

# South Sudan

## Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 26, 2019 (June 24 - June 30)



## Major Epidemiological Developments W26, 2019

- In week 26, Completeness for IDSR reporting at county level was 57% . Completeness for EWARS reporting from IDP sites was 90% .
- A total of 130 alerts received in week 26, 2019 out of which 65% were verified. 5% was risk assessed and 3 required a response.
- Malaria (33), Acute watery diarrhea (27) and bloody diarrhea (16) were the top common alerts generated through the EWARS in week 26, 2019.
- Suspected cholera case in UN House IMC clinic on 24<sup>th</sup> June, 2019. A 28 yrs old female. Patient recovered. Sample was not collected.
- Suspected measles deaths in Wau; 5 deaths were reported in May and June, 2019 from St. Daniel Comboni hospital, IMC health clinic in POC-AA and Mary help hospital.
- Suspected Guinea worm case in Panyume, Yei. On 26<sup>th</sup> June, 2019. Follow up is ongoing by G.W program,
- 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 82 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 42 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 (W26 2019)

Hub	Reporting		Performance	
	# counties	# reports received	Completeness	Timeliness
Aweil	5	1	20%	20%
Bentiu	9	6	67%	67%
Bor	11	3	27%	27%
Juba	6	1	17%	17%
Kuajok	7	3	43%	29%
Malakal	13	4	31%	31%
Rumbek	8	8	100%	100%
Torit	8	8	100%	100%
Wau	3	2	67%	0%
Yambio	10	10	100%	100%
<b>South Sudan</b>	<b>80</b>	<b>46</b>	<b>57%</b>	<b>54%</b>

Table 2 | Summary of key IDSR surveillance indicators

W26	Cumulative (2019)	
<b>80</b>	-	Number of counties
<b>57%</b>	<b>70%</b>	Completeness
<b>54%</b>	<b>54%</b>	Timeliness

Table 3 | IDSR report submissions

W26	Cumulative (2019)	
<b>46</b>	<b>1,628</b>	total submissions
<b>5</b>	<b>0</b>	submissions by mobile
<b>41</b>	<b>0</b>	submissions by web

- In this week 26,2019 the Completeness is **57%** and the Timeliness is **54%** while the cumulative completeness and timeliness was **70%** and **54%** 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.

## EWARS Performance at Facility Level Timeliness and Completeness for week 26,2019

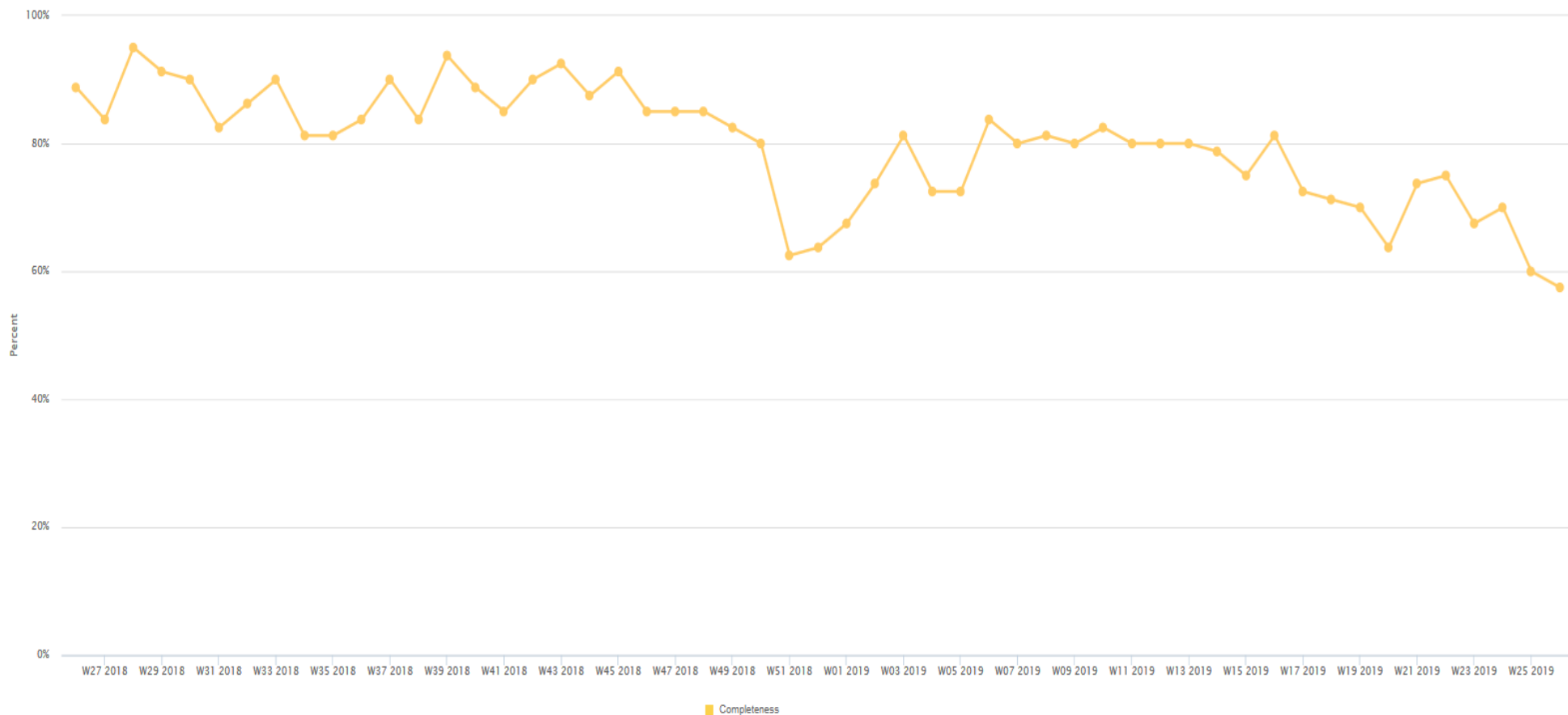
State	Supporting Partners	Total No. of Health Facility	No. of Facilities Reported on Time	Timeliness Percentage	No. of Facilities Reported on not on Time	Completeness Percentage
Rumbek Hub	Doctors with Africa (CUAMM)	120	56	47%	71	59%
Aweil Hub	Malaria Consortium, HealthNet TPO, IRC, CEDS, IHO,	145	36	25%	45	31%
Bentiu Hub	Cordaid, UNIDOR, IRC, C HADO, CARE International	99	5	5%	5	5%
Wau Hub	Cordaid, HealthNet TPO, CARE International, IHO	85	17	20%	20	24%
Yambio Hub	AMREF, World Vision, CUAMM, CDTY, O PEN,	214	145	68%	150	70%
Bor Hub		168	21	13%	23	14%
Kuajok Hub	GOAL, CCM, WVI, Malaria Consortium, UNKEA	137	31	23%	36	26%
Torit Hub	Cordaid, HLSS, CMD	177	120	68%	130	73%
Juba Hub	HLSS, SSUHA, Healthnet TPO, IHO	155	53	34%	57	37%
Malakal Hub		160	0	0%	0	0%
South Sudan		1479	484	33%	537	36%
<b>Key</b>						
				<b>Poor</b>		
				<b>Fair</b>		
				<b>Good</b>		
				<b>Excellent</b>		

Above table is the IDSR data from the health facilities following the EWARS rollout to Health facilities in all 10 state Hubs. State MoH; CHD; health cluster partners; HPF partners; UNICEF/WB partners are to support the health facilities to submit their reports on time.

# Surveillance | Trend in IDSR completeness

## Surveillance | Trend in IDSR completeness

Figure 1 | Trend in IDSR completeness over time



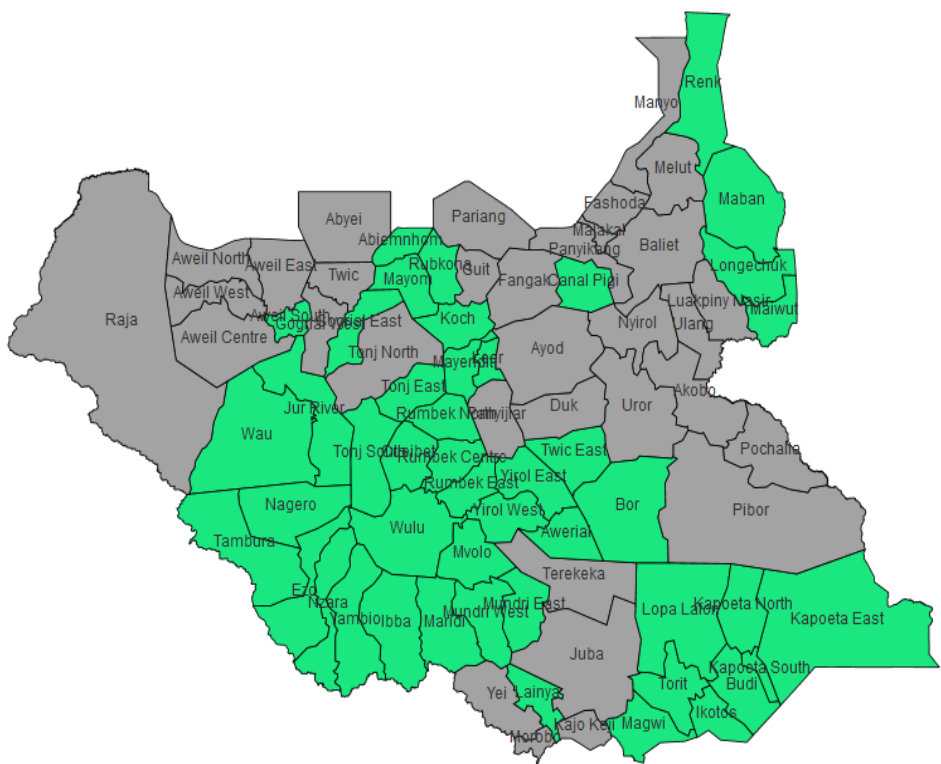
The graph shows completeness for the weekly IDSR reporting at the county level over time from 2018 to week 26, 2019.



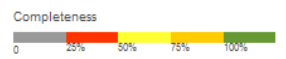
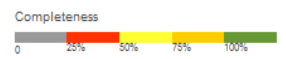
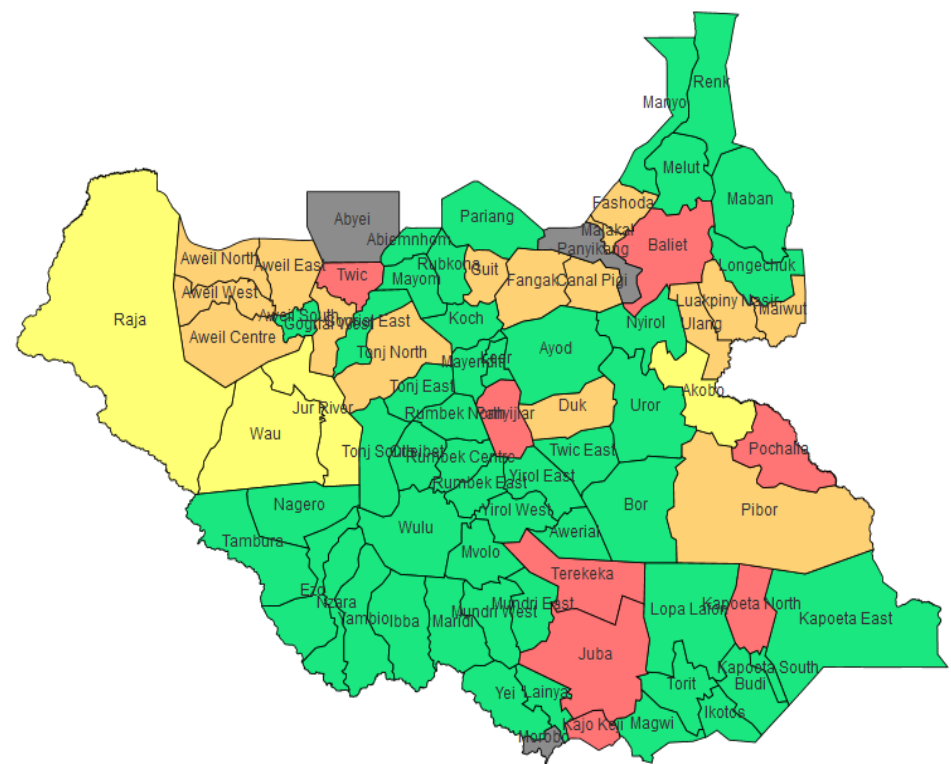
# Surveillance | Maps of IDSR completeness by county

## Surveillance | Maps of IDSR completeness by county

Map 1a | Map of IDSR completeness by county (W26 2019)



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



- Counties that submitted their IDSR reports in week 26, 2019 are shown in green in map 1a.
- Counties that did not submit their IDSR reports in week 26, 2019 are shown in grey in map 1a.

# Surveillance | EWARS surveillance indicators

## Surveillance | EWARS surveillance indicators

**Table 4 |** EWARS surveillance performance indicators by partner (W26 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	2	100%	100%
MSF-H	3	2	67%	33%
SMC	7	5	71%	71%
UNIDO	1	1	100%	100%
UNKEA	2	2	100%	100%
World Relief	1	1	100%	100%
TRI-SS	2	2	100%	100%
LIVEWELL	2	2	100%	100%
<b>Total</b>	<b>69</b>	<b>62</b>	<b>90%</b>	<b>86%</b>

**Table 5 |** Summary of key EWARS surveillance indicators

W26	Cumulative (2019)	
<b>69</b>	-	Number of EWARS reporting sites
<b>90%</b>	<b>72%</b>	Completeness
<b>86%</b>	<b>66%</b>	Timeliness

**Table 6 |** EWARS report submissions

W26	Cumulative (2019)	
<b>62</b>	<b>1,417</b>	total submissions
<b>0</b>	<b>29</b>	submissions by mobile
<b>62</b>	<b>1388</b>	submissions by web

- Completeness was **90%** and timeliness was **86%** for EWARS reporting by partners for week 26, 2019, while the cumulative completeness and timeliness were **72%** and **66%** 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	W26		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	18	22%	142	60%
Bentiu	8	63%	146	84%
Bor	7	29%	127	33%
Juba	9	11%	198	45%
Kuajok	11	9%	145	25%
Malakal	3	100%	96	70%
Rumbek	20	95%	387	80%
Torit	10	100%	267	62%
Wau	8	100%	152	70%
Yambio	36	100%	328	84%
<b>South Sudan</b>	<b>130</b>	<b>68%</b>	<b>1988</b>	<b>65%</b>

Table 8 Summary of key alert indicators

W26	Cumulative (2019)	
<b>130</b>	<b>1988</b>	Total alerts raised
<b>68%</b>	<b>65%</b>	% verified
<b>0%</b>	<b>0%</b>	% auto-discarded
<b>4%</b>	<b>5%</b>	% risk assessed
<b>4%</b>	<b>3%</b>	% requiring a response

• A total of **130** alerts received in week 26, 2019 out of which **65%** were verified. **5%** was risk assessed and **3** required a response.

Alert | Event risk assessment

**Table 9 | Alert performance indicators by event**

Event	W26		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
<b>Indicator-based surveillance</b>				
Malaria	33	85%	315	67%
AWD	27	56%	540	64%
Bloody Diarr.	16	88%	372	65%
Measles	12	58%	397	65%
Meningitis	0	0%	0	0%
Cholera	4	100%	56	82%
Yellow Fever	1	100%	16	100%
Guinea Worm	3	67%	53	60%
AFP	2	0%	103	69%
VHF	0	0%	18	72%
Neo. tetanus	2	0%	27	56%
<b>Event-based surveillance</b>				
EBS total	0	0%	32	78%

**Table 10 | Event risk assessment**

W26	Cumulative (2019)	Risk Level
0	20	Low risk
26	26	Medium risk
0	30	High risk
5	20	Very high risk

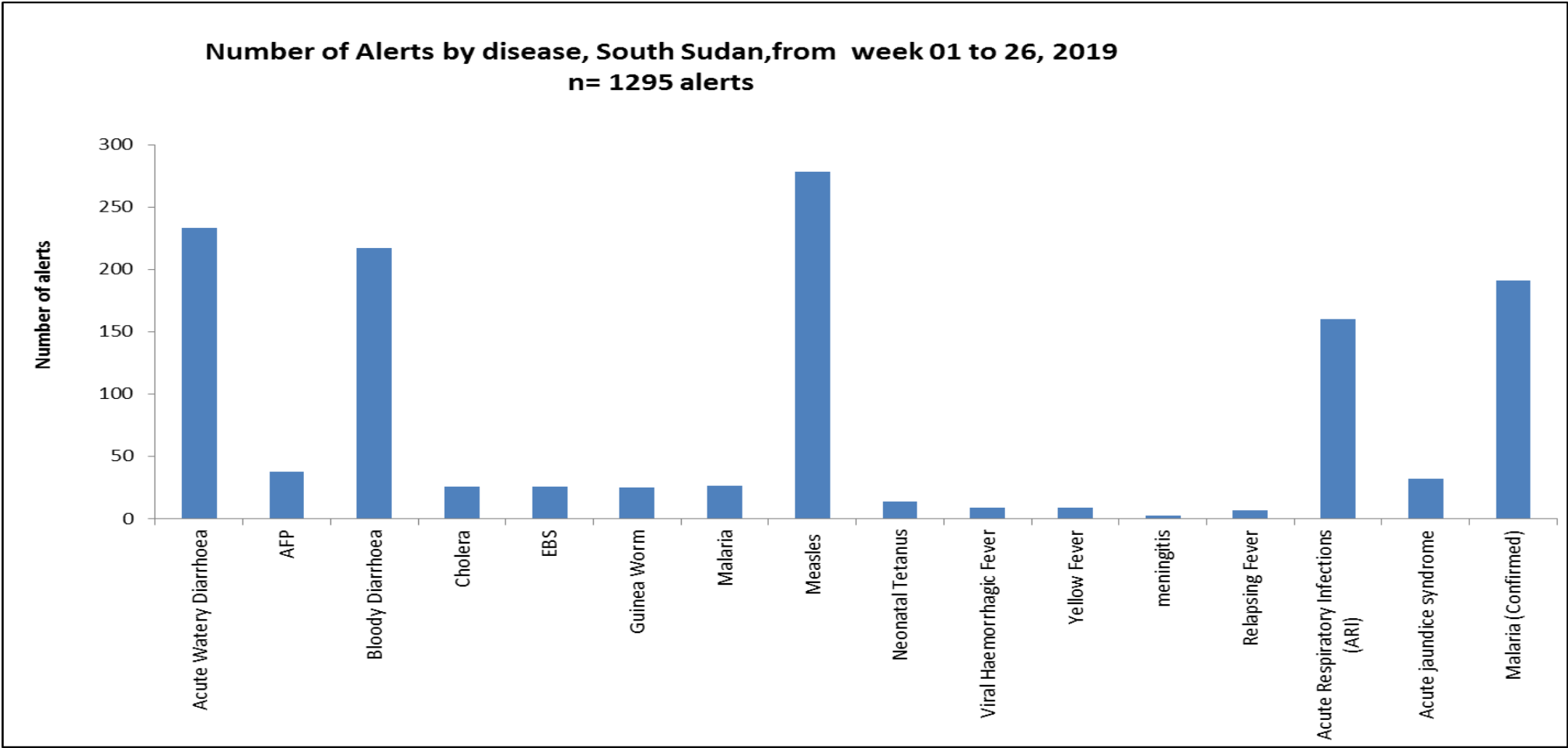
• Malaria (33), Acute watery diarrhea (27) and bloody diarrhea (16) were the top common alerts generated through the EWARS in week 26, 2019.

## Alert by disease and Hubs in W26, 2019 [A total of 130 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	3	7
Kuajok Hub		2		4		1	1					1				2	11
Torit Hub		1		3	2							3				1	10
Bentieu Hub	1	1		1								4				1	8
Yambio Hub	1	11		7	6			1	1		2	7					36
Juba Hub		1		2	2	1	1	1							1		9
Aweil Hub		5		6			1					5				1	18
Rumbek Hub	1	1		3	4			1			2	8					20
Wau Hub				1	1							2				4	8
Malakal Hub					1							2					3
<b>Total Grand</b>	<b>4</b>	<b>23</b>	<b>0</b>	<b>27</b>	<b>16</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>33</b>	<b>0</b>	<b>2</b>	<b>12</b>	<b>130</b>	

Cholera alerts from Yambio and Rumbek were all discarded.

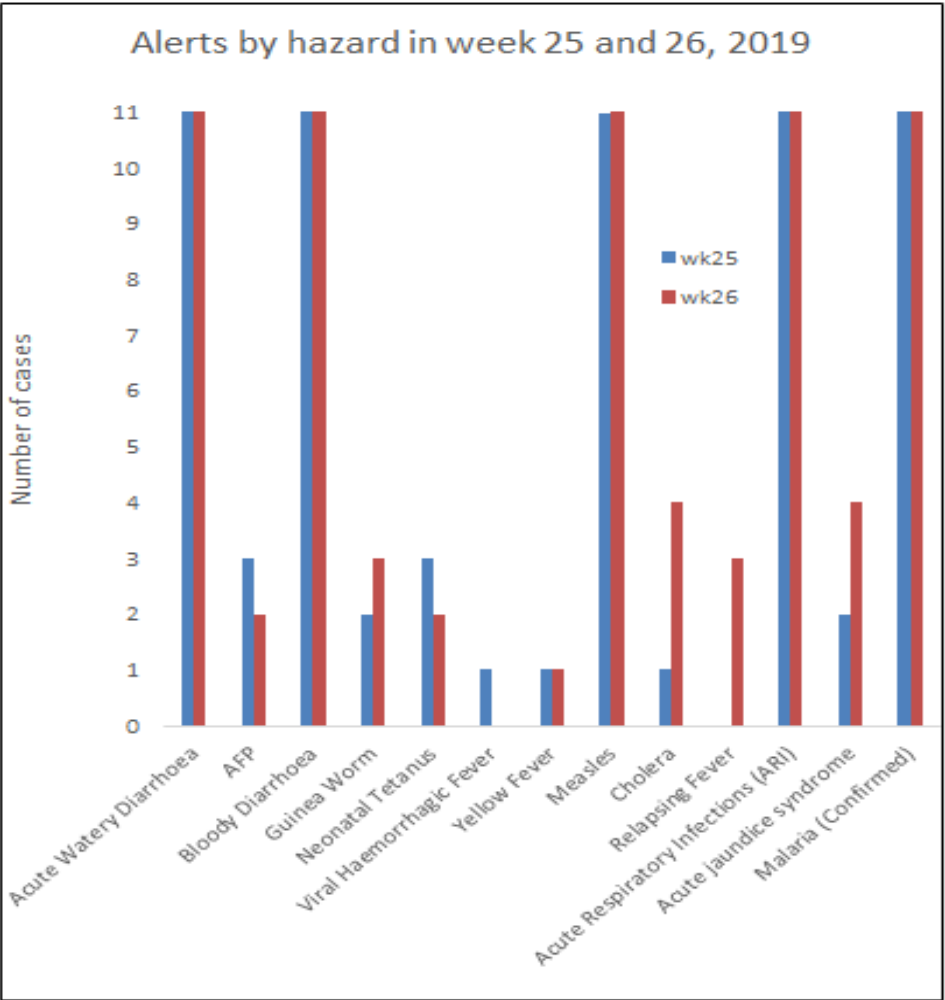
# Alerts by disease from week 1 to 26, 2019



The graph shows number of cumulative alerts from week 1 to week 26, 2019. Most common alerts generated since the beginning of the year were Measles, Bloody diarrhea, Acute watery diarrhea, Acute respiratory illness and Malaria.

# Comparison between alerts received in week 25 and 26, by disease

Row Labels	wk25	wk26	Total alerts
Acute Watery Diarrhoea	21	27	48
AFP	3	2	5
Bloody Diarrhoea	16	16	32
Guinea Worm	2	3	5
Neonatal Tetanus	3	2	5
Viral Haemorrhagic Fever	1		1
Yellow Fever	1	1	2
Measles	11	12	23
Cholera	1	4	5
Relapsing Fever		3	3
Acute Respiratory Infections (ARI)	14	23	37
Acute jaundice syndrome	2	4	6
Malaria (Confirmed)	30	33	63
<b>Total alerts</b>	<b>105</b>	<b>130</b>	<b>235</b>



Measles, acute watery diarrhea and malaria alerts are more in week 26 than in week 25

# Cumulative alerts by risk assessment stage in 2019

County	OUTCOME	RISK ASSESSED	VERIFICATION	Total Alerts	
Acute Watery Diarrhoea		6	1	226	233
AFP		2		36	38
Bloody Diarrhoea		3	2	212	217
EBS		4		22	26
Guinea Worm				25	25
Neonatal Tetanus				14	14
Viral Haemorrhagic Fever				9	9
Yellow Fever				9	9
Measles		25	5	248	278
Cholera				26	26
Malaria				27	27
meningitis		2		1	3
Relapsing Fever				7	7
Acute Respiratory Infections (ARI)		6	2	152	160
Acute jaundice syndrome		3		29	32
Malaria (Confirmed)		7	1	183	191
<b>Total Alerts</b>		<b>58</b>	<b>11</b>	<b>1226</b>	<b>1295</b>

- The table shows the cumulative alerts by risk assessment status in 2019
- Of the 1295 alerts reported in 2019; 1226 (94.6%) alerts were verified and 11 (0.84%) underwent risk assessment.

## **Juba POC/IMC Cholera Alert**

On 24<sup>th</sup> June, 2019 a suspected case of cholera was reported from IMC Clinic/Juba PoC-3, a 28years female presented with frequent watery diarrhea. The suspect was isolated at the CTC (Cholera Treatment Center) and received treatment according to Cholera guidelines. Patient has improved and discharged after 2 days. No sample was collected by implementing partner.

## **Suspected Guinea Worm from Yei**

On 26th June, 2019 a suspected Guinea worm case was reported from ICRC clinic in the SPLM-IO controlled areas in Panyume, Yei. Follow up is ongoing by Guinea Worm program.

## **Five Measles deaths reported from Wau**

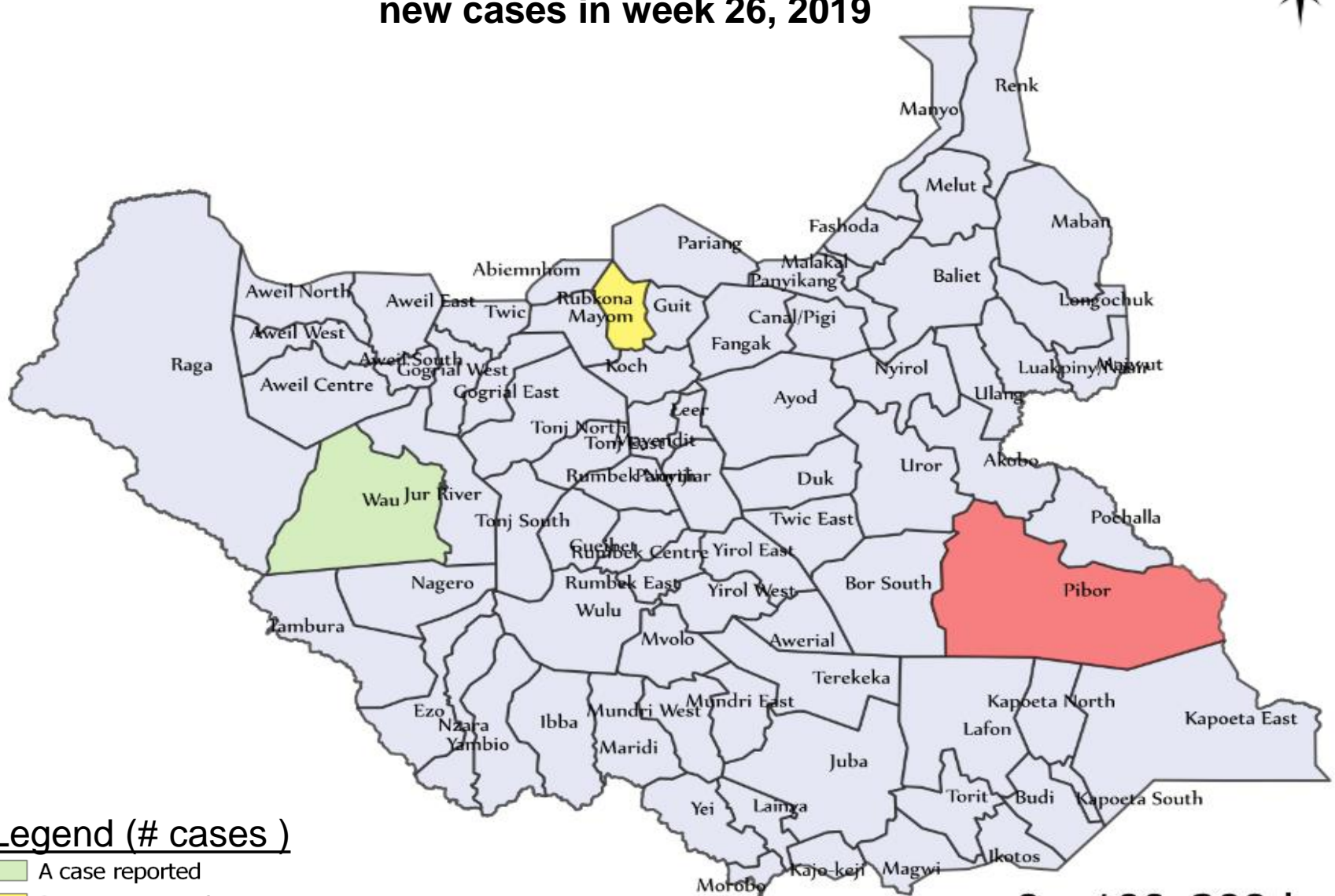
Two Measles deaths were reported way back to May, 2019; one from IMC health clinic in POC-AA and another one from Mary help hospital. St. Daniel Comboni hospital reported 3 deaths of measles on 8th, 15th & 19th June 2019. Patients reported to hospital very late with complications. Total of five (5) deaths officially reported from HFs. Measles outbreak was declared in wau and reactive campaign was conducted in june,2019 targeting (27,166) children aged from 6-59 months.



# OUTBREAKS IN 2019

Major suspected and confirmed outbreaks in  
South Sudan in 2019

# Counties with confirmed measles outbreaks that reported new cases in week 26, 2019



## Legend (# cases )

- A case reported
- 3 cases reported
- 28 cases reported
- No Cases reported in this week

0 100 200 km



# 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
<b>Ongoing epidemics</b>								
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		N/A
Measles	Wau County and PoC-AA	28/1/2019	10	425(0.023)	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	1	51(0.11)	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		N/A
Measles	Tonj North	2/04/2019	0	20 (0)	Yes	Yes	Yes	N/A
Measles	Pibor	17/01/2019	59	881(0.066)				
Measles	Aweil West	4/04/2019	0	48 (0)	Yes	Yes	Yes	N/A
Measles	Bentiu PoC	24/04/2019	3	27 (0.11)	Yes	Yes	Yes	N/A
Measles	Aweil East	13/05/2019	0	19 (0)	Yes	Yes	Yes	N/A

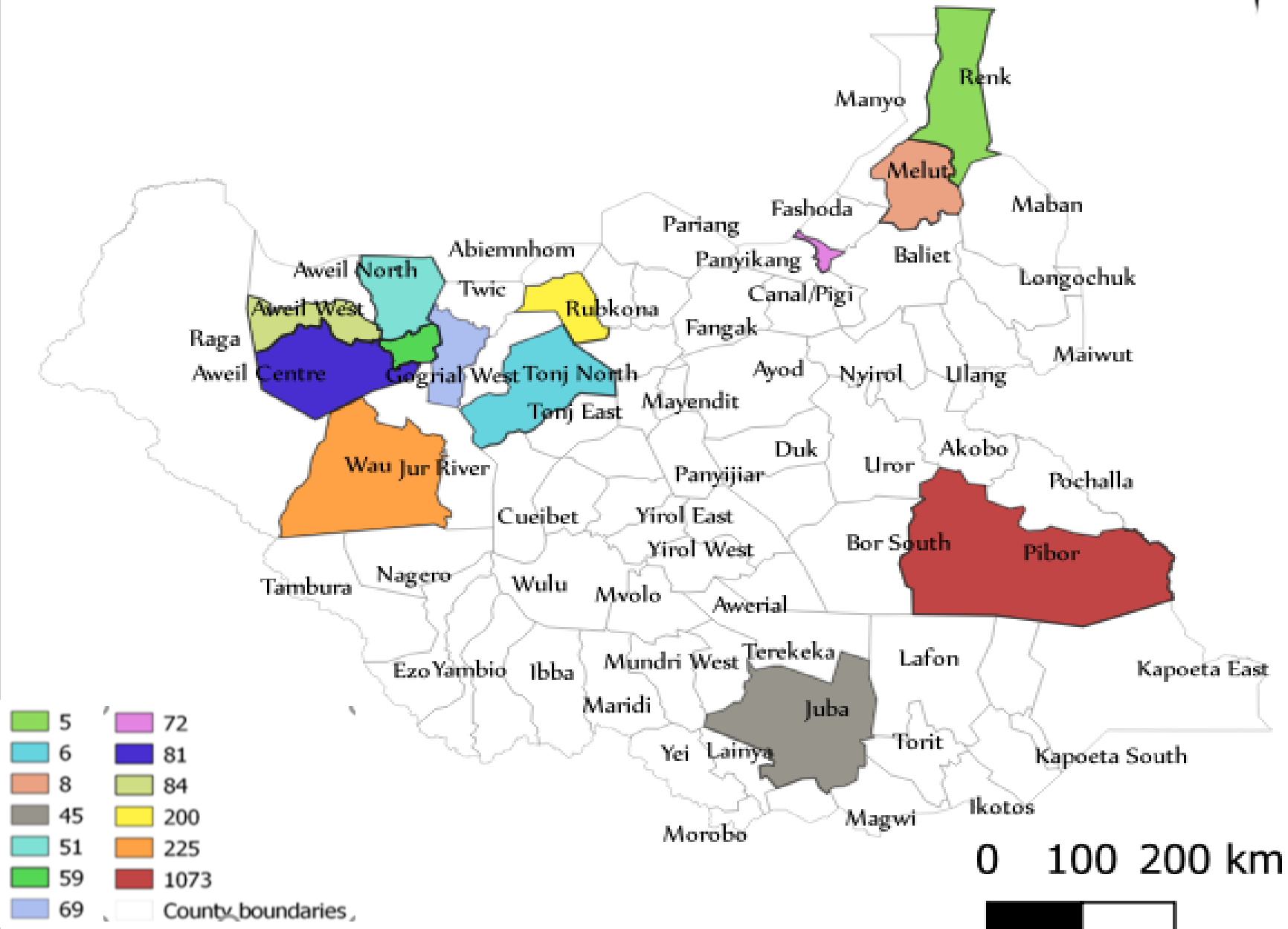
# Response | Summary of major Controlled outbreaks in 2019

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

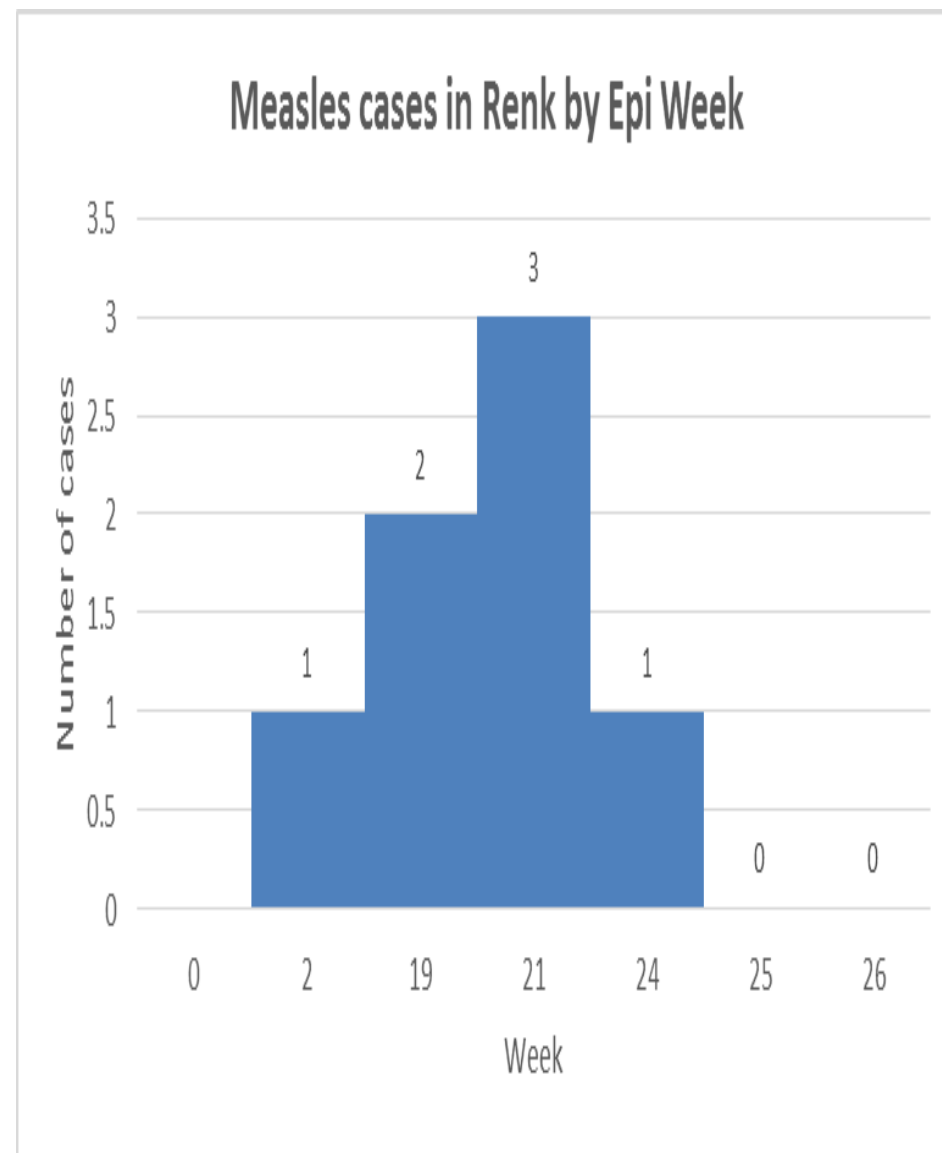
# Counties with confirmed measles cases in 2019



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

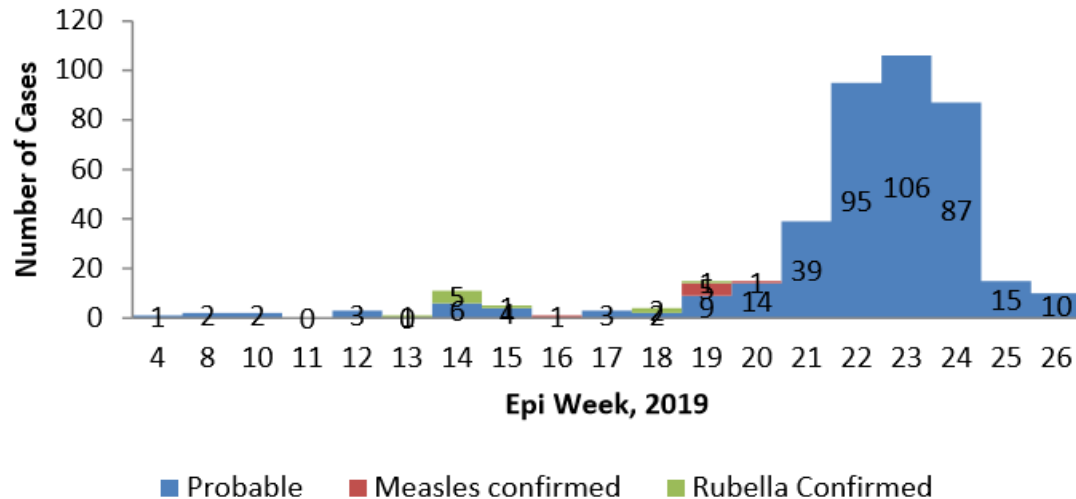
## Simple Descriptive Epidemiology and Recommendations

- As of 30<sup>th</sup> May, a new measles outbreak has been confirmed in Renk County
- Renk County is a border town in former upper Nile state. it is bordering Melut county which had measles outbreak in the beginning of the year (March 2019)
- The first suspected case was reported way back in week 2, 2019
- No new cases since week 21 and only one case in week 24
- 5 (83%) of the 6 cases are age less than 5 years
- All cases are from Renk north Payam with 3 of the cases from Saraya village and 2 from imtidad Jadid
- No new cases reported in week 25, 2019
- World Vision have conducted vaccination Campaign from 24 June 2019. A total of 16,680 children aged 6-59 months are targeted during the the campaign.
- PCE was done by Medair, coverage was 89,15%.



# Confirmed Measles Outbreak in Wau County and POCAA

Measles cases in Wau County and POCAA from week 4 to 26, 2019



## Introduction

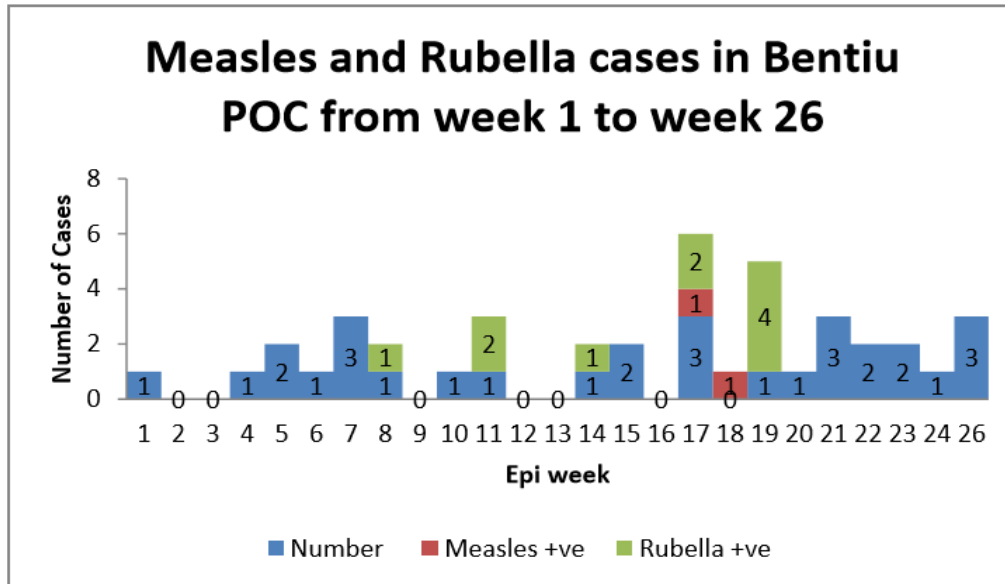
- In week 19, 2019 a measles outbreak was confirmed in Wau county following the confirmation of 3 measles samples tested positive for IgM Wau county and 1 in the POC AA.
- Wau county started seeing measles cases from as early as week 4 in 2019.
- Out of all the samples sent to the lab, 10 tested positive 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 5 years 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 3<sup>rd</sup> – 10<sup>th</sup> 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

### 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%.

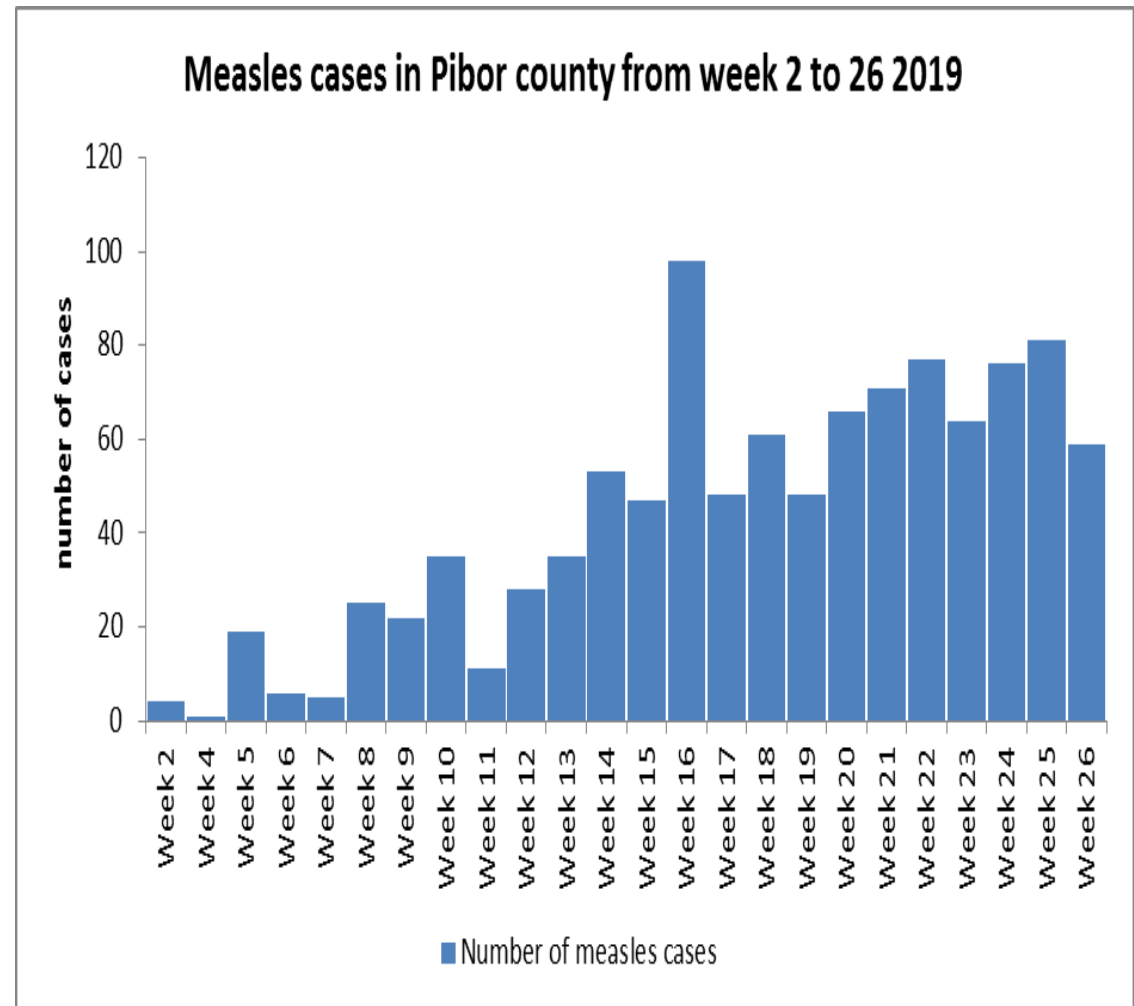
# Measles in Pibor County

There is an ongoing transmission of measles in Pibor County inspite 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 and MSF with partners proposed to do a mop up campaign where cases are coming from

MoH/CHD, live well and partners have developed a micro plan targetig 28,549 children aged 6 month-15yrs in four payams of Pibor.



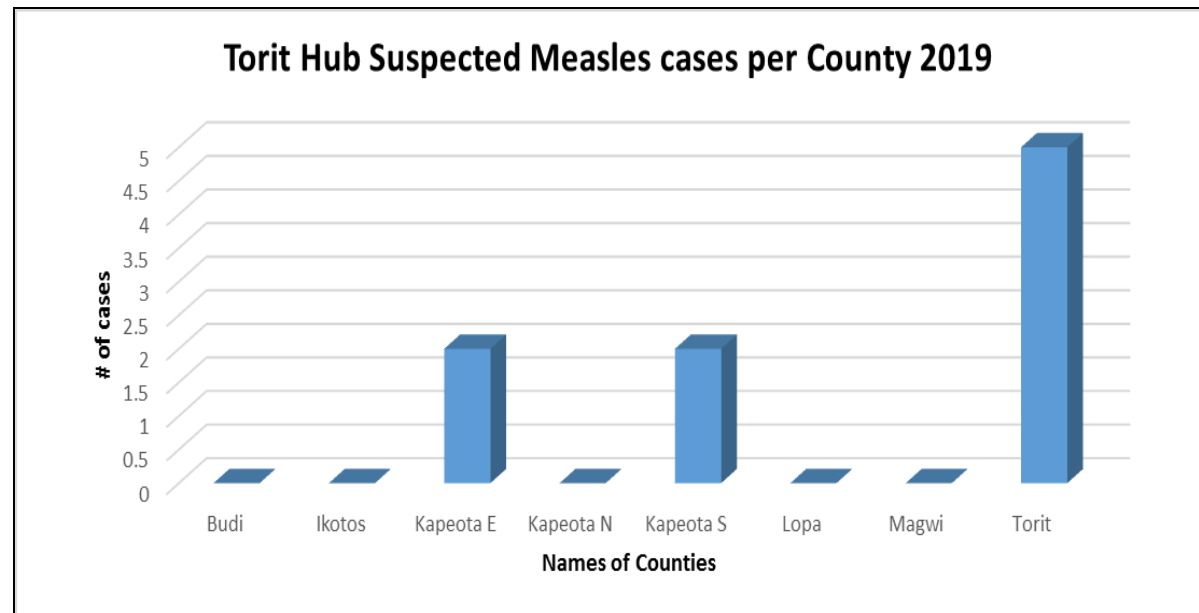
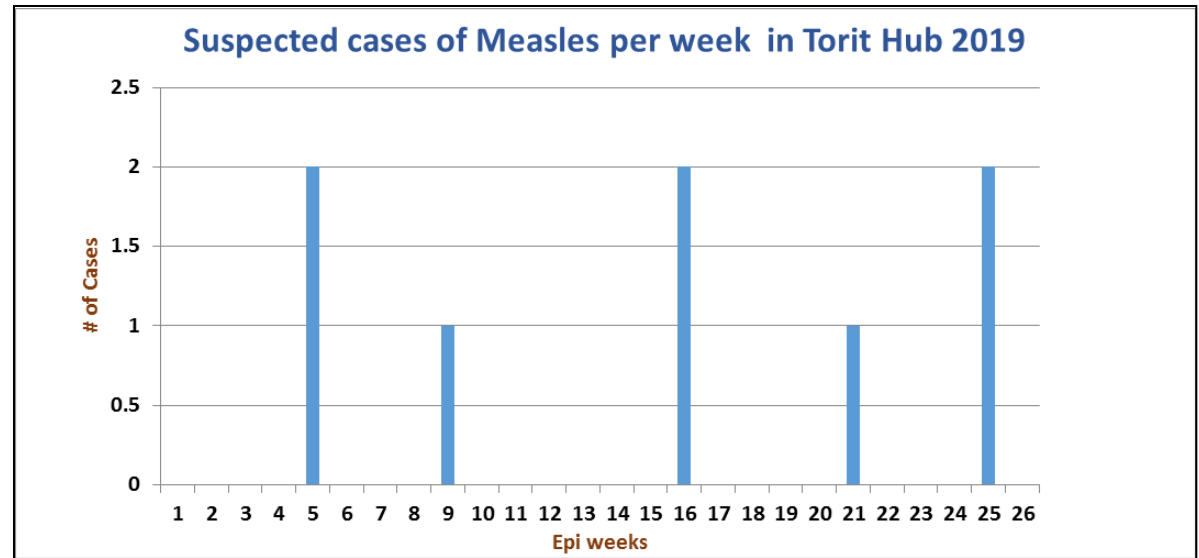
## Suspected Measles Cases in Torit

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.



## Updates on other Confirmed Measles Outbreaks in 2019

### ● **Tonj North:**

- Since the confirmation of Measles outbreak in Tonj North nearly 2 months ago, reactive Vaccination campaign completed by UNKEA, the coverage was 91%. Target was 48,904 children and 44,400 were vaccinated. PCE was not done due to insecurity

### ● **Malakal PoC:**

- MSF-Spain Completed reactive vaccination campaigns in both Malakal POC and town on the 31<sup>st</sup> May and achieved a coverage of 100.1% and 112% in Malakal town and POC respectively. PCE teams from MoH and WHO are on ground.

### ● **Aweil Town (Aweil Town and Aweil West):**

- MSF-France covered Aweil town and surrounding villages. The coverage achieved was 97% 26,477 (children vaccinated). PCE coverage is 63.5%

# Updates on other Confirmed Measles Outbreaks in 2019

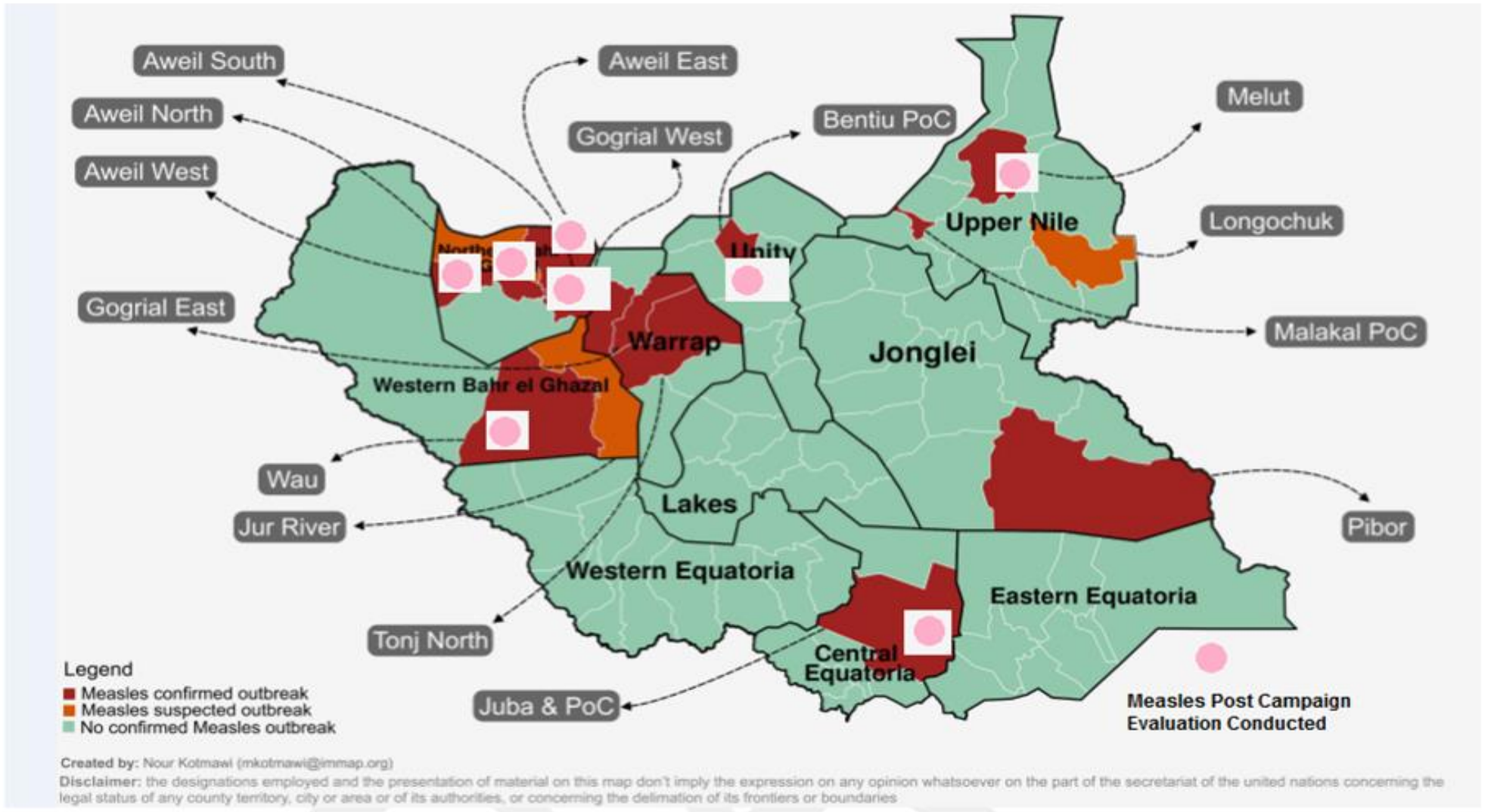
- **Aweil East County:**

- Aweil East confirmed a measles outbreak as of 13th May 2019, Reactive vaccination campaign was conducted by IRC and MoH and WHO did the Post Campaign Evaluation which was 52.3%

- **Gogrial East County:**

- MEDAIR conducted a mop-up campaign in 5 payams and it raised the coverage to 95%. There has been suspected measles cases still seen after the reactive campaign and the team decided to collect more samples to determine whether they are measles

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



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

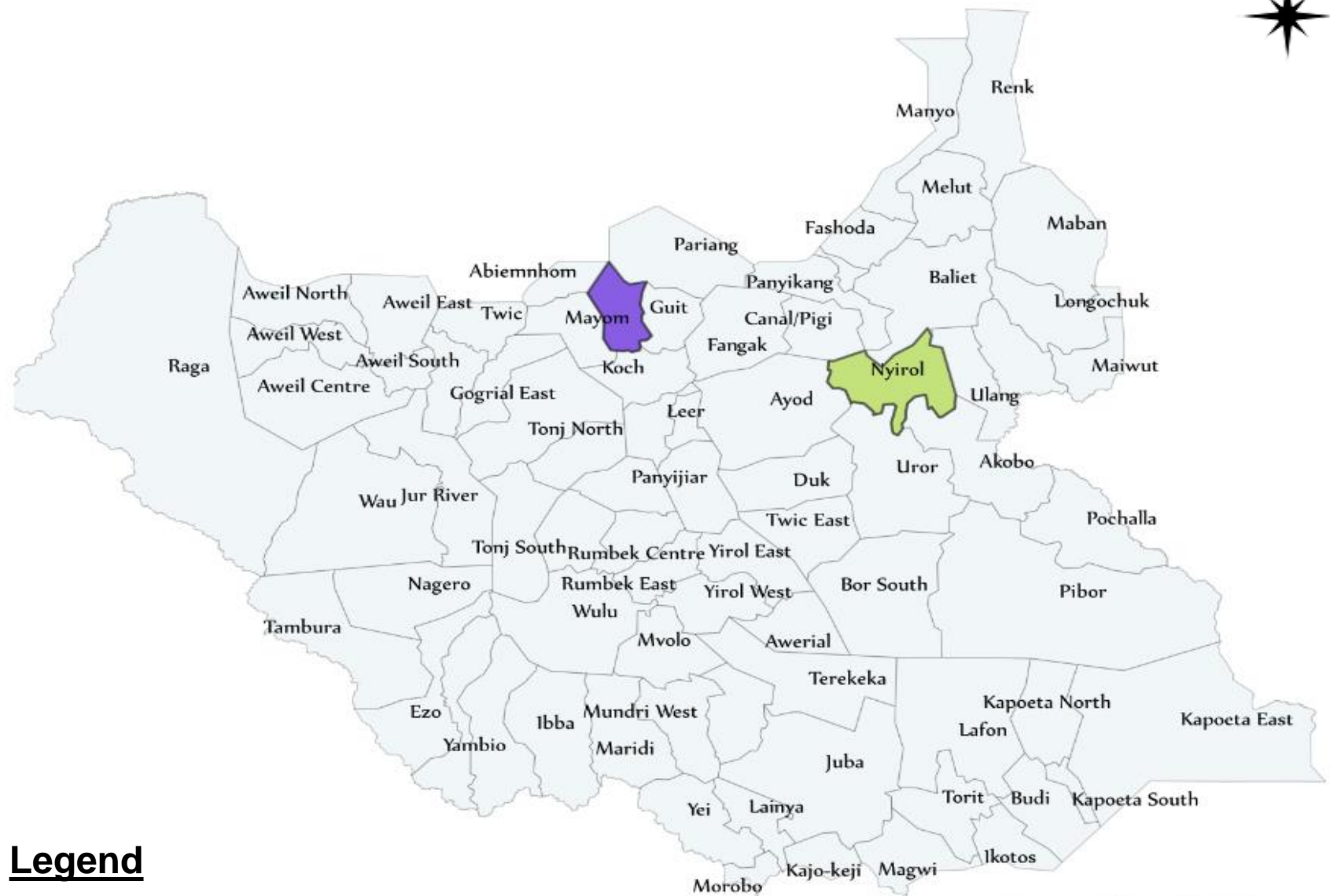
Table 1. MEASLES COVERAGE AND POST CAMPAIGN EVALUATION 2019

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 <sup>th</sup> -10 <sup>th</sup> June 2019-WHO		81.9%
5	Malakal PoC	June 2019	16 <sup>th</sup> -18 <sup>th</sup> July 2019-WHO		Pending
6	Wau	June 2019	29 <sup>th</sup> June -4 <sup>th</sup> July 2019-WHO		89.15
7	Bentiu PoC	June 2019	29 <sup>th</sup> June -4 <sup>th</sup> July 2019-WHO		74.6%
8	Tonj North	June 2019	29 <sup>th</sup> June -4 <sup>th</sup> July 2019-WHO		Shelved -clan clashes
9	Aweil West/Town	June 2019	29 <sup>th</sup> June -4 <sup>th</sup> July 2019-WHO		63.5%
10	Aweil East	June 2019	29 <sup>th</sup> June -4 <sup>th</sup> 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

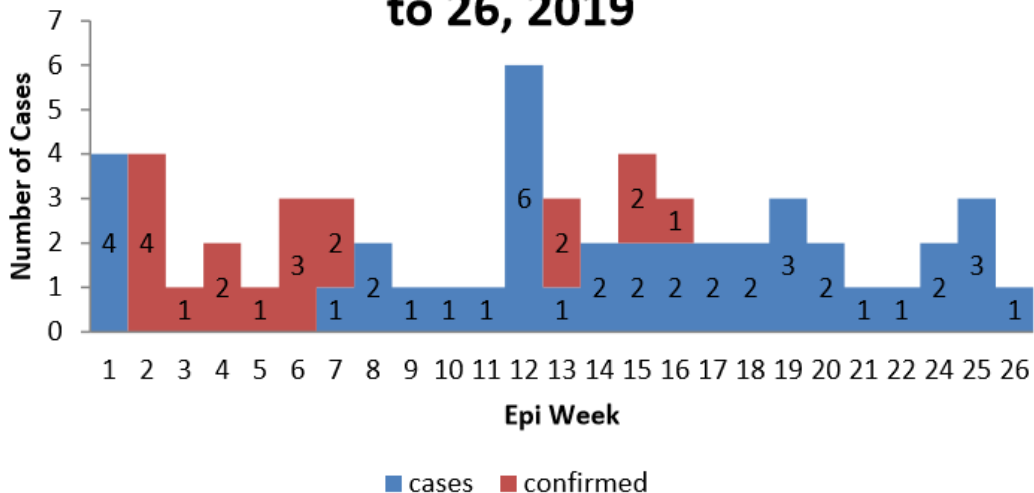


Disclaimer: The boundaries and names shown on this map do not imply official endorsement by the United Nations in Sudan



## Hepatitis E, Bentiu PoC

**HEV Cases in Bentiu POC from week 1 to 26, 2019**



### 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 23<sup>rd</sup> February, 2019 and 11<sup>th</sup> April, 2019
- One death on 12<sup>th</sup> 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 3<sup>rd</sup> trimester of pregnancy
- Use of unsafe drinking water likely to be source of infection
- 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.

Age groups	Female, n	Male, n	Total, n	Percent, %
1-4 years	7	7	14	27.4
5-9 years	2	5	7	13.7
10-14 years	5	3	8	15.7
15-44 years	7	14	21	41.1
45+years	2	0	2	3.9
<b>Total cases</b>	<b>23</b>	<b>28</b>	<b>51</b>	<b>100</b>

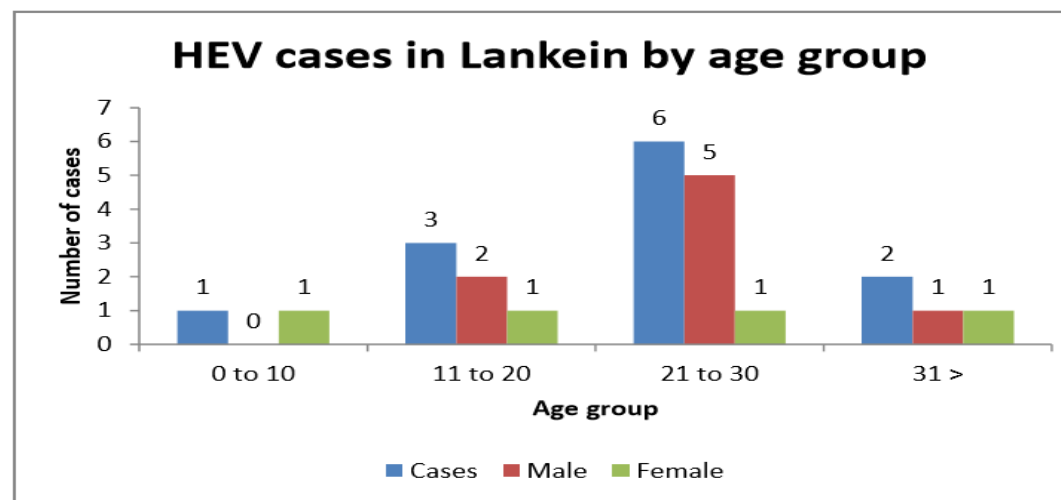
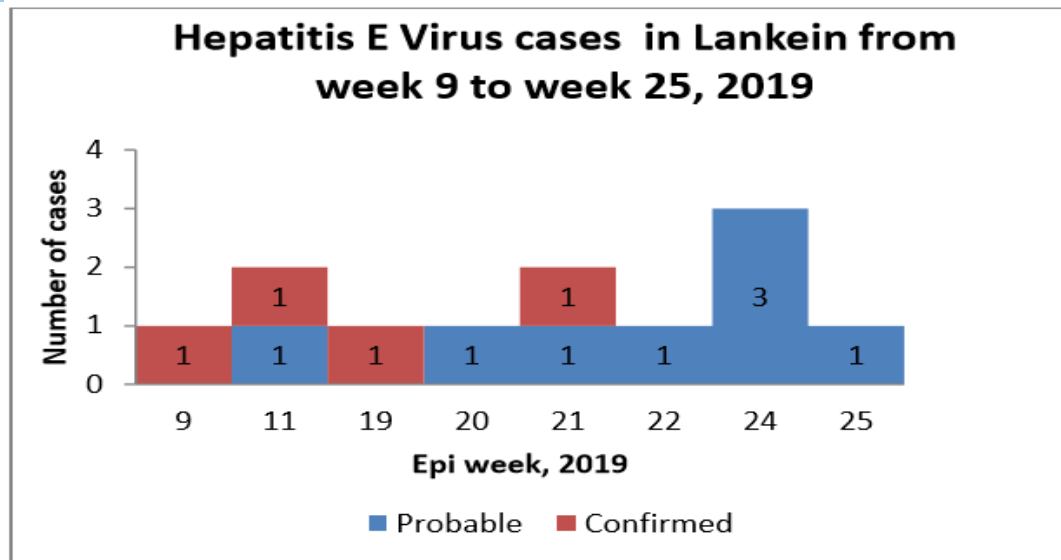
# Hepatitis E cases in Lankein, 2019

## 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)

## 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.



## Laboratory Results for Epi week 26, 2019

Location/Health Facility	Date sent to Juba	Date Received at PHL	Suspected Disease	Lab results
Rubkona/Bentiu POC	6/29/2019	6/29/2019	Measles	Measles Igm Positive
Rubkona/Bentiu POC	6/29/2019	6/29/2019	Measles	Measles & Rubella Negative
Lopua / PHCC	6/20/2019	6/20/2019	Measles	Measles & Rubella Negative
Payinjiar/Bentiu POC	6/29/2019	6/29/2019	Measles	Measles & Rubella Negative
Torit /TSH	6/24/2019	6/26/2019	Measles	Measles & Rubella Negative
Yambio/PHCC	6/20/2019	6/29/2019	Measles	Measles & Rubella Negative
Renk/Hospital	6/10/2019	6/11/2019	Measles	Rubella IgM Positive
Yambio/ Hospital	6/19/2019	6/20/2019	Measles	Measles & Rubella Negative

## Current Malaria trends

Malaria was the leading cause of morbidity and mortality, accounting for 61.0 % of all morbidities and 60.4% of all mortalities in week 26, 2019

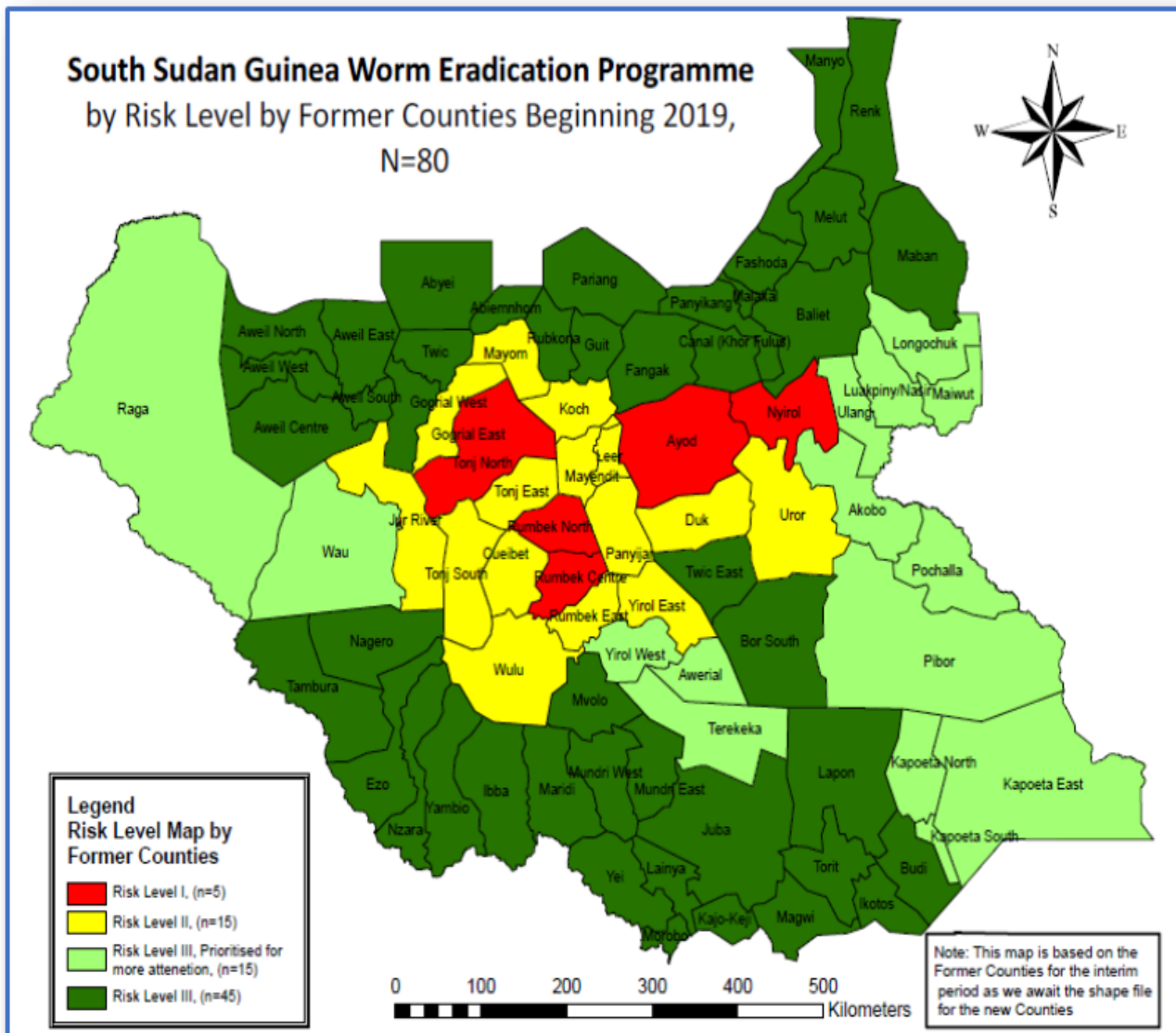
At least 20 counties with malaria trends that exceed the threshold (third quartile of trends for the period 2013-2017) and these include:

1. Rumbek hub (Rumbek East, Yirol East, Rumbek Center, Cueibet, Wulu, Awerial)
2. Juba hub (Juba, Yei)
3. Wau hub (Wau)
4. Torit hub (Torit, Ikotos, Budi, Magwi)
5. Aweil hub (Aweil North, Aweil West)
6. Kwajok hub (Gogrial East, Tonj South)
7. Bor hub (Duk, Bor)
8. Bentiu hub (Rabkona)
9. Yambio hub (Ezo)

# 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 82 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 42 samples.

## Guinea Worm Risk level by former Counties



### 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

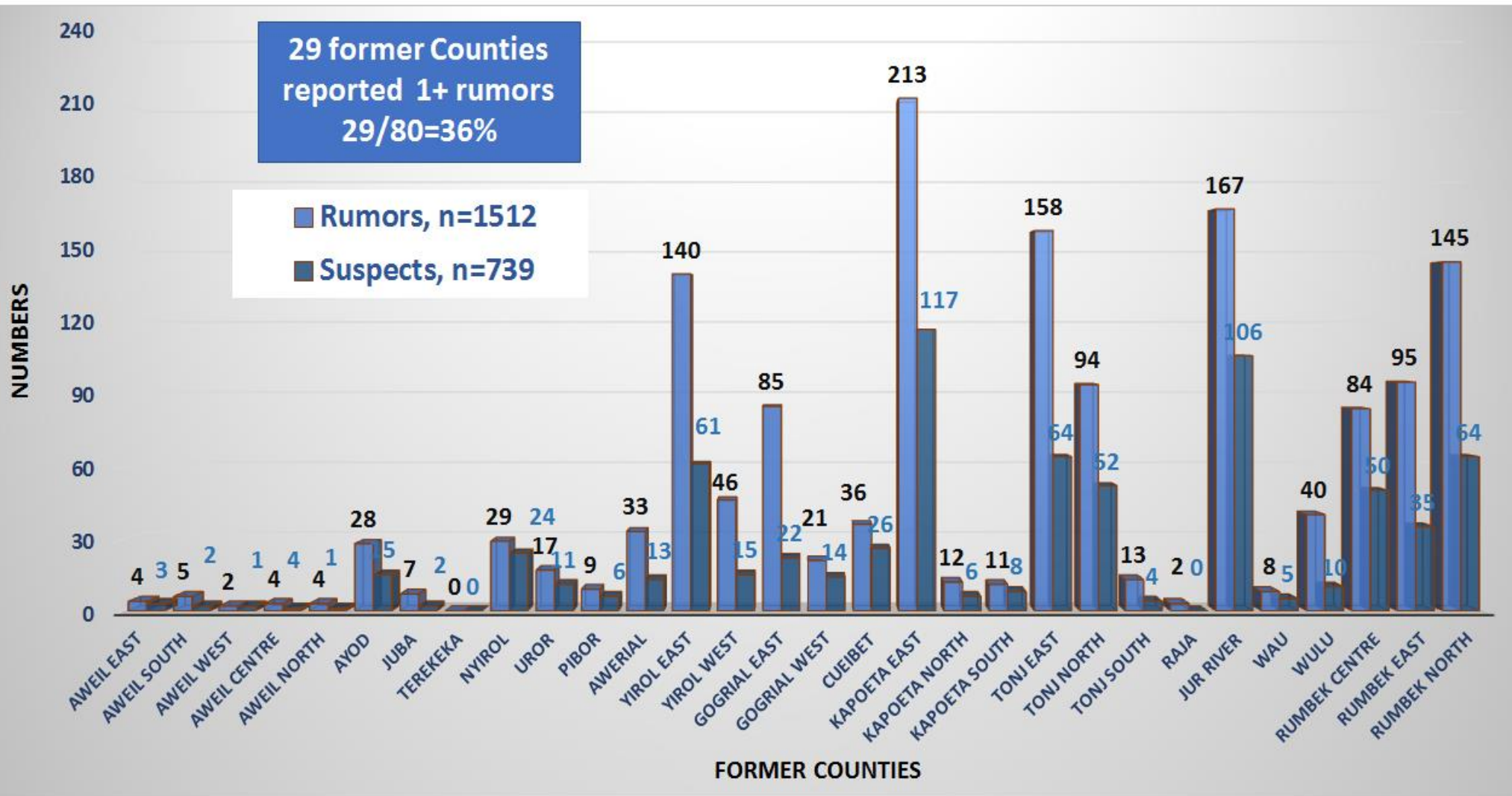
### Risk III, prioritized for more attention (15 former Counties)

### Risk Level III (45 former Counties)

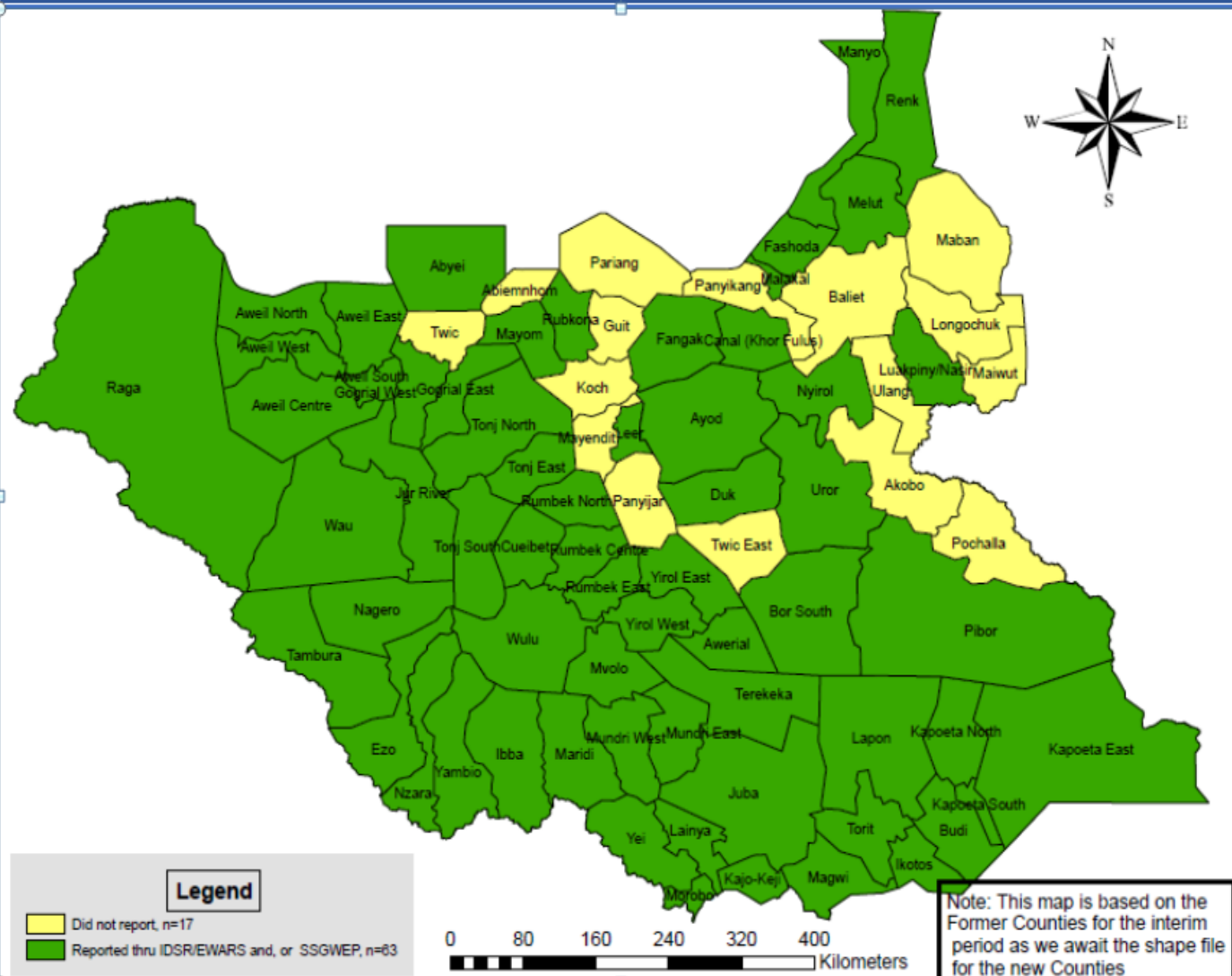
The level III areas are those that are non endemic and with little or no risk of importation.

# Guinea Worm

Former Counties that reported Rumors, and Suspects during 23 June-29<sup>th</sup> June, 2019  
(26 Week) of the Year.



## Guinea Worm disease reports received through IDSR/ EWARS and/ or South Sudan Guinea Worm Eradication Programme (SSGWEP) during Week 26 of the year, N=80



### Reporting

**63 former Counties reported at least once from the health facilities/ reporting units through IDSR/ EWARS and or South Sudan Guinea worm Eradication programme (SSGWEP)**

**17 former Counties did not report from any of the health facilities**

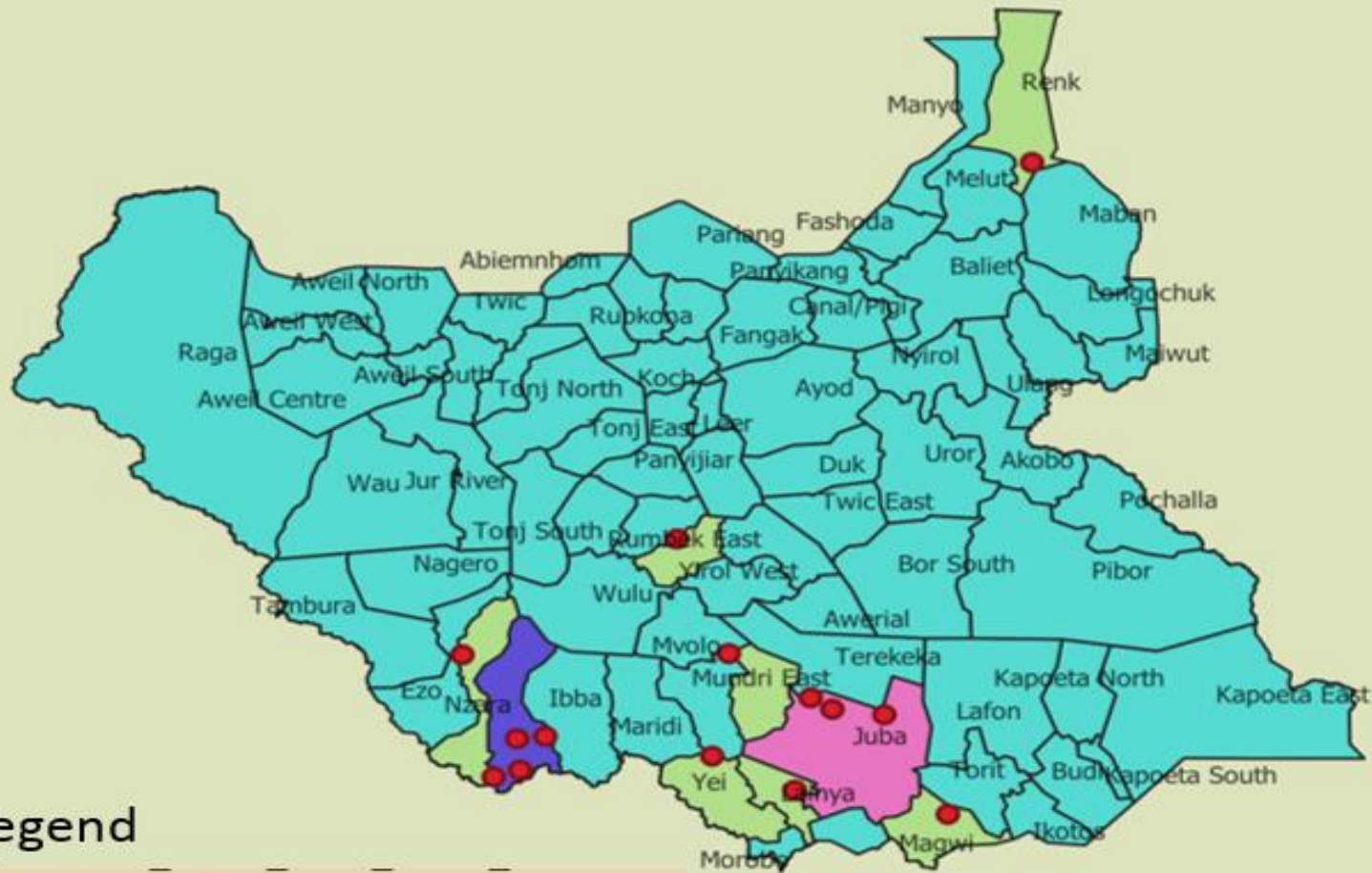


## Ebola alerts investigated in 2018

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

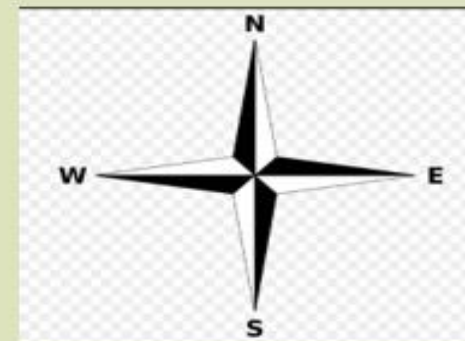
- In 2018, at least 16 alerts met the case definition and therefore underwent verification and follow up investigation by the rapid response teams.
- During 2018, at least **13** alerts that met the case definition were investigated and had samples obtained for laboratory testing will testing negative 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



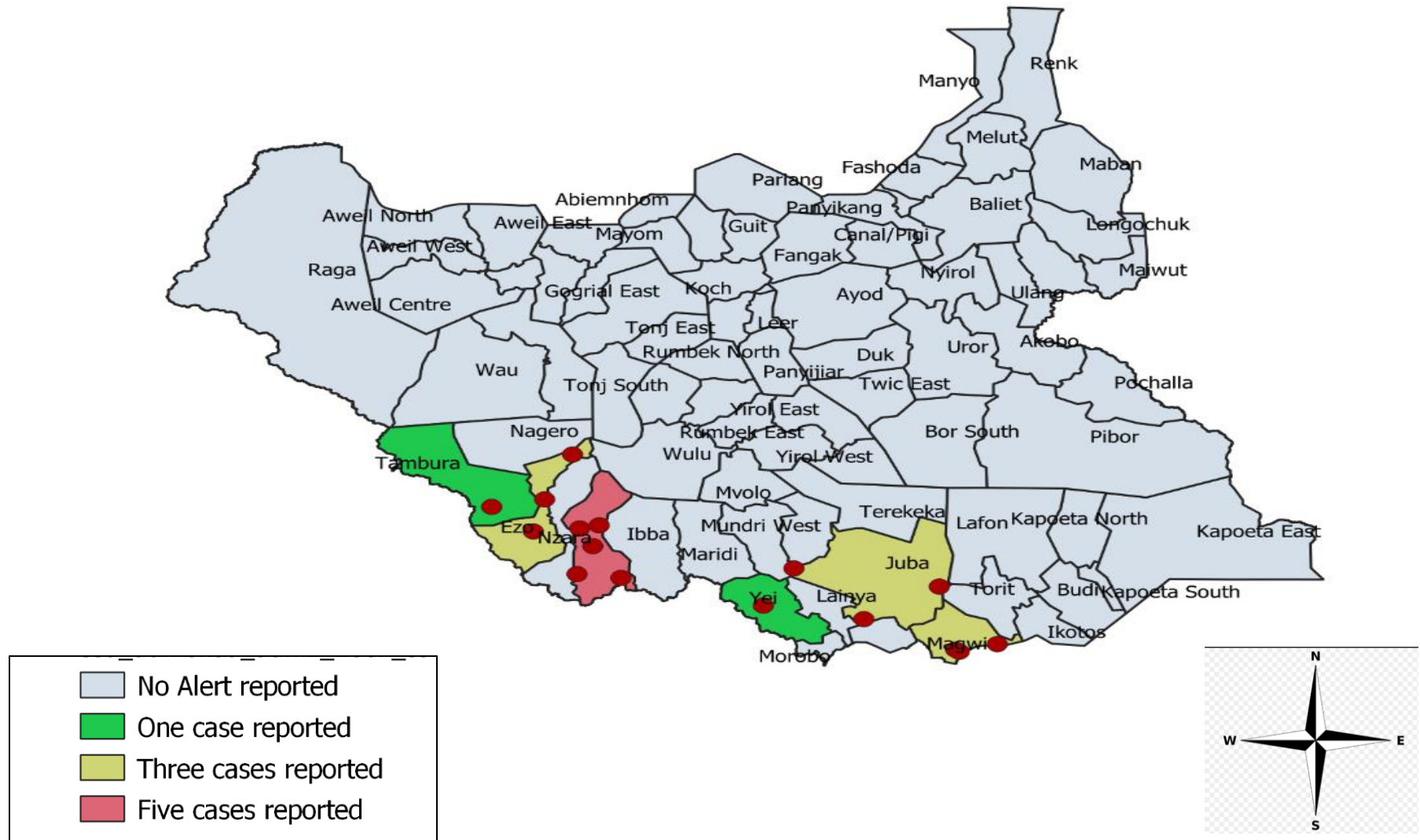
## Legend

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



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# Counties that reported Ebola Alerts in 2019



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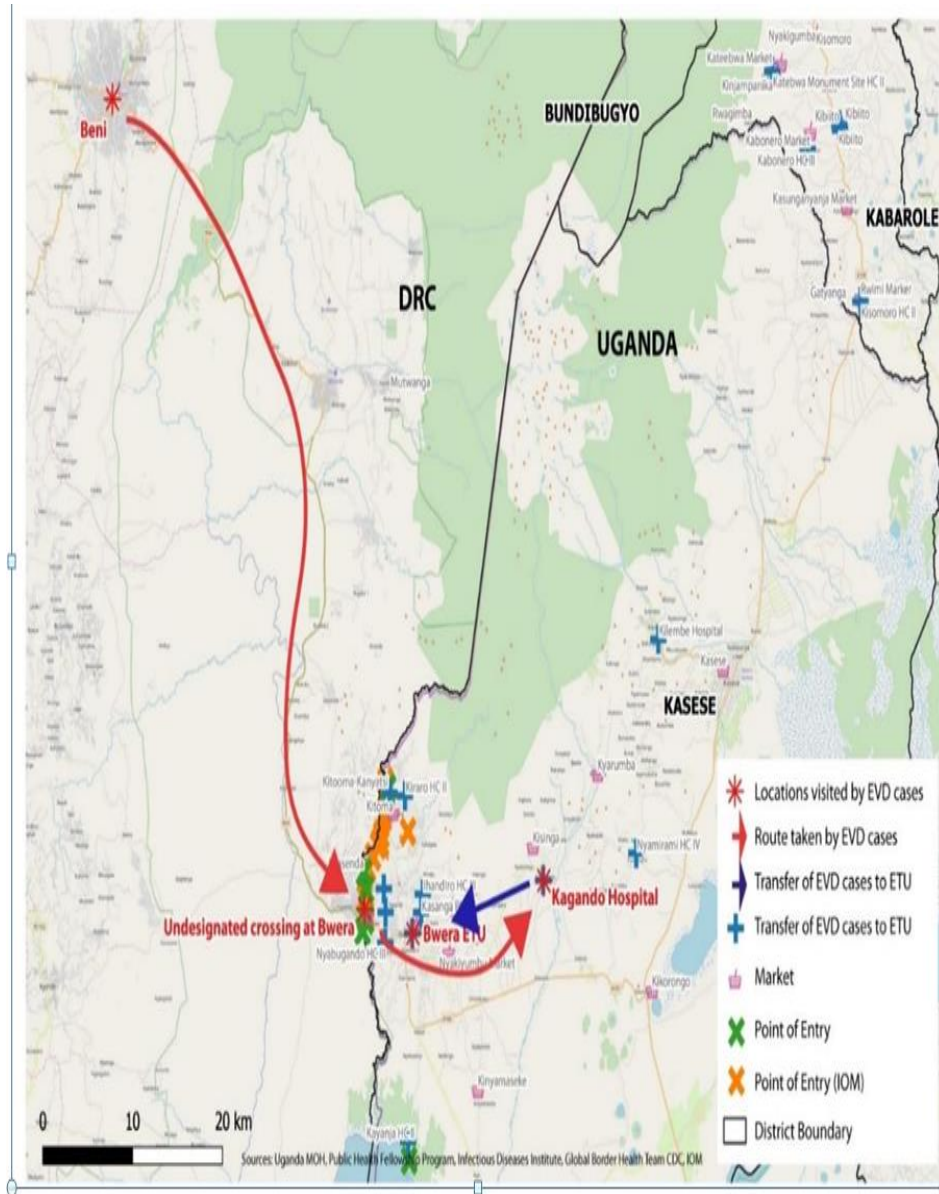
Date	Cases	Deaths	Payam	County	eRDT	eGeneXpert	ePCR	Comments
27 Jan 19	1	0	Nimule		ND	-ve	-ve	Investigated on 27 Jan 2019
30 Jan 19	1	0	Nimule		ND	-ve	-ve	Investigated on 30 <sup>th</sup> Jan 2019
09 Feb 19	1	0	Juba		Nd	-ve	-ve	Investigated on 09 <sup>th</sup> Feb 2019
21 <sup>st</sup> Feb 19	1	1	Yambio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

# Ebola confirmed in Uganda border district of Kasese



- An Ebola Outbreak was confirmed in Uganda on the 9<sup>th</sup> of June 2019
- 5-year-old from DRC (Index case) , plus to other family members travelled with parents through the market at Mpondwe by passing the official border post on 9th June. The child presented at Kagando hospital with vomiting blood, bloody diarrhea, muscle pain, headache, fatigue and abdominal pain
- Case transferred to Kagando Hospital ETU
- 3 Case 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.

# Ebola update DRC 14<sup>th</sup> July, 2019

## Current situation

- Currently as of 14<sup>th</sup> July, 2019
- 2501 Cases [2407 confirmed & 94 probable]
- 1688 Deaths [1574 confirmed & 94 probable]
- 135 (5%) Health workers

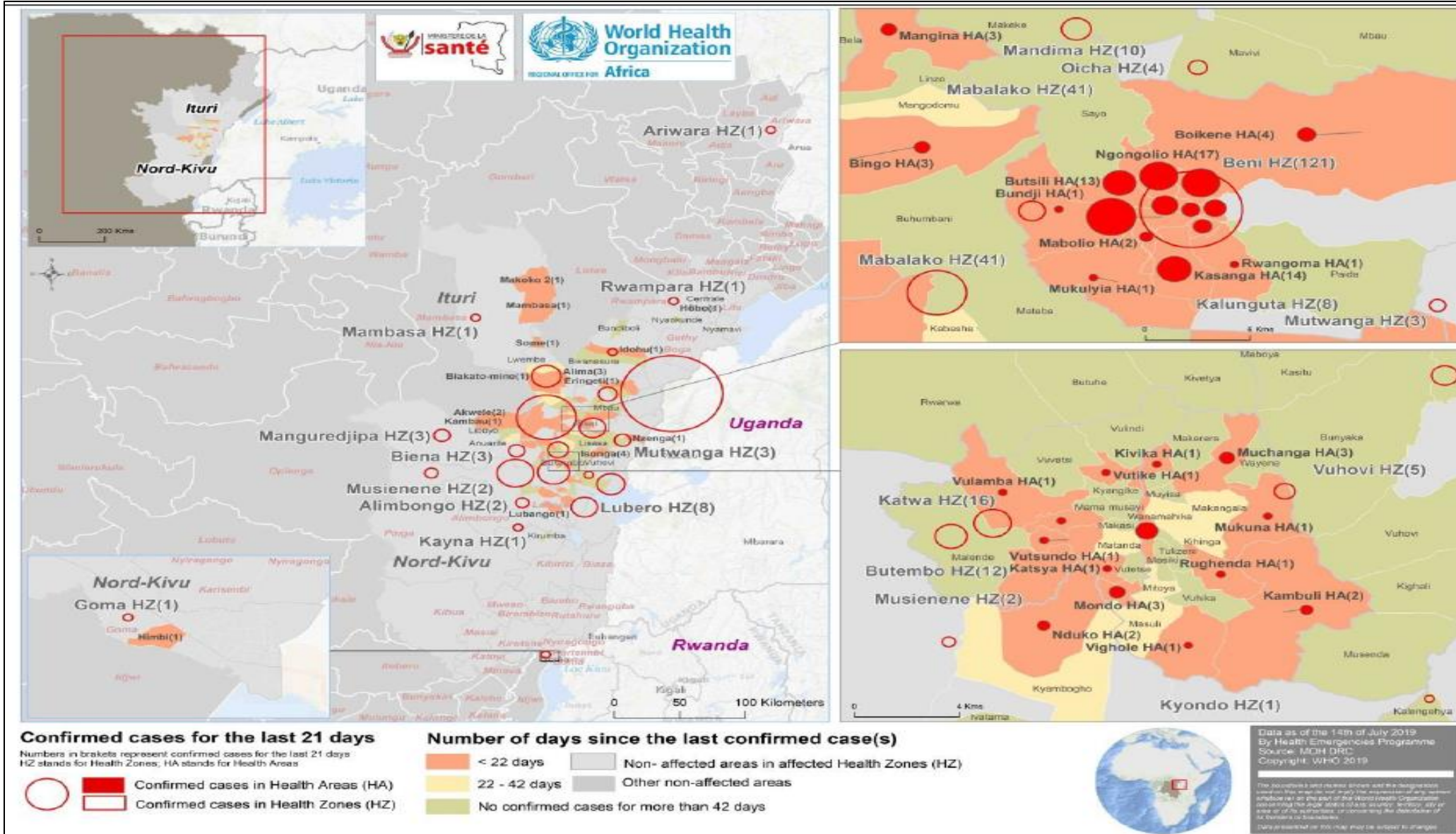
## Response update

- On 14 July 2019, a confirmed case of EVD was reported in Goma, a city of two million inhabitants close to the Rwandan border. approximately 3000 health workers had been vaccinated.
- On 9 July 2019, an EVD case was reported from Mambasa. In response to this case, vaccinations have been completed for at least 140 individuals at this time, including 60 contacts, and 15 frontline workers

## Affected health zones

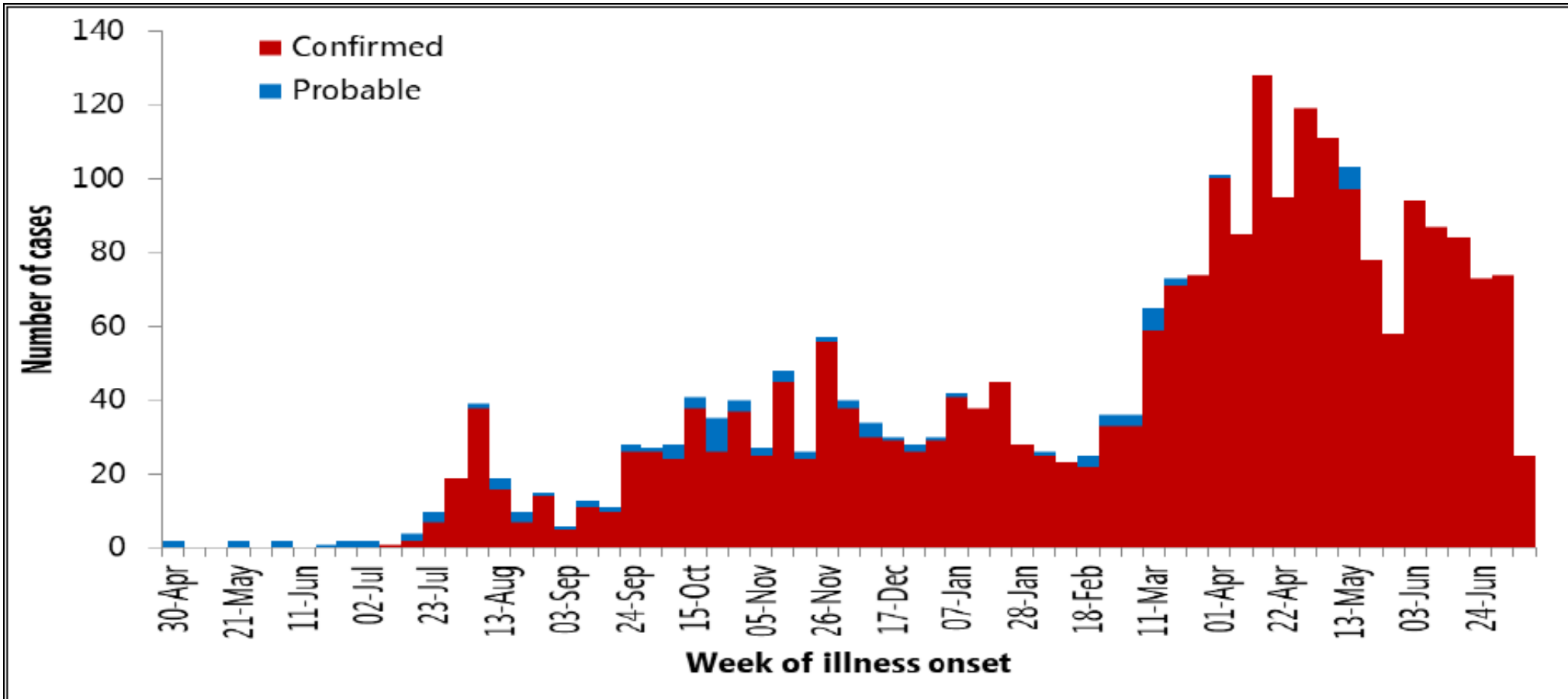
- In the 21 days between 24 June to 14 July 2019, a total of 254 confirmed cases were reported, the majority of which were from the health zones of Beni (48%, n=121) and Mabalako (16%, n=41), which are the main active areas in the outbreak.

# Democratic Republic of Congo EVD Spot map





# EVD Epi-curve by week of illness in DR Congo

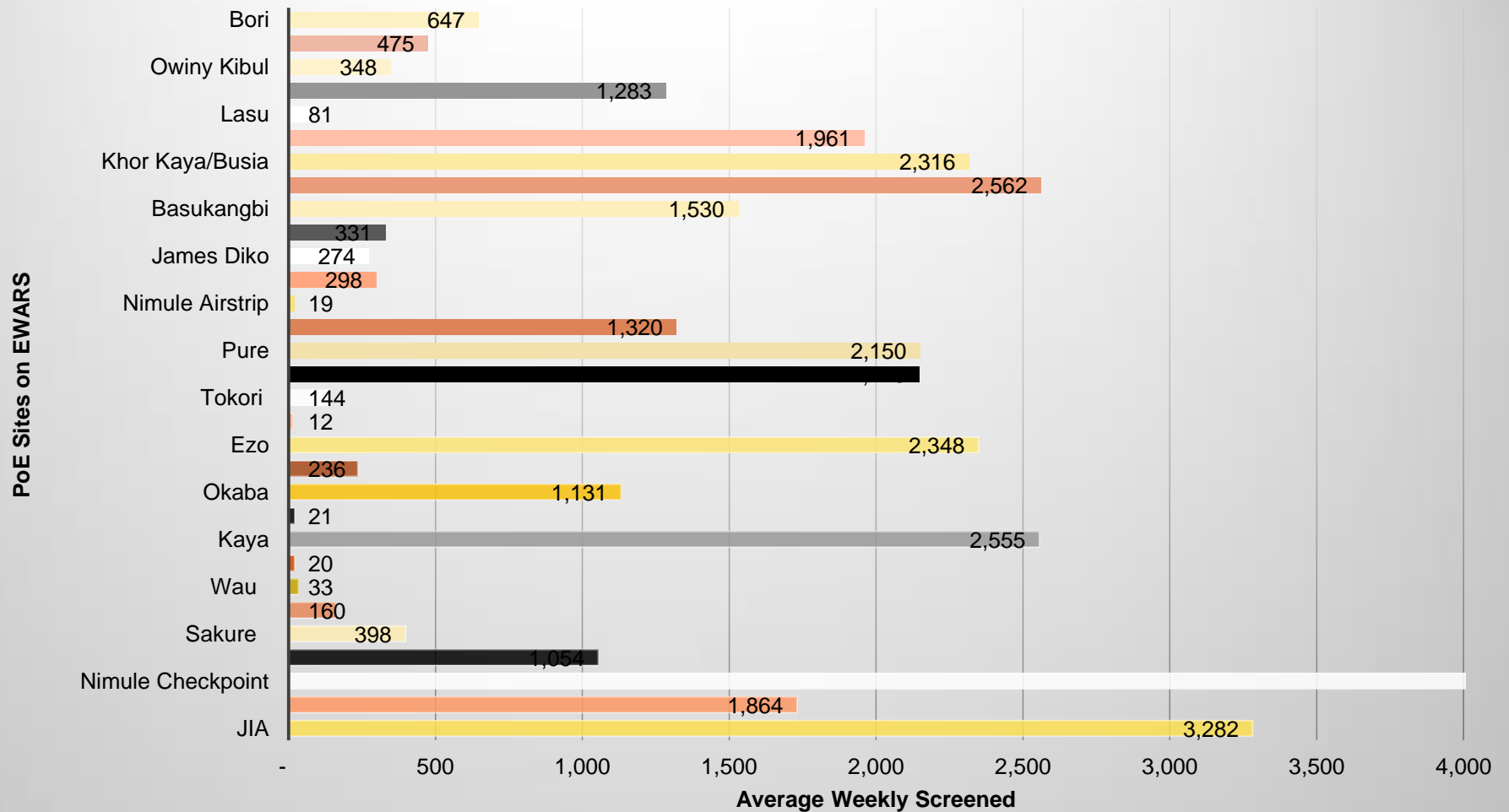


- Active transmission with continued increase in the number of new Ebola virus disease (EVD) cases in the affected geographical regions. █

# *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.

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

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## Notes

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

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

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

