

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 27, 2019 (July 01 - July 07)



Major Epidemiological Developments W27, 2019

- In week 27, Completeness for IDSR reporting at county level was 57% . Completeness for EWARS reporting from IDP sites was 90% .
- A total of 89 alerts received in week 27, 2019 out of which 65% were verified. 5% was risk assessed and 3% required a response
- Malaria (25), Acute watery diarrhea (11), measles (11) and bloody diarrhea (14) were the top common alerts generated through the EWARS in week 27, 2019.
- Suspected cholera case in UN House IMC clinic, 28 yrs old female. Patient recovered. Sample was not collected by implementing partner.
- 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.
- On 26th June, 2019 a suspected Guinea worm case was reported from ICRC clinic in the SPLM-IO controlled areas in Panyume, Yei.
- On 4th July 2019, EVD alert was reported from new site/Juba. 46 yrs old female. Suspect did not meet the case definition. Alert was discarded.
- 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 83 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 43 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 (W27 2019)

Hub	Reporting		Performance	
	# counties	# reports received	Completeness	Timeliness
Aweil	5	1	20%	20%
Bentiu	9	4	44%	44%
Bor	11	4	36%	36%
Juba	6	1	17%	0%
Kuajok	7	3	43%	43%
Malakal	13	2	15%	0%
Rumbek	8	3	38%	25%
Torit	8	7	88%	88%
Wau	3	2	67%	33%
Yambio	10	10	100%	100%
South Sudan	80	37	46%	40%

Table 2 | Summary of key IDSR surveillance indicators

W27	Cumulative (2019)	
80	-	Number of counties
46%	70%	Completeness
40%	54%	Timeliness

Table 3 | IDSR report submissions

W27	Cumulative (2019)	
37	1,628	total submissions
5	0	submissions by mobile
32	0	submissions by web

- In this week 27, 2019 the Completeness is **46%** and the Timeliness is **40%** while the cumulative completeness and timeliness was **54%** and **70%** 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 27,2019

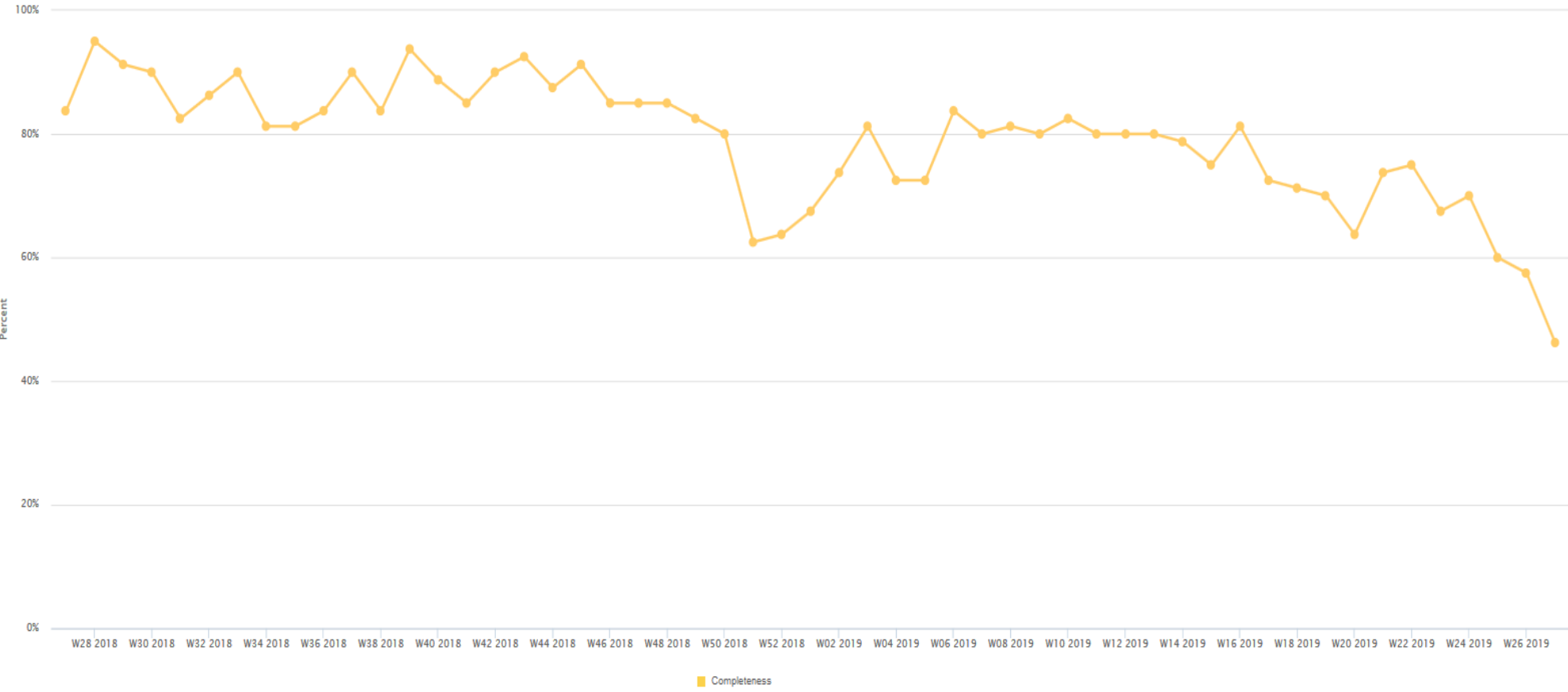
State	Supporting Partners	Total No. of Health Facility	No. of Facilities Reported on Time	Timeliness Percentage	No. of Facilities Reported on not on Time	Completeness Percentage
Rumbek Hub	Doctors with Africa (CUAMM)	120	56	47%	70	58%
Aweil Hub	Malaria Consortium, HealthNetTPO, IRC, CEDS, IHO,	145	17	12%	27	19%
Bentiu Hub	Cordaid, UNIDOR, IRC, C HADO, CARE International	99	9	9%	9	9%
Wau Hub	Cordaid, HealthNetTPO, CARE International, IHO	85	18	21%	24	28%
Yambio Hub	AMREF, World Vision, CUAMM, CDTY, O PEN,	214	156	73%	161	75%
Bor Hub		168	17	10%	19	11%
Kuajok Hub	GOAL, CCM, WVI, Malari a Consortium, UNKEA	137	14	10%	21	15%
Torit Hub	Cordaid, HLSS, CMD	177	104	59%	126	71%
Juba Hub	HLSS, SSUHA, Healthnet TPO, IHO	155	26	17%	47	30%
Malakal Hub		160	2	1%	2	1%
South Sudan		1479	419	28%	506	34%
Key						
				Poor		
				Fair		
				Good		
				Excellent		

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



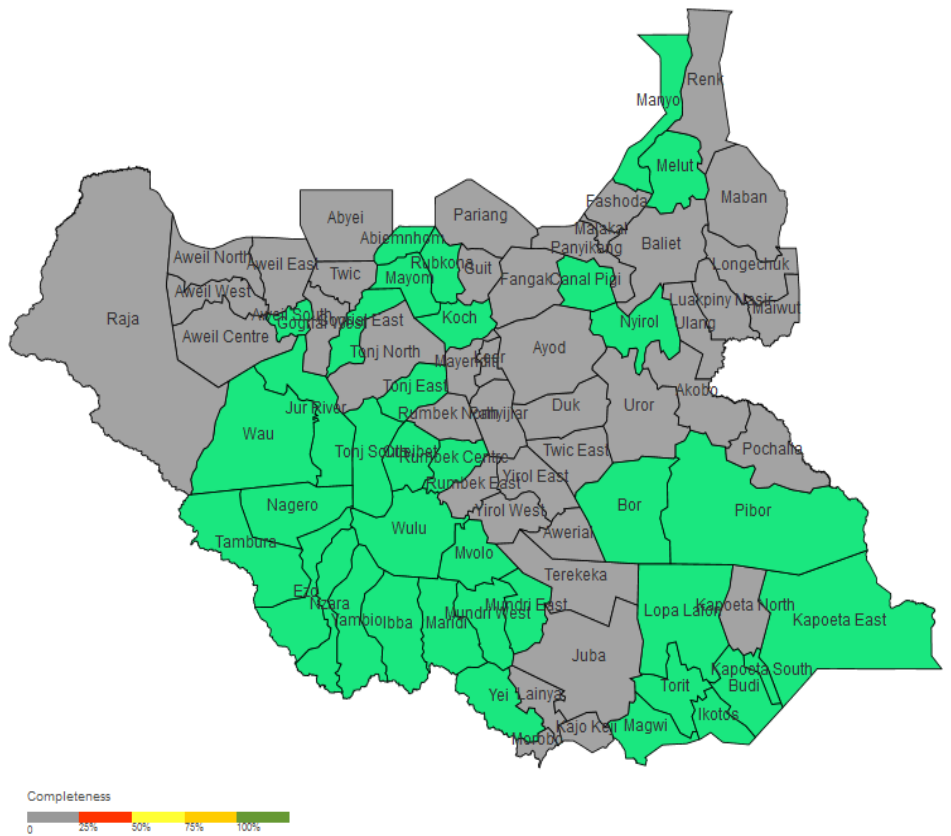
The graph shows completeness for the weekly IDSR reporting at the county level over time from 2018 to week 27, 2019.



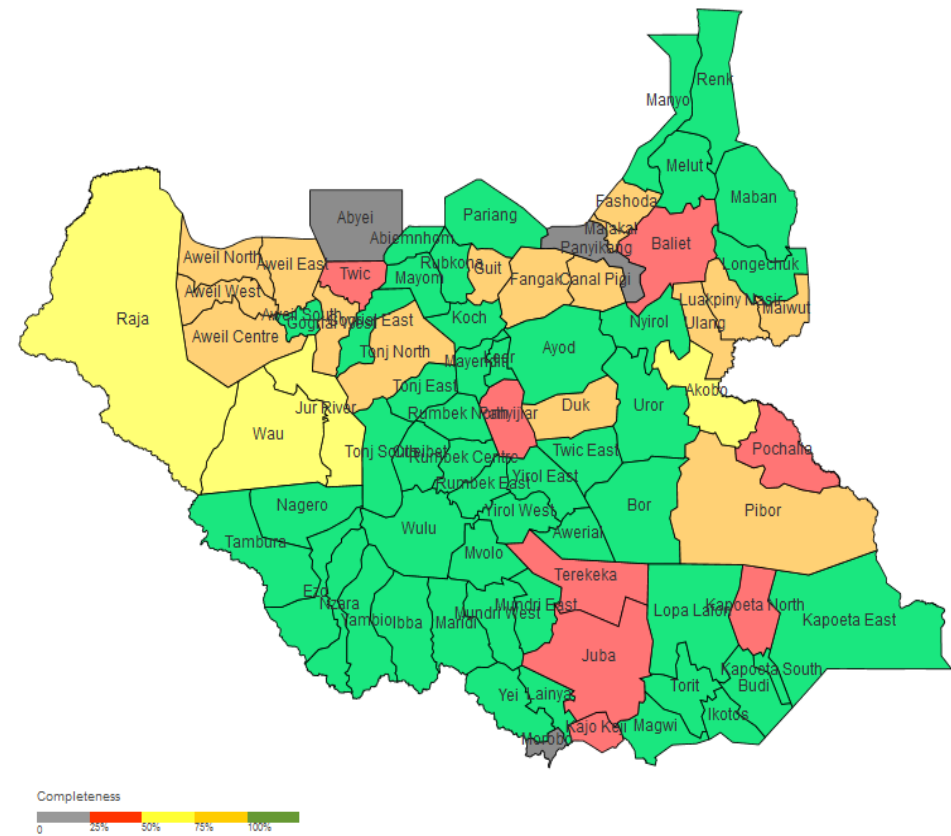
Surveillance | Maps of IDSR completeness by county

Surveillance | Maps of IDSR completeness by county

Map 1a | Map of IDSR completeness by county (W27 2019)



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



3 W27 2019 (Jul 01-Jul 07)



- Counties that submitted their IDSR reports in week 27, 2019 are shown in green in map 1a.
- Counties that did not submit their IDSR reports in week 27, 2019 are shown in grey in map 1a.



Surveillance | EWARS surveillance indicators

Surveillance | EWARS surveillance indicators

Table 4 | EWARS surveillance performance indicators by partner (W27 2019)

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	0	0		
GOAL	2	2	100%	100%
HLSS	1	1	100%	100%
IMA	7	2	29%	29%
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	6	86%	86%
UNIDO	1	0	0%	0%
UNKEA	2	0	0%	0%
World Relief	1	1	100%	100%
TRI-SS	2	2	100%	100%
LIVEWELL	2	2	100%	100%
Total	69	55	80%	80%

Table 5 | Summary of key EWARS surveillance indicators

W27	Cumulative (2019)	
69	-	Number of EWARS reporting sites
80%	72%	Completeness
80%	66%	Timeliness

Table 6 | EWARS report submissions

W27	Cumulative (2019)	
55	1,417	total submissions
0	29	submissions by mobile
55	1388	submissions by web

- Completeness was **80%** and timeliness was **80%** for EWARS reporting by partners for week 27, 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	W27		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	14	14%	142	60%
Bentiu	5	80%	146	84%
Bor	8	13%	127	33%
Juba	13	8%	198	45%
Kuajok	2	50%	145	25%
Malakal	2	100%	96	70%
Rumbek	9	100%	387	81%
Torit	16	50%	267	62%
Wau	9	100%	152	70%
Yambio	11	100%	328	84%
South Sudan	89	54%	1988	65%

Table 8 Summary of key alert indicators

W27	Cumulative (2019)	
89	1988	Total alerts raised
54%	65%	% verified
0%	0%	% auto-discarded
3%	5%	% risk assessed
2%	3%	% requiring a response

• A total of **89** alerts received in week 27, 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	W27		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	25	56%	315	67%
AWD	11	64%	551	64%
Bloody Diarr.	14	57%	372	65%
Measles	11	55%	397	65%
Meningitis	0	0%	0	0%
Cholera	2	100%	56	82%
Yellow Fever	0	0%	16	100%
Guinea Worm	3	67%	53	60%
AFP	2	0%	105	69%
VHF	2	0%	18	72%
Neo. tetanus	4	25%	27	56%
Event-based surveillance				
EBS total	0	0%	32	78%

Table 10 | Event risk assessment

W27	Cumulative (2019)	Risk Level
0	20	Low risk
26	26	Medium risk
0	30	High risk
3	20	Very high risk

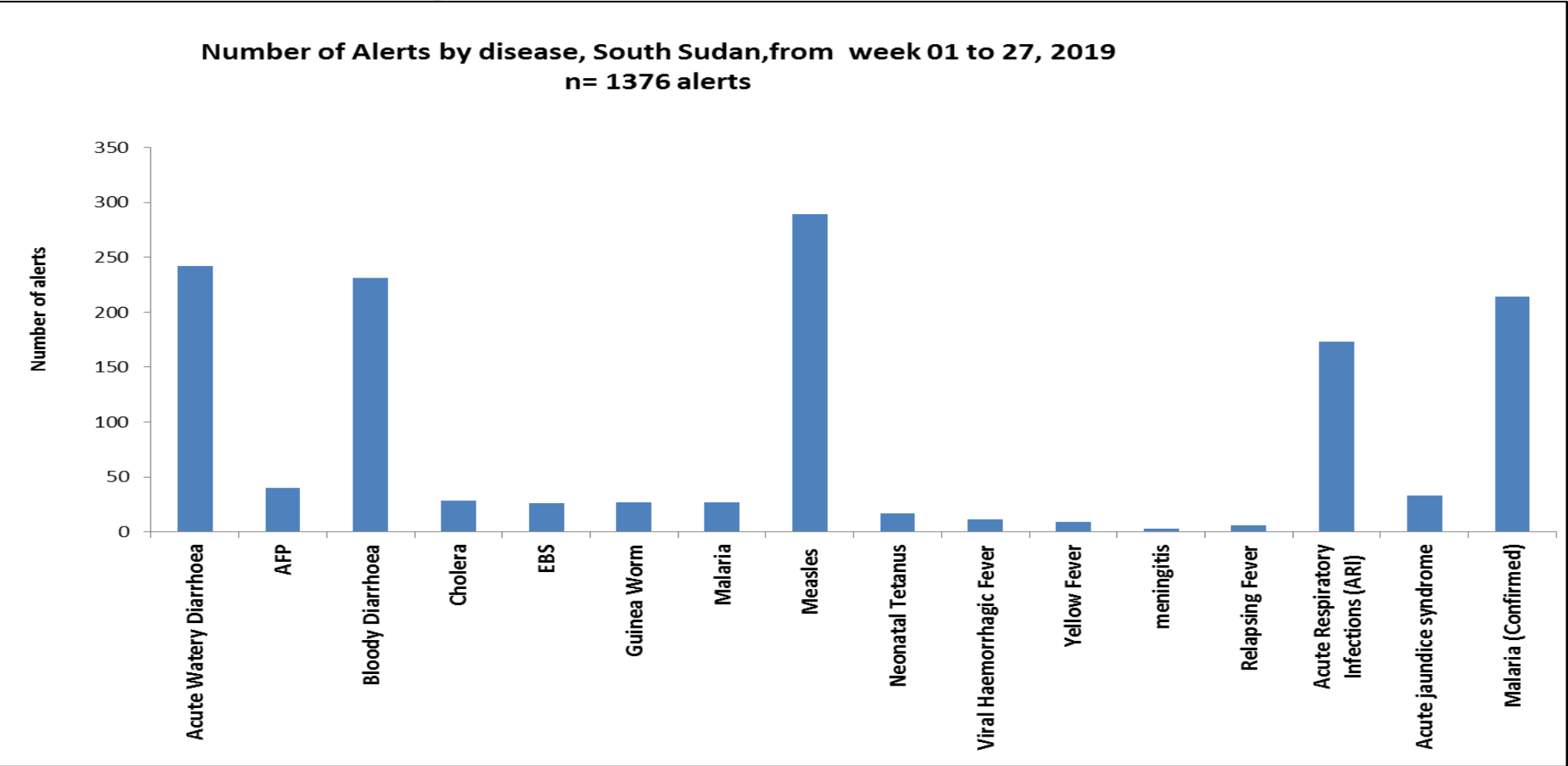
• Malaria (25), Acute watery diarrhea (11), measles (11) and bloody diarrhea (14) were the top common alerts generated through the EWARS in week 27, 2019.

Alert by disease and Hubs in W27, 2019 [A total of 88 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				2	1	1					1	1			2	8
Kuajok Hub												1				1
Torit Hub		6		2	5							4				17
Bentiue Hub	1						2					2				5
Yambio Hub		6		3								1			1	11
Juba Hub		1	2	1	3	1					1	3			2	14
Aweil Hub		1		2	1							5		2	1	12
Rumbek Hub				1	2		1					4			1	9
Wau Hub					2							2		1	4	9
Malakal Hub												2				2
Total Grand	1	14	2	11	14	2	3	0	0	0	2	25	0	3	11	88

VHE & cholera alerts from Juba hub and cholera alert from Bor hub were all discarded.

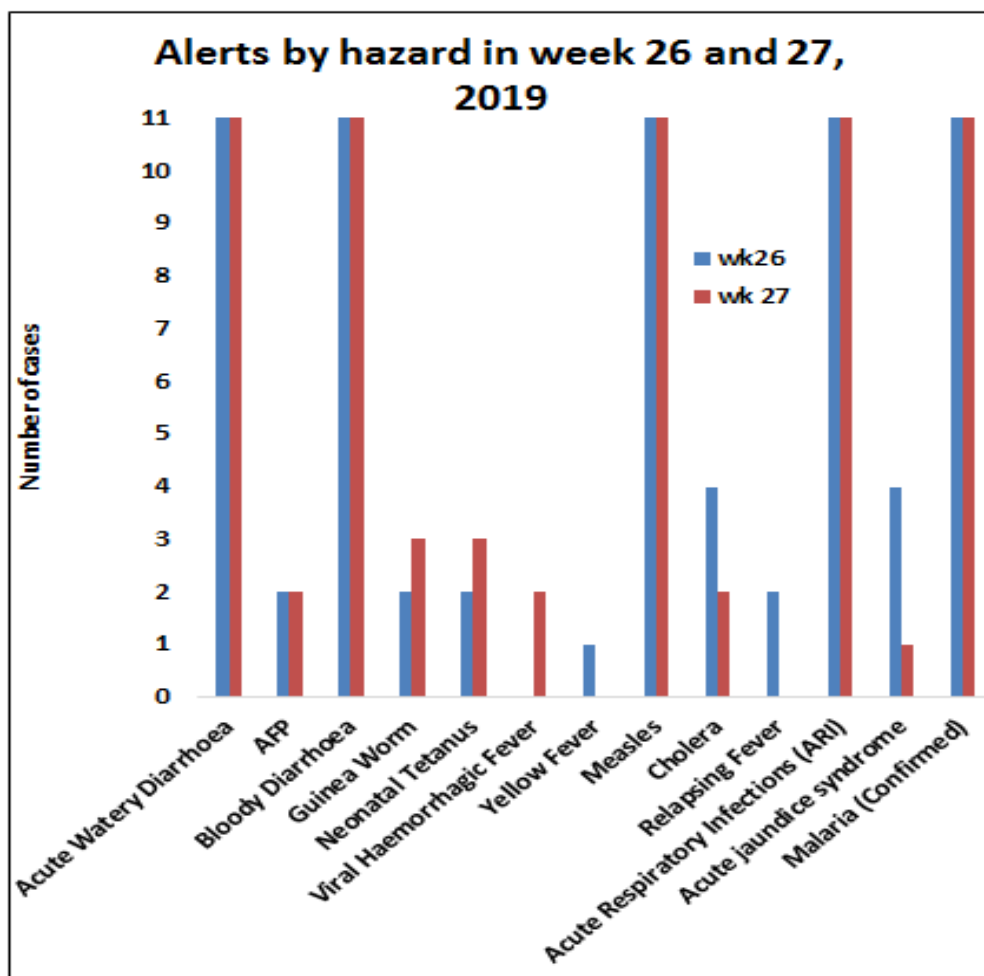
Alerts by disease from week 1 to 27, 2019



The graph shows number of cumulative alerts from week 1 to week 27, 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 26 and 27, by disease

Row Labels	wk26	wk 27	Total alerts
Acute Watery Diarrhea	25	11	36
AFP	2	2	4
Bloody Diarrhea	16	14	30
Guinea Worm	2	3	5
Neonatal Tetanus	2	3	5
Viral Hemorrhagic Fever		2	2
Yellow Fever	1		1
Measles	12	11	23
Cholera	4	2	6
Relapsing Fever	2		2
Acute Respiratory Infections (ARI)	22	14	36
Acute jaundice syndrome	4	1	5
Malaria (Confirmed)	31	25	56
Total alerts	123	88	211



There is Much difference between week 26 and week 27 alerts. Acute watery diarrhea, acute bloody diarrhea and malaria alerts are less in week 27 than in week 26.

Cumulative alerts by risk assessment stage in 2019

County	OUTCOME	RISK ASSESSED	VERIFICATION	Total Alerts
Acute Watery Diarrhoea	6	1	235	242
AFP	2		38	40
Bloody Diarrhoea	3	2	226	231
EBS	4		22	26
Guinea Worm			27	27
Neonatal Tetanus			17	17
Viral Haemorrhagic Fever			11	11
Yellow Fever			9	9
Measles	25	5	259	289
Cholera			28	28
Malaria			27	27
meningitis	2		1	3
Relapsing Fever			6	6
Acute Respiratory Infections (ARI)	6	2	165	173
Acute jaundice syndrome	4		29	33
Malaria (Confirmed)	9	1	204	214
Total Alerts	61	11	1304	1376

- The table shows the cumulative alerts by risk assessment status in 2019
- Of the 1376 alerts reported in 2019; 1304 (94.76%) alerts were verified and 11 (0.79%) underwent risk assessment.

Juba POC/IMC Cholera Alert

On 24th 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 G.W program.

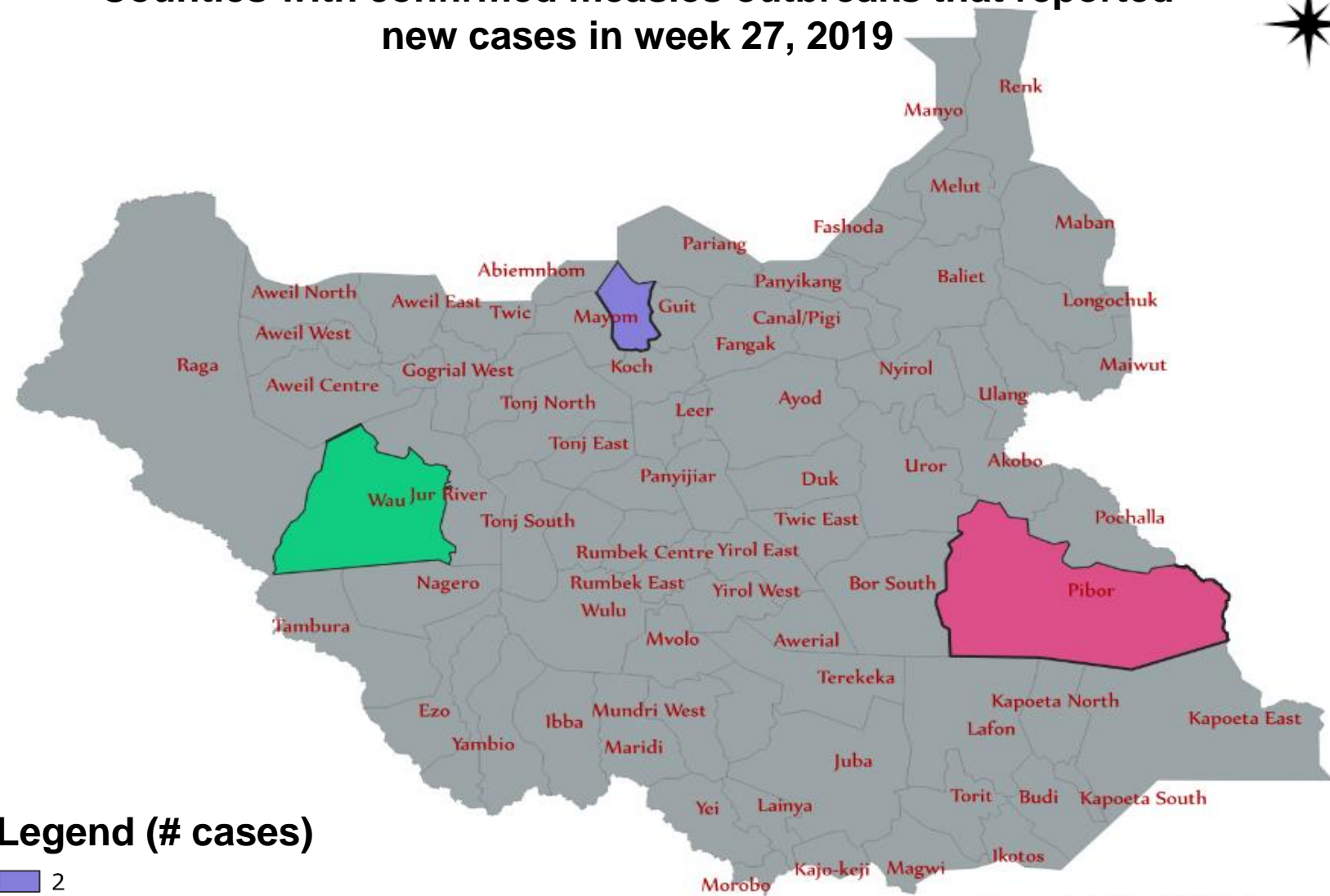
Five Measles deaths reported from Wau

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 27, 2019



Legend (# cases)

- 2
- 8
- 18
- County boundaries

0 100 200 km



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

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	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	2	53(0.37)	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	NA/
Measles	Tonj North	2/04/2019	0	20 (0)	Yes	Yes	Yes	N/A
Measles	Pibor	17/01/2019	35	915(0.37)				
Measles	Aweil West	4/04/2019	0	48 (0)	Yes	Yes	Yes	N/A
Measles	Bentiu PoC	24/04/2019	0	27 (0)	Yes	Yes	Yes	N/A
Measles	Aweil East	13/05/2019	0	19 (0)	Yes	Yes	Yes	N/A

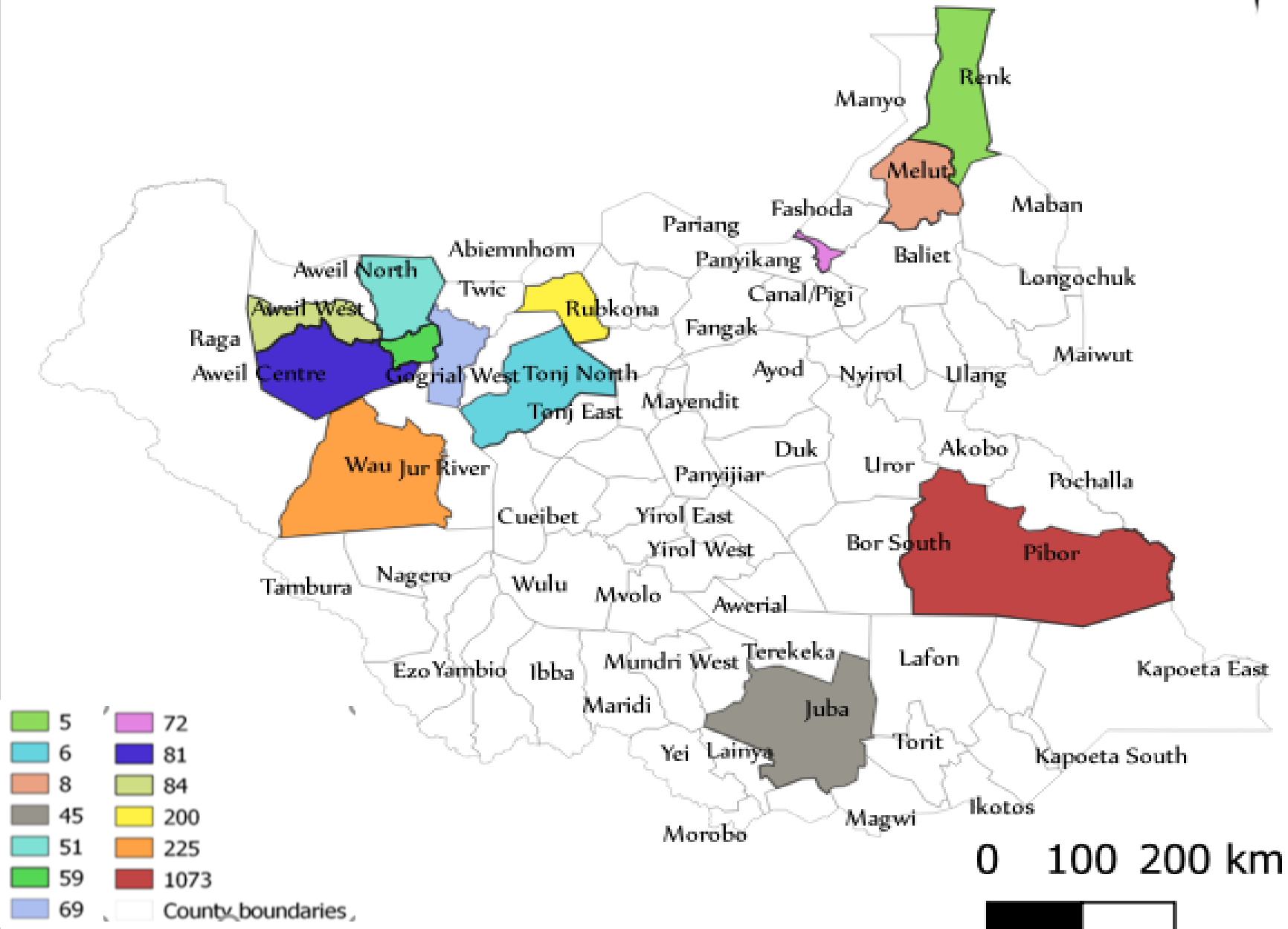
Response | Summary of major Controlled outbreaks in 2019

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

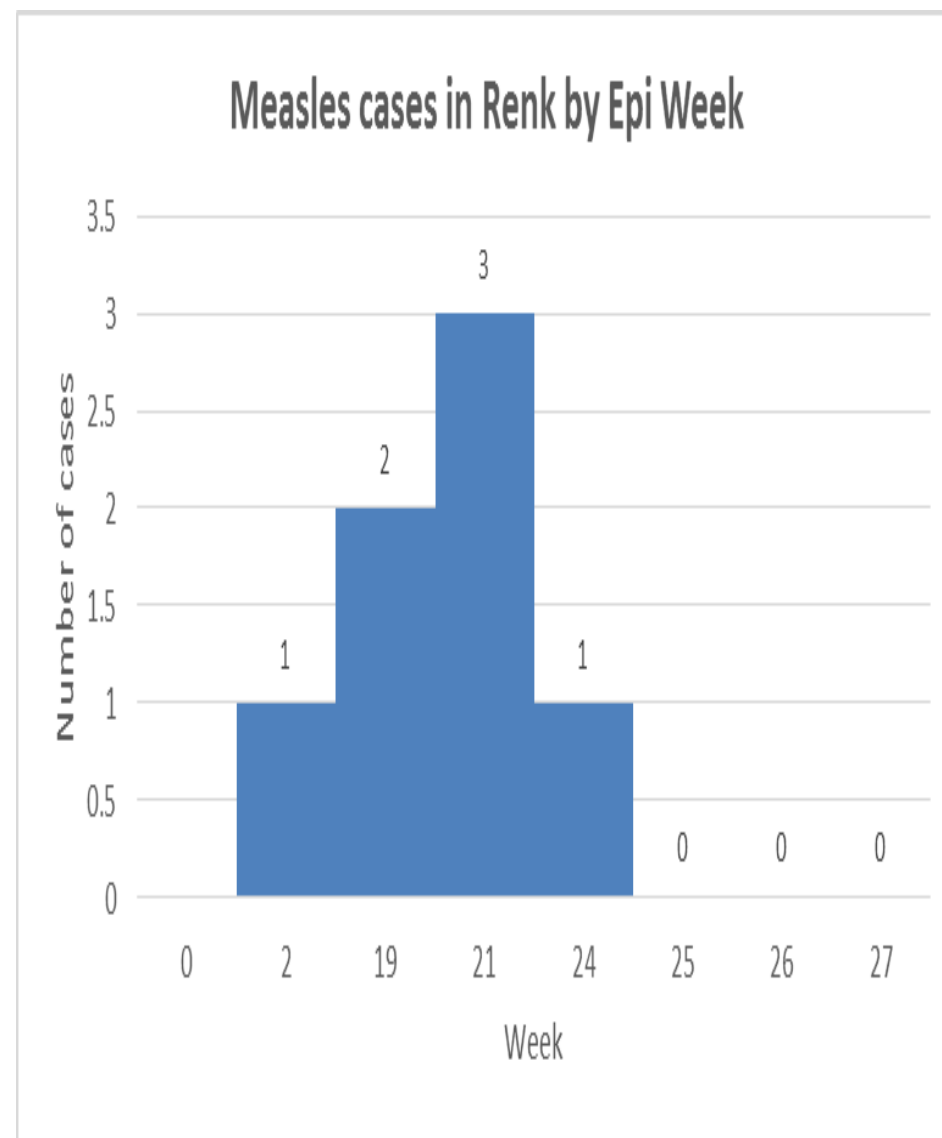
Counties with confirmed measles cases in 2019



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

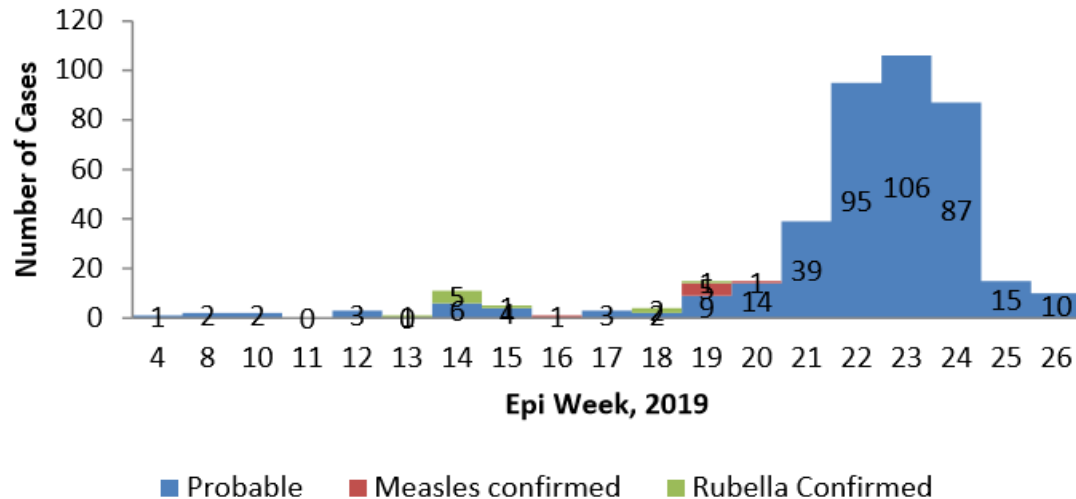
Simple Descriptive Epidemiology and Recommendations

- As of 30th 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

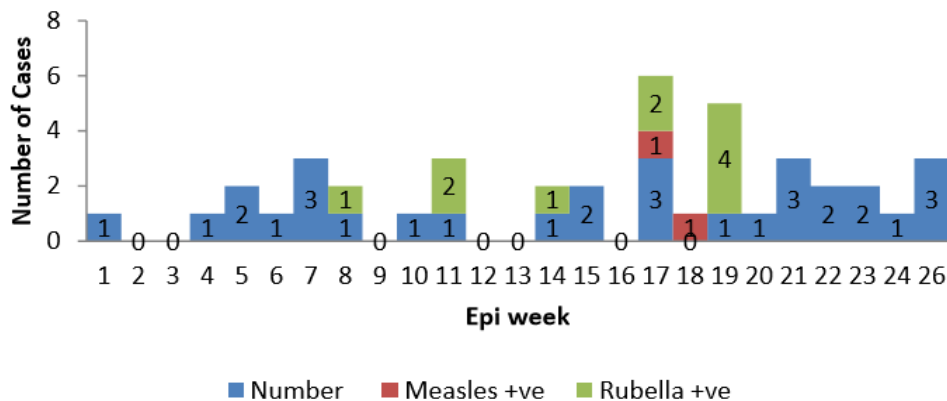
- In week 19, 2019 a measles outbreak was confirmed in Wau county following the confirmation of 3 measles samples tested positive for IgM Wau county and 1 in the POC AA.
- Wau county started seeing measles cases from as early as week 4 in 2019.
- Out of all the samples sent to the lab, 10 tested positive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

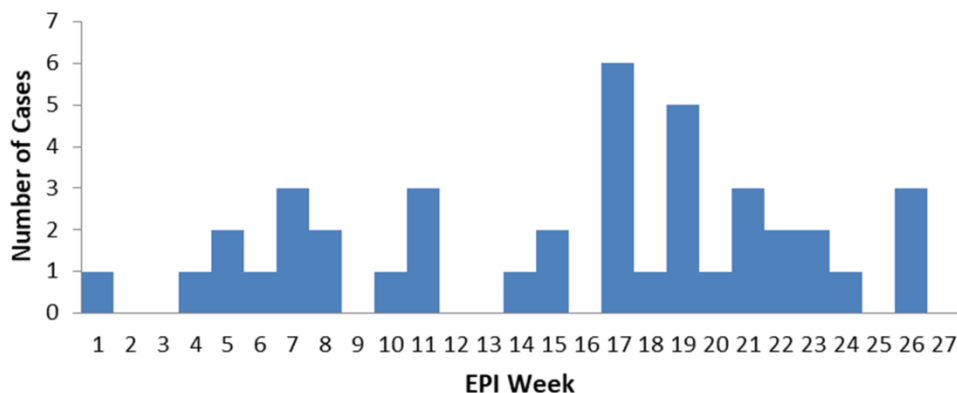
Measles and Rubella cases in Bentiu POC from week 1 to week 26



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

Measles Cases in Bentiu from week 01 to week 27, 2019



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%.

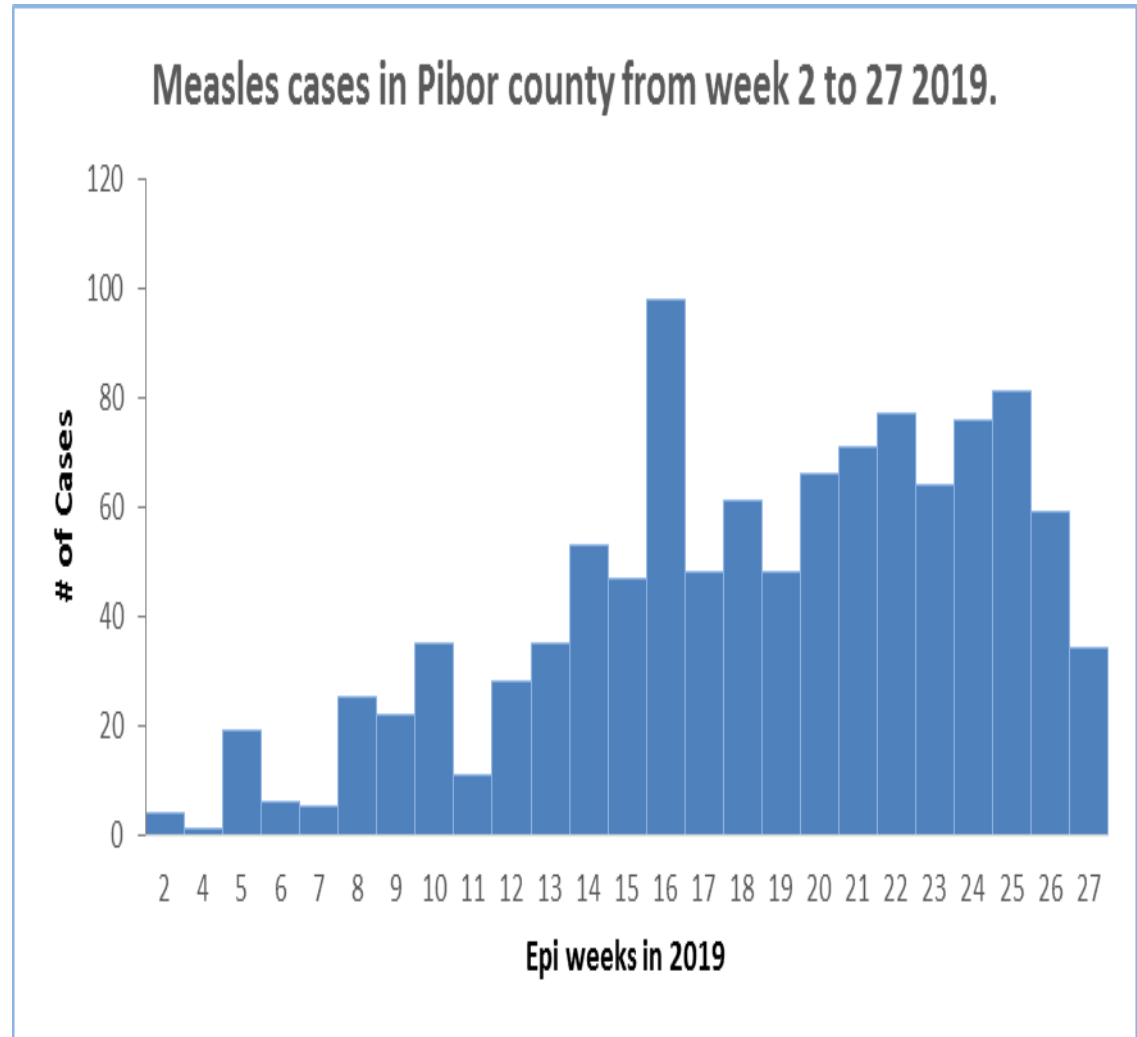
Measles in Pibor County

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.



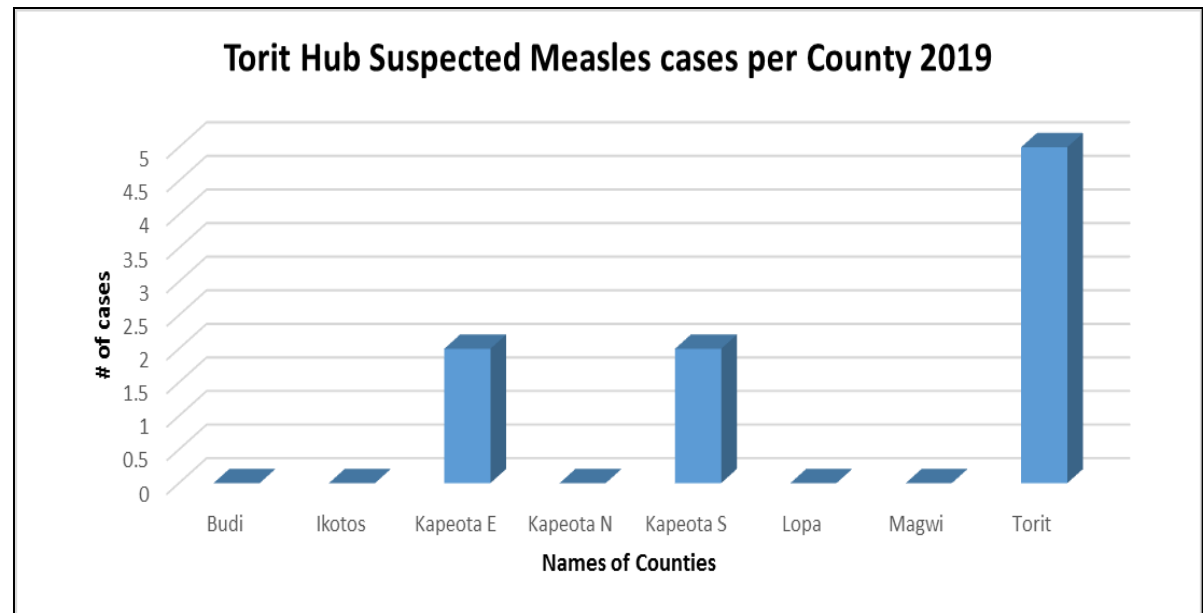
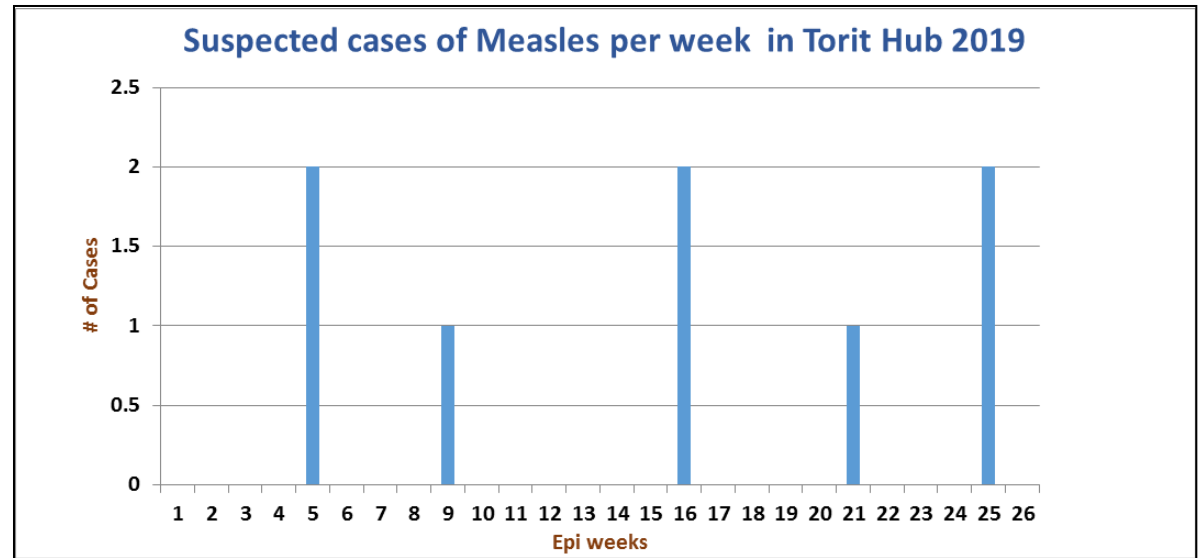
Suspected Measles Cases in Torit

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 31st 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

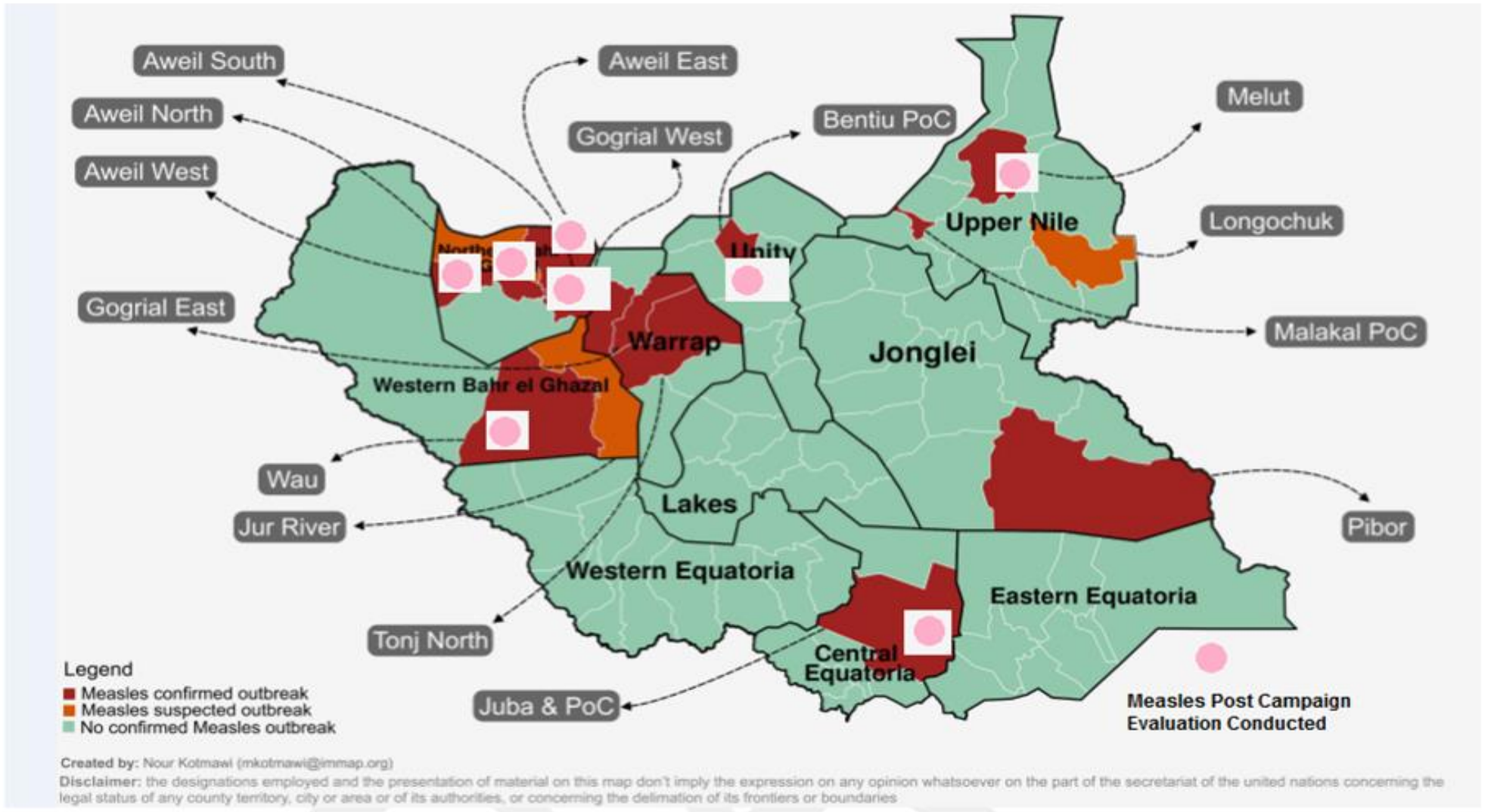
- **Aweil East County:**

- 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

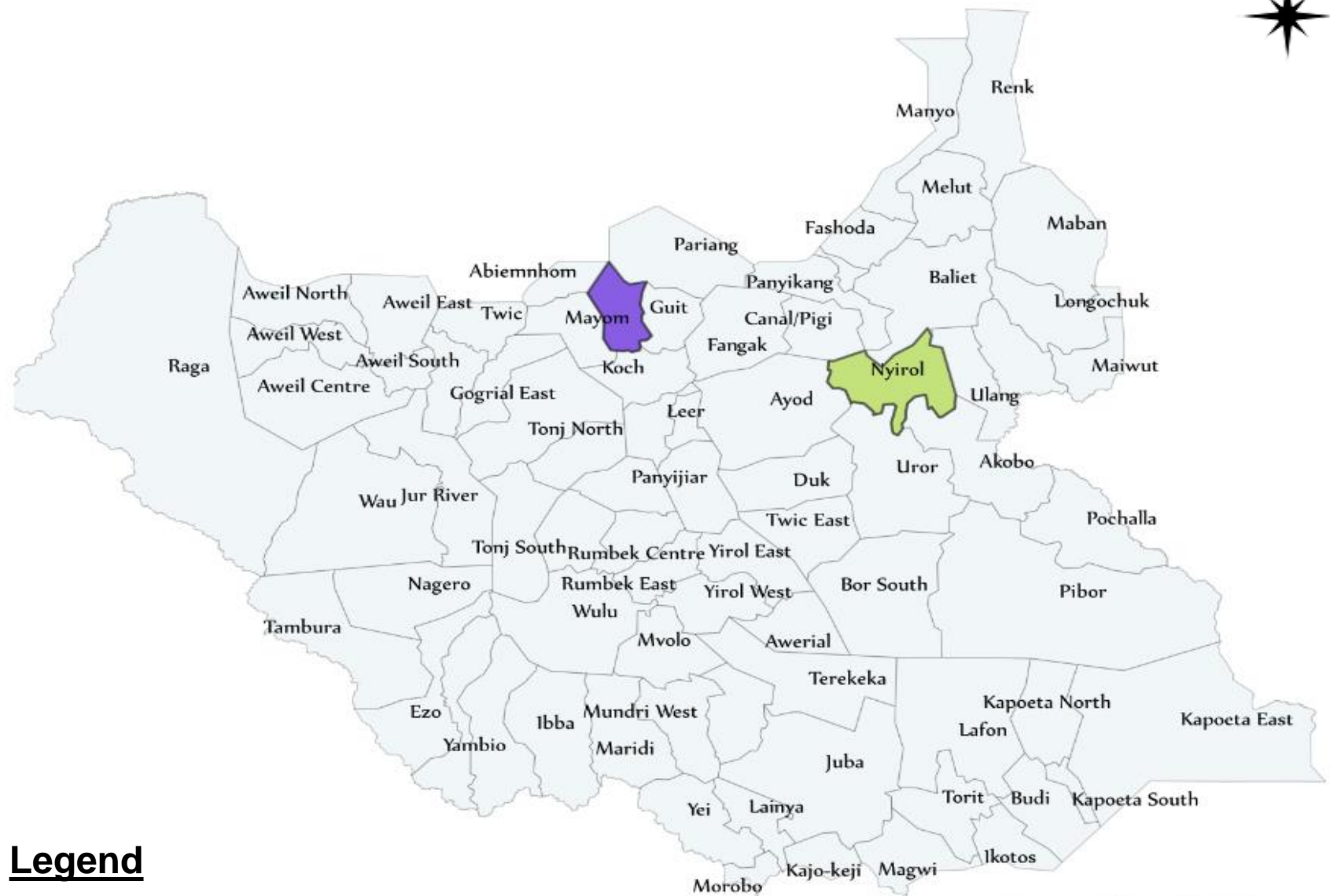
†

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 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

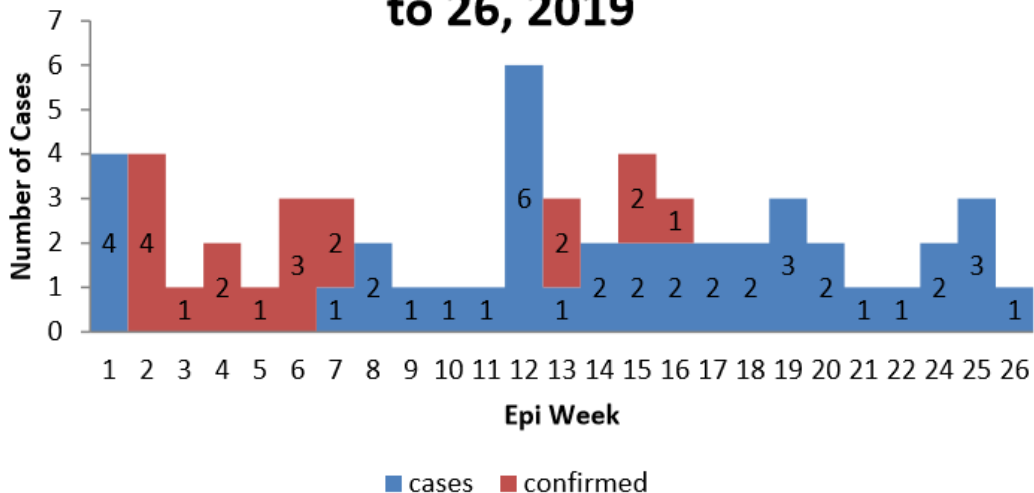
0 100 200 km



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 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 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
- 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
Total cases	23	28	51	100

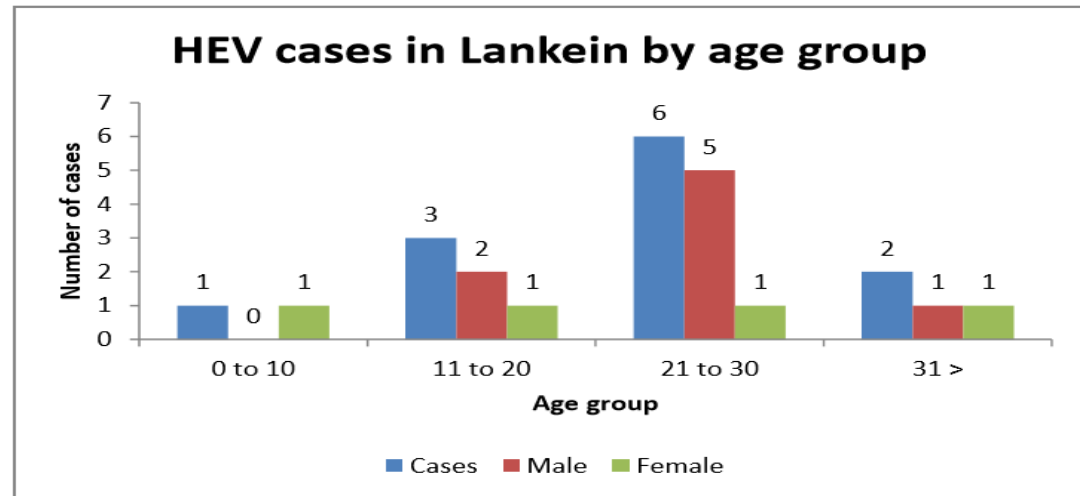
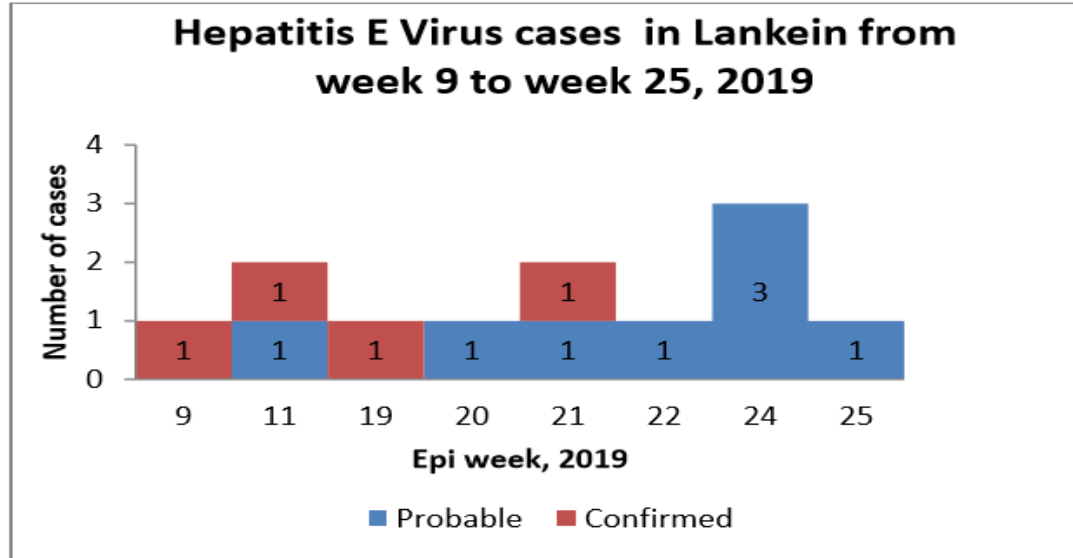
Hepatitis E cases in Lankein, 2019

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 27, 2019

Location/Health Facility	Date sent to Juba	Date Received at PHL	Suspected Disease	Lab results
MSF H/Rubkona POC	7/9/2019	7/10/2019	Measles	Measles IgM Positive
MSF Hospital POC	7/9/2019	7/10/2019	Measles	Measles IgM Positive
MSF Hospital POC	7/10/2019	7/17/2019	Measles	Measles IgM Positive
Bentiu POC	7/12/2019	7/17/2019	Measles	Measles IgM Positive
Kuarnor POC	7/12/2019	7/17/2019	Measles	Measles IgM Positive
Akuak PHcc	7/20/2019	7/22/2019	Measles	Rubella IgM Positive

Current Malaria trends

Malaria was the leading cause of morbidity and mortality, accounting for 67.9 % of all morbidities and 71, 5 % of all mortalities in week 27, 2019

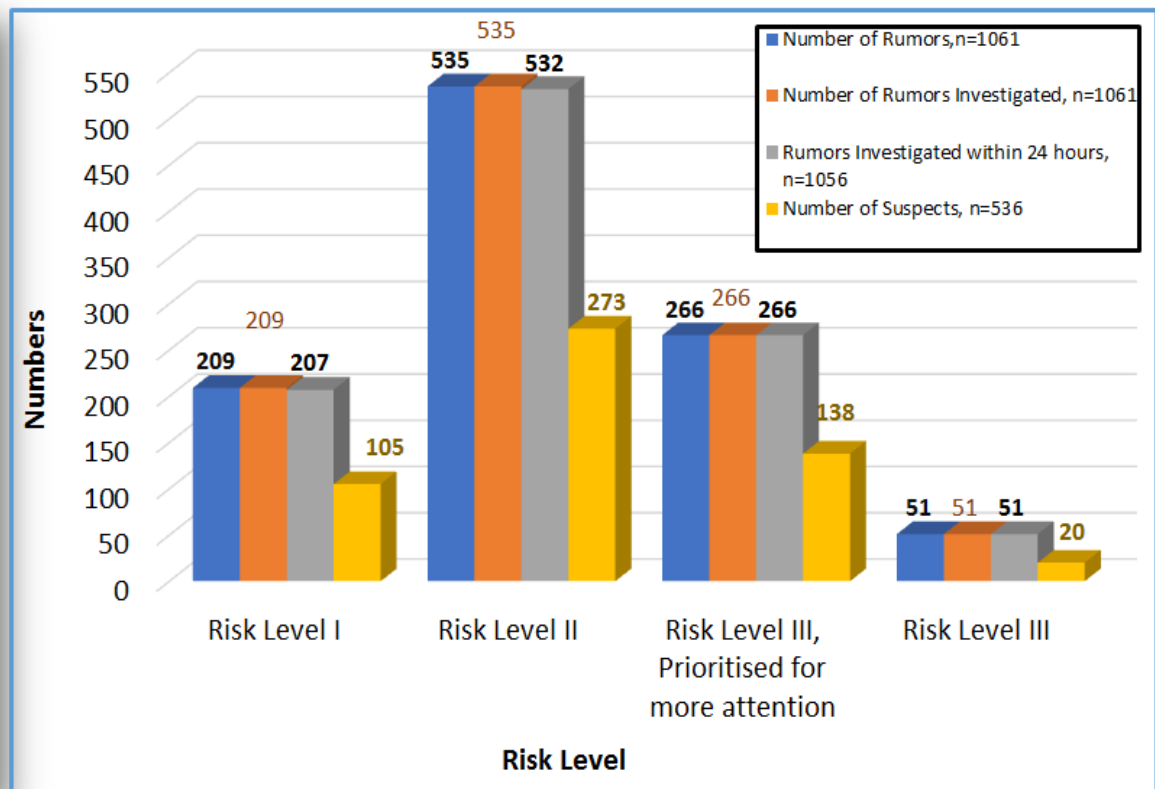
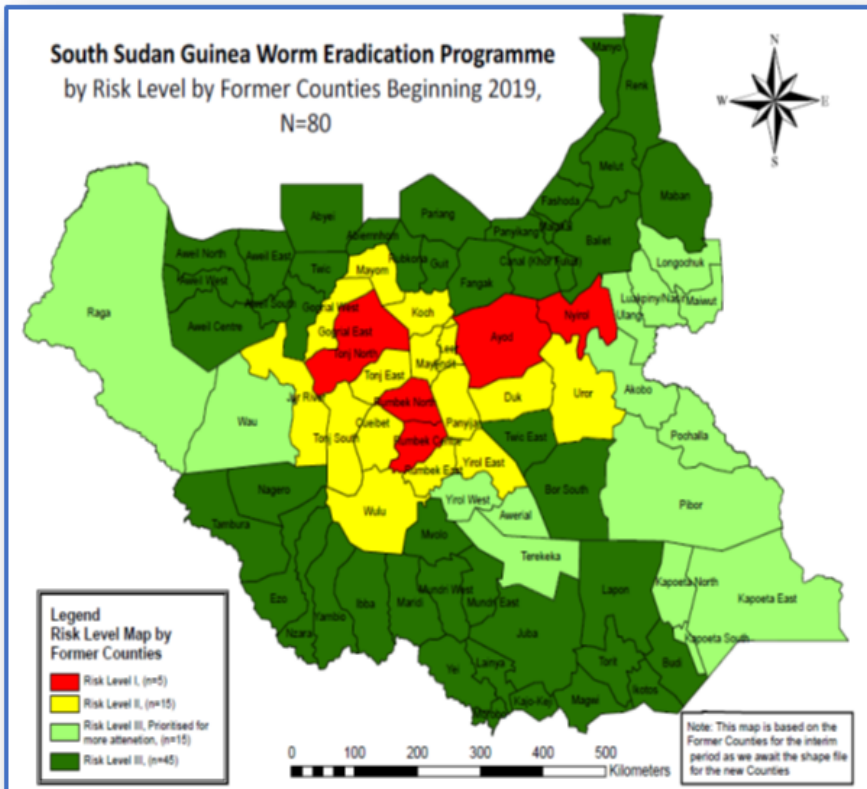
At least 19 counties with malaria trends that exceed the threshold (third quartile of trends for the period 2013-2017) and these include:

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

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 83 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 43 samples.

Guinea Worm Rumors reported, Rumors Investigated, Rumors Investigated within 24 hours and Suspects by Risk Level



- Only 5 rumors were not investigated within 24 hours (0.5% of all rumors reported during week 27).
- All the 5 rumors were eventually investigated successfully.
- 50.5% of rumors became Guinea Worm Disease suspects.

Total Number of Rumors/ Alerts Reported by Reporting Structures for the 27th. Week of 2019, N=1061

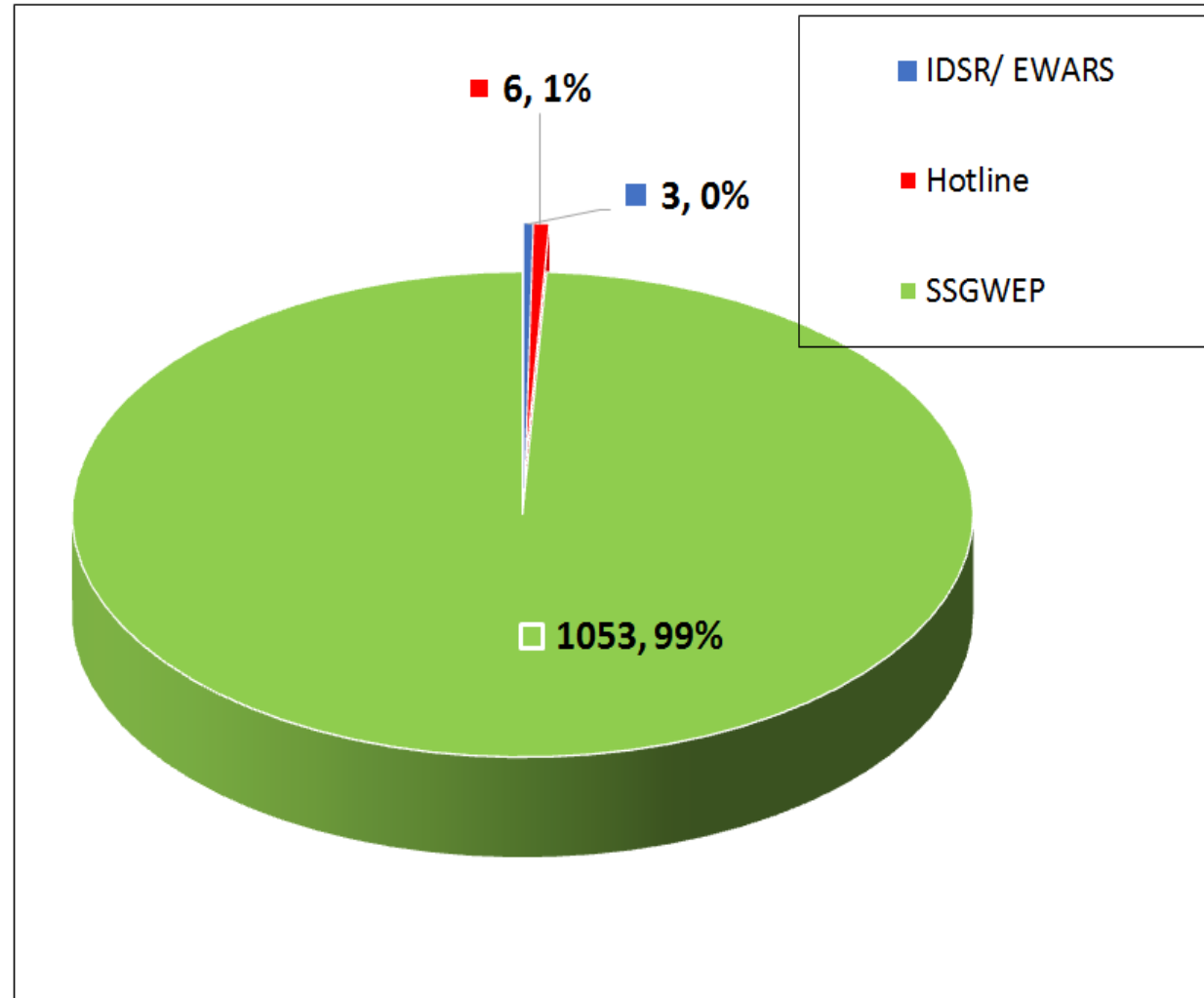
3 alerts from IDSR

2 from Agany PHCU, Aluakluak Payam, former Yirol West county. They have already been investigated

1 from Wangkei PHCC, former Mayom County, this is an **Entry error. Needs to be removed**

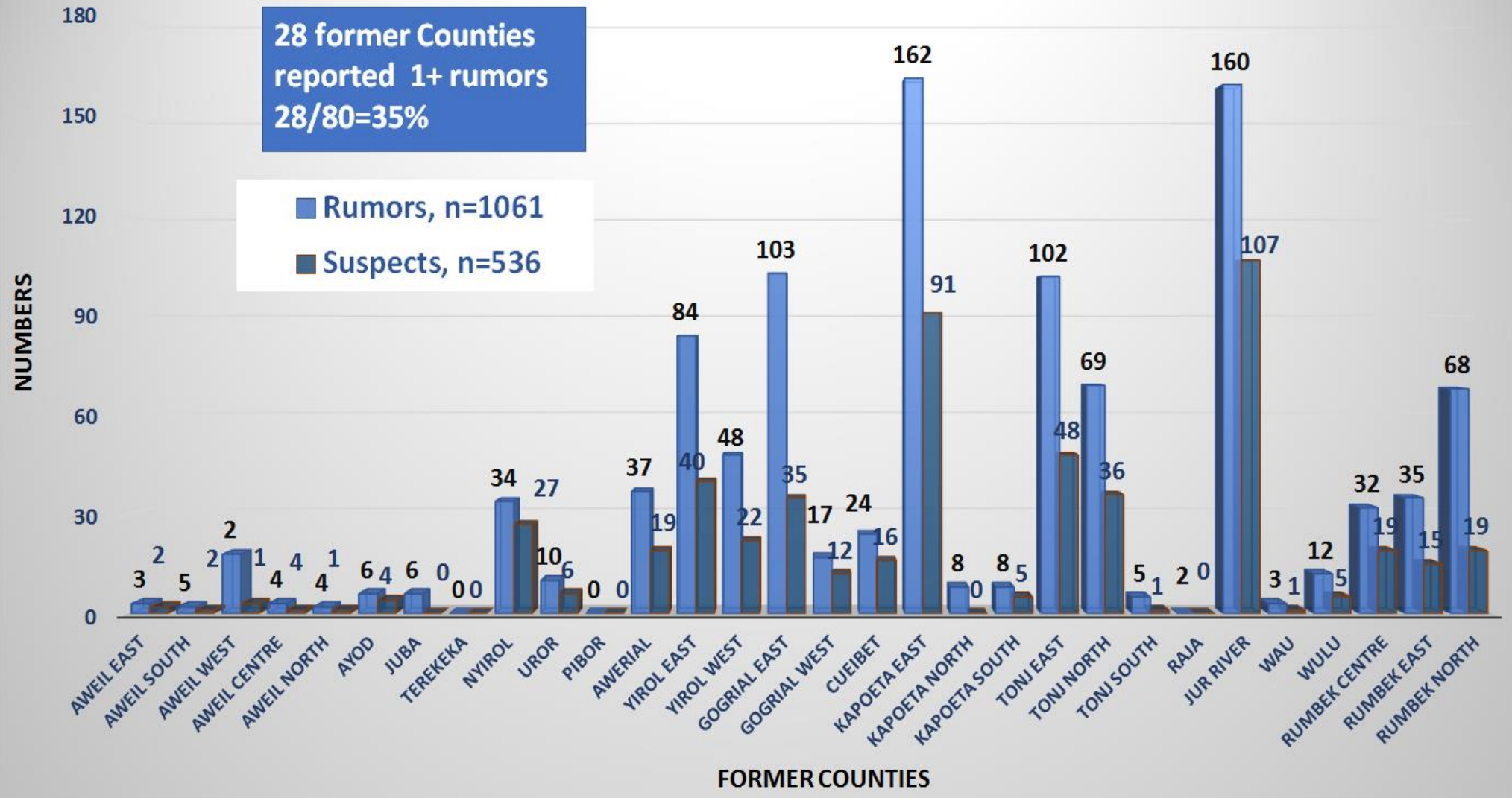
6 hotline rumors

All from Munuki Payam, former Juba County, all have been investigated

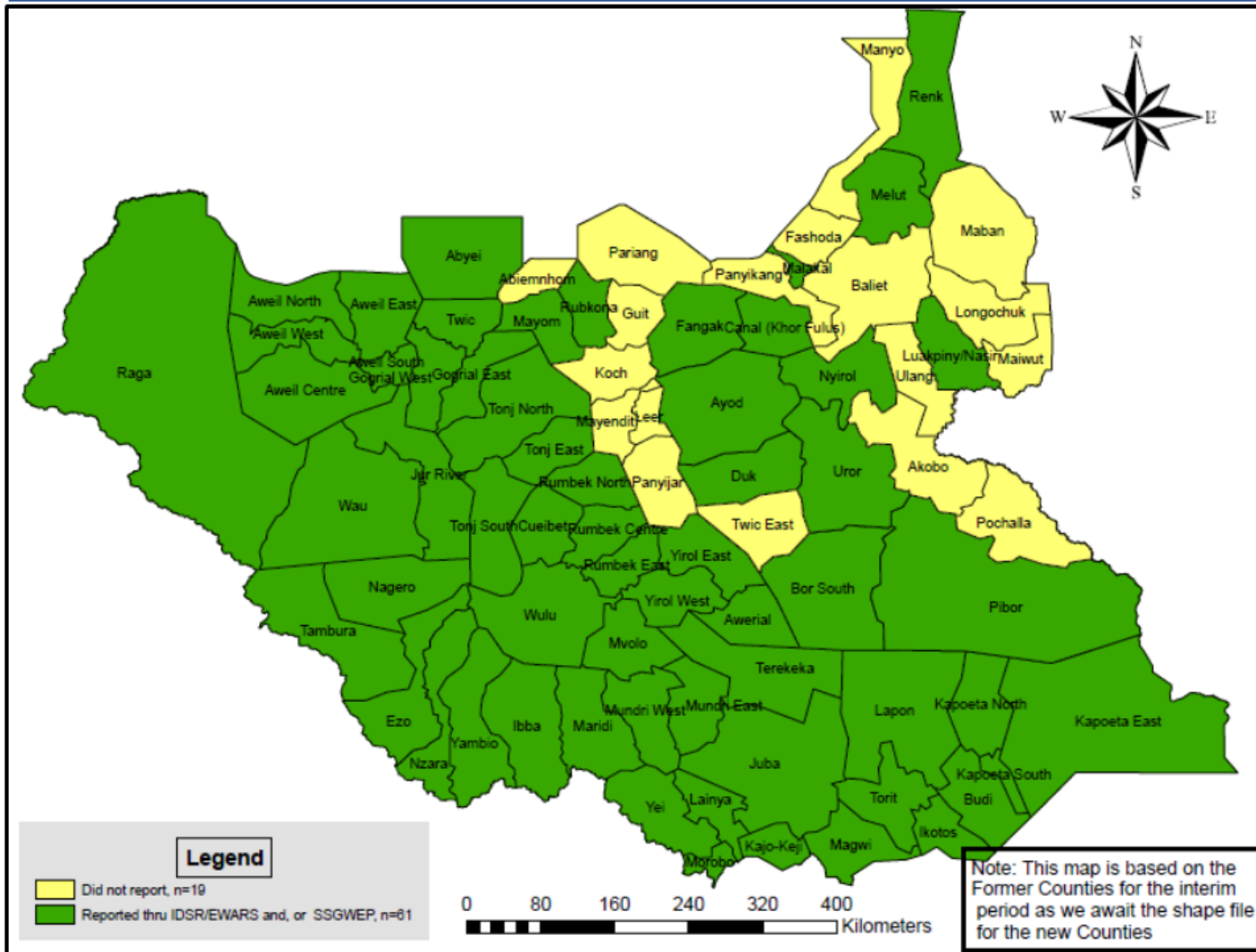


Guinea Worm

Former Counties That Reported Guinea Worm Rumors, and Suspects during 30th June – 6th July, 2019 (27th Week) of the Year.



Guinea Worm disease reports received through IDSR/ EWARS and/ or South Sudan Guinea Worm Eradication Programme (SSGWEP) during Week 27 of the year, N=80



Reporting

76% (61/80) of former Counties reported at least once from the health facilities/ reporting units through IDSR, EWARS, and/ or South Sudan Guinea Worm Eradication Programme (SSGWEP)

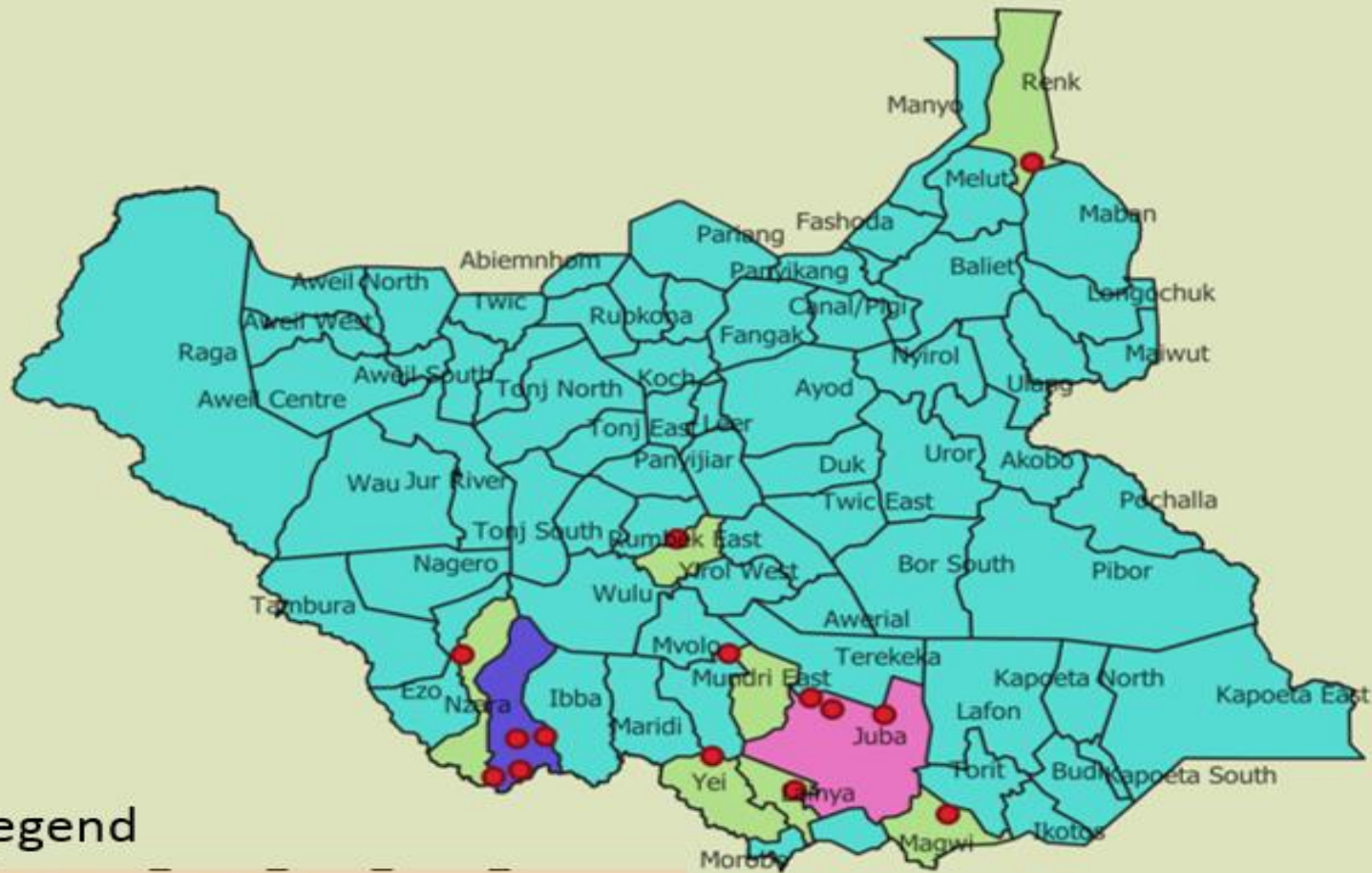
24% (19/80) of former Counties did not report from any of the health facilities

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

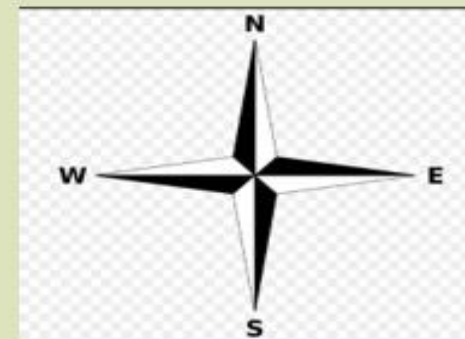
- In 2018, at least 16 alerts met the case definition and therefore underwent verification and follow up investigation by the rapid response teams.
- During 2018, at least **13** alerts that met the case definition were investigated and had samples obtained for laboratory testing will testing negative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



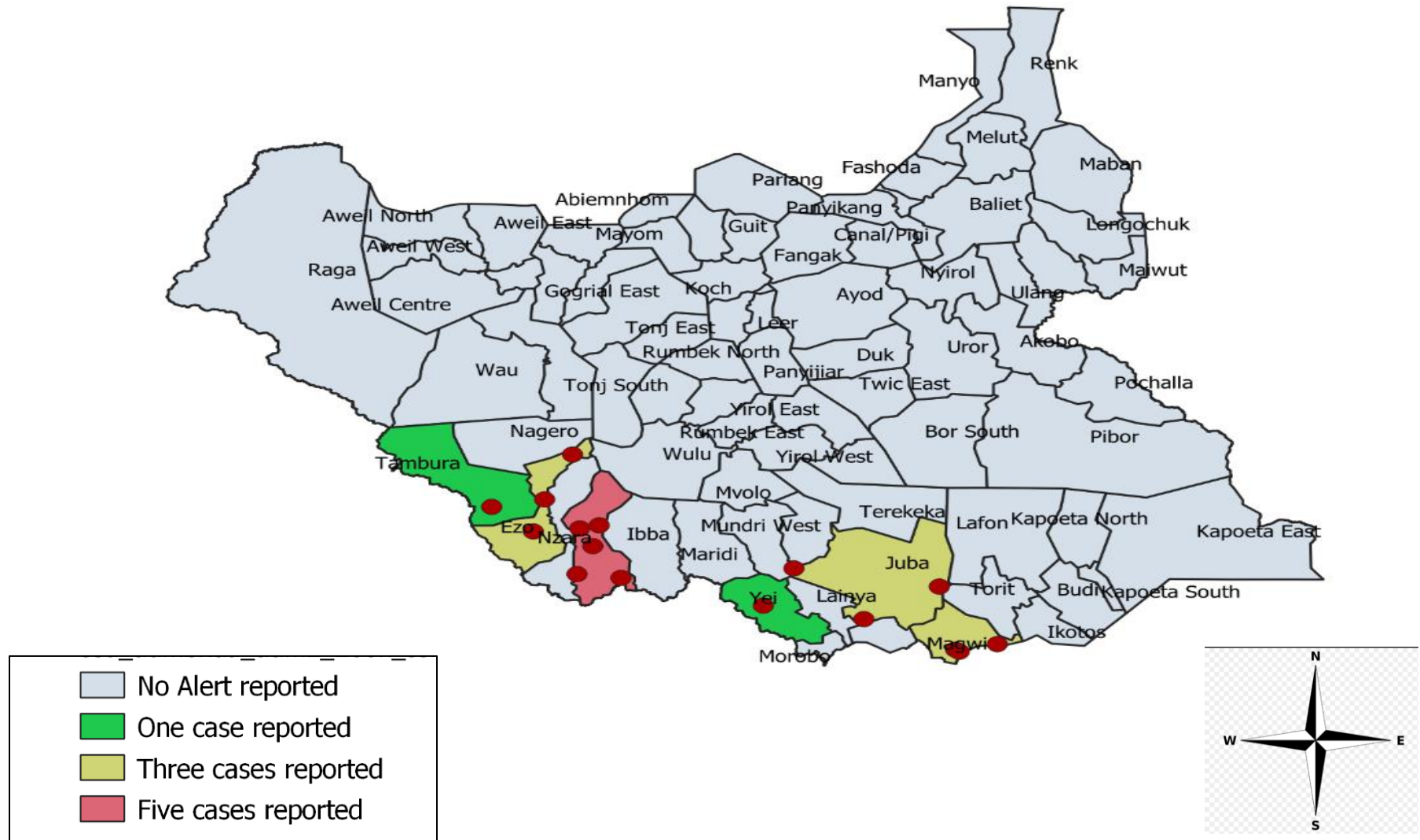
Legend

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



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



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

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

Nimule EVD Alert

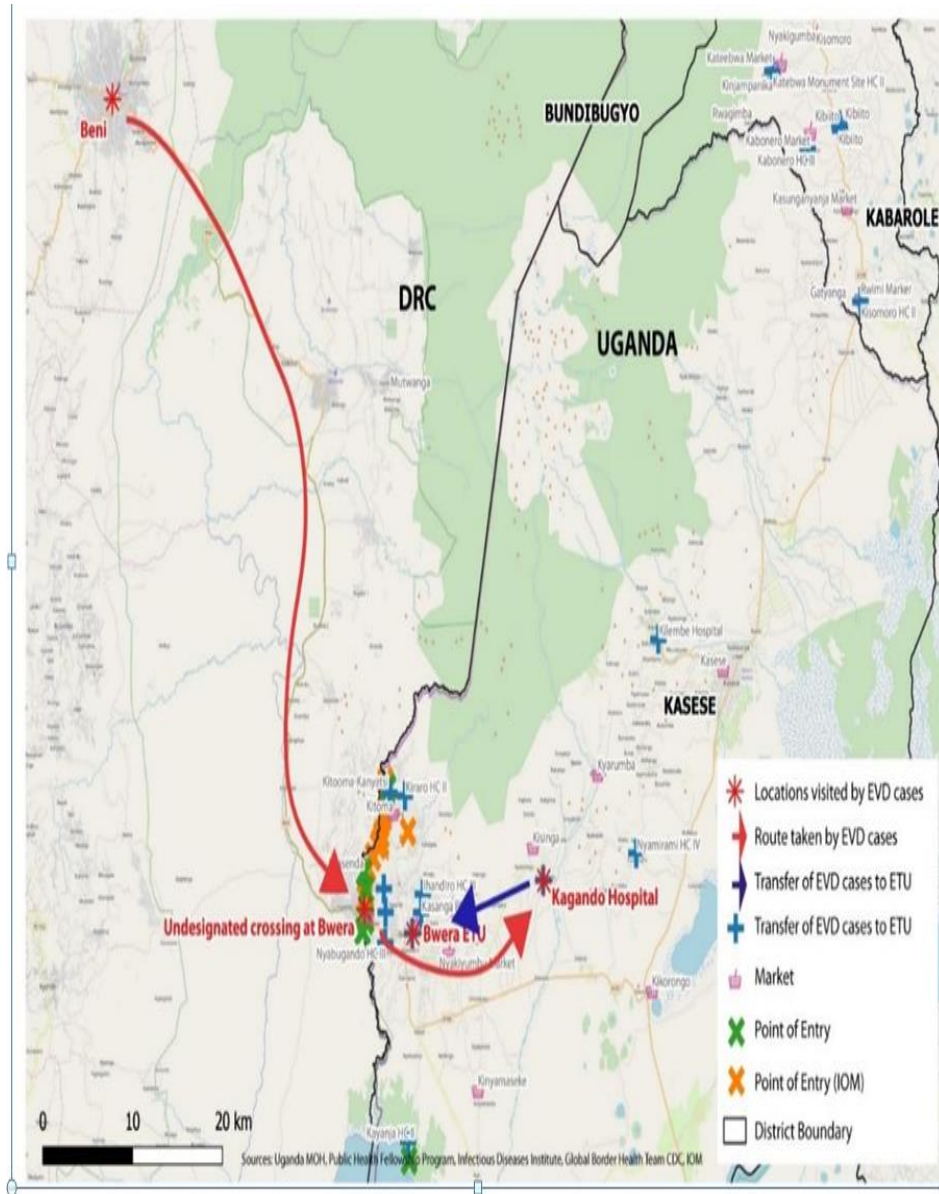
On 6th June, 2019 two alerts were received around 4:30pm and 4:50pm. They were picked from the Main ground crossing at the PoE. SRRT was activated. Both alerts did not meet EVD case definition. The alerts were discarded.

Juba EVD Alert

On 4th July 2019, through 6666, the PHEOC receive an alert from New Site/ Juba County. S.M 46 years old male complaining of fever, dark urine, generalized body weakness, fatigue, abdominal pain and weight loss. No history of travel to DRC. Patient seek medical attention in military hospital two weeks ago, he was diagnosed with Jaundice, However patient refused to continue with medication because of traditional perceptions.

The NRRT was activated immediately after they received the alert at 11:39 pm. The NRRT and VHF Consortium arrived in New Site at 12:01 pm. They concluded that case does not match the EVD standard case definition and alert was 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) , 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 20th July, 2019

Current situation

- Currently as of 20th July, 2019
- 2578 Cases [2484 confirmed & 94 probable]
- 1737 Deaths [1643 confirmed & 94 probable]
- 135 (5%) Health workers

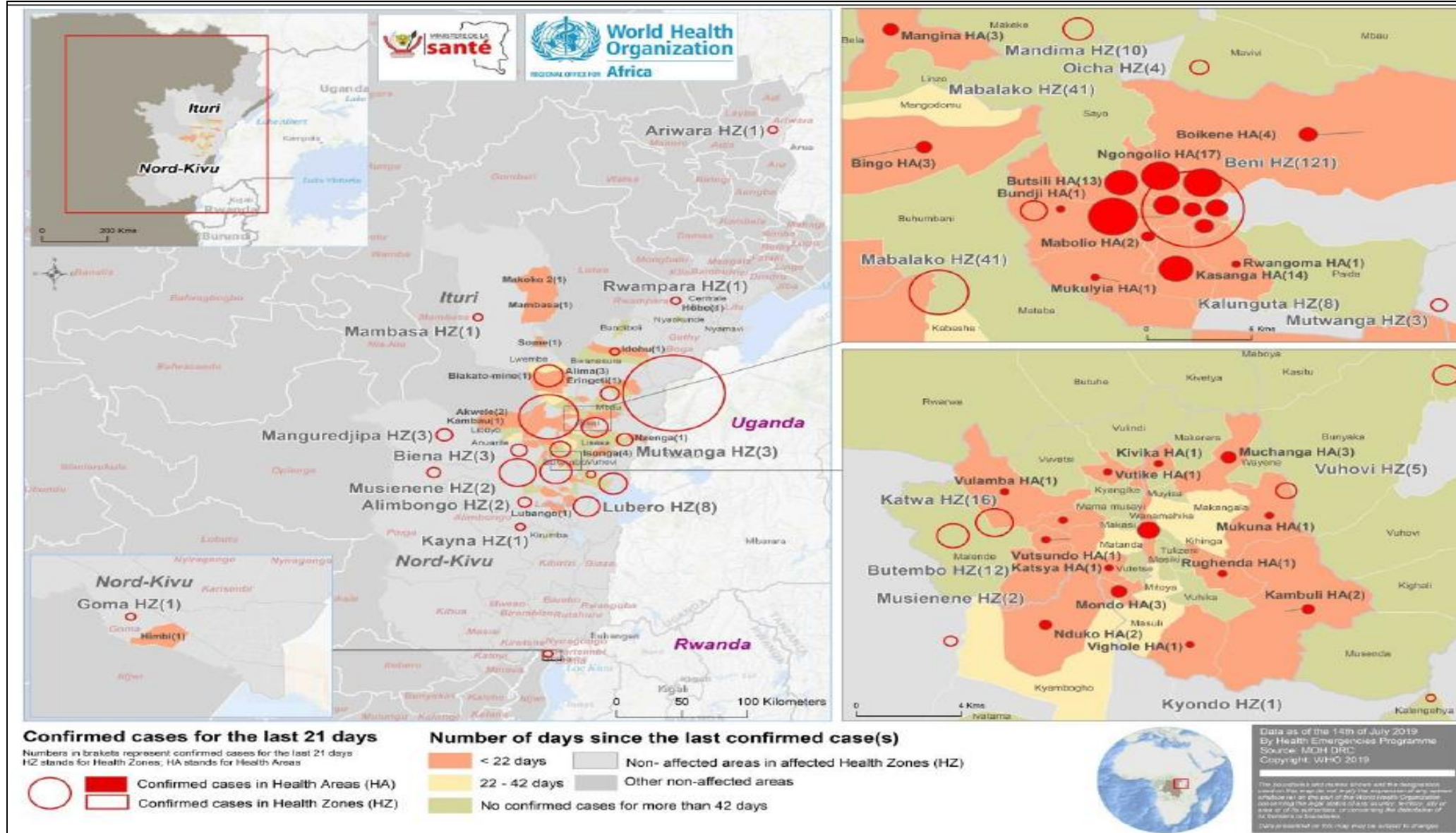
Response update

- 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

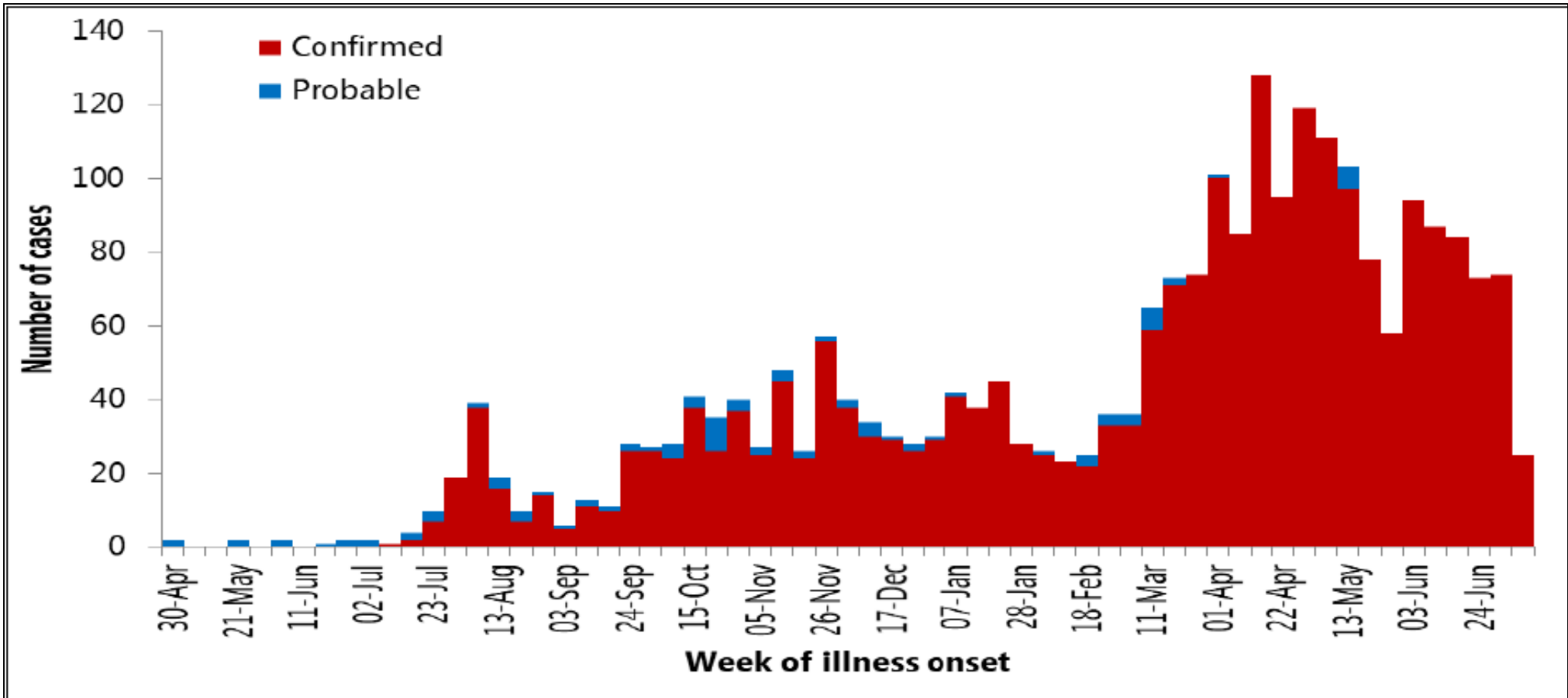
Affected health zones

- 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

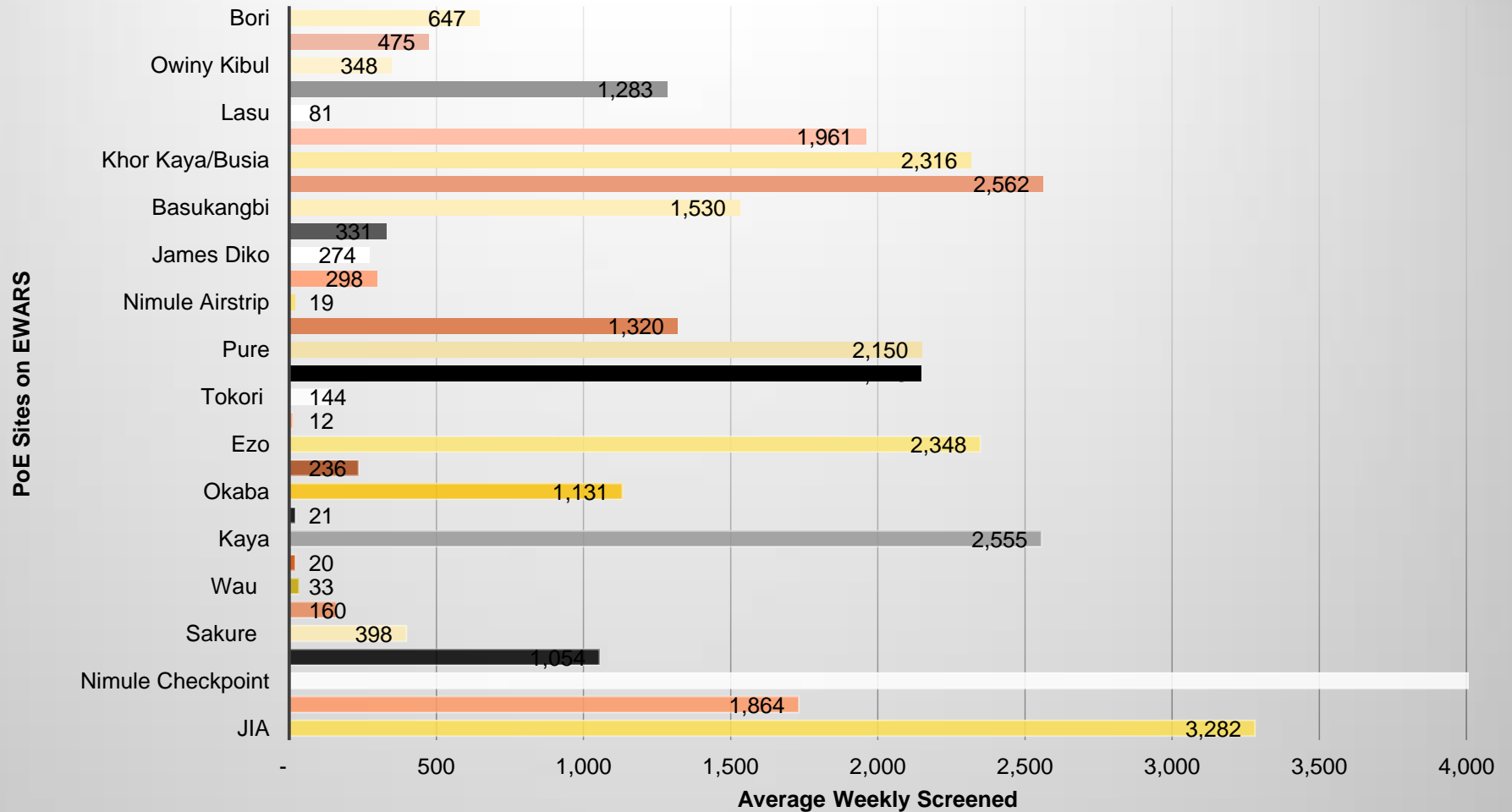


- Active transmission with continued increase in the number of new Ebola virus disease (EVD) cases in the affected geographical regions. █

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**

**For more help and support,
please contact:**

Dr. Pinyi Nyimol Mawien

Director General Preventive Health Services
Ministry of Health
Republic of South Sudan
Telephone: +211916285676

Mathew Tut M. Kol

Director, Emergency Preparedness and Response
Ministry of Health, RSS
Tell: +211916010382, +211922202028
Emails: tut1988@yahoo.com, greensouth2020@gmail.com
Skype: mathew19885

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>

