

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin W24 (June 10 - June 16)



Major Epidemiological Developments W24, 2019

- In week 24, Completeness for IDSR reporting at county level was 65% and Completeness for EWARS reporting from IDP sites was 87% .

- A total of 105 alerts were reported, of which 70% have been verified. 1 alert was risk assessed and 1 required a response.

- Acute watery diarrhea (24), Malaria (22) and Bloody diarrhea (16) were the top common alerts generated through the EWARS in week 24, 2019.

- Cholera Alert in Juba POC3 of a 28 year old female who later on improved and no sample was taken. Active case search was initiated in the PoC plus community awareness as the situation is continued to be monitored

- EVD alert on the 25th of June was reported through the hotline of a 3 year old child with fever and vomiting blood. The alert was verified and later discarded on the same date.

- Considering the confirmed EVD outbreak in North Kivu and recently Uganda, the South Sudan EVD contingency plan has been updated and implemented to mitigate the risk of EVD importation and enhance readiness capacities.

- Since week 12 of 2019, a total of 82 ILI/SARI samples have been collected and tested at Uganda Virus Research Institute (UVRI) with 31 being negative; two (2) positive for Influenza B (Victoria); and seven (7) positive for Influenza A (H3), test result is pending for 42 samples.

SURVEILLANCE PERFORMANCE

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

Table 1 | IDSR surveillance performance indicators by county (W24 2019)

Hub	Reporting		Performance	
	# counties	# reports received / # reports	Completeness	Timeliness
Aweil	5	1	20%	20%
Bentiu	9	6	67%	67%
Bor	11	8	73%	73%
Juba	6	2	33%	17%
Kuajok	7	2	29%	14%
Malakal	13	11	85%	77%
Rumbek	8	6	75%	25%
Torit	8	6	75%	75%
Wau	3	0	0%	0%
Yambio	10	10	100%	100%
South Sudan	80	52	65%	56%

Table 2 | Summary of key IDSR surveillance indicators

W24	Cumulative (2019)	
80	-	Number of counties
65%	73%	Completeness
56%	57%	Timeliness

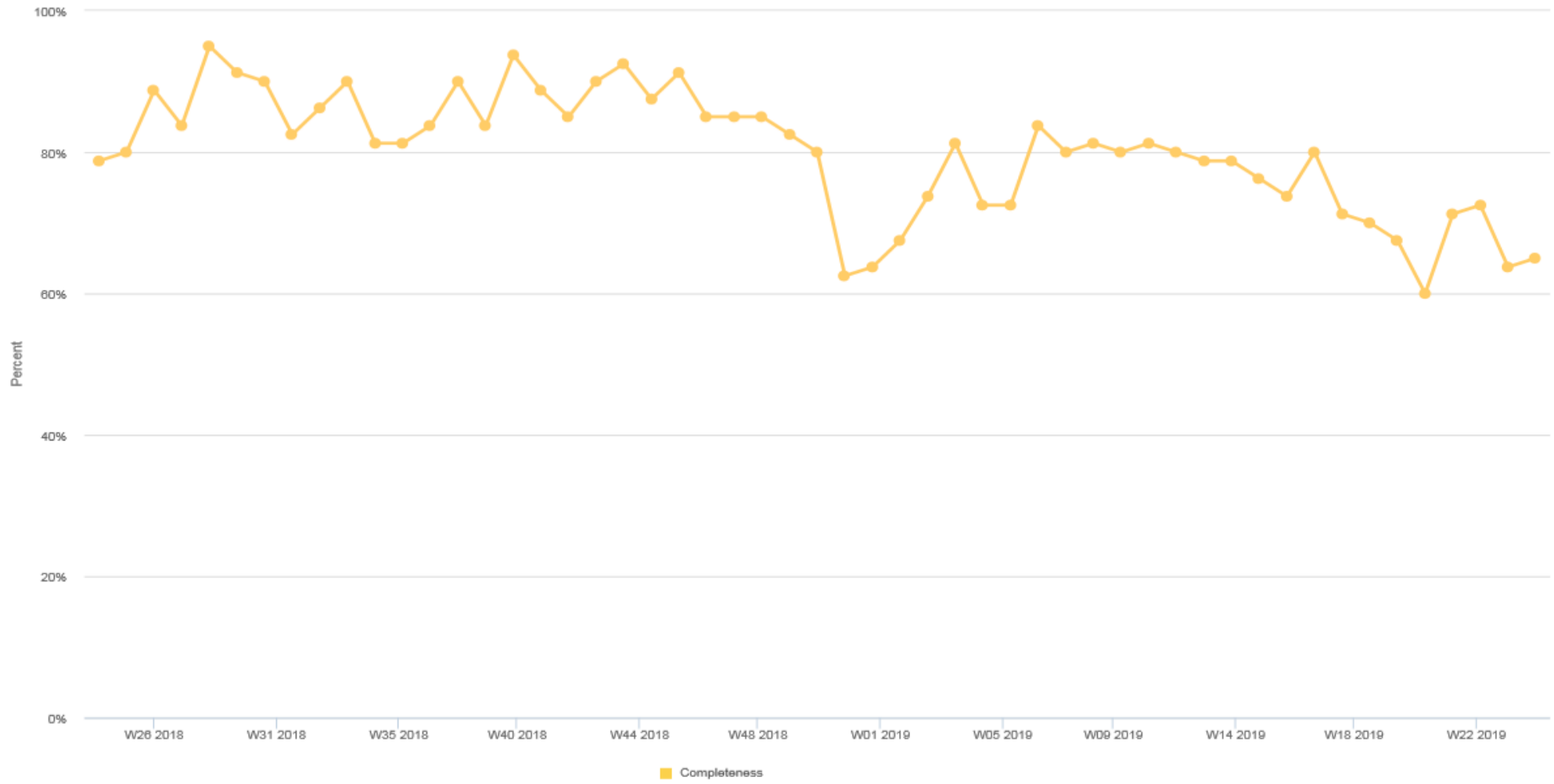
Table 3 | IDSR report submissions

W24	Cumulative (2019)	
52	1,462	total submissions
5	0	submissions by mobile
47	0	submissions by web

- In this week 24 the Completeness is 65% and the Timeliness is 56% while the cumulative completeness and timeliness was 73% and 57% respectively for 2019.
- The rolling out of the mobile phones for reporting to the health facilities is ongoing, this has affected the completeness of the surveillance system as the reports from the health facilities are captured separately.

Surveillance | Trend in IDSR completeness

Figure 1 | Trend in IDSR completeness over time

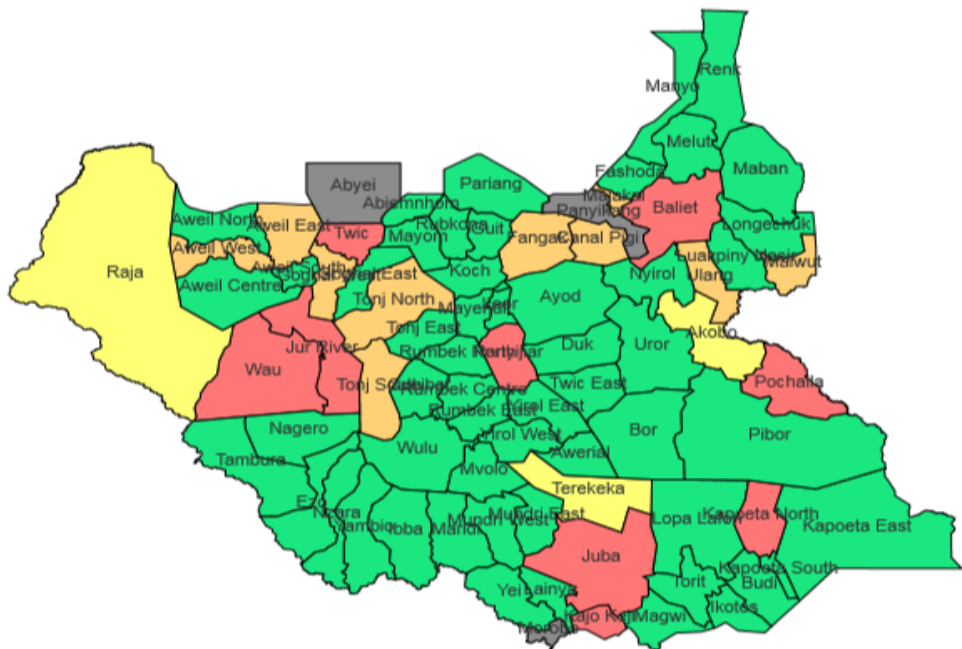
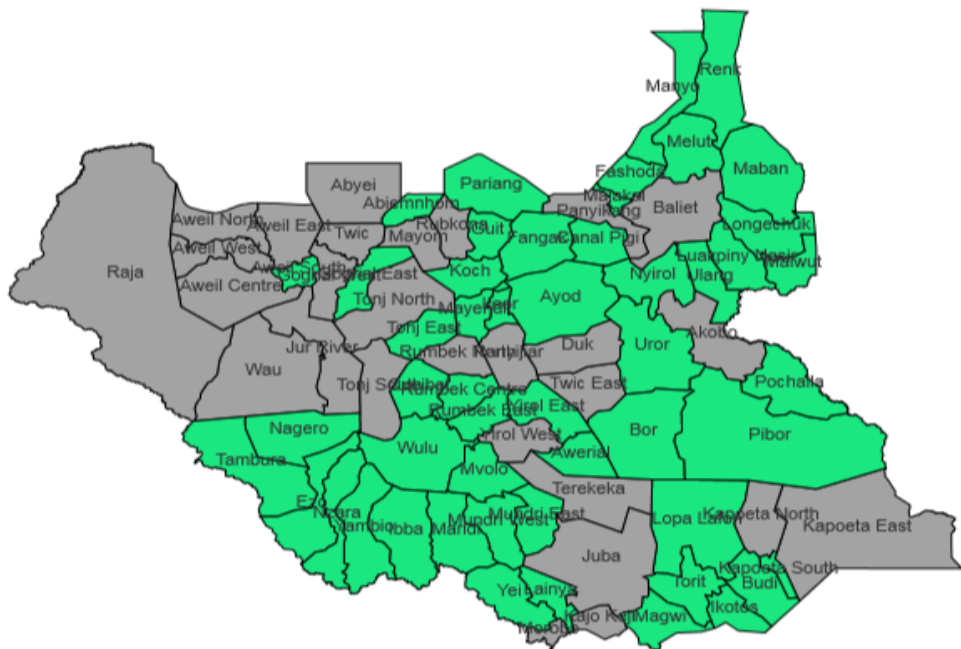


The graph shows completeness for the weekly IDSR reporting at the county level over time from 2018 to week 24, 2019.

Surveillance | Maps of IDSR completeness by county

Map 1a | Map of IDSR completeness by county (W24 2019)

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



- Counties that submitted their IDSR reports in week 24, 2019 are shown in green in map 1a.
- Counties that did not submit their IDSR reports in week 24, 2019 are shown in grey in map 1a.

Surveillance | EWARS surveillance indicators

Table 4 | EWARS surveillance performance indicators by partner (W24 2019)

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	2	2	100%	100%
GOAL	2	2	100%	100%
HAA	2	2	100%	100%
HFO	2	2	100%	100%
HLSS	1	0	0%	0%
IMA	7	7	100%	100%
IMC	5	5	100%	100%
IOM	11	11	100%	100%
IRC	1	1	100%	100%
LIVEWELL	2	2	100%	100%
Medair	2	2	100%	100%
MSF-E	2	1	50%	50%
MSF-H	3	1	33%	33%
RHS	2	2	100%	100%
SMC	7	6	86%	86%
TADO	3	0	0%	0%
TRI-SS	2	2	100%	100%
UNIDO	1	1	100%	100%
UNKEA	2	2	100%	100%
World Relief	1	1	100%	100%
Total	68	56	82%	82%

Table 5 | Summary of key EWARS surveillance indicators

W24	Cumulative (2019)	
68	-	Number of EWARS reporting sites
82%	70%	Completeness
82%	65%	Timeliness

Table 6 | EWARS report submissions

W24	Cumulative (2019)	
56	1,180	total submissions
0	29	submissions by mobile
56	1151	submissions by web

- Completeness was 82% and timeliness was 82% for EWARS reporting by partners for week 24, while the cumulative completeness and timeliness were 70% and 65% respectively for 2019

EVENT-BASED SURVEILLANCE

Alert management including detection;
reporting; verification; risk assessment; & risk
characterization

Alert | Alert performance indicators

Table 7 | Alert performance indicators by Hub

Hub	W24		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	11	36%	93	73%
Bentiu	3	100%	123	87%
Bor	6	17%	97	37%
Juba	7	100%	153	56%
Kuajok	5	60%	112	26%
Malakal	3	33%	91	58%
Rumbek	6	83%	336	77%
Torit	23	48%	214	65%
Wau	9	89%	128	63%
Yambio	30	100%	243	81%
South Sudan	103	71%	1590	66%

Table 8 Summary of key alert indicators

W24	Cumulative (2019)	
103	1590	Total alerts raised
71%	66%	% verified
0%	0%	% auto-discarded
1%	5%	% risk assessed
1%	4%	% requiring a response

- A total of 103 alerts received in week 24 out of which 71% were verified. 1% were risk assessed and 1% required a response.

Table 9 | Alert performance indicators by event

Event	W24		Cumulative (2019)	
	# alerts	% Verif.	# alerts	% Verif.
Indicator-based surveillance				
Malaria	21	67%	225	65%
AWD	23	78%	487	66%
Bloody Diarr.	16	44%	309	65%
Measles	14	86%	358	66%
Meningitis	0	0%	0	0%
Cholera	2	100%	43	81%
Yellow Fever	0	0%	16	94%
Guinea Worm	1	0%	41	63%
AFP	0	0%	99	68%
VHF	1	100%	15	73%
Neo. tetanus	1	100%	21	62%
Event-based surveillance				
EBS total	2	100%	29	79%

Table 10 | Event risk assessment

W24	Cumulative (2019)	
0	20	Low risk
26	26	Medium risk
0	30	High risk
1	7	Very high risk

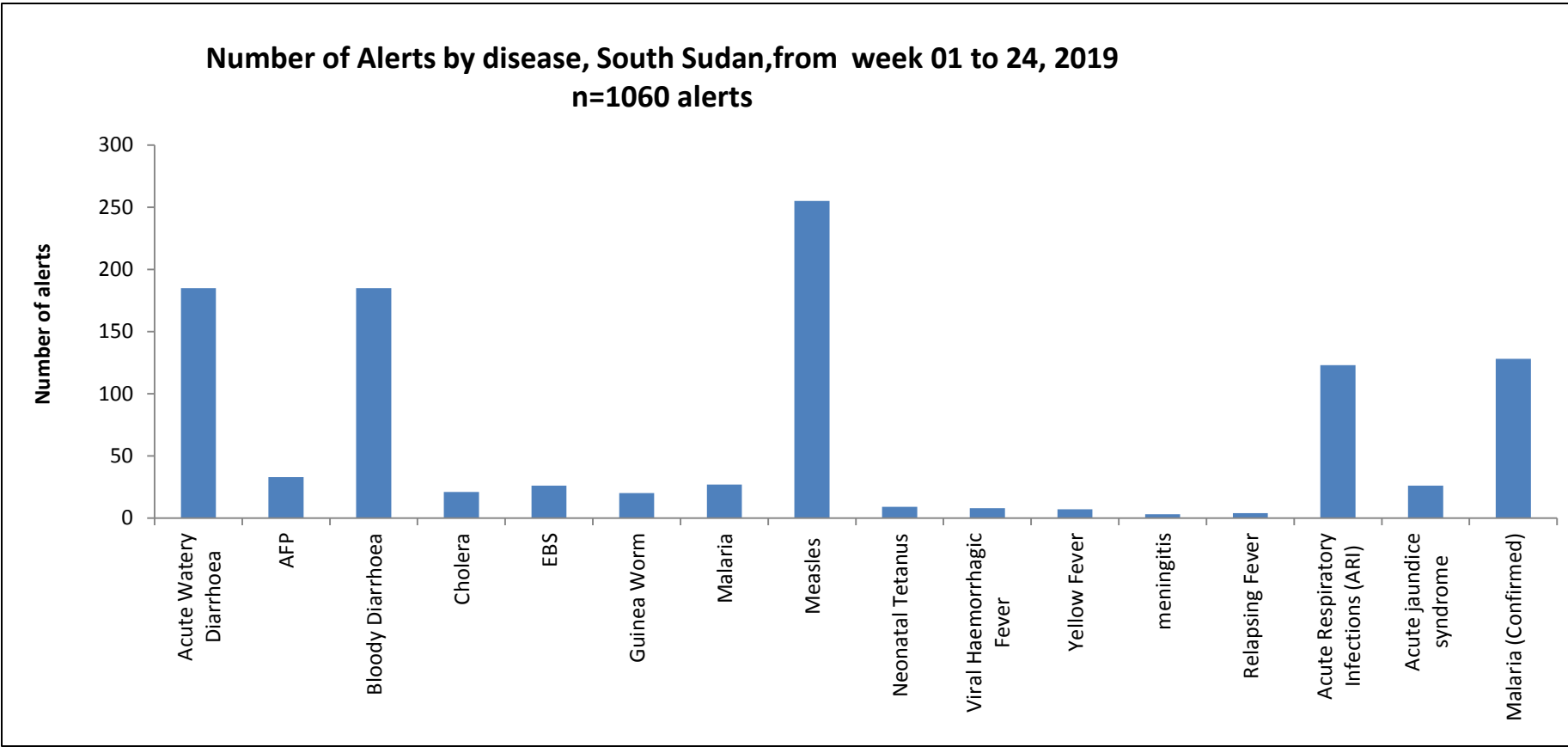
- Acute watery diarrhea (23), Malaria (21) and Bloody diarrhea (16) were the top common alerts generated through the EWARS in week 24, 2019.

Alert by disease and Hubs in W24, 2019 [A total of 96 event specific alerts generated by Hubs]

Hubs	AJS	ARI	Viral Haemorrhagic Fever	Acute Watery Diarrhoea	Bloody Diarrhoea	AFP	Guinea Worm	Yellow Fever	EBS	Cholera	Malaria	Meningitis	Neonatal Tetanus	Measles	Total Alerts
Bor- Hub	1			1	1						1			2	6
Kuajok Hub				1	1									3	5
Torit Hub		4		4	4				2		6				20
Bentieu Hub	1									1				1	3
Yambio Hub		11	1	8	3					1	6				30
Juba Hub				3										2	5
Aweil Hub		3		2	2		1				2			1	11
Rumbek Hub		2		1	2						1				6
Wau Hub				1										6	7
Malakal Hub					2						1				3
Total Grand	2	20	1	21	15	0	1	0	2	2	17	0	1	14	96

In Week 24, 61% of all the alerts were verified and non of them requires response,

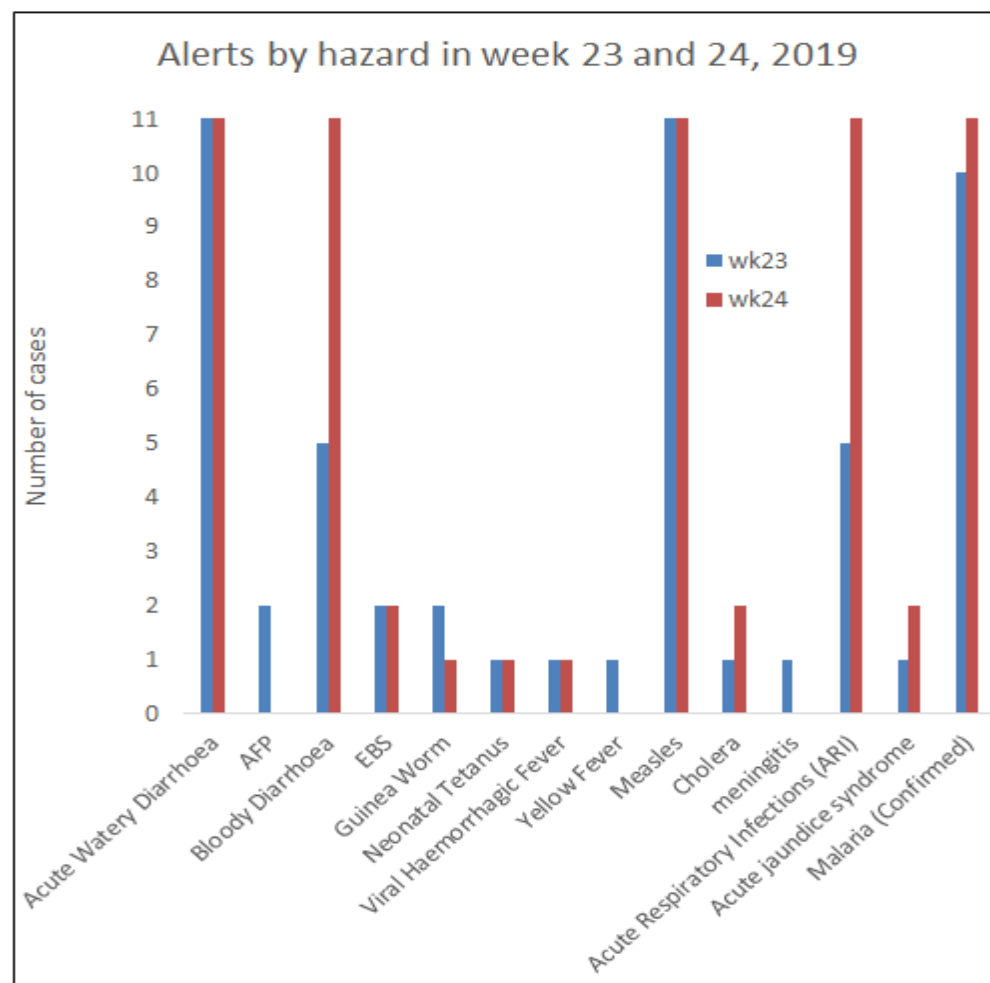
Alerts by disease from week 1 to 24, 2019



The graph shows number of cumulative alerts from week 1 to week 24. Most common alerts generated since the beginning of the year were Measles, Bloody diarrhea, Acute watery diarrhea, Acute respiratory illness and Malaria.

Comparison between alerts received in week 23 and 24, by disease

Row Labels	wk23	wk24	Total alerts
Acute Watery Diarrhoea	12	21	33
AFP	2		2
Bloody Diarrhoea	5	15	20
EBS	2	2	4
Guinea Worm	2	1	3
Neonatal Tetanus	1	1	2
Viral Haemorrhagic Fever	1	1	2
Yellow Fever	1		1
Measles	14	14	28
Cholera	1	2	3
meningitis	1		1
Acute Respiratory Infections (ARI)	5	20	25
Acute jaundice syndrome	1	2	3
Malaria (Confirmed)	10	17	27
Total alerts	58	96	154



No Much difference between week 23 and week 24 alerts. Acute watery diarrhea is the same in week 23 and week 24. More bloody diarrhea alerts in week 24 (15) compared to week 23 (5).

Cumulative alerts by risk assessment stage in 2019

County	OUTCOME	RISK ASSESSED	VERIFICATION	Total Alerts	
Acute Watery Diarrhoea		6	1	178	185
AFP		2		31	33
Bloody Diarrhoea		3	2	180	185
EBS		4		22	26
Guinea Worm				20	20
Neonatal Tetanus				9	9
Viral Haemorrhagic Fever				8	8
Yellow Fever				7	7
Measles		24	5	226	255
Cholera				21	21
Malaria				27	27
meningitis		2		1	3
Relapsing Fever				4	4
Acute Respiratory Infections (ARI)		6	2	115	123
Acute jaundice syndrome		3		23	26
Malaria (Confirmed)		2	1	125	128
Total Alerts		52	11	997	1060

- The table shows the cumulative alerts by risk assessment status in 2019
- Of the 1060 alerts reported in 2019; 997 (93.6%) alerts were verified and 11 (1.03%) underwent risk assessment.

OUTBREAKS IN 2019

Major suspected and confirmed outbreaks in
South Sudan in 2019

Suspected Outbreaks in South Sudan in week 24 and 25

- **Cholera alert in Juba**

A suspected cholera case from Juba POC-3 of a 28 years old female, she presented with frequent watery diarrhoea and was isolated at the CTC and received treatment according to National guidelines. Sample was not collected and the patient improved. Patient was given additional treatment. Active case search and community awareness is ongoing in the camp. The health partner was advise to collect Cholera investigation kit from WHO through Health Cluster

- **EVD alert in Yei**

A call came from Mugo payam in Yei County through a watch officer, of a 3 year old baby who had fever and vomiting blood, no history of travel but the mother travel to Yei town to attend to the brother who had an accident. RRT was activated to do verification and it was later discarded.

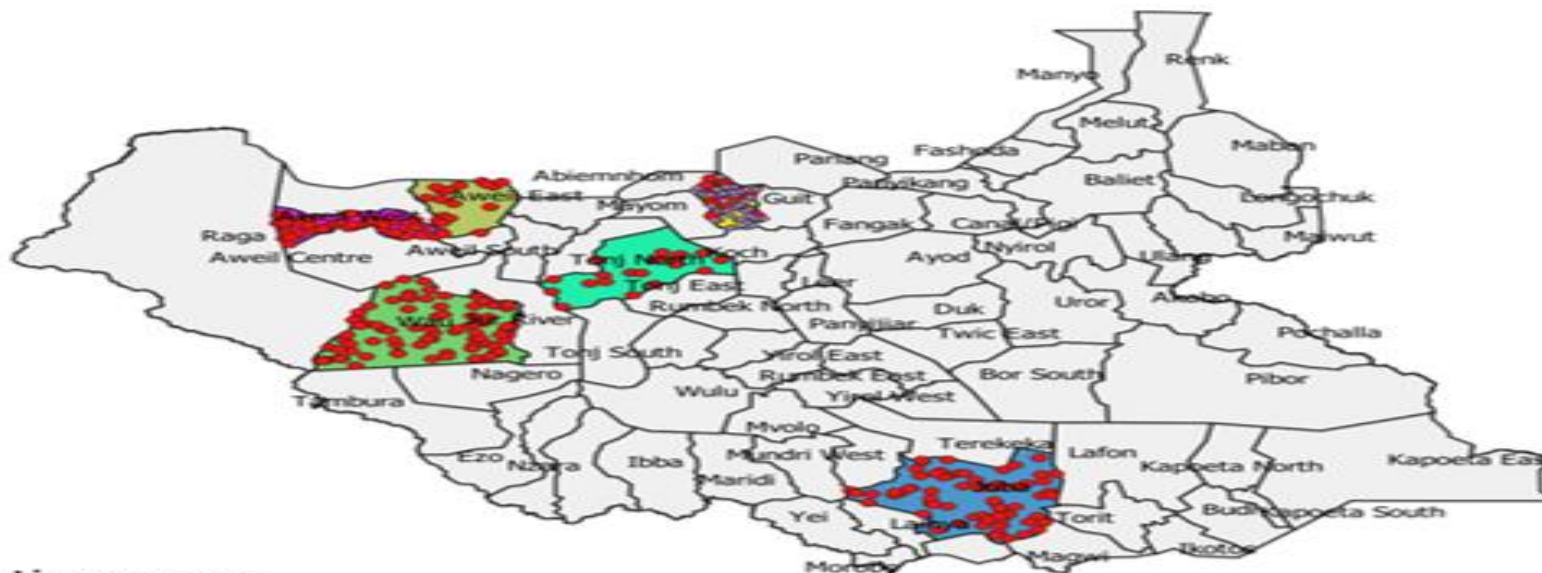
- **EVD alert in Nimule**

EVD alert case was captured through the Nimule PoE as a 36 year old female with a high temperature of 38.7°C. She was then referred to Nimule hospital. The case was later discarded as it did not meet the case definition and patient was treated for tonsillitis.

- **Suspected Ebola Virus Diseases (EVD) in Yambio**

A suspect EVD case was reported to the RRT from Bazungua PHCC, Yambio. The case is a 16 year old student who have been staying with his mother in a village called Nabanga, close to the border with DRC. The sample was tested negative with both geneXpert and PCR in the UVRI

A map of cumulative outbreak in 2019



Communitative cases

- Hepatitis Cases
- Measles Cases

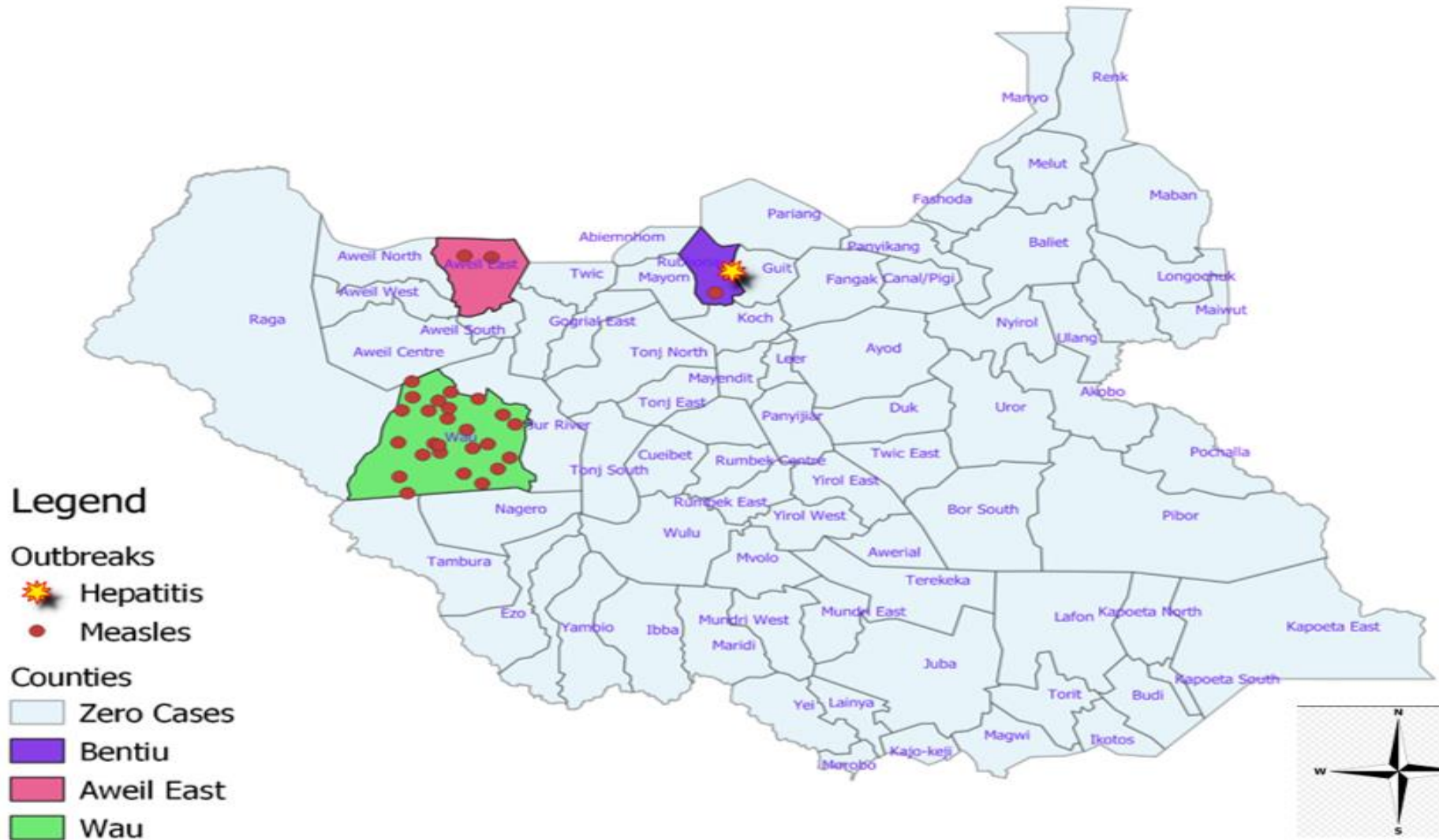
Counties

- Counties that reported Zero cases
- Aweil east
- Tonj north
- Bentiu Poch
- Aweil west
- Juba
- Wau

Response | Summary of major ongoing outbreaks in 2019

Aetiological agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
Ongoing epidemics								
Measles	Renk County	-	-	-	yes	Preparation stage underway		N/A
Hepatitis E	Lankein	28/2/2019						
Measles	Wau County and PoC-AA	28/1/2019	25	86(0.034)	yes	underway	yes	N/A
Rubella	Wau PoC-AA	25/3/2019						
Hepatitis E	Bentiu PoC	03/01/2018	1	45 (0.11)	Yes	No	Yes	Yes
Measles	Juba & PoC	15/01/2019	0	68 (0.01)	Yes	Yes	Yes	N/A
Rubella	Bentiu Poc							
Measles	Tonj North	2/04/2019	0	20 (0.01)	Yes	Yes	Yes	N/A
Measles	Pibor							
Measles	Aweil West	4/04/2019	0	48 (0.02)	Yes	Yes	Yes	N/A
Measles	Bentiu PoC	24/04/2019	1	24 (0.01)	Yes	Yes	Yes	N/A
Measles	Aweil East	13/05/2019	2	19 (0.004)	Yes	Yes	Yes	N/A

Map of ongoing outbreaks (measles and Hepatitis)



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

Response | Summary of major Controlled outbreaks in 2019

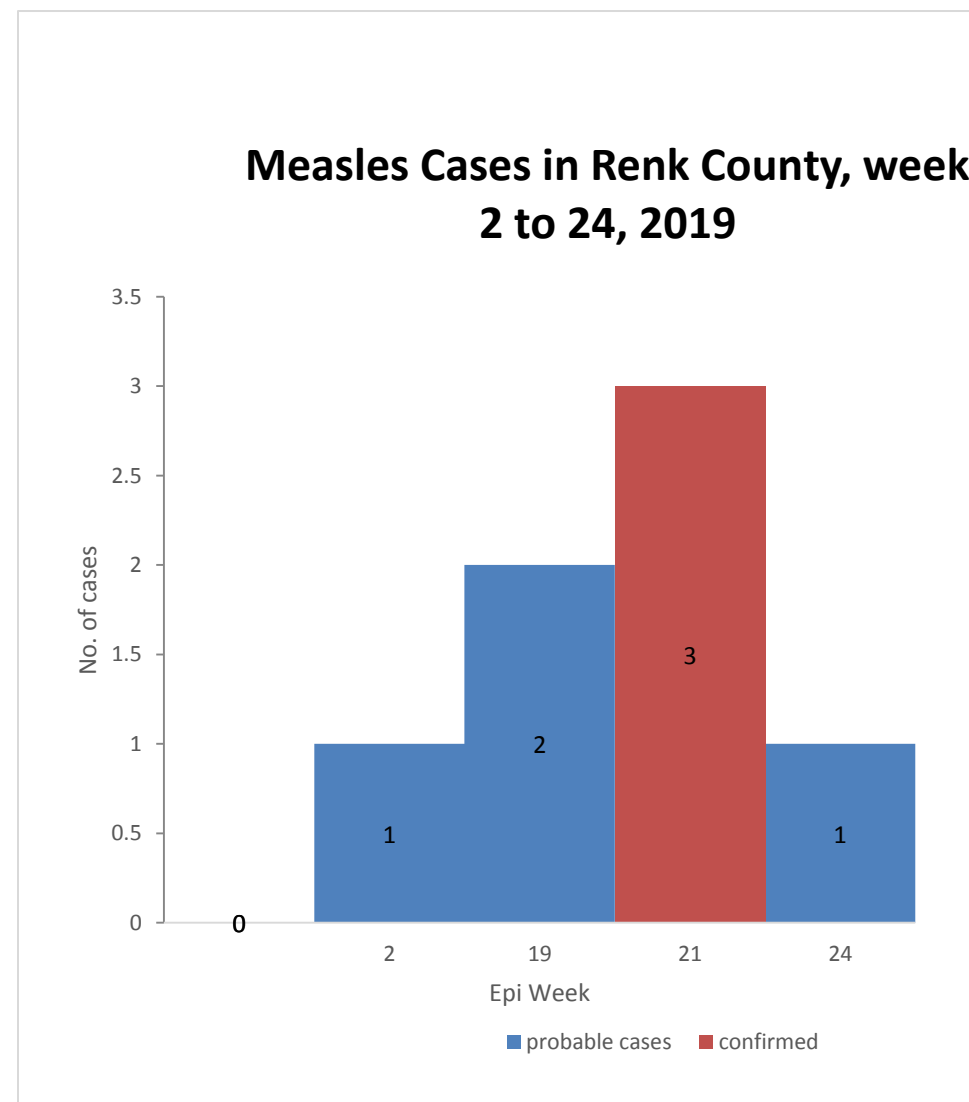
Aetiological agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
Rubella	Malakal PoC	25/10/2018	0	178 (0.08)	Yes	No	Yes	N/A
Yellow Fever	Nzara	23/11/2018	0	3 (0.001)	Yes	Yes	Yes	N/A
Measles	Abyei	12/02/2018	0	306 (0.40)	Yes	Yes	Yes	N/A
Measles	Mayom	17/01/2019	0	19 (0.010)	Yes	Yes	Yes	N/A
Measles	Pibor	17/01/2019	12	435 (1.10)	Yes	Yes	Yes	N/A
Measles	Gogrial West	04/02/2019	0	156 (0.025)	Yes	Yes	Yes	N/A
Rubella	Aweil Center/NBG		0	35 (0.028)	Yes	No	Yes	N/A
Measles	Aweil South	15/03/2019	0	46 (0.012)	Yes	Yes	Yes	N/A
Measles	Melut	15/03/2019	0	9(0.008)	Yes	Yes	Yes	N/A
Rubella	Bor South		0	4 (0.001)	Yes	No	Yes	N/A
Rubella	Gogrial West		0	5 (0.001)	Yes	No	Yes	N/A
Rubella	Yirol East		0	3 (0.003)	Yes	No	Yes	N/A
Measles	Gogrial East	4/04/2019	0	30 (0.003)	Yes	Yes	Yes	N/A
Measles	Malakal PoC	24/04/2019	0	2 (0.01)	Yes	Yes	Yes	N/A

ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

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

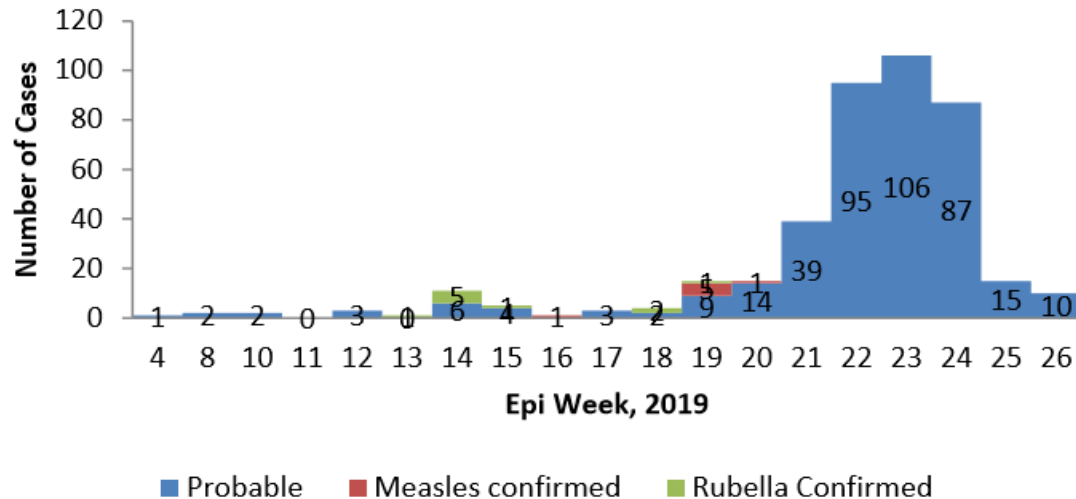
Simple Descriptive Epidemiology and Recommendations

- As of 30th May, a new measles outbreak has been confirmed in Renk County
- Renk County is a border town in former upper Nile state. it is bordering Melut county which had measles outbreak in the beginning of the year (March 2019)
- The first suspected case was reported way back in week 2, 2019
- No new cases since week 21 and only one case in week 24
- 5 (83%) of the 6 cases are age less than 5 years
- All cases are from Renk north Payam with 3 of the cases from Saraya village and 2 from imtidad Jadid
- World Vision have conducted vaccination Campaign from 24 June 2019. A total of 16,680 children aged 6-59 months are targeted during the the campaign. PCE Teams have also been deployed on 24 June, 2019



Confirmed Measles Outbreak in Wau County and POCAA

Measles cases in Wau County and POCAA from week 4 to 26, 2019



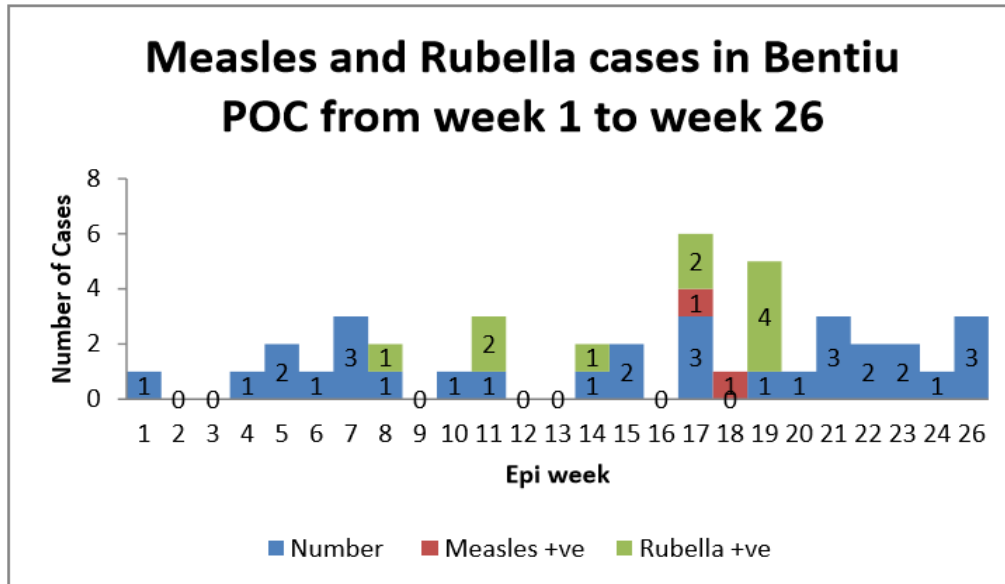
Introduction

- In week 19, 2019 a measles outbreak was confirmed in Wau county following the confirmation of 3 measles samples tested positive for IgM Wau county and 1 in the POC AA.
- Wau county started seeing measles cases from as early as week 4 in 2019.
- Out of all the samples sent to the lab, 10 tested positive for Rubella IgM and 7 for Measles IgM

Descriptive Epidemiology:

- A total of 415 cases from week 4 to week 26, 2019, 80%(335) are from the POCAA
- During the Campaign cases peaked in week 22, 23 and 24 and later came down to 15 cases in week 25
- Total of 5 deaths giving the CFR at 1.20%
- 79.2% of the cases are under the age of 5 years with only 19.9% of cases received at least 1 dose of measles vaccine
- **Response and recommendations**
- IOM just concluded a vaccination Campaign in collaboration with WHO, UNICEF and other health partners
- The campaign covered Wau municipality and extended to some IDPs collective sites in Jur River from 3rd – 10th June
- Target populations (27,166) child from 6-59 months, the coverage was 85% as (23,028) child vaccinated including (1,628) child from IDPs collective site in Jur River County.
- Post Campaign evaluation is expected to be done from 21st June 2019.

Confirmed Measles and Rubella outbreak in Bentiu PoC



Bentiu PoC

- Bentiu PoC has been reporting suspected measles/rubella cases since beginning of the year
 - A total of 42 suspected measles cases reported since January 2019
 - Three (3) suspected measles cases reported in week 26, 2019
 - Out of the 42 cases 2 tested positive for measles IgM
 - And 10 confirmed Rubella cases since week 8
 - All the cases are children <5 years except for two cases

Response and Recommendations

- IOM completed a reactive vaccination campaign in Bentiu POC on 31 May 2019.
- During the reactive measles campaign 21,285 children 6-59 months (126%) received measles vaccination
- PCE teams were deployed to do

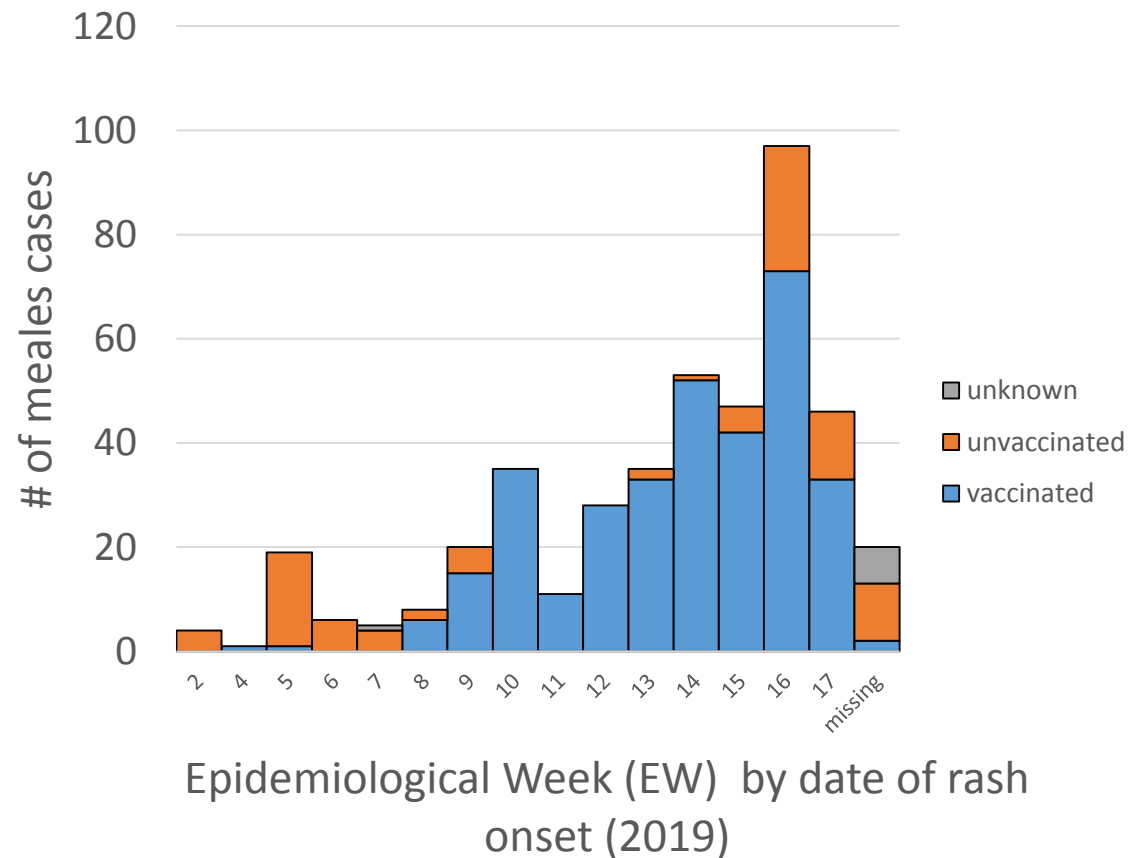
Measles in Pibor County

There is an ongoing transmission of measles in Pibor County inspite of the vaccination campaign conducted in February and March.

This may be influenced by the semi-nomadic nature of the population in Pibor. As the rainy season starts there are a lot of Movements with high number of unvaccinated population coming in the communities.

In May two suspected cases tested positive for Measles IgM and MSF with partners proposed to do a mop up campaign where cases are coming from

Number of suspected measles cases by vaccination status in Pibor, week 1-17, 2019 (N=435)



Updates on other Confirmed Measles Outbreaks in 2019

● **Tonj North**

- Since the confirmation of Measles outbreak in Tonj North nearly 2 months ago, reactive Vaccination campaign completed by UNKEA, the coverage was 91%. Target was 48,904 children and 44,400 were vaccinated.

● **Malakal PoC**

- MSF-Spain Completed reactive vaccination campaigns in both Malakal POC and town on the 31st May and achieved a coverage of 100.1% and 112% in Malakal town and POC respectively. PCE teams from MoH and WHO are set to go to Malakal from 17th June 2019

● **Aweil Town (Aweil Town and Aweil West)**

- MSF-France covering Aweil town and surrounding villages only, not entire Aweil west, ministry has decided the campaign to be conducted in the missed 14 villages. The coverage achieved was 97% 26,477 (children vaccinated).



Updates on other Confirmed Measles Outbreaks in 2019

- **Aweil East County**

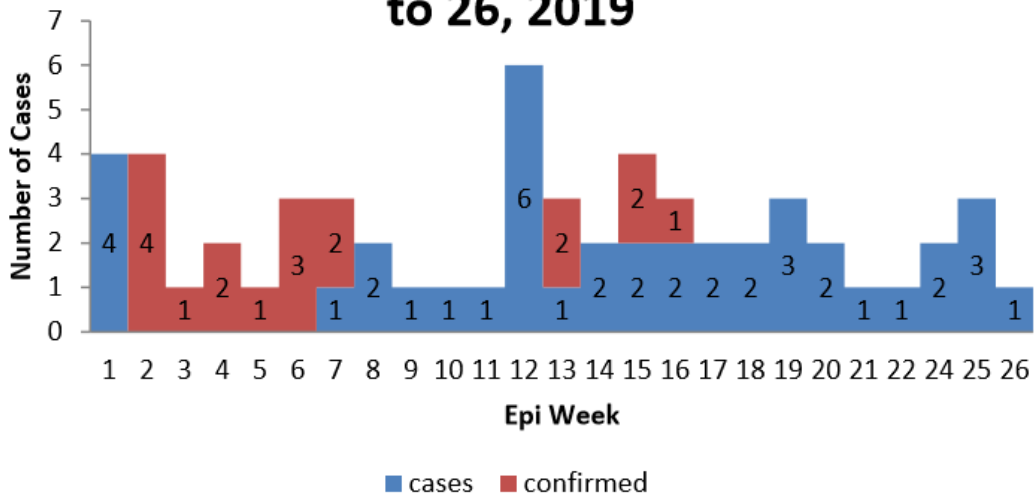
- Aweil East confirmed a measles outbreak as of 13th May 2019, Reactive vaccination campaign is ongoing by IRC and MoH and WHO will do Post Campaign Evaluation

- **Gogrial East County**

- MEDAIR conducted a mop-up campaign in 5 payams and it raised the coverage to 95%. There has been suspected measles cases still seen after the reactive campaign and the team decided to collect more samples to determine whether they are measles

Hepatitis E, Bentiu PoC

HEV Cases in Bentiu POC from week 1 to 26, 2019



Bentiu PoC

- The persistent transmission of HEV in Bentiu PoC continues with 58 cases since beginning of 2019
 - Eighteen (18) cases confirmed by PCR testing
 - There were no cases reported in week 23.
- All the cases were managed as outpatient cases except for two cases who were admitted on 23rd February, 2019 and 11th April, 2019
- One death on 12th April 2019
- Over half (51.3%) of the cases are male.
- Age group 15-44 years had the most cases with 14 (34.1%) cases.
- Of the 23 female cases, 7 (30%) are aged 15-44 years
 - At risk of adverse outcomes when infected in the 3rd trimester of pregnancy
- Use of unsafe drinking water likely to be source of infection
- Recommended response
 - Social mobilization to raise awareness on modes of transmission, symptoms and where to seek for care
 - Case identification and follow up in the communities and WASH interventions are recommended.

Age groups	Female, n	Male, n	Total, n	Percent, %
1-4 years	7	7	14	27.4
5-9 years	2	5	7	13.7
10-14 years	5	3	8	15.7
15-44 years	7	14	21	41.1
45+years	2	0	2	3.9
Total cases	23	28	51	100

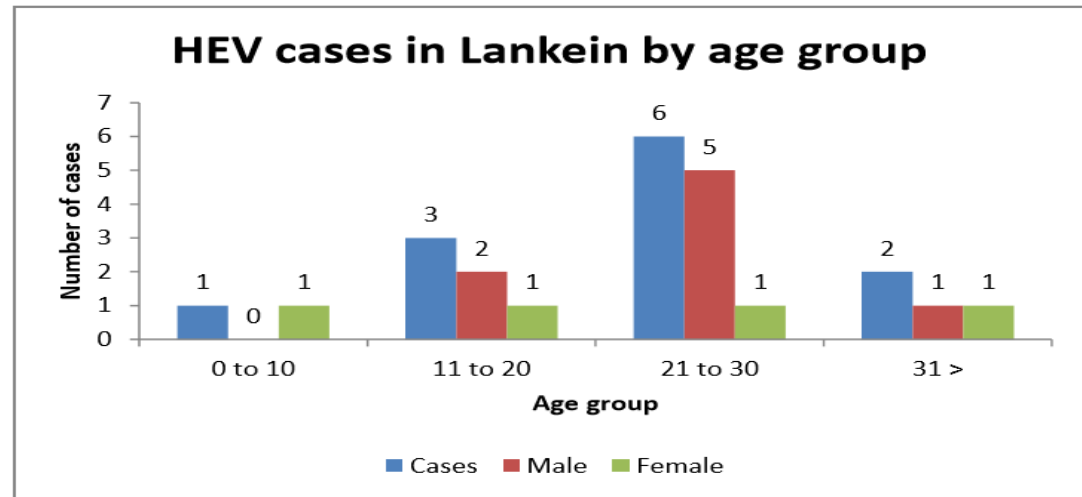
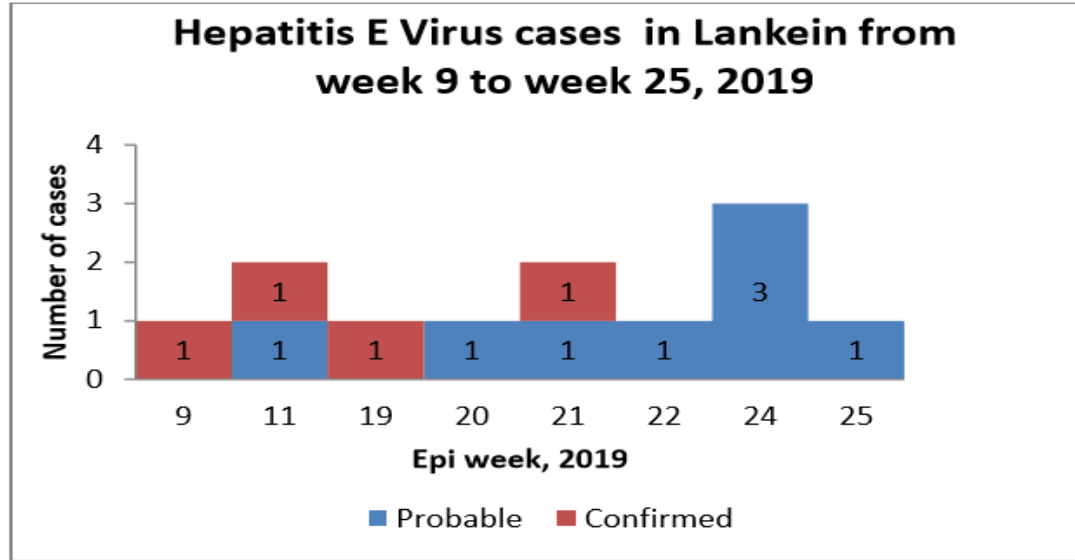
Hepatitis E cases in Lankein, 2019

Descriptive Epidemiology

- First case of Hepatitis E virus was confirmed in Lankein as of week 9, 2019
- A total of 12 cases since week 9 with 4 confirmed through PCR
- 50% (6) of the cases are between the age group of 21 to 30years
- Of the 12 cases (8) 66.6% are Males
- 58.3% of the cases are internally displaced persons (IDPs)

Recommended response

- Social mobilization to raise awareness on modes of transmission, symptoms and where to seek for care
- Case identification and follow up in the communities and WASH interventions are recommended.



Malaria trends

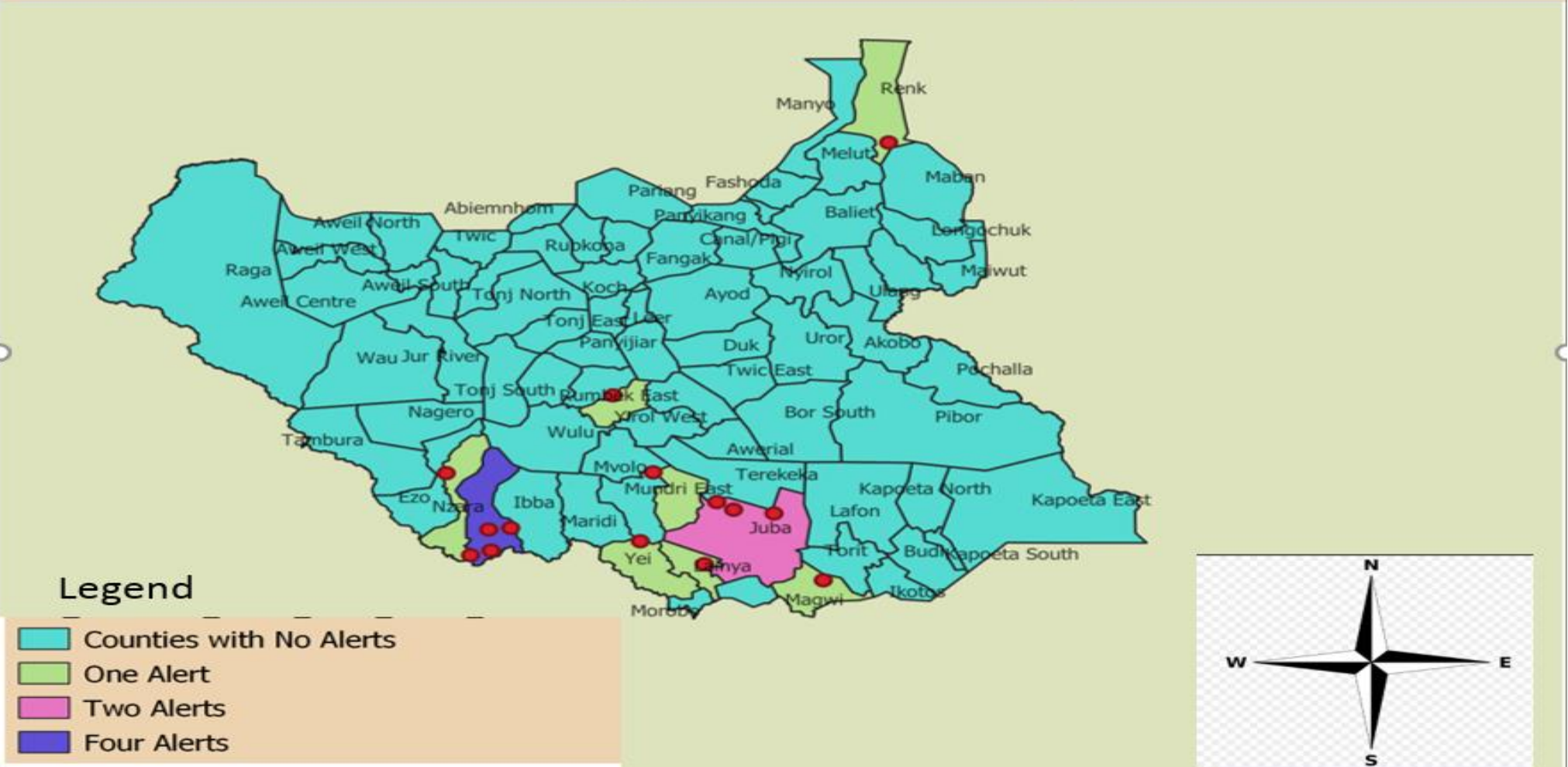
Current malaria trends

- Malaria was the leading cause of morbidity and mortality, accounting for 58.8% of all morbidities and 13.4% of all mortalities in week 24, 2019.
- At least 12 Counties with malaria trends that exceed the threshold (third quartile of trends for the period 2013-2017) and these include:
 - Juba hub(,Juba,Yei)
 - Torit hub(.Budi,Magwi,Torit,Ikotos)
 - Wau hub(Wau)
 - Rumbek hub(Rumbek Center, Wulu, Cueibet)
 - Aweil hub (Aweil East)
 - Kwajok hub(Gogrial West)
 - Yambio hub(Tambura)
- This list has to be reviewed – not all these counties exceed the threshold

Routine Sentinel Surveillance | Human Influenza

- In week 12, 2019, South Sudan started conducting case-based investigation for Influenza Like Illness (ILI) and Severe Acute Respiratory Infection (SARI) cases through systematic collection of epidemiological and virological information
- There are currently three designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital, Al Sabah Children's Hospital and UNMISS POC3 clinic) that are collecting epidemiological data and samples from ILI/SARI cases for virological testing.
- Since week 12 of 2019, a total of 82 ILI/SARI samples have been collected and tested at Uganda Virus Research Institute (UVRI) with 40 being negative; two (2) positive for Influenza B (Victoria); and seven (8) positive for Influenza A (H3). Test results pending for 42 samples.

Counties that reported Ebola Alerts in year 2018



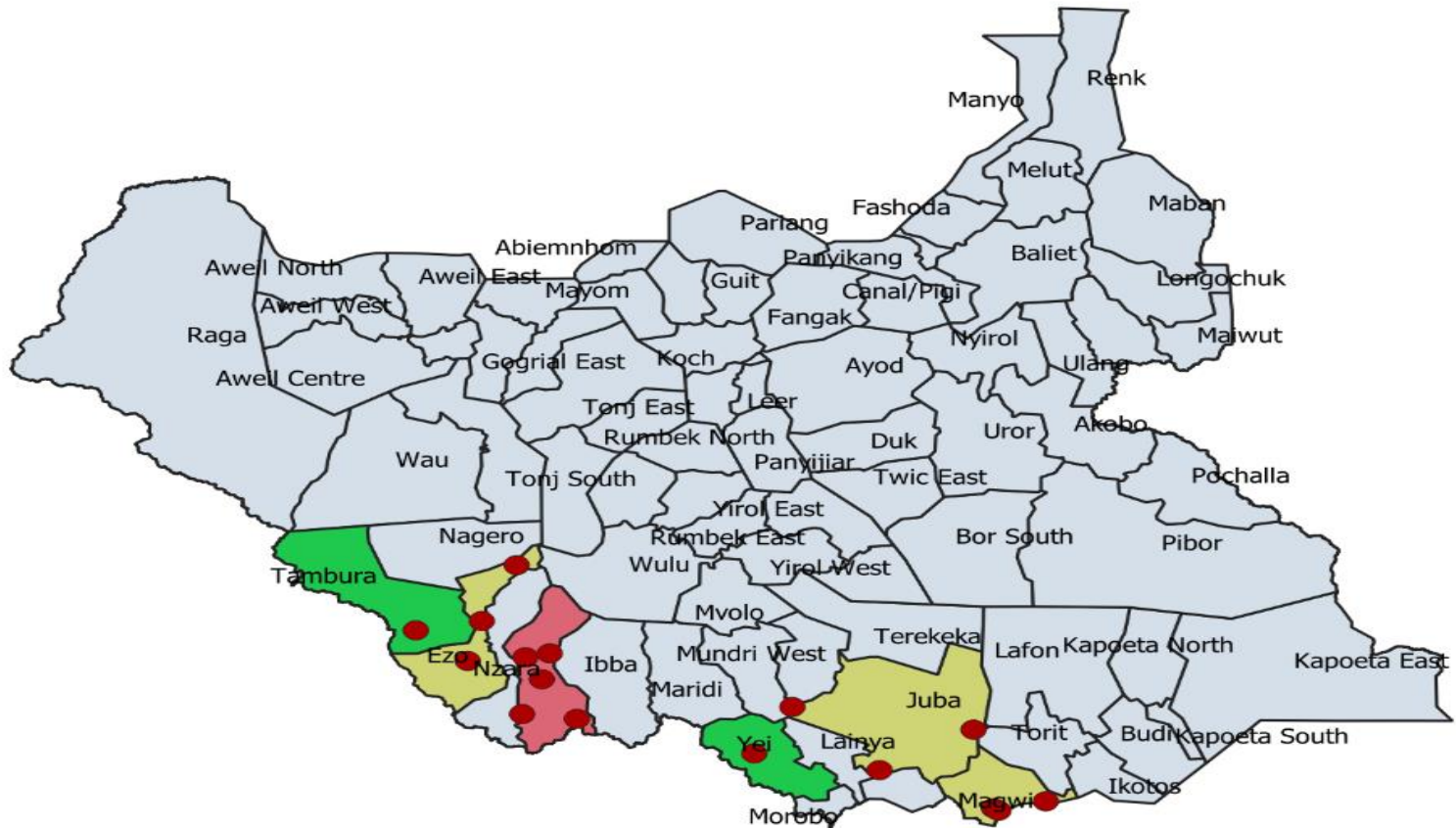
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Ebola alerts investigated in 2018

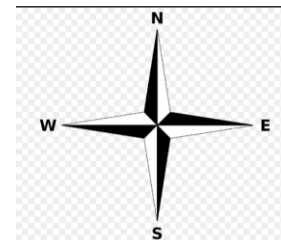
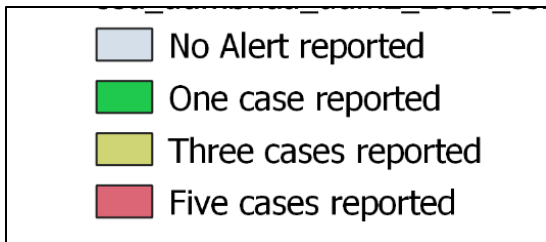
Date	Cases	Deaths	Payam	County	eRDT	eGeneXpert	ePCR	Comments
28May	1	0	Makpandu	Yambio	ND	ND	-ve	Reported in refugee camp
8Sep	1	1	Bakiwiri	Yambio	ND	ND	-ve	Did not meet case definition
26Sep	1	1	N/Bari	Juba	ND	ND	-ve	Community death
30Oct	1	1	Yei town	Yei	ND	ND	ND	Never traced (?false alert)
12Oct	1	0	Rumbek	Rumbek Center	ND	-ve	-ve	Recent travel from DR Congo
14Oct	1	0	Gumbo	Juba	ND	-ve	-ve	Did not meet case definition
18Oct	1	1	Mundri East	Mundri East		ND	-ve	Reported by Lui hospital
21Oct	1	1	Yambio	Yambio	ND	ND	-ve	Recovered & discharged
29Oct	2	0	Nimule	Pageri	ND	ND	ND	Alerts discarded
11Nov	1	1	Loka	Lainya	ND	-ve	-ve	Investigated 11 Nov
23 Nov	1	0	Sakure	Nzara	ND	-ve	-ve	Confirmed for Yellow Fever
29 Nov	1	1	Yambio	Yambio	ND	-ve	-ve	Investigated on 29 Nov
03 Dec	1	0	Renk South	Renk	ND	-ve	-ve	Investigated 4 Dec
15 Dec	1	0	Rejaf	Rejaf	ND	-ve	-ve	Investigated 15 Dec
25 Dec	1	0	Yambio Town		ND	-ve	-ve	Investigated 25 Dec

- In 2018, at least 16 alerts met the case definition and therefore underwent verification and follow up investigation by the rapid response teams.
- During 2018, at least 13 alerts that met the case definition were investigated and had samples obtained for laboratory testing will testing negative for Ebola virus disease and other hemorrhagic fevers safe for one alert in Sakure, Nzara county that was confirmed yellow fever positive. |

Counties that reported Ebola Alerts in 2019



Legend



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

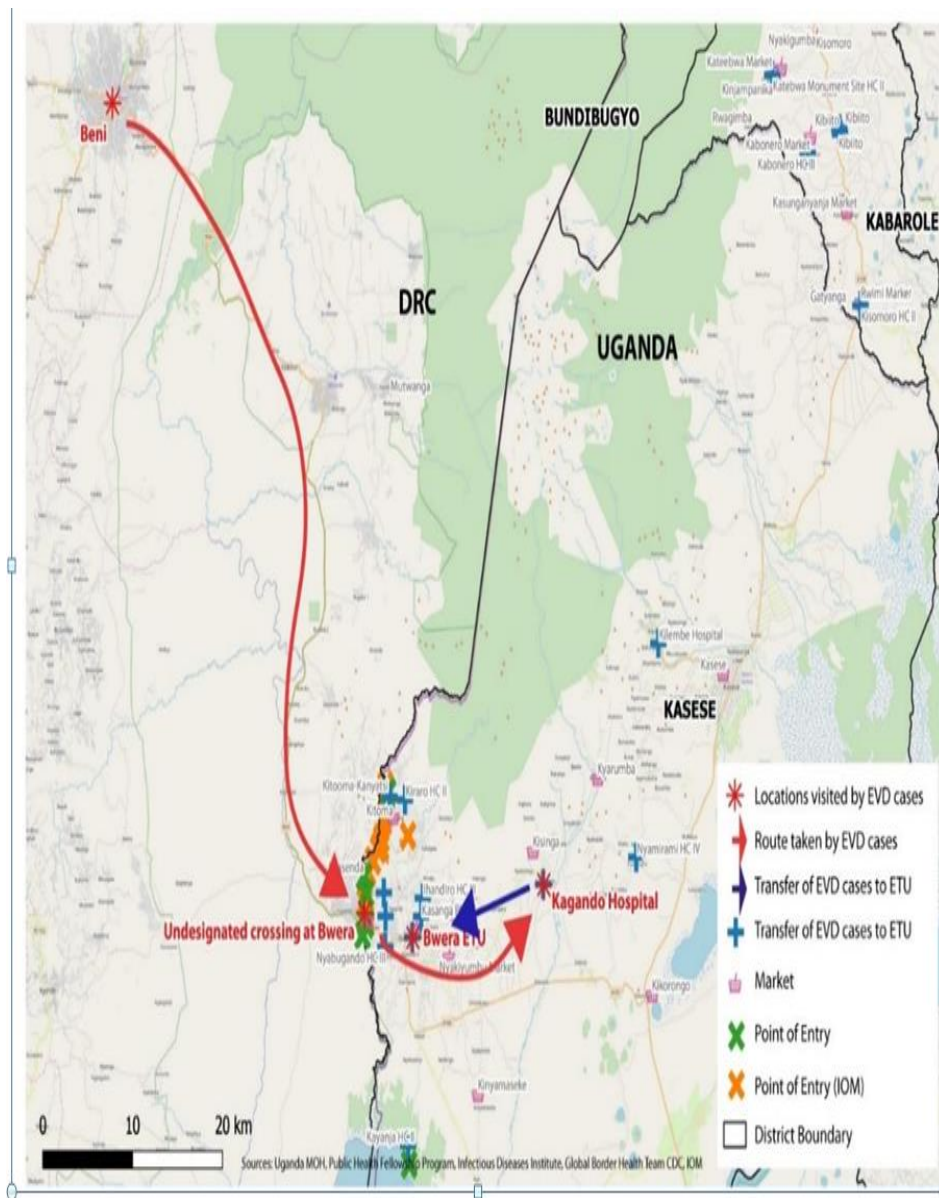
Date	Cases	Deaths	Payam	County	eRDT	eGeneXpert	ePCR	Comments
27 Jan 19	1	0	Nimule		ND	-ve	-ve	Investigated on 27 Jan 2019
30 Jan 19	1	0	Nimule		ND	-ve	-ve	Investigated on 30 th Jan 2019
09 Feb 19	1	0	Juba		Nd	-ve	-ve	Investigated on 09 th Feb 2019
21 st Feb 19	1	1	Yambio		Nd	-ve	-ve	Investigated on 21 st Feb 19
25 rd Feb 19	1	0	Yambio		Nd	-ve	-ve	Investigated on 25 th Feb 19
26 th Feb 19	1	0	Yambio		Nd	-ve	-ve	Investigated on 26 th Feb 19
14 th Mar 19	1	0	Tambura		Nd	-ve	-ve	Investigated on 14 th Mar 19
22 nd Mar 19	1	0	Juba		Nd	-ve	-ve	Investigated on 22 nd Mar 19
26 th Mar 19	1	0	Ezo		Nd	-ve	-ve	Investigated on 26 th Mar 19
22 nd Apr 19	1	0	Ezo		Nd	-ve	-ve	Investigated on 22 nd Apr 19
21 st May 19	1	0	Yambio		ND	-ve	-ve	Investigated 21 st May 19
7 th June 19	1	0	EZO		ND	-Ve	-Ve	Investigated 8 th June 19
13 th June 19	1	0	Yambio		ND	pending	pending	Investigated 13 th June 19
13 th June 19	1	1	Juba		ND	Not Done	Not Done	Investigated 13 th June 19
19 th June 19	1	0	Nimule		ND	Not Done	Not Done	Investigated 19 th June 19
25 th June 19	1	0	Yei		ND	Not done	Not done	Investigated 25 th June 19

- Blood samples have been obtained from (13) Ebolavirus alerts; all tested negative for Ebolavirus and other viral hemorrhagic fevers including RVF, Marburg; Yellow Fever; and CCHF.

EBOLA VIRUS DISEASE[EVD] PREPAREDNESS IN SOUTH SUDAN

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

Ebola confirmed in Uganda border district of Kasese



- An Ebola Outbreak was confirmed in Uganda on the 9th of June 2019
- 5-year-old from DRC (Index case) , plus to other family members travelled with parents through the market at Mpondwe by passing the official border post on 9th June. The child presented at Kagando hospital with vomiting blood, bloody diarrhea, muscle pain, headache, fatigue and abdominal pain
- Case transferred to Kagando Hospital ETU
- 3 Case confirmed by UVRI on 11th June, Child died together with grandmother at Bwera ETU. Five cases (one confirmed and four suspected) have been repatriated back to DR Congo on request from DRC.
- The third case died on arrival at the ETU in Beni, DR Congo
- A total of 106 contacts are under follow up with a cumulative of 181 contacts vaccinated against Ebola virus disease.

Ebola update DRC 23rd June, 2019

Current situation

- Currently as of 23rd June, 2019
- 2239 Cases [2153 confirmed & 94 probable]
- 1510 Deaths [1416 confirmed & 94 probable]
- 110 Health workers [34 deaths]

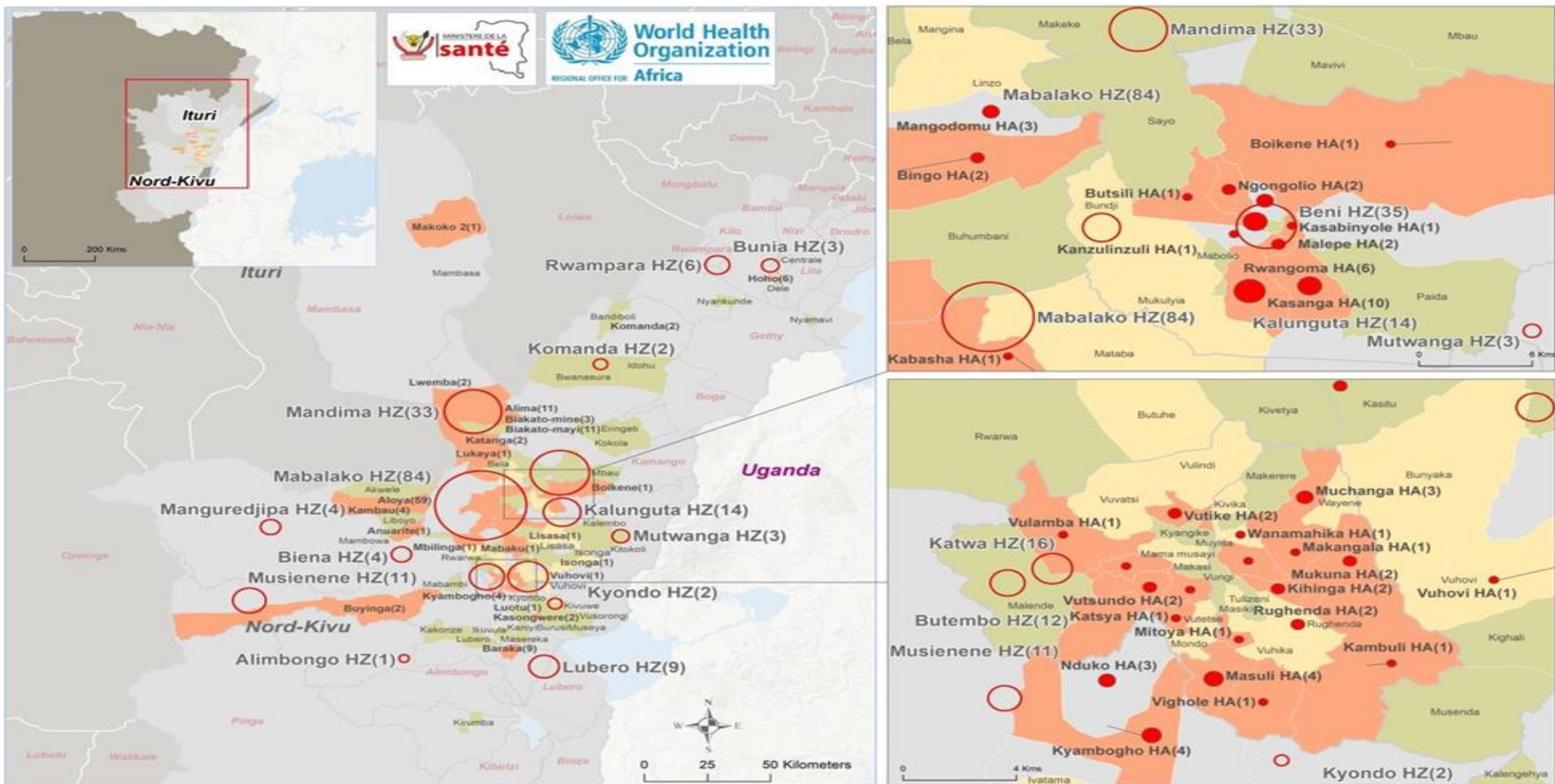
Response update

- 16708 contacts under surveillance as of 23th June [88% followed up]; 131,471 vaccinated

Affected health zones

- In the 21 days between 3 to 23 June 2019, 63 health areas within 16 health zones reported new cases, representing 10% of the 664 health areas within North Kivu and Ituri provinces
- During this period, a total of 239 confirmed cases were reported, the majority of which were from the health zones of Mabalako (35%; n=84), Beni (1%; n=35), Mandima (14%; n=33), Katwa (7%; n=16), and Kalunguta (6%; n=14)

Democratic Republic of Congo EVD Spot map



Confirmed cases for the last 21 days

Numbers in brackets represent confirmed cases for the last 21 days
HZ stands for Health Zones; HA stands for Health Areas

- Confirmed cases in Health Areas (HA)
- Confirmed cases in Health Zones (HZ)

Number of days since the last confirmed case(s)

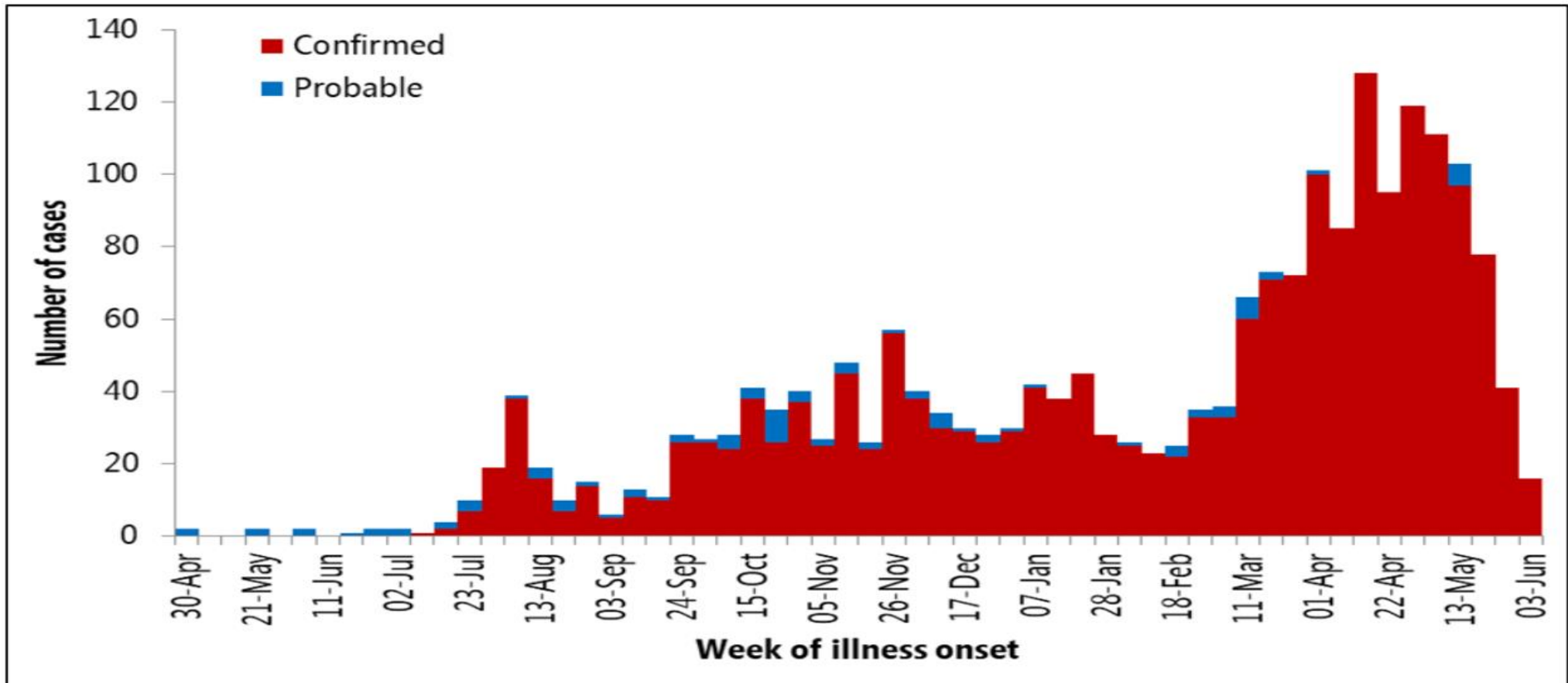
- < 22 days
- 22 - 42 days
- No confirmed cases for more than 42 days
- Non-affected areas in affected Health Zones (HZ)
- Other non-affected areas



Data as of the 23rd of June 2019
By Health Emergencies Programme
Source: MCH DRC
Copyright: WHO 2019

The boundaries and names shown and the designations used on this map do not imply the endorsement of any specific authorities or the approval of any country, territory, city or area or its authorities, or concerning the jurisdiction of its borders or boundaries.
Data presented on this map may be subject to change

EVD Epi-curve by week of illness in DR Congo

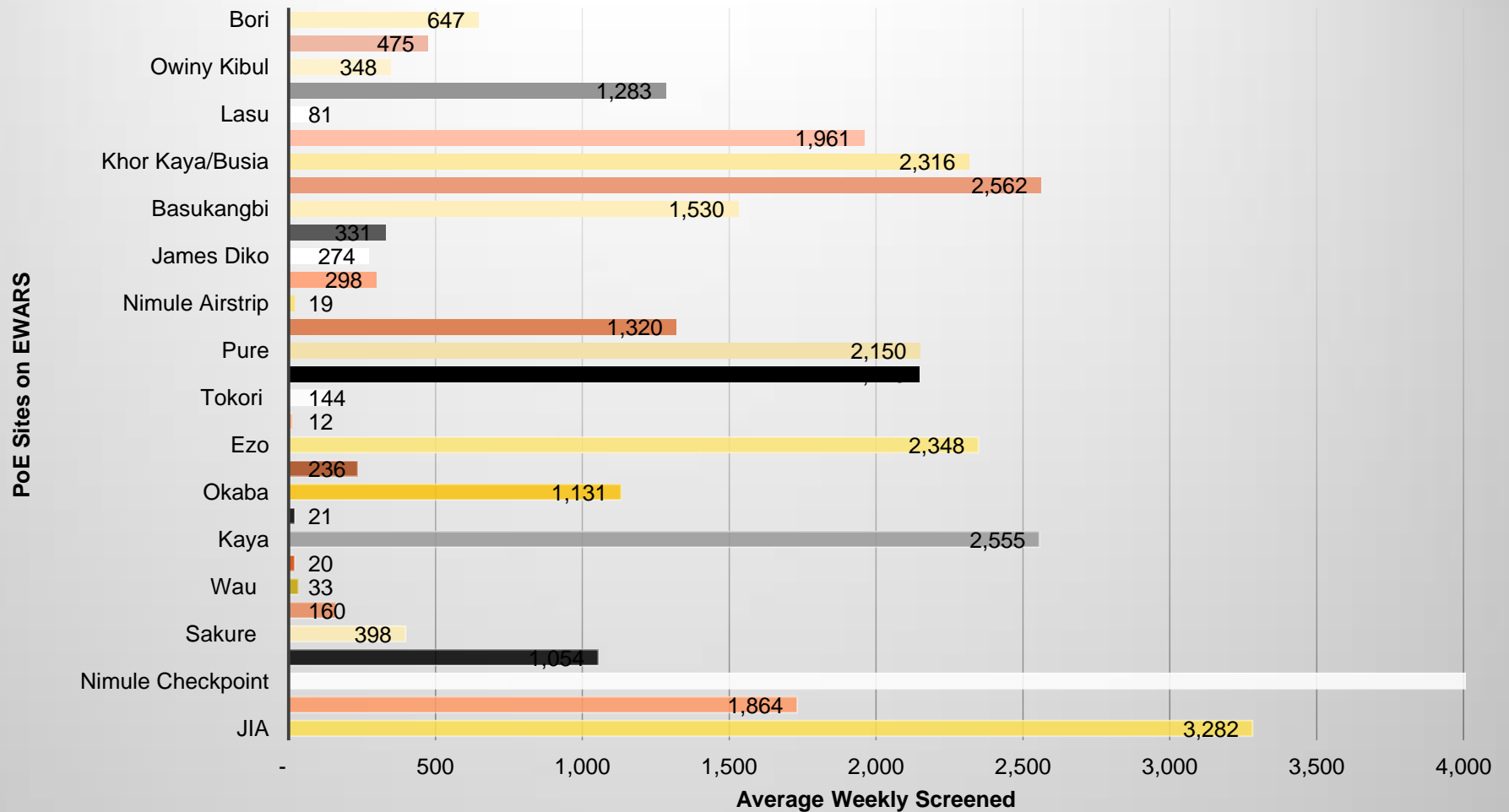


- Active transmission with continued increase in the number of new Ebola virus disease (EVD) cases in the affected geographical regions. █

Ebola preparedness in South Sudan

EVD preparedness activities undertaken in South Sudan

- South Sudan, as a priority one (1) country for Ebola virus disease outbreak (EVD) preparedness continues to make progress to enhance capacities for EVD case detection, investigation, response, and prevention.
- The national Ebola taskforce continues to meet twice weekly and is coordinating the implementation of the EVD contingency plan. The Ebola taskforce working groups have finalized the EVD contingency plan for the next six months of EVD preparedness and readiness in the country.
- Detailed preparedness update can be accessed <https://www.afro.who.int/publications/weekly-update-ebola-virus-disease-evd-preparedness-south-sudan>



The electronic EWARS platform captures points of entry screening data and enables summarizing number of travelers screened on weekly basis. In week 24, A total of 60,043 travellers were screened at various screening points in the country.

MAJOR SUSPECTED AND CONFIRMED OUTBREAKS & EVENTS REPORTED IN 2019

Listing of all major suspected and confirmed
outbreaks and public health events reported in
2018-2019

Outbreaks in 2019

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
20/10/2018	Measles	3	Bor South	Bor PoC	At least three suspect measles cases reported from Bor PoC since 20/10/2018. All tested measles IgM positive following tests done in Juba. Reactive measles campaign planned.
24/11/2018	Yellow Fever	1	Nzara	Sakure	A suspect Ebola case was reported from Sakure on 23/11/2018 and investigated by the rapid response team on 24/11/2018. Preliminary testing in Juba on 24/11/2018 were negative for Ebola Zaire following GeneXpert testing. Further testing of the sample was PCR negative for all Ebola species; Marburg; Rift Valley Fever, Crimean Congo Hemorrhagic Fever, and Sosuga viruses. The sample eventually tested PCR positive for Yellow Fever.
12/10/2018	measles	82 (3)	Rumbek East		Suspect measles cases reported from Mabor Duang village, Aduel payam in Rumbek East where the initial suspect case was a 38 year female whose illness started on 12 October 2018 in week 41. The affected village is served by Mabor Duang PHCC . 82 cases including 9 confirmed cases and 3 death (CFR 3.6%) reported . Cases reported from six payams with most originating from Aduel; Atiaba, and Mathian kok. Majority of the cases, 55 (67%), were children < 5 years of age A total of 9 samples tested positive for measles IgM on 22 November 2018
24/12/2018	Dog bites	8	Bentiu	Bentiu PoC	A cluster of cases of dog bites has been reported in Bentiu PoC. Eight (8) cases have been seen at health facilities between 24 th Dec 2018 and 28 th Dec 2018. Majority (75%) of the cases are children aged 5-12 years. None of the cases are symptomatic and no deaths were reported. Most of the dogs implicated are stray dogs who attacked unprovoked. Four (4) of the dogs were reported as being acting suspiciously and died within 15 days of the attacks. Of all the 8 cases reported, 5 (63%) received passive immunization with immunoglobulins, 2 (25%) received rabies vaccine and 6 (75%) received tetanus toxoid

Outbreaks in 2019

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
06/01/2019	Malaria alerts	counties with trends significantly higher than expected	6		Counties with malaria trends that exceed the threshold (third quartile of trends for the period 2013-2017) include: Aweil hub (Aweil East, Aweil West and Aweil North)
27/10/2018	Rubella	155	Malakall PoC		A total of 155 suspected rubella cases have been reported since week 43. No deaths reported. 41 cases are laboratory confirmed
31/12/2019	HEV	169	Bentiu PoC		At least 169 suspect cases of Hepatitis E (HEV) have been reported in Bentiu PoC in 2018. Of all the cases, 18 suspect cases were confirmed using PCR. The eight (8) cases were reported between week 50-52 tested positive on RDT testing. One (1) mortality (CFR 0.65%) in 2018. Result are pending.
06/01/2019	Acute Watery Diarrhea	467	Malakal PoC & Malakal Town		An increase in AWD cases in Malakal PoC and Malakal Town reported from week 51, 2018. Overall, 467 AWD cases to date. In Malakal PoC, a total of 333 cases (70 in week 51, 224 in week 52 and 39 in week 01). In Malakal Town, 134 cases (49 in week 52 and 85 in week 01). Assossa, Jalaba and Malakal Payams had the most number of cases. No mortalities reported.
06/01/2019	Measles	202	Abyei		Measles has been present in the area throughout the year, with about one suspected seen per week. A total of 45 suspected cases reported between week 7, 2018 and week 02,2019. The number of cases increased from week 50, 2018. Of all the cases, 35 (76%) were reported between week 51, 2018-02, 2019. Five (5) confirmed cases between week 51-52, 2018. No deaths reported
27/01/2019	EVD	1	Nimule		An alert was reported on 27 th Jan, 2019. The cases, 30year old male, was investigated, sample collected which tested negative on GneneXpert and PCR testing.
27/01/2019	Measles	3	Juba	Kator and Amarat	Twenty-one (21) cases reported as from week 01, 2019. Five cases confirmed

Outbreaks in 2019

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
21/01/2019	Chicken Pox	0	Awerial	Puluk	38 suspected cases of chicken pox all coming from Mingkaman in Puluk Payam.
30/01/2019	EVD	1	Nimule		An alert was reported on 30 th Jan, 2019. The cases, 30year old patient, was investigated, sample collected which tested negative on GneXePert and PCR testing.
17/01/2019	Measles	1	Gogriol West		97 suspected, three positive for IgM
31/01/2019	Measles	0	Aweil Center		About 12 suspected Measles cases have been reported from Aweil Center as at 31 st January, 2019. Eight cases tested positive for rubella. There are now 35 cass.
	Measles	0	Yirol East	Shambe	25 suspected Measles cases have been reported in Shambe in Yirol East. They have not been investigated or sample collected because of insecurity in the area
17/01/2019	Measles	0	Pibor	Gumuruk	Five suspected cases out of which three tested positive for Measles IgM antibodies
17/01/2019	Measles	0	Mayom		Five suspected cases out of which three tested positive for Measles IgM antibodies
15/03/2019	Measles	0	Aweil South		Twelve (12) suspected cases reported in the county, following which 4 samples tested positive for measles
15/03/2019	Measles	0	Melut		Three samples tested positive for measles out of six samples tested
4/04/2019	Measles	0	Gogriol East		11 cases out of which four were laboratory confirmed for measles
4/04/2019	Measles	0	Aweil Centre		Five cases tested positive for measles

Outbreaks in 2019

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
2/04/2019	Measles	2	Tonj North		Six tested positive for measles
4/04/2019	Measles	0	Aweil West		10 positive for measles
24/04/2019	Measles	0	Bentiu PoC		Two tested positive for measles
24/04/2019	Measles	0	Malakal PoC		Two tested positive for measles
19/05/2019	Measles	300(1)	Wau		3 tested positive for measles
24/05/2019	Measles	6(0)	Renk		3 tested positive for Measles IgM

**This bulletin is produced by the Ministry of Health with
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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>

