

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 30, 2019 (July 22 - July 28)



Major Epidemiological Developments W30, 2019

- In week 30, the completeness was 60% and the timeliness is 48% while the cumulative completeness and timeliness was 71% and 55% respectively for 2019.
- A total of 91 alerts received in week 30, 2019 out of which 64% were verified; 4% was risk assessed and 3% required a response
- Malaria (31), acute watery diarrhea (11), measles (6) and bloody diarrhea (13) were the top common alerts generated through the EWARS in week 30, 2019.
- 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.
- On 28th July, an EVD alert was received from Ibba, a female farmer presented with Fever, bleeding from nose, fatigue and headache. No history of travel to DRC. Patient did not meet the cases definition and hence the alert was discarded.
- An EVD alert was received from UNMISS-HoFO on 29th July 2019. A sudden death of 35 yrs old woman who died in CONGO and was brought for burial in Ikpiro in Yambio. The case did not meet EVD case definition and it was immediately discarded.
- On 24th July, Ministry of health, Uganda declared the EVD outbreak over. This marked the end of 42 days after the deaths of the last confirmed Ebola case in Kasese district.
- 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)

Surveillance | IDSR surveillance indicators

Table 1 | IDSR surveillance performance indicators by county (W30 2019)

Hub	Reporting		Performance	
	# counties	# reports received	Completeness	Timeliness
Aweil	5	1	20%	20%
Bentiu	9	5	56%	56%
Bor	11	1	9%	9%
Juba	6	0	0%	0%
Kuajok	7	3	43%	43%
Malakal	13	5	38%	38%
Rumbek	8	2	25%	25%
Torit	8	5	63%	63%
Wau	3	3	100%	100%
Yambio	10	2	20%	20%
South Sudan	80	27	34%	34%

Table 2 | Summary of key IDSR surveillance indicators

W30	Cumulative (2019)	
80	-	Number of counties
34%	72%	Completeness
34%	56%	Timeliness

Table 3 | IDSR report submissions

W30	Cumulative (2019)	
27	1,725	total submissions
4	0	submissions by mobile
23	0	submissions by web

- In this week 30, 2019 the Completeness is **34%** and the Timeliness is **34%** while the cumulative completeness and timeliness was **72%** and **56%** respectively for 2019.
- The rolling out of the mobile phones for reporting to the health facilities is ongoing, this has affected the completeness of the surveillance system as the reports from the health facilities are captured separately.

IDSR Timeliness and Completeness Performance at Facility Level for week 30,2019

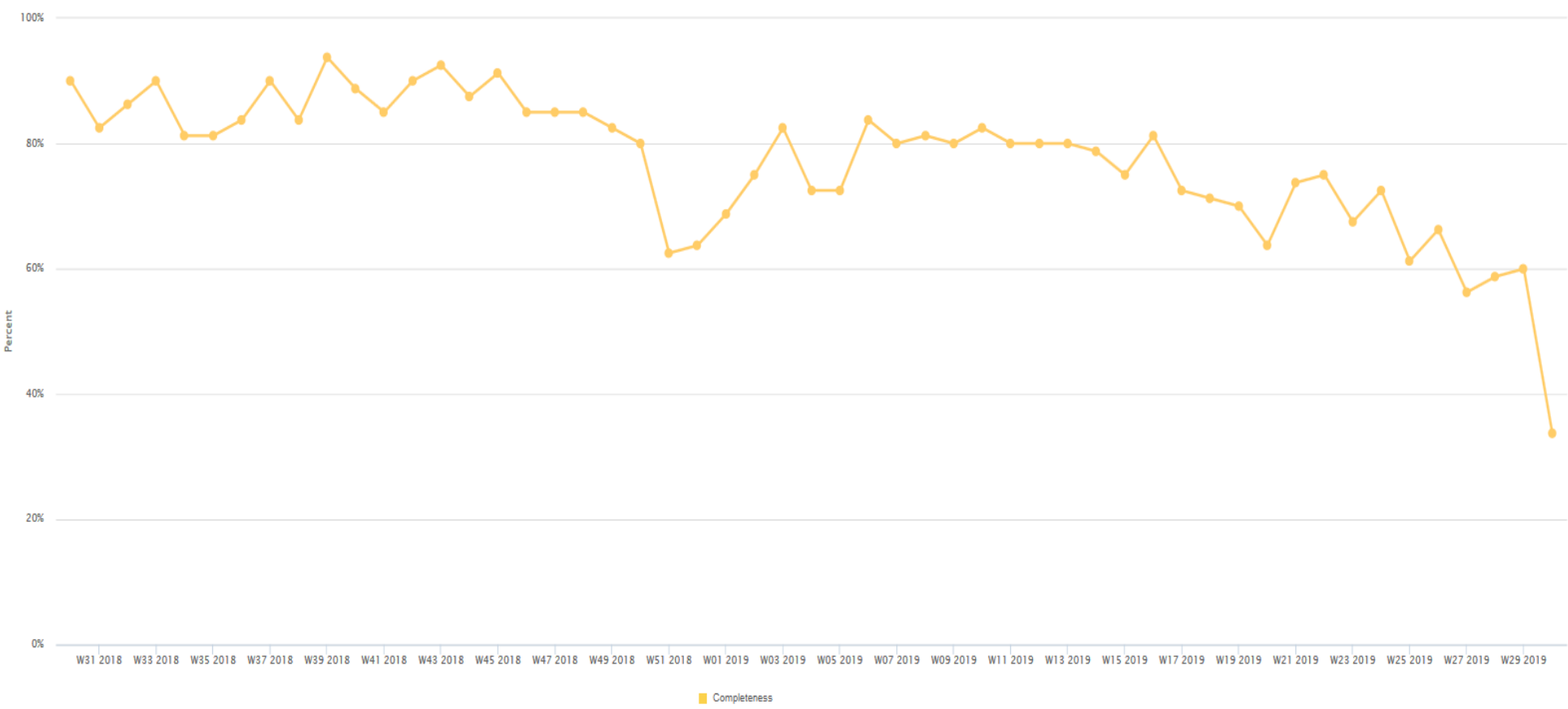
State	Supporting Partners	Total No. of Health Facility	No. of HFs Reported on Time	Timeliness Percentage	No. of HFs Reported not on Time	Completeness Percentage
Rumbek Hub	Doctors with Africa (CUAMM)	116	80	69%	80	69%
Aweil Hub	Malaria Consortium,HealthNet TPO,IRC,CEDS,IHO,	145	49	34%	49	34%
Bentiu Hub	Cordaid,UNIDOR,IRC,C HADO,CARE International	99	9	9%	9	9%
Wau Hub	Cordaid,HealthNetTPO,CARE International,IHO	85	44	52%	44	52%
Yambio Hub	AMREF,World Vision,CUAMM,CDTY,O PEN,	214	179	84%	179	84%
Bor Hub		168	19	11%	19	11%
Kuajok Hub	GOAL,CCM,WVI,Malaria Consortium,UNKEA	137	21	15%	21	15%
Torit Hub	Cordaid,HLSS,CMD	177	90	51%	90	51%
Juba Hub	HLSS,SSUHA,Healthnet TPO,IHO	155	57	37%	57	37%
Malakal Hub		178	4	2%	4	2%
South Sudan		1475	552	37%	552	37%
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 37% and Completeness is 37% with Yambio hub stands the best with 84% and the rest are below 80%.

Surveillance | Trend in IDSR completeness

Surveillance | Trend in IDSR completeness

Figure 1 | Trend in IDSR completeness over time



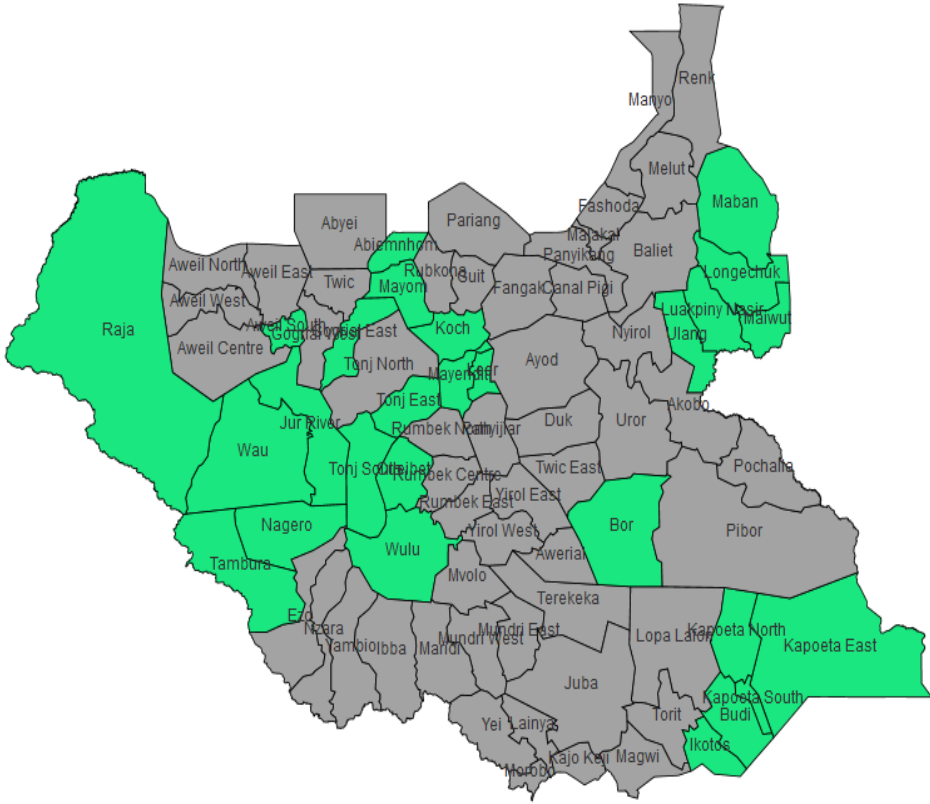
The graph shows completeness for the weekly IDSR reporting at the county level over time from 2018 to week 30 2019.



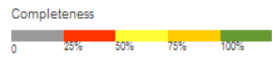
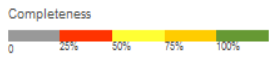
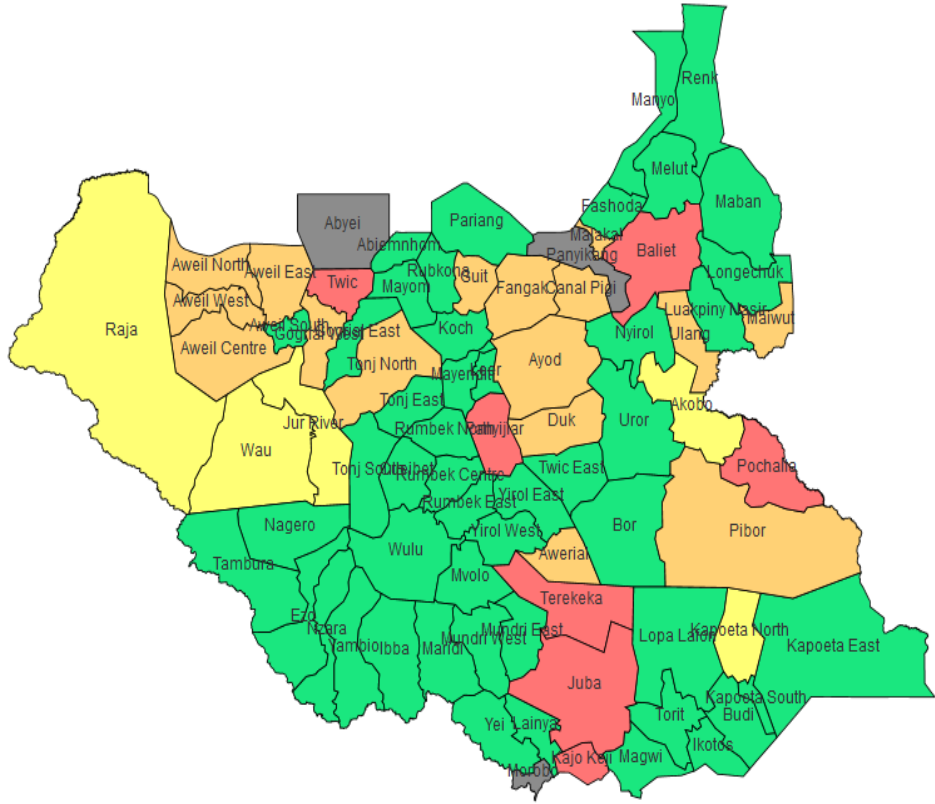
Surveillance | Maps of IDSR completeness by county

Surveillance | Maps of IDSR completeness by county

Map 1a | Map of IDSR completeness by county (W30 2019)



Map 1b | Map of IDSR completeness by county (2019)



- Counties that submitted their IDSR reports in week 30, 2019 are shown in green in map 1a.
- Counties that did not submit their IDSR reports in week 30, 2019 are shown in grey in map 1a.

Surveillance | EWARS surveillance indicators

Surveillance | EWARS surveillance indicators

Table 4 | EWARS surveillance performance indicators by partner (W30 2019)

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	0	0		
GOAL	2	2	100%	100%
HLSS	1	1	100%	100%
IMA	7	6	86%	86%
IMC	5	5	100%	100%
IOM	11	11	100%	100%
IRC	1	1	100%	100%
Medair	2	2	100%	100%
MSF-E	2	2	100%	100%
MSF-H	3	1	33%	33%
SMC	7	4	57%	57%
UNIDO	1	1	100%	100%
UNKEA	2	2	100%	100%
World Relief	1	1	100%	100%
TRI-SS	2	2	100%	100%
LIVEWELL	3	0	0%	0%
Total	70	56	80%	80%

Table 5 | Summary of key EWARS surveillance indicators

W30	Cumulative (2019)	
70	-	Number of EWARS reporting sites
80%	73%	Completeness
80%	67%	Timeliness

Table 6 | EWARS report submissions

W30	Cumulative (2019)	
56	1,513	total submissions
0	29	submissions by mobile
56	1484	submissions by web

- Completeness was **80%** and timeliness was **80%** for EWARS reporting by partners for week 30, 2019, while the cumulative completeness and timeliness were **73%** and **67%** respectively for 2019

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	W30		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	6	100%	163	74%
Bentiu	4	0%	159	79%
Bor	6	0%	149	34%
Juba	3	0%	198	46%
Kuajok	5	60%	168	26%
Malakal	1	0%	102	69%
Rumbek	16	25%	429	75%
Torit	2	0%	284	60%
Wau	2	100%	158	71%
Yambio	46	0%	400	78%
South Sudan	91	16%	2210	64%

Table 8 Summary of key alert indicators

W30	Cumulative (2019)	
91	2210	Total alerts raised
16%	64%	% verified
0%	0%	% auto-discarded
0%	4%	% risk assessed
0%	3%	% requiring a response

• A total of 91 alerts received in week 30, 2019 out of which 64% were verified. 4% was risk assessed and 3% required a response.

Alert | Event risk assessment

Table 9 | Alert performance indicators by event

Event	W30		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	31	6%	377	63%
AWD	11	18%	616	64%
Bloody Diarr.	13	31%	396	63%
Measles	6	17%	425	64%
Meningitis	0	0%	0	0%
Cholera	5	20%	65	74%
Yellow Fever	0	0%	17	94%
Guinea Worm	0	0%	57	61%
AFP	1	100%	112	64%
VHF	0	0%	21	71%
Neo. tetanus	0	0%	31	58%
Event-based surveillance				
EBS total	0	0%	32	81%

Table 10 | Event risk assessment

W30	Cumulative (2019)	
0	20	Low risk
27	27	Medium risk
0	30	High risk
0	20	Very high risk

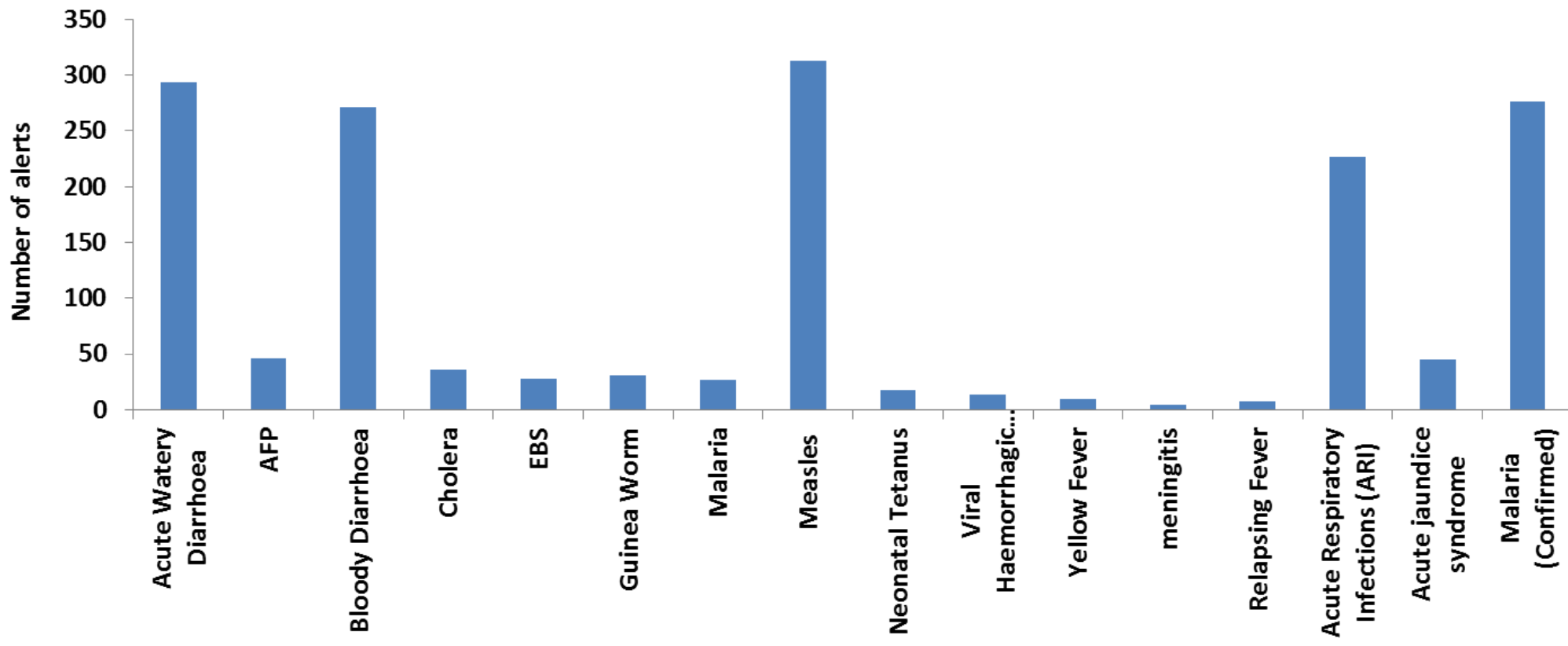
• Malaria (31), Acute watery diarrhea (11), measles (6) and bloody diarrhea (13) were the top common alerts generated through the EWARS in week 30, 2019.

Alert by disease and Hubs in W30, 2019 [A total of 77 event specific alerts generated by Hubs]

Hubs	AJS	ARI	Viral Haemorrhagic Fever	Acute Watery Diarrhoea	Bloody Diarrhoea	AFP	Guinea Worm	Relapsing Fever	Yellow Fever	EBS	Cholera	Malaria	Meningitis	Neonatal Tetanus	Measles	Total Alerts
Bor- Hub	1	1			1						1				2	6
Kuajok Hub					1								1		2	4
Torit Hub											1	1				2
Bentieu Hub	1	1			1										1	4
Yambio Hub	1	11		7	3						2	23				47
Juba Hub	1				1							1				3
Aweil Hub		1		1	1	1						2				6
Rumbek Hub		4		2	4			1			1	3			1	16
Wau Hub				1	1											2
Malakal Hub												1				1
Total Grand	4	18	0	11	13	1	0	1	0	0	5	31	1	0	6	91

- Five (5) alerts of cholera were triggered from Yambio , Bor, Torit, Rumbek with one discarded and 4 pending verification.
- One (1) meningitis from Gogrial West county was triggered and was discarded.
- Four (4) alerts of AJS all pending verification.
- 18 alerts of ARI been triggered with 3 discarded and 15 pending verification and the highest were from Yambio (11).

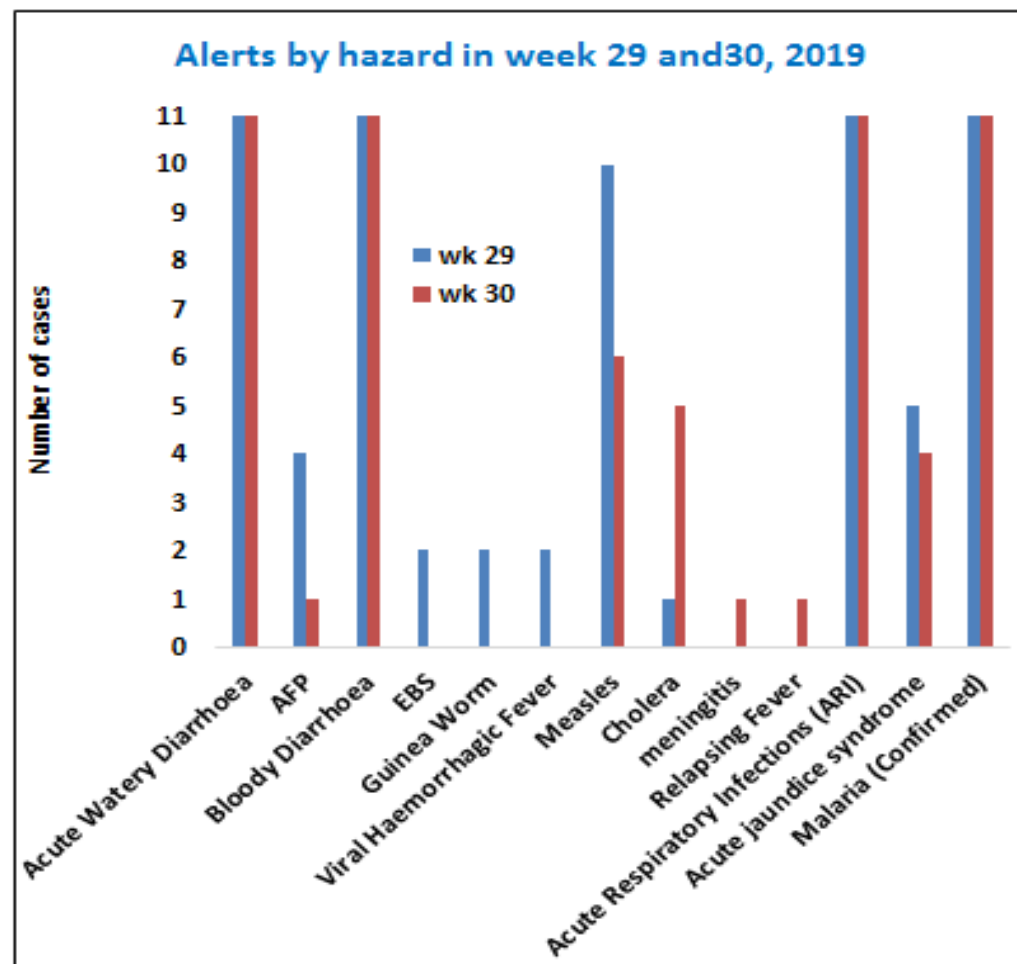
Number of Alerts by disease from week 01 to 30, 2019
n= 1644 alerts



There are 1644 alerts triggered since the year began with measles, AWD, Malaria, ABD and Malaria with more alerts as compared to the rest of the diseases.

Comparison between alerts received in week 29 and 30, by disease

Row Labels	wk 29	wk 30	Total alerts
Acute Watery Diarrhoea	23	11	34
AFP	4	1	5
Bloody Diarrhoea	18	13	31
EBS	2		2
Guinea Worm	2		2
Viral Haemorrhagic Fever	2		2
Measles	10	6	16
Cholera	1	5	6
meningitis		1	1
Relapsing Fever		1	1
Acute Respiratory Infections (ARI)	11	18	29
Acute jaundice syndrome	5	4	9
Malaria (Confirmed)	23	31	54
Total alerts	101	91	192



Week 30 recorded few alerts as compared to week 29 of 2019 but more alerts of malaria ,ARI and cholera were reported in week 30 compared to the previous week.

Cumulative alerts by risk assessment stage in 2019

County	OUTCOME	RISK ASSESSED	VERIFICATION	Total Alerts
Acute Watery Diarrhea	6	1	286	293
AFP	2		44	46
Bloody Diarrhea	3	2	266	271
EBS	4		24	28
Guinea Worm			31	31
Neonatal Tetanus			18	18
Viral Hemorrhagic Fever			14	14
Yellow Fever			9	9
Measles	26	7	280	313
Cholera			36	36
Malaria			27	27
meningitis	2		2	4
Relapsing Fever			7	7
Acute Respiratory Infections (ARI)	7	2	217	226
Acute jaundice syndrome	4		41	45
Malaria (Confirmed)	9	1	266	276
Total Alerts	63	13	1568	1644

Since the year began, there are 1553 alerts triggered of which 1477 were verified, 13 were risk assessed and 63 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.

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.

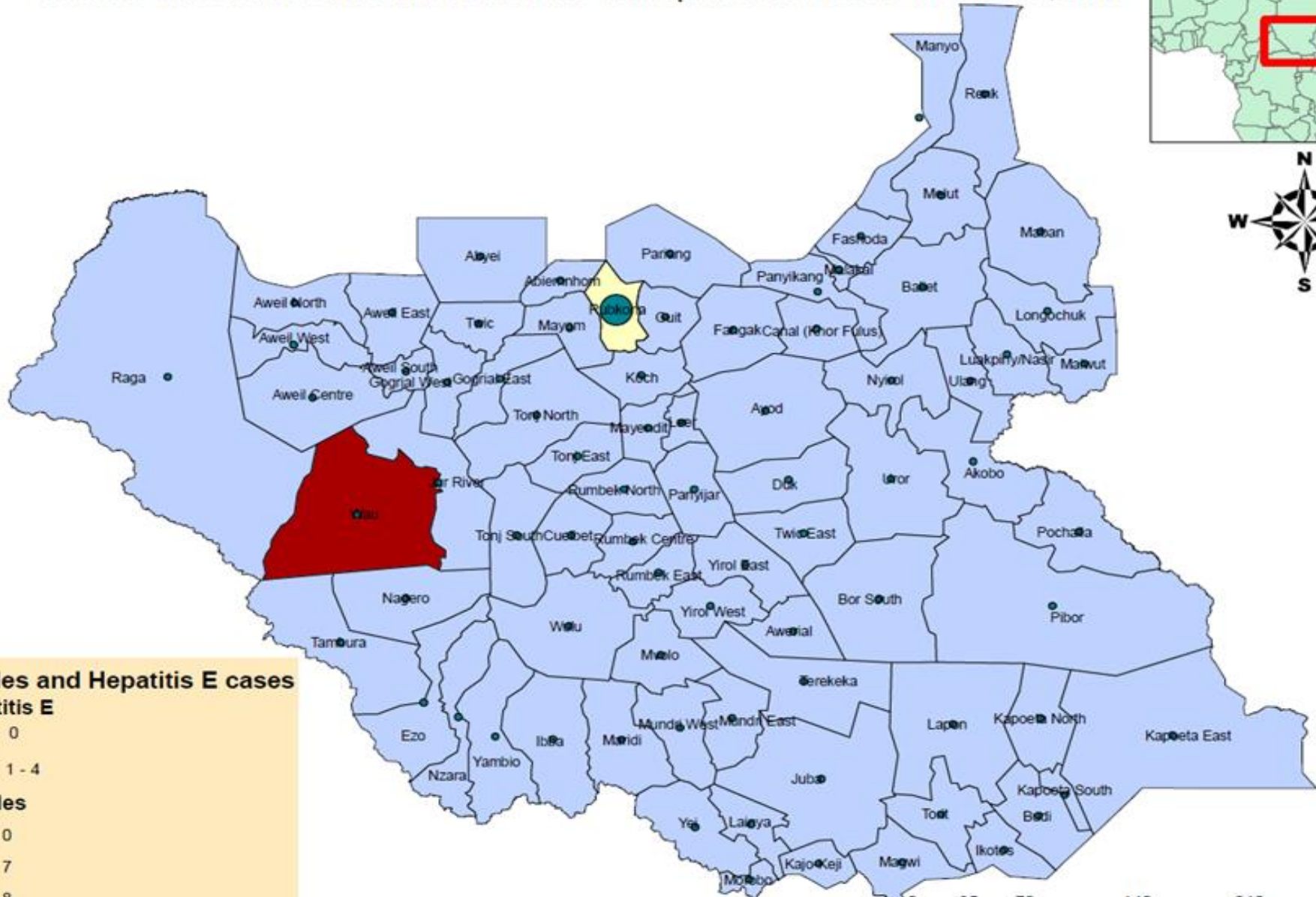
Laboratory Results for week 30, 2019

Loaction	Health Facility Name	Date sent to Juba	Date Received at NPHL	Suspected Disease	Lab results
Rubkona	Bentiu POC/ MSF	7/24/2019	7/25/2019	Measles	Measles Igm Positive
Rubkona	Bentiu POC/MSF	7/24/2019	7/25/2019	Measles	Measles Igm Positive
Rubkona	Bentiu POC/MSF OCA	7/24/2019	7/25/2019	Measles	Measles Igm Positive
Rubkona	MSF OCA	7/23/2019	7/24/2019	Measles	Measles Igm Positive
Rubkona	Bentiu POC/MSF	7/24/2019	7/25/2019	Measles	Measles Igm Positive
Koch	Bentiu POC /MSF	7/23/2019	7/25/2019	Measles	measles & Rubella Negative
Mayom	Bentiu POC	7/23/2019	7/25/2019	Measles	Measles Igm Positive
Malakal	MSF Hospital	7/25/2019	7/26/2019	Measles	Rubella Igm Positive
Abyei	MSF CH Agok	7/24/2019	7/25/2019	Measles	Rubella Igm Positive
Abyei	MSF CH Agok	7/24/2019	7/25/2019	Measles	measles & Rubella Negative
Abyei	MSF CH Agok	7/24/2019	7/25/2019	Measles	measles & Rubella Negative
Abyei	MSF CH Agok	7/24/2019	7/25/2019	Measles	Measles Igm Positive
Abyei	Kaljak PHCC	7/26/2019	7/26/2019	Measles	Measles Igm Positive
Rubkona	Kaljak PHCC	7/26/2019	7/26/2019	Measles	measles & Rubella Negative
Rubkona	Kaljak PHCC	7/26/2019	7/26/2019	Measles	Measles Igm Positive
Rubkona	Kaljak PHCC	7/26/2019	7/26/2019	Measles	Measles Igm Positive
WAU	Wau Hospital	7/25/2019	7/26/2019	Measles	Empty container
WAU	Wau Hospital	7/25/2019	7/26/2019	Measles	Measles Igm Positive
WAU	Daniel Comboni Hospital	7/25/2019	7/26/2019	Measles	Measles Igm Positive
WAU	Daniel Comboni Hospital	7/25/2019	7/26/2019	Measles	Measles Igm Positive
WAU	Pocaaalom Clinic	7/25/2019	7/26/2019	Measles	Measles Igm Positive
WAU	POC AA	7/25/2019	7/26/2019	Measles	measles & Rubella Negative
WAU	POC AA	7/25/2019	7/26/2019	Measles	Rubella Igm Positive
WAU	Cathedral IOM Clinic	7/25/2019	7/26/2019	Measles	Rubella Igm Positive
WAU	Cathedral IOM Clinic	7/25/2019	7/26/2019	Measles	measles & Rubella Negative
WAU	Daniel Comboni Hospital	7/25/2019	7/26/2019	Measles	Measles Igm Positive

OUTBREAKS IN 2019

Major suspected and confirmed outbreaks in
South Sudan in 2019

Counties with confirmed measles outbreaks that reported new cases in week 30, 2019



Measles and Hepatitis E cases

Hepatitis E

- 0
- 1 - 4

Measles

- 0
- 7
- 8



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	8	440 (0.018)	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	4	67 (0.059)	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	100	1246 (0.08)	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	7	47 (0.2)	Yes	Yes	Yes	N/A
Measles	Aweil East	13/05/2019	2	19 (0.14)	Yes	Yes	Yes	N/A

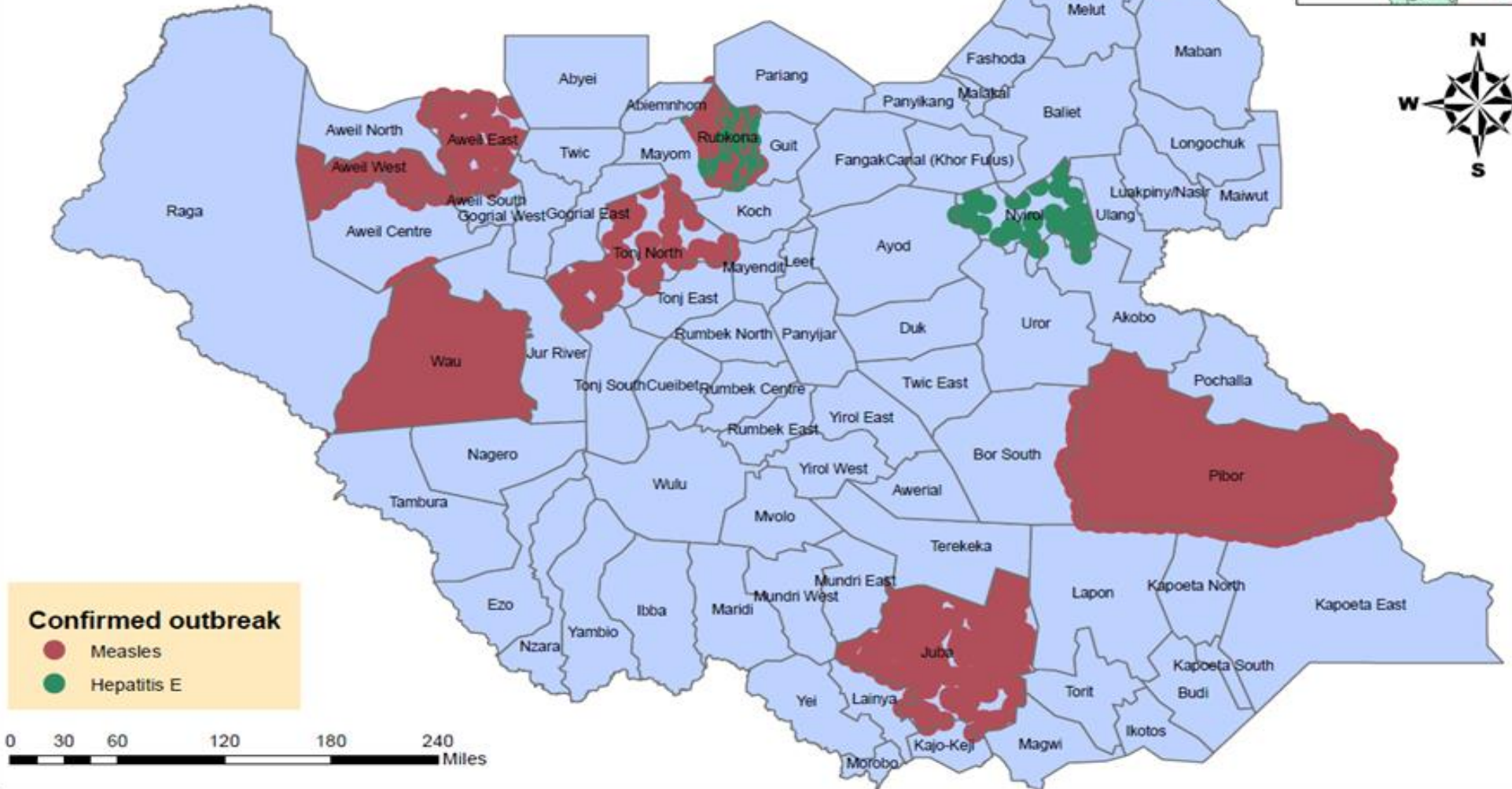
Response | Summary of major Controlled outbreaks in 2019

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

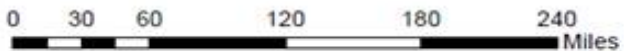
Brief epidemiological description and public health response for active outbreaks and public health events

Counties with confirmed measles cases in 2019

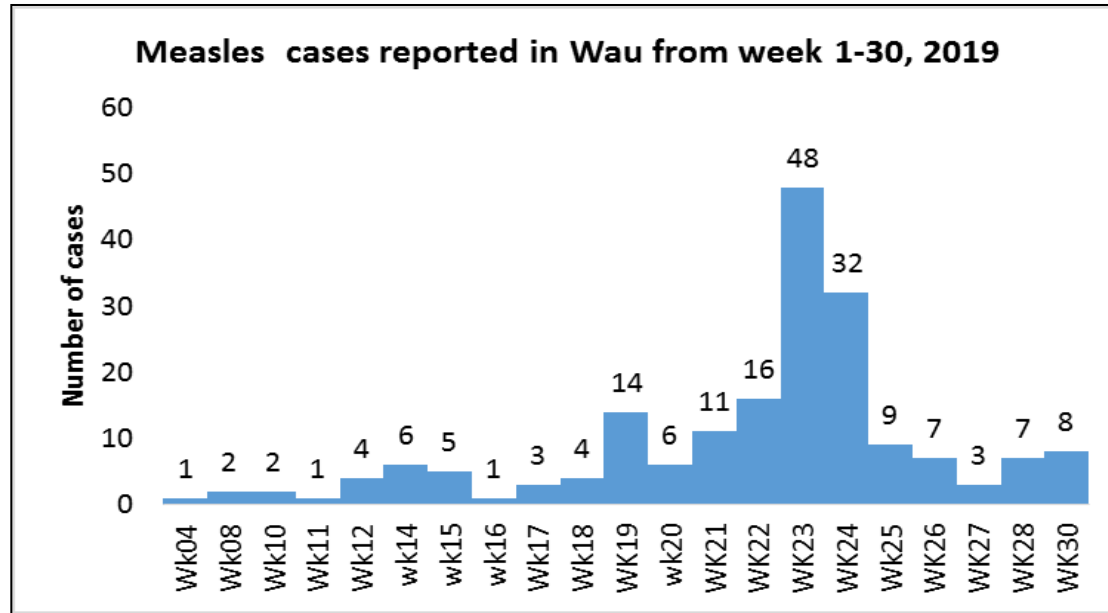


Confirmed outbreak

- Measles
- Hepatitis E



Confirmed Measles Outbreak in Wau County and POCAA



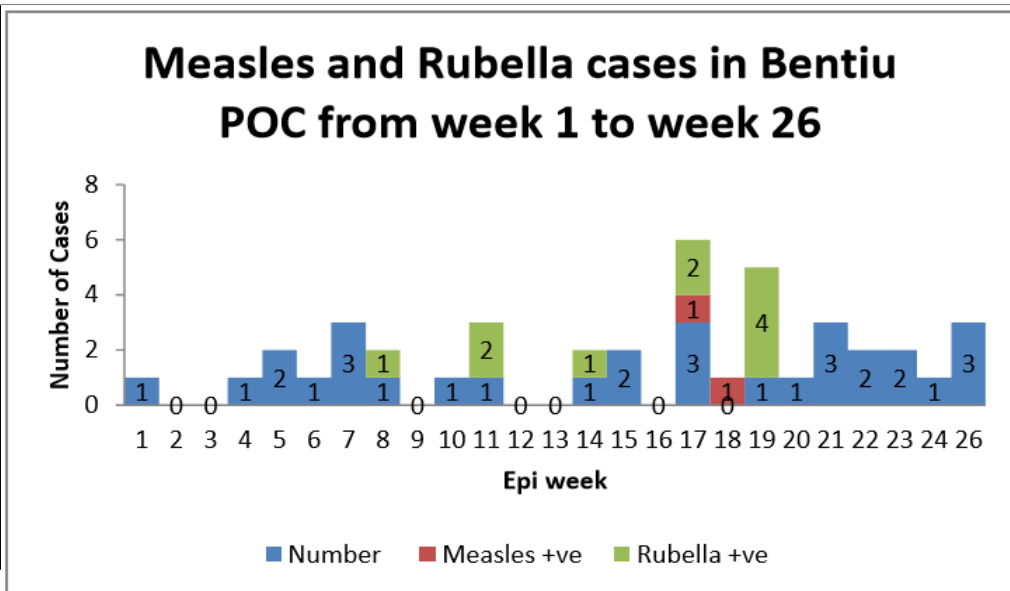
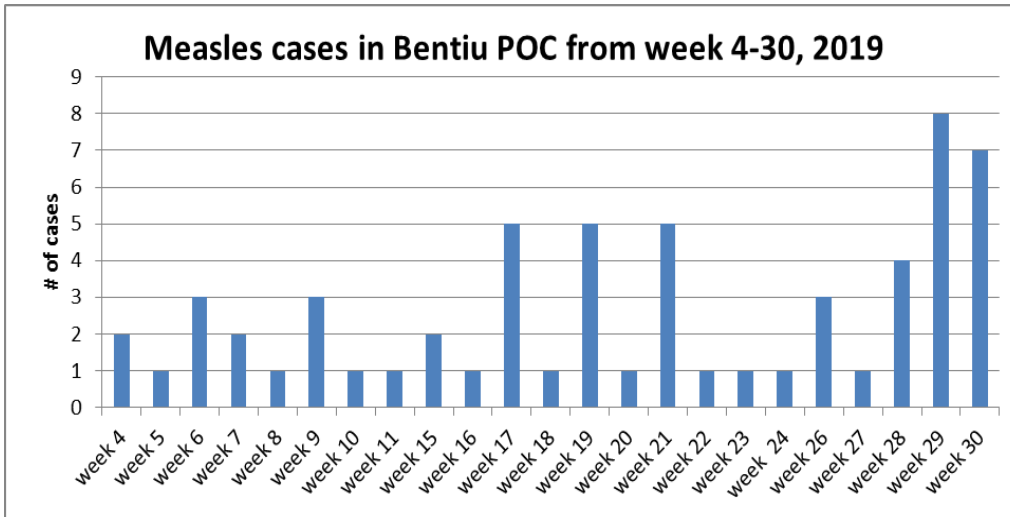
Introduction

- 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

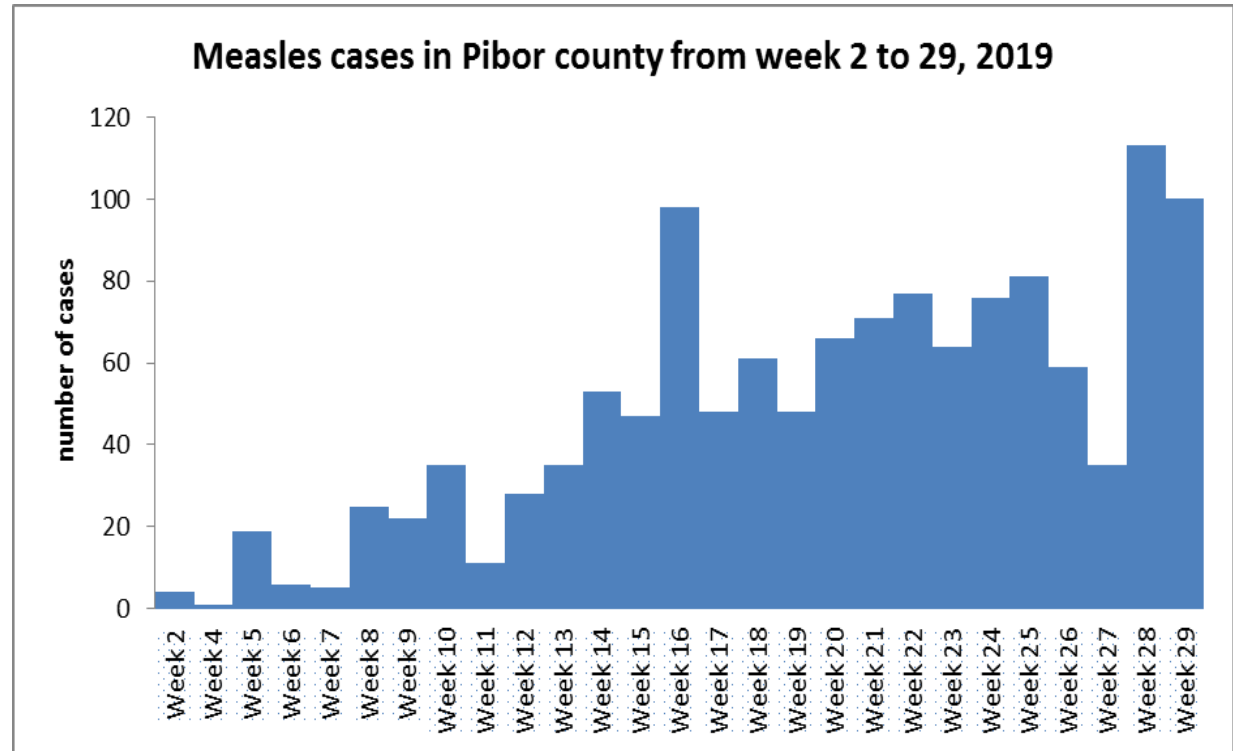


Bentiu PoC

- 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%.

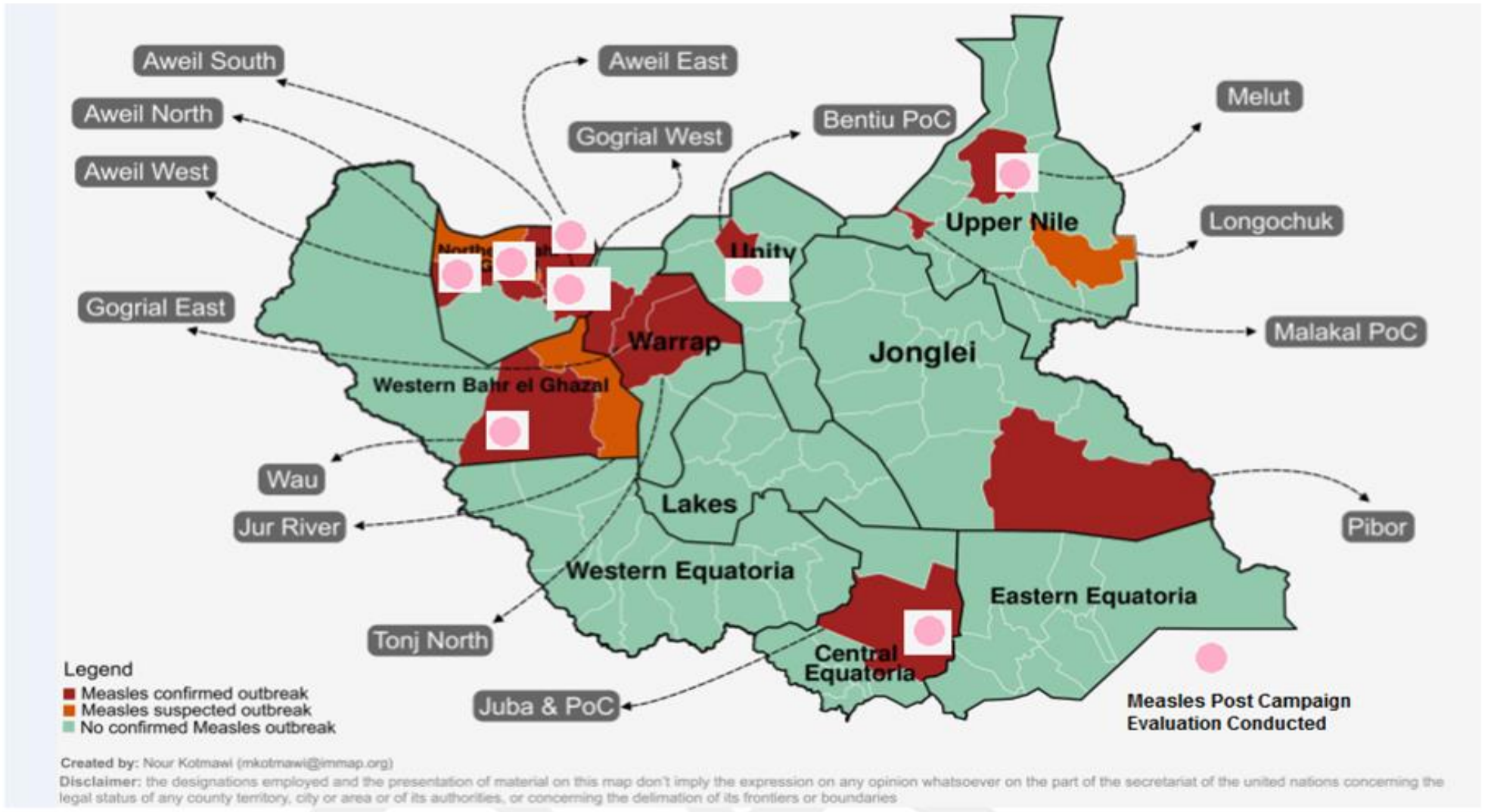
Measles in Pibor County

- 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 .

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

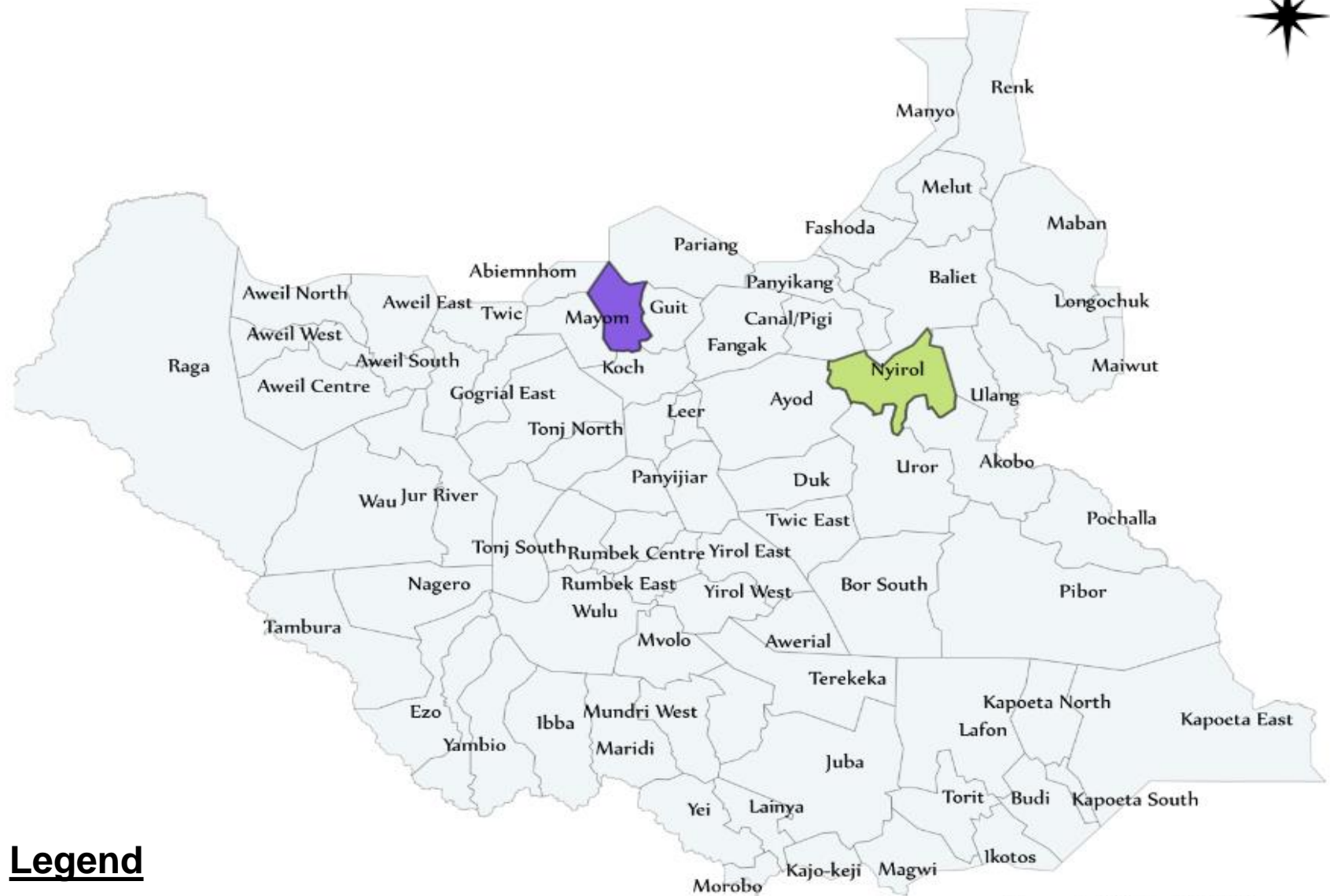
‡

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

Finger mark evidence

Based on verbal report

Hepatitis E cumulative cases in 2019



Legend

- 10
- 45
- County boundaries

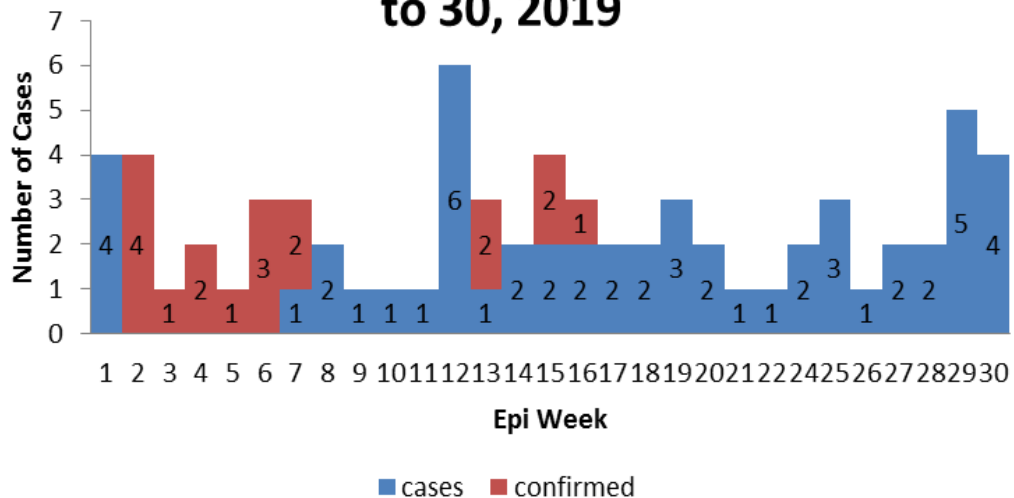
0 100 200 km



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

Hepatitis E, Bentiu PoC

HEV Cases in Bentiu POC from week 1 to 30, 2019



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.

Bentiu PoC

- The persistent transmission of HEV in Bentiu PoC continues with 58 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

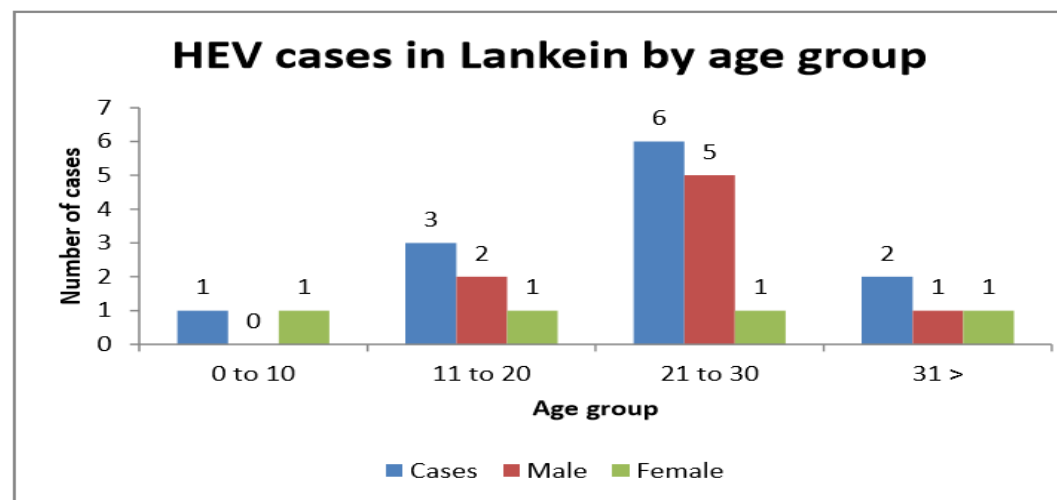
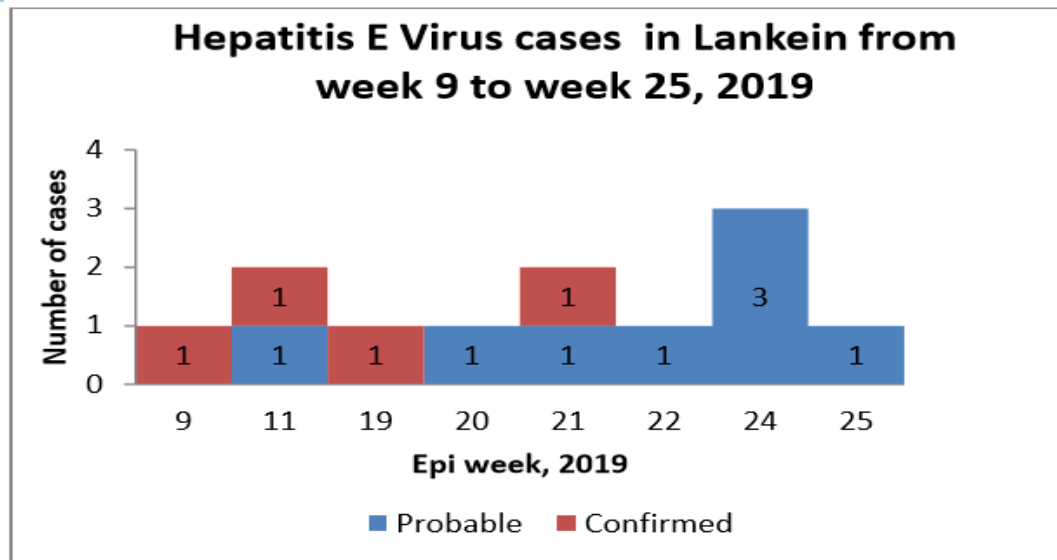
Hepatitis E cases in Lankein, 2019

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.**

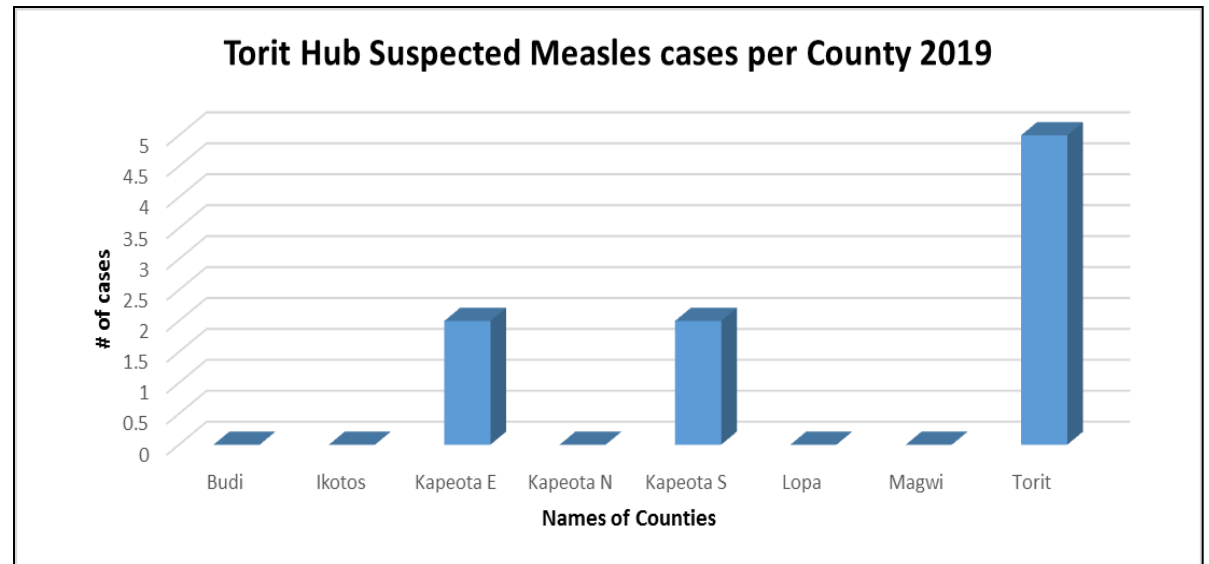
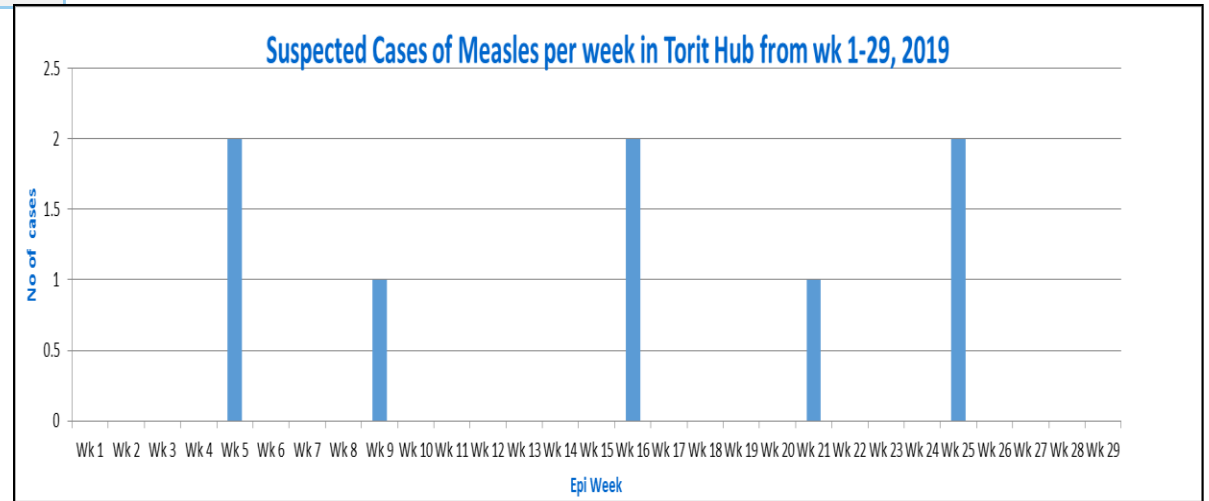
Recommended response

- 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.

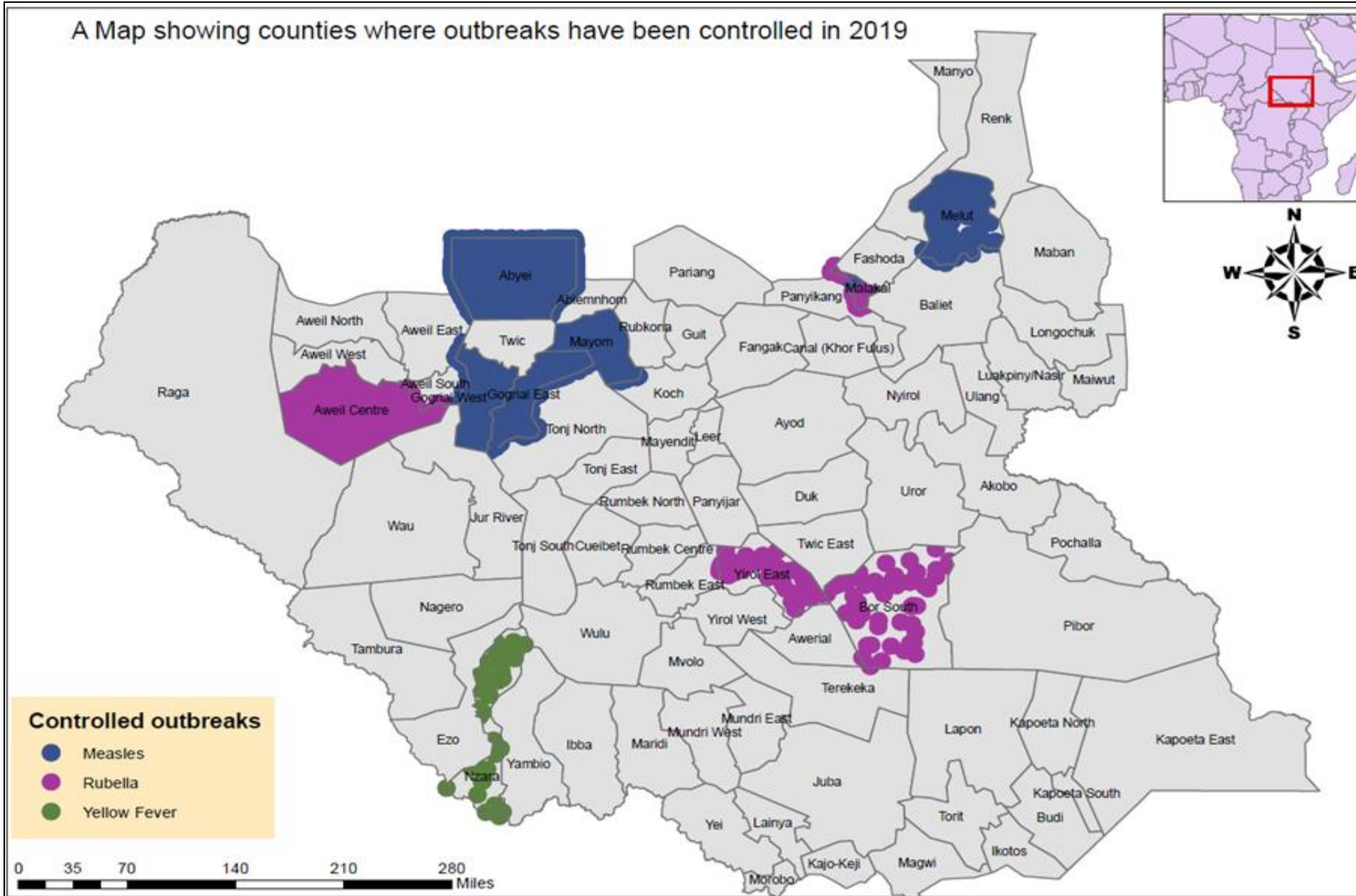


Suspected Measles Cases in Torit

- 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 30, 2019

Malaria was the leading cause of morbidity and mortality, accounting for **69.4 %** of all morbidities and **1.4 %** of all mortalities in week 30, 2019

There are **25** Counties with malaria trends that exceeded the threshold (third quartile of trends for the period 2013-2017) and these include the following:

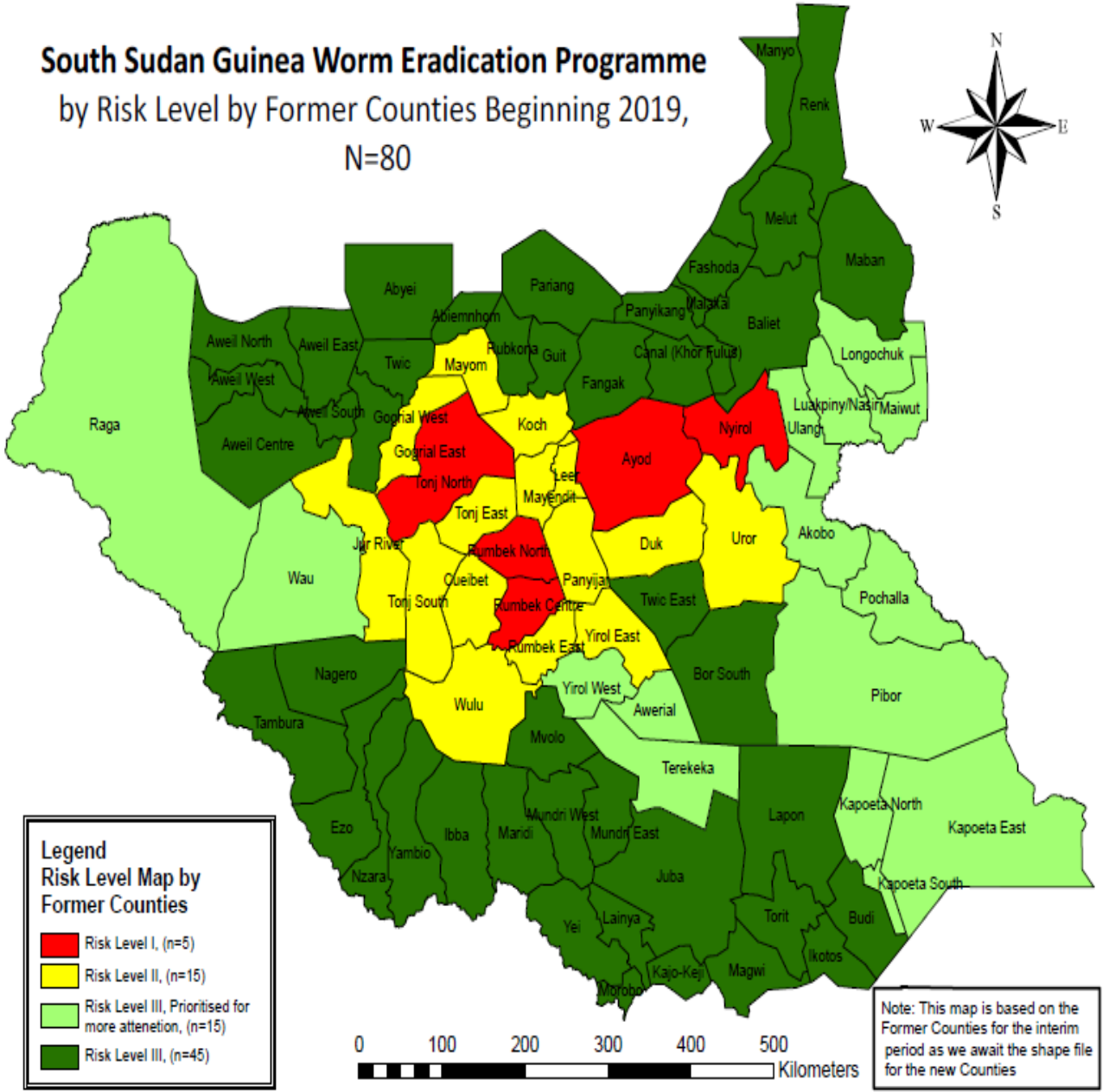
1. Juba hub (Juba ,Yei)
2. Wau hub (Wau , Jur River)
3. Kwajok hub (Gogrial East , Tonj South , Gogrial West , Abyei ,Tonj East)
4. Aweil hub (Aweil East , Aweil North , Aweil South)
5. Bentiu hub (Robkona , Mayom)
6. Bor hub (Bor)
7. Yambio hub (Tambura)
8. Rumbek hub (Yirol East , Cueibet, Rumbek Center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

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



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. There are 2379 villages under active village based 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 III, prioritized for more attention (15 former Counties)

Risk Level III (45 former Counties)

The level III areas are those that are non endemic and with little or no risk of importation.

Total Number of Rumors/ Alerts Reported by Reporting Structures for the 30th. Week of 2019, N=1626

0 Guinea Worm alert from IDSR

9 hotline rumors

Reports by Former Counties

Gogrial East =1

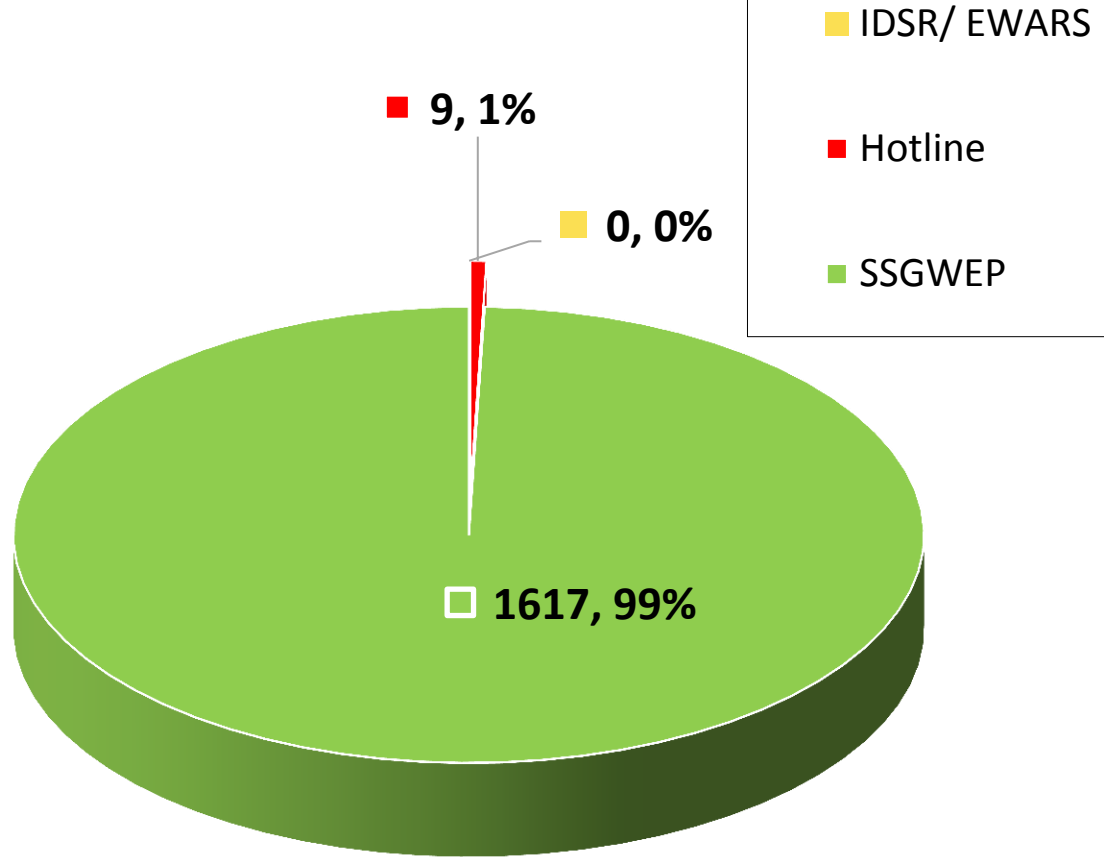
Yirol East=1

Juba=2

Tonj North=1

Rumbek Center=1

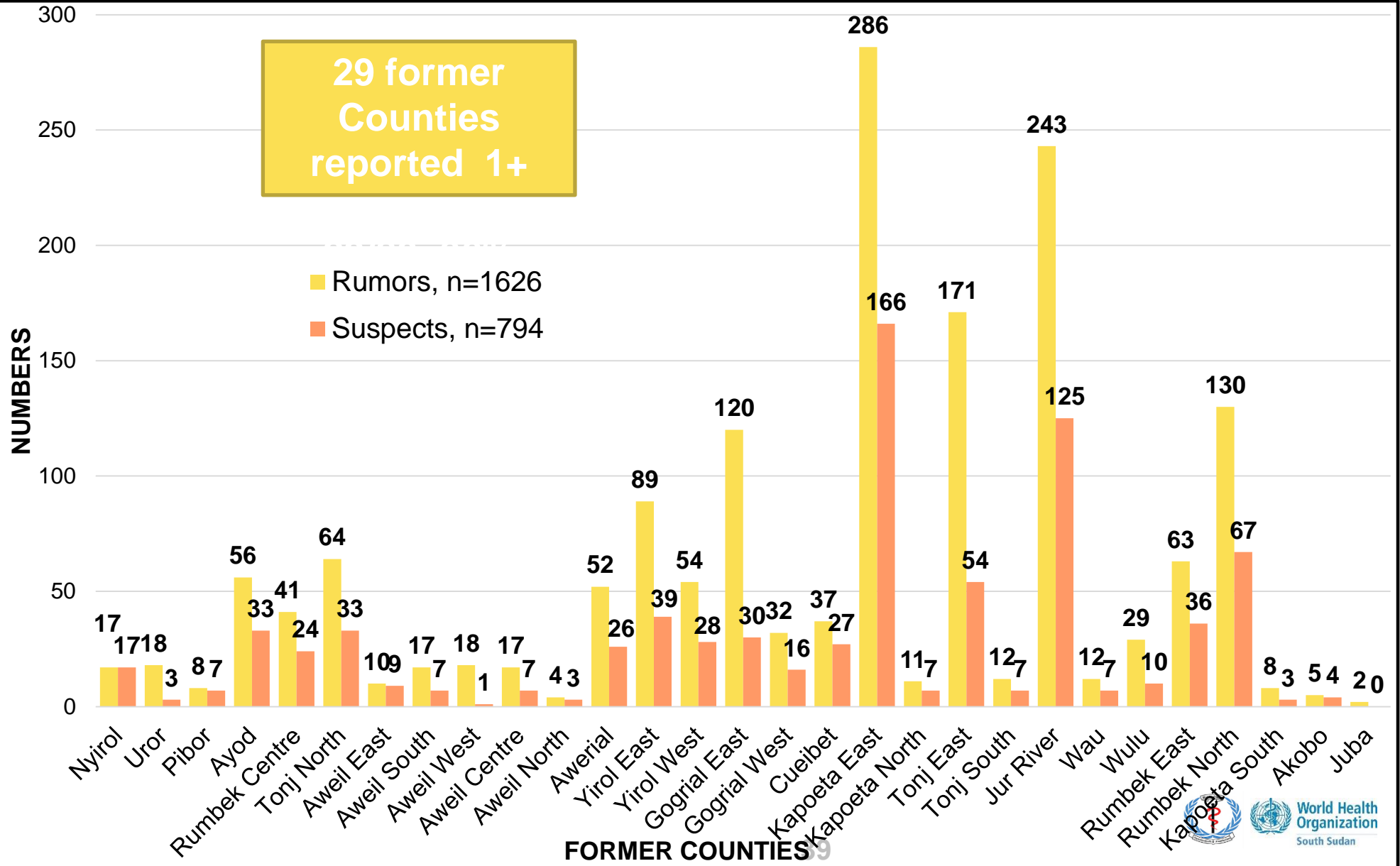
Wau=3



Former Counties that reported Rumors, and Suspects during 21st July-27th July, 2019 (30th Week) of the Year

29 former Counties reported 1+

Rumors, n=1626
Suspects, n=794

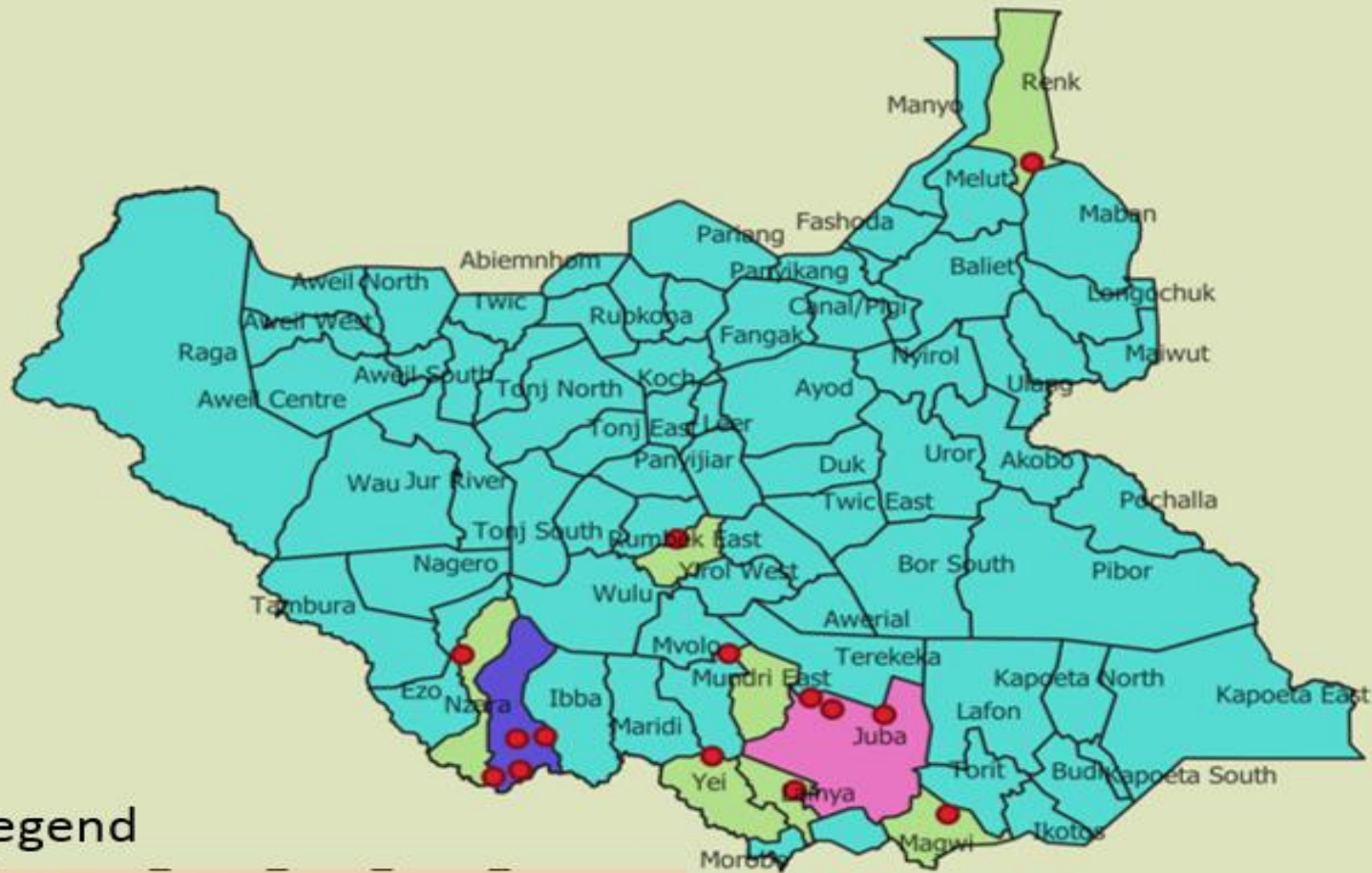


Ebola alerts investigated in 2018

Date	Cases	Deaths	Payam	County	eRDT	eGeneXpert	ePCR	Comments
28May	1	0	Makpandu	Yambio	ND	ND	-ve	Reported in refugee camp
8Sep	1	1	Bakiwiri	Yambio	ND	ND	-ve	Did not meet case definition
26Sep	1	1	N/Bari	Juba	ND	ND	-ve	Community death
30Oct	1	1	Yei town	Yei	ND	ND	ND	Never traced (?false alert)
12Oct	1	0	Rumbek	Rumbek Center	ND	-ve	-ve	Recent travel from DR Congo
14Oct	1	0	Gumbo	Juba	ND	-ve	-ve	Did not meet case definition
18Oct	1	1	Mundri East	Mundri East		ND	-ve	Reported by Lui hospital
21Oct	1	1	Yambio	Yambio	ND	ND	-ve	Recovered & discharged
29Oct	2	0	Nimule	Pageri	ND	ND	ND	Alerts discarded
11Nov	1	1	Loka	Lainya	ND	-ve	-ve	Investigated 11 Nov
23 Nov	1	0	Sakure	Nzara	ND	-ve	-ve	Confirmed for Yellow Fever
29 Nov	1	1	Yambio	Yambio	ND	-ve	-ve	Investigated on 29 Nov
03 Dec	1	0	Renk South	Renk	ND	-ve	-ve	Investigated 4 Dec
15 Dec	1	0	Rejaf	Rejaf	ND	-ve	-ve	Investigated 15 Dec
25 Dec	1	0	Yambio Town		ND	-ve	-ve	Investigated 25 Dec

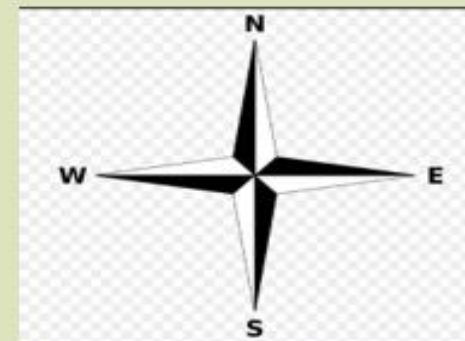
- In 2018, at least 16 alerts met the case definition and therefore underwent verification and follow up investigation by the rapid response teams.
- During 2018, at least **13** alerts that met the case definition were investigated and had samples obtained for laboratory testing will testing negative for Ebola virus disease and other hemorrhagic fevers safe for one alert in Sakure, Nzara county that was confirmed yellow fever positive. |

Counties that reported Ebola Alerts in year 2018



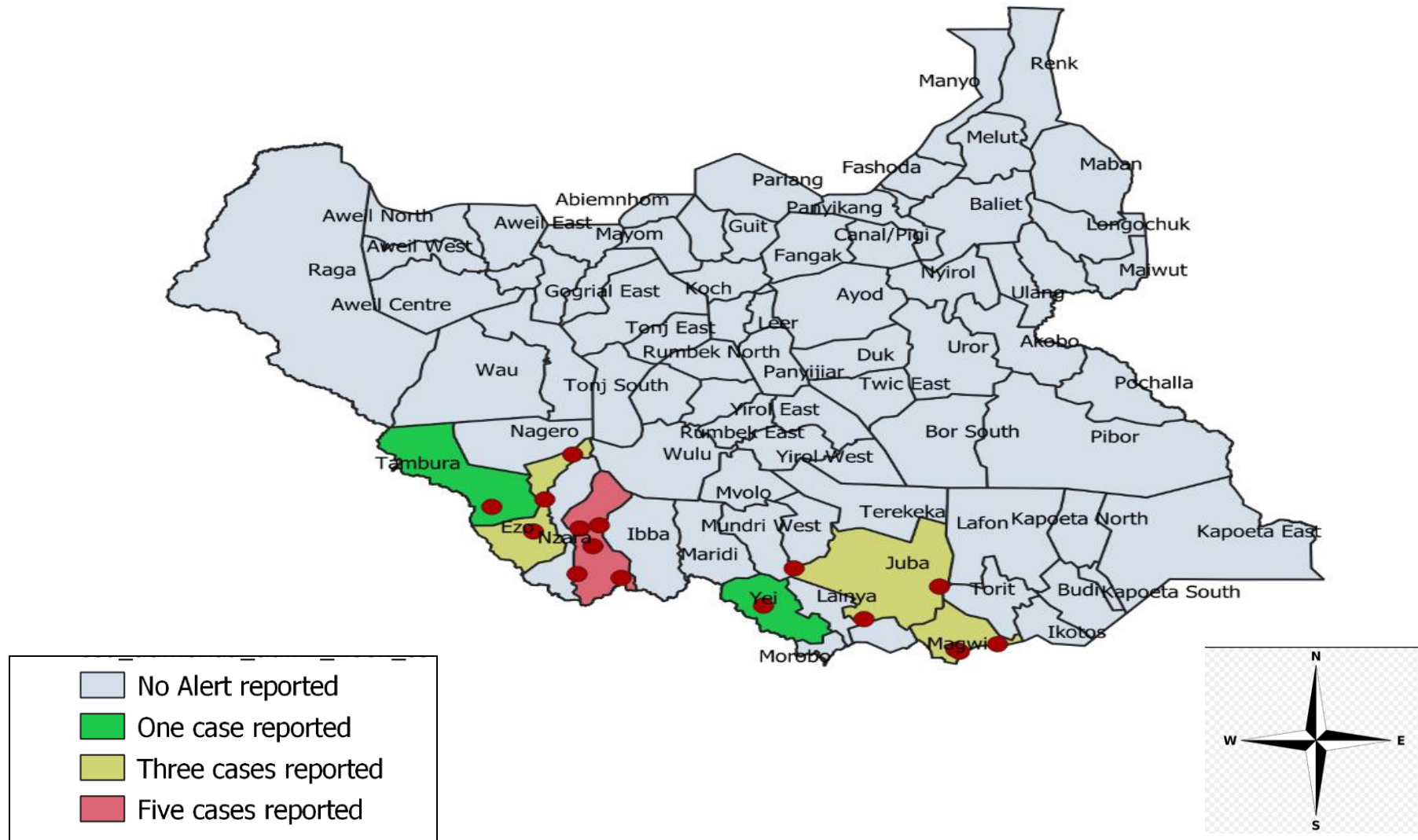
Legend

- Counties with No Alerts
- One Alert
- Two Alerts
- Four Alerts



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

Counties that reported Ebola Alerts in 2019



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Date	Cases	Deaths	Payam	County	eRDT	eGeneXpert	ePCR	Comments
27 Jan 19	1	0	Nimule		ND	-ve	-ve	Investigated on 27 Jan 2019
30 Jan 19	1	0	Nimule		ND	-ve	-ve	Investigated on 30 th Jan 2019
09 Feb 19	1	0	Juba		Nd	-ve	-ve	Investigated on 09 th Feb 2019
21 st Feb 19	1	1	Yambio		Nd	-ve	-ve	Investigated on 21 st Feb 19
25 rd Feb 19	1	0	Yambio		Nd	-ve	-ve	Investigated on 25 th Feb 19
26 th Feb 19	1	0	Yambio		Nd	-ve	-ve	Investigated on 26 th Feb 19
14 th Mar 19	1	0	Tambura		Nd	-ve	-ve	Investigated on 14 th Mar 19
22 nd Mar 19	1	0	Juba		Nd	-ve	-ve	Investigated on 22 nd Mar 19
26 th Mar 19	1	0	Ezo		Nd	-ve	-ve	Investigated on 26 th Mar 19
22 nd Apr 19	1	0	Ezo		Nd	-ve	-ve	Investigated on 22 nd Apr 19
21 st May 19	1	0	Yambio		ND	-ve	-ve	Investigated 21 st May 19
7 th June 19	1	0	EZO		ND	-Ve	-Ve	Investigated 8 th June 19
13 th June 19	1	0	Yambio		ND	pending	pending	Investigated 13 th June 19
13 th June 19	1	1	Juba		ND	Not Done	Not Done	Investigated 13 th June 19
19 th June 19	1	0	Nimule		ND	Not Done	Not Done	Investigated 19 th June 19
25 th June 19	1	0	Yei		ND	Not done	Not done	Investigated 25 th June 19

- Blood samples have been obtained from (13) Ebolavirus alerts; all tested negative for Ebolavirus and other viral hemorrhagic fevers including RVF, Marburg; Yellow Fever; and CCHF. |

EBOLA VIRUS DISEASE[EVD] PREPAREDNESS IN SOUTH SUDAN

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

Ibba EVD Alert

On 28/07/2019, an alert was received from Ibba, a female farmer who presented to the hospital with fever, bleeding from nose, fatigue, headache and wasn't able to talk. Patient had a history of similar illness since childhood; which presents with unilateral headache and bleeding from nose. No history of travel to DRC. Patient did not meet the case definition. Alert was discarded.

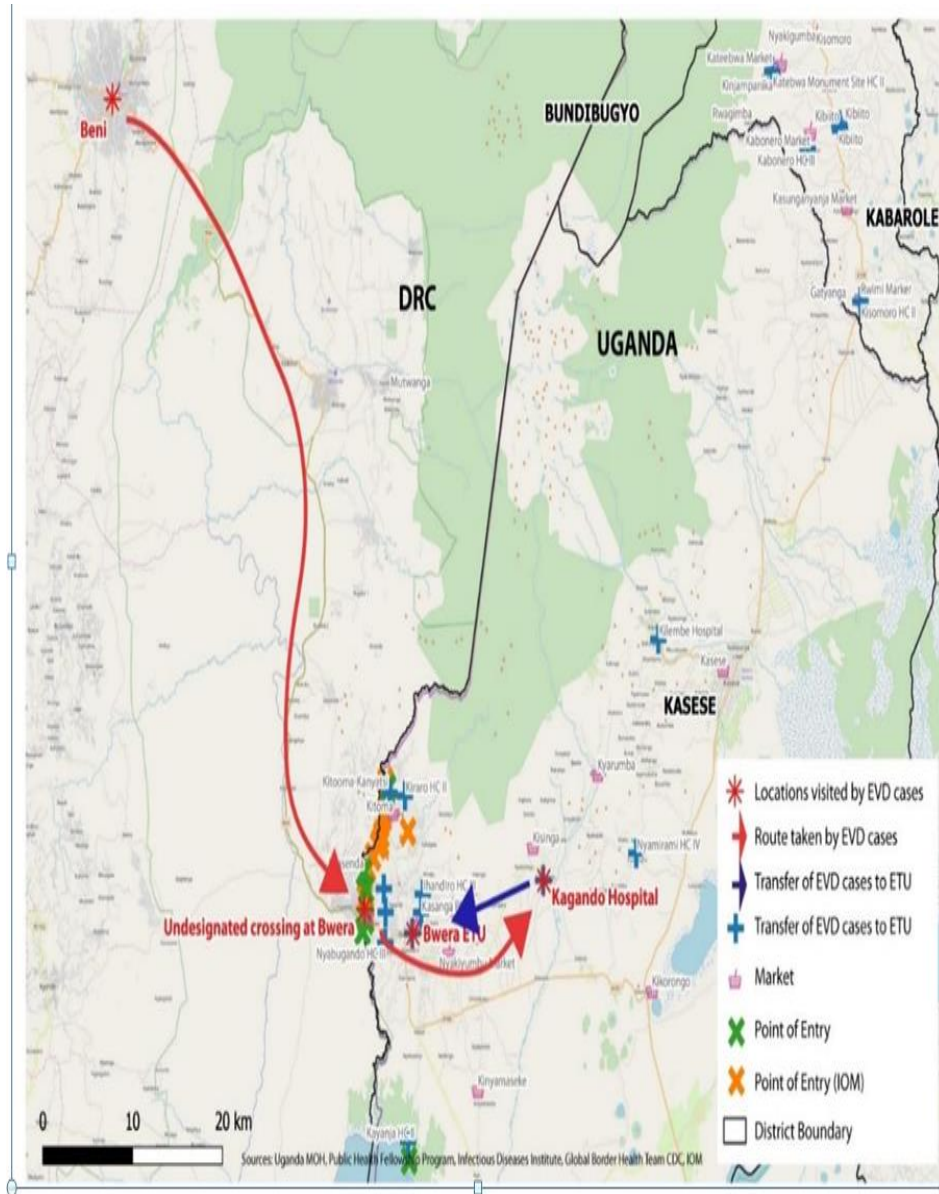
UNMISS-HoFO/ Yambio Alert:

An EVD alert was received from UNMISS-HoFO of a sudden death on 29th July 2019. A 35 yr old woman had suddenly died in CONGO and was brought for burial in Ikpiro in Yambio.

The woman had a chronic illness for about 2 months. She was taken from Yambio to Bandala in Ezo county for traditional medicine a month ago but she succumbed to the illness on the 28th July 2019. The relatives decided to bring the remains to Yambio for burial.

The case did not meet EVD case definition and was immediately discarded.

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 31th July, 2019

Current situation

- Currently as of **31th July, 2019**
- **2713** Cases [**2619** confirmed & 94 probable]
- **1823** Deaths [**1729** confirmed & 94 probable]

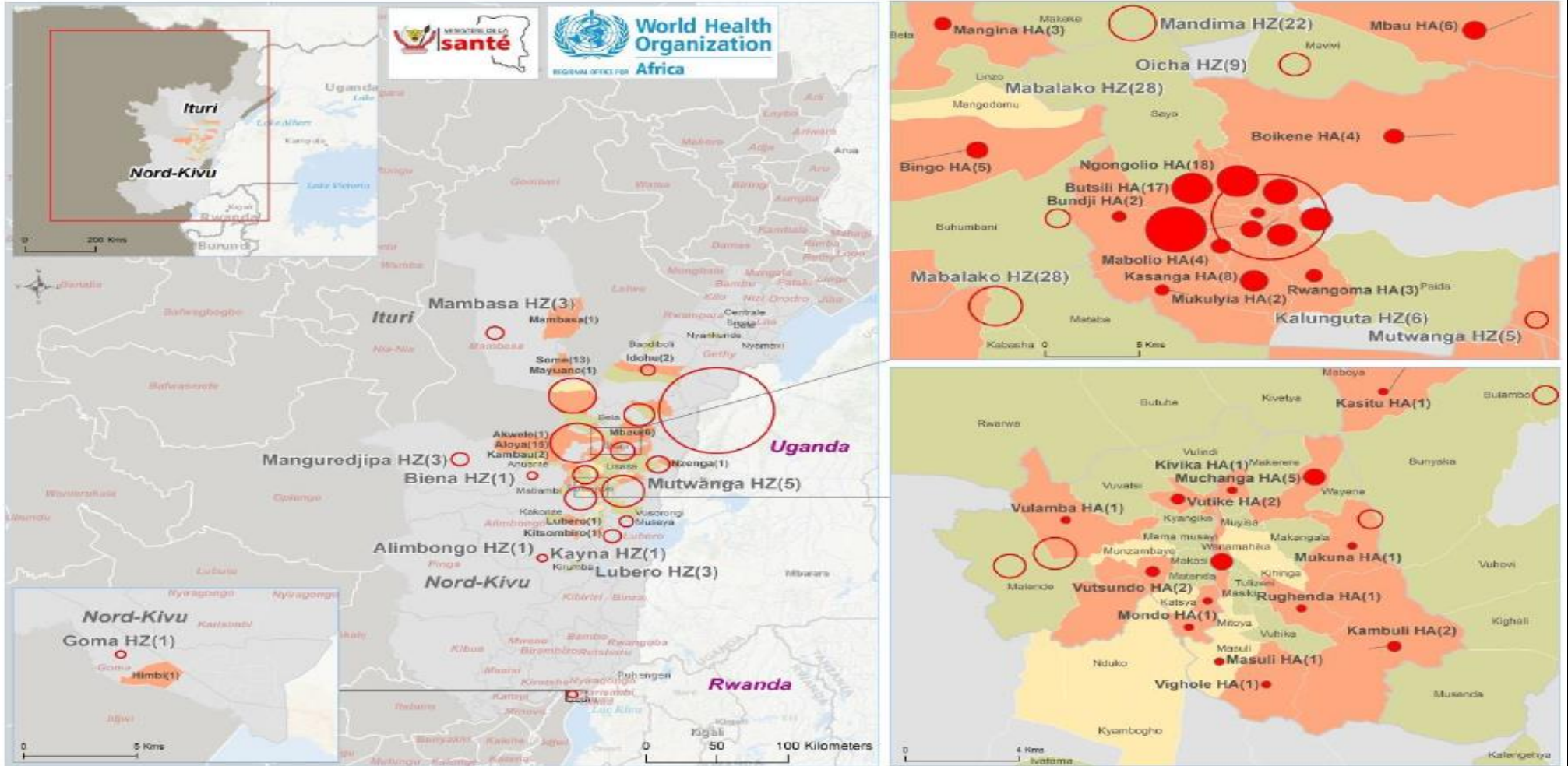
Response update

- On 17 July 2019, The Director-General accepted the Emergency Committee's recommendation that the outbreak in the Democratic Republic of the Congo (DRC) constitutes a Public Health Emergency of International Concern (PHEIC).

Affected health zones

- In last 21 days, 65 health areas within 18 health zones reported new cases, representing 16% of the 664 health areas within North Kivu and Ituri provinces. During this period, a total of 254 confirmed cases were reported, the majority of which were from the health zones of Beni (52%, n=133), Mabalako (11%, n=28), Mandima (9%, n=22) and Katwa (7%, n=18) which are the main active areas in the outbreak.

Democratic Republic of Congo EVD Spot map

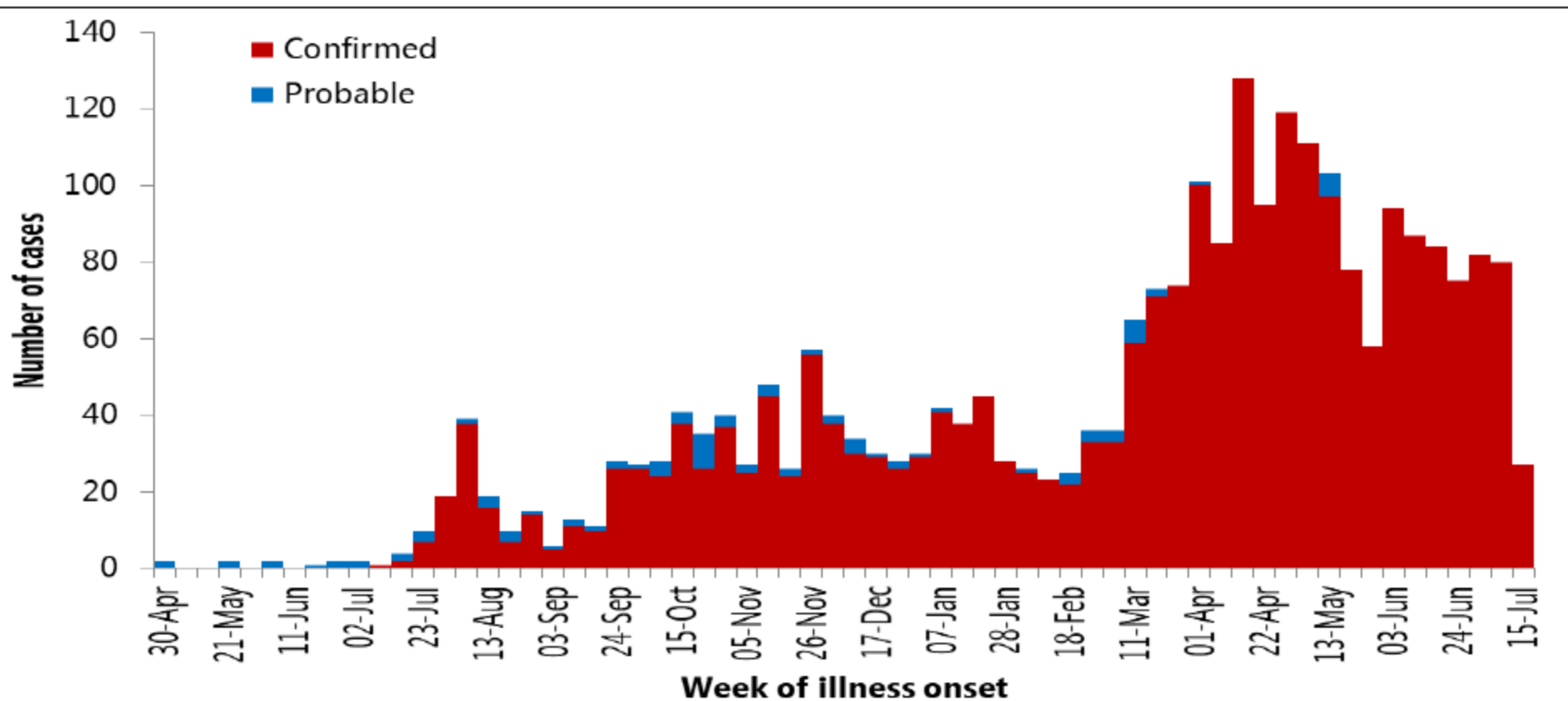


Data as of the 21th of July 2019
 By Health Emergencies Programme
 Source: MCH DRC
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EVD Epi-curve by week of illness in DR Congo

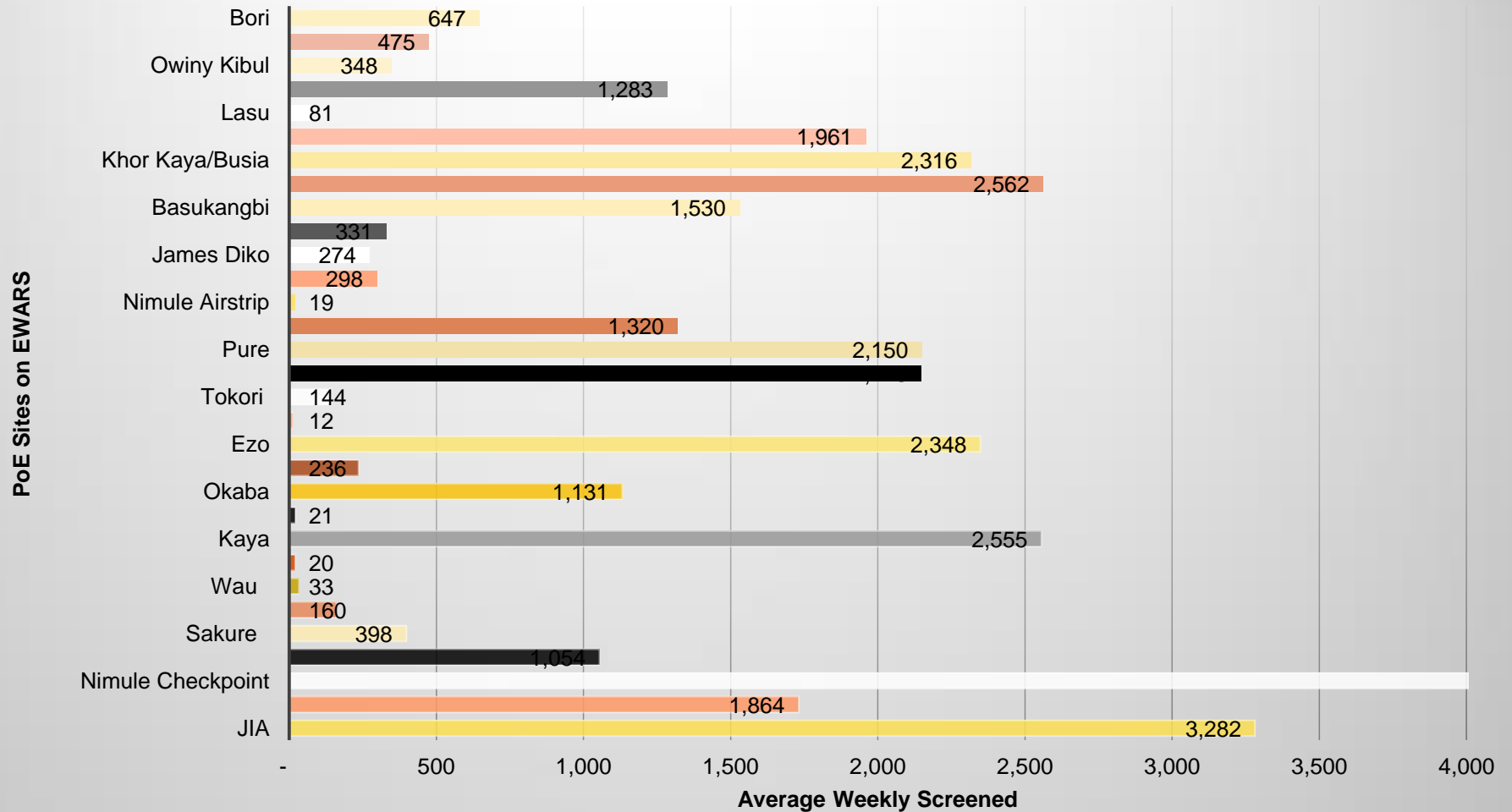


- Active transmission with continued increase in the number of new Ebola virus disease (EVD) cases in the affected geographical regions. █

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.

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

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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>

