

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin W22 (May 27-June 2)



- In Week 22, Completeness for IDSR reporting at county level was 68% . Completeness for EWARS reporting from IDP sites was 73% .

- A total of 72 alerts were reported, of which 35% have been verified. 2 alerts were risk assessed and 2 required a response.
- Bloody Diarrhea (21), Acute Watery Diarrhea (16) and Malaria (11) and Measles (10) were the top common alerts generated through the EWARS in week 22, 2019.

- A measles outbreak in Renk county (upper Nile Hub), following the confirmation of (3) out of (5) laboratory samples which tested positive for Measles IgM response. Preparations are underway to do conduct a reactive vaccination Campaign.

- Cumulatively, there are 45 Hepatitis E Virus cases reported in Bentiu PoC since the beginning of 2019. There were two (2) suspected cases in week 21 and week 22, 2019. There are 13 PCR confirmed Hepatitis E Virus cases since January 2019.

- Since week 12 of 2019, a total of 75 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 35 samples. ■

- A new Ebola Outbreak has been confirmed in Uganda. A 5-year-old from DRC (Index case) , plus to other family members travelled with parents
- EVD alerts were investigated in Juba and Yambio. In Juba an alert was investigated on the 10th June and later discarded as it was a TB case. On 13th June 2019 a suspect EVD case was reported of a 16 year old boy originally stays in a town near border with DRC, develop symptoms was treated for malaria but no improvement. Samples have been collected and results are pending.

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

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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 (W22 2019)

Hub	Reporting		Performance	
	# counties	# reports received / # reports	Completeness	Timeliness
Aweil	5	2	40%	40%
Bentiu	9	6	67%	67%
Bor	11	8	73%	64%
Juba	6	1	17%	17%
Kuajok	7	2	29%	29%
Malakal	13	10	77%	46%
Rumbek	8	8	100%	100%
Torit	8	7	88%	88%
Wau	3	0	0%	0%
Yambio	10	10	100%	100%
South Sudan	80	54	68%	61%

Table 2 | Summary of key IDSR surveillance indicators

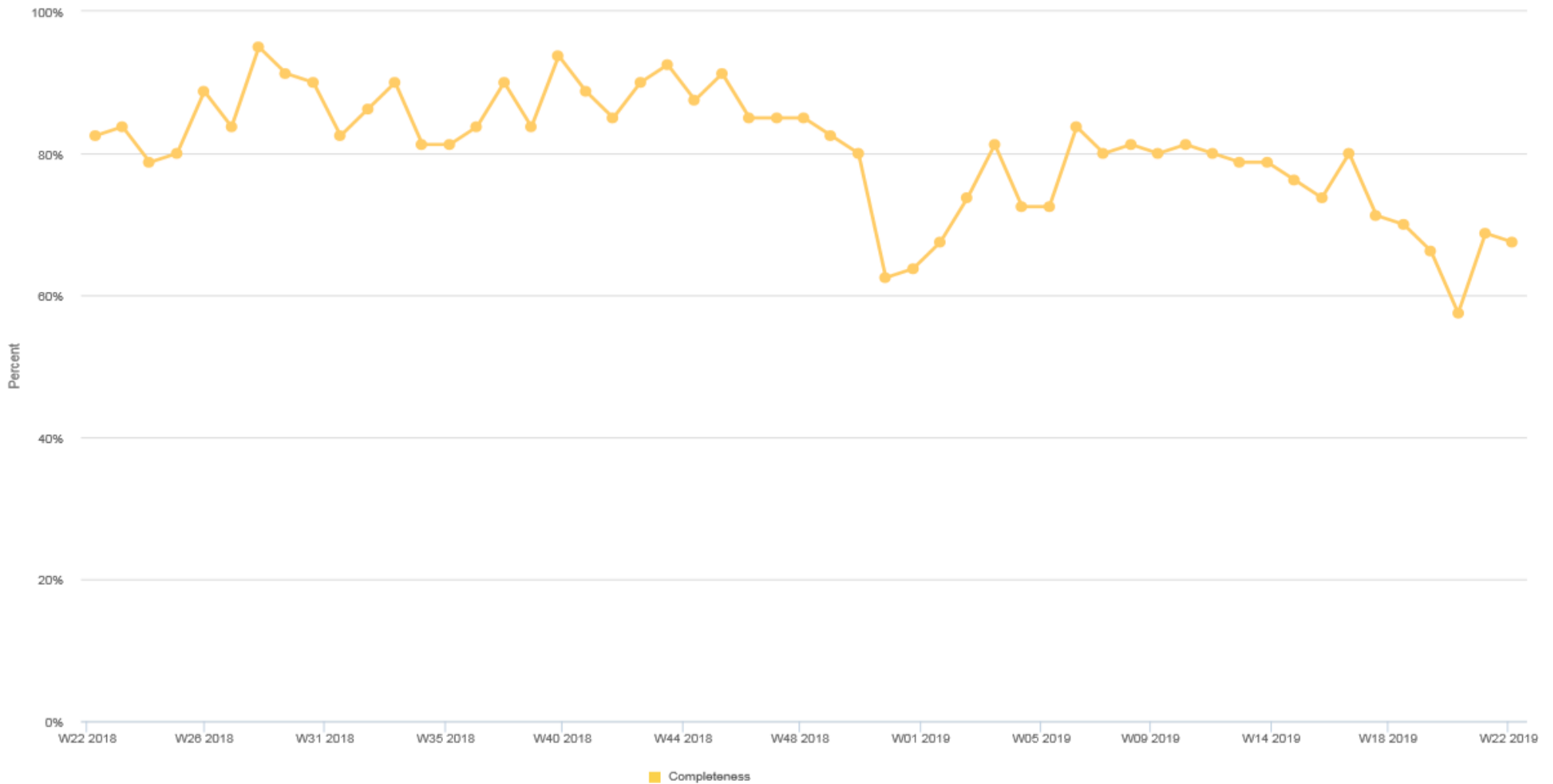
W22	Cumulative (2019)	
80	-	Number of counties
68%	74%	Completeness
61%	57%	Timeliness

Table 3 | IDSR report submissions

W22	Cumulative (2019)	
54	1,360	total submissions
7	0	submissions by mobile
47	0	submissions by web

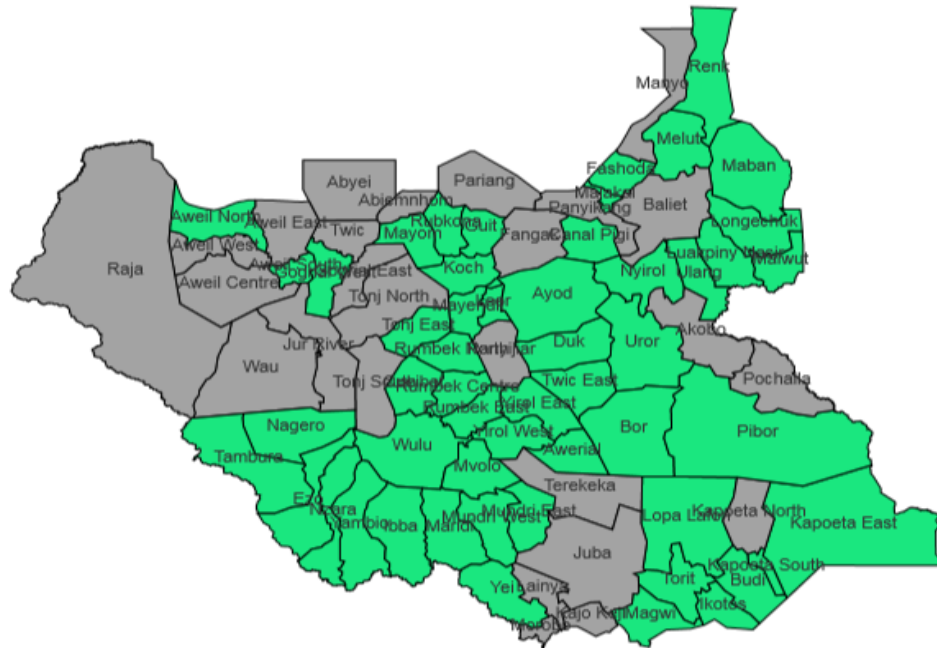
- In this week 22 the Completeness is 68% and the Timeliness is 61% while the cumulative completeness and timeliness was 74% and 57% respectively for 2019.
- The rolling out of the mobile phones for reporting to the health facilities is ongoing, this has affected the completeness of the surveillance system as the reports from the health facilities are captured separately. And secondly the Health workers strike due to incentives has negatively affected the completeness and timeliness.

Figure 1 | Trend in IDSR completeness over time

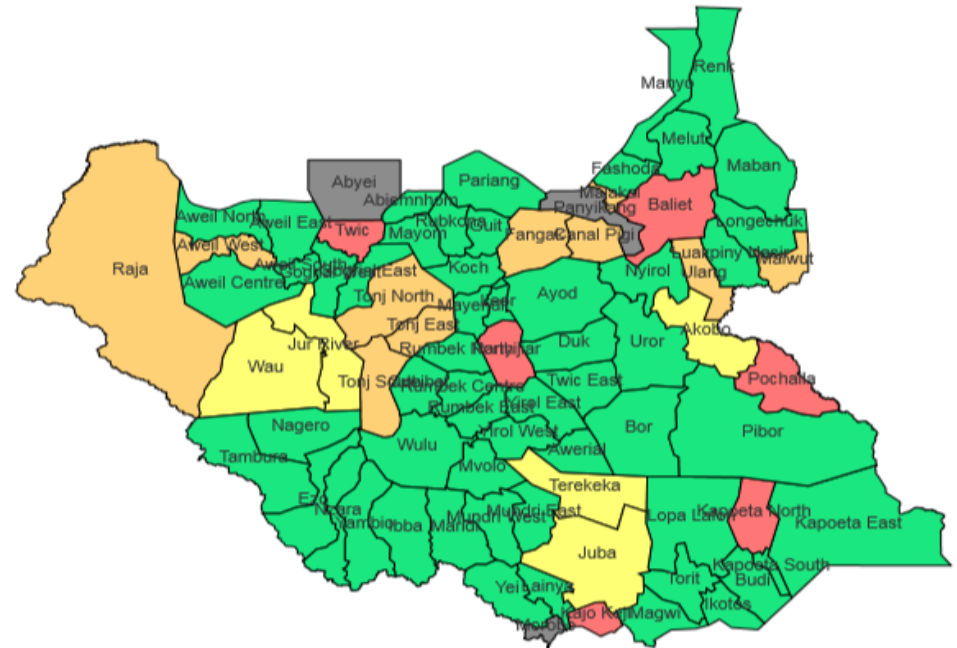


The graph shows completeness for the weekly IDSR reporting at the county level over time from 2018 to week 22, 2019.

Map 1a | Map of IDSR completeness by county (W22 2019)



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



- Counties that submitted their IDSR reports in week 22, 2019 are shown in green in map 1a.
- Counties that did not submit their IDSR reports in week 22, 2019 are shown in grey in map 1a.

Table 4 | EWARS surveillance performance indicators by partner (W22 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	1	100%	100%
IMA	7	6	86%	86%
IMC	5	5	100%	100%
IOM	11	9	82%	82%
IRC	1	1	100%	100%
LIVEWELL	2	1	50%	50%
Medair	2	2	100%	100%
MSF-E	2	1	50%	0%
MSF-H	3	1	33%	33%
RHS	2	0	0%	0%
SMC	7	5	71%	71%
TADO	3	0	0%	0%
TRI-SS	2	2	100%	100%
UNIDO	1	1	100%	100%
UNKEA	2	2	100%	0%
World Relief	1	1	100%	100%
Total	66	48	73%	68%

Table 5 | Summary of key EWARS surveillance indicators

W22	Cumulative (2019)	
66	-	Number of EWARS reporting sites
73%	67%	Completeness
68%	63%	Timeliness

Table 6 | EWARS report submissions

W22	Cumulative (2019)	
48	1,043	total submissions
0	29	submissions by mobile
48	1014	submissions by web

- Completeness was 73% and timeliness was 68% for EWARS reporting by partners for week 22, while the cumulative completeness and timeliness were 67% and 63% respectively for 2019

EVENT-BASED SURVEILLANCE

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

Table 7 | Alert performance indicators by Hub

Hub	W22		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	3	33%	71	87%
Bentiu	4	50%	109	93%
Bor	6	0%	71	48%
Juba	6	33%	138	55%
Kuajok	7	0%	102	23%
Malakal	5	0%	77	68%
Rumbek	5	0%	302	83%
Torit	13	62%	185	69%
Wau	5	60%	114	54%
Yambio	18	50%	196	69%
South Sudan	72	35%	1365	68%

Table 8 Summary of key alert indicators

W22	Cumulative (2019)	
72	1365	Total alerts raised
35%	68%	% verified
0%	0%	% auto-discarded
3%	6%	% risk assessed
3%	4%	% requiring a response

• A total of 72 alerts received in week 22, 35% of them were verified. 3% were risk assessed and 3% required a response.

Table 9 | Alert performance indicators by event

Event	W22		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	11	27%	172	70%
AWD	16	44%	441	67%
Bloody Diarr.	21	24%	275	65%
Measles	10	30%	322	66%
Meningitis	0	0%	0	0%
Cholera	1	100%	41	80%
Yellow Fever	0	0%	14	100%
Guinea Worm	1	100%	38	66%
AFP	3	0%	96	65%
VHF	0	0%	13	77%
Neo. tetanus	0	0%	17	65%
Event-based surveillance				
EBS total	1	100%	29	72%

Table 10 | Event risk assessment

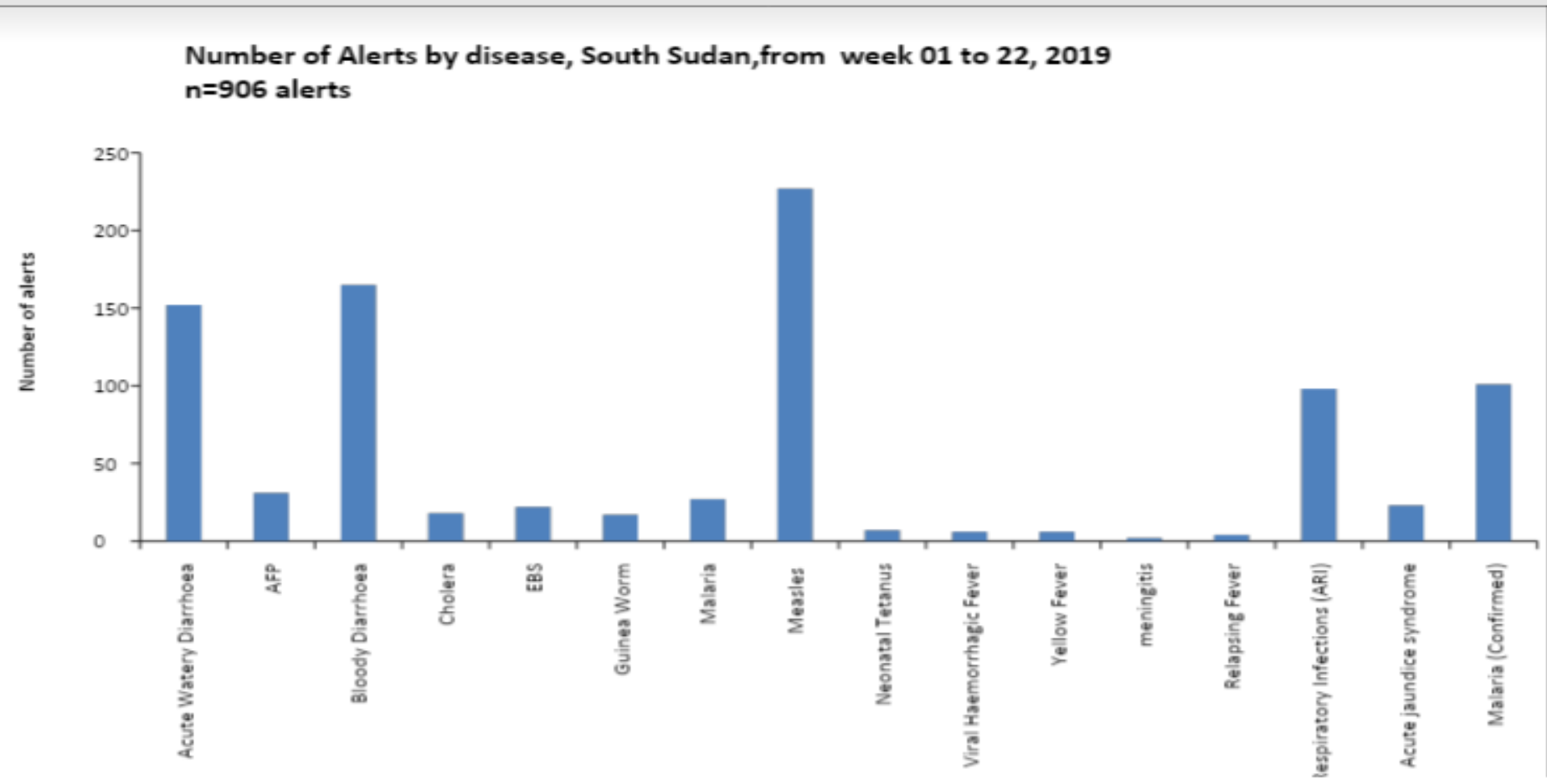
W22	Cumulative (2019)	
0	20	Low risk
26	26	Medium risk
2	29	High risk
0	6	Very high risk

- Bloody Diarrhea (21), Acute Watery Diarrhea (16) and Malaria (11) and Measles (10) were the top common alerts generated through the EWARS in week 22, 2019.

Alert by disease and Hubs in W22, 2019 [A total of 61 event specific alerts generated by Hubs]

Hubs	AJS	ARI	Viral Haemorrhagic Fever	Acute Watery Diarrhoea	Bloody Diarrhoea	AFP	Guinea Worm	Relapsing Fever	EBS	Cholera	Malaria	Neonatal Tetanus	Measles	Total Alerts
Bor- Hub					2						1			3
Kuajok Hub					1	1	1						3	6
Torit Hub			1		3	3					3			10
Bentieu Hub		1				1							2	4
Yambio Hub			3		6	5	1				2			17
Juba Hub			1			2					2		1	6
Aweil Hub										1	1		1	3
Rumbek Hub					1	2					3			6
Wau Hub						2				1			2	5
Malakal Hub						1								1
Total Grand	1	5	0	13	17	1	1	0	1	1	12	0	9	61

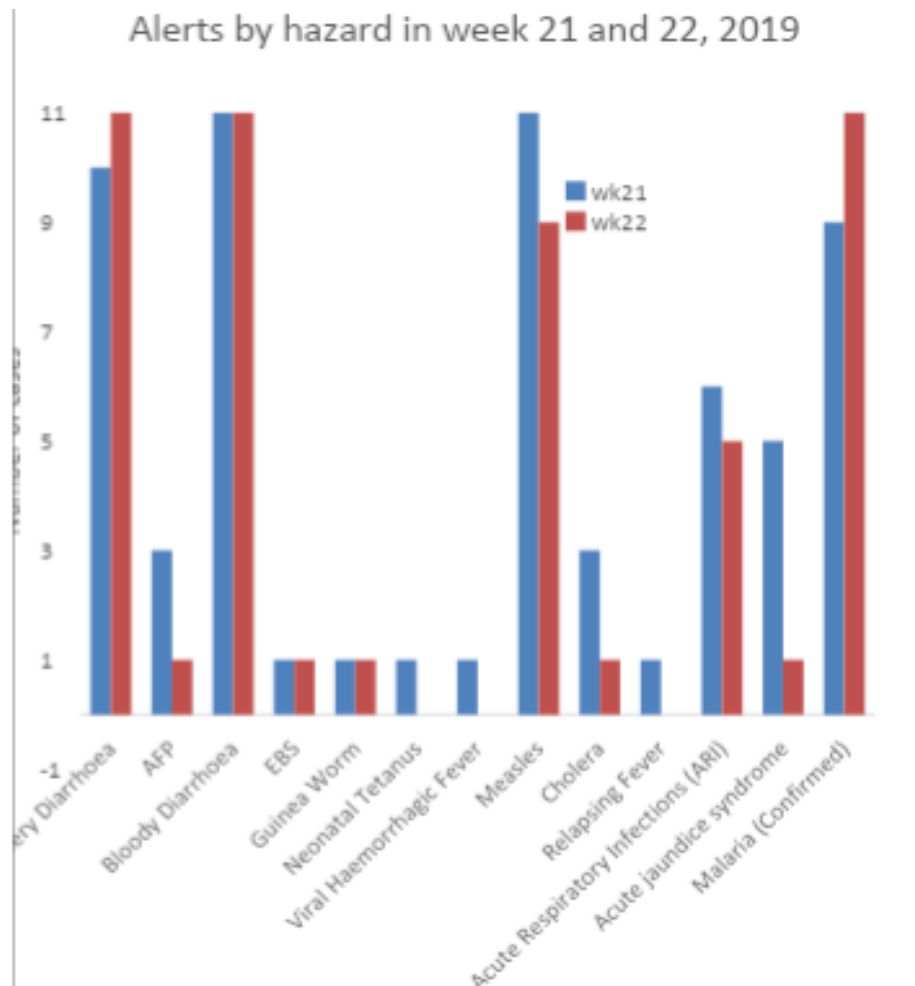
In Week 22, an alert of Guinea worm was investigated and later verified in Yambio Hub, the alert was later discarded. Cholera in Aweil hub was verified. As we see by the weeks the number of bloody diarrhoea is on the rise and there is a proposal to develop SOPs case investigation and sample collection in bother Cary-Blair and Filter paper for further investigations



The graph shows number of cumulative alerts from week 1 to week 22. 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 21 and 22, by disease

Row Labels	wk21	wk22	Total alerts
Acute Watery Diarrhoea	10	13	23
AFP	3	1	4
Bloody Diarrhoea	12	17	29
EBS	1	1	2
Guinea Worm	1	1	2
Neonatal Tetanus	1		1
Viral Haemorrhagic Fever	1		1
Measles	11	9	20
Cholera	3	1	4
Relapsing Fever	1		1
Acute Respiratory Infections (ARI)	6	5	11
Acute jaundice syndrome	5	1	6
Malaria (Confirmed)	9	12	21
Total alerts	64	61	125



No Much difference between week 21 and week 22 alerts, all the cholera alerts were discarded as they are under acute watery diarrhea (All Cholera alerts needs to be investigated regardless of age)

Cumulative alerts by risk assessment stage in 2019

County	OUTCOME	RISK ASSESSED	VERIFICATION	Total Alerts
Acute Watery Diarrhoea	6	1	132	139
AFP	2		28	30
Bloody Diarrhoea	3	2	143	148
EBS	4		17	21
Guinea Worm			16	16
Neonatal Tetanus			7	7
Viral Haemorrhagic Fever			6	6
Yellow Fever			6	6
Measles	22	5	191	218
Cholera			17	17
Malaria			27	27
meningitis	2			2
Relapsing Fever			4	4
Acute Respiratory Infections (ARI)	6	1	86	93
Acute jaundice syndrome	2		20	22
Malaria (Confirmed)	2		87	89
Total Alerts	49	9	787	845

- The table shows the cumulative alerts by risk assessment status in 2019
- Of the 845 alerts reported in 2019; 787 (93.1%) alerts were verified and nine (1.2%) underwent risk assessment.

OUTBREAKS IN 2019

Major suspected and confirmed outbreaks in
South Sudan in 2019

Suspected Outbreaks in South Sudan in week 22

- **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. He came to Banzugua to see his father on the 6th June, 2019. He was treated for malaria but failed to respond. He started having fever on Sunday 8th June 2019. Other signs and symptoms presented include: Red eyes, Headache, Abdominal pain, Bleeding from the nose, Injected conjunctiva. One child has died in Nambanga 7 days before he left to come to his father. The case has been isolated and sample collected for further investigation. 13 contacts have been line listed for follow up. Detailed report shall be provided as soon as the investigation is concluded.

- **Suspected EVD in Juba**

A 23 year old male who stayed in Sure Village developed a cough with stain of blood in March and on 8th June,2019 he seriously vomited fresh blood and on 9/6/2019 he was brought to Juba the following day on Monday 10/6/2019 he visited Munuki PHCC no accurate results were obtained. History of the case from the immediate relatives mainly from the caretaker person who Accompanied the late to Juba and other relatives who had previous information about the deceased. The date of onset was not specifically indicated but it was tracked back or said to be in March, 2019 started with coughing blood. History of recent travel 21 days to other places within or outside South Sudan especially Democratic Republic of Congo or pouching animal (meat). In conclusion the case was considered a TB cases given the onset of illness way back in March 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
Measles	Wau County and PoC-AA	28/1/2019	37	86(0.034)	yes	underway	yes	N/A
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
Measles	Tonj North	2/04/2019	0	20 (0.01)	Yes	Yes	Yes	N/A
Measles	Aweil West	4/04/2019	7	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

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
Controlled epidemics								
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

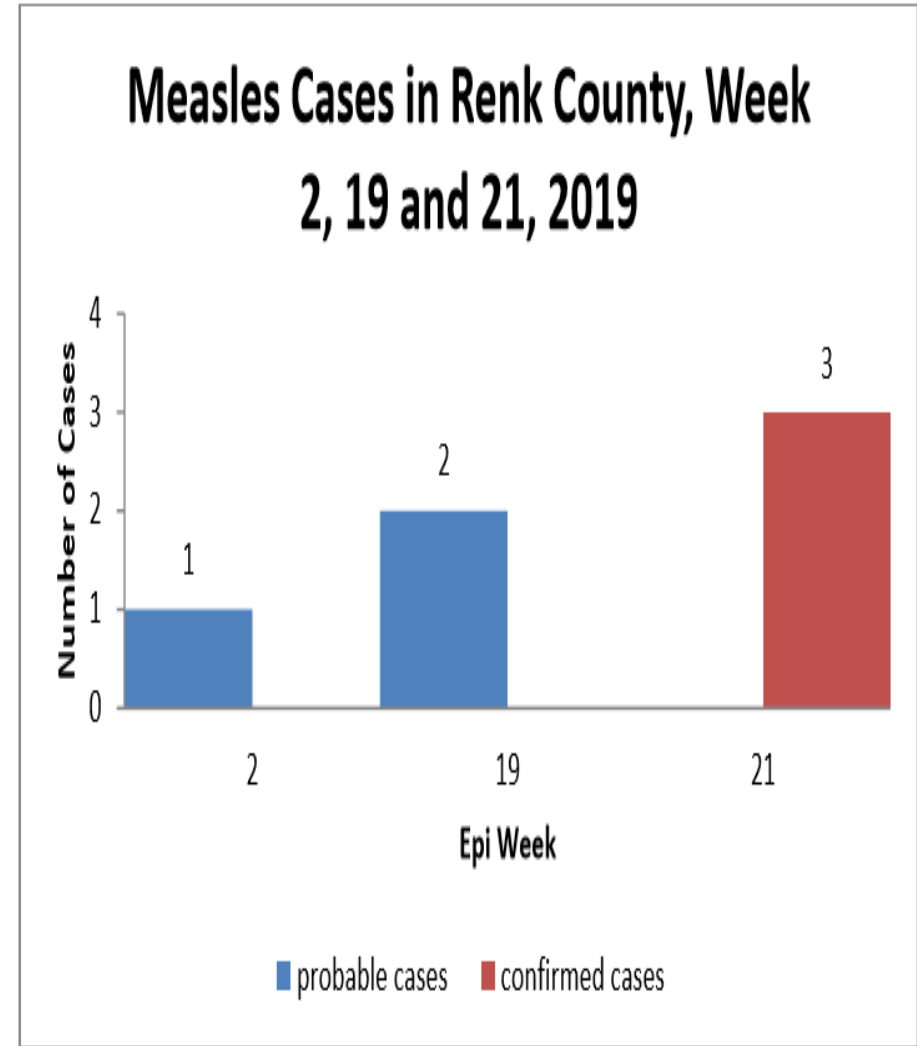
ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

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

Measles outbreak in Renk County

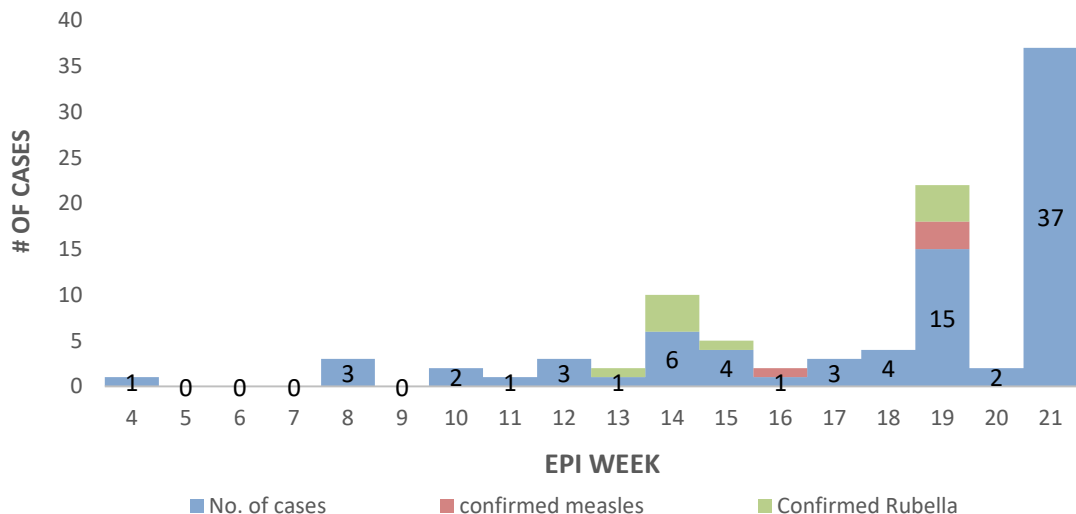
Simple Descriptive Epidemiology and Recommendations

- 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 January 2019
- 6 cases have been line listed as well as five samples were collected from new cases in May
- 3 tested positive for measles IgM
- 5 (83%) of the 6 cases are age less than 5 years
- All 5 cases are from Renk north Payam with 3 of the cases from Saraya village and 2 from imtidad Jadid
- World Vision is the lead agency in the county and have taken the lead in response
- Vaccination Campaign is expected to kick off soon as partners are working on the Micro Plan.



Confirmed Measles Outbreak in Wau County and POCAA

MEASLES CASES IN WAU COUNTY WEEK 4 TO 21, 2019



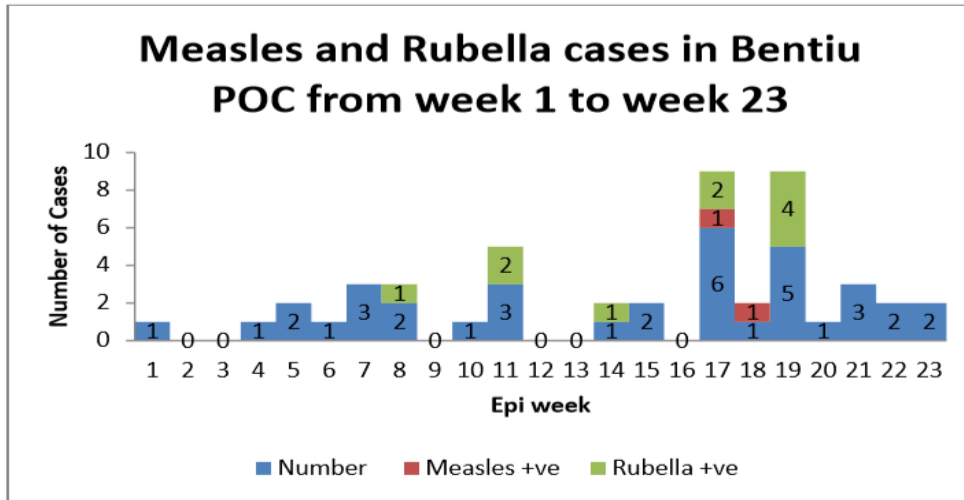
Introduction

- In week 19, 2019 a measles outbreak was confirmed in Wau county following the confirmation of 3 measles samples in Wau county and the POC AA.
- Wau county started seeing measles cases from as early as week 4 of 2019, but cases peaked in week 19 and 21 with 3 measles and 4 Rubella IgM positive in week 19.

Descriptive Epidemiology:

- A total of 86 Suspected cases from week 4 to 21 in Wau county
- 37 new cases in week 21
- 59.3% of the cases are from the POC-AA
- 59 of the cases are age less than 5 years
- Other payams affected are: Wau South and Wau North
- **Response and recommendations**
- IOM just concluded a vaccination Campaign in collaboration of 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.

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 37 suspected measles cases reported since January 2019
 - Six (6) suspected measles cases reported in week 17, 2019
 - Out of the 37 cases 2 tested positive for measles IgM
 - And 10 confirmed Rubella cases since week 8
 - All the cases are children <5 years except one case

Response and Recommendations

- IOM has completed a reactive vaccination campaign in Bentiu POC,
- MOH and WHO will do the PCE from the 17th of June, 2019
- Continue with routine immunization and community sensitization activities

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 to kick off on 16 of June by IRC and MoH and WHO will do post campaign investigation

- **Tonj North**

- Since the confirmation of Measles outbreak in Tonj North nearly 2 months ago, Vaccination campaign started on 10 of June by UNKEA

- **Juba town**

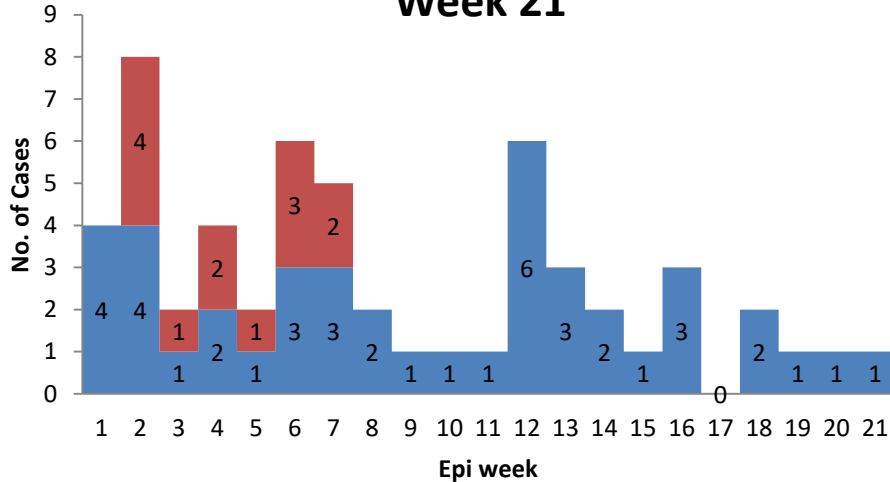
- Completed reactive campaign in PoCs and County.
- IMC is doing a mob up campaign in the POC targeting 2000 children to raise the coverage of 27%.
- Post Campaign Evaluation was done and reports are yet to be shared

- **Malakal PoC**

- MSF-Spain Completed reactive vaccination campaigns in both Malakal POC and town and PCE teams from MoH and WHO are set to go to Malakal from 17th May 2019

Hepatitis E, Bentiu PoC

HEV cases in Bentiu PoC from Week 1 to Week 21



Age groups	Female, n	Male, n	Total, n	Percent, %	Cumulative %
1-4 years	6	5	11	26.8	26.8
5-9 years	1	5	6	14.6	41.5
10-14 years	5	3	8	19.5	61.0
15-44 years	6	11	17	64.7	95.1
45+years	2	0	2	4.9	100.0
Total cases	20	23	43	100	

Bentiu PoC

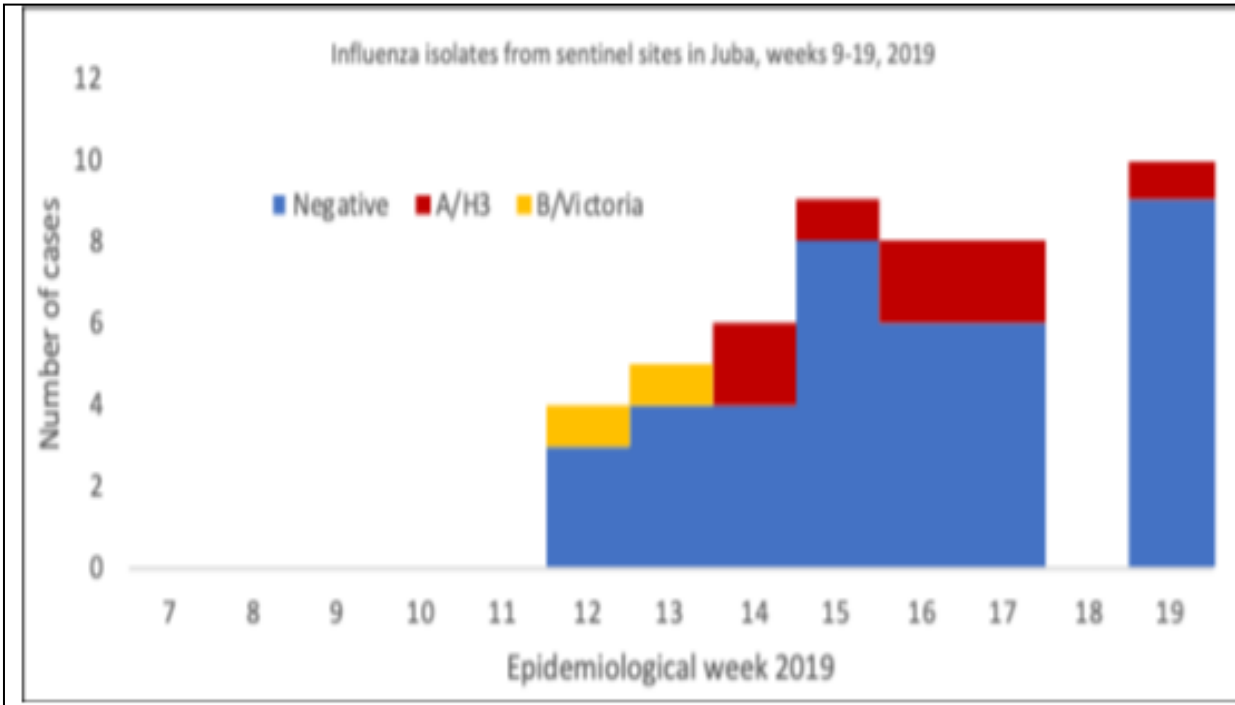
- The persistent transmission of HEV in Bentiu PoC continues with 45 cases since beginning of 2019
 - Thirteen (13) cases confirmed by PCR testing
 - Two new cases were reported in week 21 and 22, 2019
- All the cases were managed as outpatient cases except for two cases who were admitted on 23rd February, 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 20 female cases, 6 (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.

Malaria trends

Current malaria trends

- Malaria was the leading cause of morbidity and mortality, accounting for 42.1% of all morbidities and 51.2% of all mortalities in week 22, 2019.
- In relatively stable states, malaria is the top cause of morbidity accounting for 22.5% of all the consultations.
- At least 12 Counties with malaria trends that exceed the threshold (third quartile of trends for the period 2013-2017) and these include:
- 1. Juba hub(,Juba,Yei), 2. Torit hub(.Budi,Magwi,Torit), 3. Wau hub(Wau), 4. Rumbek hub(Rumbek Center,Rumbek East), 5. Aweil hub (Aweil North), 6. Kwajok hub(Abyi,Gogrial) and 7. Junglei hub(Canal pigji)
- Malaria Drugs currently available at National level and partners are expected to cater for the transport cost to their locations as this was not factored in the budget

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 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 for virological testing.

Since week 12 of 2019, a total of 75 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 35 samples.

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.

Ebola alerts investigated in 2019

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

- 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

- 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

Ebola update DRC 4th June, 2019

Current situation

- Currently as of 10th June, 2019
- **2071** Cases [**1977** confirmed & 94 probable]
- **1346** Deaths [**1302** confirmed & 94 probable]
- **110** Health workers [34 deaths]

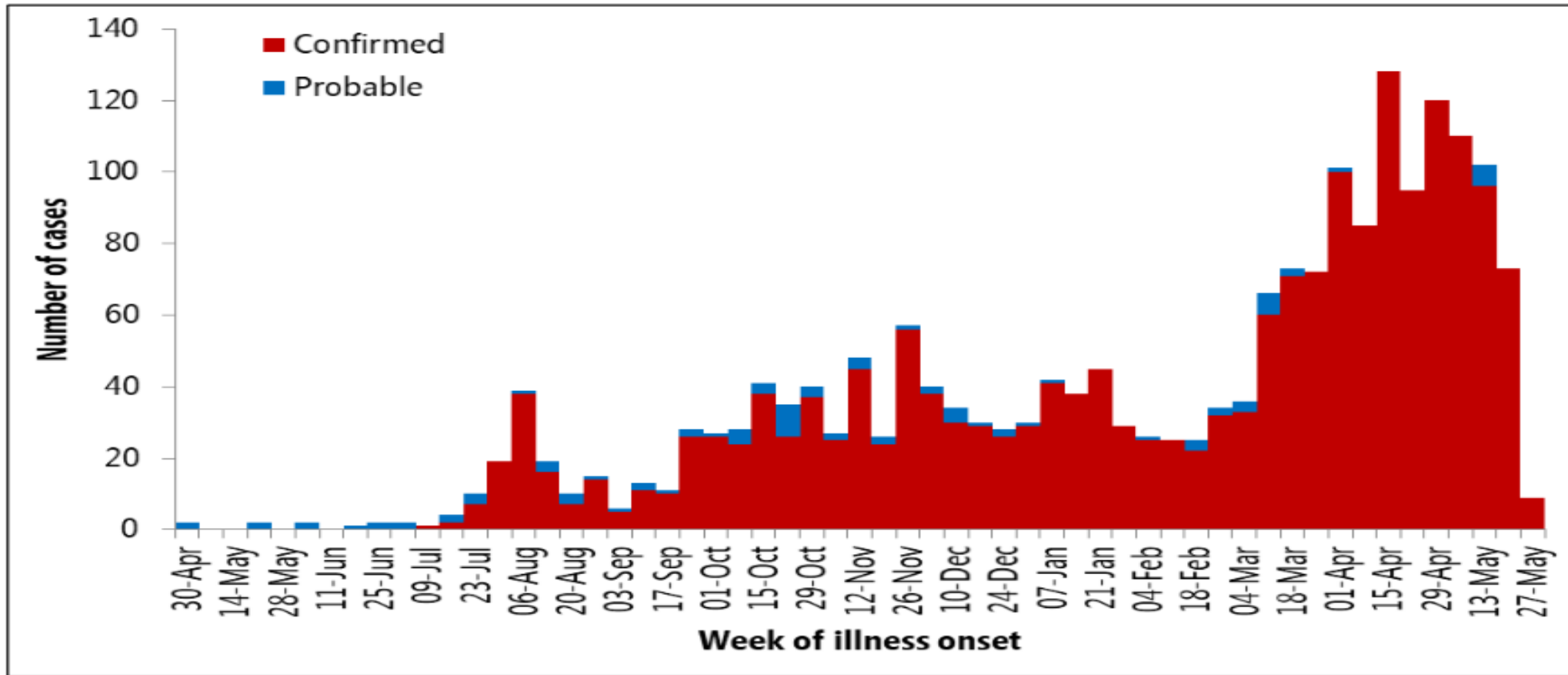
Response update

- 15,502 contacts under surveillance [84% followed up]; 114, 498 vaccinated

Affected health zones

- In the 21 days between 15 May to 4 June 2019, 80 health areas within 12 health zones reported new cases, representing 12% of the 664 health areas within North Kivu and Ituri provinces (Table 1 and Figure 2). During this period, a total of 280 confirmed cases were reported, the majority of which were from the Mabalako (27%, n=75), Butembo (23%, n=63), Katwa (16%, n=44), Beni (11%, n=30), Kalunguta (8%, n=23), Mandima (7%, n=19) and Musienene (5%, n=14) health zones.

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>

South Sudan Ebola Response | Monitoring of EVD screening activities at Points of Entry in countries prioritized for Ebola preparedness activities

Year: 2019

Week number: W22

From: 2019-05-27

To: 2019-06-02

Name of PoE	Passengers Screening Information			EVD Alerts		
	# screened	# isolated	# under Voluntary Home Quarantine	# reported	# validated	# suspects
Kor Kaya PoE	2,780	0	0	0	0	0
Bangangai	0	0	0	0	0	0
Basukangbi	0	0	0	0	0	0
Bazi Border	1,605	0	0	0	0	0
Birigo	1,415	0	0	0	0	0
Bori	1,009	0	0	0	0	0
Dukudu-Olo	0	0	0	0	0	0
Ezo	0	0	0	0	0	0
Gangura Border	0	0	0	0	0	0
James Dico	0	0	0	0	0	0
Salia Musala	3,071	0	0	0	0	0
Sangua 1	0	0	0	0	0	0
Tikori	74	0	0	0	0	0
Wau Airport	0	0	0	0	0	0
Yambio Airport	0	0	0	0	0	0
Yei Airport	12	0	0	0	0	0
Yei RRC	32	0	0	0	0	0
South Sudan	59,798	0	0	0	0	0

The electronic EWARS platform captures points of entry screening data and enables summarizing number of travelers screened on weekly basis. In week 22, A total of 59,798 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

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	2	Juba	Keter and	

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 GneXeprt 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	0	Wau		3 tested positive for measles

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

