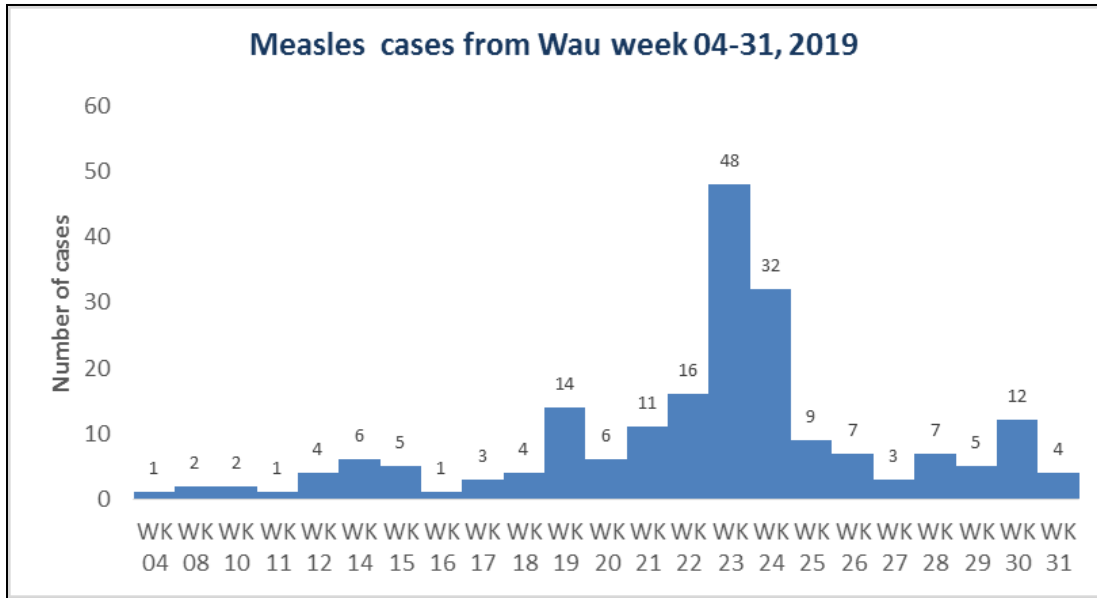
Descriptive Epidemiology:

- Suspected Measles case was initially detected at Tonj hospital in a 10 month old female on 30th July 2019
- A total of three(3) blood samples were collected and sent to the Public Health Laboratory in Juba of which 2 are positive for Measles IgM antibody
- Seven (7) cases have been line-listed with Akelkeu village (6) and Matar (1) in Tonj payam
- No deaths reported

Response and Recommendations:

- Active case search, case investigation and continue line-listing
- Continue to collect samples for testing
- Promote social mobilization in the affected area and surroundings

Confirmed Measles Outbreak in Wau County and POCAA



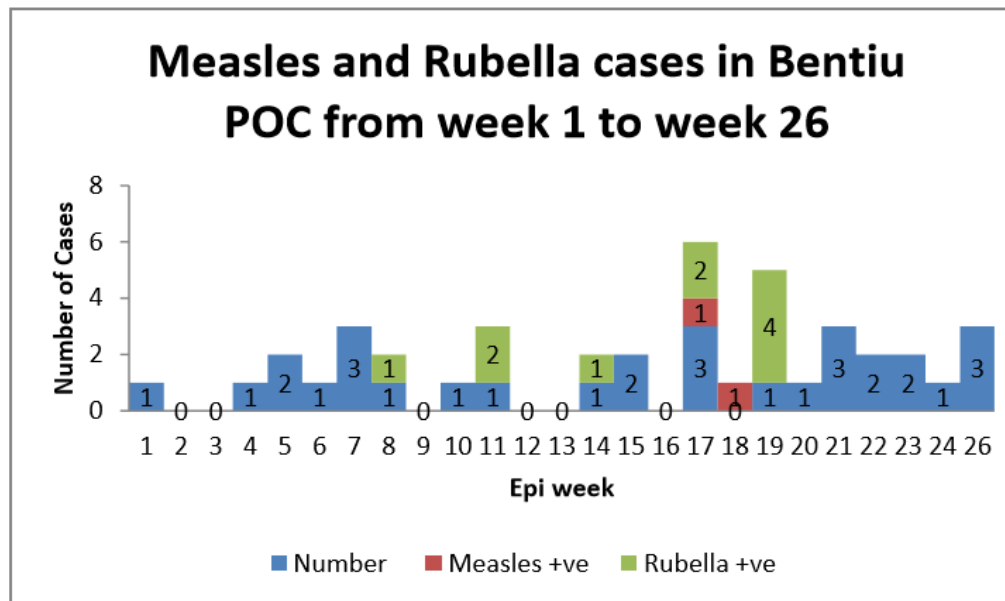
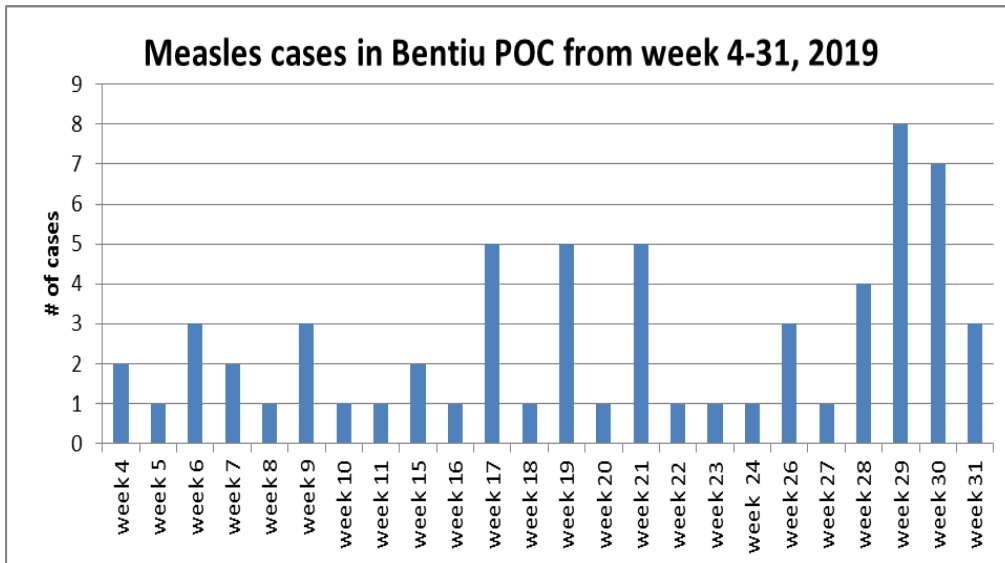
Introduction

- In week 19, 2019 a measles outbreak was confirmed in Wau county following the confirmation of 3 measles samples tested positive for IgM Wau county and 1 in the POC AA.
- Wau county started seeing measles cases from as early as week 4 in 2019.
- Out of all the samples sent to the lab, 10 tested positive for Rubella IgM and 7 for Measles IgM

Descriptive Epidemiology:

- A total of 415 cases from week 4 to week 26, 2019, 80%(335) are from the POCAA
- During the Campaign cases peaked in week 22, 23 and 24 and later came down to 15 cases in week 25
- Total of 5 deaths giving the CFR at 1.20%
- 79.2% of the cases are under the age of 5years with only 19.9% of cases received at least 1 dose of measles vaccine
- **Response and recommendations**
- IOM just concluded a vaccination Campaign in collaboration with WHO, UNICEF and other health partners
- The campaign covered Wau municipality and extended to some IDPs collective sites in Jur River from 3rd – 10th June
- Target populations (27,166) child from 6-59 months, the coverage was 85% as (23,028) child vaccinated including (1,628) child from IDPs collective site in Jur River County.
- Post Campaign evaluation was done. MoH and WHO conducted the campaign with coverage of 89.15%

Confirmed Measles and Rubella outbreak in Bentiu PoC



Bentiu PoC

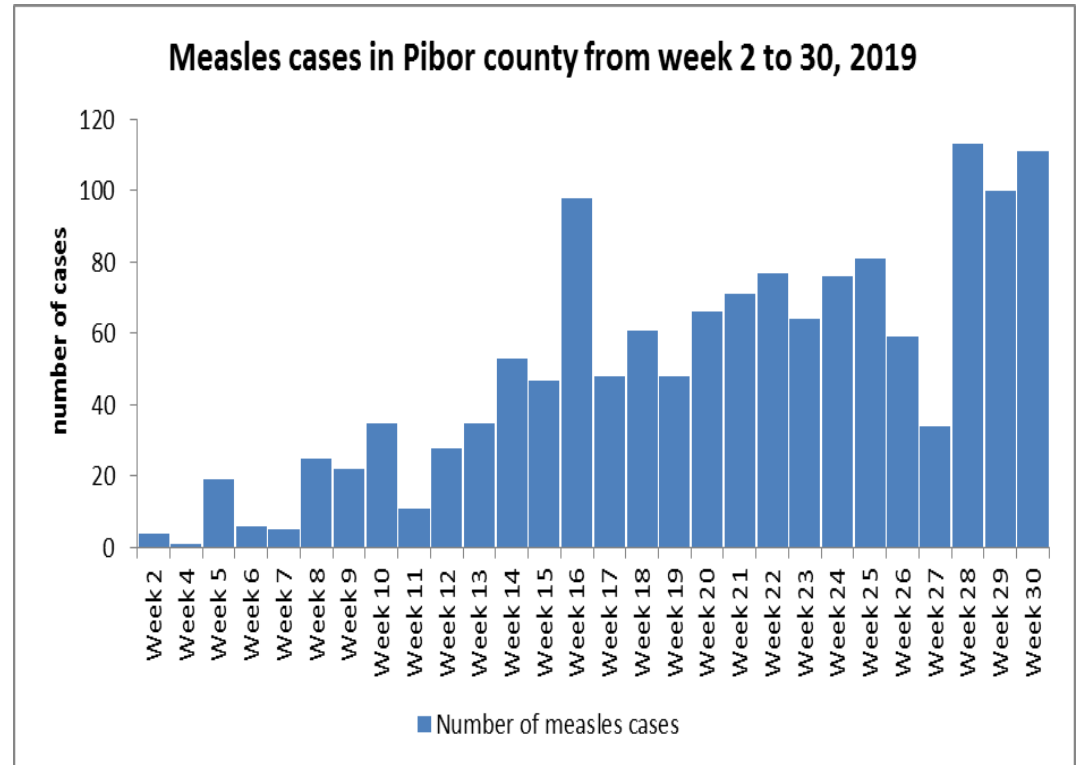
- Bentiu PoC has been reporting suspected measles/rubella cases since beginning of the year
- A total of 42 suspected measles cases reported since January 2019
- Three (3) suspected measles cases reported in week 26, 2019
- Out of the 42 cases 2 tested positive for measles IgM
- And 10 confirmed Rubella cases since week 8
- All the cases are children <5 years except for two cases
- **In week 30, 2019 five (5) measles samples was confirmed positive on IgM despite the reactive campaign which was conducted in May**
- **Response and Recommendations**
 - IOM completed a reactive vaccination campaign in Bentiu POC on 31 May 2019.
 - During the reactive measles campaign 21,285 children 6-59 months (126%) received measles vaccination
 - PCE was done by MoH & WHO , coverage was 74.6%.

Measles cases continue to be confirmed in Rubkona because of the increase number of returnees and population movement and crowding in transit sites

Proposed strategies: there is need to vaccinate all children among the new arrivals in transit sites with returnees and at the entrance to the PoC

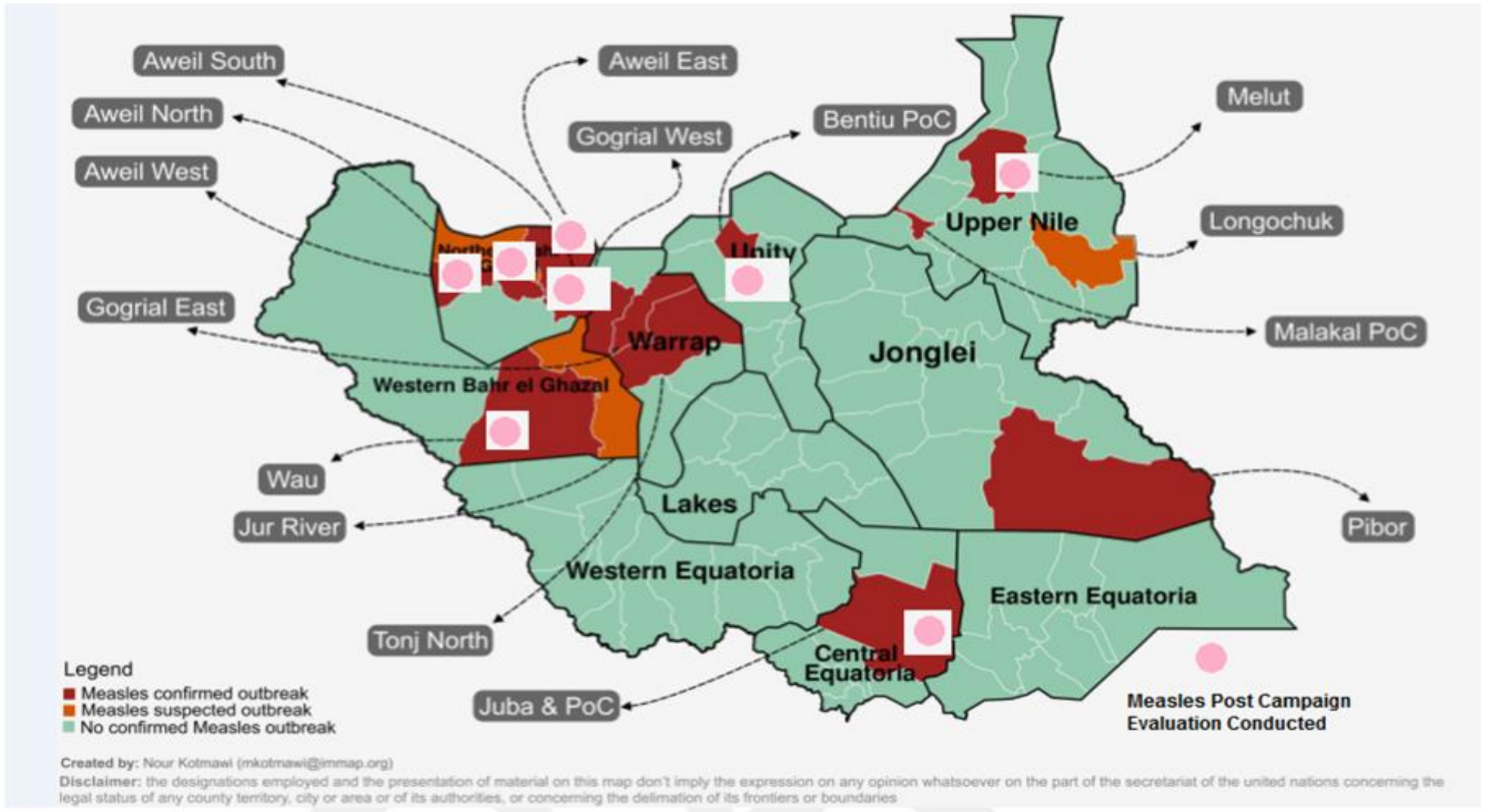
Measles in Pibor County

- There is an ongoing transmission of measles in Pibor County in spite of the vaccination campaign conducted in February and March.
- This may be influenced by the semi-nomadic nature of the population in Pibor. As the rainy season starts there are a lot of Movements with high number of unvaccinated population coming in the communities.
- In May, two suspected cases tested positive for Measles IgM.
- Given the case upsurge in recent weeks; partners have been advised to collect samples for laboratory testing. The laboratory test results will inform decisions on the next course of action
- During the mission (WHO, UNICEF and Live well) to Pibor (Maruwa and Labarab) on 12 Aug 2019; four measles samples were collected (two each from Maruwa and Labarab)
- Three samples tested measles IgM positive and one tested negative on 19 Aug 2019



- Medair and Live Well will conduct measles reactive campaign in Pibor including Maruwa and Labarab starting 1st week of September, 2019 targeting children up to 14 yrs old

Fig 1. Map of Measles Outbreaks and Post Campaign Measles Evaluation, 2019



PCE Results: Measles coverage among children aged 6-59 months per counties

Table 1. MEASLES COVERAGE AND POST CAMPAIGN EVALUATION 2019

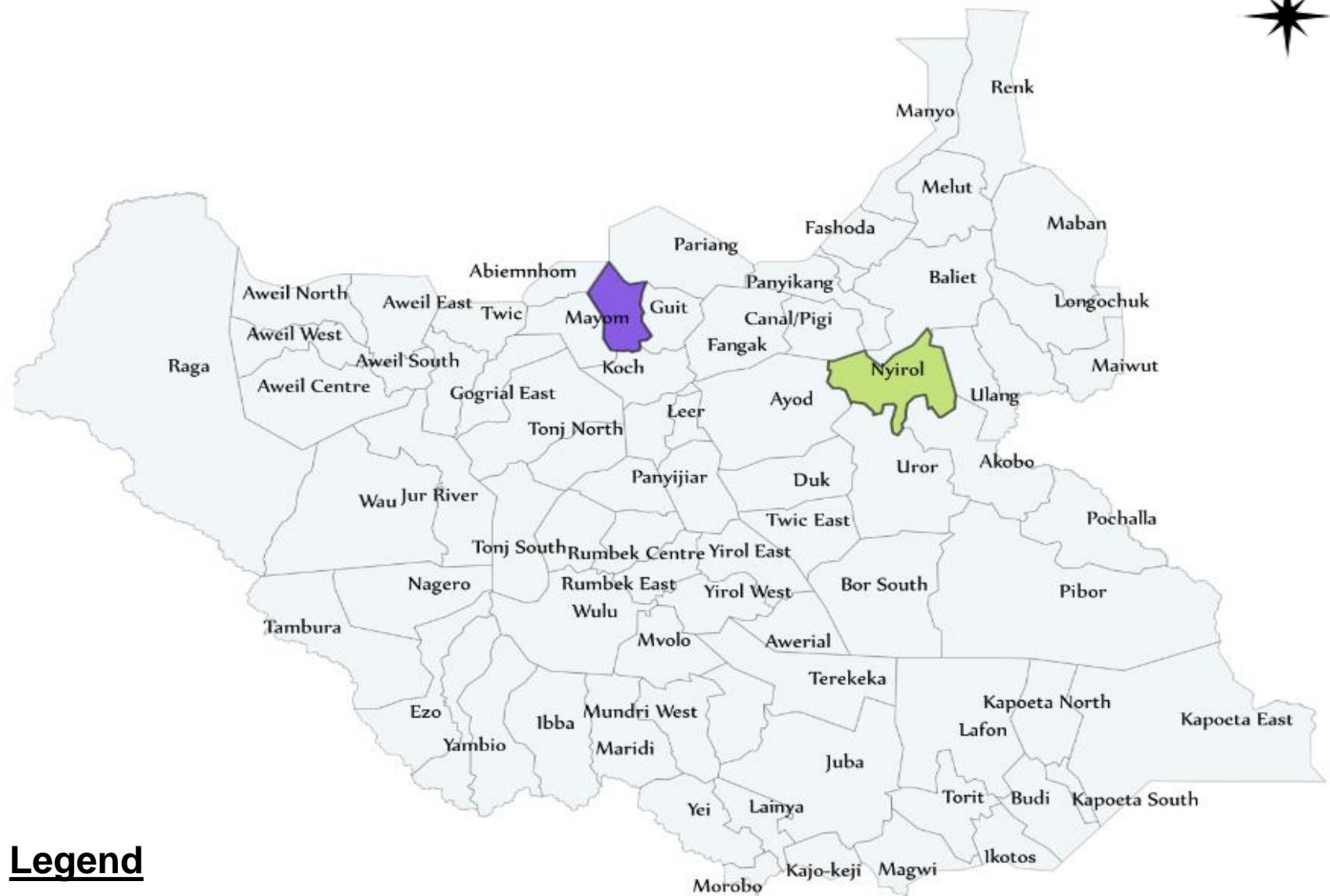
S/N	County	Dates of Measles SIAS	Dates PCE Conducted	Admin Cov	PCE Cov
1	<u>Gogrial West</u>	April 2019	April 2019- Med Air		97.2%
2	<u>Aweil South</u>	April 2019	April 2019- WHO	116%	98%
3	<u>Melut</u>	April 2019	April 2019- WHO	78%	65.7%
4	<u>Juba</u>	May 2019	5 th -10 th June 2019-WHO		81.9%
5	<u>Malakal PoC</u>	June 2019	16 th -18 th July 2019-WHO		Pending
6	<u>Wau</u>	June 2019	29 th June -4 th July 2019-WHO		89.15
7	<u>Bentiu PoC</u>	June 2019	29 th June -4 th July 2019-WHO		74.6%
8	<u>Tonj North</u>	June 2019	29 th June -4 th July 2019-WHO		Shelved -clan clashes
9	<u>Renk</u>	June, 2019	July 2019-Medair		79.8% - by card 93.5% - by card and history
10	<u>Aweil West/Town</u>	June 2019	29 th June -4 th July 2019-WHO		63.5%
11	<u>Aweil East</u>	June 2019	29 th June -4 th July 2019-WHO		52.3%

Finger mark evidence

Based on verbal report

Renk County: a house-to-house mop up campaign was undertaken by MedAir reaching an additional 6.175 children under one year with measles vaccine

Hepatitis E cumulative cases in 2019



Legend

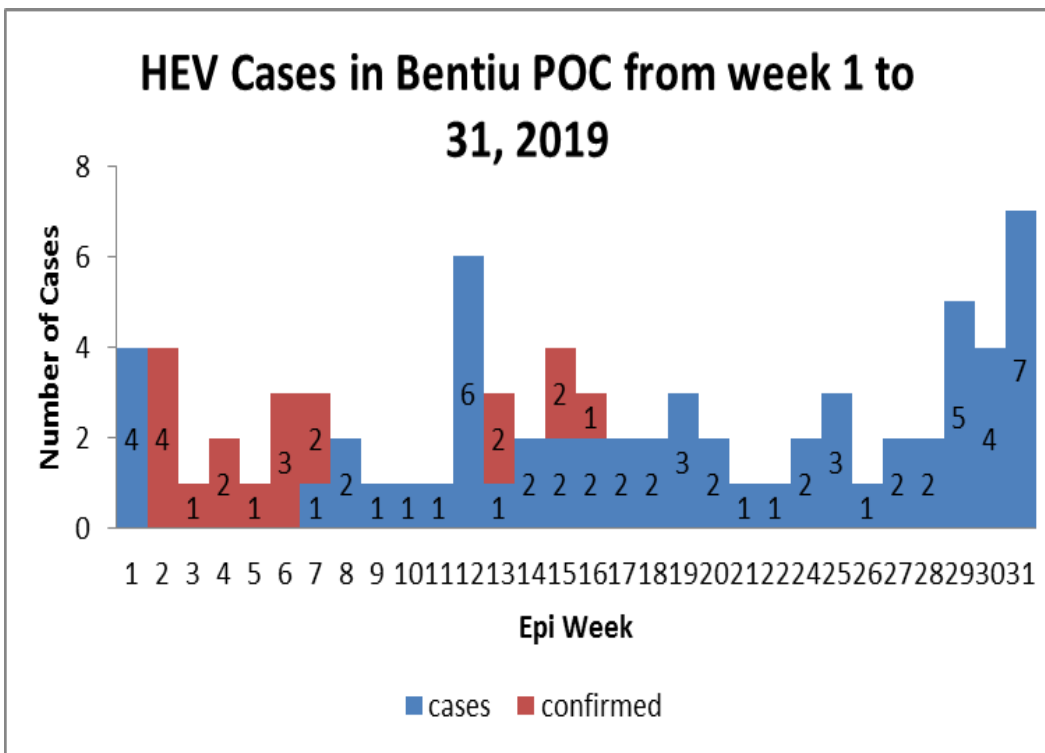
- 10
- 45
- County boundaries

0 100 200 km



Disclaimer: The boundaries and names shown on this map do not imply official endorsement by the United Nations in Sudan

Hepatitis E, Bentiu PoC



Bentiu PoC

- The persistent transmission of HEV in Bentiu PoC continues with 71 cases since beginning of 2019
 - Eighteen (18) cases confirmed by PCR testing
 - There were no cases reported in week 23.
- All the cases were managed as outpatient cases except for two cases who were admitted on 23rd February, 2019 and 11th April, 2019
- One death on 12th April 2019
- Over half (51.3%) of the cases are male.
- Age group 15-44 years had the most cases with 14 (34.1%) cases.
- Of the 23 female cases, 7 (30%) are aged 15-44 years
 - 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 31, 2019; there were 71 cases of HEV in Bentiu PoC

Recommended response

- Social mobilization to raise awareness on modes of transmission, symptoms and where to seek for care
- Case identification and follow up in the communities and WASH interventions are recommended.

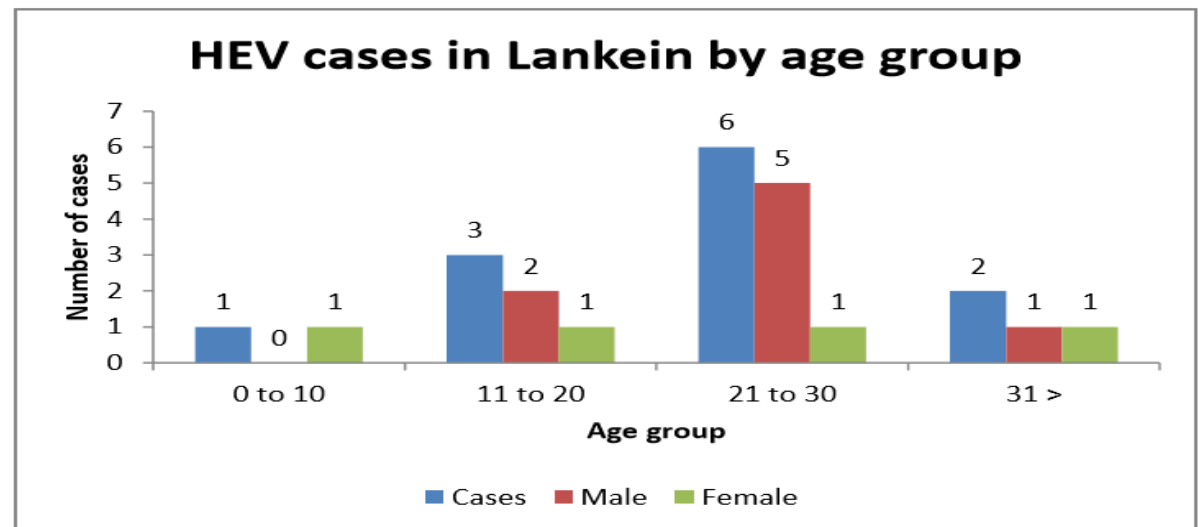
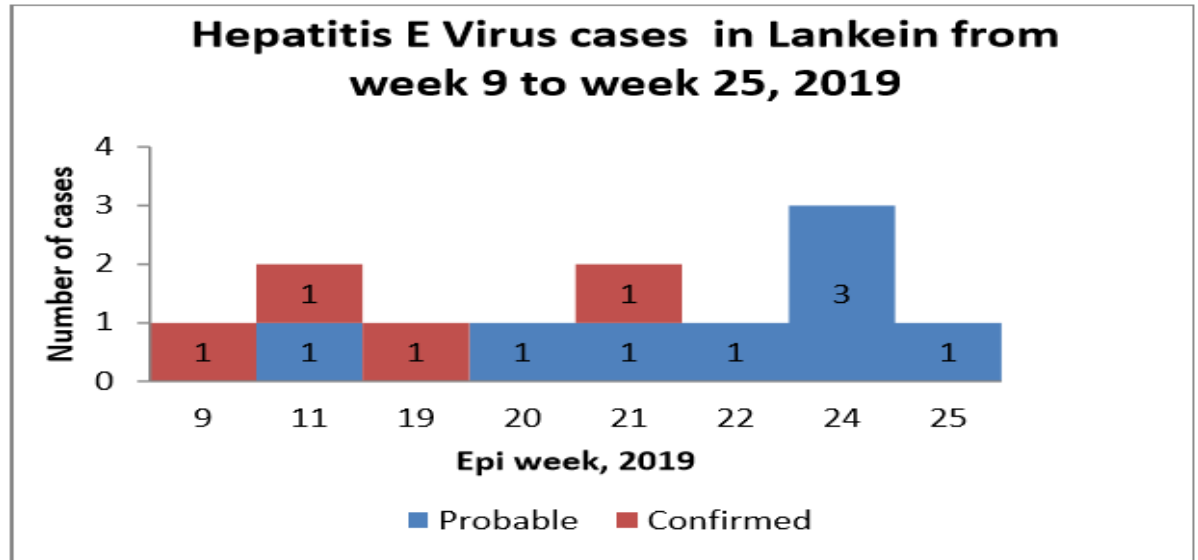
Hepatitis E cases in Lankein, 2019

Descriptive Epidemiology

- First case of Hepatitis E virus was confirmed in Lankein as of week 9, 2019
- A total of 12 cases since week 9 with 4 confirmed through PCR
- 50% (6) of the cases are between the age group of 21 to 30years
- Of the 12 cases (8) 66.6% are Males
- 58.3% of the cases are internally displaced persons (IDPs)
- **No new cases have been reported since week 25.**

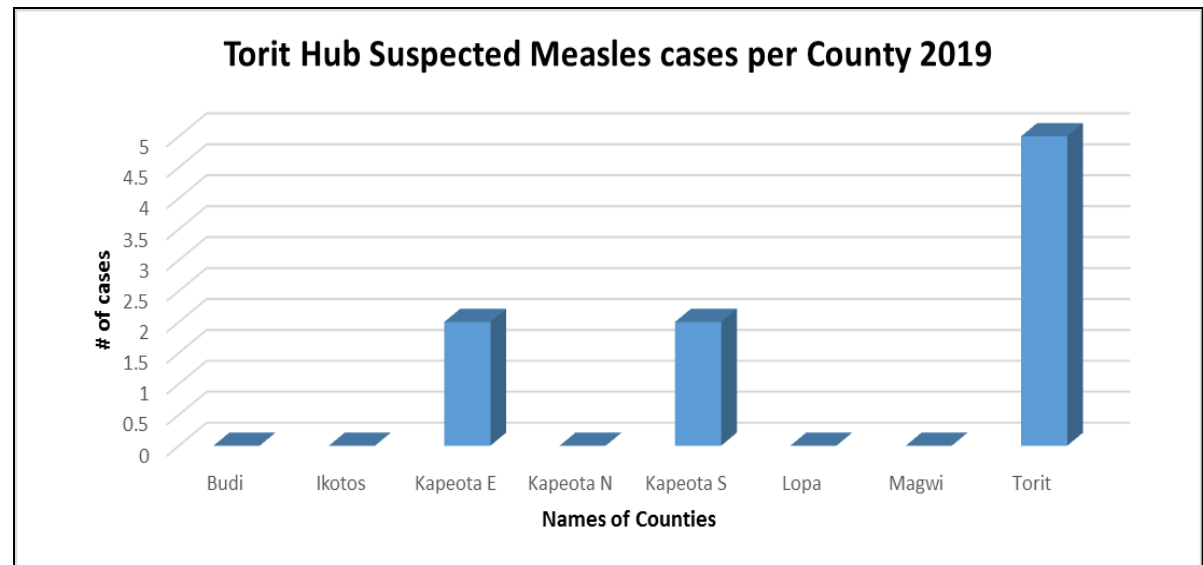
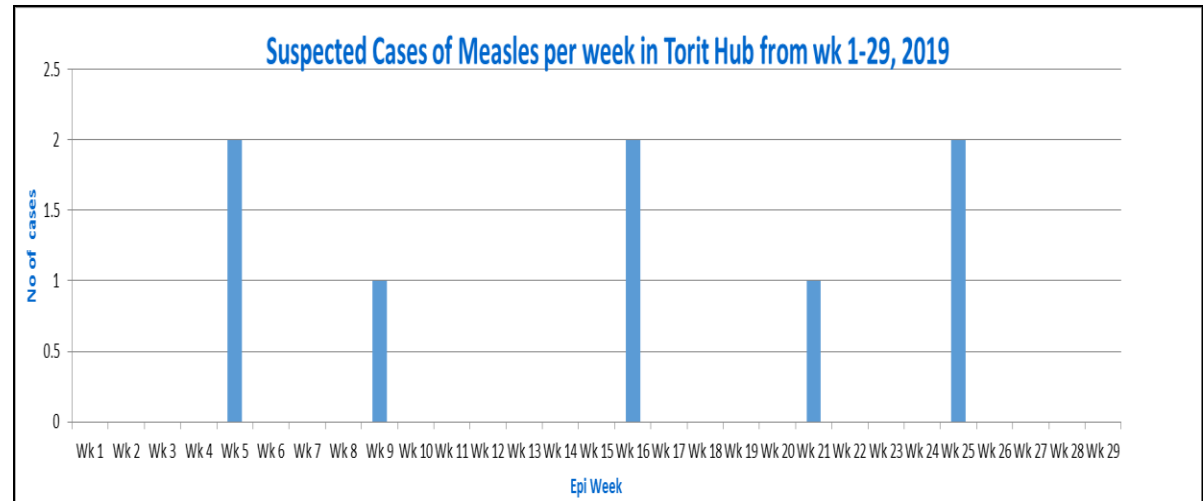
Recommended response

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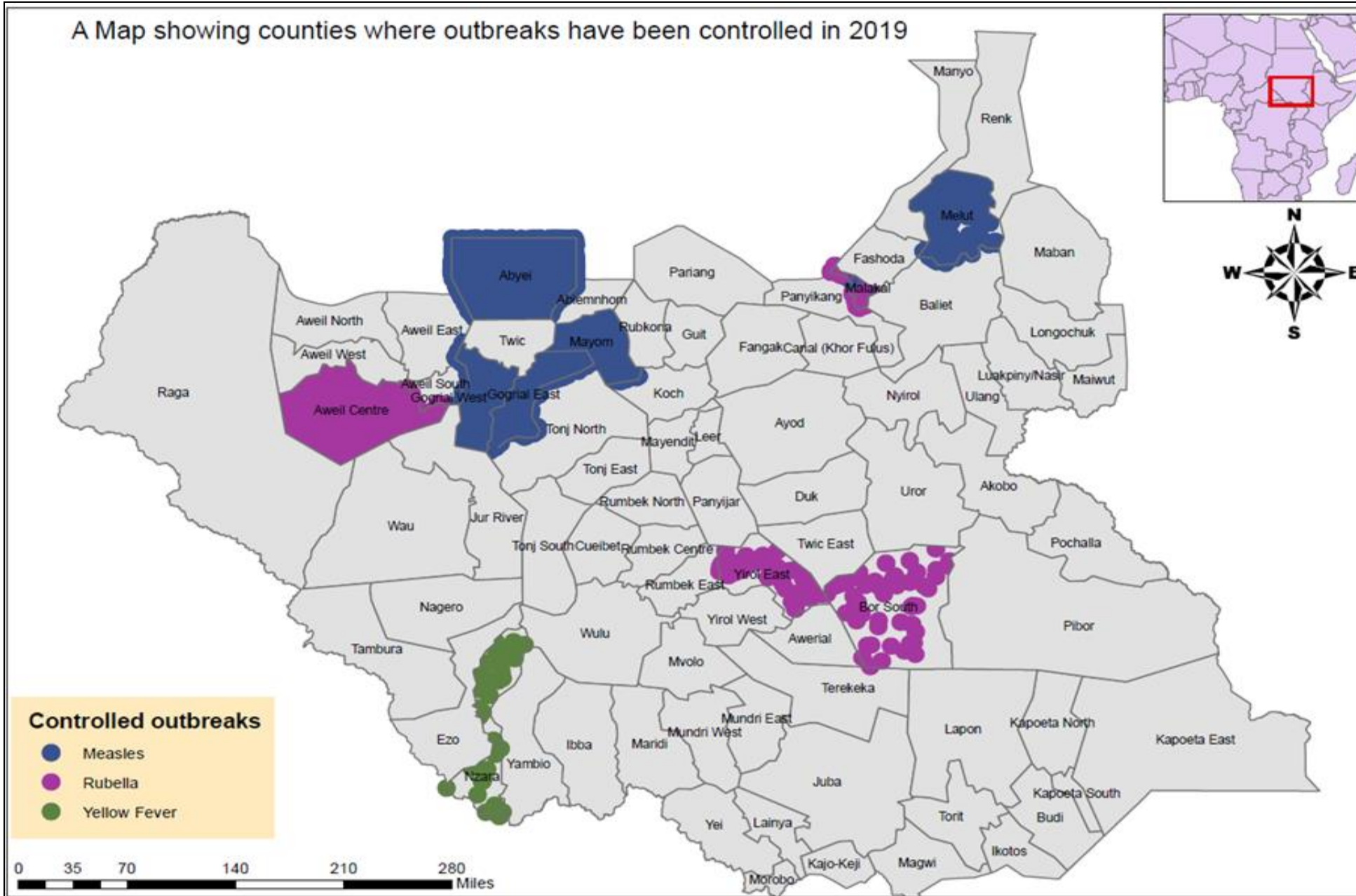


Suspected Measles Cases in Torit

- Suspected measles cases has been reported from Torit hub starting February 2019 (week 5) from Torit county; Kapeota South and Kapeota North.
- Cumulative number of cases as of week 25th is 9 cases.
- Total of 9 samples were collected; 2 were positive (samples were collected on 20th of March and 2nd of April; results came out in April), 2 were negative and 5 still pending results.
- SMOH and partners are advised to continue collecting samples for testing.
- **No new cases has been reported since week 25, 2019**



A Map showing counties where outbreaks have been controlled in 2019



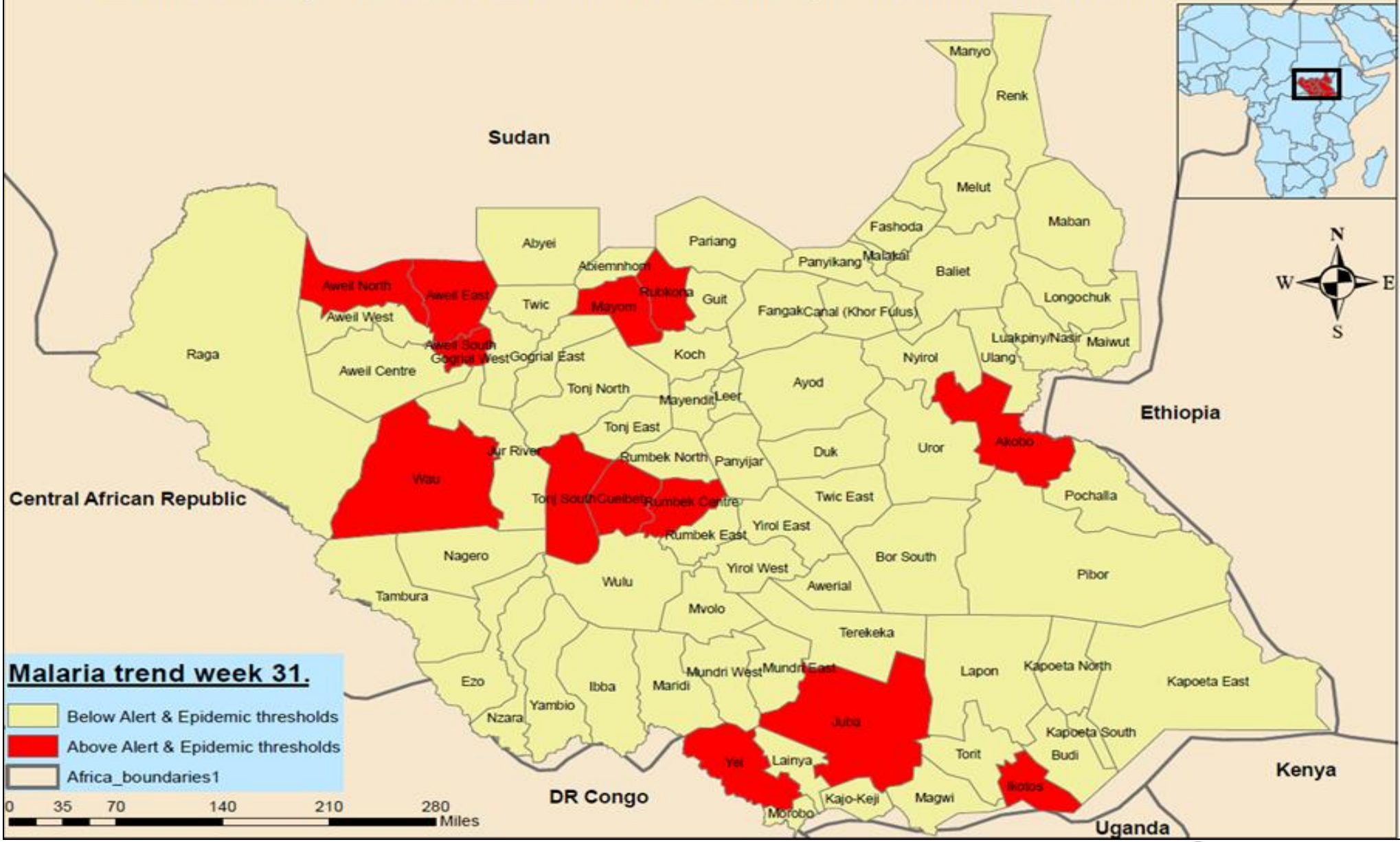
Current Malaria trends 31, 2019

Malaria was the leading cause of morbidity and mortality, accounting for **70.1%** of all morbidities and **90.4%** of all mortalities in week 31, 2019

There are **26** Counties with malaria trends that exceeded the threshold (third quartile of trends for the period 2013-2017) and these include the following:

1. Juba hub (Juba ,Yei)
2. Wau hub (Wau , Jur River)
3. Kwajok hub (Gogrial East , Tonj South , Gogrial West , Tonj East)
4. Aweil hub (Aweil East , Aweil North , Aweil South)
5. Bentiu hub (Akobo, Robkona , Mayom)
6. Bor hub (Bor)
7. Rumbek hub (Yirol East , Cueibet, Rumbek Center , Rumbek East , Wulu, Rumbek East)
8. Torit hub (Ikotos ,Budi, Torit ,Kapoeta South)
9. Malakal hub (Renk, Maban)

Counties that reported Malaria cases above Alert and Epidemic thresholds in week 31, 2019.

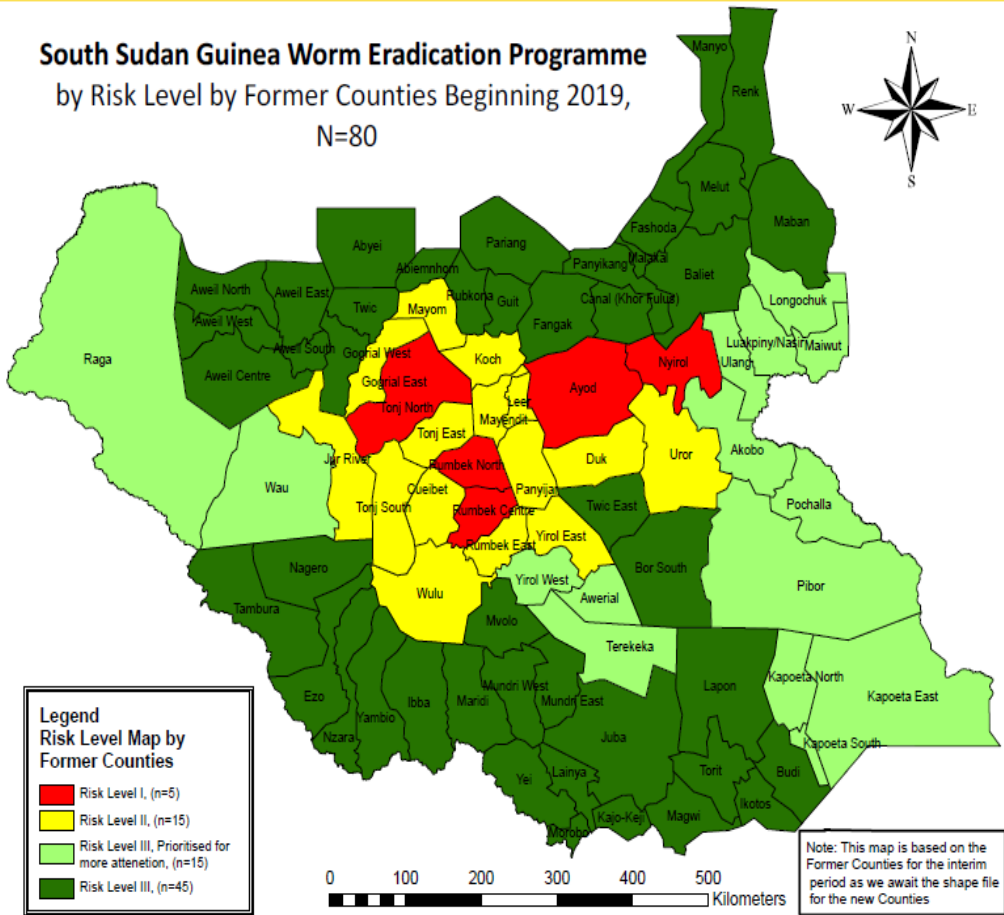


Routine Sentinel Surveillance | Human Influenza

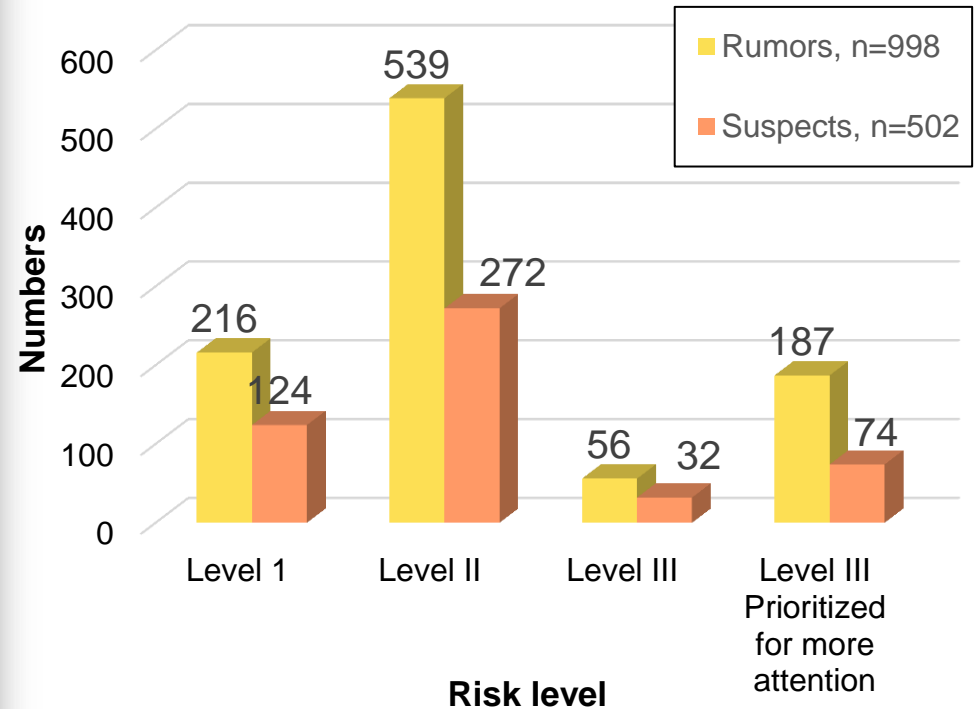
- In week 12, 2019, South Sudan started conducting case-based investigation for Influenza Like Illness (ILI) and Severe Acute Respiratory Infection (SARI) cases through systematic collection of epidemiological and virological information
- There are currently three designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital, Al Sabah Children's Hospital and UNMISS POC3 clinic) that are collecting epidemiological data and samples from ILI/SARI cases for virological testing.
- Since week 12 of 2019, a total of 97 ILI/SARI samples have been collected and tested at Uganda Virus Research Institute (UVRI) with 40 being negative; two (2) positive for Influenza B (Victoria); and seven (8) positive for Influenza A (H3). Test results pending for 57 samples.

Guinea Worm Risk level by former Counties

South Sudan Guinea Worm Eradication Programme
by Risk Level by Former Counties Beginning 2019,
N=80



Numbers of Rumors and suspects reported
by Risk Level During week 31, N=998



Risk Level definition

Risk Level 1 (5 former Counties). The Level I area is where we still have high risk of Guinea worm disease, we maintain active surveillance.

Risk Level II (15 former Counties). The level II areas are areas bordering the level I with high risk of importation of GWD from the level I areas.

Risk Level III (45 former Counties). The level III areas are those that are non endemic and with little or no risk of importation.

Risk III, prioritized for more attention (15 former Counties).

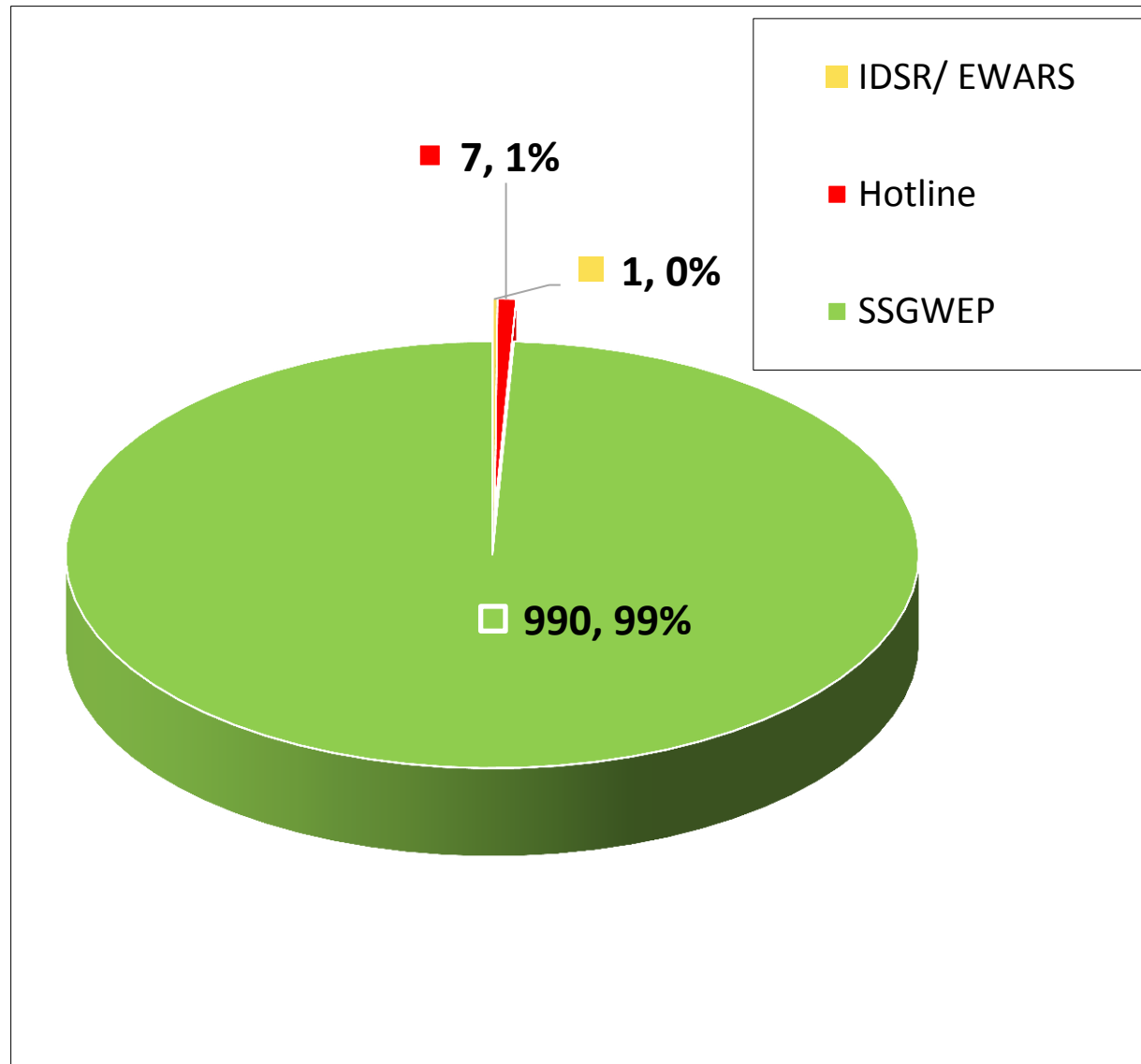
Total Number of Rumors/ Alerts Reported by Reporting Structures for the 31st. Week of 2019, N=998

1 Guinea Worm alert from IDSR from Former Gogrial East County

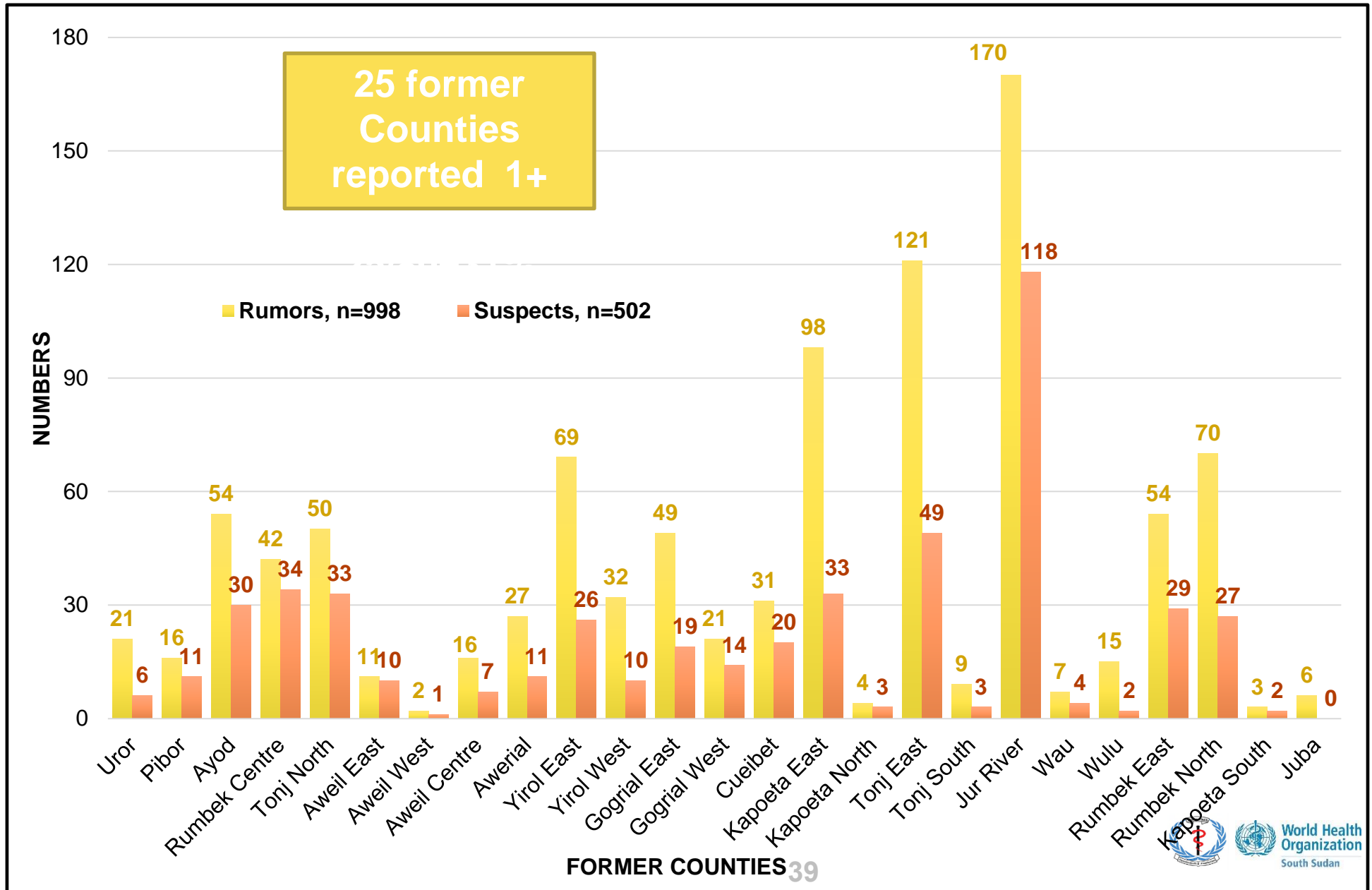
7 hotline rumors

Reports by Former Counties

**1 from Former Gogrial West
6 from former Juba County**



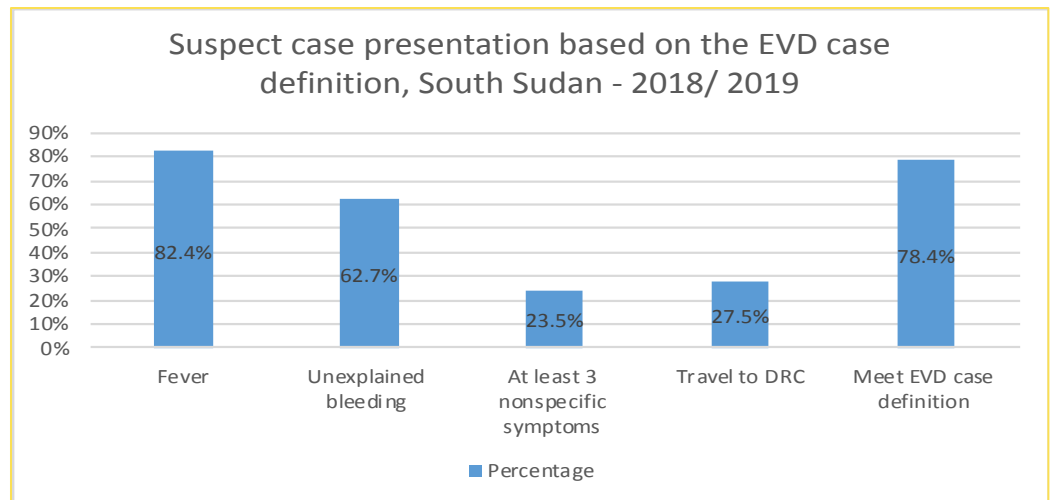
Former Counties that reported 1+ Rumors, and Suspects during 28th July-3rd August 2019 (31th Week) of the Year.



EVD Suspect cases in South Sudan 2018 and 2019

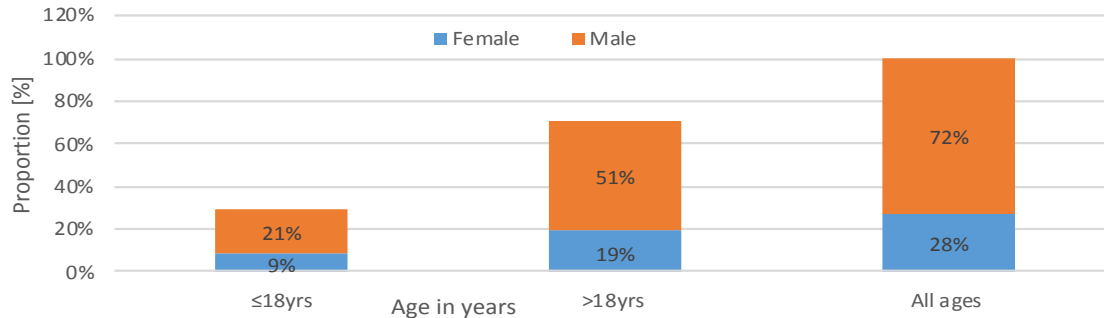
- Since Aug 2018, at least 51 suspect EVD cases have been reported
- Most 31 (61%) have been reported in 2019
- 40 (78%) met the EVD case definition – with fever (82%) and unexplained bleeding (63%) being the most frequent symptoms
- Most of the suspect EVD cases have been reported by health workers at health facility level
- Three suspect EVD cases were reported from screening points

Source of information	Met the EVD case definition		Total cases
	No	Yes	
2018	3	17	20
Community		5	5
Health Worker	3	11	14
Screening point		1	1
2019	8	23	31
Community		2	2
Health Worker	5	15	20
MSF Swiss		1	1
PHO	1		1
Red Cross		1	1
Screening point		2	2
Surveillance officer	2	1	3
Yirol Hospital		1	1
Total cases	11	40	51

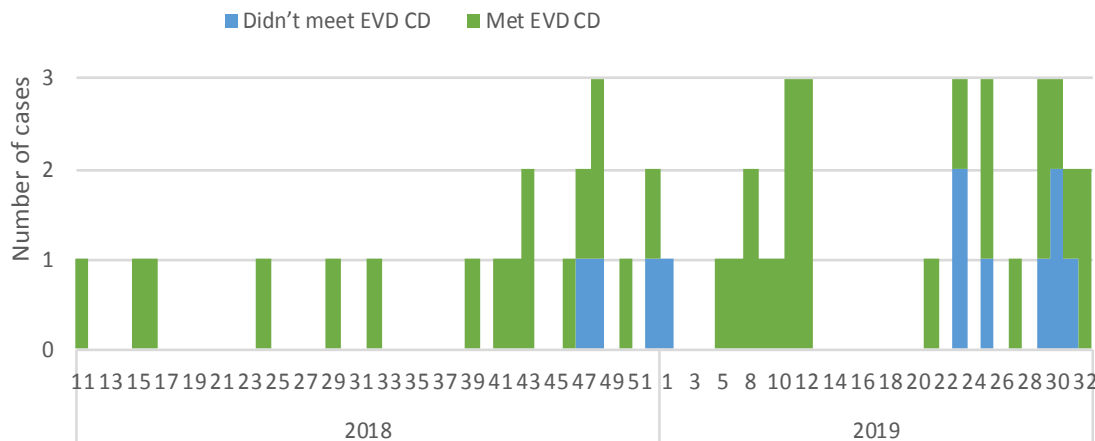


EVD Suspect cases in South Sudan 2018 and 2019

Age and sex distribution of suspect EVD cases, South Sudan - 2018/2019



EVD Suspect cases by Epi week and EVD case definition (CD), South Sudan - 2018 and 2019



- Most of the suspect EVD cases have been reported in adults 18 years and above (70%)
- Similarly, most suspect EVD cases have been reported in males (72%)
- The distribution suspect EVD cases in both children <18years and adults ≥18yrs is skewed towards the males
- The number of suspect EVD cases reported per week range from 0-3 cases
- The following map shows the distribution of suspect EVD cases by county

Counties that reported suspected cases of EVD in South Sudan 2018 and 2019.



EBOLA VIRUS DISEASE[EVD] PREPAREDNESS IN SOUTH SUDAN

Brief on the Ebola situation in DR Congo and updates on EVD preparedness in South Sudan

Suspected Ebola alert at Morobo Clinic Juba on 3rd August 2019

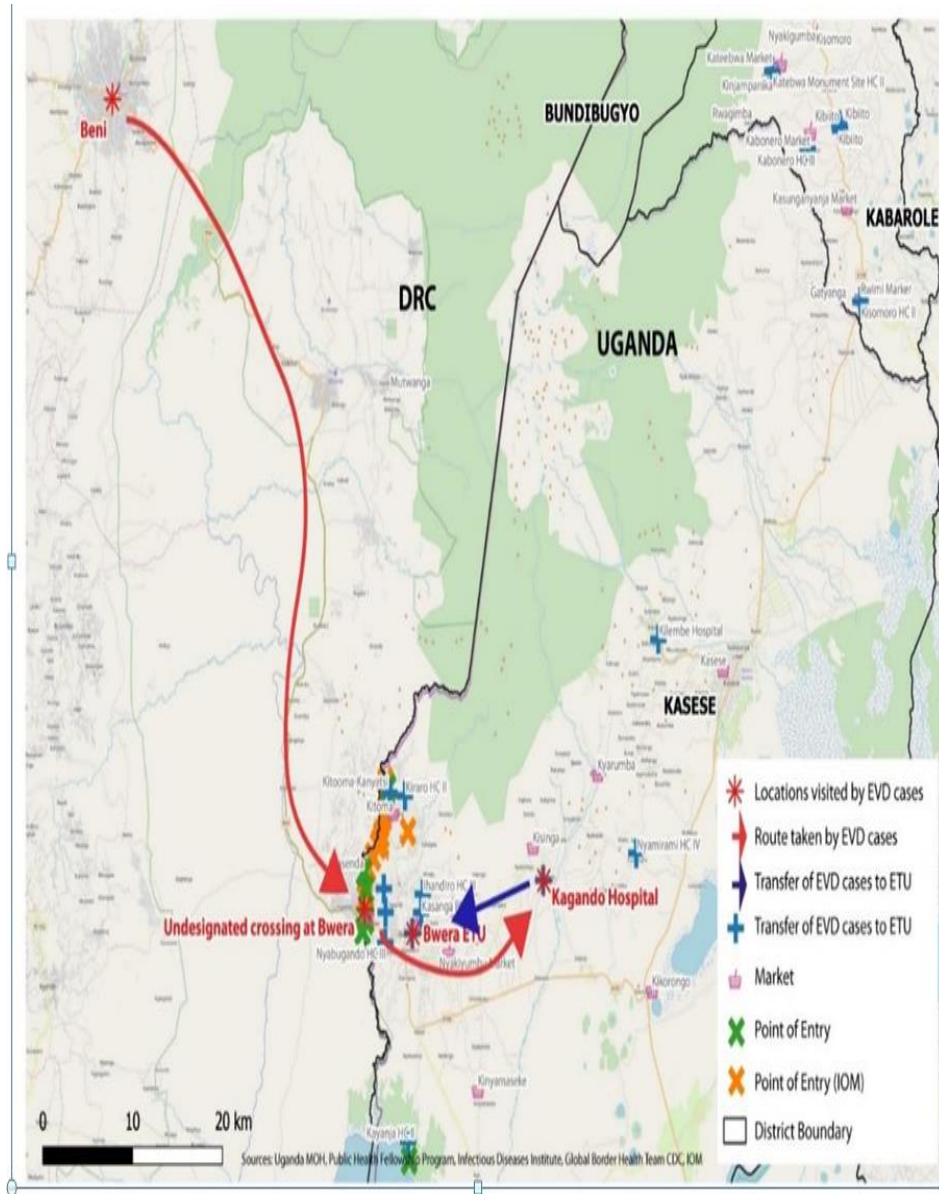
M. Y is a 35 years old, 4 month pregnant woman presented to Morobo clinic with cough, headache, lower abdominal and back pain associated with fever of 38.2 c . Malaria test was positive (+++). No vaginal bleeding, no diarrhea. Vomited once following cough. There is history of travelling to DRC (Ariwara) for business where she spent 3 days and came back to South Sudan on 21 June 2019 (proved by a business receipt signed on 19 July).

Sample was collected and PCR result was negative to EVD.

Sudden death in Yambio on 9th August 2019

- An EVD alert was received from a Red Cross in Masia-Yambio. That his neighbor of 40 yrs (estimated) had died after being sick for few days and was to be buried. Deceased has two wives. He had returned from Saura where the other wife lives on 6th August 2019.
- He came from Saura with fever, headache, bloody urine, diarrhea vomiting, generalized body pain, neck and back pain, ecchymosis . As the condition worsens his body became swollen as though bitten by lashed by sticks and painful (ecchymosis).
- He eventually developed bloody urine, he was taken to a local clinic and they could not manage and was referred to the hospital but did not also go. In the afternoon, the husband passed on.
- Deceased was a meat seller which included cow and wild/game meat. He has no history of recent travel outside Yambio.
- Sample was collected and PCR result was negative to EVD.

Ebola confirmed in Uganda border district of Kasese



- An Ebola Outbreak was confirmed in Uganda on the 9th of June 2019
- 5-year-old from DRC (Index case) .
- 3 Cases confirmed by UVRI on 11th June, Child died together with grandmother at Bwera ETU. Five cases (one confirmed and four suspected) have been repatriated back to DR Congo on request from DRC.
- The third case died on arrival at the ETU in Beni, DR Congo
- A total of 106 contacts are under follow up with a cumulative of 181 contacts vaccinated against Ebola virus disease.

On 24th July, Ministry of health, Uganda declared the outbreak over , this marked the end of 42 days after the deaths of the confirmed Ebola case in Kasese district.

Ebola update DRC 6th August, 2019

Current situation

- Currently as of 6th August, 2019
- 2763 Cases [2669 confirmed & 94 probable]
- 1846 Deaths [1752 confirmed & 94 probable]

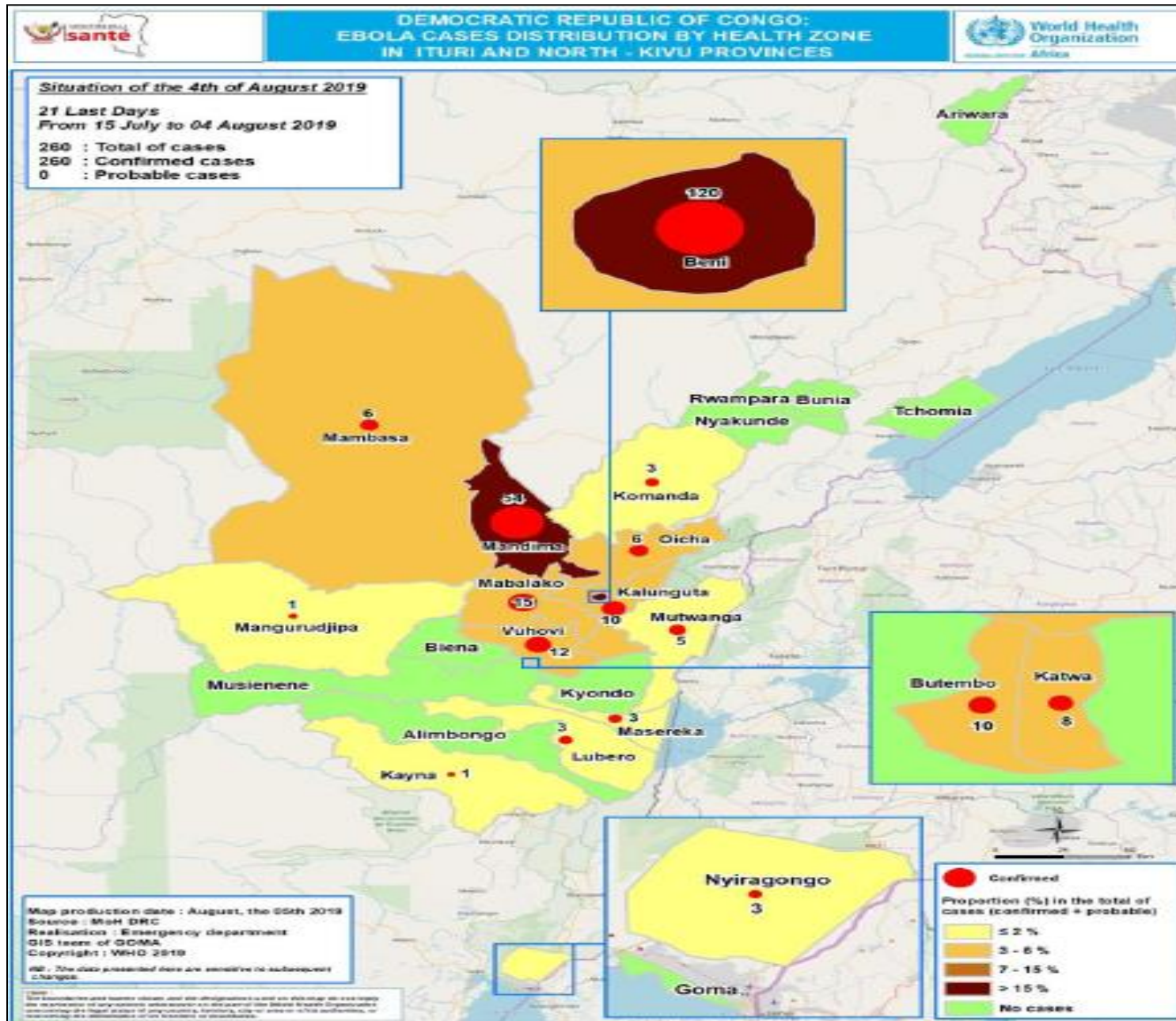
Response update

- 1 August 2019 marked one year since the Government of the Democratic Republic of the Congo declared the Ebola outbreak

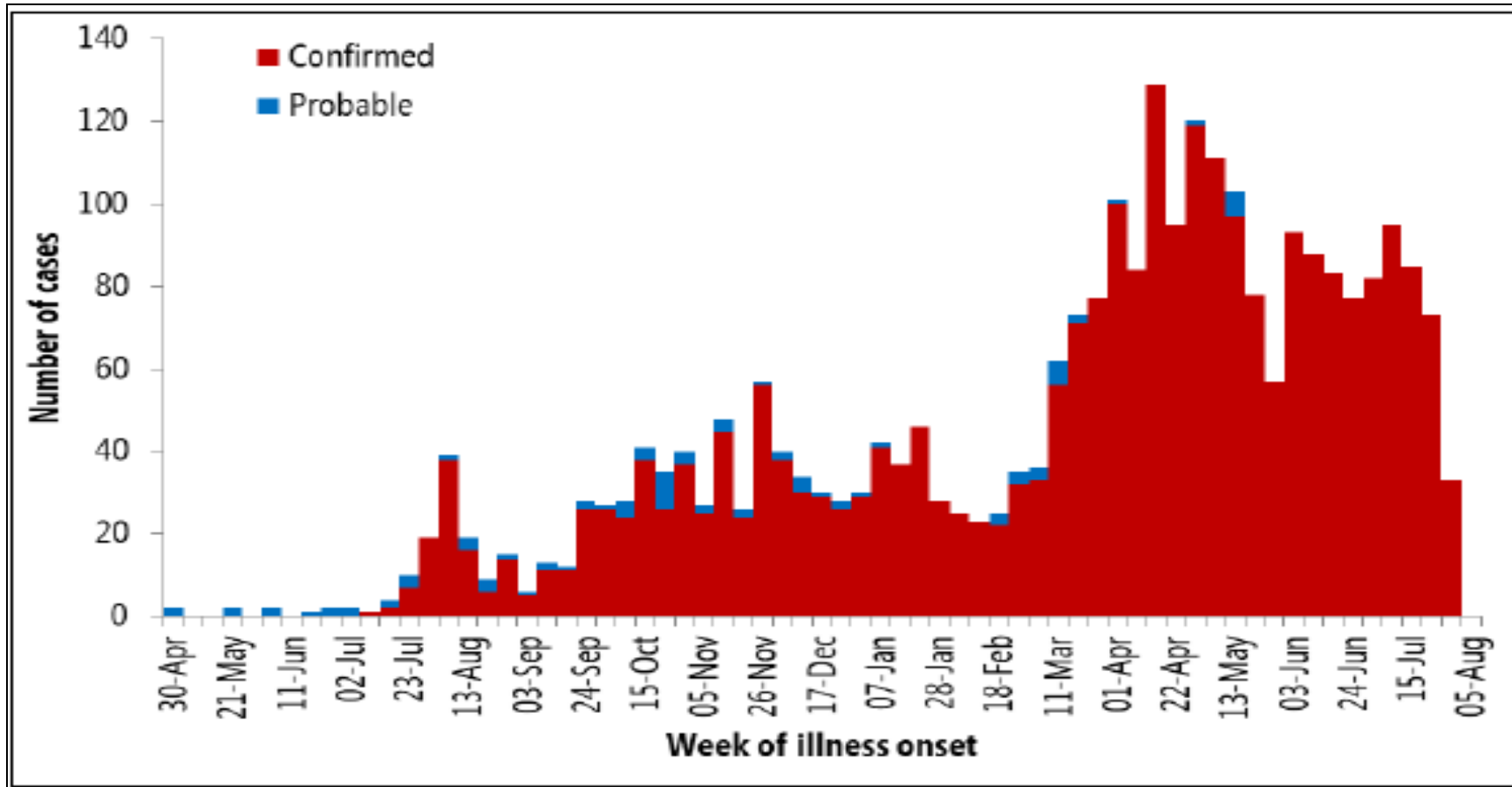
Affected health zones

- In the 21 days from 15 July through 4 August 2019, 68 health areas within 16 health zones reported new cases, representing 10% of the 664 health areas within North Kivu and Ituri provinces (Table 1, Figure 2). During this period, a total of 260 confirmed cases were reported, with the majority coming from the health zones of Beni (46%, n=120) and Mandima (21%, n=54).

Democratic Republic of Congo EVD Spot map



EVD Epi-curve by week of illness in DR Congo

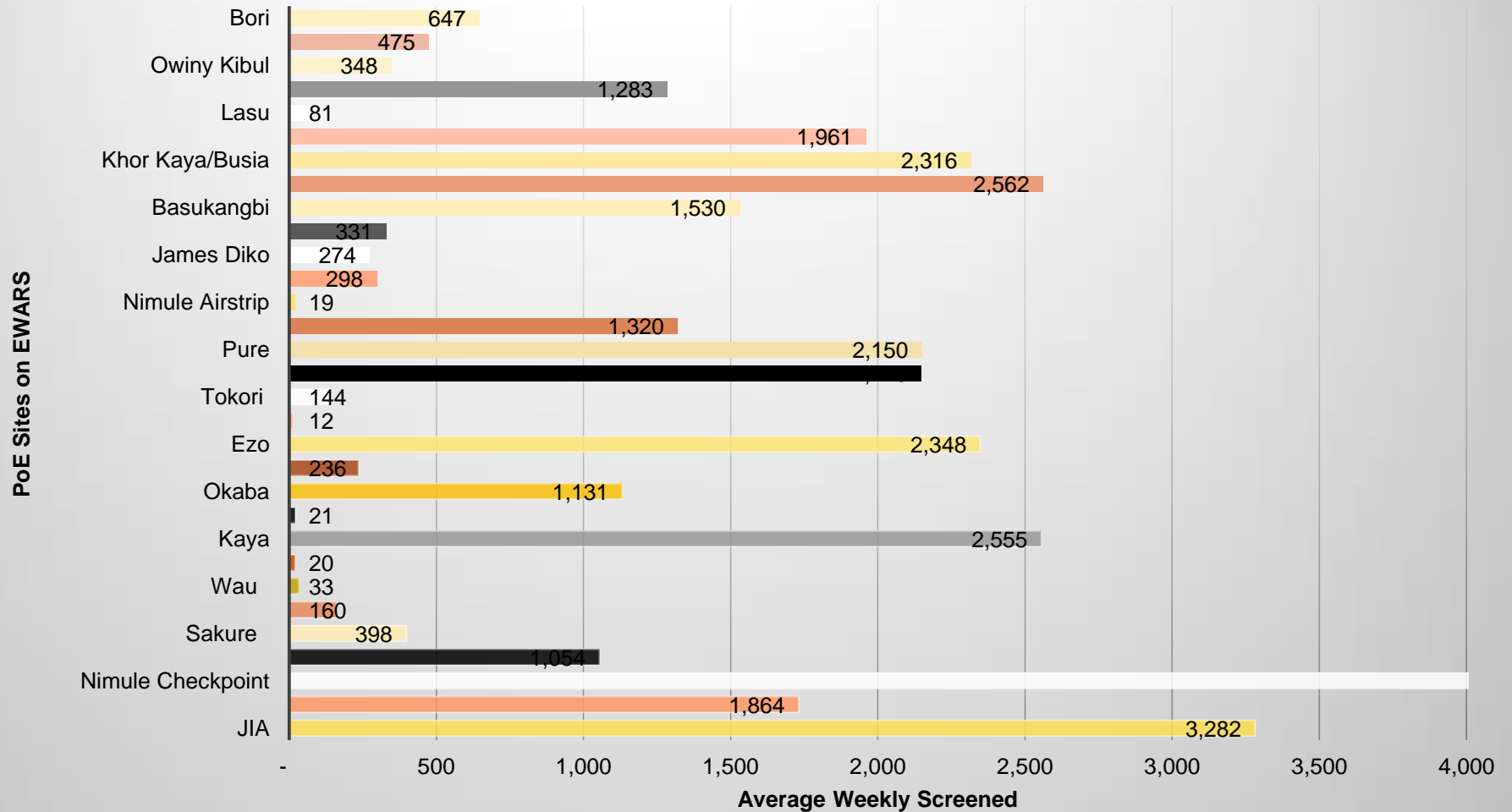


- Active transmission with continued increase in the number of new Ebola virus disease (EVD) cases in the affected geographical regions. █

Ebola preparedness in South Sudan

EVD preparedness activities undertaken in South Sudan

- South Sudan, as a priority one (1) country for Ebola virus disease outbreak (EVD) preparedness continues to make progress to enhance capacities for EVD case detection, investigation, response, and prevention.
- The national Ebola taskforce continues to meet twice weekly and is coordinating the implementation of the EVD contingency plan. The Ebola taskforce working groups have finalized the EVD contingency plan for the next six months of EVD preparedness and readiness in the country.
- Detailed preparedness update can be accessed <https://www.afro.who.int/publications/weekly-update-ebola-virus-disease-evd-preparedness-south-sudan>



The electronic EWARS platform captures points of entry screening data and enables summarizing number of travelers screened on weekly basis. In week 24, A total of 60,043 travellers were screened at various screening points in the country.

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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>

