

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Update W6 2018 (Feb 05-Feb 11)



Surveillance

Slide 1	Table 1 IDSR surveillance performance indicators by county (W6)
	Table 2 Summary of key IDSR surveillance indicators
	Table 3 IDSR report submissions (W6)
Slide 2	Figure 1 Trend in IDSR completeness over time
Slide 3	Map 1a Map of IDSR completeness by county (W6)
	Map 1b Map of IDSR timeliness by county (2018)
Slide 4	Table 4 EWARS surveillance performance indicators by partner (W6)
	Table 5 Summary of key EWARS surveillance indicators
	Table 6 EWARS report submissions (W6)

Alert

Slide 5	Table 7 Alert performance indicators by Hub (W6)
	Table 8 Summary of key alert indicators
Slide 6	Table 9 Alert performance indicators by event (W6)
	Table 10 Event risk assessment
Slide 7	Map 2a - 2f Maps of key disease alerts by county (W6)

Response

Cholera

Slide 8	Table 11 Summary of key cholera response indicators
Slide 9	Figure 2 Cholera epidemic curve (National)
Slide 10	Map 3a - 3d Maps of distribution of cholera cases (Jul 2016 - present)
Slide 11	Figure 3a - 3k Cholera epidemic curves by county
Slide 12	Table 12 Summary of response indicators by Hub
Slide 13	Figure 4a Cholera cases by sex (2018)
	Figure 4b Cholera cases by age (2018)
	Figure 4c Cholera cases by patient outcome (2018)

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 is 69% at county level and 82% for the IDP sites.

- A total of 15 alerts were reported, of which 40% have been verified. 0 alerts were risk assessed and 0 required a response.

- Rift Valley Fever outbreak - Yirol East with 28 suspect human cases including 5 confirmed; 3 probable; 12 none-cases; and 8 pending classification. One confirmed animal case (cow).

- Measles response completed in Cueibet where the reactive vaccination campaign administrative coverage was 58,842 (87%).

- Preparations underway to conduct reactive measles vaccination campaign in Aweil Center. In Panyijiar; no new measles cases have been reported since 14 Jan 2018.

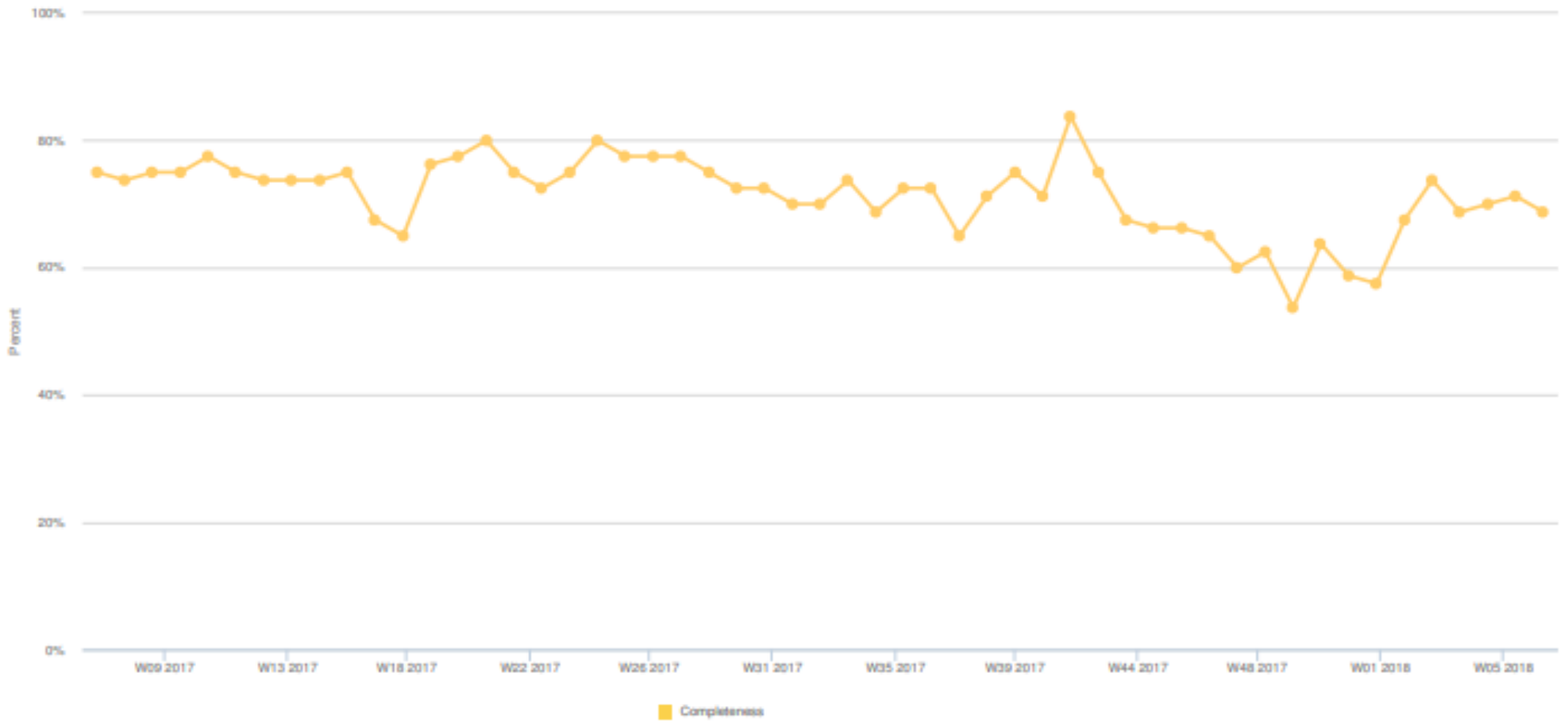
- Suspect measles cases being investigated in Wau, Torit, Juba, Terekeka, Mundri West; there are increasing concerns about the increasing suspect pertussis cases reported in Yirol East, Aweil Center, Aweil East, Aweil South, Bor, & Mayom.

Table 1 | IDSR surveillance performance indicators by county (W6 2018)

Hub	Reporting		Performance (W6 2018)		Performance (Cumulative 2018)	
	# counties	# reports received	Completeness	Timeliness	Completeness	Timeliness
Aweil	5	5	100%	100%	97%	97%
Bentiu	9	6	67%	67%	67%	44%
Bor	11	6	55%	55%	53%	38%
Juba	6	3	50%	50%	75%	69%
Kwajok	7	7	100%	100%	100%	86%
Malakal	13	0	0%	0%	4%	1%
Rumbek	8	8	100%	100%	100%	96%
Torit	8	8	100%	100%	85%	75%
Wau	3	2	67%	67%	89%	67%
Yambio	10	10	100%	100%		98%
South Sudan	80	55	69%	69%	70%	69%

- Completeness for IDSR reporting at county level was 69% in week 6 and cumulatively at **70%** for 2018
- Timeliness for IDSR reporting at county level was 69% in week **6** and cumulatively at 69% for 2018

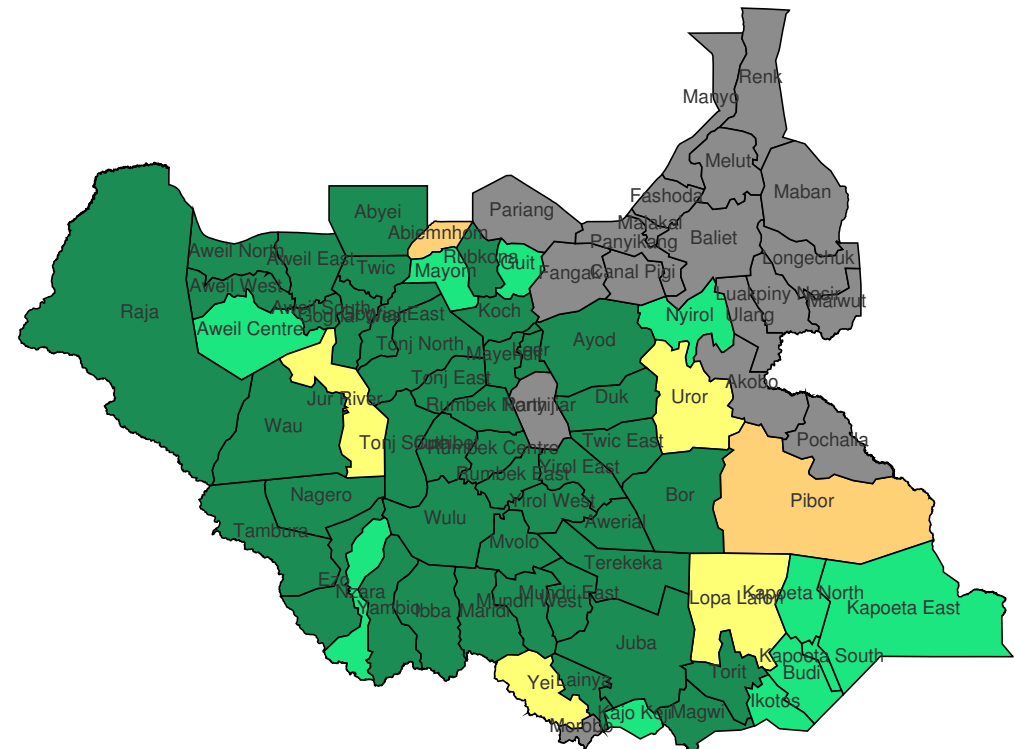
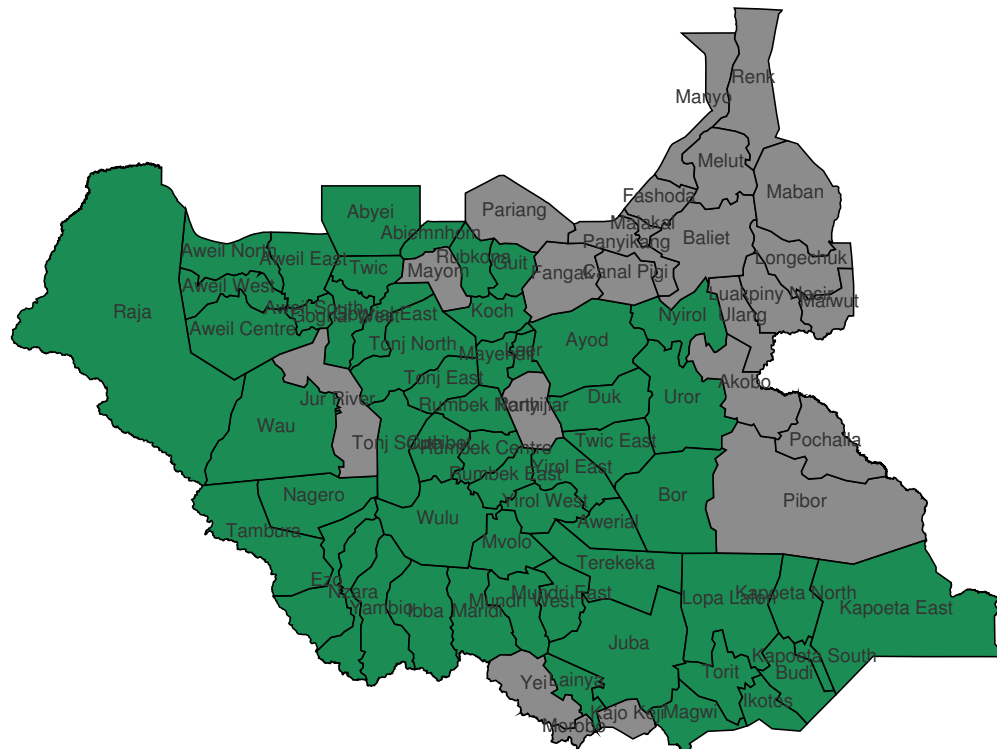
Figure 1 | Trend in IDSR completeness over time¹



The graph shows completeness for weekly reporting at county level. The national average currently stands at **70%**.

Map 1a | Map of IDSR completeness by county (W6 2018)

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



- Counties that submitted IDSR reports in W6 are shown in green in map 1a
- Counties that did not submit IDSR reports in W6 are shown in grey in map 1a

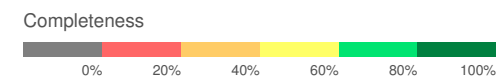
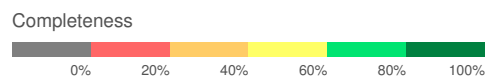


Table 4 | EWARS surveillance performance indicators by partner (W6 2018)

Partner	Performance		Reporting (W6 2018)		Reporting (Cumulative 2018)	
	# sites	# reports received	Completeness	Timeliness	Completeness	Timeliness
CMD	2	2	100%	100%	100%	100%
GOAL	2	2	100%	100%	100%	50%
HLSS	1	1	100%	100%	100%	100%
IMA	3	3	100%	100%	100%	78%
IMC	8	4	50%	50%	69%	67%
IOM	7	7	100%	100%	100%	100%
IRC	1	1	100%	100%	100%	100%
Medair	2	2	100%	100%	100%	100%
MSF-E	2	2	100%	100%	83%	67%
MSF-H	1	1	100%	100%	100%	67%
SMC	3	3	100%	100%	100%	94%
UNIDO	1	1	100%	100%	100%	100%
UNKEA	2	2	100%	100%	50%	50%
World Relief	1	0	0%	0%	83%	83%
Total	38	31	82%	82%	84%	77%

Timeliness and completeness for EWARN/IDP reporting stands at 82% for week 6 while cumulatively, completeness and timeliness are 84% and 77% respectively for 2018

Table 7 | Alert performance indicators by Hub

Hub	W6		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Aweil	1	0%	11	45%
Bentiu	3	33%	9	56%
Bor	4	0%	13	15%
Juba	2	100%	12	42%
Kwajok	1	0%	10	90%
Malakal	1	0%	5	0%
Rumbek	1	100%	12	17%
Torit	1	100%	10	30%
Wau	0	0%	5	0%
Yambio	1	0%	14	
South Sudan	15	33%	101	33%

Table 8 Summary of key alert indicators

W6	Cumulative (2018)	
15	101	Total alerts raised
33%	33%	% verified
0%	0%	% auto-discarded
0%	0%	% risk assessed
0%	0%	% requiring a response

A total of 15 alerts were reported in week 6 [majority from Bor and Bentiu hubs]. Only 33% of the alerts reported in week 6 were verified; 0 were risk assessed and 0 required a response.

Table 9 | Alert performance indicators by event

Event	W6		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	2	50%	12	50%
AWD	3	0%	103	32%
Bloody Diarr.	4	0%	32	37%
Measles	4	50%	21	43%
Meningitis	0	0%	0	0%
Cholera	0	0%	1	100%
Yellow Fever	0	0%	1	0%
Guinea Worm	1	100%	3	33%
AFP	0	0%	35	50%
VHF	0	0%	0	0%
Neo. tetanus	0	0%	1	0%
Event-based surveillance				
EBS total	1	100%	6	50%

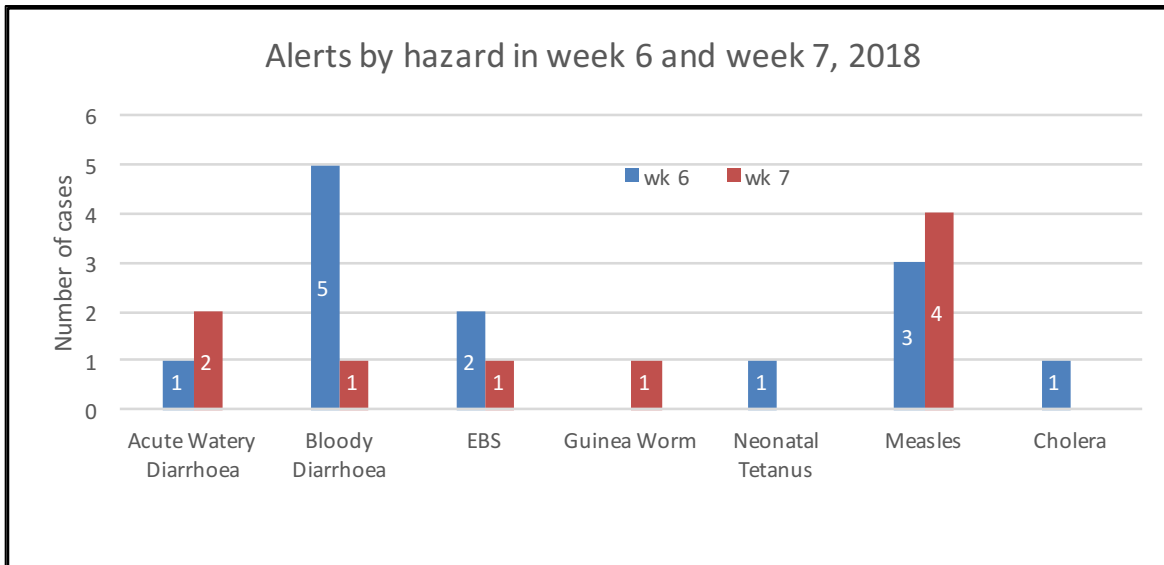
Table 10 | Event risk assessment

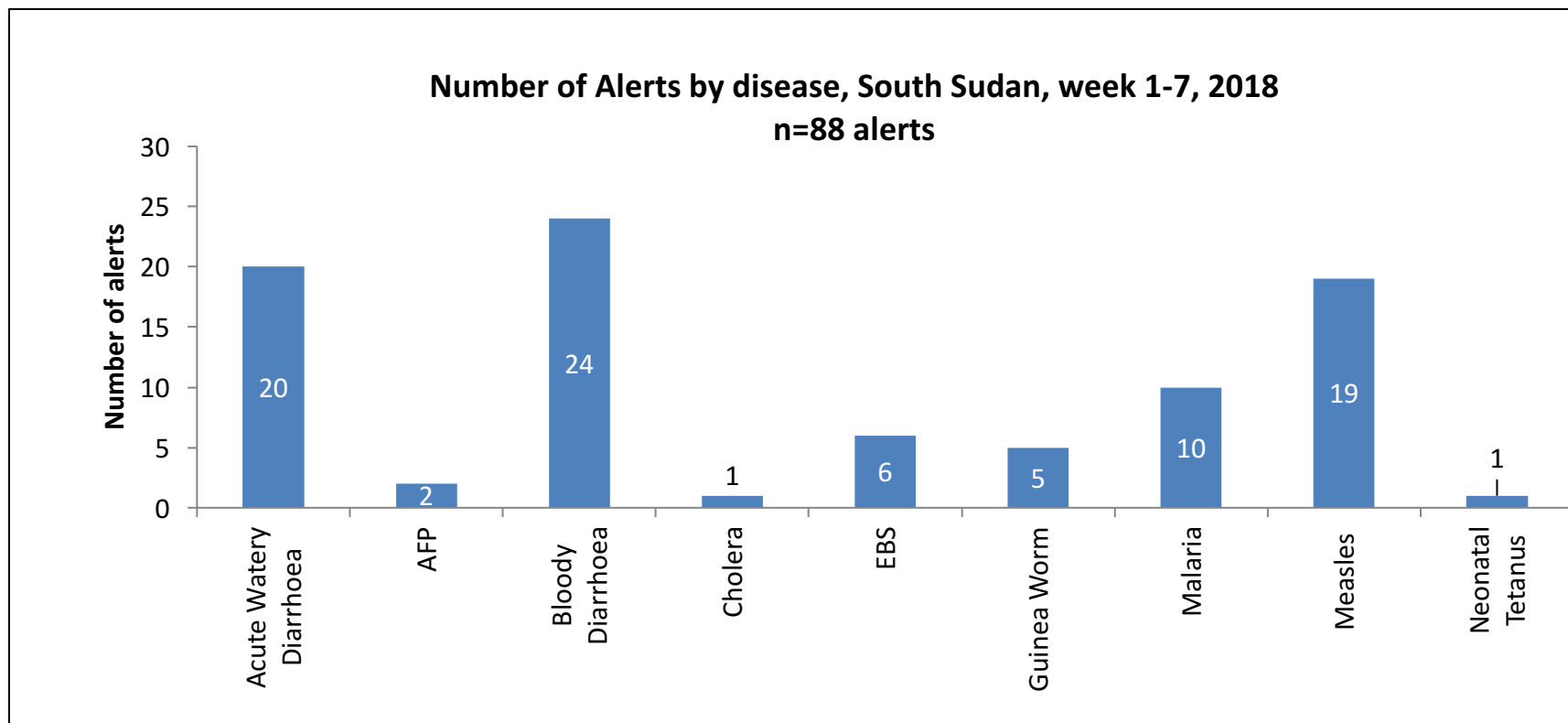
W6	Cumulative (2018)	
0	0	Low risk
0	0	Medium risk
0	0	High risk
0	0	Very high risk

- During the week, acute bloody diarrhoea, acute watery diarrhoea and Measles were the most frequent infectious hazards reported.

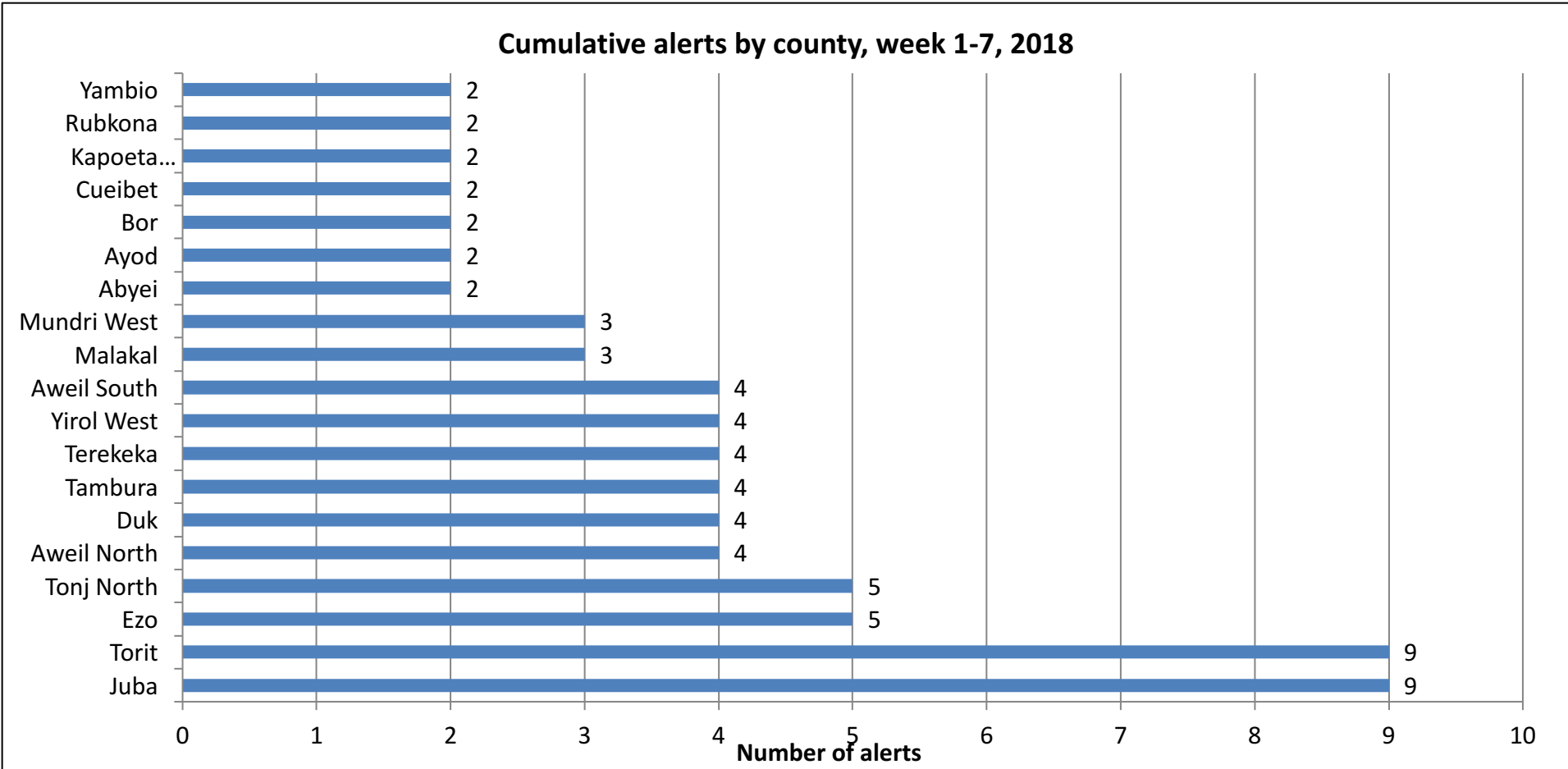
County	Acute Watery Diarrhoea	Bloody Diarrhoea	EBS	Guinea Worm	Measles	Malaria	Total Alerts
Aweil East					1		1
Ayod	2						2
Duk						1	1
Juba					1		1
Mundri West					1		1
Terekeka					1		1
Torit			1				1
Twic East		1					1
Yirol West				1			1
Total Alerts	2	1	1	1	4	1	10

- During week 7, a total of 10 alerts were triggered
- Measles features prominently with alerts in Aweil East; Juba; Mundri West; & Terekeka - follow up with respective SSOs/CSOs and partners on sample collection
- Two AWD alerts in Ayod; follow up with - MedAir; CMD on RDT/sample collection for cholera testing
- Guinea worm alert reported in Yirol West; another alert reported in Pibor county
- Anthrax alert in Mayom - active surveillance ongoing
- Plans underway for special bloody diarrhoea investigation





- The Figure shows the cumulative number of alerts triggered in 2018 by hazard and location.
- Since the beginning of 2018, most alerts are due to Bloody diarrhoea, measles, and acute watery diarrhoea
- A special investigation into the bloody diarrhoea cases is planned (protocol and case form finalized).



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

County	OUTCOME	RISK_ASSESS	VERIFICATION	Total Alerts
Acute Watery Diarrhoea			20	20
AFP			2	2
Bloody Diarrhoea			24	24
EBS			6	6
Guinea Worm	1		4	5
Measles			1	1
Neonatal Tetanus			1	1
Measles		2	16	18
Cholera			1	1
Malaria			10	10
Total Alerts	1	2	85	88

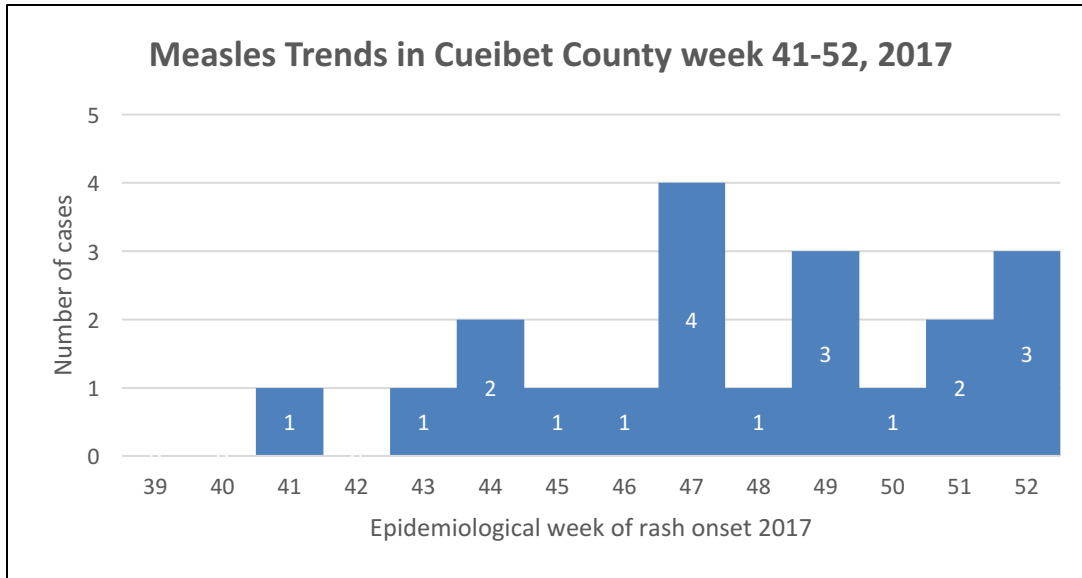
- The Figures show the cumulative alerts by risk assessment state in 2018
- Of the 88 alerts reported in 2018; a total of 85 alerts are at verification stage; and the rest are at risk assessment stage (3 alerts); one at outcome stage.

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
New epidemics: no new epidemics								
Ongoing epidemics:								
Measles	Aweil Center	6/Jan/2018	0	11 (0.0095)	Yes	No	Yes	N/A
RVF	Yirol East	28/12/2017	0	28 (0.02)	Yes	N/A	Yes	N/A
Measles	Cueibet	14/10/2017	0	20 (0.012)	Yes	Yes	Yes	N/A
Measles								
Cholera								

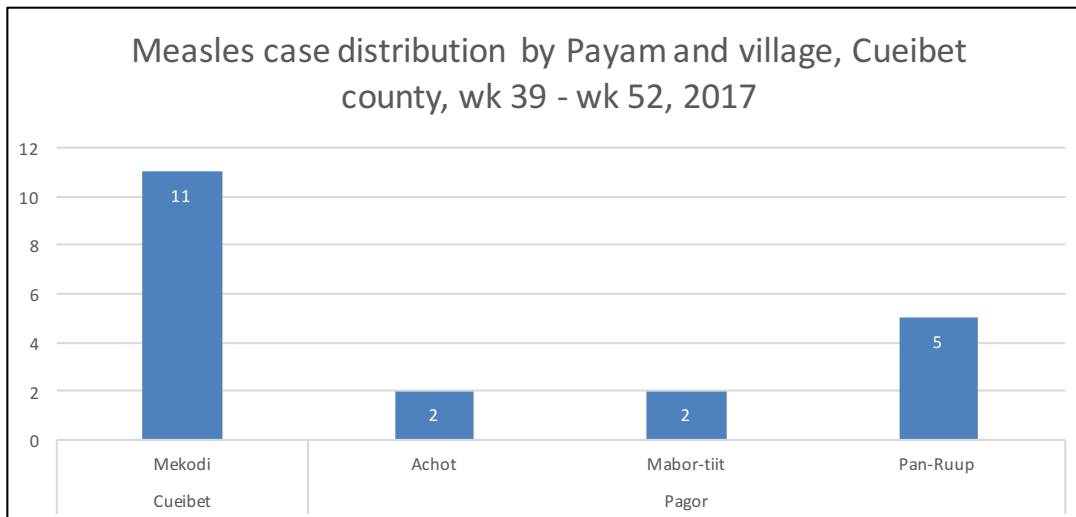
Epidemics - Update

- There are no new confirmed outbreaks in the week
- Reactive measles campaign completed in response to the measles outbreak in Cueibet. The campaign was led by the CHD supported by partners – HPF, CUAMM, Unicef, and WHO. The administrative coverage at the end of the campaign was 58,842 (87%).
- In Aweil Center; preparations are underway to conduct a measles reactive vaccination campaign targeting under fives. The two – partners – MedAir and MSF-France will lead the campaign. Training of vaccination teams; social mobilization; delivery of vaccines and cold chain supplies to start during the week of 19th Feb 2018.
- In Yirol East, while two alerts were reported during the week, the case based details were not available at the time of writing this report. In the period 7 December 2017 to 18 February 2018, a total of 28 suspect RVF cases were reported in Eastern Lakes. These were reclassified based on investigations and laboratory results, such that as of 16th February 2018, there were a total of five (5) RVF confirmed cases, three (3) probable, and eight (8) suspect RVF cases (laboratory results are pending). Twelve (12) cases were discarded as non-cases following negative laboratory results for RVF and other common causes of viral haemorrhagic fever.

Ongoing epidemics - Epidemic description - Measles in Cueibet county



Age (years)	Female (n)	Male (n)	Total cases	Percentage	Cum.%
<1yr	1	3	4	20%	20%
1-4yrs	5	4	9	45%	65%
5-14yrs	2	3	5	25%	90%
15+yrs	2	0	2	10%	100%
Grand Total	10	10	20	100%	



- A reactive measles vaccination campaign has been completed in Cueibet with the CHD leading the response supported by CUAAM and with funding support from HPF. The administrative coverage at the end of the campaign was 58,842 (87%).
- The measles outbreak in Cueibet was confirmed in week 50 of 2017 with 3 measles IgM positive cases.
- At least 20 cases including one community death (CFR 5%) line listed since week 41 of 2017.
- Most cases reported from Pagor PHCU & Cueibet hosp.
- 13 (65%) are <5 years of age
- Two payams affected - Cueibet and Pagor
- Most affected villages are Mekodi and Pan-ruup

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
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. bit.ly/2EIndTP #SouthSudan Initial verification details to follow.
15Feb18	Cholera	02	Rubkona	Bentiu PoC	This week samples from two suspect cholera cases in Bentiu PoC tested negative for cholera following microbiological culturing in the NPHL.

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
9Feb18	Guinea worm (GW)	01	Pibor	Thangajon village	A suspect GW case reported involving a 24 year old female presented to a health facility with an emerging worm, skin lesion with itching and swelling, after they attempted to remove it at home and it broke off. Reports suggest she entered a water source after the worm emerged on 5Feb18. Program alerted to initiate follow up investigations.
5Feb18	anthrax	02	Mayom		In Abyei, two suspected cases of subcutaneous and inhalation anthrax in human were referred to MSF Agok Hospital from Mayom County, former Unity state for medical care. MSF-CH contacted to provide an update on the two cases. The cases have been discharged and active community case search is ongoing by CHD, ARC, and MSF-CH.
14Feb18	meningitis	01	Pibor		MSF-OCB reported suspect meningitis case; it's a lone case with no associated suspect cases. The sample was collected and tested at NPHL during the week. The culture results were negative for bacterial meningitis. There were no additional cases reported from the area. The preventive MenAfriVac campaign pending for Pibor.
14Feb18	meningitis	05(0)	Wau (Jur River)	Udici, Roc Roc Dong	During the week, two suspect meningitis cases were admitted to Wau Teaching hospital. No samples were obtained. Wau implemented MenAfriVac preventive campaign in March 2016 with overall coverage of 84% for Wau and 90% for Jur River. However, three payams in Wau county - Baselia, Baggari, & Kpaile were not covered due to insecurity. Plans are currently underway to develop a microplan for the three payams. Sensitization meeting planned for health workers to enhance surveillance and case investigation.
14Feb18	measles	06	Wau & Jur River	Wau South; Marial Bai; Roc Roc Dong, Wau North	Since 26 Jan 2018, six suspect measles cases have been reported from Jur River and Wau counties; testing of three samples (from the most recent cases) underway at the NPHL.

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
16Feb18	pertussis	01	Mayom		On 16Feb2018, MSF-CH reported a suspect pertussis case in their health facility in Mayom. The patient resides in Mayom Town and presented with fever, hoarse voice, respiratory distress, and characteristic whoop. The case is reported to have improved on treatment. No related cases among close contacts. The patient was not vaccinated. Active surveillance for additional cases is ongoing.
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).
5Feb18	Animal deaths (susp. Anthrax)	Two cows died	Abyei	Majbuong village	Two cows died 2 nd to 3 rd Jan 2018 after a hemorrhagic illness. No human cases have been reported after RRT verification mission. FAO/Min. of Livestock conducted preventive livestock vaccination in the affected and surrounding villages from 29 Jan 2018 targeting 100,000 Herd of cattle and 10,000 goats and sheep against Animal Anthrax, Hemorrhagic Septicemia, and Blackwater diseases.
25Jan18	Rabies	28(2)	Rubkona	Bentiu PoC	At least 28 animal bite (suspect rabies) cases including 2 deaths reported by MSF since last month. There is need to mobilize human antirabies vaccine for post-exposure prophylaxis; consultations ongoing to find solution for stray dogs in the PoC.
19Jan18	measles	01	Mayendit	Rubkuai	One suspect measles cases from Rubkuai in Mayendit tested measles IgM positive. Plans underway for a measles follow up campaign in Leer and Mayendit by MedAir; MSF-Holland; and UNIDO with support from Unicef and WHO. Surveillance for suspect cases is also ongoing.

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
30Jan18	pertussis	57(02)	Aweil Center; Aweil South; Aweil East	Awulic, Bar Mayen, Nyoc, Yargot,	Cases reported from four payams in three counties; investigations showed case presentation consistent with pertussis. Partners meeting to be convened on 5 Feb 2018 to organize a response (including case investigation; treatment of cases and contacts with antibiotics; and implementing accelerated routine (EPI) vaccination in affected areas.
15Jan18	pertussis	83(0)	Yirol East	Nyang	A verification mission showed low routine immunization coverage & high dropout rates. Most under two children had incomplete immunization status. The cases investigated for whooping cough meet the clinical case definition. Treatment of suspect cases ongoing; and resources needed to implement accelerated routine immunization in the county.
Jan18	measles	8(1)	Aweil Center	Nyalath; Hai Salam; Bar Mayen	Three cases investigated by ARC with one being confirmed as measles IgM positive on 19Jan18. Two more samples tested measles IgM positive thus confirming a measles outbreak in the county. Plans underway to conduct a reactive campaign by MSF-France and MedAir.
2Jan18	measles	17(0)	Torit	Kiyala payam, ogurony village	RRT investigated event on 4 Jan18. Of the five samples collected; two were measles IgM positive; one was rubella IgM positive. Five additional samples tested negative for measles and rubella IgM. Active surveillance is ongoing.

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

Dr. Pinyi Nyimol Mawien
Director General Preventive Health Services
Ministry of Health
Republic of South Sudan
Telephone: +211 955 604 020

Dr. Mathew Tut Moses
Director Emergency Preparedness and Response
(EPR)
Ministry of Health
Republic of South Sudan
Telephone: +211 955 295 257

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>

