

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Update W33 2018 (Aug13- Aug19)



Ministry of Health
Republic of South Sudan



World Health
Organization

South Sudan

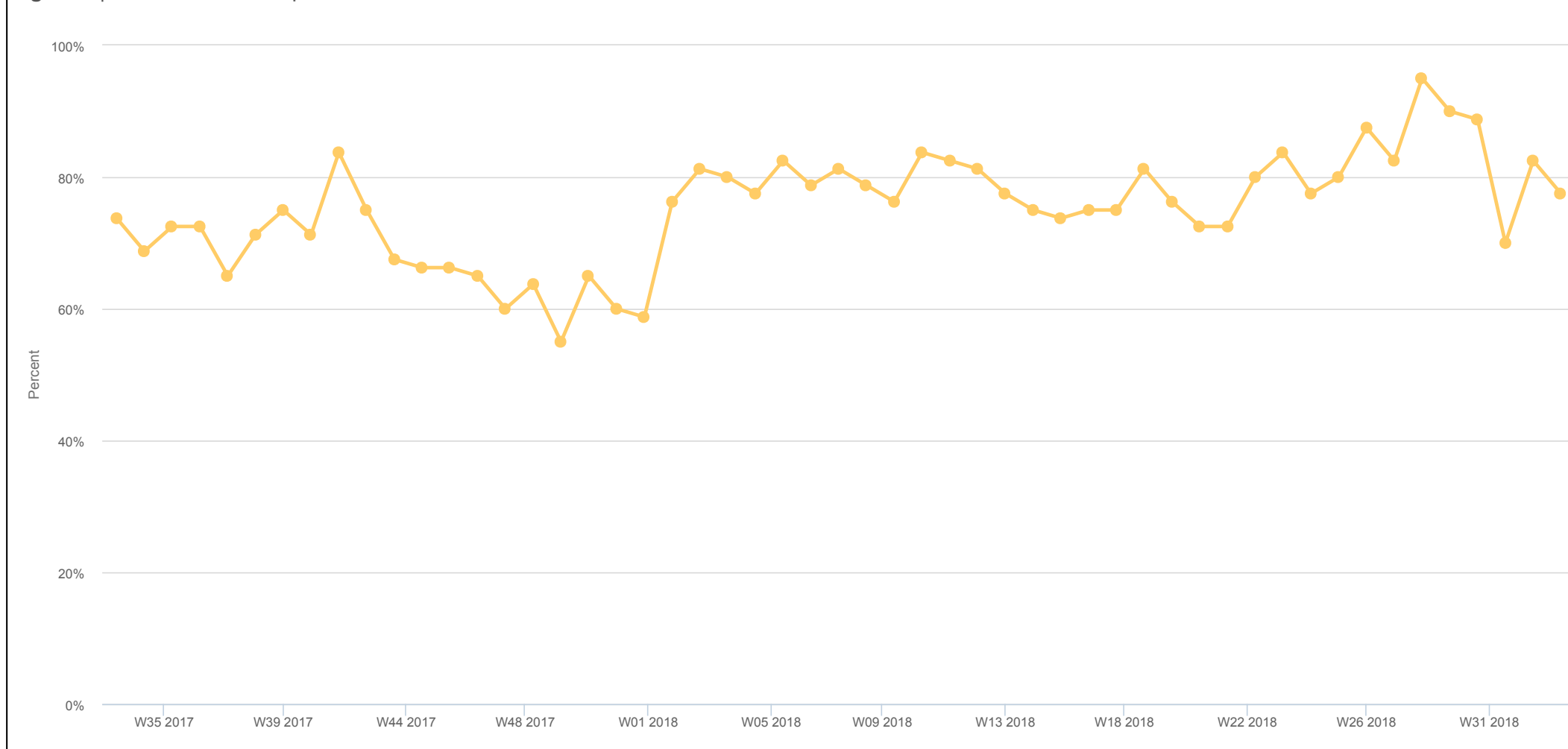
- Completeness for IDSR reporting at county level was 78% . Completeness for EWARS reporting from IDP sites was 80%.
- A total of 12 alerts were reported, of which 92% have been verified. 0 alerts was risk assessed & 0 required a response.
- In the absence of measles and rubella IgM ELISA test kits, a comprehensive response is planned for two suspect measles outbreaks in Bentiu PoC and Yirol East county.
- A cluster of eight (8) acute jaundice syndrome (suspect HEV) cases are being investigated in Fangak county.
- There was no new suspect Rift Valley Fever (RVF) case reported from Yirol East in week 33. A total of 58 suspect human cases including 6 confirmed; 3 probable; 48 non-cases; and 01 pending classification (with no definitive lab. test results) have been reported. Nine confirmed animal cases (cattle).
- One new suspect HEV case reported in week 33. A total of 131 HEV cases (15 confirmed by PCR) have been reported in Bentiu PoC in 2018. Current response entails surveillance, case follow up, WASH and discouraging communities from using stagnant water for domestic and recreational purposes.
- In light of the confirmed EVD outbreak in North Kivu, the South Sudan EVD contingency plan has been updated to mitigate the risk of EVD importation and enhance readiness capacities.

Table 1 | IDSR surveillance performance indicators by county (W33 2018)

Hub	Reporting		Performance (W33 2018)		Performance (Cumulative 2018)	
	# counties	# reports received	Completeness	Timeliness	Completeness	Timeliness
Aweil	5	5	100%	100%	87%	87%
Bentiu	9	7	78%	78%	69%	54%
Bor	11	8	73%	73%	50%	46%
Juba	6	6	100%	100%	85%	72%
Kwajok	7	6	86%	86%	100%	90%
Malakal	13	8	62%	62%	56%	22%
Rumbek	8	8	100%	100%	100%	92%
Torit	8	2	25%	25%	96%	73%
Wau	3	2	67%	67%	90%	74%
Yambio	10	10	100%	100%	99%	99%
South Sudan	80	62	78%	78%	80%	78%

- Completeness for IDSR reporting at county level was 78% in week 33 and cumulatively at 80% for 2018.
- Timeliness for IDSR reporting at county level was 78% in week 33 and cumulatively at 78% 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 **80%**.

Table 4 | EWARS surveillance performance indicators by partner (W33 2018)

Partner	Performance		Reporting (W33 2018)		Reporting (Cumulative 2018)	
	# sites	# reports received	Completeness	Timeliness	Completeness	Timeliness
CMD	0	0				
GOAL	2	2	100%	100%	100%	91%
HLSS	1	1	100%	100%	100%	100%
IMA	5	4	80%	80%	79%	76%
IMC	6	6	100%	100%	95%	94%
IOM	9	8	89%	89%	83%	83%
IRC	1	1	100%	100%	100%	97%
Medair	0	0				
MSF-E	2	0	0%	0%	76%	61%
MSF-H	2	2	100%	100%	77%	56%
SMC	4	0	0%	0%	79%	79%
UNIDO	1	1	100%	100%	103%	103%
UNKEA	2	2	100%	100%	91%	88%
World Relief	1	1	100%	100%	97%	85%
TRI-SS	0	0				
LIVEWELL	4	4	100%	100%	21%	21%
Total	41	33	80%	80%	80%	77%

Timeliness and completeness for EWARN/IDP reporting stands at 80% for week 33, while cumulatively timeliness and completeness are 77% and 80% respectively for 2018.

Table 7 | Alert performance indicators by Hub

Hub	W33		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Aweil	1	0%	36	94%
Bentiu	4	100%	67	72%
Bor	0	0%	46	61%
Juba	0	0%	64	70%
Kwajok	0	0%	36	94%
Malakal	1	100%	48	67%
Rumbek	1	100%	43	72%
Torit	0	0%	42	81%
Wau	2	100%	32	63%
Yambio	3	100%	65	65%
South Sudan	12	92%	479	73%

Table 8 Summary of key alert indicators

W33	Cumulative (2018)	
12	479	Total alerts raised
92%	73%	% verified
0%	0%	% auto-discarded
0%	4%	% risk assessed
0%	1%	% requiring a response

A total of 12 alerts were reported in week 33 with 92% of the alerts in week 33 being verified; 0% were risk assessed and 0% required a response.

Table 9 | Alert performance indicators by event

Event	W33		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	1	100%	92	67%
AWD	2	100%	165	71%
Bloody Diarr.	5	80%	123	53%
Measles	3	100%	98	80%
Meningitis	0	0%	0	0%
Cholera	0	0%	6	100%
Yellow Fever	0	0%	4	75%
Guinea Worm	0	0%	19	89%
AFP	0	0%	46	100%
VHF	1	100%	2	100%
Neo. tetanus	0	0%	5	60%
Event-based surveillance				
EBS total	0	0%	27	67%

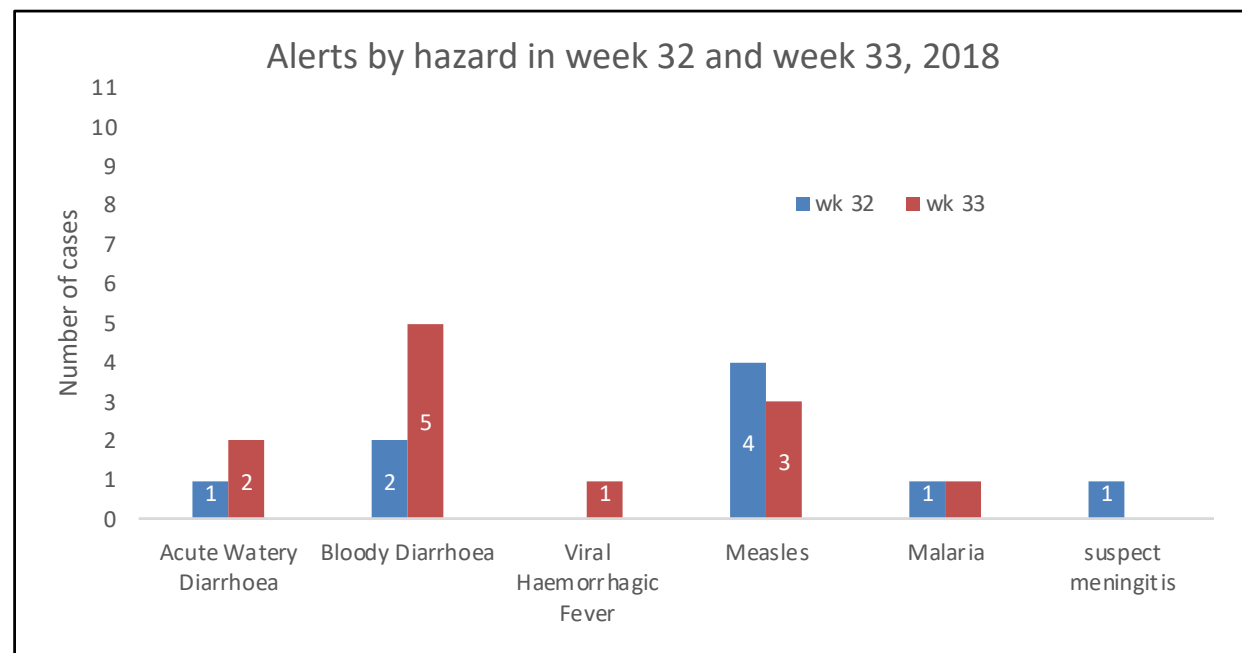
Table 10 | Event risk assessment

W33	Cumulative (2018)	
0	8	Low risk
1	1	Medium risk
0	3	High risk
0	1	Very high risk

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

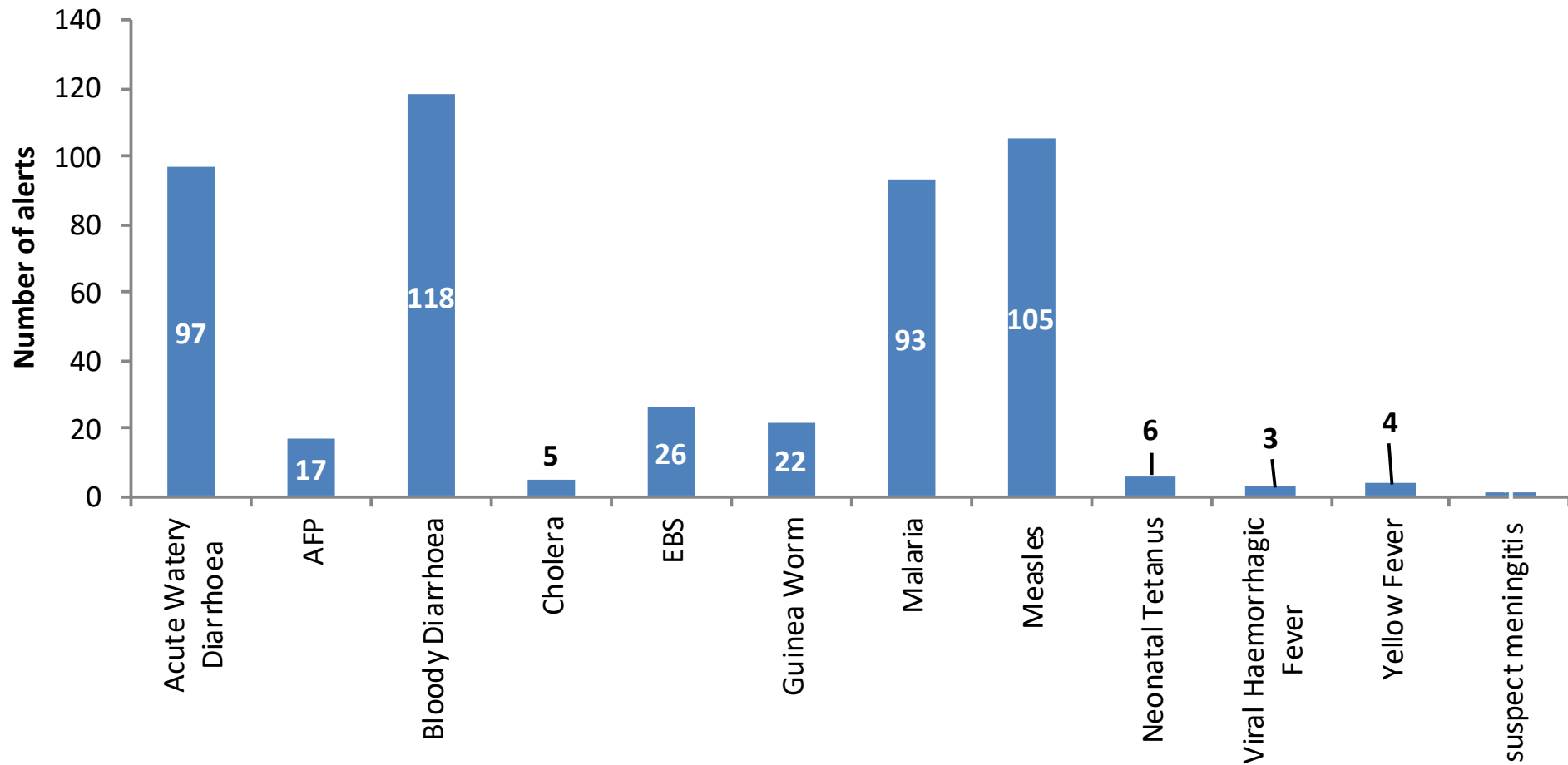
Alert by disease and county in W33 2018

County	Acute Watery Diarrhoea	Bloody Diarrhoea	Viral Haemorrhagic Fever	Measles	Malaria	Total Alerts
Aweil North		1				1
Ezo	1	1				2
Melut		1				1
Nzara	1					1
Rubkona			1	3		4
Rumbek North		1				1
Wau		1			1	2
Total Alerts	2	5	1	3	1	12



- During week 33, a total of 12 alerts were reported through EWARS
- Bloody diarrhoea & suspect measles were the most common alerts
- The other alerts reported during the week include the following
- One **suspect Guinea worm** case was reported to WHO on 24 August 2018. The case was reported from Lankien, Nyirol county, Jonglei state. The SSGWEP has been alerted to initiate investigations.
- From Fangak, **one suspect HEV** was reported in week 33. Since week 31, a total of 7 HEV RDT positive cases have been reported from Fangak. All the cases have occurred in adults (one in a postpartum female). The cases appear to be occurring sporadically and are using River water (largely from Phow river). Community awareness and hygiene promotion are ongoing. Samples sent to Uganda for PCR testing.

Number of Alerts by disease, South Sudan, week 1-33, 2018
n=497 alerts



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

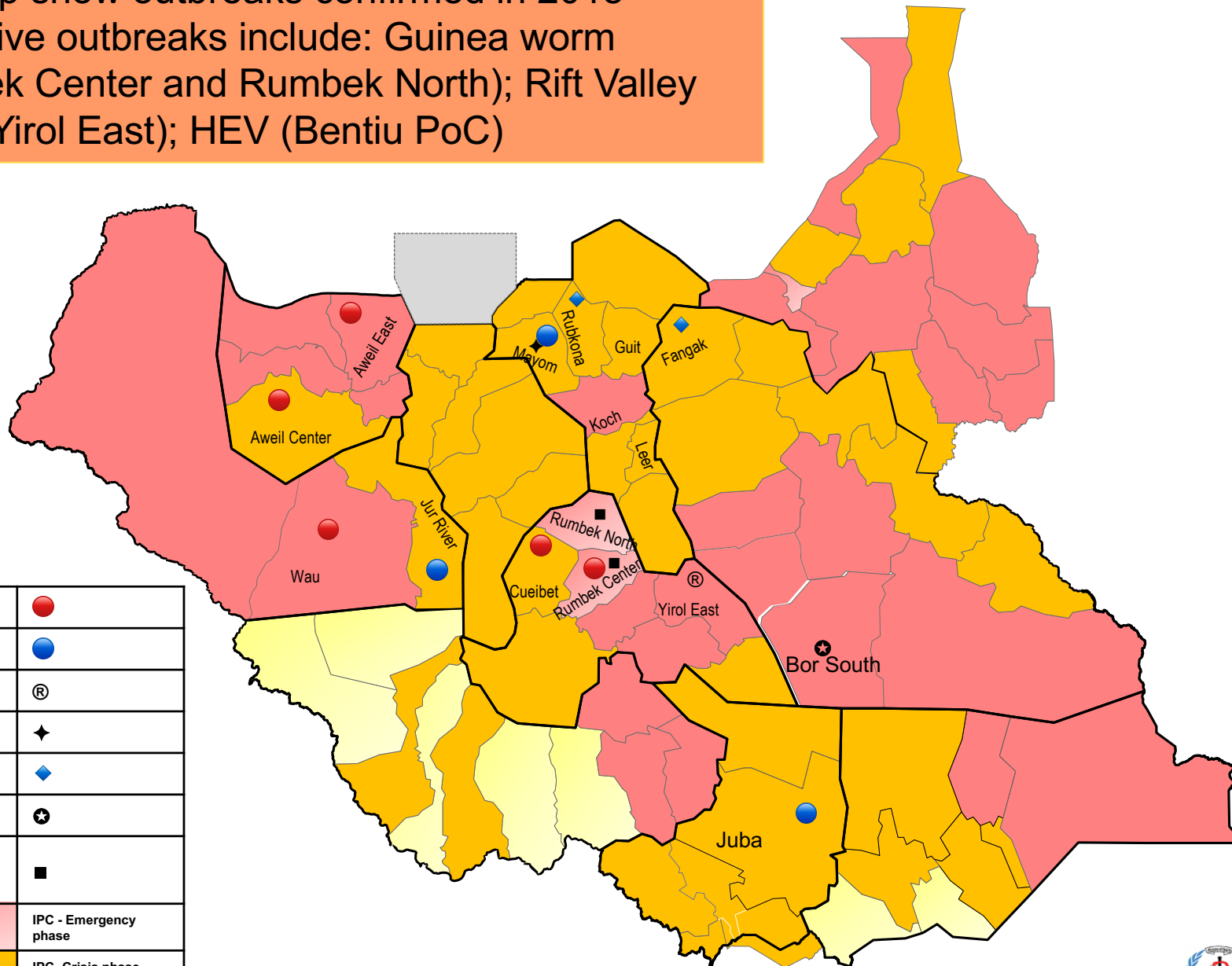
Cumulative alerts by risk assessment stage in 2018

County	OUTCOME	RISK ASSESSED	RISK CHARACTERISED	VERIFICATION	Total Alerts
Acute Watery Diarrhoea	1			96	97
AFP		1		16	17
Bloody Diarrhoea	1			117	118
Cholera	1			1	2
EBS		3		23	26
Guinea Worm	2	1		19	22
Neonatal Tetanus	3			3	6
Viral Haemorrhagic Fever				3	3
Yellow Fever				4	4
Measles	5	6		94	105
Cholera				3	3
Malaria	2	4	1	86	93
suspect meningitis				1	1
Total Alerts	15	15	1	466	497

- The Figures show the cumulative alerts by risk assessment state in 2018
- Of the 497 alerts reported in 2018; a total of 466 alerts have been verified; 15 alerts underwent risk assessment; and 15 alerts have a documented outcome

Confirmed Outbreaks South Sudan – 27 August 2018

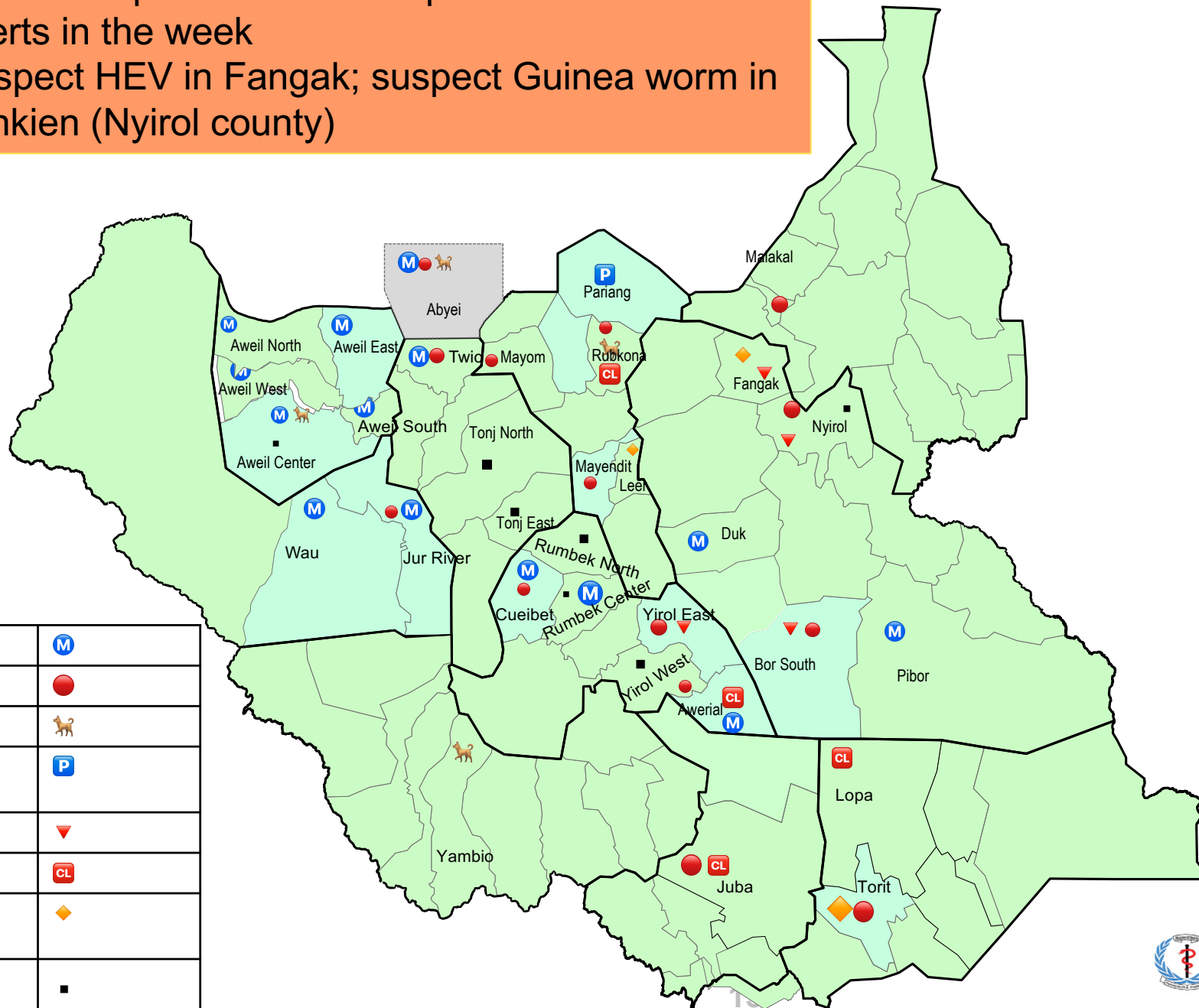
- The map show outbreaks confirmed in 2018
- The active outbreaks include: Guinea worm (Rumbek Center and Rumbek North); Rift Valley Fever (Yirol East); HEV (Bentiu PoC)



Measles	●
Rubella	●
Rift Valley Fever	Ⓜ
Anthrax	◆
Hepatitis E virus	◆
Foodborne disease	⊛
Guinea worm	■
	IPC - Emergency phase
	IPC- Crisis phase
	IPC - Stressed phase

Suspect Outbreaks South Sudan – 27 August 2018

- Map shows suspect outbreaks reported in 2018
- New alerts in the week
 - Suspect HEV in Fangak; suspect Guinea worm in Lankien (Nyirrol county)

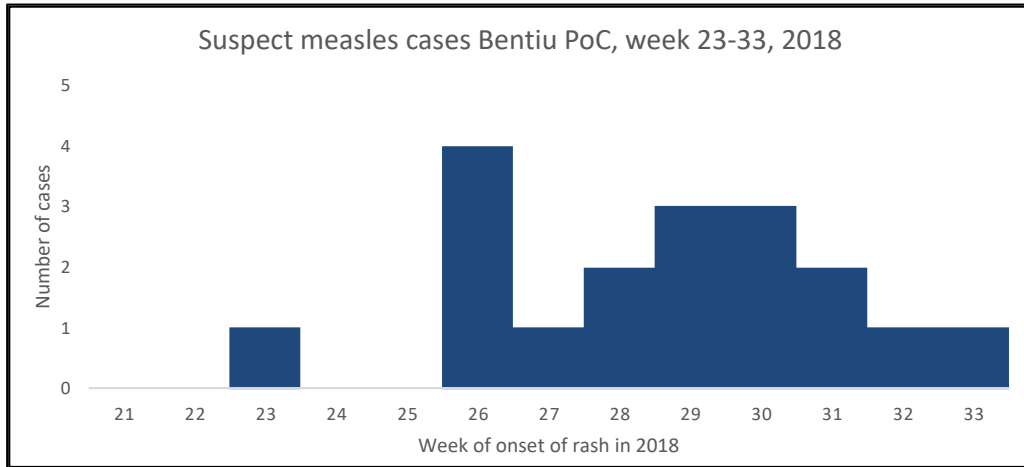


Response | Summary of major ongoing outbreaks

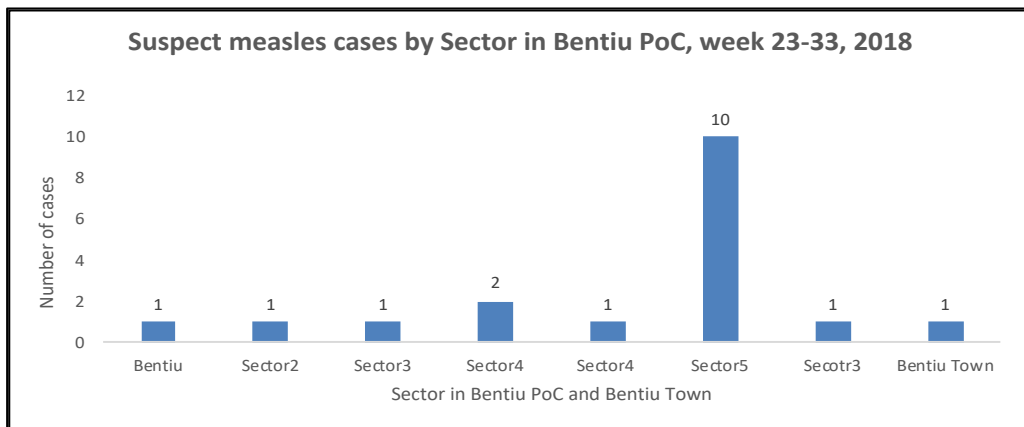
Aetiologic agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
New epidemics								
Ongoing epidemics								
Guinea worm	Rumbek Center & Rumbek North	27/05/2018	0	3 (0.001)	Yes	N/A	Yes	Yes
RVF	Yirol East	28/12/2017	0	58 (0.054)	Yes	N/A	Yes	N/A
Hepatitis E	Bentiu PoC	03/01/2018	1	131 (0.112)	Yes	No	Yes	Yes
Controlled epidemics								
Rabies probable	Bentiu PoC	06/12/2017	0	270 (0.231)	Yes	Yes	Yes	N/A
Measles	Rumbek Center	13/05/2018	0	40 (0.017)	Yes	Yes	Yes	N/A
Measles	Wau PoC AA	04/04/2018	0	1 (0.0025)	Yes	No	Yes	N/A
Hepatitis E	Old Fangak	15/02/2018	0	01 (0.001)	Yes	No	Yes	Yes
Rubella	Jur River	14/02/2018	0	76 (0.039)	Yes	No	Yes	N/A
Rubella	Juba	26/02/2018	0	22 (0.0037)	Yes	No	Yes	N/A
Rubella	Mayom	22/02/2018	0	08 (0.004)	Yes	No	Yes	N/A
Measles	Aweil Center	6/Jan/2018	0	22 (0.021)	Yes	Yes	Yes	N/A
Measles	Cueibet	14/10/2017	0	20 (0.012)	Yes	Yes	Yes	N/A
Measles	Aweil East	05/02/2018	0	31 (0.006)	Yes	Yes	Yes	N/A
Foodborne	Bor South	18/02/2018	0	434 (29)	Yes	Yes	Yes	Yes
Cut. Anthrax	Mayom	27/01/2018	0	2 (0.001)	Yes	No	Yes	N/A
Meningitis	Torit	17/01/2018	0	173 (0.107)	Yes	No	Yes	N/A

- There is no new outbreak confirmed in the week
- The other ongoing and controlled outbreaks in 2018 are shown in the table

Suspect measles outbreak - Bentiu PoC



Age	Female	Male	Total cases	Percentage %	Cum %
<1yr	6	5	11	61%	61%
1-4yrs	3	2	5	28%	89%
5-9yrs	1	1	2	11%	100%
Total cases	10	8	18	100%	



- At least 18 suspect measles cases (with no deaths) have been reported in Bentiu PoC since week 23, 2018.
- All the suspect cases are <5 years with 89% being less than five years of age.
- Most cases 56% (10/18) are from sector 5;
- All the suspect measles cases reported to date have not received any measles vaccine dose

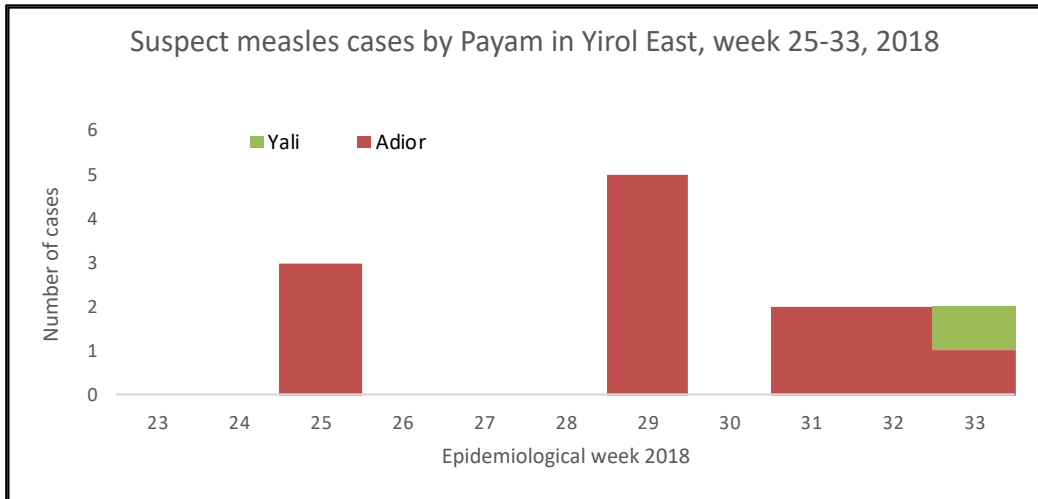
Recommended response

1. Case-based surveillance should continue
2. Ensure adequate clinical management of suspect measles cases (guided by national measles protocols).
3. Due to the absence of measles and rubella ELISA kits to facilitate lab confirmation and since Bentiu PoC hosts IDPs with the risk of amplification; reactive measles vaccination (and polio vaccination) should be implemented immediately with contingencies to vaccinate all new arrivals.
 - a) **Antigens to be delivered:** Measles & oral polio vaccine (OPV)
 - b) **Target population for measles:** 6months -15 years
 - c) **Target population for oral polio vaccine:** 0-59 months

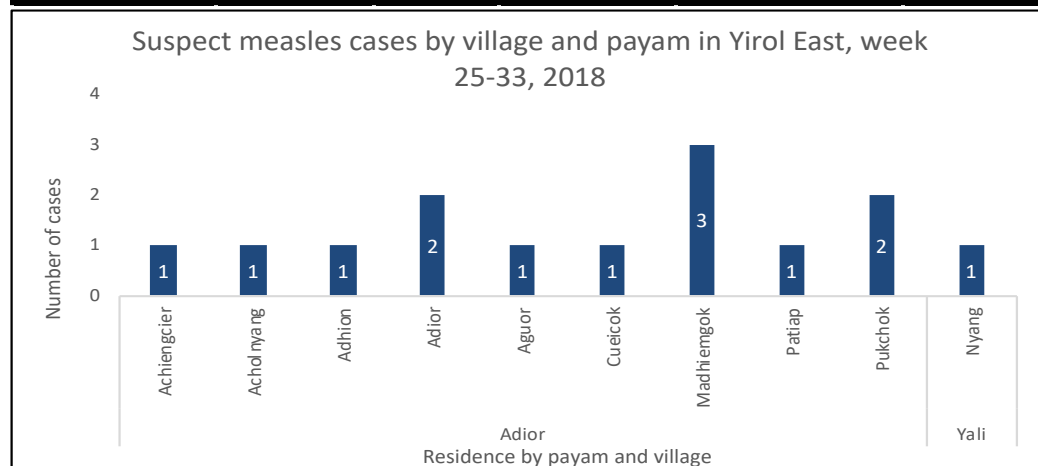
Update on preparations for campaign

Microplans finalized and vaccines delivered but the campaign delayed due to operational challenges with the vaccinators.

Suspect measles outbreak - Yirol East county



Age	Female	Male	Total cases	Percentage %	Cum%
<1yr		1	1	7%	7%
1-4yrs	2	4	6	43%	50%
5-9yrs	3	3	6	43%	93%
10-14yrs		1	1	7%	100%
Total cases	5	9	14	100%	



- At least 14 suspect measles cases (with no deaths) have been reported in Yirol East since week 25, 2018.
- Most of the suspect cases are <5 years with 50% being <5 years of age.
- Most of the suspect measles cases are from Adior payam with most cases reported from Madhiengkok village
- All the suspect measles cases reported to date have not received any measles vaccine dose

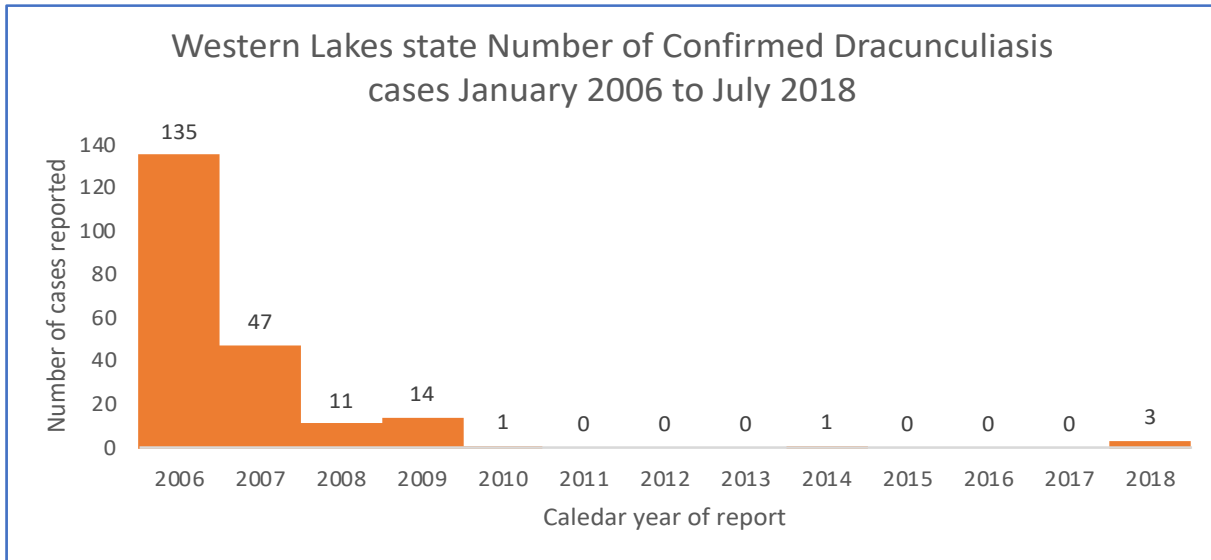
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 - a) **Antigens to be delivered:** Measles & oral polio vaccine
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 - c) **Target population for oral polio vaccine:** 0-59 months

Updates on preparations for the campaign

- Microplan finalized and is currently under review.

Confirmed Guinea worm - Rumbek Center & Rumbek North, Western Lakes state



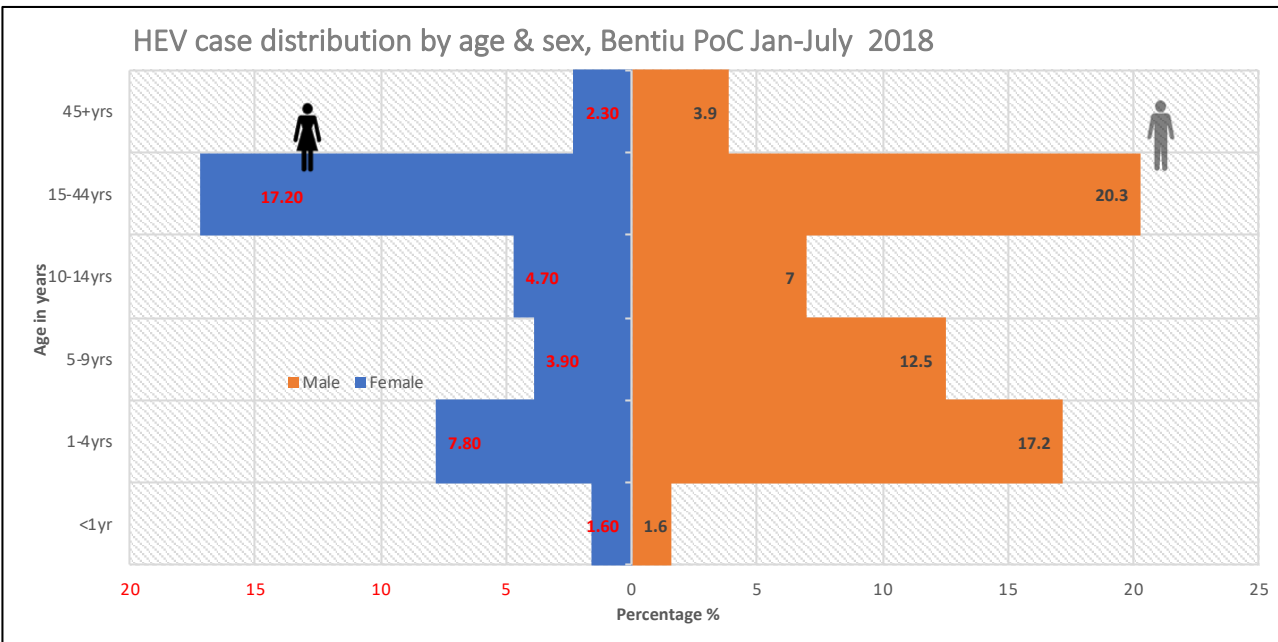
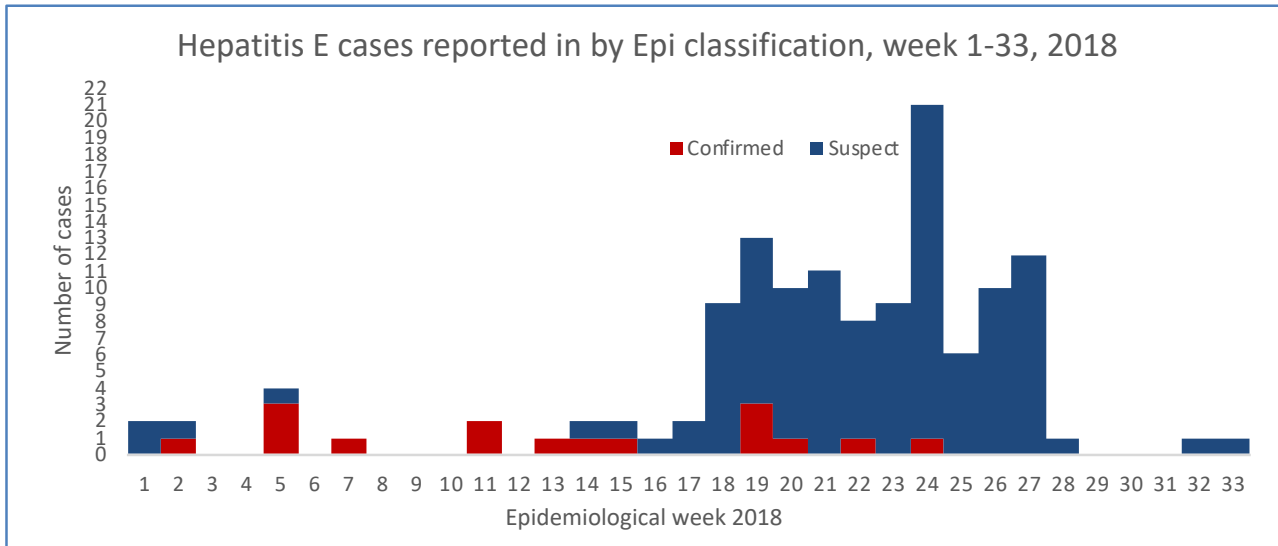
Confirmed Guinea worm cases by state hub, Jan 2006- Jul 2018

State hub	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Central Equatoria	290	210	376	275	45	12	0	0	0	0	0	0	0
Eastern Equatoria	13835	3127	1350	675	667	775	452	85	58	1	0	0	0
Western Equatoria	0	0	2	19	0	0	0	0	0	0	0	0	0
Lakes	659	396	467	494	270	59	7	9	12	2	0	0	3
Warrap	2942	930	1157	1193	675	116	37	4	0	1	2	0	0
Jonglei	1922	857	88	9	26	62	24	14	0	0	0	0	0
Western Bahr el Ghazal	197	162	160	62	15	4	1	0	0	1	4	0	0
Northern Bahr el Ghazal	727	129	18	6	0	0	0	1	0	0	0	0	0
Unity	0	0	0	0	0	0	0	0	0	0	0	0	0
Upper Nile	9	4	0	0	0	0	0	0	0	0	0	0	0
Total	20581	5815	3618	2733	1698	1028	521	113	70	5	6	0	3

SSGWEP - South Sudan Guinea worm eradication program; GW - Guinea worm

- The SSGWEP was established in 2006 with 20,581 cases being reported the same year but consistent case declines were reported with no cases in 2017
- Western Lakes state comprises of the former Wulu, Rumbek Center, Rumbek East, and Rumbek North counties in former Lakes state
- Western Lakes state has a village surveillance system since the SSGWEP started in 2006 with confirmed Guinea worm cases declining from 135 out of 20,581 cases countrywide to 14 cases in 2009, the year the last indigenous cases were reported in Western Lakes. The 2010 case was imported and the 2014 case originated from Wulu county
- From 2015-2017; Western Lakes reported no confirmed GW cases however, three GW cases were confirmed in 2018. The source of these three new cases is still being investigated
- Two of the 2018 cases originate from Rumbek Center while the third is from Rumbek North. They are all from the cattle camps and are uncontained.
- The affected cattle camp populations of the Pakam and Rup communities have in the past several years been engaged in communal violence which had hindered the work of the SSGWEP. The ongoing disarmament of civilians has created the necessary environment for the SSGWEP to reach all the cattle camps inhabited by these communities.
- The current investigations entail detailed investigations into the 3 cases to map their close contacts (in search for additional cases), open water sources visited after the worms emerged; abating all the open water sources in the outbreak area; improving access to safe water; public awareness through the cash reward campaign; and countrywide surveillance to detect additional cases.

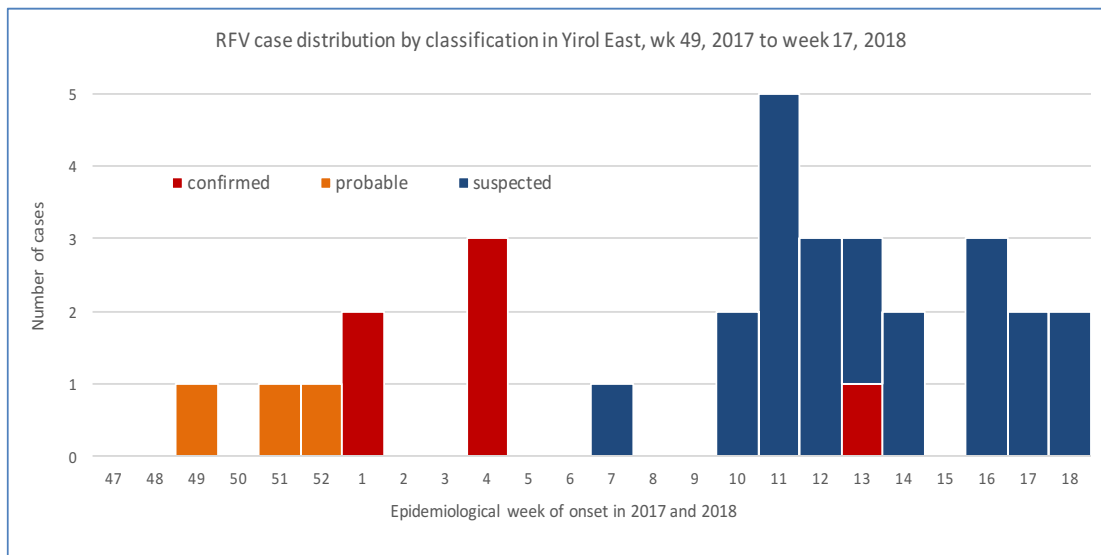
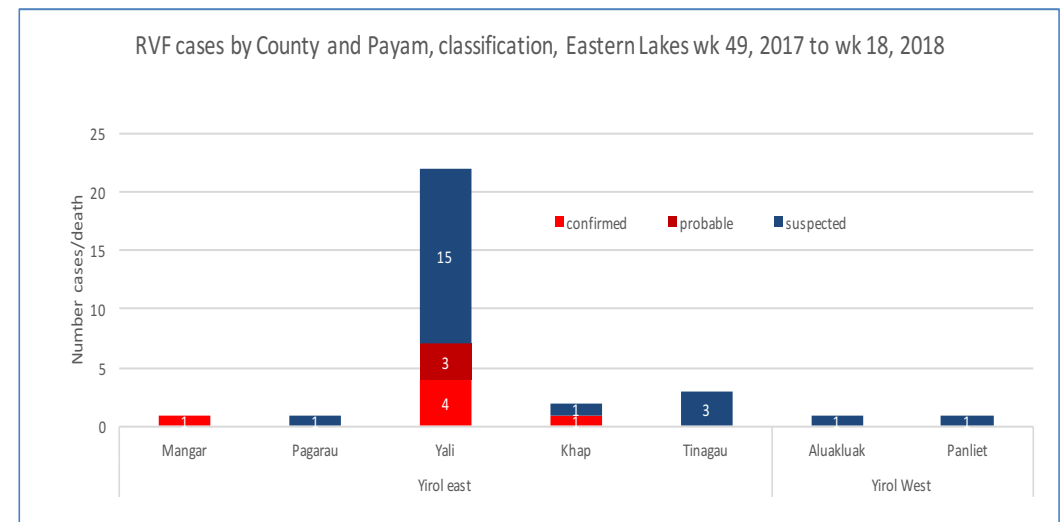
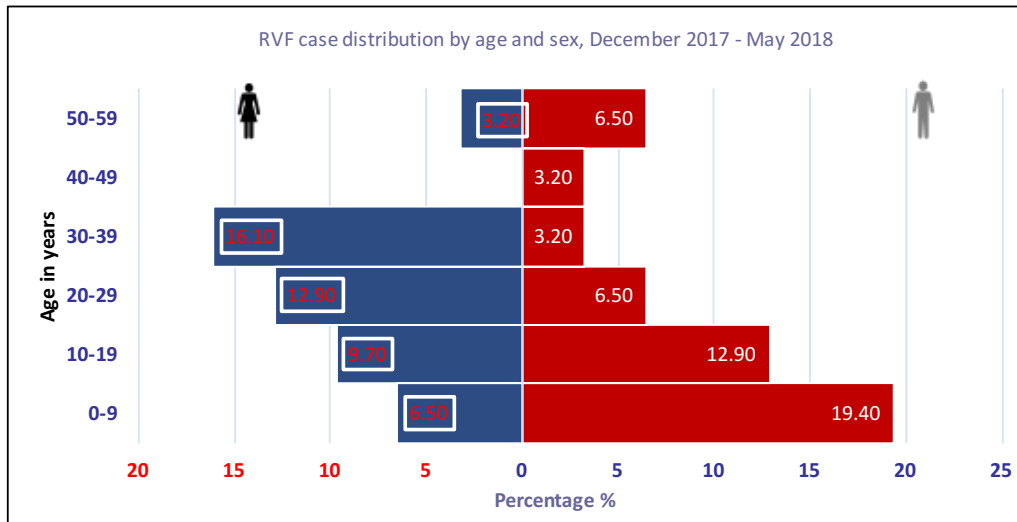
Hepatitis E, Bentiu PoC and Old Fangak



- At least 131 suspect cases of Hepatitis E (HEV) have been reported in 2018. Of the 131 suspect cases, a total of 16 cases have been PCR confirmed as HEV (15 in Bentiu PoC & 1 in Old Fangak). No new cases identified after active follow up in Fangak. Only 5 HEV cases have been admitted.
- At least 44.3% of the cases are 1-9 years of age; and 62% being male. Among the females, most cases have been reported in those aged 15-44 yrs (who are at risk of adverse outcomes if infected in the 3rd trimester of pregnancy).
- Use of stagnant water for domestic or recreation purposes likely to be source of infection - communities are being educated on the risk and draining the water is being discussed
- Unicef has shared key HEV messages - for radio programs on [Kondial FM & Bentiu FM] and community sensitizations.
- Case identification and follow up is ongoing and WASH risk assessment has been planned.

One new case was reported in week 33

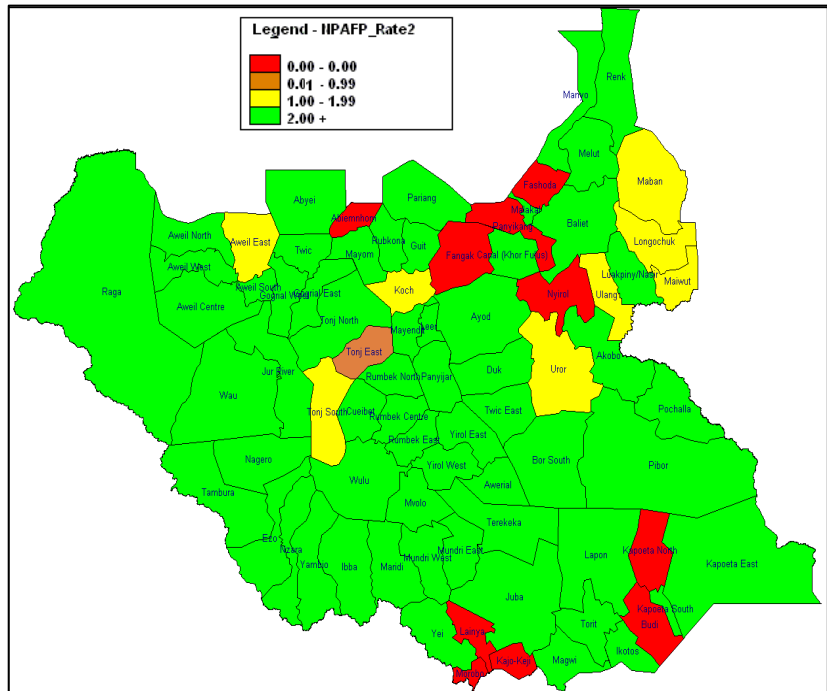
Ongoing epidemics - Epidemic description - RVF Eastern Lakes state



Sno.	Description	Number
1	Suspect cases	58
2	Total deaths	4
3	Confirmed cases	6
4	Probable cases	3
5	Cases pending testing	01
6	Non-cases	48
7	Cases on admission	01
8	Total human samples collected	39
9	Total animal samples collected	28
10	Positive animal cases	9

- No new suspect RVF case reported from Yirol East in week 33.
- In the period 7 December 2017 to 27 Aug 2018, a total of 58 suspect RVF cases were reported in Eastern Lakes.
- These were reclassified based on investigations and laboratory results, such that as of 27th Aug 2018, there were a total of six (6) RVF confirmed cases, three (3) probable, and 01 suspect RVF cases (either no samples collected or samples collected and test results are pending).
- Forty eight (48) 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

Acute Flaccid Paralysis - suspect Polio



In week 33, 2018, a total of 6 new AFP cases were reported from Jonglei, Eastern Equatoria, Lakes, Northern Bahr el Ghazal, Unity, and Warrap hubs. This brings the cumulative total for 2018 to 261 AFP cases.

The annualized non-Polio AFP (NPAFP) rate (cases per 100,000 population children 0-14 years) in 2018 is 5.0 per 100,000 population of children 0-14 years (target ≥ 2 per 100,000 children 0-14 years).

Stool adequacy was 84% in 2018, a rate that is higher than the target of $\geq 80\%$

Environmental surveillance ongoing since May 2017; with 23 samples testing positive for non-polio enterovirus (NPEV) in 2017 and Thirty one (31) NPEV positive sample in 2018.

Source: South Sudan Weekly AFP Bulletin

2017-2018* SUMMARY by States (Using NID figures for population estimates)

State Hubs	Population <15 years	Cumulative AFP Cases	Non-Polio Cases	Cases of the Week	Polio cases				NPAFP Rate	Stool Adequacy			Lab indicators (Pending lab cases excluded)				
					Polio Compatible	VDPV	Pending			Specimens (#)	Adequate Specimens	Stool adequacy	NPEV		Sabin like		
							Pending Lab/CLT	Pending Lab/ITD					Pending ERC	Number	Percent	Number	Percent
CENTRAL EQUATORIA HUB	737148	15	13	0	0	0	1	0	1	3.2	15	13	87%	0	0%	0	0%
EASTERN EQUATORIA HUB	674008	25	23	1	0	0	2	0	0	5.8	25	25	100%	3	12%	2	11%
JONGLEI HUB	982693	29	20	1	0	0	6	0	3	4.7	29	23	79%	3	10%	1	8%
LAKES HUB	791864	31	30	1	0	0	1	0	0	6.2	31	31	100%	3	10%	0	0%
NORTHERN BAHR EL GHAZAL HUB	987309	28	26	1	0	0	2	0	0	4.5	28	25	89%	4	14%	3	15%
UNITY HUB	864151	23	17	1	0	0	1	0	5	4.2	23	18	78%	3	13%	1	7%
UPPER NILE HUB	895541	33	21	0	0	0	1	0	11	5.8	33	18	55%	5	15%	3	14%
WARRAP HUB	1456973	37	33	1	0	0	1	0	3	4.0	37	34	92%	5	14%	0	0%
WESTERN BAHR EL GHAZAL HUB	316372	15	9	0	0	0	3	0	3	7.5	15	9	60%	1	7%	0	0%
WESTERN EQUATORIA HUB	516397	25	20	0	0	0	3	0	2	7.6	25	23	92%	3	12%	2	11%
SOUTH SUDAN	8222455	261	212	6	0	0	21	0	28	5.00	261	219	84%	30	12%	12	7%

2018*

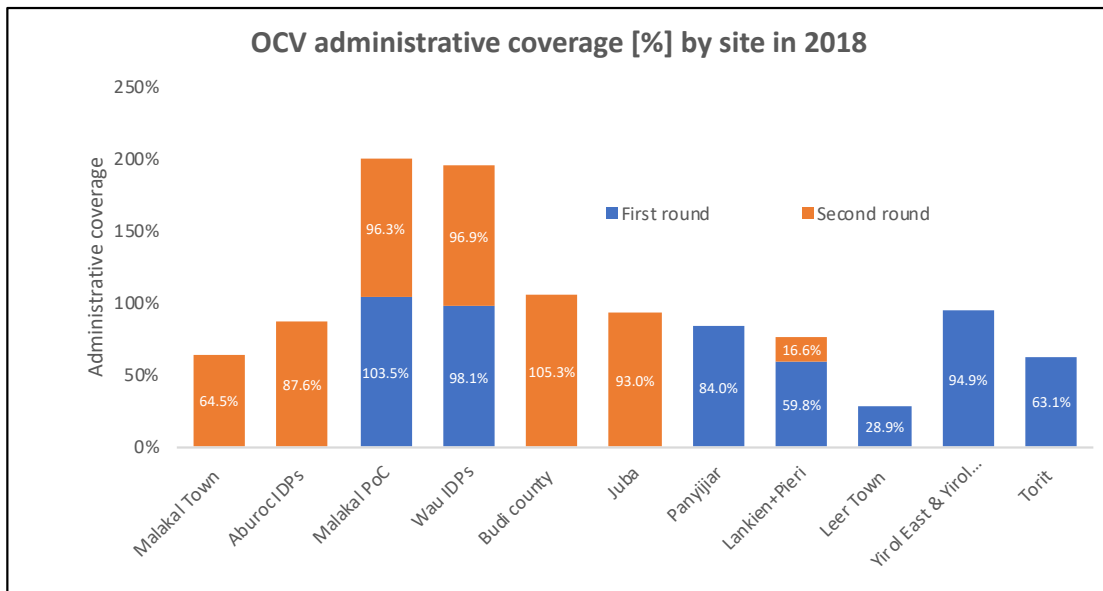
Cholera preparedness and preventive activities - Oral cholera vaccine campaigns - 2018

Site	Total population	Target population	1st round doses	2nd round doses	Total doses	1st Round dates	2nd Round dates	Partners
Aburoc	11,640	11,291		11,550	11,550	20-22May2017	Jan 17- 20 2018	MoH, WHO, Unicef, MSF-E
Malakal Town	20,000	19,200		22,200	22,200	18-24Mar2017	Jan 5 - 9 2018	MoH, WHO, Unicef, MSF-E
Juba	214,887			206,292	206,292	9Sep - 24Nov 2017	Apr 24-28 2018	MoH, WHO, Unicef, MSF-F & Spain
Malakal PoC	24,424	23,691	34,291	34,291	68,582	19-23March 2018	Apr 17-21 2018	MoH, WHO, Unicef, IOM
Wau IDPs	40,499	39,284	56,860	56,860	113,720	19-23March 2018	Apr 17-21 2018	MoH, WHO, Unicef, IOM
Torit	180,169	174,764	174,764	174,764	349,528	9th - 14th Aug 2018	28Jul- 6Aug 2018	MoH, WHO, Unicef, SCI, CARE
Yirol East & West	170,189	165,083	165,083	165,083	330,167	20-29 July 2018	TBD	MoH, WHO, Unicef, LiveWell
Lankien	38,000	36,860	36,860	36,860	73,720	28May -13Jun2018	TBD	MoH, WHO, Unicef, MSF-H
Panyijiar	75,000	72,750	75,000	75,000	150,000	16-22May2018	TBD	MoH, WHO, Unicef, IRC
Leer	50,000	48,500	48,500	48,500	97,000	11-Jun-18		MoH, WHO, Unicef, MedAir
Totals	824,808	800,064	591,358	831,400	1,422,759			

- Cholera prevention and response activities are already underway to mitigate the risk of cholera outbreaks in cholera transmission hotspots
- These efforts are critical now at the rain season is starting for the states in the Southern parts of the country.
- The use of oral cholera vaccines alongside WASH and other interventions is critical to these efforts
- Preventive vaccine campaigns (with oral cholera vaccines) for the first half of 2018 are listed in the table
- The National Cholera Control Plan is being finalized by a consultant secured with support from the GTFCC
- Validation of the National Cholera control plan is planned for August 2018
- A consignment of 96,285 doses of oral cholera vaccine from the ICG arrived in the country on 4Jul 2018 for the pre-emptive campaign in Leer county
- Another 352,660 doses of oral cholera vaccine from the GTFCC arrived in the country on 18 July 2018 for the campaigns in Panyijiar and Yirol

- **Oral cholera vaccine campaigns completed in 2018 include:**
 - Malakal Town (2nd round)
 - Aburoc IDPs (2nd round)
 - Malakal PoC (1st & 2nd round)
 - Wau PoC+IDPs (1st & 2nd round)
 - Juba Town (1st & 2nd round)
 - Panyijiar (1st round)
 - Leer Town (1st round)
 - Yirol East and Yirol West (1st round)
- **Upcoming campaigns for 2018**
 - Torit (2nd round)
 - Yirol East and Yirol West (2nd round)
- **Currently ongoing campaigns in July 2018**
 - Leer county outside Leer town (1st round)

Oral cholera vaccine campaigns administrative coverage - 2018



2018 OCV campaigns		First round		Second round		
	Site	Target	Coverage	Coverage	Coverage	Coverage %
1	Malakal Town	19,200			12,393	64.5%
2	Aburoc IDPs	9,683			8,484	87.6%
3	Malakal PoC	23,447	24,277	103.5%	22,588	96.3%
4	Wau IDPs	37,048	36337	98.1%	35887	96.9%
5	Budi county	89,377			94,128	105.3%
6	Juba	216,852			201,737	93.0%
7	Panyijiar	75,000	63,000	84.0%		
8	Lankien+Pieri	38,000	22,712	59.8%	6,294	16.6%
9	Leer Town	10,000	2,892	28.9%		
10	Yirol East & Yirol West	165,081	156,682	94.9%		
11	Torit	158,297	99,846	63.1%		
	Total	506,873	405,746	80.0%	381,511	96.4%

The following OCV campaigns have been completed in 2018:

1. Malakal Town (2nd round)
2. Aburoc IDPs (2nd round)
3. Budi county (2nd round)
4. Malakal PoC (1st & 2nd round)
5. Wau PoC+IDPs (1st & 2nd round)
6. Juba (2nd round)
7. Panyijiar (1st round)
8. Leer town (1st round)
9. Lankien (1st round)
10. Pieri (1st & 2nd round)
11. Yirol East & Yirol West (1st round)
12. Torit county (1st round)

Ebola situation update - North Kivu 22 Aug 2018

Outbreak declaration

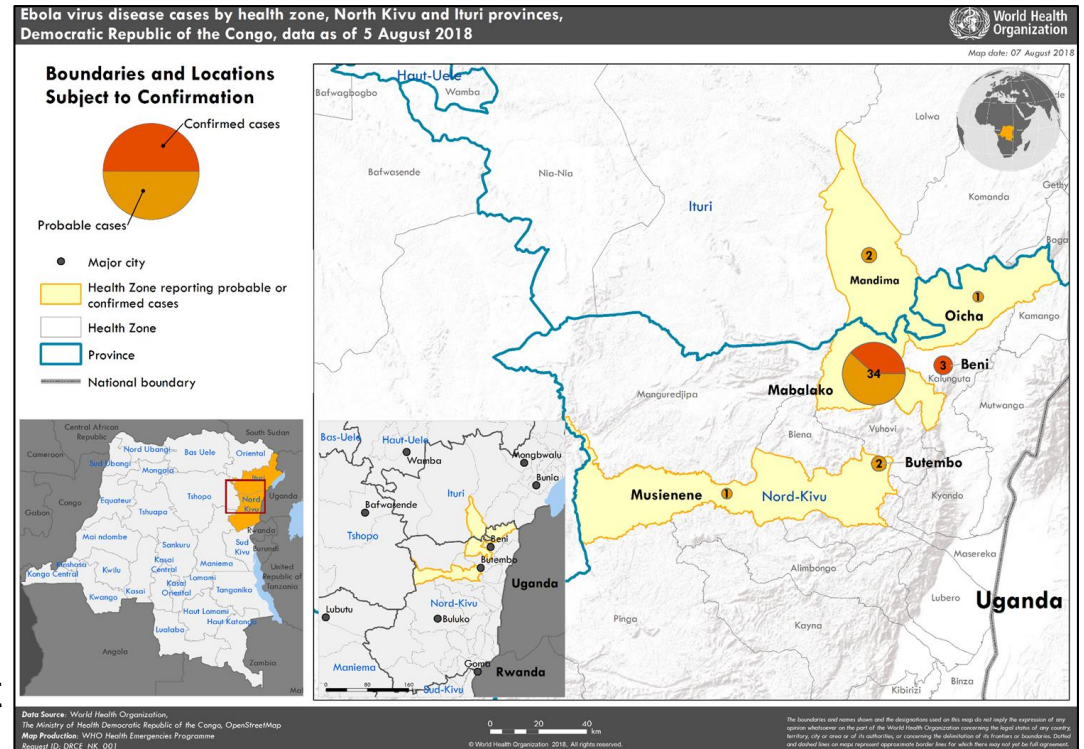
- Ebola outbreak declared in North Kivu province, DRC on 1 Aug 2018

Cases (deaths): 102 cases (59 deaths)

- 75 Laboratory confirmed cases
- 27 probable cases
- 13 healthcare workers (12 confirmed, 1 probable); one death
- 10 EVD cases recovered
- 2,408 contacts listed (1,782 being followed up)
- Ring vaccination commenced at least 500 contacts vaccinated

6 health zones affected in two provinces

- Mabalako, Beni, Butembo, Oicha & Musienene in **North-Kivu Province**
- Mandima in **Ituri Province**



- Epicenter - Mangina (Mabalako health zone), North Kivu
- Multipartner IMS/EOC activated in Beni & field coordination center in Mangina
- Mobile Lab in Beni & fixed site lab testing in Beni, Goma, & Mangina
- ALIMA & MSF established 60-bed ETCs in Beni & Mangina respectively
- The partners preparing ETCs to provide therapeutics under the monitored emergency use of unregistered and experimental interventions (MEURI) protocol

Ebola preparedness in South Sudan

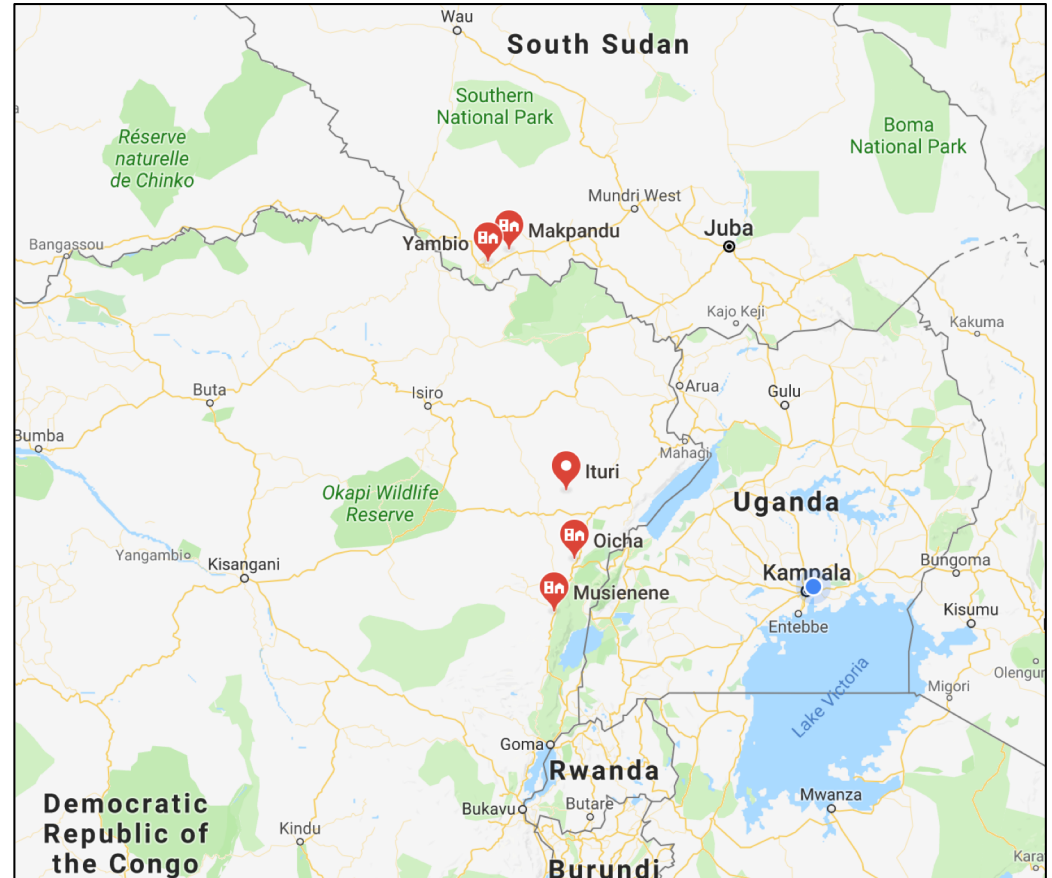
Contextual issues & risk assessment

Contextual issues

- North Kivu high population (8 million)
- Shares borders with 4 other provinces and 2 countries (Uganda & Rwanda)
- Insecurity & worsening humanitarian crisis (1 million IDPs)
- Efflux of refugees to Uganda, Burundi & Tanzania

Current risk assessment

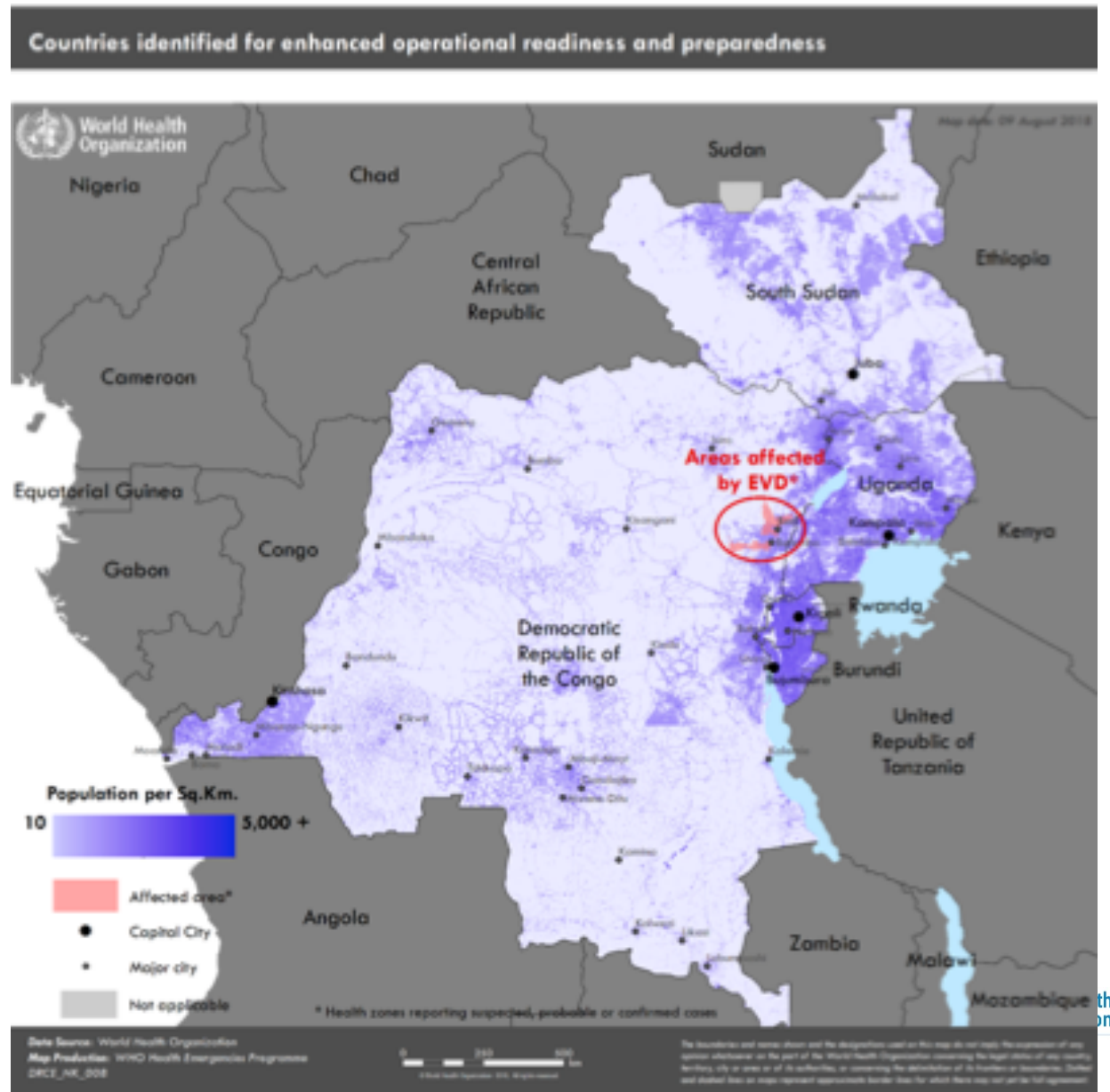
- EVD outbreak affecting NE provinces of DRC that border Uganda & Rwanda
- Risk factors include transport links to neighboring countries; IDPs; refugee displacement to neighboring countries; several epidemics in DRC; protracted humanitarian crisis; insecurity.
- Public health risk considered high regionally
- Outbreak declared grade 3 emergency



Ebola preparedness in South Sudan

Countries identified for enhanced readiness & preparedness activities

- For the North Kivu EVD, WHO prioritized 4 countries (Burundi, Rwanda, South Sudan and Uganda) to enhance operational readiness & preparedness based on:
 - Proximity current EVD outbreak areas
 - Capacity to manage EVD & VHF outbreaks
- Priority points of entry for South Sudan: Bazi & Kaya (Morobo); Nabiapai (Yambio); Nimule (Torit); Wau airport (Wau); & JIA (Juba)
- In JIA there are plans to open screening for VIPs & UNMISS arrivals



Ebola preparedness in South Sudan

EVD preparedness activities undertaken in South Sudan

- As part of strategic leadership and coordination, the Humanitarian Country Team (HCT) involving all heads of humanitarian agencies (UNICEF, UNHCR, IOM, MSF, MedAir, ICRC, WFP) and donors. The meeting was held on 20 August 2018 and chaired by the Deputy Special Representative of the Secretary General, Resident Coordinator, Humanitarian Coordinator and UNDP Resident Representative in South Sudan, Alain Noudehou
- The Ministry of Health in Juba held a meeting involving key sectors in government including Immigration, Medical Corps, Legislators, Ministers and Governors from High-risk states, partners, and donors. The meeting was held on 22 August 2018 and chaired by the Honorable Minister of Health, Dr. Riek Gai Kok.

Response | Suspect outbreaks in 2018

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 was stepped up but no additional cases were identified.
17Feb18	meningitis	173 (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. There was no conclusive laboratory confirmation due to sample contamination . 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 weeks 11-18, 2018. Plans underway to conduct meningitis training for the NRRT and laboratory team at NPHL & in the state hubs
10Mar18	meningitis	3 (0)	Cueibet		Since 10 Mar 2018, at least three suspect meningitis cases have been reported by CUAMM in Cueibet hospital. However, no samples were collected.
02Feb2018	meningitis	52 (06)	Aweil South (14cases) Aweil East (18 cases) Aweil West (11 cases) Aweil North (4 cases)	Aweil hub	Since 2Feb2018, at least 52 suspect cases (6 deaths) have been reported in Aweil hub. Six samples positive for <i>Streptococcus pneumoniae</i> following rapid pastorex testing or showed gram positive diplococci on gram stain. None of the affected counties exceeded the alert threshold for meningitis.
06Jan18	meningitis	03 (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 for the 2 nd & 3 rd suspect case from Twic and Abyei counties respectively were positive for <i>Streptococcus pneumoniae</i> .
14Feb18	meningitis	21(03)	Wau (Jur River)	Udici, Roc Roc Dong	Since 14 Feb; 20 suspect meningitis cases have been reported from Wau (11 cases - 2deaths) and Jur River (9 cases - 1 death) counties. A suspect case involving a 45 year old male from Jur River was admitted in Comboni hospital on 28 Feb 18. PCR testing was positive for <i>Streptococcus pneumoniae</i> . Another suspect case tested positive for NmA by rapid pastorex at NPHL on 27/4/18.

Response | Suspect outbreaks in 2018

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 were obtained by MSF-CH for testing. Three of the four samples tested were positive for rubella IgM.
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
31Mar2018	Suspect meningitis /malaria	12(08)	Gogrial West	Kuach South	On 28 th Mar 2018; the Director Gogrial West reported community deaths in Kuach South that were verified by the RRT on 29 Mar 2018. The clinical and lab tests on suspect cases were consistent with malaria and the cases responded to treatment with ACTs. All the deaths were 10 years and above and 50% of the deaths were 20 years and above. Given the dramatic nature of symptoms, the other differential diagnosis to keep an eye on is epidemic meningitis. No new cases reported in weeks 14 and 15.
12/Apr/18	pertussis	18(00)	Fangak	Bei	Suspect pertussis cases have been reported by Mandeang PHCU and Kuephone PHCU in Fangak county. At least 11 suspect cases have been reported from Bei payam and another 7 suspect cases from Jiath. The response instituted by the partner CMA - entails treatment of cases and prophylaxis to close contacts and enhancing routine immunization for the infants.
22/05/18	cholera	2	Lopa	Imehejek	Two suspect cholera cases reported from Imehejek, Lopa from 22May18; the index ate cold food at a local market; direct RDT positive for cholera; all two samples negative for cholera after culturing in NPHL.
21/05/2018	measles	40	Rumbek Center	Teyau	Eight suspect measles cases reported from Teyau, Rumbek Centre - MMT dispatched for the investigation. Specimens obtained. Outbreak confirmed & reactive vaccination done.
23/05/18	measles	2	Mayom	Tam & Wangbur	Two suspect measles cases reported from Mayom (Tam & Wangbur payams) samples sent to Juba by MSF-CH
16/05/18	measles	1	Torit	Nyong	One suspect measles case reported from Nyong payam in Torit. Specimen collected

Response | Suspect outbreaks in 2018

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
30/05/2018	Acute jaundice	01(00)	Torit	Torit town	On 30 May 2018, a 2year and eight month child was admitted to Torit Hospital with fever, yellow eyes, and vomiting, Specimen obtained for testing and sent to Juba. First test results in week 26; showed the sample was negative for HEV by PCR. Further tests were IgM negative for YF, ZIKV, CHIK, WNV and DEN.
28/05/2018	Measles	2 (00)	Awerial		Two suspect measles cases reported and investigated in Awerial county. Samples have been collected and shipped to Juba for laboratory testing.
26/06/2018	Measles	14	Yirol East		Fourteen suspect measles cases have been reported and investigated in Adior payam. Samples have been collected for testing.
26/06/2018	Measles	1	Yirol West		One suspect measles cases was reported in week 26.
10/06/2018	Measles	18	Bentiu PoC		18 suspect measles cases were reported in Bentiu PoC from 10 June 2018. Samples have been obtained for laboratory testing
28/06/2018	Measles	6	Jur River		New suspect Measles cases reported from (Thilij) village in Wau Bai payam in Jur River county, an investigation team dispatched on 28 th June and they investigated & collected 6 blood samples
02/07/2018	Measles	6(0)	Twic		Five suspected measles cases have been reported in Twic County. They were investigated and samples were collected pending transportation to Juba. Line-listing and investigation reports had been prepared.
13/07/2018	cholera	Deaths	Awerial	Magok	On 13 th July; suspect cholera deaths were reported from Magok, Awerial county. Initial verification by MoH/WHO has not revealed suspect cholera deaths in the area. Further verification by the CHD revealed on additional information to confirm the alert.
25/07/2018	Acute Jaundice	2 (02)	Leer TPA	Leer Town	Two AJS (suspect HEV) deaths reported in Leer TPA are being investigated. Surveillance has been strengthened to detect and investigate subsequent cases; and WASH has been stepped up.
20/07/2018	measles	1	Aweil Center		A suspect measles case reported from Aweil Center county and investigated (sample collected for testing).

Response | Suspect outbreaks in 2018

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
10/08/2018	Suspect measles & pertussis	unspecified	Nyirol	Waat	On 10 Aug 2018, CMA reported a cluster of suspect measles and pertussis cases in Waat payam, Nyirol county. The area has not been reached with immunization (routine or supplementary) in the last one year. Emergency supportive response is underway and there are preparations to line list and collect samples from suspect cases.
8/08/2018	Suspect cholera	1	Juba	Juba	Suspect cholera case reported in EB clinic and referred to Juba Teaching hospital. Test results awaited.
8/08/2018	Animal bites (suspect rabies)	12	Yambio	Yambio town	Animal bites (suspect rabies) involving 12 cases including 2 children were reported in Yambio town and were attributed to stray dogs. A multisectoral meeting convened in Yambio and from the national level - human & animal rabies vaccines are being shipped to support the response. IEC materials are being adapted to support rabies risk communication.
8/08/2018	Suspect Guinea worm	2	Aweil	Aweil town	Two suspected Guinea worm cases were reported and investigated in Aweil State hospital. There was no hanging worm found the patients are being monitored
24/08/2018	Suspect Guinea worm	1	Nyirol	Lankien	One suspect Guinea worm case reported in Lankien. The SSGWEP has been initiated to initiate detailed investigations into the suspect case
05/08/2018	Suspect HEV cases	8	Fangak	Fangak	From Fangak, one suspect HEV was reported in week 33. Since week31, a total of 7 HEV RDT positive cases have been reported from Fangak. All the cases have occurred in adults (one in a postpartum female). The cases appear to be occurring sporadically and are using River water (largely from Phow river). Community awareness and hygiene promotion are ongoing. Samples sent to Uganda for PCR testing.

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

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