

# South Sudan

## Integrated Disease Surveillance and Response (IDSR)

Epidemiological Update W10 2018 (Mar 05- Mar 11)



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### Cholera

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### Sources of data

1. Weekly IDSR Reporting Form
2. Weekly EWARS Reporting Form
3. Daily cholera line list
4. Event based surveillance form

- Completeness for IDSR reporting at county level was 74%. Completeness for EWARS reporting from IDP sites was 86%.

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- A total of 9 alerts were reported, of which 78% have been verified. 0 alerts were risk assessed and 0 required a response.

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- Rift Valley Fever outbreak - Yirol East with 40 suspect human cases including 6 confirmed; 3 probable; 19 non-cases; and 12 pending classification. Nine confirmed animal cases (cattle).

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- Following the confirmation of a measles outbreak in Aweil East [after four measles IgM positive cases were confirmed on 24 Feb 2018], a reactive measles campaign planned targeting children 6 months to 59 months. The campaign is slated for March 26-31, 2018.

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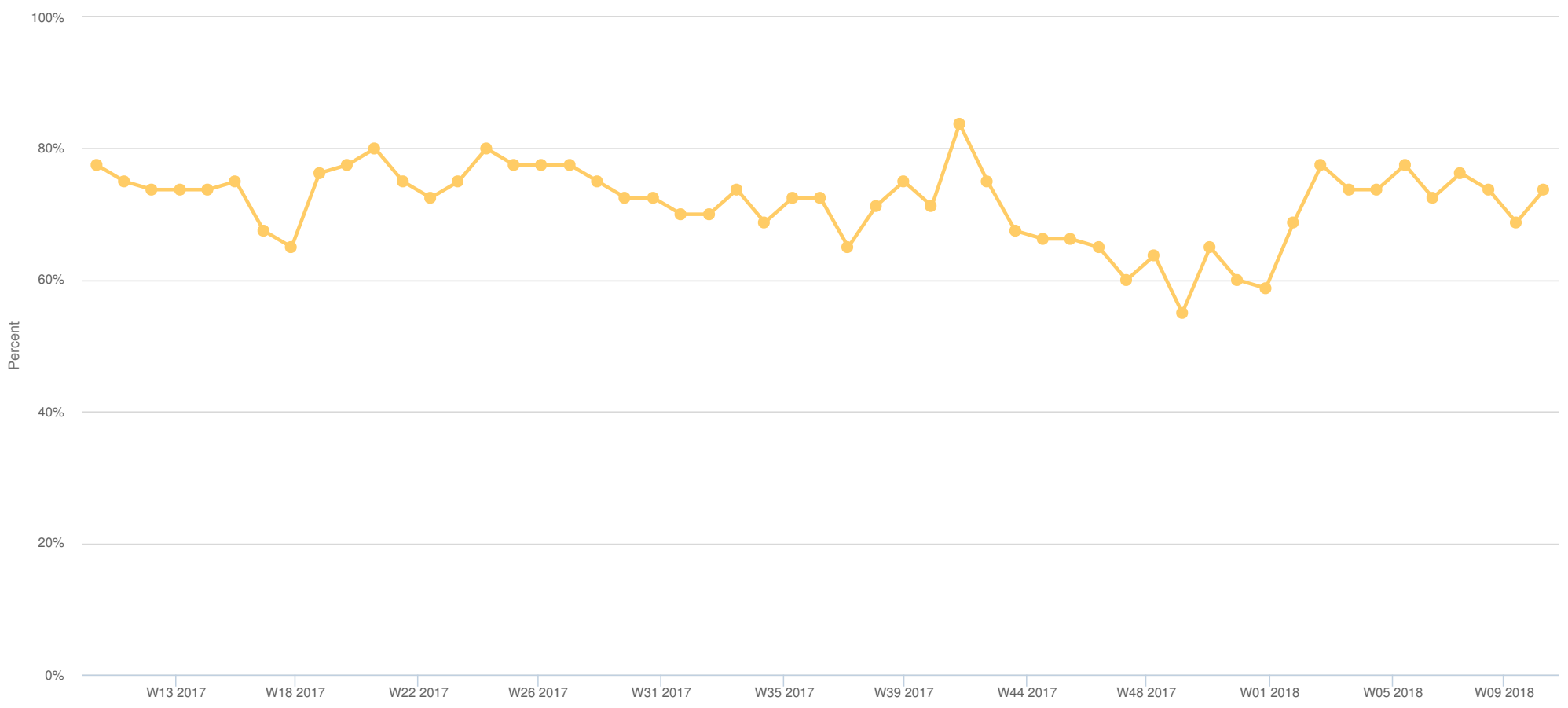
- Suspect meningitis cases reported in Torit county, Iyire & Imurok payams. At least 171 suspect cases including 31 deaths reported. Alert and action thresholds surpassed in weeks 7 and 9 respectively. Transmission declined after week 9 and hence in week 11, attack rate was below the alert & action thresholds. Definitive laboratory testing pending.

**Table 1** | IDSR surveillance performance indicators by county (W10 2018)

Hub	Reporting		Performance (W10 2018)		Performance (Cumulative 2018)	
	# counties	# reports received	Completeness	Timeliness	Completeness	Timeliness
Aweil	5	5	100%	100%	98%	98%
Bentiu	9	7	78%	78%	78%	52%
Bor	11	7	64%	64%	53%	44%
Juba	6	3	50%	50%	67%	63%
Kwajok	7	7	100%	100%	100%	91%
Malakal	13	2	15%	15%	20%	8%
Rumbek	8	8	100%	100%	100%	98%
Torit	8	7	88%	88%	89%	70%
Wau	3	3	100%	100%	90%	73%
Yambio	10	10	100%	100%	98%	98%
<b>South Sudan</b>	<b>80</b>	<b>59</b>	<b>74%</b>	<b>74%</b>	<b>74%</b>	<b>74%</b>

- Completeness for IDSR reporting at county level was 74% in week 10 and cumulatively at 74% for 2018
- Timeliness for IDSR reporting at county level was 74% in week 10 and cumulatively at 74% for 2018

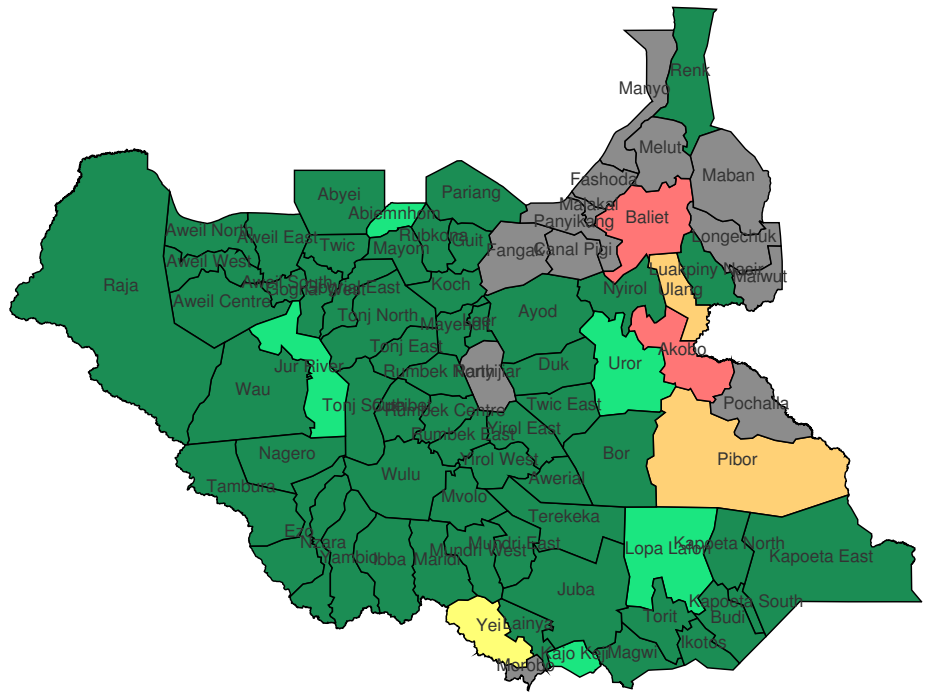
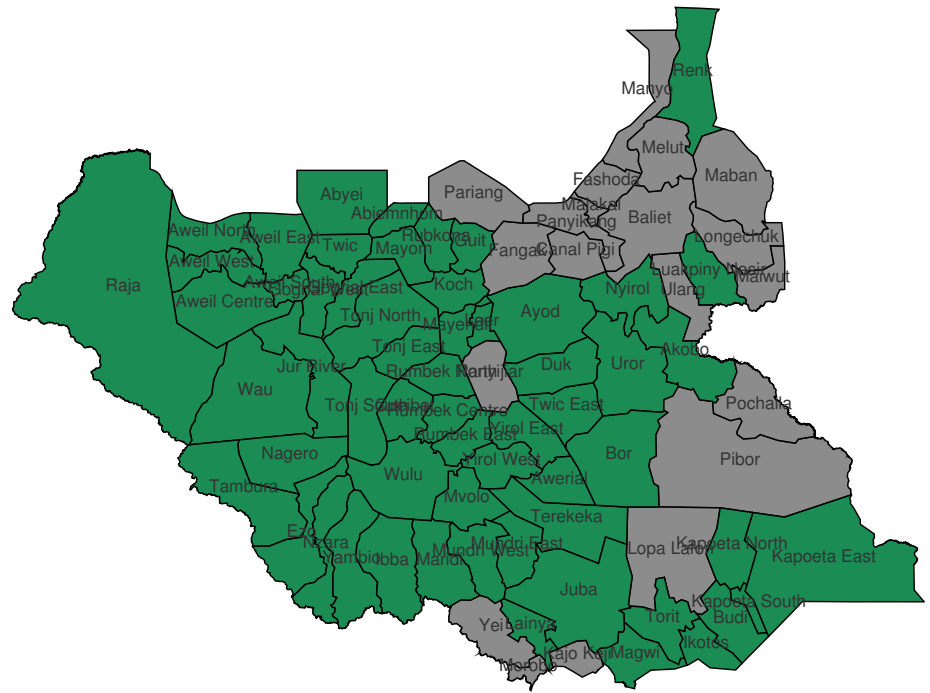
Figure 1 | Trend in IDSR completeness over time<sup>1</sup>



The graph shows completeness for weekly reporting at county level. The national average currently stands at **74%**.

Map 1a | Map of IDSR completeness by county (W10 2018)

Map 1b | Map of IDSR completeness by county (2018)



- Counties that submitted IDSR reports in W10 are shown in green in map 1a
- Counties that did not submit IDSR reports in W10 are shown in grey in map 1a

**Table 4** | EWARS surveillance performance indicators by partner (W10 2018)

Partner	Performance		Reporting (W10 2018)		Reporting (Cumulative 2018)	
	# sites	# reports received	Completeness	Timeliness	Completeness	Timeliness
CMD	2	2	100%	100%	100%	100%
GOAL	2	2	100%	100%	100%	70%
HLSS	1	1	100%	100%	100%	100%
IMA	4	3	75%	75%	75%	65%
IMC	6	4	67%	67%	65%	63%
IOM	10	10	100%	100%	81%	81%
IRC	1	1	100%	100%	100%	100%
Medair	2	2	100%	100%	100%	90%
MSF-E	2	2	100%	100%	90%	80%
MSF-H	2	1	50%	50%	50%	40%
SMC	4	4	100%	100%	80%	78%
UNIDO	1	1	100%	100%	100%	100%
UNKEA	2	2	100%	100%	70%	70%
World Relief	1	1	100%	100%	100%	70%
<b>Total</b>	<b>42</b>	<b>36</b>	<b>86%</b>	<b>86%</b>	<b>77%</b>	<b>72%</b>

Timeliness and completeness for EWARN/IDP reporting stands at 86% for week 10 while cumulatively, completeness and timeliness are 77% and 72% respectively for 2018

**Table 7** | Alert performance indicators by Hub

Hub	W10		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Aweil	2	100%	17	71%
Bentiu	1	0%	16	63%
Bor	0	0%	17	35%
Juba	1	100%	18	56%
Kwajok	1	100%	16	100%
Malakal	1	100%	12	42%
Rumbek	1	100%	14	29%
Torit	1	0%	17	53%
Wau	1	100%	8	38%
Yambio	0	0%	26	50%
<b>South Sudan</b>	<b>9</b>	<b>78%</b>	<b>161</b>	<b>55%</b>

**Table 8** Summary of key alert indicators

W10	Cumulative (2018)	
<b>9</b>	<b>161</b>	Total alerts raised
<b>78%</b>	<b>55%</b>	% verified
<b>0%</b>	<b>0%</b>	% auto-discarded
<b>0%</b>	<b>3%</b>	% risk assessed
<b>0%</b>	<b>1%</b>	% requiring a response

A total of 9 alerts were reported in week 10 [majority from Aweil hub]. 78% of the alerts in week 10 were verified; 0% were risk assessed and 0% required a response.



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

Event	W10		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
<b>Indicator-based surveillance</b>				
Malaria	1	0%	20	60%
AWD	1	0%	116	51%
Bloody Diarr.	2	100%	47	41%
Measles	3	100%	33	67%
Meningitis	0	0%	0	0%
Cholera	0	0%	2	100%
Yellow Fever	1	100%	2	50%
Guinea Worm	0	0%	5	60%
AFP	0	0%	39	83%
VHF	1	100%	1	100%
Neo. tetanus	0	0%	2	50%
<b>Event-based surveillance</b>				
EBS total	0	0%	8	63%

**Table 10** | Event risk assessment

W10	Cumulative (2018)	
0	4	Low risk
1	1	Medium risk
0	0	High risk
0	0	Very high risk

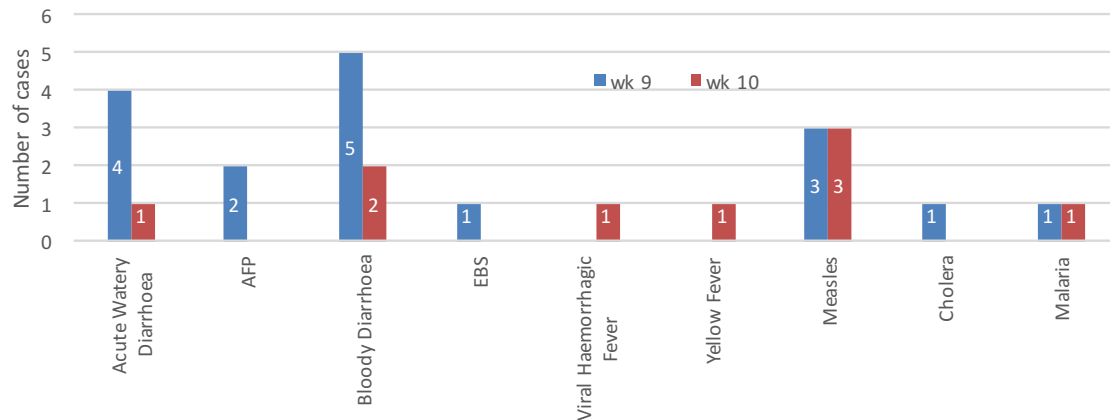
- During the week, measles and bloody diarrhoea were the most frequent infectious hazards reported.

## Alert by disease and county in W10 2018

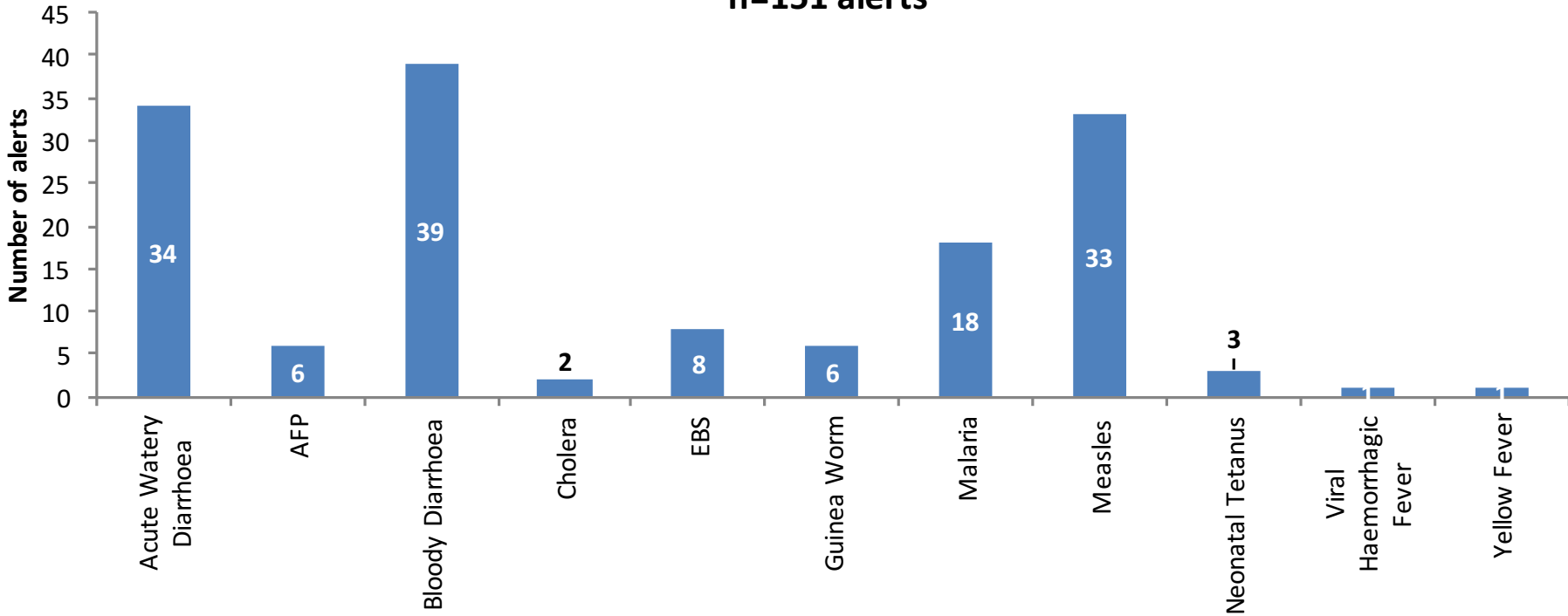
County	Acute Watery Diarrhoea	Bloody Diarrhoea	Viral Haemorrhagic Fever	Yellow Fever	Measles	Malaria	Total Alerts
Aweil East			1		1		2
Juba					1		1
Kapoeta North						1	1
Leer	1						1
Melut		1					1
Rumbek North		1					1
Tonj South				1			1
Wau					1		1
<b>Total Alerts</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>9</b>

- During week 10, a total of 9 alerts were reported.
- The Yellow Fever and VHF alerts were verified and ruled out as recording errors.

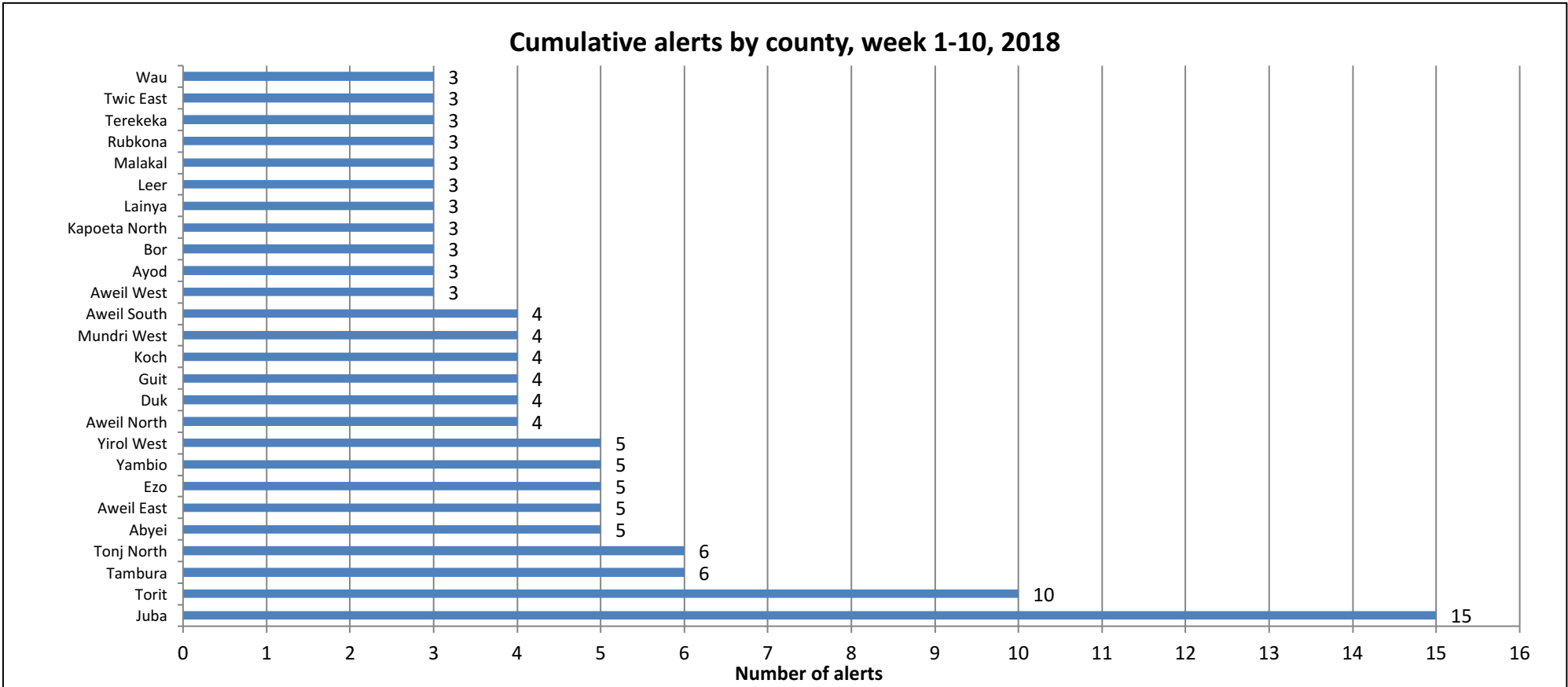
Alerts by hazard in week 9 and week 10, 2018



**Number of Alerts by disease, South Sudan, week 1-10, 2018**  
n=151 alerts



- The Figure shows the cumulative number of alerts triggered in 2018 by hazard and location.



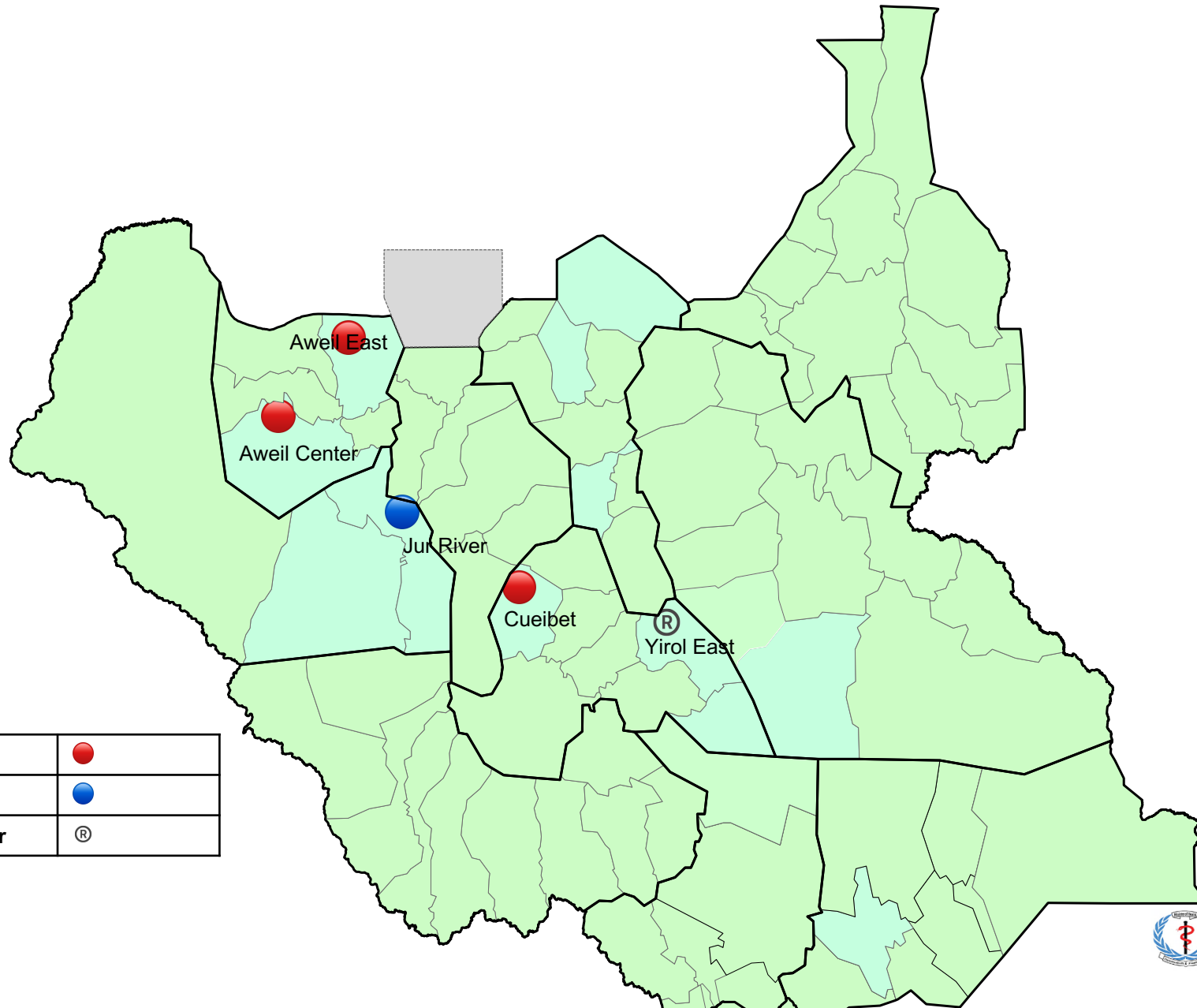
- The Figures show the cumulative alerts triggered in 2018 by location
- Most alerts have been reported from Juba and Torit.

## Cumulative alerts by risk assessment stage in 2018

County	OUTCOME	RISK ASSESS	VERIFICATION	TOTAL ALERTS
Acute Watery Diarrhoea			34	34
AFP		1	5	6
Bloody Diarrhoea			39	39
EBS		1	7	8
Guinea Worm	2		4	6
Neonatal Tetanus	2		1	3
Viral Haemorrhagic Fever			1	1
Yellow Fever			1	1
Measles	4	3	26	33
Cholera			2	2
Malaria			18	18
<b>TOTAL ALERTS</b>	<b>8</b>	<b>5</b>	<b>138</b>	<b>151</b>

- The Figures show the cumulative alerts by risk assessment state in 2018
- Of the 151 alerts reported in 2018; a total of 138 alerts are at verification stage; and the rest are at risk assessment stage (5 alerts); 8 at outcome stage.

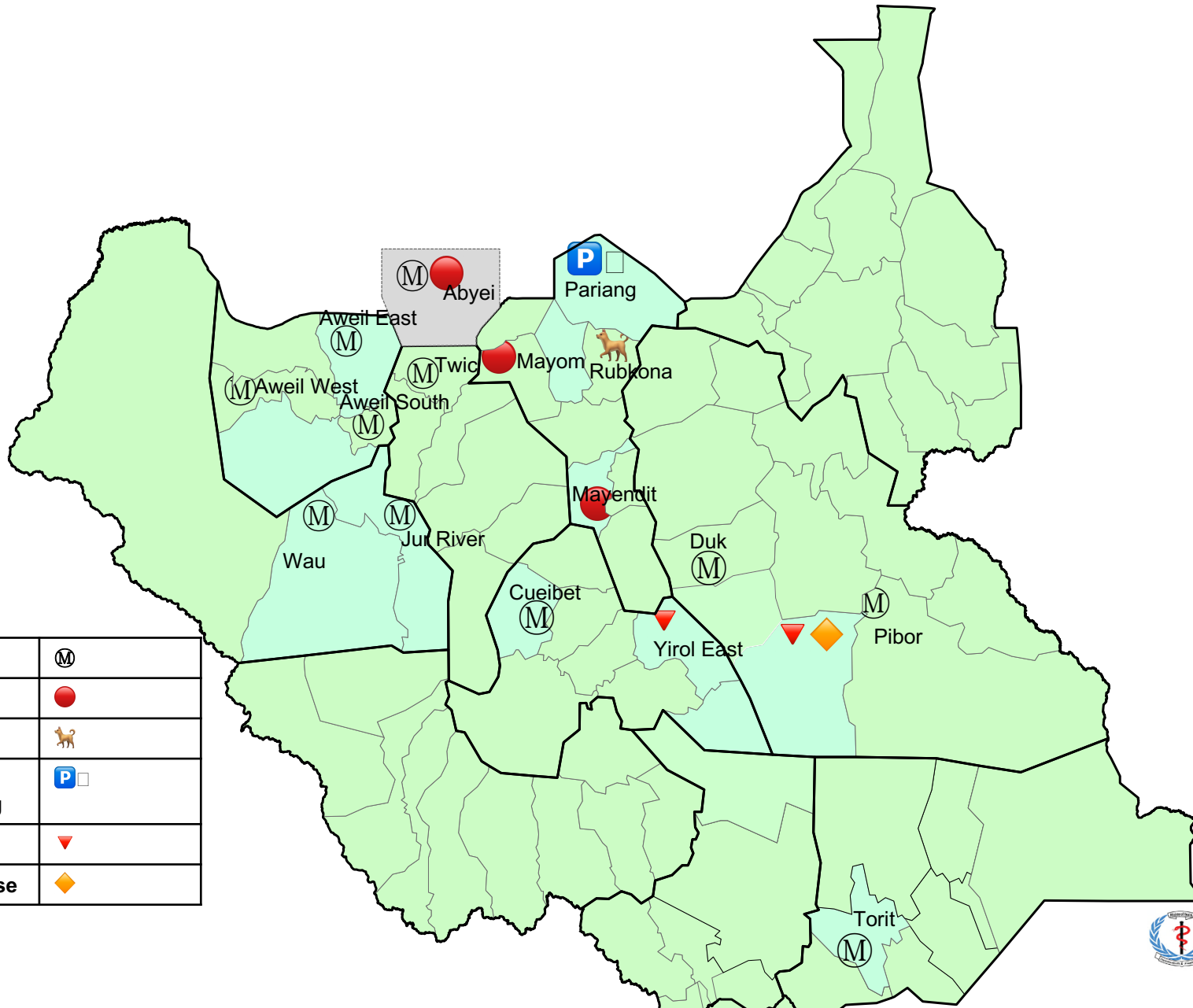
# Confirmed Outbreaks South Sudan – 18 March 2018



Measles	●
Rubella	●
Rift Valley Fever	®



# Suspect Outbreaks South Sudan – 18 March 2018



<b>Meningitis</b>	Ⓜ
<b>Measles</b>	●
<b>Rabies</b>	🐕
<b>Health effects of petroleum drilling</b>	Ⓟ
<b>Pertussis</b>	▼
<b>Foodborne disease</b>	◆



Aetiologic 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>New epidemics: no new epidemics</b>								
<b>Ongoing epidemics:</b>								
Measles	Aweil Center	6/Jan/2018	8	22 (0.02)	Yes	Yes	Yes	N/A
<b>RVF</b>	Yirol East	28/12/2017	1	40 (0.03)	Yes	N/A	Yes	N/A
Measles	Cueibet	14/10/2017	0	20 (0.012)	Yes	Yes	Yes	N/A
<b>Measles</b>	Aweil East	05/02/2018	4	21 (0.005)	Yes	No	Yes	N/A
<b>Rubella</b>	Jur River	14/02/2018	0	34 (0.011)	Yes	No	Yes	N/A

## Epidemics - Update

- Measles was confirmed in Aweil East after **four samples tested measles IgM positive** on 24 Feb 2018. A total of 21 measles cases have been line listed. IOM will support IRC the local implementing partner to conduct the reactive measles campaign. MSF to support cold chain. Target age group will include children 6months to 59 months. The campaign is slated to start on March 26, 2018 and end on 31 Mar 2018.
- Reactive measles campaign completed in Cueibet. The campaign was led by the CHD supported by partners – HPF, CUAMM, Unicef, & WHO. The administrative coverage was 58,842 (87%).
- In Aweil Center; a reactive measles vaccination campaign targeting under fives has been completed. Campaign led by two – partners – MedAir and MSF-F. Coverage data is being analyzed and the coverage survey is being finalized.



## Ongoing epidemics - Epidemic description - RVF Eastern Lakes state

Sno.	Description	Number
1	Suspect cases	40
2	Total deaths	4
3	Confirmed cases	6
4	Probable cases	3
5	Cases pending testing	12
6	Non-cases	19
7	Cases on admission	0
8	Total human samples collected	34
9	Total animal samples collected	28
10	Positive animal cases	9

- In the period 7 December 2017 to 17 March 2018, a total of 40 suspect RVF cases were reported in Eastern Lakes.
- These were reclassified based on investigations and laboratory results, such that as of 9<sup>th</sup> March 2018, there were a total of six (6) RVF confirmed cases, three (3) probable, and twelve (12) suspect RVF cases (laboratory results are pending).
- Nineteen (19) cases were discarded as non-cases following negative laboratory results for RVF and other common causes of viral haemorrhagic fever.
- A total of nine animal samples have been confirmed serologically (3IgM and 6IgG).
- Current response entails surveillance, laboratory testing, supportive care for suspect cases, and community sensitization on hygienic animal handling

Response | Suspect outbreaks being investigated

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
13Mar18	Meningitis	16 (00)	Duk	Ayueldit	On 12 Mar 2018; a 3 year old male from Buongjok area, Ayueldit payam was admitted to Padiet PHCC. The health partner SMC requested for guidance on managing the case and the WHO Bor team shared the meningitis case management guidelines. Surveillance has been stepped up but no additional cases have been identified.
17Feb18	Meningitis	171 (31)	Torit	Iyire and Imurok	After rumors of strange illness in Iyire, several RRT verification and response missions have been undertaken since 20Feb18. Torit county surpassed in the alert and epidemic thresholds in week 7 and week 9 respectively. Conclusive laboratory confirmation underway. Overall coordination, case surveillance, line listing, and investigation are ongoing. Transmission declined after week 9 with the weekly attack rate falling below the alert and epidemic threshold in week 11.
10Mar18	Meningitis	3 (0)	Cueibet		Since 10 Mar 2018, at least three suspect meningitis cases have been reported by CUAMM in Cueibet hospital. However, sample collection and testing has not been undertaken on any of the cases.
02Feb2018	Meningitis	13 (0)	Aweil South (5cases) Aweil East (4 cases) Aweil West (2 cases) Aweil Town (2 cases)	Aweil hospital	Since 2Feb2018, at least 13 suspect cases have been admitted in Aweil hospital. Of the 5 susp. Cases from Aweil South, one tested positive for Gram positive diplococci; one case from Aweil East was positive for <i>Streptococcus pneumoniae</i> by rapid pastorex; & one case from Aweil East was also positive for <i>Streptococcus pneumoniae</i> by rapid pastorex. All admitted to Aweil hospital with average age of 5.9 years (range 6months to 12 years); 7 (58%) female.
06Jan18	Meningitis	02 (00)	Abyei and Twic	Rumkor and Pan-nyok	The two suspect cases were treated in Agok hospital on 4 Jan and 29 Jan respectively with initial diagnoses of severe malaria but final diagnosis was bacterial meningitis. Rapid pastorex testing sample from the second suspect case from Twic county was positive for <i>Streptococcus pneumoniae</i> .
14Feb18	meningitis	07(03)	Wau (Jur River)	Udici, Roc Roc Dong	Since 14 February; seven suspect meningitis cases have been reported from Wau and Jur River counties. The most recent suspect case involved a 45 year old male from Jur River that was admitted in Comboni hospital on the 28 Feb 2018. Rapid pastorex testing was positive for <i>Streptococcus pneumoniae</i> .

Response | Suspect outbreaks being investigated

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
16Mar2018	Measles	08(01)	Mayom	Riak & Lol Maroal	Suspect measles cases reported from Riak payam in Nyebola village since 9 Mar 2018. Four samples obtained by MSF-CH for testing. Another alert of 4 suspect measles cases including one community death has been reported from Lol Maroal but verification and sample collection are pending.
19Jan18	measles	01	Mayendit	Rubkuai	One suspect measles cases from Rubkuai in Mayendit tested measles IgM positive. Measles follow up campaign in Leer and Mayendit has been completed by MedAir; MSF-Holland; and UNIDO with support from Unicef and WHO. Plans underway to conduct a coverage survey.
16Feb18	Health effects of petroleum drilling	Unspecified	Pariang	Pariang	A newswire indicates the Mayor of Pariang in Ruweng State has appealed to the Ministry of Health to establish some health conditions affecting people in the oil producing area. <a href="https://bit.ly/2EIndTP">bit.ly/2EIndTP</a> #SouthSudan. Initial verification details to follow

Response | Suspect outbreaks being investigated

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
14Feb18	pertussis	Unspecified	Bor	Baidit (Bongo, Mayen, Kwei, Anuak	Alerts of whooping cough reported from Baidit Payam (Bongo & Mayen Bomas. Other alerts reported from Kwei Boma and Anuak (a swampy area/island/fishing camp only accessible by speed boat). These locations have no health implementing partner presence. Investigations planned by the RRT to accessible areas (further updates to follow).
25Jan18	Rabies	28(2)	Rubkona	Bentiu PoC	Rabies surveillance and response is ongoing. Current response entails post-exposure prophylaxis; community awareness (radio & IEC message dissemination) on rabies prevention and early care seeking following bite incidences. Camp management, IOM, VSF Suisse, & UNMISS are holding consultations on dog curling.

## For more help and support, please contact:

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## Notes

WHO and the Ministry of Health gratefully acknowledge 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>

