

# South Sudan

## Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 49, 2019 (December 05 – December 08)



## Major Epidemiological Highlights in week 49 of 2019

- In week 49, 2019 IDSR reporting completeness was 65% and timeliness was 67% at health facility level. EWARNS reporting completeness and timeliness were both 78%.
- Of the 168 alerts in week 49; 48% were verified 3% were risk assessed and 2% required a response. Malaria (43), AWD (40), measles (17) and bloody diarrhea (25) were the top common alerts generated through the EWARS in week 49, 2019.
- On 17 December 2019, 5 acute diarrhea cases and one death were reported from Dug Dug PHCC/North Renk Town, near Sudan border
- In week 7, 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
- Since week 7 of 2019, a total of 234 ILI/SARI samples have been collected and tested in UVRI 197 being negative; 2 (1%) positive for Influenza B (Victoria); 2(1%) positive for Influenza A (H3); and 1(1%) positive for Influenza A (H1)pdm09 and 6 samples are pending test results .Since the beginning of 2019; Influenza A (H3) has been the predominant isolate. However, Influenza A (H1)pdm09 emerged from week 35 as a new circulating strain.

# 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 49,2019

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
1st	Kuajok	GOAL, CCM, WVI, Malaria Consortium, UNKEA, Save the Children, MSF	125	125	100%	125	100%
2nd	Rumbek	Doctors with Africa (CUAMM), LIVEWELL	116	112	97%	112	97%
3th	Yambio	AMREF, World Vision, CUAMM, CDTY, OPEN	214	197	92%	198	93%
5th	Wau	Cordaid, Healthnet TPO, CARE International, IHO	79	54	68%	57	72%
4th	Bentiu	Cordaid, UNIDOR, IRC, CHADO, CARE International, CRADA	87	56	64%	60	69%
6th	Aweil	Malaria Consortium, Healthnet TPO, IRC, CEDS, IHO	144	89	62%	92	64%
7th	Bor	Nile Hope, MDM, JDF, Livewell, CMD, HFO, EDA, CRADA, Malaria Consortium, CMA	138	85	62%	86	62%
9th	Torit	Cordaid,HLSS,CMD	178	71	40%	80	45%
8th	Malakal	Cordaid, WVI, RI, IMC, NIDO, UNKEA, MC, SSAID	99	43	43%	43	43%
10th	Juba	HLSS, SSUHA, <u>HealthnetTPO</u> , IHO	157	41	26%	43	27%
	South Sudan		1337	873	65%	896	67%

### 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 65% and completeness is 67%. Reporting performance is highest in Kwajok hub with completeness of 100% followed by Rumbek hub with completeness at 97%, Yambio hub with 93% completeness and Bentiu hub with 83% completeness. while the rest of the state hubs are below the target of 80%.

# IDSR Timeliness and Completeness Performance at County Level for week 49, 2019 (1)

Counties	Supporting Partners	Total No. of Health Facility	No. of HFs Report on Time	Timeliness Percentage	No. of HFs Report not on Time	Completeness Percentage
Rumbek Centre	Doctors with Africa (CUAMM)	23	23	100%	23	100%
Rumbek East	Doctors with Africa (CUAMM)	24	23	96%	23	96%
Rumbek North	Doctors with Africa (CUAMM)	7	5	71%	5	71%
Wulu	Doctors with Africa (CUAMM)	14	13	93%	13	93%
Cueibet	Doctors with Africa (CUAMM)	15	15	100%	15	100%
Yirol East	Doctors with Africa (CUAMM),LIVEWELL	14	14	100%	14	100%
Yirol West	Doctors with Africa (CUAMM)	12	12	100%	12	100%
Awerial	Doctors with Africa (CUAMM)	7	7	100%	7	100%
Yambio	World Vision International	42	40	95%	40	95%
Ibba	AMREF	11	7	64%	7	64%
Maridi	AMREF	26	26	100%	26	100%
Mundri West	CUAMM	21	19	90%	19	90%
Mundri East	CUAMM	20	20	100%	20	100%
Tambura	World Vision International	26	25	96%	25	96%
Mvolo	CUAMM	11	11	100%	11	100%
Nzara	World Vision International	20	18	90%	18	90%
Nagero	World Vision International	10	4	40%	5	50%
Ezo	World Vision International	27	27	100%	27	100%
Abiemnhom	Cordaid	4	4	100%	4	100%
Koch	UNIDOR,CRADA,CARE International,IRC.	5	3	60%	3	60%

Counties	Supporting Partners	Total No. of Health Facility	No. of HFs Report on Time	Timeliness Percentage	No. of HFs Report not on Time	Completeness Percentage
Gogrial West	GOAL	32	32	100%	32	100%
Gogrial East	GOAL	15	15	100%	15	100%
Abyei	AAA,Save the Children,MSF	15	15	100%	15	100%
Tonj East	CCM	12	12	100%	12	100%
Tonj South	CCM	12	12	100%	12	100%
Tonj North	CCM	14	14	100%	14	100%
Twic Mayardit	GOAL	25	25	100%	25	100%
Bor	MDM + JDF	25	24	96%	24	96%
Duk	MDM + JDF	13	13	100%	13	100%
Pibor	LIVEWELL,CRADA	14	4	29%	4	29%
Akobo	NILE HOPE	8	0	0%	0	0%
Fangak	CMD,HFO	16	16	100%	16	100%
Uror	CMA,Nile Hope,Malaria Consortium	8	1	13%	1	13%
Nyirrol	CMA,Nile Hope,Malaria Consortium	8	2	25%	2	25%
Twic East	MDM + JDF	9	3	33%	3	33%
Ayod	CMD,EDA	15	14	93%	14	93%
Pochalla	LIVEWELL	7	6	86%	7	100%
Pigi Canal	IMC	16	2	13%	2	13%
Mayendit	UNIDOR	13	12	92%	12	92%
Guit	Cordaid	5	0	0%	0	0%

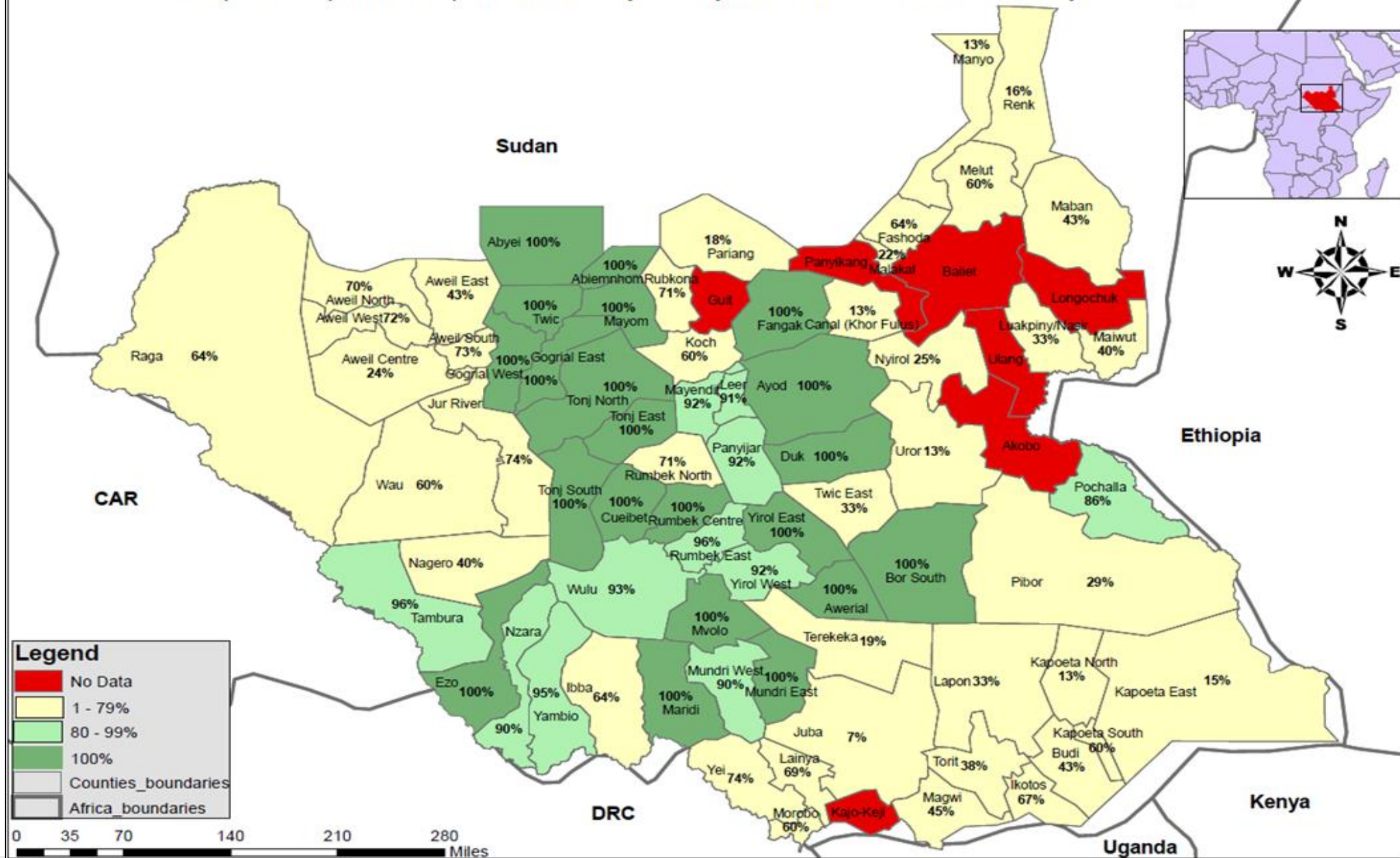
## IDSR Timeliness and Completeness Performance at County Level for week 49, 2019 (2)

Counties	Supporting Partners	Total No. of Health Facility	No. of HFs Report on Time	Timeliness Percentage	No. of HFs Report not on Time	Completeness Percentage
Malakal	IMC	4	2	50%	2	50%
Akoka	IMC	5	0	0%	0	0%
Baliet	IMC	4	0	0%	0	0%
Renk	WVI + RI	11	4	36%	4	36%
Melut	WVI + RI	7	6	86%	6	86%
Manyo	CORDAID	6	1	17%	1	17%
Maiwut	RI	4	4	100%	4	100%
Fashoda	CORDAID	9	9	100%	9	100%
Ulang	MC	7	0	0%	0	0%
Maban	WVI + RI	13	9	69%	9	69%
Luakping Nasir	MC	19	8	42%	8	42%
Longechuk	RI	9	0	0%	0	0%
Panyikang	IMC	6	0	0%	0	0%
Aweil West	HealthNetTPO	39	28	72%	32	82%
Aweil East	IRC	44	20	45%	20	45%
Aweil Center	Malaria Consortium(MC)	17	10	59%	10	59%
Aweil South	Malaria Consortium(MC)	11	8	73%	8	73%
Aweil North	HealthNetTPO	33	23	70%	23	70%
Pariang	Cordaid	13	2	15%	5	38%
Panyijiar	IRC	13	13	100%	13	100%

Counties	Supporting Partners	Total No. of Health Facility	No. of HFs Report on Time	Timeliness Percentage	No. of HFs Report not on Time	Completeness Percentage
Juba	HLSS	55	4	7%	4	7%
Kajo-Keji	SSUHA	15	0	0%	0	0%
Yei	SSUHA	19	14	74%	15	79%
Lainya	SSUHA	16	11	69%	12	75%
Morobo	SSUHA	4	3	75%	3	75%
Terekeka	HealthNetTPO	47	9	19%	9	19%
Torit	Cordaid	37	14	38%	14	38%
Lopa Lafon	HLSS	24	8	33%	8	33%
Ikotos	HLSS	27	18	67%	21	78%
Magwi	HLSS	31	12	39%	12	39%
Budi	Cordaid	21	9	43%	12	57%
Kapoeta South	CMD	10	6	60%	8	80%
Kapoeta East	CMD	13	2	15%	2	15%
Kapoeta North	CMD	15	2	13%	3	20%
Wau	Cordaid	30	18	60%	20	67%
Raja	HealthNetTPO	14	9	64%	9	64%
Jur River	Cordaid	34	27	79%	28	82%
Rubkona	Cordaid	9	5	56%	5	56%
Mayom	Cordaid	9	9	100%	9	100%
Leer	UNIDOR	10	9	90%	9	90%



# Map of completeness performance by county in week 49, 2019 as of friday 10:00 AM.



Disclaimer: 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.

# Surveillance | EWARS surveillance performance indicators by partner week 49, 2019

## Surveillance | EWARS surveillance indicators

**Table 4 | EWARS surveillance performance indicators by partner (W49 2019)**

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	0	0		
GOAL	2	2	100%	100%
HLSS	1	0	0%	0%
IMA	8	8	100%	25%
IMC	6	5	83%	83%
IOM	11	7	64%	64%
IRC	1	1	100%	100%
Medair	2	2	100%	100%
MSF-E	2	2	100%	100%
MSF-H	3	2	67%	67%
SMC	0	0		
UNIDO	1	1	100%	100%
UNKEA	1	1	100%	100%
World Relief	1	1	100%	100%
TRI-SS	2	2	100%	100%
LIVEWELL	3	3	100%	100%
<b>Total</b>	<b>64</b>	<b>50</b>	<b>78%</b>	<b>69%</b>

**Table 5 | Summary of key EWARS surveillance indicators**

W49	Cumulative (2019)	
<b>64</b>	-	Number of EWARS reporting sites
<b>78%</b>	<b>62%</b>	Completeness
<b>69%</b>	<b>57%</b>	Timeliness

**Table 6 | EWARS report submissions**

W49	Cumulative (2019)	
<b>50</b>	<b>2,026</b>	total submissions
<b>0</b>	<b>9</b>	submissions by mobile
<b>50</b>	<b>2016</b>	submissions by web

- Both completeness and timeliness for weekly reporting were 78% in week 49 for partner-supported clinics serving IDP sites. The cumulative completeness and timeliness were 62% and 57% respectively for 2019.



# EVENT-BASED SURVEILLANCE

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

**Table 7 | Alert performance indicators by Hub**

Hub	W49		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
Aweil	21	100%	463	97%
Bentiu	13	8%	539	40%
Bor	25	100%	633	98%
Juba	4	0%	357	37%
Kuajok	9	0%	529	24%
Malakal	12	67%	192	65%
Rumbek	9	100%	767	100%
Torit	13	31%	541	74%
Wau	8	75%	253	79%
Yambio	54	13%	1075	80%
<b>South Sudan</b>	<b>168</b>	<b>48%</b>	<b>5349</b>	<b>73%</b>

**Table 8 Summary of key alert indicators**

W49	Cumulative (2019)	
<b>168</b>	<b>5349</b>	Total alerts raised
<b>48%</b>	<b>73%</b>	% verified
<b>0%</b>	<b>0%</b>	% auto-discarded
<b>1%</b>	<b>3%</b>	% risk assessed
<b>0%</b>	<b>2%</b>	% requiring a response

- A total of 168 alerts were received in week 49, 2019 out of which 48% were verified 3% were risk assessed and 2% required a response.

**Table 9 | Alert performance indicators by event**

Event	W49		Cumulative (2019)	
	# alerts	% verif.	# alerts	% verif.
<b>Indicator-based surveillance</b>				
Malaria	43	28%	1020	75%
AWD	40	63%	1240	72%
Bloody Diarr.	25	48%	917	67%
Measles	17	53%	812	70%
Meningitis	0	0%	0	0%
Cholera	4	100%	132	89%
Yellow Fever	1	100%	26	81%
Guinea Worm	2	50%	102	88%
AFP	0	0%	140	68%
VHF	1	100%	41	78%
Neo. tetanus	3	33%	64	75%
<b>Event-based surveillance</b>				
EBS total	0	0%	32	84%

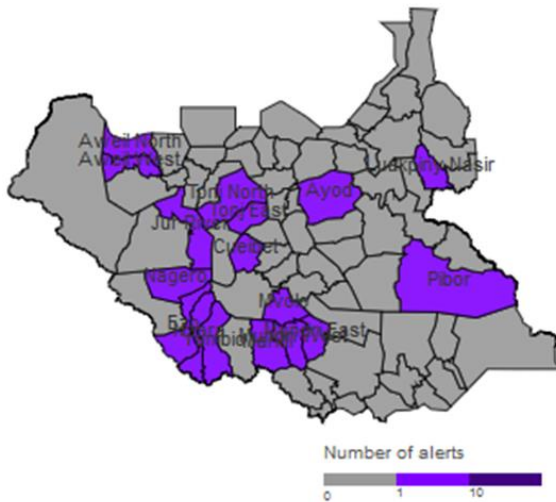
**Table 10 | Event risk assessment**

W49	Cumulative (2019)	
1	27	Low risk
30	30	Medium risk
0	38	High risk
0	42	Very high risk

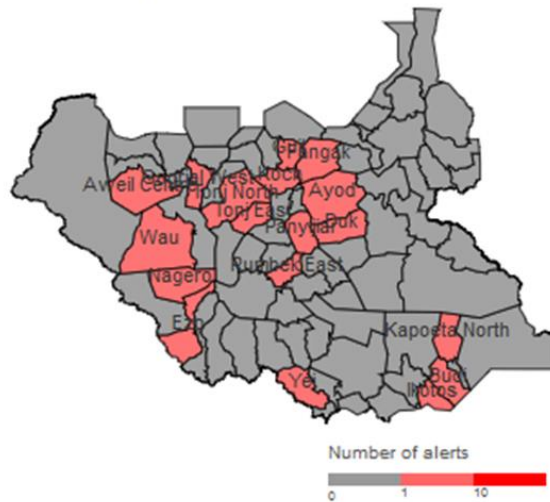
- Malaria (43), AWD (40), measles (17) and bloody diarrhea (25) were the top common alerts generated through the EWARS in week 49, 2019.

# Alert | Map of key disease alerts by county week 49, 2019

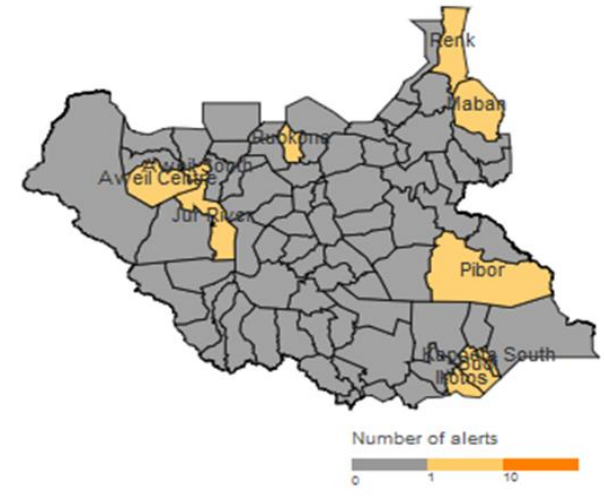
Map 2a | Malaria (W49 2019)



Map 2b | Bloody diarrhoea (W49 2019)



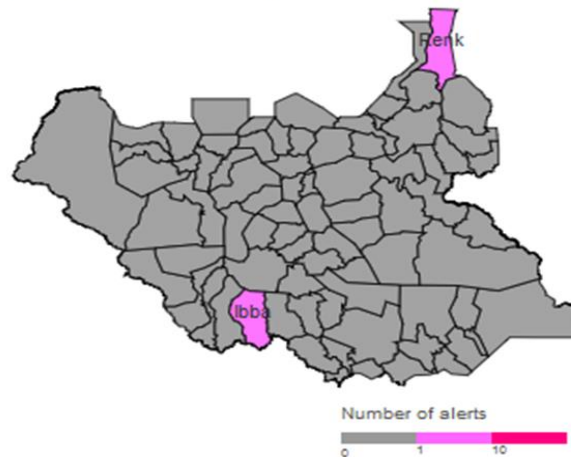
Map 2c | Measles (W49 2019)



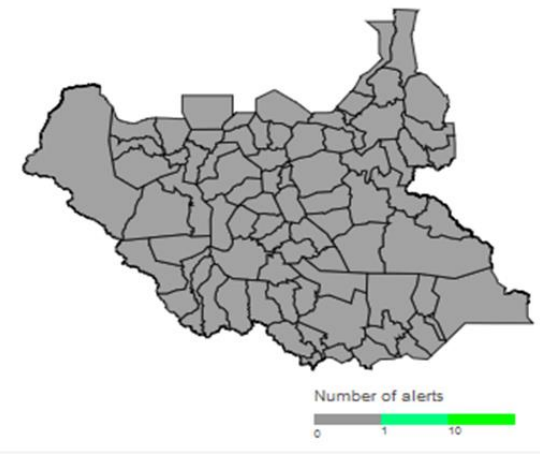
Map 2d | Cholera (W49 2019)



Map 2e | Guinea Worm (W49 2019)



Map 2f | Event-based surveillance (W49 2019)



## Alert by disease and Hubs in Week 49, 2019 [A total of **168** event specific alerts generated by Hubs]

Hub/Former States	AJS	ARI	Acute Watery Diarrhoea	Bloody Diarrhoea	Guinea Worm	Cholera	Meningitis	Yellow Fever	Neonatal Tetanus	VHF	Malaria	Measles	Total Alerts
Bor		5	8	7							4	2	26
Kuajok			5	3							3		11
Torit		1	2	3		1						5	12
Bentiu	1	3	1	4			1					4	14
Yambio		9	7	4	1				1		30		52
Juba		2	1	1									4
Aweil	1	3	8	1		1			1		1	2	18
Rumbek		2	5	1							1		9
Wau		2	2	1							2	2	9
Malakal	1	1	1		1	2		1	1	1	2	2	13
<b>Total Grand</b>	<b>3</b>	<b>28</b>	<b>40</b>	<b>25</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>43</b>	<b>17</b>	<b>168</b>

### During this week:

- **3 AJS alerts: 01 discarded and 2 pending**
- **28 ARI alerts: 14 are pending verification, 4 been monitored and 10 discarded**
- **40 AWD alerts: 15 pending, and 25 discarded.**
- **25 ABD alerts: 13 pending verification and 12 discarded**
- **4 Cholera alerts: 3 discarded and 1 under monitoring**
- **2 G.W alerts: 1 under monitoring and 1 pending verification**
- **1 Meningitis alert: pending verification**
- **1 Yellow Fever alert: under monitoring**
- **3 N.T alerts: 1 discarded and 2 pending verification**
- **1 VHF alert: under monitoring**
- **Malaria alerts: 4 under monitoring, 8 discarded and 31 pending verification**
- **17 Measles alerts: 8 are pending verification, 3 been monitored and 6 discarded**

## Cholera Alert In DuG Dug PHCC/Renk on 17th December, 2019

- Report of 5 acute diarrhea cases and one death in Dug dug phcc/North Renk Town, near Sudan border (Sudan has had running cholera outbreak in Sennar and Blue Nile states).

### Response Actions

- The Alert was verified by WHO team on ground in consultation with the state minister of health of Northern upper Nile state
- RRT in Renk activated this morning to investigate and collect samples.
- OCV round 2 current going on, focus will shift to mop up in Dug dug

### Response Update:

- There were three cases and 1 death. All cases are under five. Clinical symptoms were not consistent with suspected Cholera. RDTs were negative.





# SUSPECTED OUTBREAKS IN 2019

Major suspected outbreaks in South Sudan in  
2019

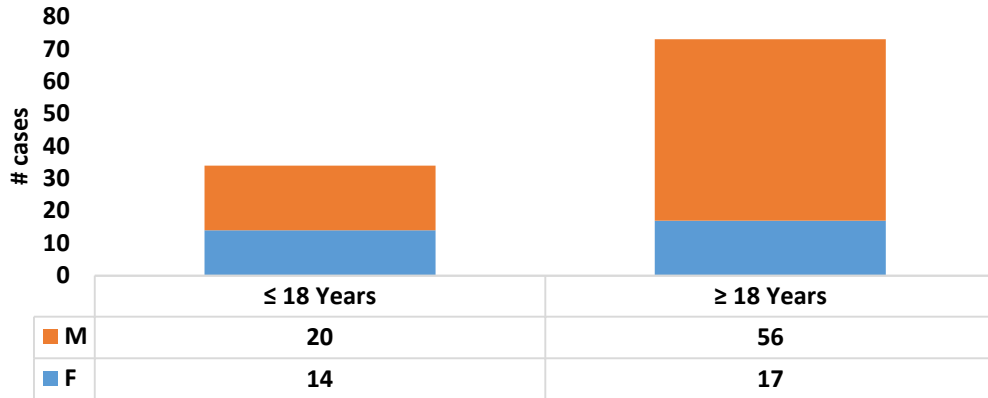
## EVD Suspect cases in South Sudan 2018 and 2019 as of week 49, 2019

Source of Information	Met EVD cases definition		Total cases
	NO	Yes	
<b>2018</b>	<b>30</b>	<b>12</b>	<b>42</b>
Community	3	2	5
Health Worker	9	9	18
Screening point	18	1	19
<b>2019</b>	<b>31</b>	<b>38</b>	<b>69</b>
Community	6	8	14
Health Worker	11	18	29
RRT lead Team	1	1	2
Screening point	4	5	9
State Surveillance Officer	8	4	12
WHO State Coordinator	1	2	3
<b>Grand Total</b>	<b>61</b>	<b>50</b>	<b>111</b>

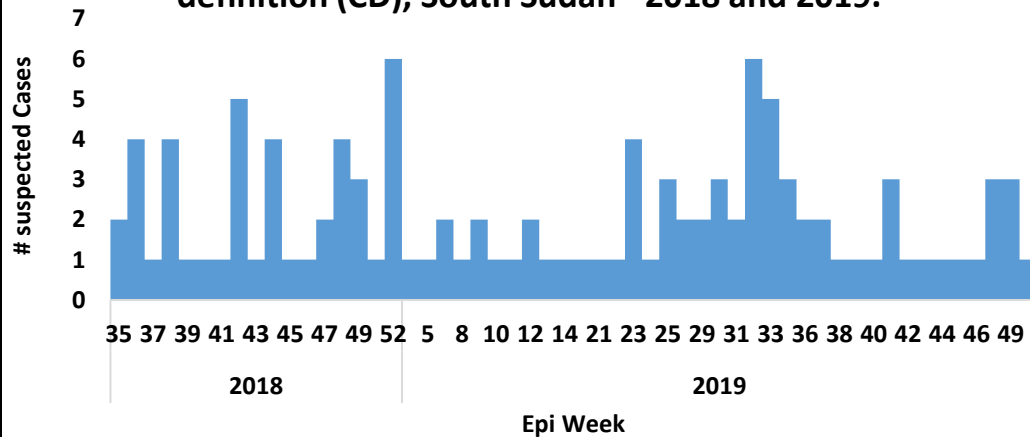
- Since August 2018, at least 111 suspect EVD cases have been reported, of which:
- Most 69 (59.4%) have been reported in 2019
- Most of the suspect EVD cases have been reported by health workers at health facility level

# EVD Suspect cases in South Sudan 2018 and 2019 as of week 49, 2019

Age and Sex distribution of suspected EVD cases South Sudan - 2018 and 2019.

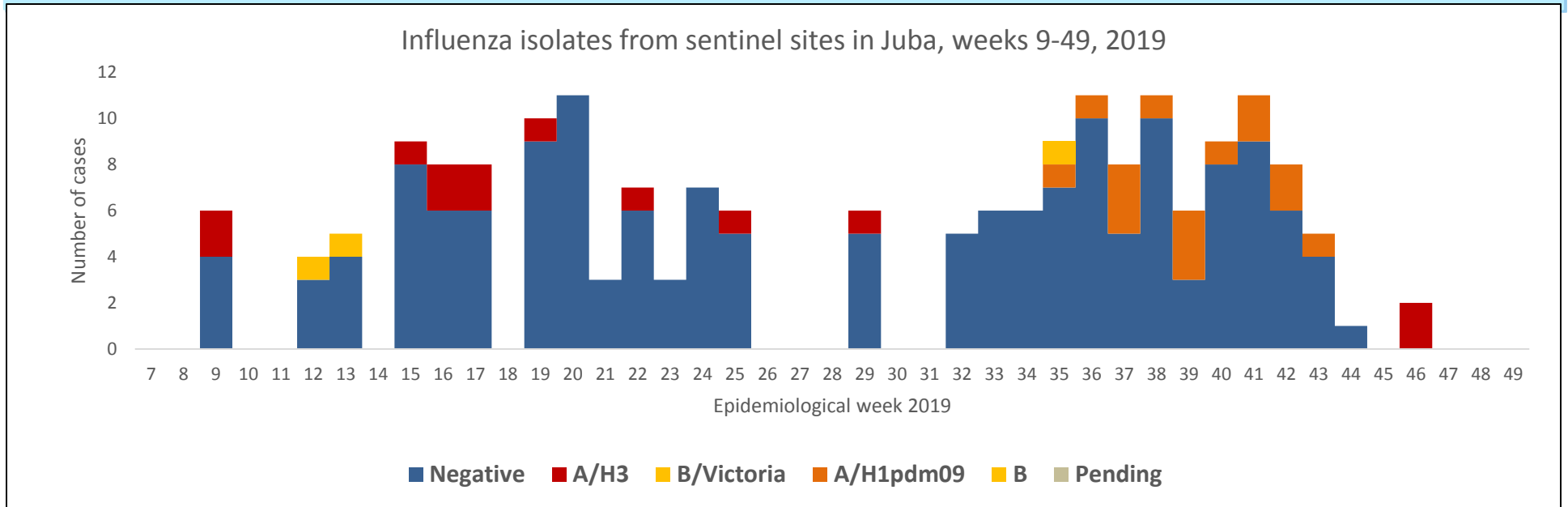


EVD suspected cases by epi week and EVD cases definition (CD), South Sudan - 2018 and 2019.



- Most of the suspect EVD cases have been reported in adults 18 years and above (72%)
- Similarly, most suspect EVD cases have been reported in males (56%)
- 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

## Routine Sentinel Surveillance | Human Influenza



- In week 7, 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 7 of 2019, a total of 234 ILI/SARI samples have been collected and tested in UVRI 197 being negative; 2 (1%) positive for Influenza B (Victoria); 2(1%) positive for Influenza A (H3); and 1(1%) positive for Influenza A (H1)pdm09 and 6 samples are pending test results .
- Since the beginning of 2019; Influenza A (H3) has been the predominant isolate. However, Influenza A (H1)pdm09 emerged from week 35 as a new circulating strain.

# 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
<b>Ongoing epidemics</b>								
Measles	Wau County and PoC-AA	28/1/2019	NR	653 (0.0015)	yes	Yes	yes	N/A
Rubella	Wau PoC-AA	25/3/2019	NR	11(0)	yes	No	yes	N/A
Hepatitis E	Bentiu PoC	03/01/2018	5	113 (0.044)	Yes	No	Yes	Yes
Measles	Pibor	17/01/2019	NR	2073 (4.82)	yes	No	yes	N/A
Measles	Bentiu PoC	24/04/2019	26	223(0.0117)	Yes	Yes	Yes	N/A
Measles	Budi	03/10/2019	2	31(0.165)	Yes	No	Yes	N/A
Measles	Ikotos	15/11/2019	9	91(0.099)	Yes	No	Yes	N/A
Measles	Aweil South	15/03/2019	NR	94(0.032)	Yes	No	Yes	N/A
Measles	Jur River	06/02/2019	64	197(0.324)	Yes	Yes	Yes	N/A
Measles	Juba	21/11/2019	NR	6( 0.1667)	Yes	No	Yes	N/A
Measles	Yambio	6/1/2019	2	72(0.23)	yes	Yes	yes	N/A
Measles	Maban	1/11/2019	7	34(204)	yes	No	Yes	N/A
Measles	Aweil East	19/2/2019	2	74(0.27)	yes	No	Yes	N/A



## ● Measles outbreaks confirmed in 2019

- **21 counties** – Pibor; Abyei; Mayom; Gogrial West; Aweil South; Melut; Gogrial East; Juba; Tonj North; Aweil West; Aweil East; Renk; Wau; Tonj North; Jur River; Yambio, Budi, Ikotos, Maban and Aweil East.
- **4 PoC/IDP sites** – Wau PoC AA; Bentiu PoC; Malakal PoC; & Juba PoC; Mangateen IDPs.
- **New confirmed measles outbreaks and response dates:**
  - Ikotos: **planned campaign on 15<sup>th</sup> Dec, 2019**
  - Aweil South; **planned campaign**
  - Budi; **planned campaign on 9<sup>th</sup> Dec, 2019**
  - Mangateen IDPs/ Juba: **planned campaign**
  - Maban: **campaign started on 5<sup>th</sup> Dec, 2019**

# Measles Outbreak situation & response by county as of week 49, 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%	2-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%	2-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%	2-Apr-19	Done	44,400 (91%)	controlled	
7	Tonj South	131,857	6	41	47	35.6	0	0.0%	30-Jul-19	Done	30,903(118%)	active	
8	Jur River	192,937	7	190	197	54.4	1	1.0%	3-Feb-19	Done	35%	active	mop up underway
9	Wau	256,363	13	641	653	254.7	5	0.8%	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%	4-Apr-19	Done	26477 (97%)	controlled	
12	Aweil South	112,162	10	84	94	94.0	0	0.0%	15-Mar-19	Done	24,261 (116%)	reactive	
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	2065	2073	922.9	9	0.4%	12-Jan-19	Done	13,965 (30%)	controlled	mop up underway
15	Renk	218,083	3	4	7	3.2	0	0.0%	9-Jan-19	Done	7,712 (79.8%)	controlled	
16	Juba PoC	38,500	2	3	5	13.0	0	0.0%	5-Apr-19	Done	74%	controlled	
17	Bentiu PoC	103,424	45	178	223	178.9	1	0.5%	1-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	0.1	1	6.3%	5-Sep-19	Done	63.00%	controlled	
21	Budi	12,986	5	18	31	283.7	0	0.0%	1-Oct-19	pending		active	
22	Ikotos		5	87	91		7	0.3%	15-Nov-19	pending		active	
23	Juba/Mangateen		4	2	6		0	0.0%	1-Nov-2019	pending		active	
24	Maban		32	2	34		0	0.0%		pending	7394.00%	active	
	<b>Total</b>	<b>4,302,346</b>	<b>215</b>	<b>4,034</b>	<b>4,255</b>	<b>92.4</b>	<b>23</b>	<b>0.6%</b>					

## Measles and Rubella Laboratory Test Results, week 49 of 2019 (1)

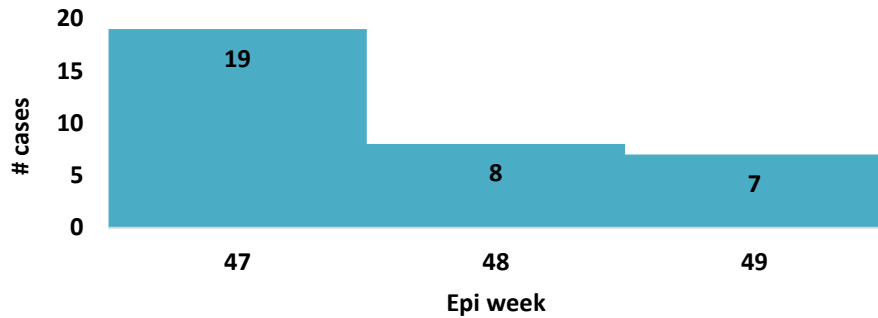
Location/Health Facility	Date sent to Juba	Date Received at PHL	Suspected Disease	Lab results
Juba/ Oasis Rejaf	11/30/2019	12/4/2019	measles	Measles IgM positive
Juba/ Oasis Rejaf	11/30/2019	11/4/2019	measles	Measles IgM positive
Juba/ Oasis Rejaf	11/30/2019	12/4/2019	measles	Measles IgM positive
Juba na Bari / Al sabah	11/25/2019	12/4/2019	measles	Measles IgM positive
Jur River/ Tella	11/29/2019	12/4/2019	measles	Measles IgM positive
Jur River/ Tella	11/30/2019	12/4/2019	measles	Measles IgM positive
Jur River/ Tella	11/30/2019	12/4/2019	measles	Measles IgM positive
Jur River/ Tella	11/30/2019	12/4/2019	measles	Measles& Rubella IgM negative
Lotukei (Budi)/ Kikilai PHCC	11/25/2019	12/4/2019	measles	Measles IgM positive
Lotukei (Budi)/ Kikilai PHCC	11/25/2019	12/4/2019	measles	Measles IgM positive
Lotukei (Budi)/ Kikilai PHCC	11/25/2019	12/4/2019	measles	Measles&Rubella IgM negative
Lotukei (Budi)/ Kikilai PHCC	11/25/2019	12/4/2019	measles	Measles IgM positive
Lotukei (Budi)/ Kikilai PHCC	11/25/2019	12/4/2019	measles	Measles IgM positive

### During this week 27 sample results were released as follows :

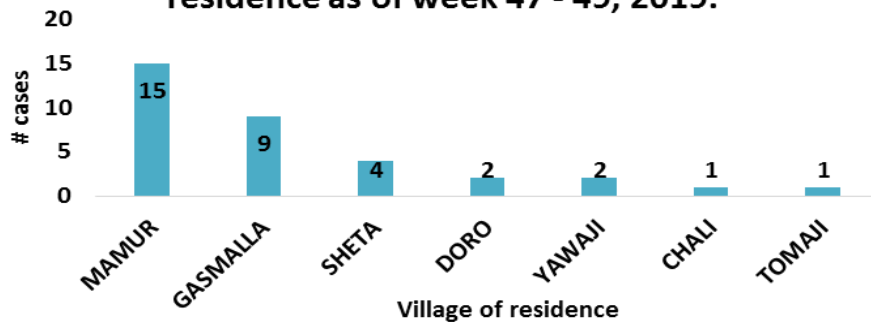
- Juba Oasis/Rejaf (3) samples:
  - (3) measles IgM positive
- Juba na Bari / Al sabah (1) sample
  - (1) measles IgM positive
- Jur River/ Tella (4) samples:
  - (3) measles IgM positive
  - (1) measles/rubella IgM negative
- Aweil East (2) samples:
  - (2) measles IgM positive
- Lotukei (Budi)/ Kikilai PHCC (5) samples:
  - (4) measles IgM positive
  - (1) measles & rubella IgM negative

# Confirmed Measles Outbreak in Maban County

Epi curve for measles cases in maban county as of week 47 - 49, 2019.



Measles cases in maban county by village of residence as of week 47 - 49, 2019.



Age group	Cases	Percentage	Cum. %
0 - 4 Years	28	82%	82%
10 - 14 Years	2	6%	88%
5 - 9 Years	4	12%	100%
<b>Grand Total</b>	<b>34</b>	<b>100%</b>	

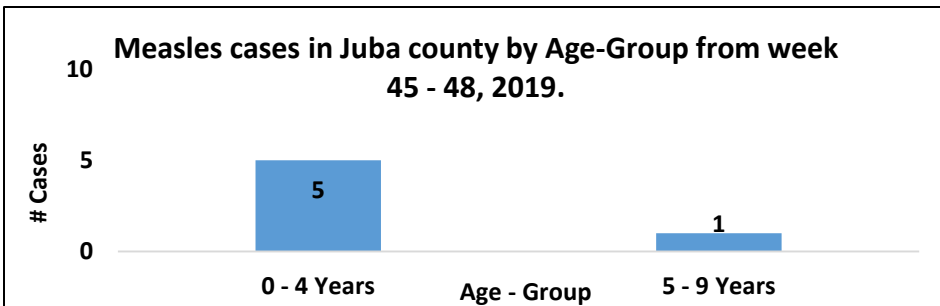
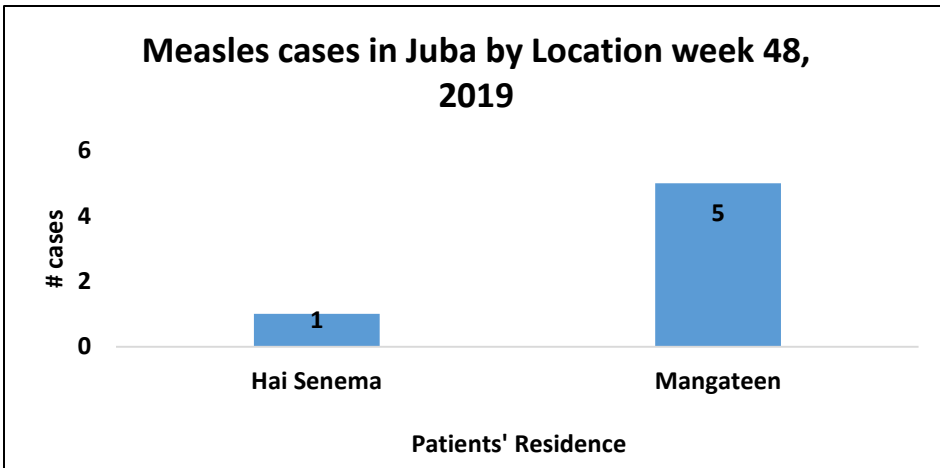
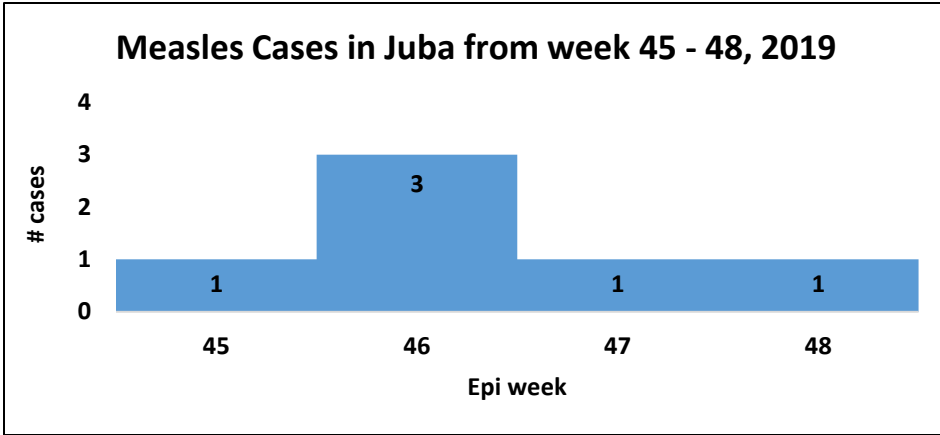
## Descriptive Epidemiology:

- Initial cases were reported on 1<sup>th</sup> November 2019
- A total of 34 Suspected Measles case have been line listed in Maban county
- 07 new cases were reported in week 49, 2019
- 12 samples were collected of which, 11 samples tested positive for measles and (1) positive for Rubella IgM
- The most affected payams are: Mamur and Gasmalla
- 82% of the cases are less than 5 years of age
- 32% of cases are females while 62% are male
- No deaths reported

## Response and Recommendations:

- Rapid response team deployed to support the response
- Reactive campaign micro plan has been developed
- Surveillance and line-listing are ongoing
- Case management underway
- SMOH, MSF-B are conducting a reactive campaign from 4<sup>th</sup> Dec, targeting 7394 children age 6 months to 15 years in the affected areas in Maban.

# Confirmed Measles Outbreak in Juba County / Mangateen IDP Camp



## Descriptive Epidemiology:

- Initial cases were reported on 11<sup>th</sup> November 2019
- A total of 06 suspected measles case have been in Juba county since week 45 of 2019.
- 01 new cases were reported in week 48, 2019
- 04 samples were collected and all tested positive for measles IgM
- The most affected payam is Mangateen
- 83% of the cases are less than 5 years of age
- 17% of cases are females while 83% are male
- No deaths were reported

## Response and Recommendations:

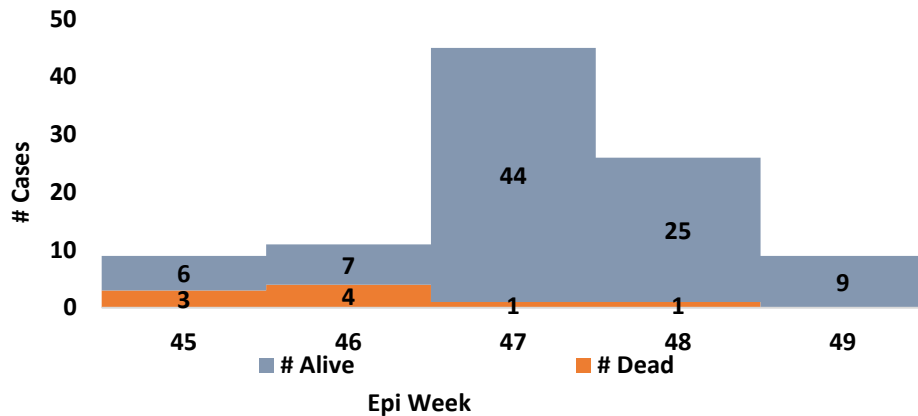
- Rapid response team deployed to support the response
- Micro plan has been developed, campaign will wait for the mass measles campaign in February.
- Surveillance and line-listing are ongoing
- Case management underway

Age-Group	Cases	Percentage	Cum. %
0 - 4 Years	5	83%	83%
5 - 9 Years	1	17%	100%
<b>Grand Total</b>	<b>6</b>	<b>100%</b>	



# Confirmed Measles Outbreak in Ikotos County

Measles cases in Ikotos from week 40 to week 49, 2019



Measles cases in Ikotos by Village week 40 to 49, 2019



Age Group	Cases	Deaths	Percentage	CFR	Cum. %
0 - 4 Years	71	8	78%	11.3%	78%
5 - 9 Years	9	1	10%	11.1%	88%
15+ Years	10	0	11%		99%
10 - 14 Years	1	0	1%		100%
<b>Grand Total</b>	<b>91</b>	<b>9</b>	<b>100%</b>		

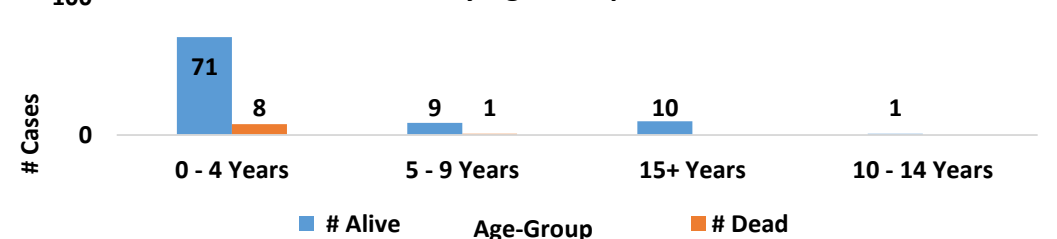
## Descriptive Epidemiology:

- Initial cases were reported on 15<sup>th</sup> November 2019
- A total of 91 Suspected Measles case have been in Ikotos county since week 45 of 2019.
- 09 new cases were reported in week 49, 2019
- 06 samples were collected initially of which, 05 samples tested positive for measles and (1) negative for measles/Rubella IgM negative
- The most affected payams are: Lira, Huma and Tuduha
- 78% of the cases are less than 5 years of age
- 54% of cases are females while 46% are male
- Total of 9 deaths reported CFR of (9.9%)

## Response and Recommendations:

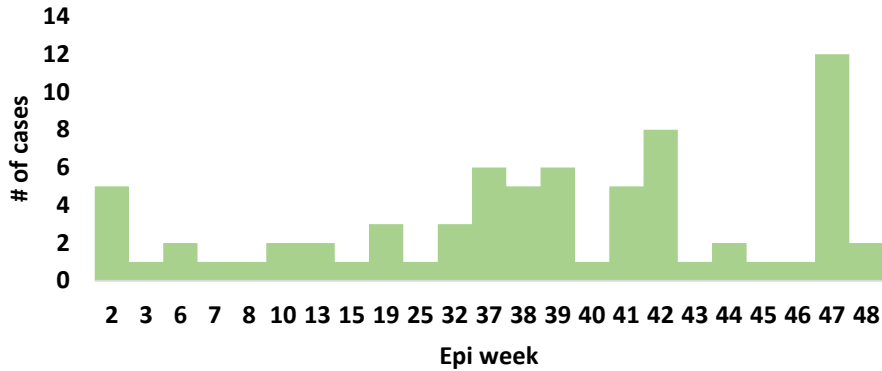
- Rapid response team deployed to support the response
- Reactive campaign micro plan has been developed, SMOH, HLSS are planning to initiate the campaign by 15<sup>th</sup> Dec 2019
- Surveillance and line-listing are ongoing
- Case management underway

Measles cases in Ikotos by Age Group from week 45 - 49, 2019.

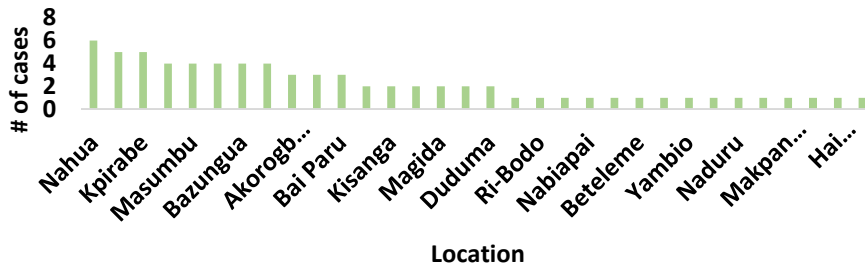


# Confirmed Measles Outbreak in Yambio County

Measles cases in Yambio from week 2 - 48, 2019.



Measles cases in Yambio by location week 2 to 48, 2019.



## Descriptive Epidemiology:

- Initial cases were reported in week 2, 2019
- A total of 72 Suspected Measles case have been in Yambio county since week 2 of 2019.
- 02 new cases were reported in week 48, 2019
- Initially (4) suspect measles cases tested IgM positive.
- The most affected payams are: Nahura and Kpirable
- 69% of the cases are less than 5 years of age
- 50% of cases are females and 50% are male
- No deaths reported

## Response and Recommendations:

- MSF-E and partners conducted a reactive campaign on 21th October targeting 30,000 children aged 6 – 59 months with a coverage of 63% . NMoH and WHO conducted a PCE with coverage of 51%
- Reactive campaign micro plan has been developed, SMOH, HLSS are planning to conduct another campaign by 14<sup>th</sup> Dec 2019
- Surveillance and line-listing are ongoing
- Case management underway

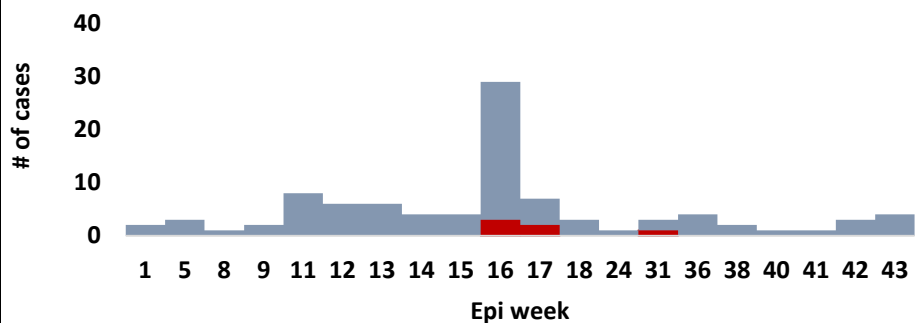
Age-Group	Cases	Percentage	Cum. %
0 - 4 Years	50	69%	69%
10 - 14 Years	8	11%	81%
15+ Years	2	3%	83%
5 - 9 Years	12	17%	100%
Grand Total	72	100%	

Measles cases in Yambio by Agegroup from week 2 to 48, 2019.

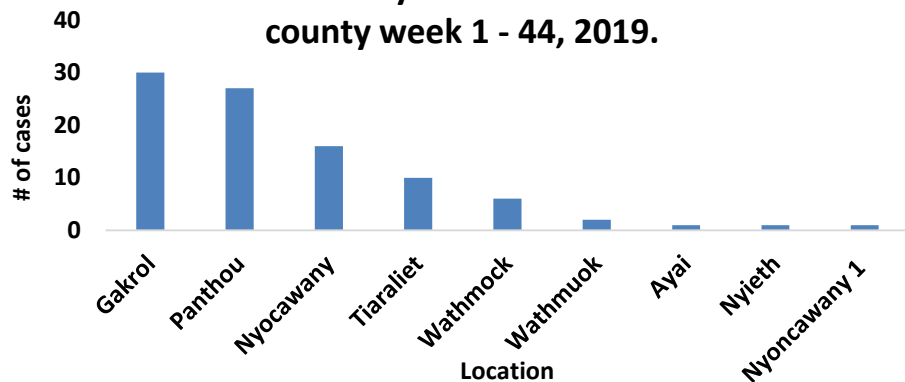


# Confirmed Measles Outbreak in Aweil South County

Measles cases in Aweil South week 1 to 43, 2019.



Measles cases by location in Aweil South county week 1 - 44, 2019.



Age Group	Cases	Percentage	Cum. %
0 - 4 Years	80	85%	85%
5 - 9 Years	13	14%	99%
15+ Years	1	1%	100%
<b>Grand Total</b>	<b>94</b>	<b>100%</b>	

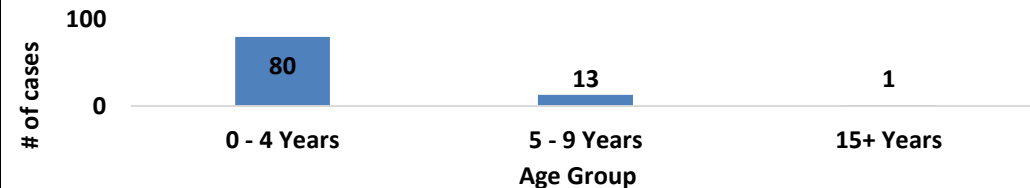
## Descriptive Epidemiology:

- Initial cases were reported on 15/03/2019
- A total of 94 Suspected Measles case have been line listed since week 01 of 2019.
- 03 new cases were reported in week 43, 2019
- Six (6) samples tested positive for measles IgM
- The most payams affected are; Gakrol and Panthou
- 85% of the cases are less than 5 years of age
- 44% of cases are females while 58% are male
- **Outbreak was detected earlier, and campaign was conducted in June with coverage of 24,261 (116%)**

## Response and Recommendations:

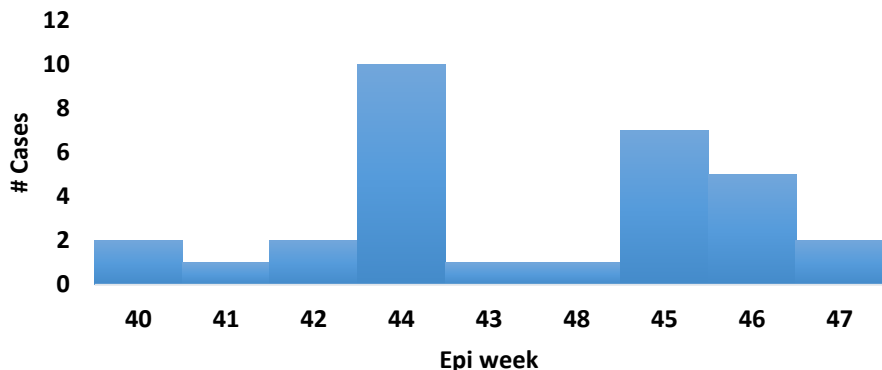
- Rapid response team deployed to support the response
- Reactive campaign micro plan development, campaign will wait for the mass measles campaign in February 2020
- Surveillance and line-listing are ongoing
- Case management underway

Measles case in Aweil South by Age Group from week 1 - 44, 2019.

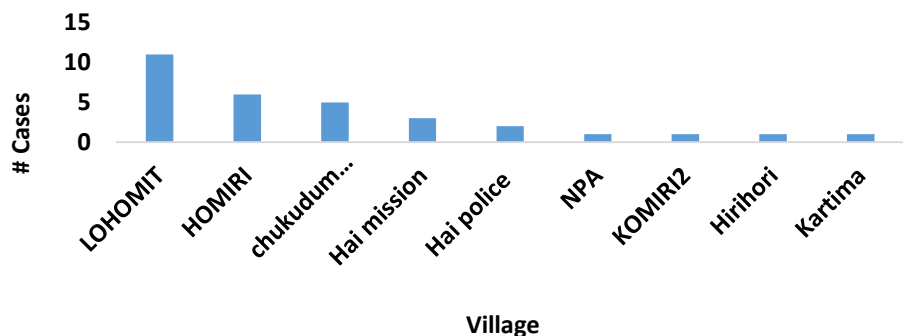


# Confirmed Measles Outbreak in Budi County

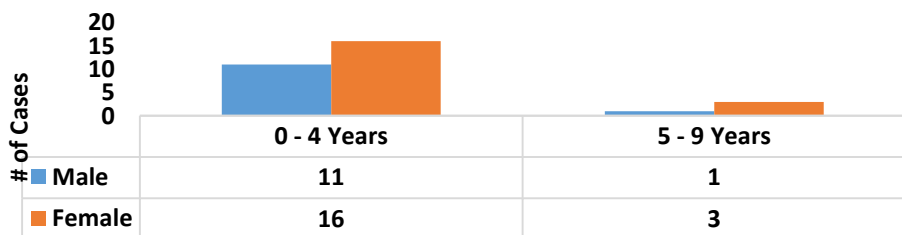
Measles cases in Budi from week 40 to week 47, 2019



Measles cases in Budi by Village week 40 to 47, 2019



Measles cases in Budi from week 40 – 47, 2019



## Descriptive Epidemiology:

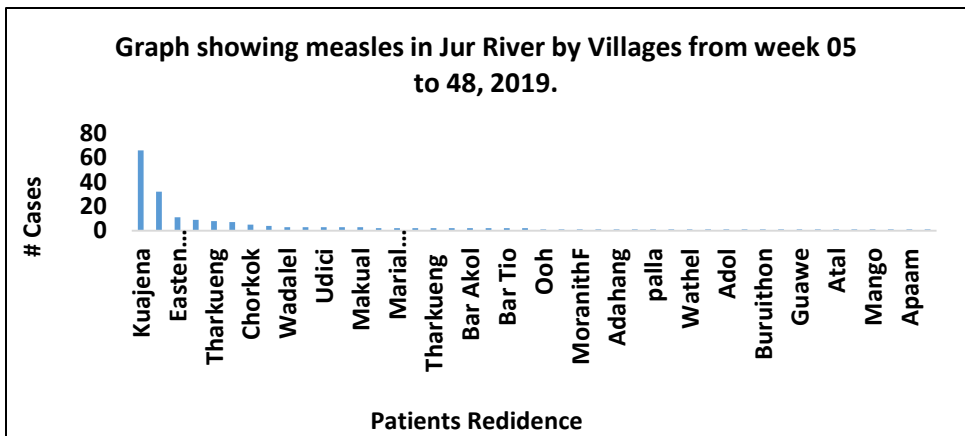
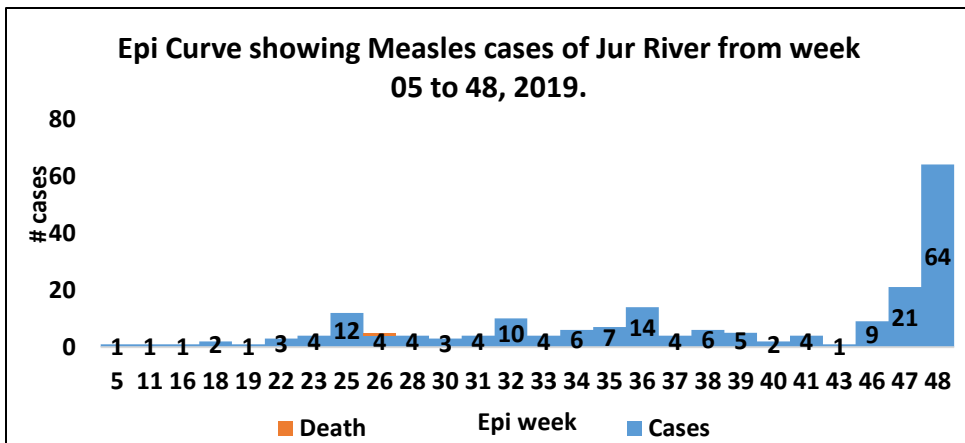
- A total of 31 Suspected Measles case have been in Budi county since week 40 of 2019.
- 2 new cases were reported in week 47, 2019
- Initially 3 samples were collected for testing in which 2 samples tested positive for measles and 1 negative
- 10 samples were collected last week of which ( 8) samples tested positive for measles and (2) negative
- 87% of the cases are less than 5 years of age
- 61% of cases are females while 39% are male
- The most affected payams are; Lohomit, Homiri and Chukudum
- One deaths reported in week 44 from Chukudum with CFR (3.22)%

## Response and Recommendations:

- Rapid response team deployed to support the response
- Reactive campaign micro plan has been developed, SMOH, Cordaid and partners are conducting the on 16<sup>th</sup> Dec, 2019
- Surveillance and line-listing are ongoing
- Case management underway in Chukudum hospital

Age Group	Cases	Percentage	Cum. %
5 - 9 Years	4	13%	13%
0 - 4 Years	27	87%	100%
<b>Grand Total</b>	<b>31</b>	<b>100%</b>	

# Measles cases in Jur River



Age-Group	Cases	Percentage	Cum. %
10 - 14 Years	8	4%	4%
15+ Years	25	13%	17%
5 - 9 Years	34	17%	34%
0 - 4 Years	130	66%	100%
Grand Total	197	100%	

## Descriptive Epidemiology:

- Initial cases were reported on 6 Feb from Marialbai PHCC from Bar Aween village
- 7 measles IgM positive cases recorded since outbreak onset
- 197 cases in total were reported since the beginning of the outbreak. Most of the cases have been reported from Kingi and Tharkueng
- 64 new cases were reported in week 48, 2019
- 66% of cases were under 5 yrs old of age
- 52% are female and 48% male
- 69 % of the cases reported are not vaccinated against measles

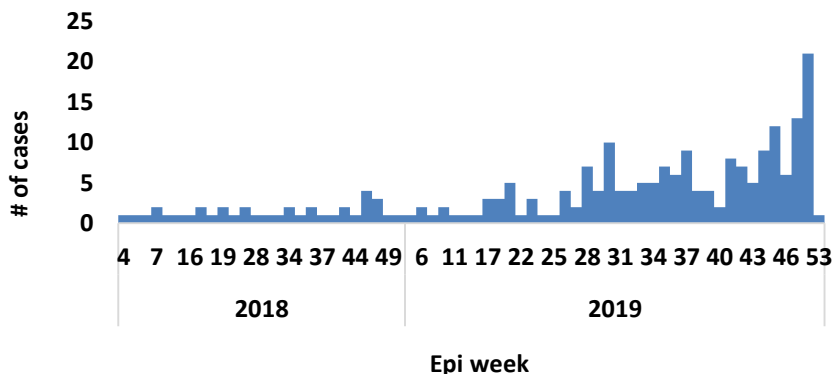
## Response and Recommendations:

- 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.
- SMoH, Cordaid and partners finalized a reactive campaign conducted with (92.4%) coverage**

## Response | Confirmed epidemics

### Confirmed Measles and Rubella outbreak in Bentiu PoC

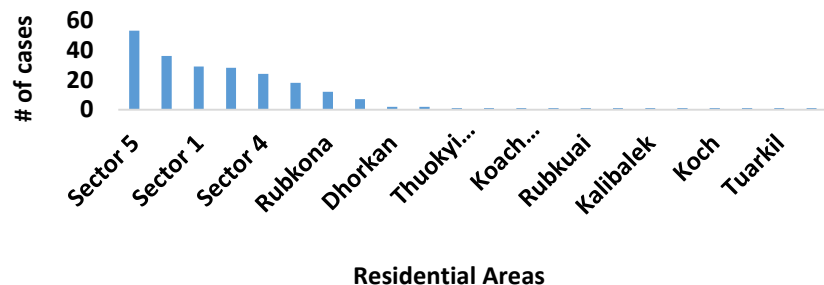
Measles cases in Bentiu from week 4 to week 48, 2019



#### Epidemiological description

- Bentiu PoC has been reporting suspected measles/rubella cases since week 4 of 2019.
- 26 new cases reported in week 48, 2019
- At least 223 measles cases including 1 death (CFR 0.54%) reported since then.
- Cumulatively, 36 tested cases have tested measles IgM positive while 15 tested rubella IgM positive.
- 50% of cases are female and 50% are male
- 93% are under 5 yrs old, 7% are 5 yrs old and above
- 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 in Bentiu by Location week 4 to 48, 2019.

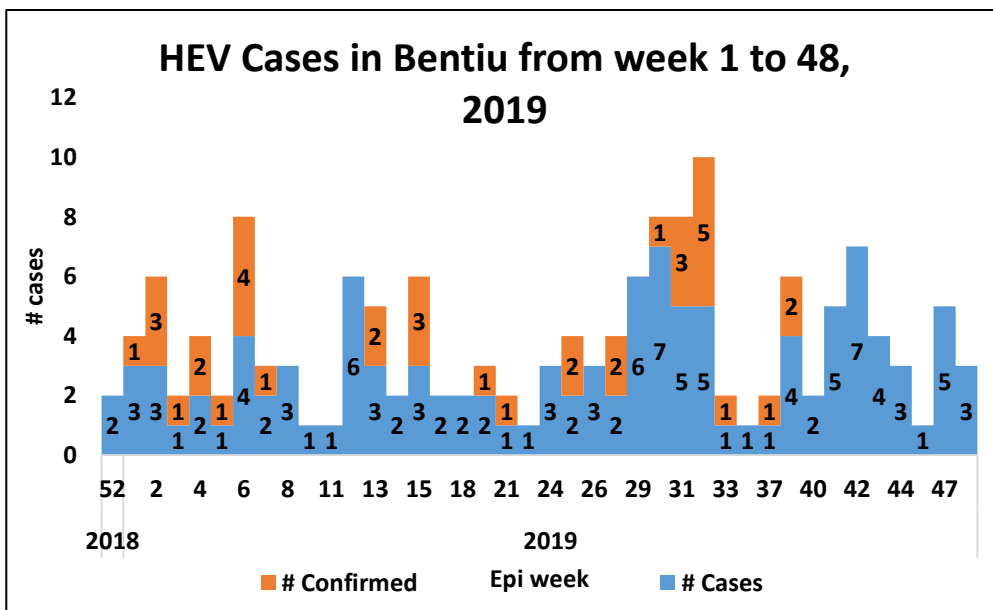


#### Response actions

- 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.

AgeGroup	Cases	Percentage	Cum. %
10 - 14 Years	4	2%	2%
15+ Years	2	1%	3%
5 - 9 Years	9	4%	7%
0 - 4 Years	208	93%	100%
Grand Total	223	100%	

## Hepatitis E, Bentiu PoC



### Descriptive epidemiology

- The persistent transmission of HEV in Bentiu PoC continues with 108 cases since beginning of 2019
- Total of (113) cases line listed
- There were (05) cases reported in week 47; & (03) case in week 48, 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 108 cases are male.
- Age group less than 15 years had the most cases with 83 (72%) cases.
- 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 48, 2019; there were 113 cases of HEV in Bentiu PoC including 2 deaths (CFR 0.18%)

### 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

Age-Group	Alive	Dead	Grand Total	Percentage	CFR	Cum. %2
1 - 4 Years	36	0	36	31%	0%	31%
10 - 14 Years	21	0	21	18%	0%	50%
15+ Years	31	1	32	28%	3%	77%
5 - 9 Years	25	1	26	23%	4%	100%
<b>Grand Total</b>	<b>113</b>	<b>2</b>	<b>115</b>	<b>100%</b>	<b>0.02</b>	



## 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
Rubella	Yirol West	06/08/2018	NR	19(0.21)	Yes	No	Yes	N/A
Measles	Tonj South	30/07/2019	0	47(0.021)	Yes	No	Yes	N/A
Measles	Yambio	06/09/2019	NR	16(0.186)	Yes	No	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 17 December 2019

## Current situation

- Currently as of **15 December 2019**
- **3348** Cases [ 3230 confirmed & 118 probable]
- **2213** Deaths [2119 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 past 21 days (25 November to 15 December 2019), 45 confirmed cases were reported from 13 of the 87 health areas within five neighboring active health zones in North Kivu and Ituri provinces: Mabalako (67%; n=30 cases), Mandima (16%; n=7), Beni (13%; n=6), Oicha (2%; n=1), and Biena (2%; n=1).

# *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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