

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 38, 2019 (September 16 – September 22)



Major Epidemiological Highlights in week 38 of 2019

- In week 38, 2019 IDSR reporting completeness was 43% while timeliness was 53% at health facility level. EWARN reporting completeness and timeliness were both 57%.
- Of the 74 alerts in week 38; 73% were verified 4% were risk assessed and 3% required a response. Malaria (13), AWD (16), measles (15) and bloody diarrhea (11) were the most frequent alerts in the week.
- A suspect EVD case was investigated and discarded in Nimule.
- A measles outbreak confirmed in Li-bodo, Yambio after four (4) suspect measles cases tested IgM positive. At least 16 cases including one death have been line listed.
- Measles outbreaks confirmed in 2019 in 16 counties and 04 PoC sites. New confirmed measles outbreaks pending response in; Yambio; Tonj South, Jur River and Pibor – Labarab and Maruwa
- Since week 12 of 2019, a total of 166 ILI/SARI samples have been collected and tested in UVRI 129 being negative; 2 (1%) positive for Influenza B (Victoria); 11 (7%) positive for Influenza A (H3); and 6 (4%) positive for Influenza A (H1)pdm09. Test results are pending for 15 samples

SURVEILLANCE PERFORMANCE

For the Integrated Disease Surveillance (IDSR)
network and Early warning alert and response
network (EWARN)

IDSR Timeliness and Completeness Performance at Facility Level for week 38,2019

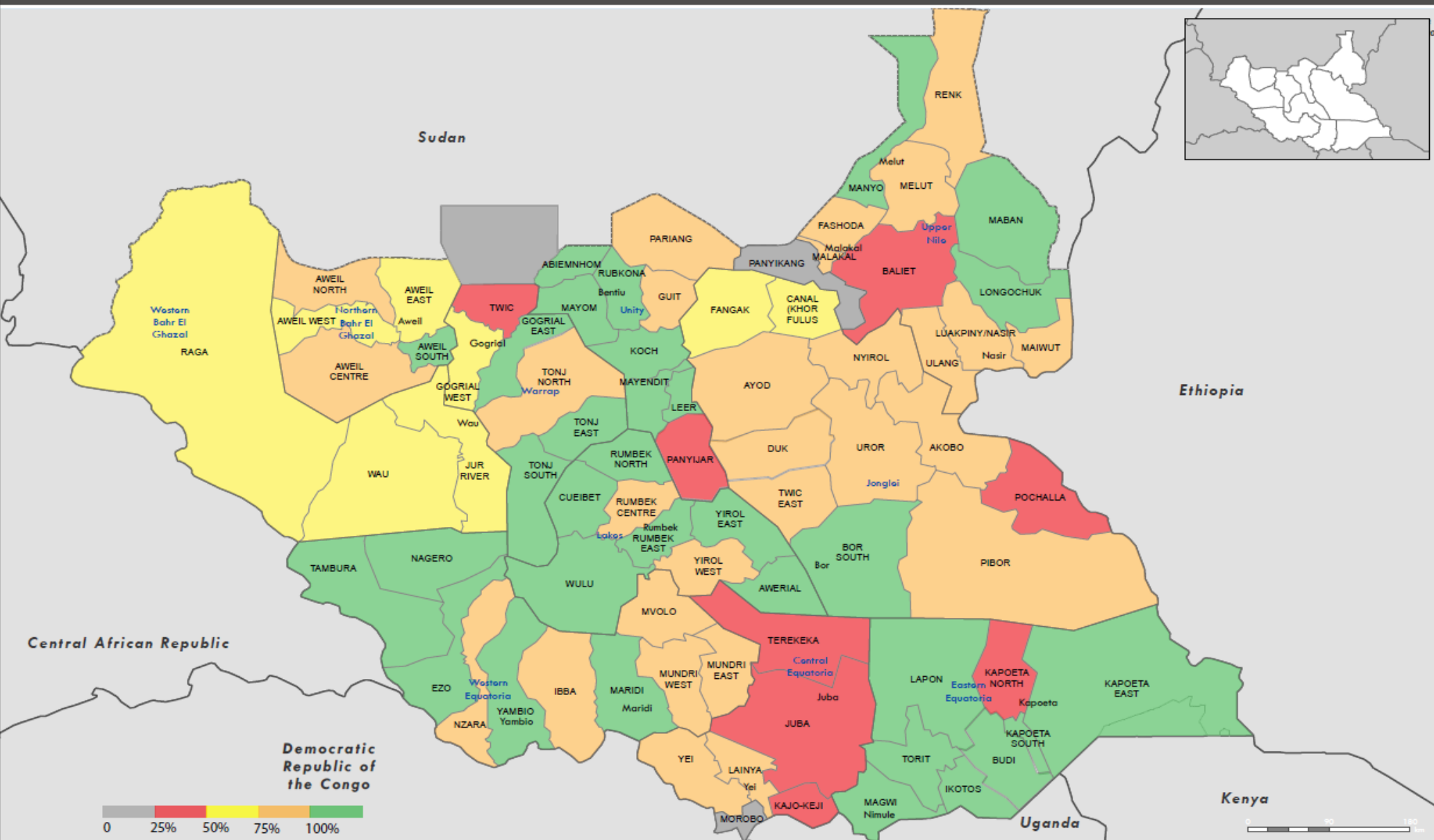
Completeness Hub/Former States Ranking	Hub/Former States	Supporting Partners	Total No. of Health Facility	No. of HFs Reported on Time	Timeliness Percentage	No. of HFs Reported not on Time	Completeness Percentage
1 st	Rumbek	Doctors with Africa (CUAMM)	116	85	73%	105	91%
2 nd	Yambio	AMREF, World Vision, CUAMM, CDTY, OPEN	214	192	90%	192	90%
3 rd	Bor	Nile Hope, MDM, JDF, Livewell, CRADA	179	86	48%	93	52%
4 th	Aweil	Malaria Consortium, Healthnet TPO, IRC, CEDS, IHO	145	36	25%	66	46%
5 th	Torit	Cordaid, HLSS, CMD	178	51	29%	80	45%
5 th	Wau	Cordaid, Healthnet TPO, CARE International, IHO	78	21	27%	35	45%
6 th	Kwajok	GOAL, CCM, WVI, Malaria Consortium, UNKEA	136	56	41%	60	44%
7 th	Juba	HLSS, SSUHA, Healthnet TPO, IHO	156	59	38%	59	38%
7 th	Malakal	Cordaid, WVI, RI, IMC, NIDO, UNKEA, MC, SSAID	188	27	14%	71	38%
8 th	Bentiu	Cordaid, UNIDOR, IRC, CHADO, CARE International	101	22	22%	25	25%
	South Sudan		1491	635	43%	786	53%

Key

	<60%	Poor
	61%-79%	Fair
	80%-99%	Good
	100%	Excellent

The timeliness of IDSR reporting (supported by EWARS mobile) at health facility level is 43% and completeness is 53%. Reporting performance is highest in Rumbek Hub with completeness of 91% followed by Yambio Hub with completeness at 90% while the rest of the state hubs are below target of 80%.

South Sudan - Percentage of completeness of reporting by county; week 38 of 2019



The map reflects the currently available data and is subject to change according to further updates to the data.
 Data source: South Sudan Ministry of Health, World Health Organization (WHO), OpenStreetMap
 Map production: WHO Health Emergencies Programme

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Surveillance | EWARS surveillance performance indicators by partner week 38, 2019

Surveillance | EWARS surveillance indicators

Table 4 | EWARS surveillance performance indicators by partner (W38 2019)

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	0	0		
GOAL	2	2	100%	100%
HLSS	1	1	100%	100%
IMA	7	0	0%	0%
IMC	4	4	100%	100%
IOM	8	10	125%	125%
IRC	1	1	100%	100%
Medair	2	2	100%	100%
MSF-E	2	0	0%	0%
MSF-H	3	1	33%	33%
SMC	7	0	0%	0%
UNIDO	1	0	0%	0%
UNKEA	2	2	100%	100%
World Relief	1	0	0%	0%
TRI-SS	2	0	0%	0%
LIVEWELL	3	3	100%	100%
Total	65	37	57%	57%

Table 5 | Summary of key EWARS surveillance indicators

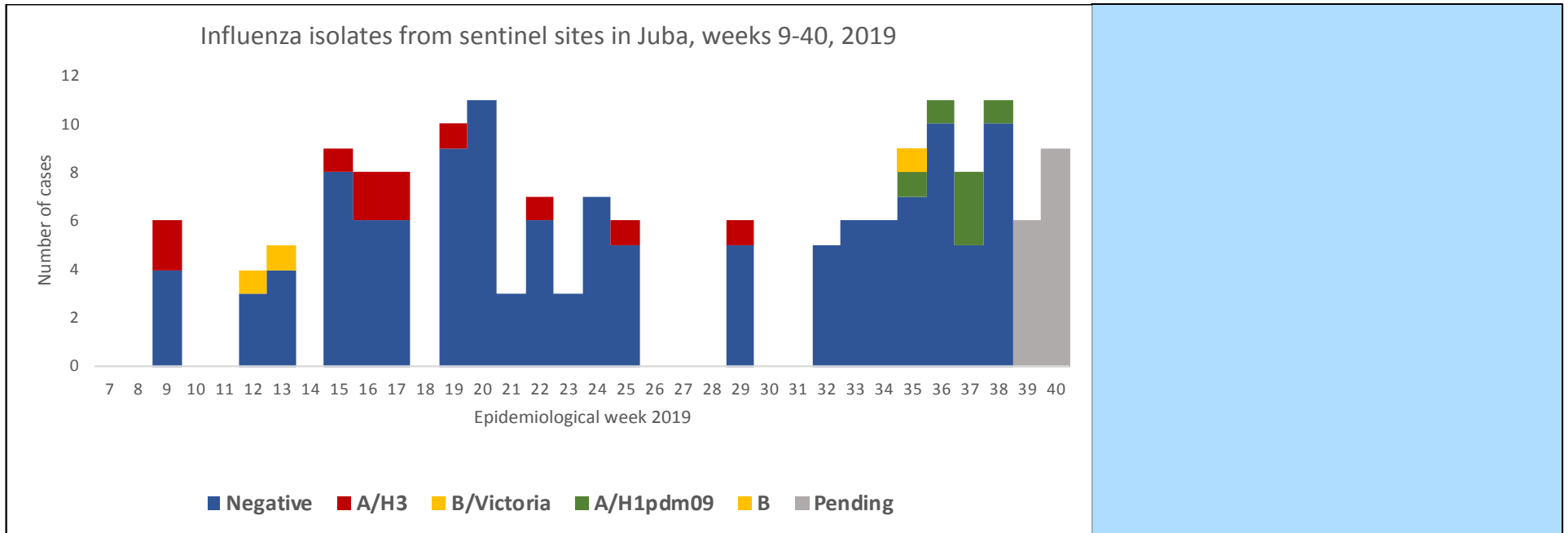
W38	Cumulative (2019)	
65	-	Number of EWARS reporting sites
57%	71%	Completeness
57%	66%	Timeliness

Table 6 | EWARS report submissions

W38	Cumulative (2019)	
37	1,757	total submissions
0	29	submissions by mobile
37	1727	submissions by web

- Both completeness and timeliness for weekly reporting were 57% in week 38 for partner-supported clinics serving IDP. The cumulative completeness and timeliness were 71% and 66% respectively for 2019.

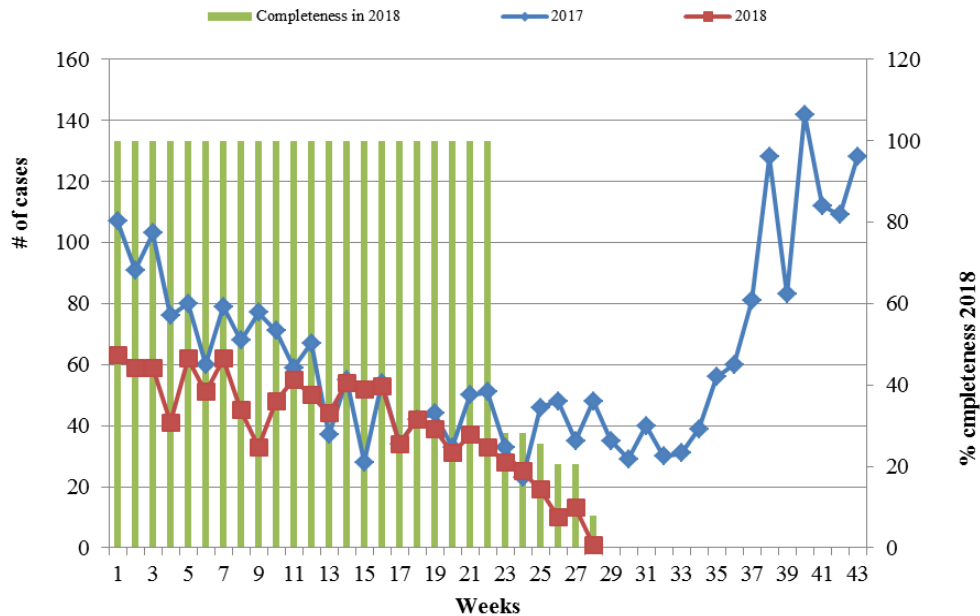
Routine Sentinel Surveillance | Human Influenza



- In week 12, 2019, South Sudan started case-based surveillance for Influenza Like Illness (ILI) and Severe Acute Respiratory Infection (SARI) cases through systematic collection of epidemiological and virological information
- There are currently two designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital and Al Sabah Children's Hospital) that are collecting epidemiological data and samples from ILI/SARI cases
- Since week 12 of 2019, a total of 166 ILI/SARI samples have been collected and tested in UVRI 129 being negative; 2 (1%) positive for Influenza B (Victoria); 11 (7%) positive for Influenza A (H3); and 6 (4%) positive for Influenza A (H1)pdm09. Test results are pending for 15 samples
- Since the beginning of 2019; Influenza A (3) has been the predominant isolate. However, Influenza A (H1)pdm09 emerged from week 35 as a new circulating strain.

Visceral Leishmaniasis | Kala-azar

A graph comparing VL new cases and completeness as of week 28, 2017-2018 in South Sudan



Kala-azar is endemic in Upper Nile, Unity, Jonglei, & Kapoeta. Response interventions have been complicated by insecurity, population displacement, poor living conditions, increasing food insecurity, closure of treatment facilities; and low treatment completion rates.

In week 29, four health facilities reported but there were no new cases or deaths.

Since the beginning of 2018, a total of 1,510 cases including 39 deaths (CFR 2.6%); 34 (2.3%) defaulters; 1,146 (75.9%) new cases; 76(5.0%) PKDL; and 288(19.1%) relapses - all reported from 39 treatment centers.

In the corresponding period of 2017, a total of 2,023 cases including 35 deaths (CFR 1.7%) and 62(3.1%) defaulters were reported from 21 treatment centers.

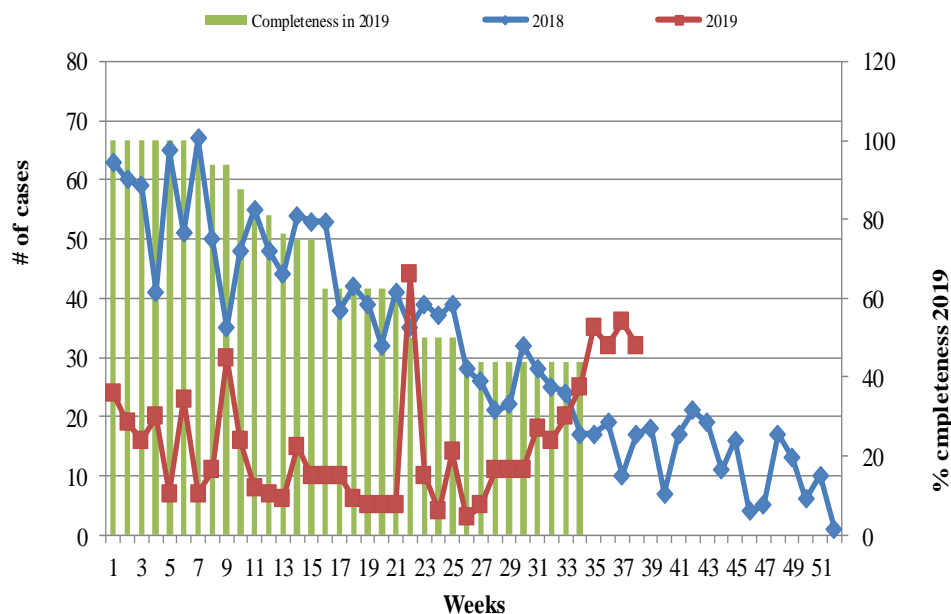
The majority of cases in 2018 have been reported from Lankien (805), Kurwai (149), Old Fangak (94), Walgak (65), Ulang (54), Malakal IDP (54), Narus (57), Pieri (38), KCH (28), Pagil (40), Doma (15), KMH (15), Bentiu (20) and Adong (13).

The most affected groups include, males [741 cases (49.1%)], those aged ≥ 15 years and above [660 cases (43.7%)] and 5 - 14 years [600(43.7%)]. A total of 235 cases (15.6%) occurred in children <5 years.

Low reporting rates currently impede meaningful trend interpretations however the major concern currently is seen from the high relapse rates; suggesting the need to improve treatment compliance through regular availability of testing and treatment kits and provision of food rations for cases on treatment.

Visceral Leishmaniasis | Kala-azar

A graph comparing VL new cases and completeness as of week 38, 2018-2019 in South Sudan



Kala-azar is endemic in Upper Nile, Unity, Jonglei, & Kapoeta. Response interventions have been complicated by insecurity, population displacement, poor living conditions, increasing food insecurity, closure of treatment facilities; and low reporting rates.

In week 38, five (5) KA treatment centers reported 33 cases, 32 (97.0%) new cases, 0(0.0%) PKDL and 1(3.0%) relapses. No deaths and defaulters reported.

Since the beginning of 2019, a total of 693 cases including 33 deaths (CFR 4.8%) and 14(2.1%) defaulters have been reported from 16 treatment centers including 1 case treated in Juba teaching Hospital.

In the corresponding period in 2018, a total of 1,935 cases including 65 deaths (CFR 3.4%) and 51(2.6%) defaulters were reported from 21 treatment centers.

The majority of the cases in 2018 have been reported from Lankien (350) Kapoeta State Hospital(KSH) (69), Narus (63), Chuil (33) Adong, Bentiu and Pagil (27 @) Old Fangak (23) etc.

The most affected groups included, males [406 cases (58.6%)], those aged ≥15 years and above [335 (48.3%) and 5 - 14 years [227 cases (32.8)]. A total of 130 cases (18.8%) occurred in children <5 years.

Despite the low reporting rates, the major concern currently is the increasing number of cases suggesting the KA peak season and the need to ensure availability of testing and treatment kits by WHO/partners and provision of food rations by partners for cases on treatment.

Number of Guinea Worm Rumours, Suspects and Provisional Cases in Week 38.

1976
Rumours

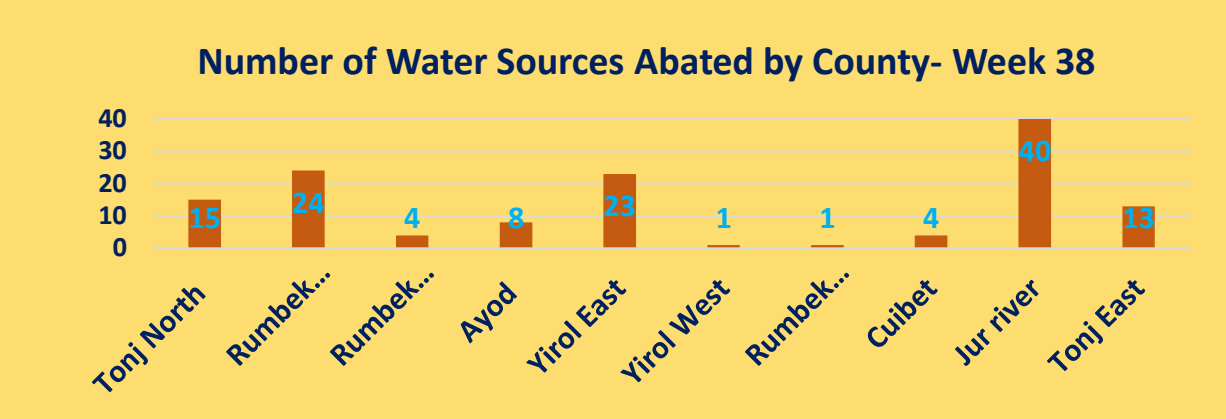
1965
Investigated
24hr
99.4%

5
Provisional Case

869
Suspects
44%

92%
Reporting Rate

SSGWEP	Hotline	IDS	HOTLINE ALER
	Location	R	LOCATION
1972 (99.4%)	3 (0.6%)	1 (0%)	<ul style="list-style-type: none"> Juba: 3

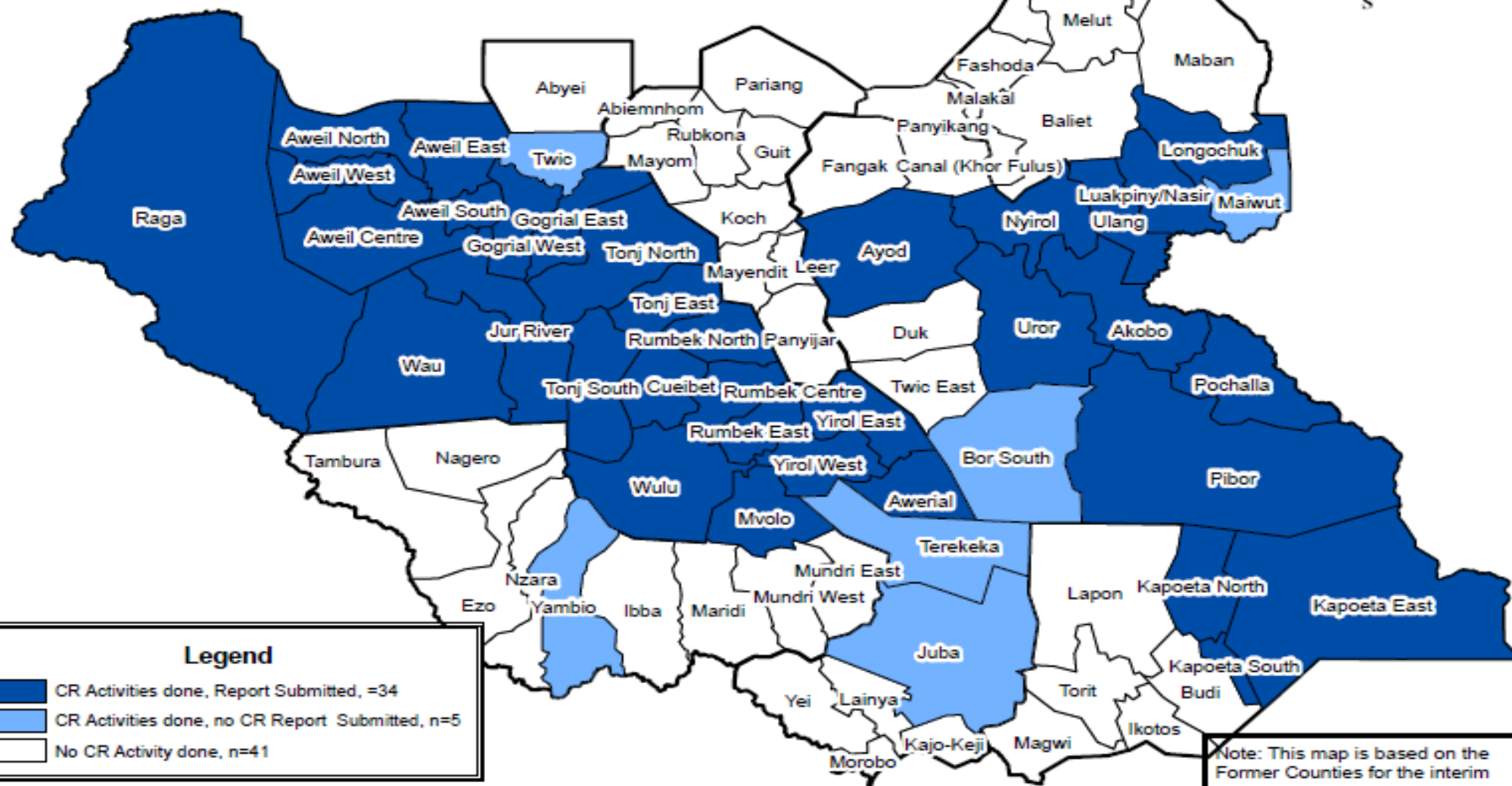


129 Water Sources were abated & 6 Litres of abate was applied

South Sudan Guinea Worm Eradication Programme

Cash Reward (CR) Coverage by Former Counties

n=39



Legend

- CR Activities done, Report Submitted, =34
- CR Activities done, no CR Report Submitted, n=5
- No CR Activity done, n=41

0 100 200 300 400 500 Kilometers

Note: This map is based on the Former Counties for the interim period as we await the shape file for the new Counties

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	W38		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	7	86%	247	79%
Bentiu	6	0%	220	68%
Bor	4	100%	206	100%
Juba	10	90%	289	42%
Kuajok	1	0%	206	37%
Malakal	0	0%	141	74%
Rumbek	15	100%	556	83%
Torit	7	86%	358	62%
Wau	7	100%	168	68%
Yambio	17	100%	623	87%
South Sudan	74	86%	3014	73%

Table 8 Summary of key alert indicators

W38	Cumulative (2019)	
74	3014	Total alerts raised
86%	73%	% verified
0%	0%	% auto-discarded
0%	4%	% risk assessed
0%	3%	% requiring a response

- A total of 74 alerts were received in week 38, 2019 out of which 73% were verified 4% were risk assessed and 3% required a response.

Alert | Event risk assessment

Table 9 | Alert performance indicators by event

Event	W38		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	13	92%	549	75%
AWD	16	81%	780	72%
Bloody Diarr.	11	91%	517	65%
Measles	15	87%	496	74%
Meningitis	0	0%	0	0%
Cholera	0	0%	93	83%
Yellow Fever	0	0%	20	90%
Guinea Worm	1	100%	71	69%
AFP	1	100%	136	70%
VHF	0	0%	22	73%
Neo. tetanus	0	0%	36	75%
Event-based surveillance				
EBS total	0	0%	32	81%

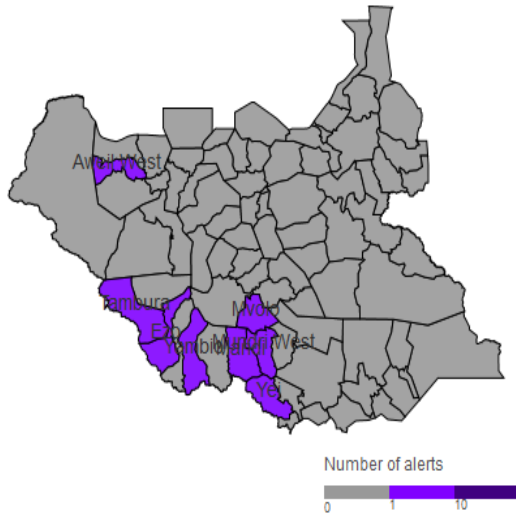
Table 10 | Event risk assessment

W38	Cumulative (2019)	
0	23	Low risk
28	28	Medium risk
0	30	High risk
0	29	Very high risk

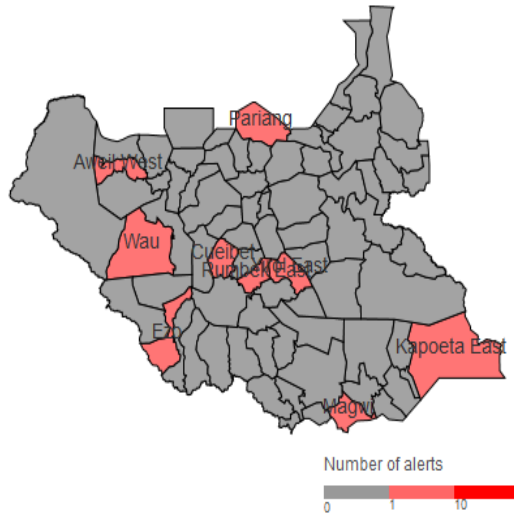
- Malaria (13), AWD (16), measles (15) and bloody diarrhea (11) were the top common alerts generated through the EWARS in week 38, 2019.

Alert | Map of key disease alerts by county week 38, 2019

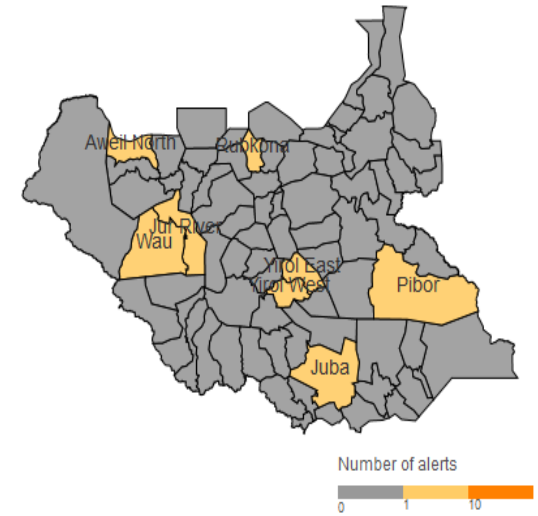
Map 2a | Malaria (W38 2019)



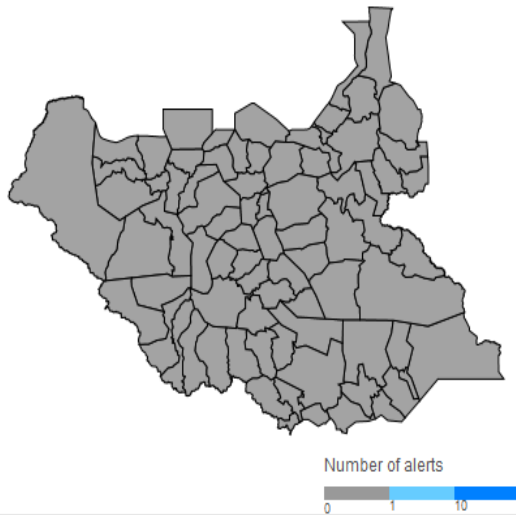
Map 2b | Bloody diarrhoea (W38 2019)



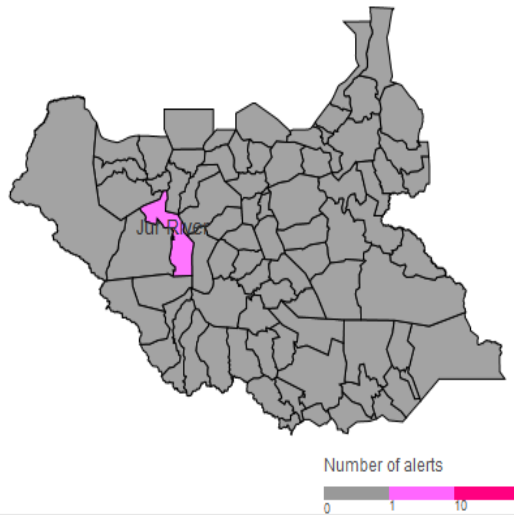
Map 2c | Measles (W38 2019)



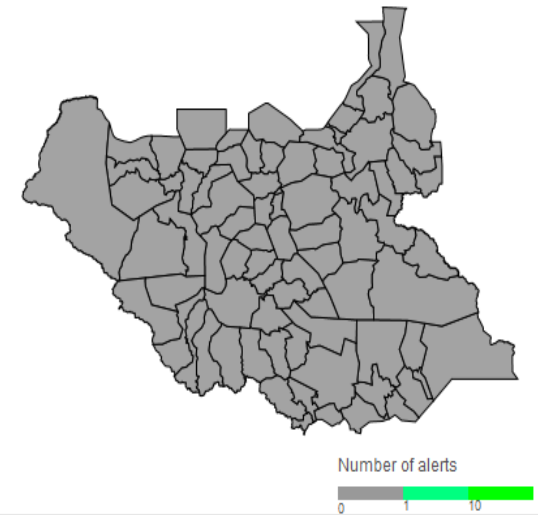
Map 2d | Cholera (W38 2019)



Map 2e | Guinea Worm (W38 2019)



Map 2f | Event-based surveillance (W38 2019)



Alert by disease and Hubs in W38, 2019 [A total of 74 event specific alerts generated by Hubs]

Hubs/Former States	ARI	Acute Watery Diarrhea	Bloody Diarrhea	AFP	Guinea Worm	Malaria	Measles	Total Alerts
Bor	1			1			2	4
Kwajok		1						1
Torit	3	2	2					7
Bentiu	2	1	1				2	6
Yambio	3	4	1			9	1	18
Juba	3	2				1	4	10
Aweil	1	1				3	2	7
Rumbek	3	4	6				1	14
Wau	1	1	1		1		3	7
Malakal								0
Total Grand	17	16	11	1		13	15	74

- ARI (17) ; 5 are under monitoring, 9 are discarded and 3 are pending verification.
- AWD (16) ; 3 are under monitoring,10 discarded and 3are pending verification.
- Malaria (13) ; 4 are under monitoring,9 discarded and 2 pending verification.
- AFP (01) ; was discarded.
- Measles (15) ; 4 are in monitoring stage, 9 discarded and 2 pending verification.
- Guinea worm (01) ; discarded
- ABD (11) ; 7 discarded, 3 under monitoring and 1 pending verification.

SUSPECTED OUTBREAKS IN 2019

Major suspected outbreaks in South Sudan in
2019

Suspect case description

- On 25th September a 20 years old patient presented to Nimule POE with fever, muscle pain, sore throat, runny nose and headache which initially started on 23rd September 2019.

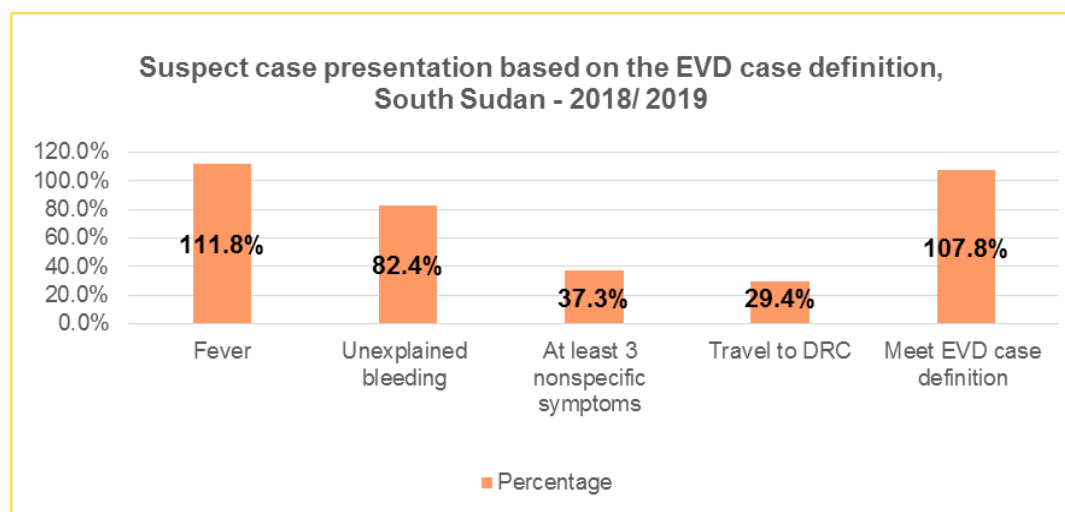
Response actions

- Nimule POE screeners called CHD
- RRT was deployed, sample was not collected because the alert was discarded; did not fit the case definition.

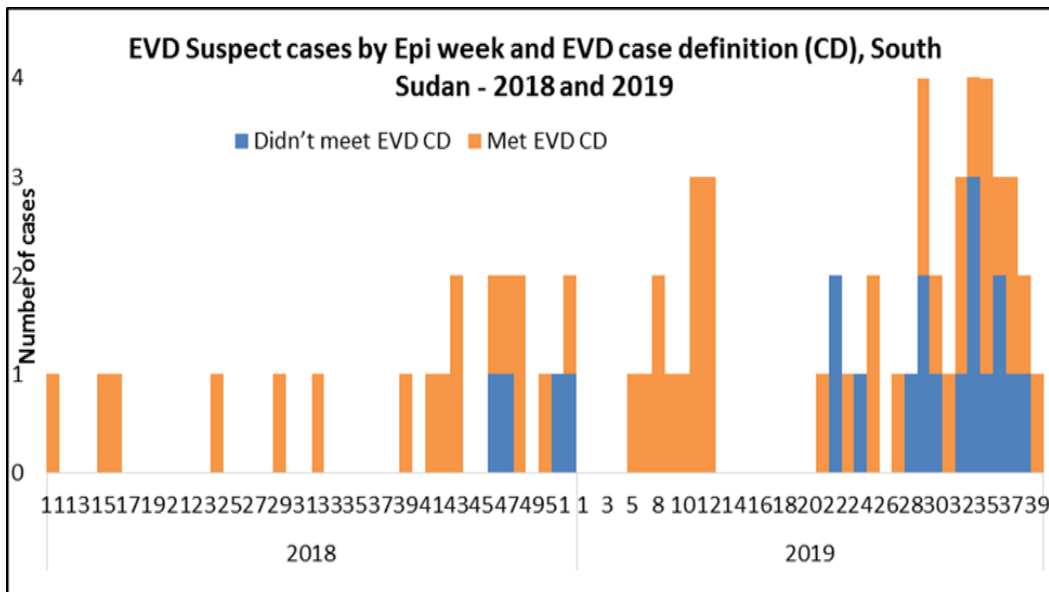
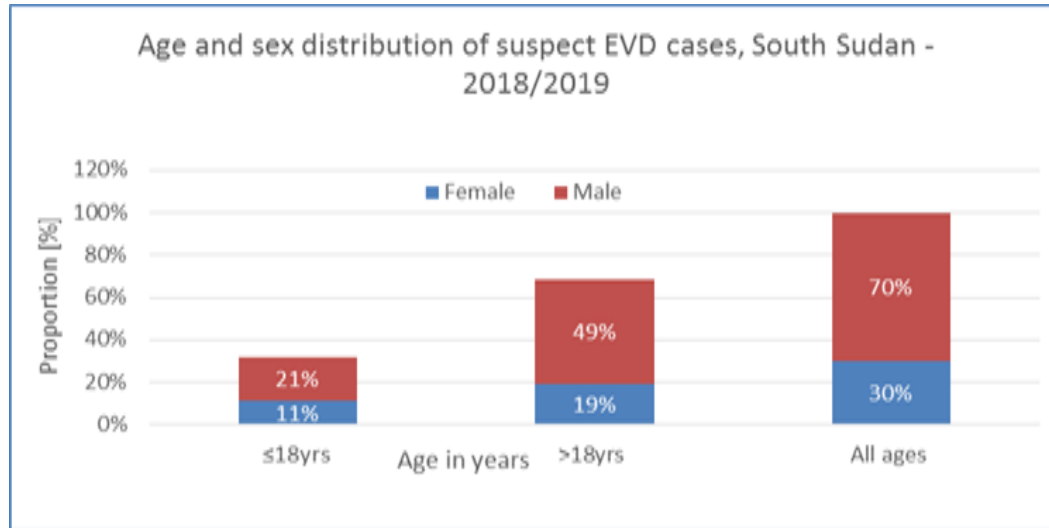
EVD Suspect cases in South Sudan 2018 and 2019

- Since August 2018, at least 67 suspect EVD cases have been reported
- Most 46 (68,6%) have been reported in 2019
- 57 (85,0%) met the EVD case definition – with fever (111,8%) and unexplained bleeding (82,4%) being the most frequent symptoms
- Most of the suspect EVD cases have been reported by health workers at health facility level
- Three suspect EVD cases were reported from screening points

Source of information	Met the EVD case definition		Total cases
	No	Yes	
2018	3	17	20
Community		5	5
Health Worker	3	11	14
Screening point			
2019	9	39	46
Community		6	6
Health Worker	6	21	27
MSF Swiss		1	1
PHO	1		1
Red Cross		1	1
Screening point		3	3
Surveillance officer	2	3	3
UNHCR Focal Person		1	1
6666		3	3
Yirol Hospital		1	1
Total cases	12	57	67



EVD Suspect cases in South Sudan 2018 and 2019



- Most of the suspect EVD cases have been reported in adults 18 years and above (49%)
- Similarly, most suspect EVD cases have been reported in males (70%)
- The distribution suspect EVD cases in both children <18years and adults ≥18yrs is skewed towards the males
- The number of suspect EVD cases reported per week range from 0-4 cases
- The following map shows the distribution of suspect EVD cases by county

ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

Brief epidemiological description and public health response for active outbreaks and public health events

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	Wau County and PoC-AA	28/1/2019	1	454 (0.002)	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	4	83 (0.048)	Yes	No	Yes	Yes
Measles	Pibor	17/01/2019	31	1972 (0.015)	yes	No	yes	N/A
Measles	Bentiu PoC	24/04/2019	7	98 (0.07)	Yes	Yes	Yes	N/A
Rubella	Yirol West	06/08/2018	4	19(0.21)	Yes	No	Yes	N/A
Measles	Tonj South	30/07/2019	2	41(0.048)	Yes	No	Yes	N/A
Measles	Jur River	06/02/2019	1	337(0.002)	Yes	No	Yes	N/A

● Measles outbreaks confirmed in 2019

- **16 counties** – Pibor; Abyei; Mayom; Gogrial West; Aweil South; Melut; Gogrial East; Juba; Tonj North; Aweil West; Aweil East; Renk; Wau; Tonj North; Jur River; and Yambio
- **4 PoC sites** – Wau PoC AA; Bentiu PoC; Malakal PoC; & Juba PoC

● New confirmed measles outbreaks pending response

- Yambio
- Tonj South
- Jur River
- Pibor – *Labarab and Maruwa*

Measles Outbreak situation & response by county as of week 38, 2019

No	County	Population	Confirmed cases	Probable cases	Total cases	Cases per 100,000	Total deaths	CFR %	Date first reported	Emergency Campaign	Admin Coverage	Status	Comments
1	Abyei	79,854	9	297	306	383.2	0	0.0%	02-Jan-19	Done	13,335 (88%)	controlled	
2	Mayom	197,510	3	16	19	9.6	0	0.0%	17-Jan-19	Done	56,647 (152%)	controlled	
3	Juba	597,171	12	51	63	10.5	3	4.8%	15-Jan-19	Done	96,180 (99%)	controlled	
4	Gogrial West	388,469	4	152	156	40.2	0	0.0%	02-Jan-19	Done	193,958 (97.2%)	controlled	6m-15yrs targeted
5	Gogrial East	157,422	4	26	30	19.1	1	3.3%	10-Mar-19	Done	56,423 (94.93%)	controlled	
6	Tonj North	249,895	6	14	20	8.0	2	10.0%	02-Apr-19	Done	44,400 (91%)	controlled	
7	Tonj South	131,857	6	41	47	35.6	0	0.0%	30-Jul-19	pending		active	
8	Jur River	192,937	7	54	61	31.6	1	1.6%	03-Feb-19	pending		active	
9	Wau	256,363	13	507	520	202.8	5	1.0%	26-Jan-19	Done	23,018 (85%)	active	
10	Aweil East	489,714	7	15	22	4.5	0	0.0%	23-Feb-19	Done	71,460 (93%)	controlled	
11	Aweil West	258,616	16	32	48	18.6	0	0.0%	04-Apr-19	Done	26477 (97%)	controlled	
12	Aweil South	112,162	4	42	46	41.0	0	0.0%	15-Mar-19	Done	24,261 (116%)	controlled	
13	Melut	323,920	3	6	9	2.8	0	0.0%	15-Mar-19	Done	12,035 (78%)	controlled	
14	Pibor	224,613	8	1964	1972	878.0	9	0.5%	12-Jan-19	Done	13,965 (30%)	controlled	mop up underway
15	Renk	218,083	3	4	7	3.2	0	0.0%	09-Jan-19	Done	7,712 (79.8%)	controlled	
16	Juba PoC	38,500	2	3	5	13.0	0	0.0%	05-Apr-19	Done	74%	controlled	
17	Bentiu PoC	103,424	45	53	98	94.8	1	1.0%	01-Jan-19	Done	19084 (112%)	active	
18	Malakal PoC	24,402	2	0	2	8.2	0	0.0%	11-Apr-19	Done	112%	controlled	
19	Wau PoC	12,959	5	98	103	794.8	0	0.0%	23-Feb-19	Done	85.00%	active	
20	Yambio	231,489	4	12	16	6.9	1	6.3%	05-Sep-19	pending		active	
	Total	4,289,360	163	3,387	3,550	82.8	23	0.6%					

Measles and Rubella Laboratory Test Results, week 39 of 2019

S/N	Reporting Health Facility	Date Specimen collected	Date Specimen Sent to Juba	Date Specimen Received at NPHL	Measles Igm Results
1	BAZUNGUA PHCC/ YAMBIO	9/6/2019	9/6/2019	9/11/2019	+Ve
2	BAZUNGUA PHCC/YAMBIO	9/6/2019	9/6/2019	9/11/2019	+Ve
3	YAMBIO STATE HOSPITAL	9/16/2019	9/16/2019	9/18/2019	+Ve
4	YAMBIO STATE HOSPITAL	9/16/2019	9/16/2019	9/18/2019	-Ve
5	YAMBIO STATE HOSPITAL	9/17/2019	9/17/2019	9/18/2019	-Ve
6	YAMBIO STATE HOSPITAL	9/19/2019	9/19/2019	9/21/2019	+Ve
7	POC MSF HOSPITAL/BENTIUI	9/12/2019	9/9/2019	9/23/2019	+Ve
8	POC MSF HOSPITAL/BENTIUI	9/15/2019	9/13/2019	9/23/2019	+Ve
9	POC MSF HOSPITAL/BENTIUI	9/12/2019	9/14/2019	9/23/2019	+Ve
10	POC MSF HOSPITAL/BENTIUI	9/16/2019	9/15/2019	9/23/2019	+Ve
11	POC MSF HOSPITAL/BENTIUI	9/10/2019	9/5/2019	9/23/2019	+Ve
12	POC MSF HOSPITAL/ BENTIUI	9/12/2019	9/15/2019	9/23/2019	+Ve
13	POC MSF HOSPITAL/ BENTIUI	9/17/2019	9/16/2019	9/23/2019	+Ve
14	POC MSF HOSPITAL/ BENTIUI	9/14/2019	9/12/2019	9/23/2019	+Ve
15	POC MSF HOSPITAL/ BENTIUI	9/11/2019	9/10/2019	9/23/2019	+Ve
16	POC MSF HOSPITAL/ BENTIUI	9/19/2019	9/19/2019	9/23/2019	+Ve
17	POC MSF HOSPITAL/ BENTIUI	9/15/2019	9/7/2019	9/23/2019	+Ve
18	POC MSF HOSPITAL/ BENTIUI	9/6/2019	9/5/2019	9/25/2019	-Ve
19	POC MSF HOSPITAL/ BENTIUI	9/20/2019	9/19/2019	9/25/2019	+Ve
20	POC MSF HOSPITAL/ BENTIUI	9/23/2019	9/22/2019	9/25/2019	-Ve
21	MUNIKI PHCC/ JUBA	9/17/2019	9/19/2019	9/25/2019	-Ve
22	MUNIKI PHCC/ JUBA	9/20/2019	9/20/2019	9/25/2019	+Ve

During the week,

- Six (6) samples from Yambio:
 - Two (2) from Bazungua both tested measles IgM +ve
 - Four (4) from Yambio hospital ; 2 tested measles IgM +ve and 2 were negative
- Fourteen (14) samples from Bentiu PoC; 12 tested measles IgM positive and 2 were negative
- One sample out of 2 samples tested measles IgM positive from Juba .

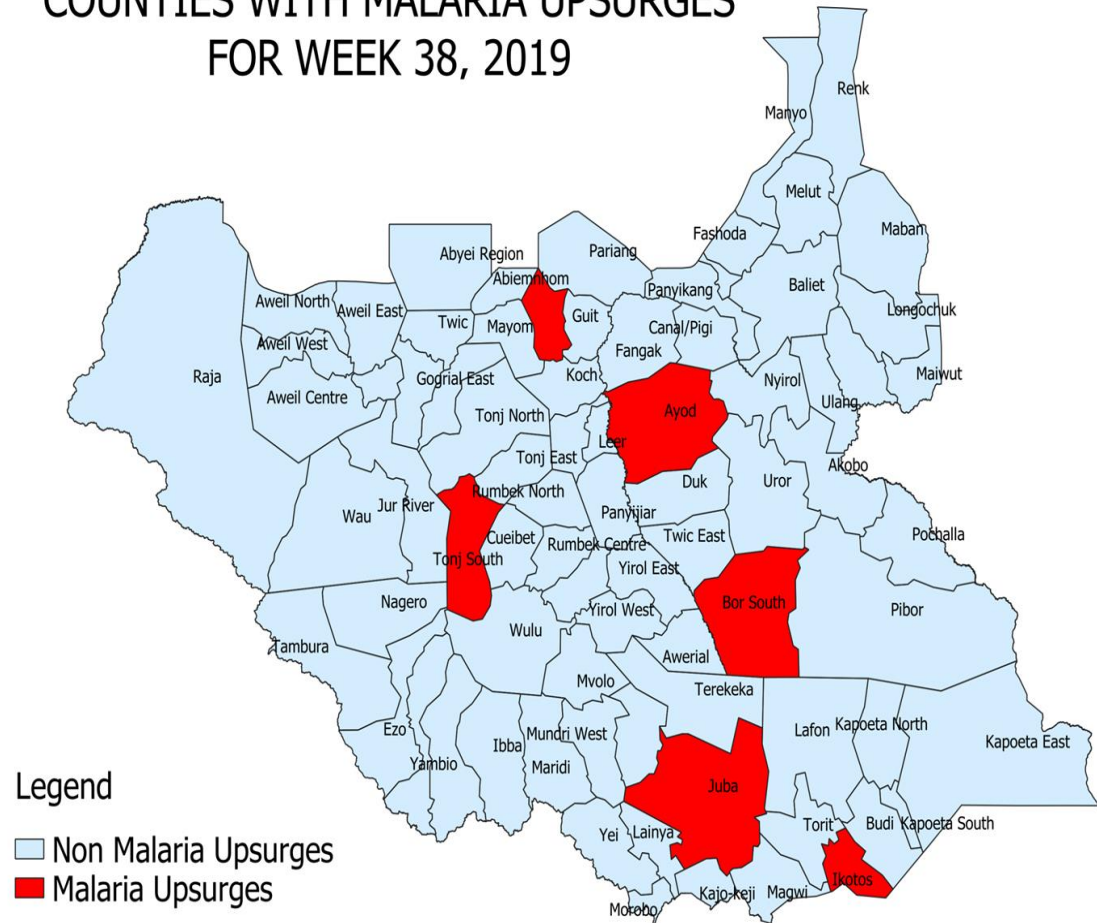
Response | Suspect epidemics; Current Malaria trends 38, 2019

Malaria was the leading cause of morbidity and mortality, accounting for **80.0%** of all morbidities and **68.4%** of all mortalities in week 33, 2019

There are 7 Counties with malaria trends that exceeded the threshold (third quartile of trends for the period 2013-2017) and these include the following:

- I. Juba hub (Juba)
- II. Kwajok hub (Abeyi , Tonj South)
- III. Wau hub (Wau)
- IV. Bentiu hub(Rubkona)
- V. Bor hub (Bor, Ayod , Twic East)
- VI. Torit hub (Ikotos)
- VII. Malakal hub (Luakpiny/Nasir)

COUNTIES WITH MALARIA UPSURGES FOR WEEK 38, 2019



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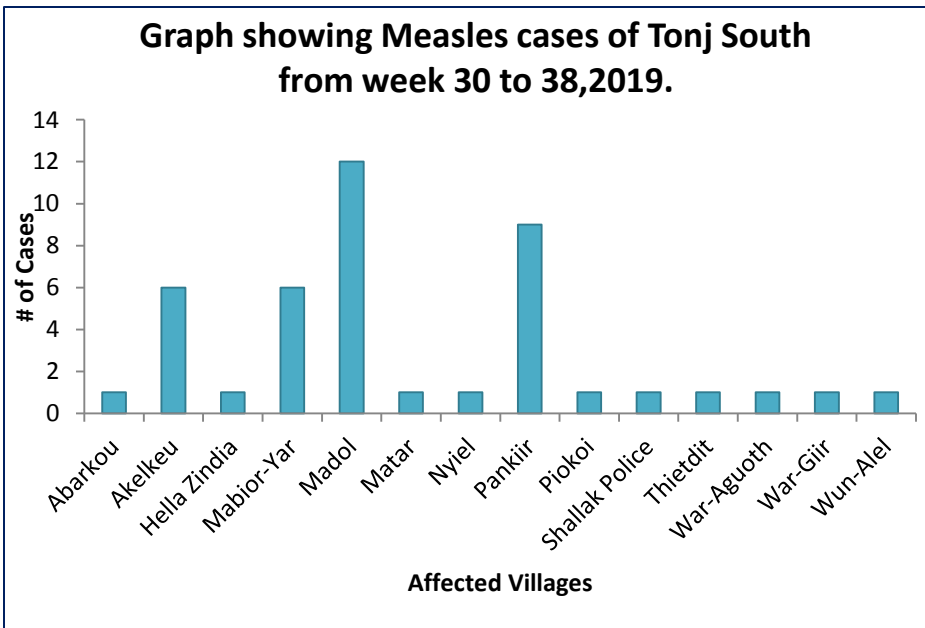
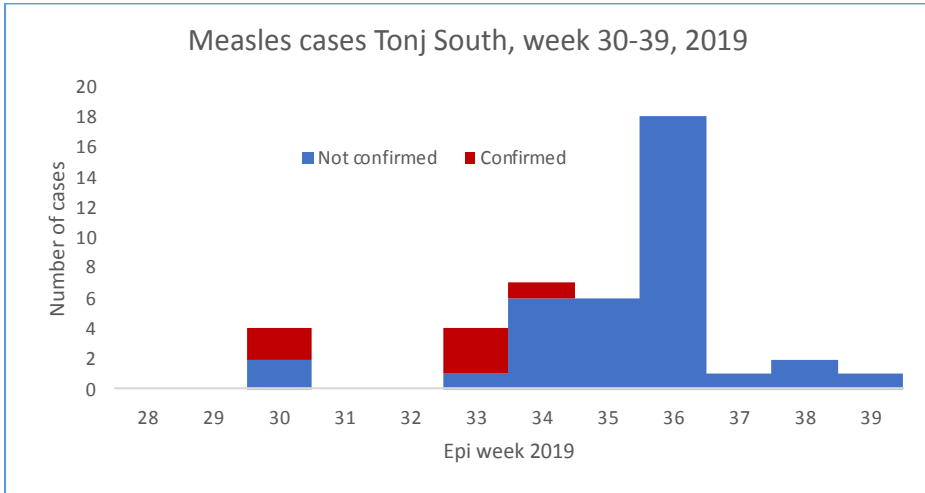
Case series description

- A cluster of six children with measles-like rash, red eyes, chest infection (one with severe pneumonia) were reported on 20 Sep 2019 from Li-bodo, a Yambio town suburb. All children were not vaccinated against measles (routine measles coverage estimated at 42% in the county)
- Active case search resulted in line listing of 16 suspect measles cases (1 death CFR 6.25%) with a total of 6 samples collected
- Four (4) samples tested measles IgM positive

Response actions

- New outbreak confirmed; reactive vaccination microplanning initiated
- Active case search and line listing underway
- Supportive treatment with Vitamin A; Tetracycline eye ointment, and antibiotics for the chest infections and pneumonia were initiated

Measles cases in Tonj South County



Descriptive Epidemiology:

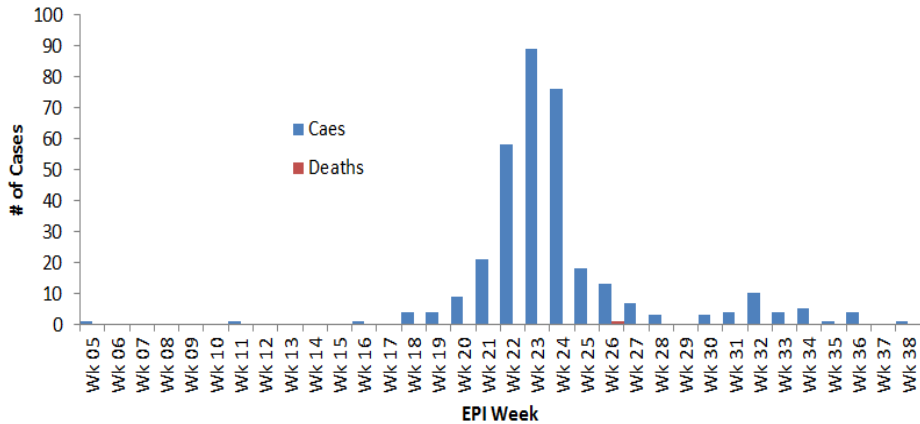
- Suspected measles case was initially detected at Tonj hospital in a 10-month-old female on 30th July 2019
- A total of eight (8) samples collected (6 measles IgM positive & 1 rubella IgM positive) thus confirming a measles outbreak
- 47 measles cases (0 death) reported since week 30
- Four (4) out of five (5) Payams are affected; with Tonj & Wanhalel Payams being the most affected. Most cases originate from Tonj and Wanhalel payam
- 56% of the cases are less than 5 years of age and 31 % of the cases reported have not received measles vaccine

Response and Recommendations:

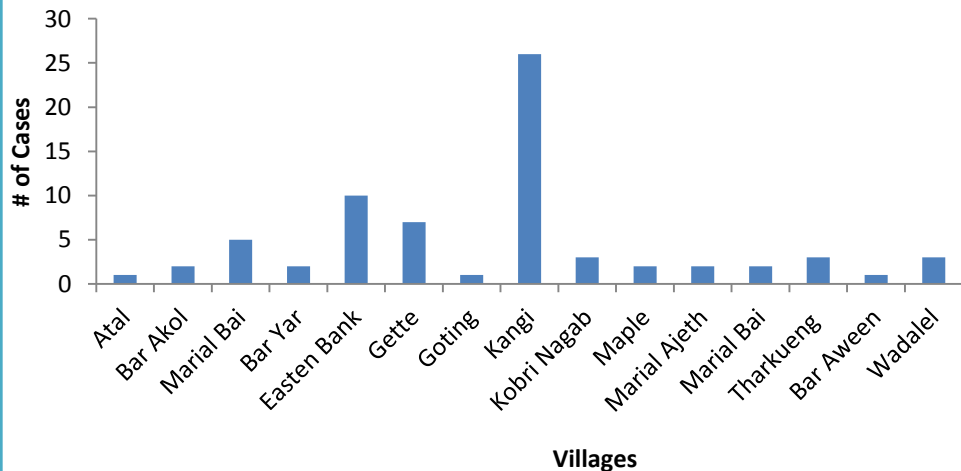
- Following the confirmation of a measles outbreak in the county, a reactive vaccination microplan targeting 26,244 children 6-59 months in five payams of Jak; Thiet; Manyang Ngok; Tonj; and Wanh Alel has been developed.
- *The other interventions include:*
- Intensified surveillance and line-listing of new measles cases
- Treating suspect cases with oral rehydration, vitamin A, and antibiotics for suprainfections
- Social mobilization and health education on measles case symptoms; prompt health care seeking; and routine immunization.

Measles cases in Jur River

Epi Curve showing Measles cases of Jur River from week 05 to 38, 2019.



Graph showing measles in Jur River by Villages from week 05 to 38, 2019.



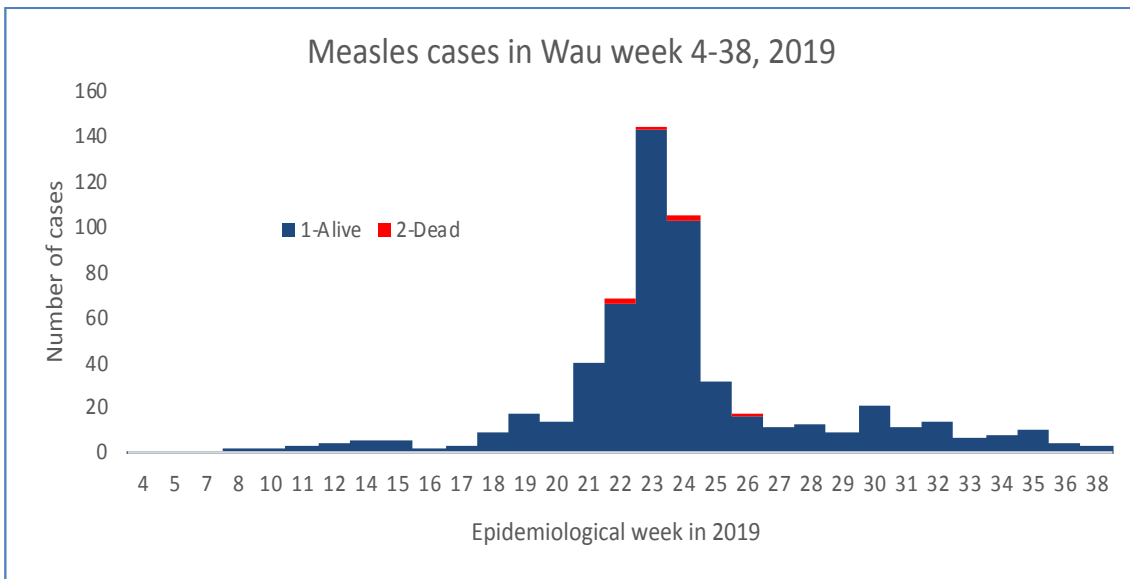
Descriptive Epidemiology:

- Initial cases were reported on 6 Feb from Marialbai PHCC from Bar Aween village
- Total of 337 measles cases (1 death) reported since week 5 of 2019
- 7 measles IgM positive cases recorded since outbreak onset
- Most of the cases have been reported from Kingi; Eastern Bank and Gette
- 69 % of the cases reported are not vaccinated against measles

Response and Recommendations:

- Following the confirmation of a measles outbreak in the county, a reactive vaccination microplan targeting 60,435 children 6-59 months in five payams of Rocroc; Kuajina; Udici; Kangi; and Marial Bai/ Wau Bai has been developed.
- The other interventions include:*
- Intensified surveillance and line-listing of new measles cases
- Treating suspect cases with oral rehydration, vitamin A, and antibiotics for suprainfections
- Social mobilization and health education on measles case symptoms; prompt health care seeking; and routine immunization.

Confirmed Measles Outbreak in Wau County and Wau POCAA



Age (yrs)	Alive	Died	Total cases	Percent age	Cum.%
<1yr	116	4	120	23%	23%
1-4yrs	267	2	269	52%	75%
5-9yrs	71	0	71	14%	88%
10-14yrs	33	0	33	6%	95%
15+yrs	27	0	27	5%	100%
Total cases	514	6	520	100%	

Introduction

- In week 19, 2019 a measles outbreak was confirmed in Wau county & Wau POC AA.
- Of the 46 samples tested in 2019; a total of 13 tested measles IgM positive while 15 tested rubella IgM positive
- The outbreak of measles was confirmed in May 2019.

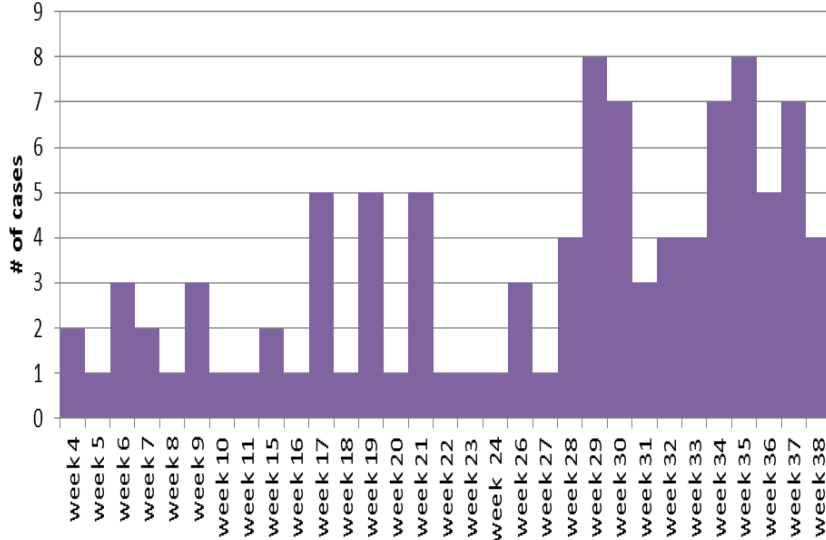
Descriptive Epidemiology:

- Since week 4 of 2019; a total of 520 cases including 6 deaths (CFR 1.2%) have been reported from Wau County. The outbreak peaked in week 22, 23 and 24 and later came down to 2 cases in week 33, 2019
- 75% of the cases are under the age of 5years with 85 % of the cases not vaccinated against measles.
- **Response and recommendations**
- IOM, UNICEF and partners conducted a 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. PCE by MoH and WHO showed a coverage of 89.15%.
- Vaccination post for measles has been fixed at the entrance of the POC-AA is continuing with vaccination for the new arrivals and children who missed vaccination during the reactive campaign.

Response | Confirmed epidemics

Confirmed Measles and Rubella outbreak in Bentiu PoC

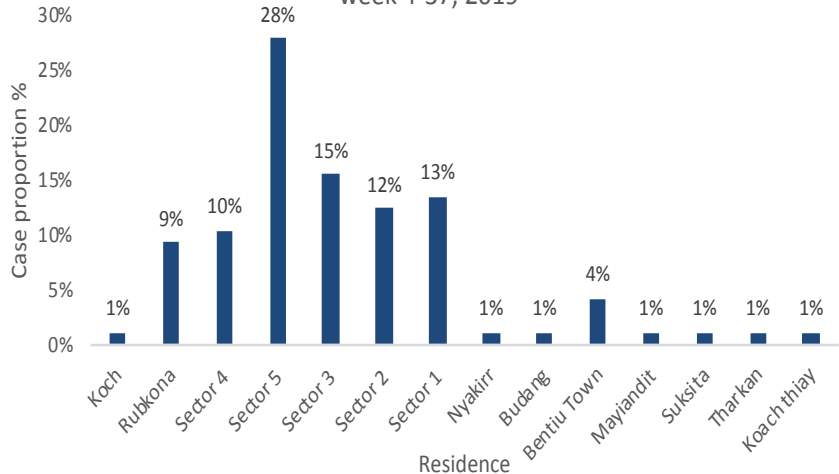
Measles cases in Bentiu POC from week 4-38, 2019



Epidemiological description

- Bentiu PoC has been reporting suspected measles/rubella cases since week 4 of 2019. 04 new cases reported in week 38, 2019
- At least 98 measles cases including 1 death (CFR 1.03%) reported since then.
- Cumulatively, 36 tested cases have tested measles IgM positive while 15 tested rubella IgM positive. During the week; nine (9) measles IgM positive and one (1) rubella IgM positive cases were reported
- Majority 69 (71%) of the cases are children <5 years.
- 72% are under 5 yrs old, 27% are 5 yrs old and above, 2% are balnk
- The majority of the cases 443 (85%) have not received measles vaccine
- Cases have been reported from inside and outside the PoC with most of the cases originating from the PoC (most cases from sector 5 but generally all the sectors are affected).

Measles cases by Residence in Bentiu PoC and surroundings, week 4-37, 2019



Response actions

- IOM completed a reactive campaign in Bentiu POC on 31 May 2019. with 21,285 children 6-59 months (126%) receiving measles vaccination
- PCE was done by MoH & WHO, coverage was 74.6%.
- Bentiu has continued to experience an upsurge of returnee refugees many of whom have ended up in Bentiu PoC. Hence the increased movements and congestion have precipitated and facilitated the current transmission of measles in Bentiu PoC.
- Consequently, measles vaccination posts have been mounted at bus stops and at the entrance to the PoC to ensure that all children under 15 years that are arriving in Bentiu receive measles vaccine.

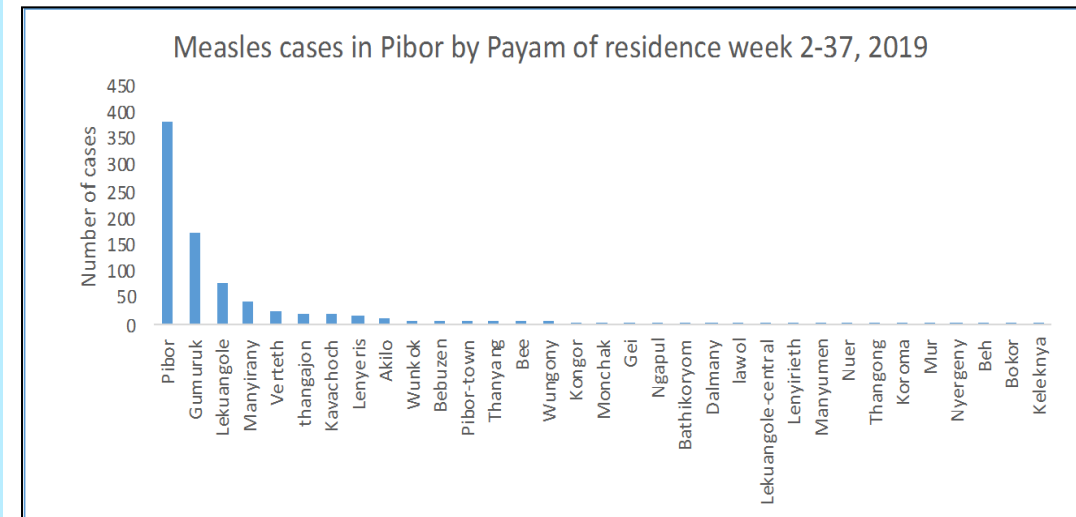
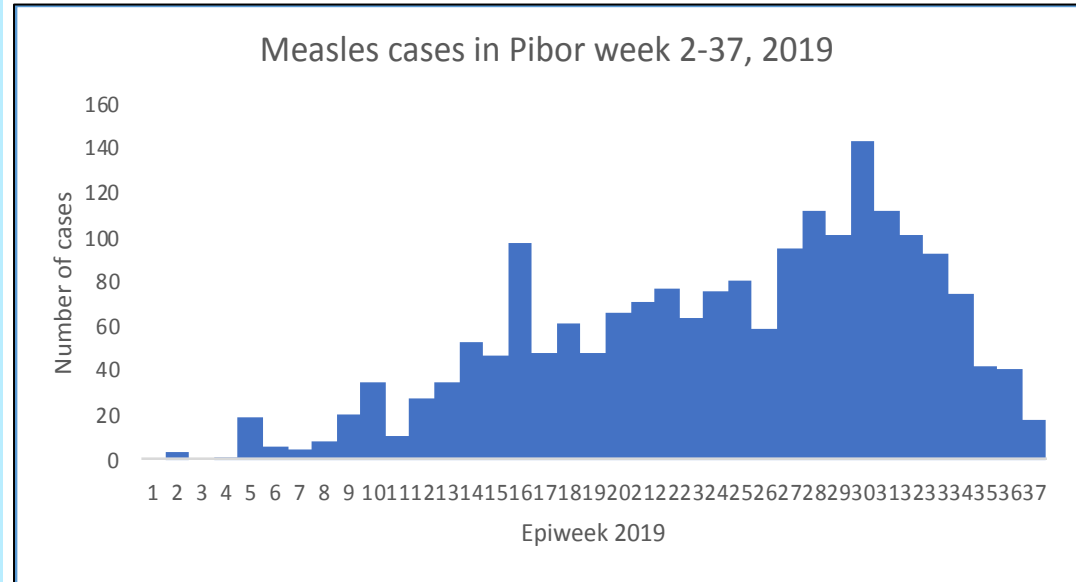
Measles in Pibor County

Background and descriptive epidemiology

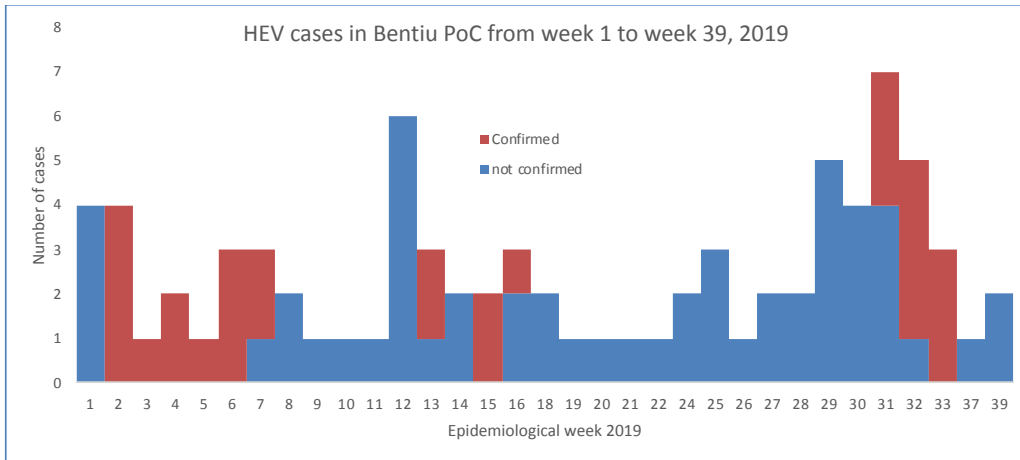
- Measles transmission has persisted in Pibor County despite of the vaccination campaign conducted in February and March 2019.
- A total of 1972 measles cases (9 deaths – [CFR 0.46%]) reported since week 2 of 2019
- A total of eight (8) measles IgM positive cases recorded since outbreak onset
- 70% of the cases are less than 5 years of age
- 33 % of the cases reported are not vaccinated against measles
- Most of the cases shave been reported from Pibor; Gumruk; Lekuangole; Verteth. In addition, cases were recently confirmed in Labarab & Marua.

Response actions:

- Due to persistent transmission; MedAir and LiveWell implemented a measles campaign in Pibor; Lekuangole; Verteth; Gumuruk to interrupt transmission.
- The campaign started on 1st September 2019, targeting 27,122 (6-59 months and 5-15 years combined).
- LiveWell and WHO eMMT are planning to conduct the vaccination campaign targeting at least 3,200 children aged 6 – 59 months in Marua and Labarab



Hepatitis E, Bentiu PoC



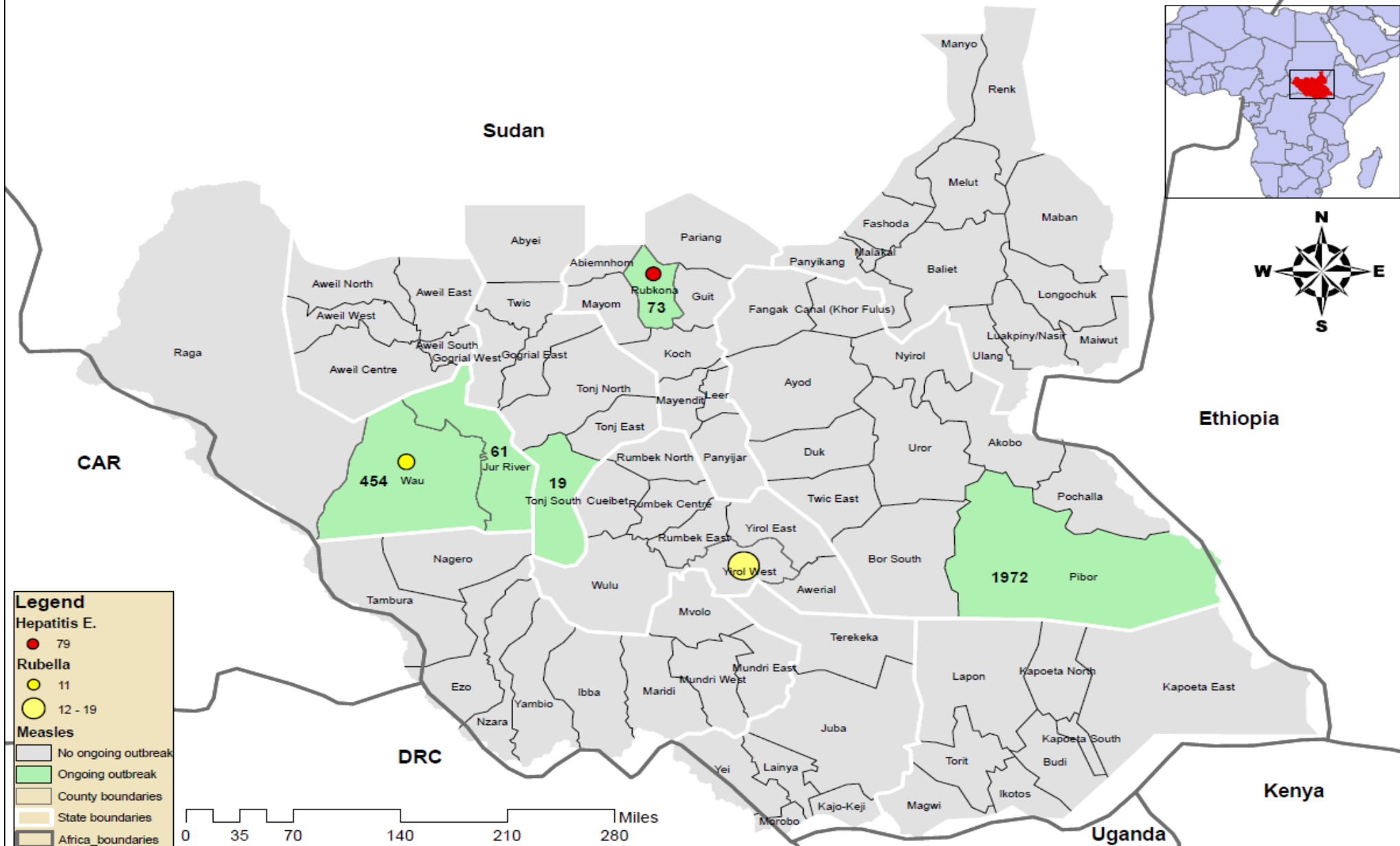
Recommended actions

- Supportive case management guided by the HEV protocol is ongoing
- Social mobilization to raise awareness on modes of transmission, symptoms and where to seek for care
- Case identification and follow up in the communities is ongoing
- The other WASH interventions entail provision of safe water and water quality surveillance along the water chain

Descriptive epidemiology

- The persistent transmission of HEV in Bentiu PoC continues with 80 cases since beginning of 2019
- Fifty-six (56) cases confirmed by PCR testing
- There were 3 cases reported in week 33; & one case in week 37, 2019.
- All the cases were managed as outpatient cases except for seven cases who were admitted
- Two deaths one on 12th, April 2019 and the second on 11th July 2019
- Over half (52%) out of 80 cases are male.
- Age group less than 15 years had the most cases with 55 (69%) cases.
- Of the 39 female cases, 8 (20.51%) 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
- Up to week 37, 2019; there were 80 cases of HEV in Bentiu PoC including 2 deaths (CFR 2.5%)

The Ongoing epidemics in south Sudan, 2019.



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Response | Summary of major Controlled outbreaks in 2019 (1)

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

Response | Summary of major Controlled outbreaks in 2019 (2)

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
Hepatitis E	Lankein	28/2/2019	0	10 (0.1)	yes	No	yes	N/A
Measles	Juba & PoC	15/01/2019	0	68 (0)	Yes	Yes	Yes	N/A
Rubella	Bentiu Poc	-	0	51 (0)	yes	No	yes	N/A
Measles	Tonj North	2/04/2019	0	20 (0)	Yes	Yes	Yes	N/A
Measles	Aweil West	4/04/2019	0	48 (0)	Yes	Yes	Yes	N/A
Measles	Aweil East	13/05/2019	2	19 (0.14)	Yes	Yes	Yes	N/A
Measles	Renk County	28/2/2019	0	7(0)	yes	Yes	Yes	N/A

EBOLA VIRUS DISEASE[EVD] PREPAREDNESS IN SOUTH SUDAN

Brief on the Ebola situation in DR Congo and updates on EVD preparedness in South Sudan

Ebola update DRC 24th September 2019

Current situation

- Currently as of 24th September, 2019
- 3168 Cases [3168 confirmed & 111 probable]
- 2096 Deaths [2002 confirmed & 94 probable]

Response update

- 1 August 2019 marked one year since the Government of the Democratic Republic of the Congo declared the Ebola outbreak

Affected health zones

- In the 21 days from 2 to 22 September 2019, 45 health areas in 13 health zones reported new cases. During this period, a total of 129 confirmed cases were reported, with the majority coming from the health zones of Mambasa (25%, n=32 cases), Mandima (19%, n=25 cases), Kalunguta (17%, n=22 cases) and Beni (11%, n=14 cases).

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>

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

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Notes

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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.

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

