

# South Sudan

## Integrated Disease Surveillance and Response (IDSR)

Epidemiological Bulletin Week 01, 2020 (December 30 – January 05)



## Major Epidemiological Highlights in week 01 of 2020

- In week 01, 2020 IDSR reporting completeness was 69% and timeliness was 48% at health facility level. EWARN reporting completeness was 67% and timeliness was 63%
- Of the 129 alerts in week 01, 2020; 37% were verified 0% were risk assessed and 0% required a response. Malaria (46), AWD (29), measles (15) and bloody diarrhea (10) were the top common alerts generated through the EWARS in week 01, 2020.
- New Rubella outbreak confirmed in Wulu county after 04 samples out of 05 turned Rubella IgM positive
- Since week 7 of 2019, a total of 251 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 17 samples are pending test results .

# 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 01,2020

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	Rumbek	Doctors with Africa (CUAMM), LIVEWELL	116	113	97%	116	100%
2nd	Kuajok	GOAL, CCM, WVI, Malaria Consortium, UNKEA, Save the Children, MSF	125	117	94%	121	97%
3th	Yambio	AMREF, World Vision, CUAMM, CDTY, OPEN	214	47	22%	202	94%
4th	Bentiu	Cordaid, UNIDOR, IRC, CHADO, CARE International, CRADA	88	58	66%	71	81%
5th	Malakal	Cordaid, WVI, RI, IMC, NIDO, UNKEA, MC, SSAID	103	48	47%	77	75%
6th	Aweil	Malaria Consortium, Healthnet TPO, IRC, CEDS, IHO	144	69	48%	91	63%
7th	Bor	Nile Hope, MDM, JDF, Livewell, CMD, HFO, EDA, CRADA, Malaria Consortium, CMA	138	85	62%	85	62%
8th	Wau	Cordaid, Healthnet TPO, CARE International, IHO	79	27	34%	48	61%
9th	Torit	Cordaid, HLSS, CMD	178	56	31%	87	49%
10th	Juba	HLSS, SSUHA, Healthnet TPO, IHO	157	20	13%	32	20%
	South Sudan		1342	640	48%	930	69%

### Key

		<b>&lt;60%</b>	<b>Poor</b>
		<b>61%-79%</b>	<b>Fair</b>
		<b>80%-99%</b>	<b>Good</b>
		<b>100%</b>	<b>Excellent</b>

The timeliness of IDSR reporting (supported by EWARS mobile) at health facility level was 48% and completeness was 69%. Reporting performance is highest in Rumbek hub with completeness of 100% followed by Kwajok hub with completeness at 97% and Yambio hub with 94% completeness. while the rest of the state hubs are below the target of 80%.

# IDSR Timeliness and Completeness Performance at County Level for week 01, 2020 (1)

Counties	Supporting Partners	Total No. of Health Facility	No. of HF's Report on Time	Timeliness Percentage	No. of HF's Report not on Time	Completeness Percentage
Rumbek Centre	Doctors with Africa (CUAMM)	23	23	100%	23	100%
Rumbek East	Doctors with Africa (CUAMM)	24	24	100%	24	100%
Rumbek North	Doctors with Africa (CUAMM)	7	5	71%	7	100%
Wulu	Doctors with Africa (CUAMM)	14	13	93%	14	100%
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	1	2%	40	95%
Ibba	AMREF	11	8	73%	10	91%
Maridi	AMREF	26	0	0%	26	100%
Mundri West	CUAMM	21	0	0%	21	100%
Mundri East	CUAMM	20	0	0%	20	100%
Tambura	World Vision International	26	14	54%	22	85%
Mvolo	CUAMM	11	1	9%	11	100%
Nzara	World Vision International	20	5	25%	20	100%
Nagero	World Vision International	10	0	0%	9	90%
Ezo	World Vision International	27	18	67%	23	85%
Abiemnhom	Cordaid	4	4	100%	4	100%
Koch	UNIDOR,CRADA,CARE International,IRC.	5	3	60%	4	80%

Counties	Supporting Partners	Total No. of Health Facility	No. of HF's Report on Time	Timeliness Percentage	No. of HF's Report not on Time	Completeness Percentage
Gogrial West	GOAL	32	27	84%	30	94%
Gogrial East	GOAL	15	14	93%	14	93%
Abyei	AAA,Save the Children,MSF	15	14	93%	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	24	96%	24	96%
Bor	MDM + JDF	25	24	96%	24	96%
Duk	MDM + JDF	13	11	85%	11	85%
Pibor	LIVEWELL,CRADA	14	2	14%	2	14%
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%
Nyirol	CMA,Nile Hope,Malaria Consortium	8	0	0%	0	0%
Twic East	MDM + JDF	9	9	100%	9	100%
Ayod	CMD,EDA	15	12	80%	12	80%
Pochalla	LIVEWELL	7	7	100%	7	100%
Pigi Canal	IMC	16	3	19%	3	19%
Mayendit	UNIDOR	13	11	85%	13	100%
Guit	Cordaid	6	5	83%	6	100%

# IDSR Timeliness and Completeness Performance at County Level for week 01, 2020 (2)

Counties	Supporting Partners	Total No. of Health Facility	No. of HF's Report on Time	Timeliness Percentage	No. of HF's Report not on Time	Completeness Percentage
Malakal	IMC	4	3	75%	3	75%
Akoka	IMC	5	0	0%	1	20%
Baliet	IMC	4	4	100%	4	100%
Renk	WVI + RI	11	1	9%	6	55%
Melut	WVI + RI	7	0	0%	6	86%
Manyo	CORDAID	6	0	0%	1	17%
Maiwut	RI	4	4	100%	4	100%
Fashoda	CORDAID	10	9	90%	10	100%
Ulang	MC	7	0	0%	0	0%
Maban	WVI + RI	16	16	100%	16	100%
Luakping Nasir	MC	19	2	11%	17	89%
Longechuk	RI	9	8	89%	8	89%
Panyikang	IMC	6	1	17%	1	17%
Aweil West	HealthNetTPO	39	24	62%	29	74%
Aweil East	IRC	44	25	57%	33	75%
Aweil Center	Malaria Consortium(MC)	17	2	12%	11	65%
Aweil South	Malaria Consortium(MC)	11	7	64%	7	64%
Aweil North	HealthNetTPO	33	11	33%	11	33%
Pariang	Cordaid	13	2	15%	10	77%
Panyijjar	IRC	13	12	92%	12	92%

Counties	Supporting Partners	Total No. of Health Facility	No. of HF's Report on Time	Timeliness Percentage	No. of HF's Report not on Time	Completeness Percentage
Juba	HLSS	55	4	7%	5	9%
Kajo-Keji	SSUHA	15	0	0%	0	0%
Yei	SSUHA	19	9	47%	10	53%
Lainya	SSUHA	16	0	0%	10	63%
Morobo	SSUHA	4	0	0%	0	0%
Terekeka	HealthNetTPO	47	7	15%	7	15%
Torit	Cordaid	37	19	51%	19	51%
Lopa Lafon	HLSS	24	4	17%	12	50%
Ikotos	HLSS	27	12	44%	19	70%
Magwi	HLSS	31	10	32%	10	32%
Budi	Cordaid	21	9	43%	13	62%
Kapoeta South	CMD	10	0	0%	8	80%
Kapoeta East	CMD	13	0	0%	4	31%
Kapoeta North	CMD	15	2	13%	2	13%
Wau	Cordaid	30	14	47%	19	63%
Raja	HealthNetTPO	14	6	43%	14	100%
Jur River	Cordaid	35	7	20%	15	43%
Rubkona	Cordaid	9	3	33%	4	44%
Mayom	Cordaid	9	9	100%	9	100%
Leer	UNIDOR	10	9	90%	9	90%





# Surveillance | EWARS surveillance performance indicators by partner week 01, 2020

## Surveillance | EWARS surveillance indicators

**Table 4 | EWARS surveillance performance indicators by partner (W1 2020)**

Partner	Performance		Reporting	
	# sites	# reports received	Completeness	Timeliness
CMD	1	1	100%	100%
GOAL	2	2	100%	100%
HAA	3	3	100%	100%
HFO	2	2	100%	100%
HLSS	1	0	0%	0%
IMA	8	6	75%	50%
IMC	6	4	67%	67%
IOM	11	7	64%	64%
IRC	1	1	100%	100%
LIVEWELL	4	3	75%	75%
Medair	2	2	100%	100%
Medicaire	1	0	0%	0%
MSF-E	2	0	0%	0%
MSF-H	3	1	33%	33%
RHS	3	3	100%	100%
SMC	0	0		
TADO	4	2	50%	50%
TRI-SS	2	2	100%	100%
UNH	2	2	100%	100%
UNIDO	1	1	100%	100%
UNKEA	0	0		
World Relief	1	1	100%	0%
<b>Total</b>	<b>64</b>	<b>43</b>	<b>67%</b>	<b>63%</b>

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

W1	Cumulative (2020)	
<b>64</b>	-	Number of EWARS reporting sites
<b>67%</b>	<b>46%</b>	Completeness
<b>63%</b>	<b>44%</b>	Timeliness

**Table 6 | EWARS report submissions**

W1	Cumulative (2020)	
<b>43</b>	<b>132</b>	total submissions
<b>0</b>	<b>0</b>	submissions by mobile
<b>43</b>	<b>132</b>	submissions by web

- Completeness was 67% and timeliness was 63% for weekly reporting in week 01, 2020 for partner-supported clinics serving IDP sites. The cumulative completeness and timeliness were 46% and 44% respectively for 2020.



# EVENT-BASED SURVEILLANCE

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

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

Hub	W1		Cumulative (2020)	
	# alerts	% verif.	# alerts	% verif.
Aweil	9	0%	22	0%
Bentiu	19	53%	56	25%
Bor	4	100%	16	100%
Juba	1	0%	4	0%
Kuajok	16	6%	27	4%
Malakal	4	100%	14	43%
Rumbek	6	100%	35	34%
Torit	6	33%	18	11%
Wau	4	75%	11	82%
Yambio	60	30%	122	30%
<b>South Sudan</b>	<b>129</b>	<b>37%</b>	<b>325</b>	<b>30%</b>

**Table 8 Summary of key alert indicators**

W1	Cumulative (2020)	
<b>129</b>	<b>325</b>	Total alerts raised
<b>37%</b>	<b>30%</b>	% verified
<b>0%</b>	<b>0%</b>	% auto-discarded
<b>0%</b>	<b>0%</b>	% risk assessed
<b>0%</b>	<b>0%</b>	% requiring a response

- A total of 129 alerts were received in week 01, 2020 out of which 37% were verified 0% were risk assessed and 0% required a response.

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

Event	W1		Cumulative (2020)	
	# alerts	% verif.	# alerts	% verif.
<b>Indicator-based surveillance</b>				
Malaria	46	24%	95	24%
AWD	29	34%	1362	30%
Bloody Diarr.	10	30%	37	67%
Measles	15	40%	32	25%
Meningitis	0	0%	0	0%
Cholera	2	100%	3	67%
Yellow Fever	1	100%	2	100%
Guinea Worm	1	0%	3	0%
AFP	1	0%	144	0%
VHF	1	100%	1	100%
Neo. tetanus	0	0%	0	0%
<b>Event-based surveillance</b>				
EBS total	0	0%	0	0%

**Table 10 | Event risk assessment**

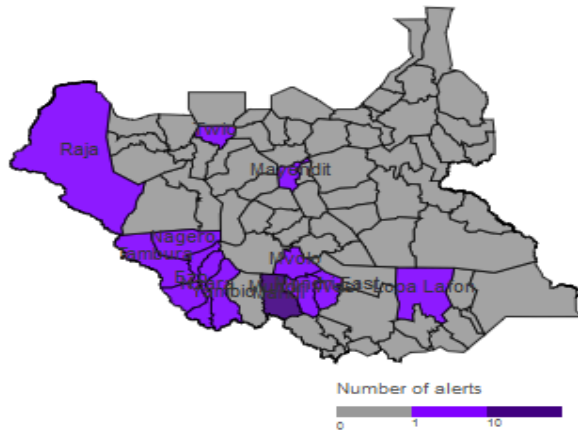
W1	Cumulative (2020)	
0	0	Low risk
0	0	Medium risk
0	0	High risk
0	0	Very high risk

- Malaria (46), AWD (29), measles (15) and bloody diarrhea (10) were the top common alerts generated through the EWARS in week 01, 2020.

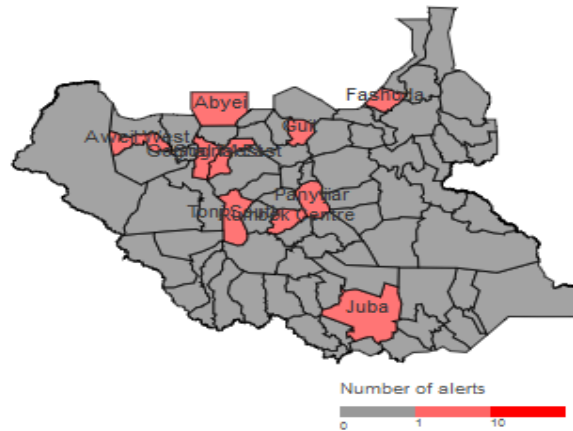
# Alert | Map of key disease alerts by county week 01, 2020

Alert | Maps of key disease alerts by county

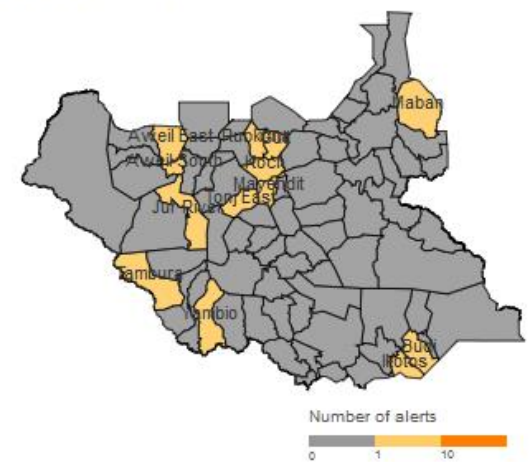
Map 2a | Malaria (W1 2020)



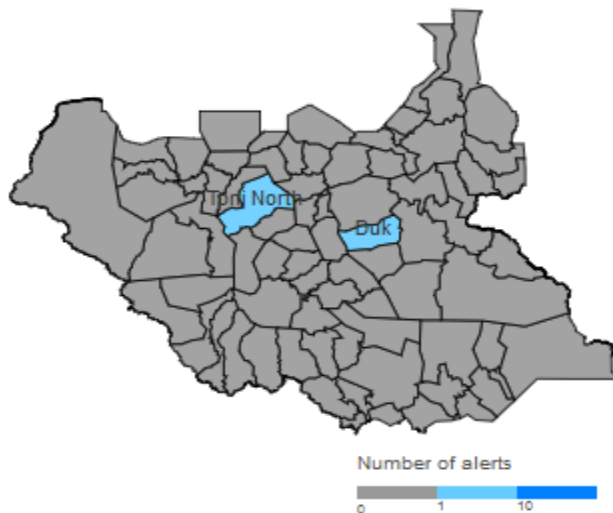
Map 2b | Bloody diarrhoea (W1 2020)



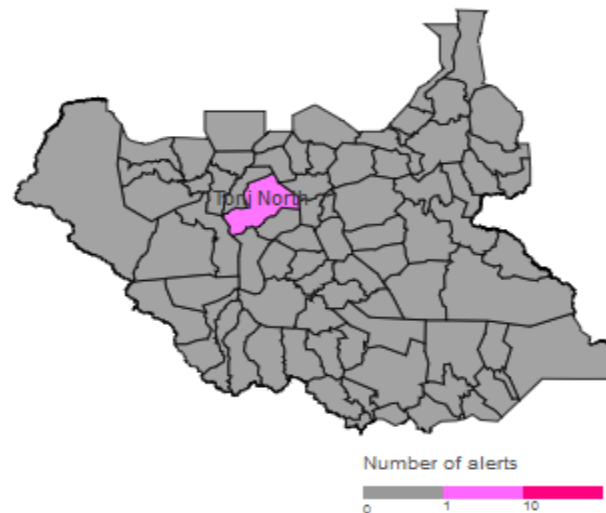
Map 2c | Measles (W1 2020)



Map 2d | Cholera (W1 2020)



Map 2e | Guinea Worm (W1 2020)



## Alert by disease and Hubs in Week 01, 2020 [A total of 129 event specific alerts generated by Hubs]

Hub/Former States	AJS	ARI	Acute Watery Diarrhoea	Bloody Diarrhoea	Guinea Worm	Yellow Fever	AFP	VHF	Cholera	Malaria	Measles	Total Alerts
Bor		1	1			1			1			4
Kuajok			8	4	1				1	2	1	17
Torit			2							1	3	6
Bentiu	1	8	2	2				1		1	4	19
Yambio		8	8				1			41	2	60
Juba				1								1
Aweil		2	3	1							3	9
Rumbek		3	1	1								5
Wau			2							1	1	4
Malakal			2	1							1	4
<b>Total Grand</b>	<b>1</b>	<b>22</b>	<b>29</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>46</b>	<b>15</b>	<b>129</b>

### During this week:

- 1 AJS alert: Been monitored
- 22 ARI: 9 are pending verification, 9 been monitored and 4 discarded
- 29 AWD alert: 19 pending, 6 been monitored and 4 discarded.
- 10 ABD: 7 pending verification, 2 been monitored and 1 discarded
- 1 AFP alert: Pending Verification
- 1 G.W alert: Pending verification
- 46 Malaria alerts: 35 pending verification, 11 under monitoring
- 15 Measles alert: 10 are pending verification, 4 been monitored and 1 discarded
- 1 Yellow Fever alert: discarded
- 2 VHF alert: discarded
- 2 Cholera alert: discarded

# SUSPECTED OUTBREAKS IN 2019

Major suspected outbreaks in South Sudan in  
2019



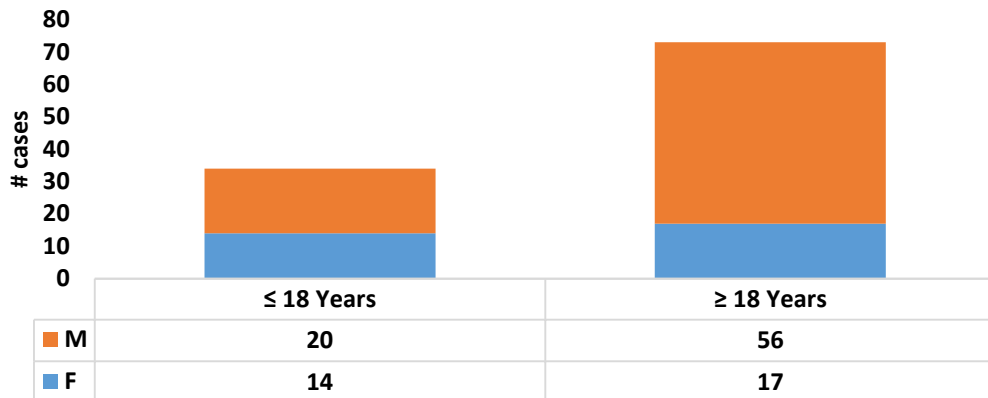
## EVD Suspect cases in South Sudan 2018 and 2019 as of week 50, 2019

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>

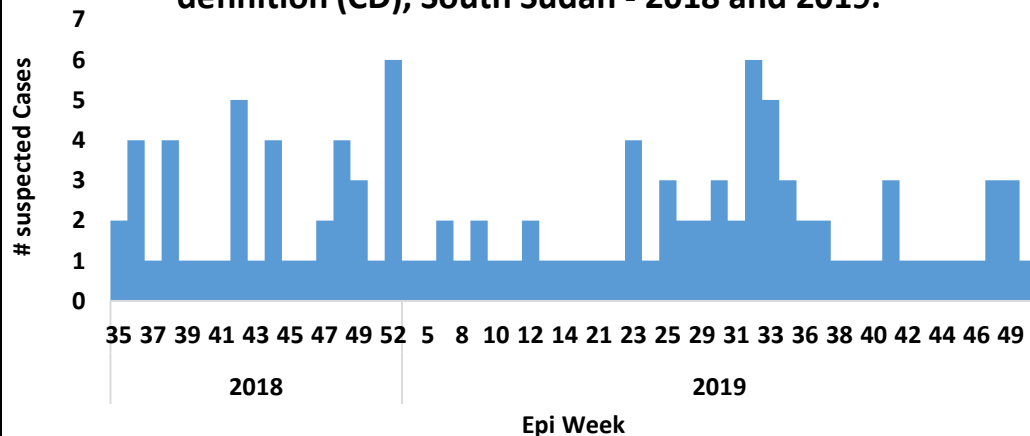
- Since August 2018, at least 111 suspect EVD cases have been reported, of which:
- Most 69 (59.4%) have been reported in 2019
- Most of the suspect EVD cases have been reported by health workers at health facility level

# EVD Suspect cases in South Sudan 2018 and 2019 as of week 50, 2019

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



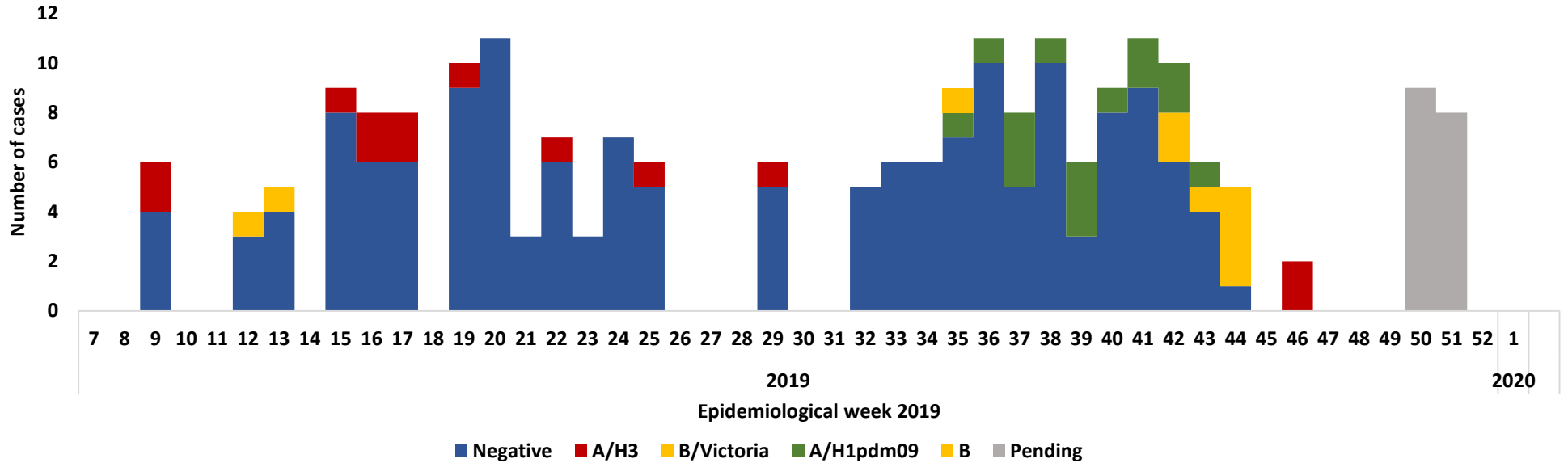
EVD suspected cases by epi week and EVD cases definition (CD), South Sudan - 2018 and 2019.



- 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

Influenza isolates from sentinel sites in Juba, wk 7, 2019 to wk 1, 2020



- 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 251 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 17 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 and 2020

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>								
Hepatitis E	Bentiu PoC	03/01/2018	01	130 (0.008)	Yes	No	Yes	Yes
Measles	Pibor	17/01/2019	NR	2073 (4.82)	yes	No	yes	N/A
Measles	Bentiu PoC	24/04/2019	13	318(0.040)	Yes	Yes	Yes	N/A
Measles	Budi	03/10/2019	2	31(0.165)	Yes	No	Yes	N/A
Measles	Ikotos	15/11/2019	3	169(0.018)	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	Maban	1/11/2019	8	114(0.070)	yes	No	Yes	N/A
Measles	Aweil East	19/2/2019	2	74(0.27)	yes	No	Yes	N/A
Measles	Tonj East	12/12/2019	23	30(0.78)	yes	Yes	Yes	N/A
Measles	Jebel Boma	10/12/2019	2	70(0.023)	yes	No	Yes	N/A



# Measles Highlights in 2019 and 2020

## ● Measles outbreaks confirmed in 2019

- **23 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, Ikotos, Tonj East, Magwi
- **4 PoC/IDP sites** – Wau PoC AA; Bentiu PoC; Malakal PoC; & Juba PoC; Mangateen IDPs.
- **New confirmed measles outbreaks and response dates:**
- Jebel Boma: **Micro plan developed**
- Magwi: **planned for mass campaign in February 2020**
- Tonj East: **planned for mass campaign in February 2020**
- Ikotos: **completed**
- Aweil South; **planned for mass campaign in February 2020**
- Budi; **completed**
- Mangateen IDPs/ Juba: **planned for mass campaign in February 2020**

# Measles Outbreak situation & response by county as of week 01, 2020

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	0.00%	2-Jan-19	Done	13,335 (88%)	controlled	
2	Mayom	197,510	3	16	19	9.6	0	0.00%	17-Jan-19	Done	56,647 (152%)	controlled	
3	Juba	597,171	12	51	63	10.5	3	4.76%	15-Jan-19	Done	96,180 (99%)	controlled	
4	Gogrial West	388,469	4	152	156	40.2	0	0.00%	2-Jan-19	Done	193,958 (97.2%)	controlled	
5	Gogrial East	157,422	4	26	30	19.1	1	3.33%	10-Mar-19	Done	56,423 (94.93%)	controlled	
6	Tonj North	249,895	6	14	20	8.0	2	10.00%	2-Apr-19	Done	44,400 (91%)	controlled	
7	Tonj South	131,857	6	41	47	35.6	0	0.00%	30-Jul-19	Done	30,903(118%)	active	
8	Jur River	192,937	7	190	197	102.1	1	0.51%	3-Feb-19	Done	35%	active	
9	Wau	256,363	13	641	654	255.1	5	0.76%	26-Jan-19	Done	23,018 (85%)	active	
10	Aweil East	489,714	7	78	85	17.4	0	0.00%	23-Feb-19	Done	71,460 (93%)	controlled	
11	Aweil West	258,616	16	32	48	18.6	0	0.00%	4-Apr-19	Done	26477 (97%)	controlled	
12	Aweil South	112,162	10	84	94	83.8	0	0.00%	15-Mar-19	Done	24,261 (116%)	reactive	
13	Melut	323,920	3	6	9	2.8	0	0.00%	15-Mar-19	Done	12,035 (78%)	controlled	
14	Pibor	224,613	15	2128	2143	954.1	9	0.42%	12-Jan-19	Done	13,965 (30%)	controlled	
15	Renk	218,083	3	4	7	3.2	0	0.00%	9-Jan-19	Done	7,712 (79.8%)	controlled	
16	Juba PoC	38,500	2	3	5	13.0	0	0.00%	5-Apr-19	Done	74%	controlled	
17	Bentiu PoC	103,424	45	273	318	307.5	1	0.31%	1-Jan-19	Done	19084 (112%)	active	
18	Malakal PoC	24,402	2	0	2	8.2	0	0.00%	11-Apr-19	Done	112%	controlled	
19	Wau PoC	12,959	5	98	103	794.8	0	0.00%	23-Feb-19	Done	85.00%	active	
20	Yambio	231,489	4	12	16	6.9	1	6.25%	5-Sep-19	Done	63.00%	controlled	
21	Budi	12,986	5	26	31	238.7	0	0.00%	1-Oct-19	pending	80%	active	
22	Ikotos	196,956	5	165	169	85.8	7	4.14%	15-Nov-19	Done	93,98%	active	
23	Tonj East		13	17	30		0	0.00%	12-Dec-19	pending		active	Pending mass Campaign
24	Juba/Mangateen		4	2	6		0	0.00%	1-Nov-2019	pending		active	Pending mass Campaign
25	Maban	200,000	32	85	117	58.5	0	0.00%	1-Nov-2020	Done	7394.00%	active	
26	Magwi	4,699,302	5	5	10		0	0.00%		pending		active	Pending mass Campaign
	<b>Total</b>	<b>4,672,421</b>	<b>240</b>	<b>4,446</b>	<b>4686</b>	<b>100.3</b>	<b>26</b>	<b>0.55%</b>					

## Measles and Rubella Laboratory Test Results, week 52 of 2019 (1)

Location/Health Facility	Date sent to Juba	Date Received at PHL	Suspected Disease	Lab results
Maban/MSF Doro	12/17/2019	12/18/2019	Measles	Measles IgM positive
Maban/MSF Doro	12/17/2019	12/18/2019	Measles	Measles & Rubella Negative
Pigi/Canal PHCC	12/6/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	No results
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Boma	12/10/2019	12/18/2019	Measles	Measles IgM positive
Aweil East/Maluakon	12/9/2019	12/18/2019	Measles	Measles IgM positive
Aweil East/Maluakon	12/9/2019	12/18/2019	Measles	Measles IgM positive
Aweil West/Aweil Hospital	12/14/2019	12/18/2019	Measles	Measles & Rubella IgM negative
Aweil West/Aweil Hospital	12/14/2019	12/18/2019	Measles	measles IgM positive
Aweil West/Aweil Hospital	12/14/2019	12/18/2019	Measles	measles IgM positive
Aweil West/Aweil Hospital	12/14/2019	12/18/2019	Measles	measles IgM positive
Aweil West/Aweil Hospital	12/14/2019	12/18/2019	Measles	measles IgM positive
Aweil West/Aweil Hospital	12/14/2019	12/18/2019	Measles	measles IgM positive
Kapoeta/Palakal	12/9/2019	12/18/2019	Measles	measles IgM positive
Kapoeta East/Lokichikio	12/6/2019	12/18/2019	Measles	Measles & Rubella IgM negative
Budi/Chukudum Hospital	12/6/2019	12/18/2019	Measles	measles IgM positive
Kapoeta/KMH-CDOT	12/6/2019	12/18/2019	Measles	measles IgM positive
Wulu/Wulu PHCC	12/17/2019	12/18/2019	Measles	Rubella IgM positive
Wulu/Wulu PHCC	12/17/2019	12/18/2019	Measles	Rubella IgM positive
Wulu/Domulolo PHCC	12/17/2019	12/18/2019	Measles	Rubella IgM positive
Wulu/Domulolo PHCC	12/17/2019	12/18/2019	Measles	Rubella IgM positive
Wulu/Domulolo PHCC	12/17/2019	12/18/2019	Measles	Measles & Rubella IgM Negative
Nzara/St. Teresa Hospital	12/14/2019	12/18/2019	Measles	measles IgM positive
Yei/YSH	12/14/2019	12/18/2019	Measles	measles IgM positive
Juba/Al Sabah Hospital	11/29/2019	12/18/2019	Measles	measles IgM positive

### During this week 31 sample results were released as follows :

#### Maban/MSF Doro (2) samples:

- (1) measles IgM positive
- (1) measles & Rubella IgM Negative

#### Pigi/Canal PHCC (1) sample:

- (1) measles IgM positive

#### Boma (8) samples:

- (5) measles IgM positive
- (1) no result

#### Aweil East/Malualkon:

- (1) measles IgM positive

#### Aweil West/Aweil Hospital (8) samples:

- (7) measles IgM positive
- (1) measles & Rubella IgM Negative

#### Kapoeta/Palakal (1) samples:

- (1) measles IgM negative

#### Kapoeta East/Lokichikio (1) samples:

- (1) measles & rubella IgM negative

#### Budi/Chukudum Hospital (1) sample:

- (1) measles IgM positive

#### Kapoeta/KMH-CDOT (1) samples:

- (1) measles IgM positive

#### Wulu/Wulu PHCC (2) samples:

- (2) Rubella IgM positive

#### Wulu/Domulolo PHCC (3) samples:

- (2) Rubella IgM positive
- (1) Measles & Rubella IgM Negative

#### Nzara/St. Teresa Hospital (1) sample:

- (1) measles IgM positive

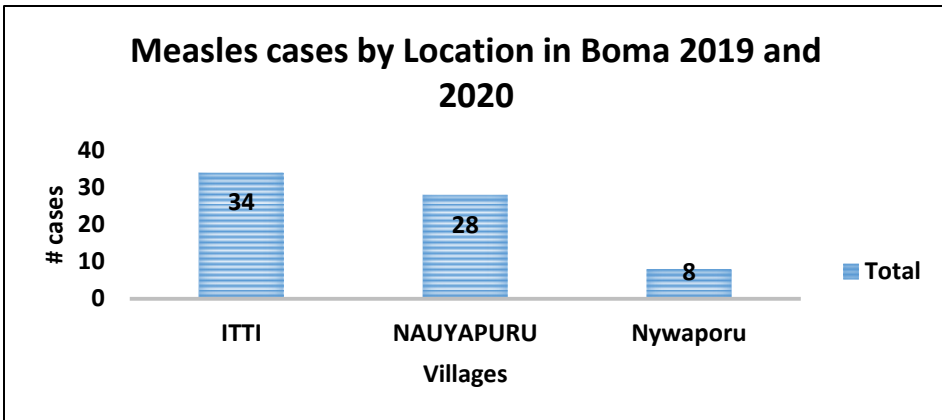
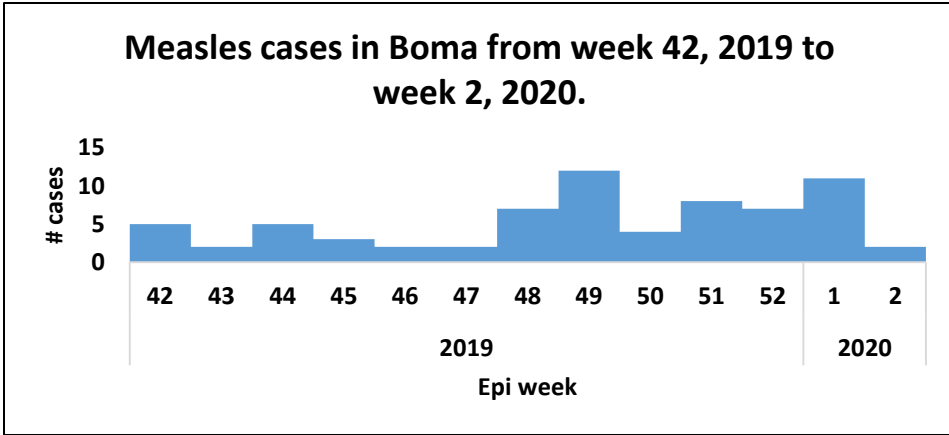
#### Yei/YSH (1) sample:

- (1) measles IgM positive

#### Juba/Al Sabah Hospital(1) sample:

- (1) measles IgM positive

# Confirmed Measles Outbreak in Jebel Boma County



Age Group	Cases	Percentage	% Cum.
0 - 4 Years	59	84%	84%
5 - 9 Years	9	13%	97%
15+ Years	1	1%	99%
10 - 14 Years	1	1%	100%
<b>Grand Total</b>	<b>70</b>	<b>100%</b>	

## Descriptive Epidemiology:

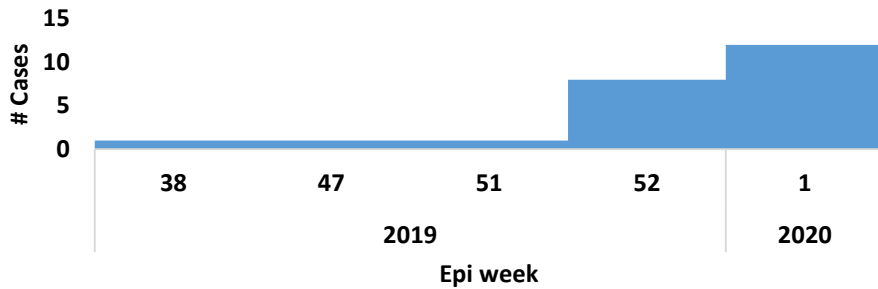
- Initial cases were reported on 14<sup>th</sup> October 2019
- A total of 70 Suspected Measles case have been line listed in Jebel Boma county
- 02 new cases were reported in week 02, 2020
- 11 samples were collected of which, 08 samples tested IgM positive for measles.
- The most affected payams are: Ititi and Nauyapuru
- (59) 84% of the cases are less than 5 years of age
- Both female to male ratio are 50%
- 11 community deaths were reported in Jebel Boma county

## Response and Recommendations

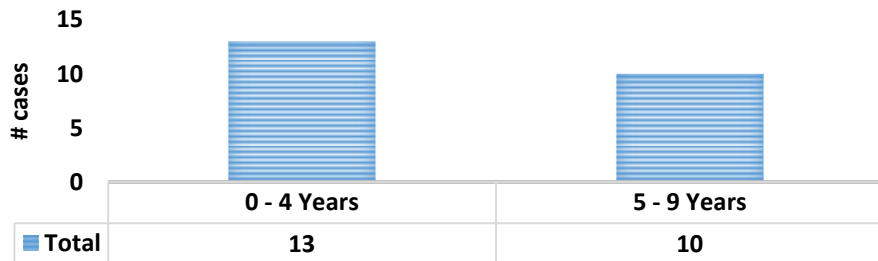
- Reactive campaign micro plan was developed, targeting 6 payams in Boma County. SMOH, Care International and partners are to conduct a reactive campaign.
- Surveillance and line-listing are ongoing
- Case management underway

# Suspected Measles Outbreak in Rumbek East County

Measles cases in Rumbek East from week 38, 2019 to week 1, 2020.



Measles cases in Rumbek East by Age group.



## Descriptive Epidemiology:

- Initial cases were reported in week 38, 2019
- A total of 23 suspected measles cases have been line listed in Rumbek East county
- 10 new cases were reported in week 01, 2020
- (13) 57% of the cases are less than 5 years of age
- Male were 65% of cases and female were 35%

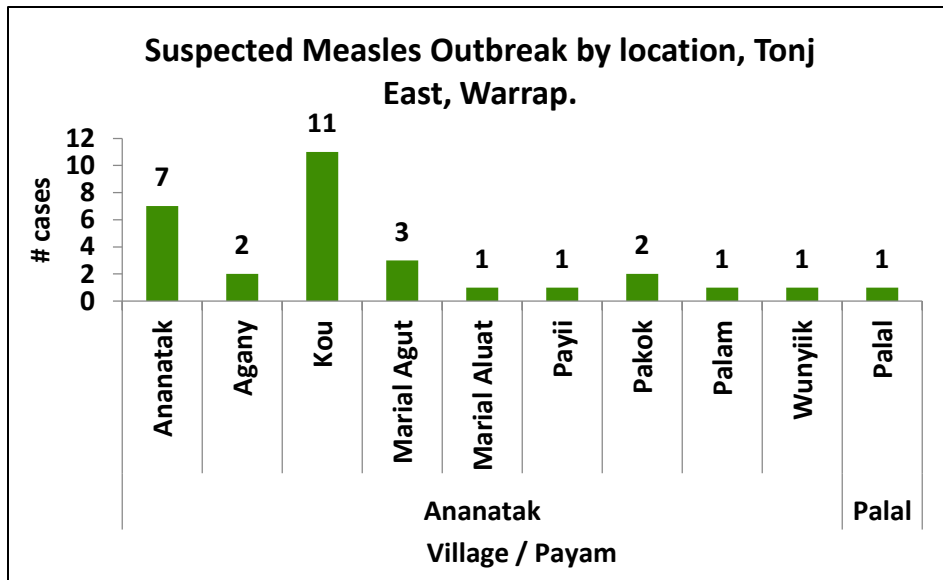
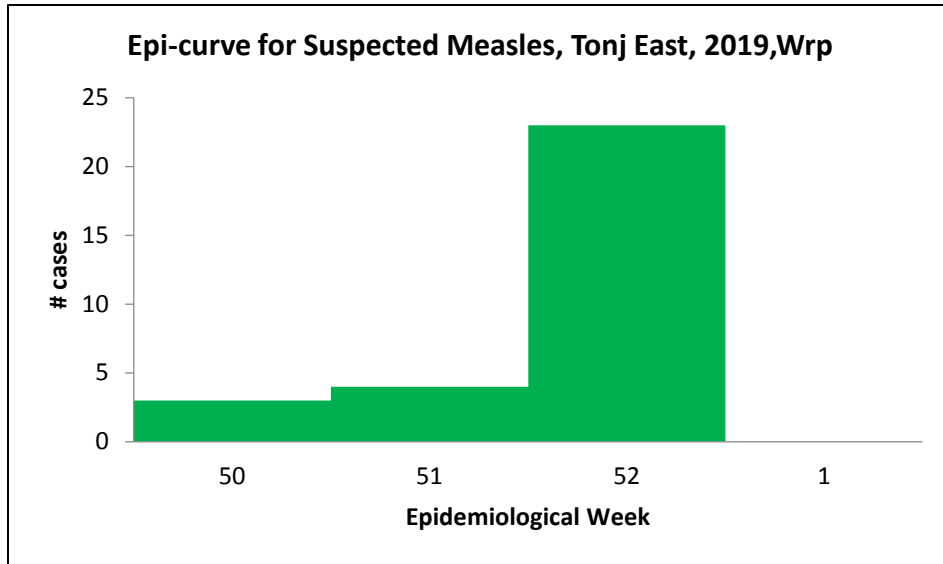
## Response and Recommendations

- Surveillance and line-listing are ongoing
- Case management underway

Age_Group	Cases	Percentage	% Cum.
0 - 4 Years	13	57%	57%
5 - 9 Years	10	43%	100%
<b>Grand Total</b>	<b>23</b>	<b>100%</b>	



# Confirmed Measles Outbreak in Tonj East County



## Descriptive Epidemiology:

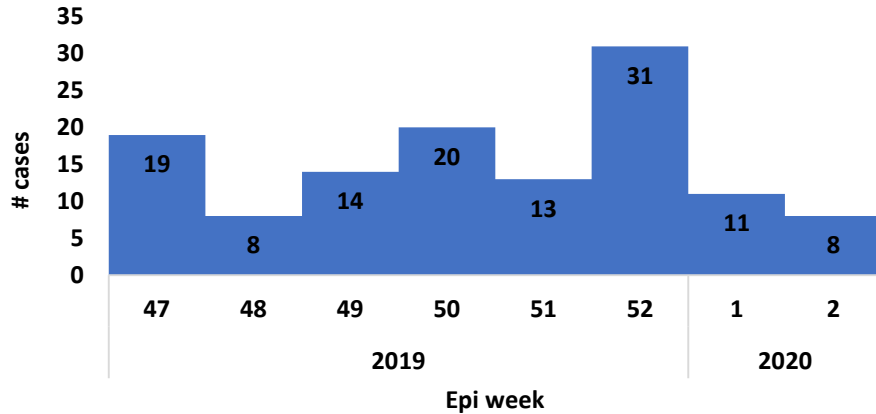
- Initial cases were reported on 12<sup>th</sup> December 2019
- A total of 30 Suspected Measles case have been line listed in Tonj East county
- 23 new cases were reported in week 52, 2019
- 15 samples were collected of which, 13 samples tested positive for measles, (1) positive for Rubella IgM and (1) negative for both measles and rubella
- The most affected payams are: Ananatak and Agany (12) 40% of the cases are less than 5 years of age
- 67% of cases are females while 33% are male
- No deaths reported

## Response and Recommendations

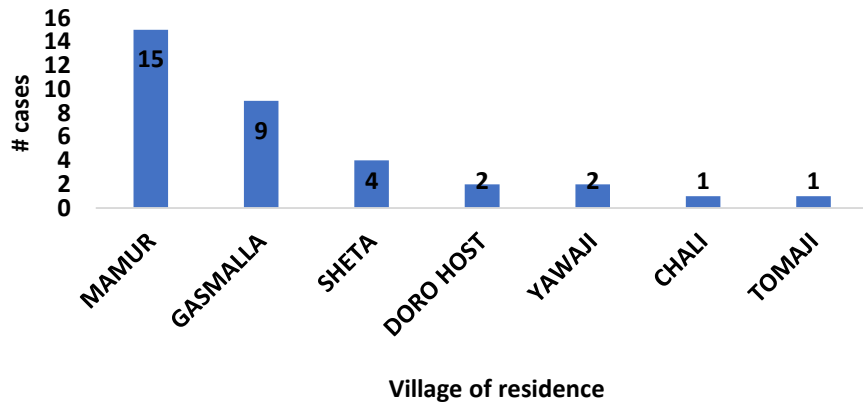
- Rapid response team deployed to support the response
- Reactive campaign micro plan is been developed
- Surveillance and line-listing are ongoing
- Case management underway
- Reactive campaign will wait for the mass measles campaign in February 2020.

# Confirmed Measles Outbreak in Maban County

Epi curve for measles cases in Maban county as of week 47, 2019 – 2, 2020



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



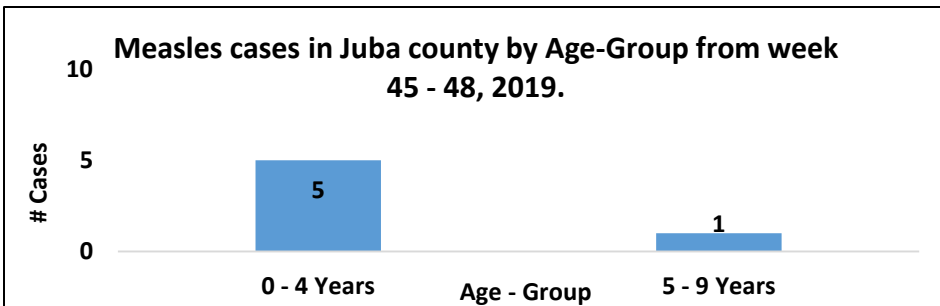
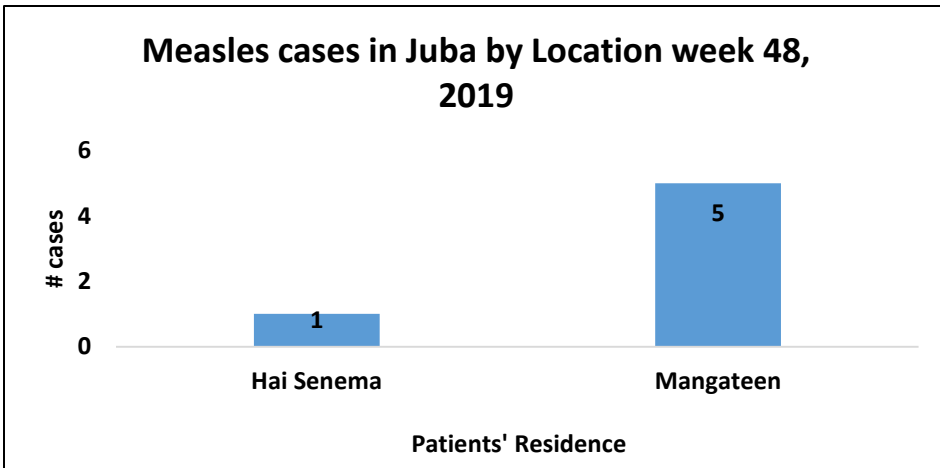
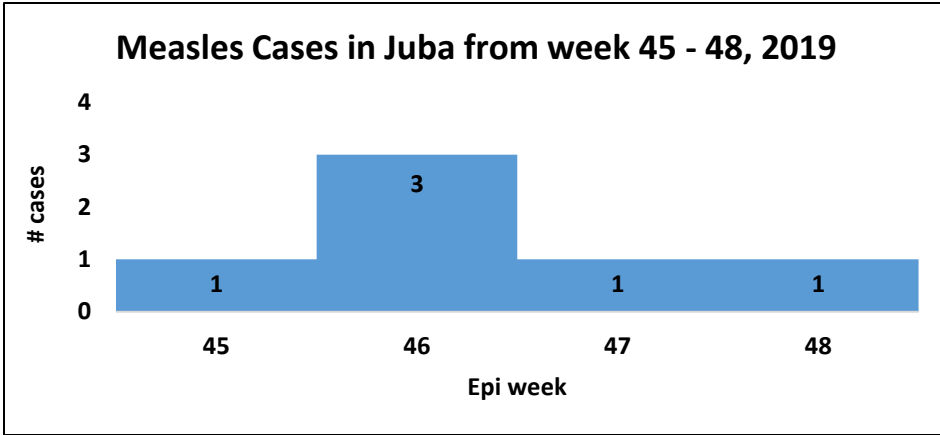
## Descriptive Epidemiology:

- Initial cases were reported on 1<sup>th</sup> November 2019
- A total of 114 Suspected Measles case have been line listed in Maban county
- 08 new cases were reported in week 02, 2020
- 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:

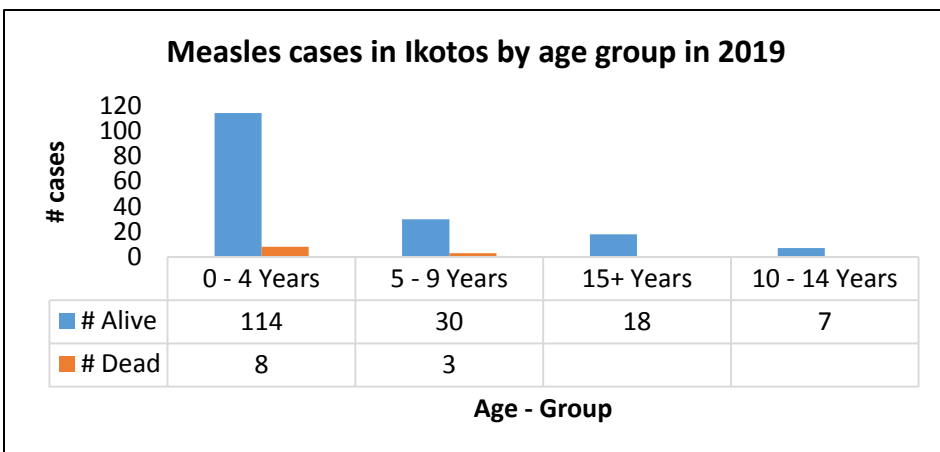
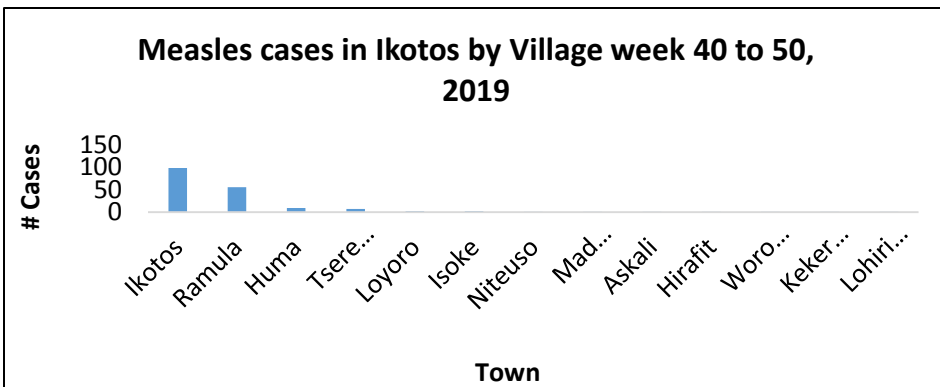
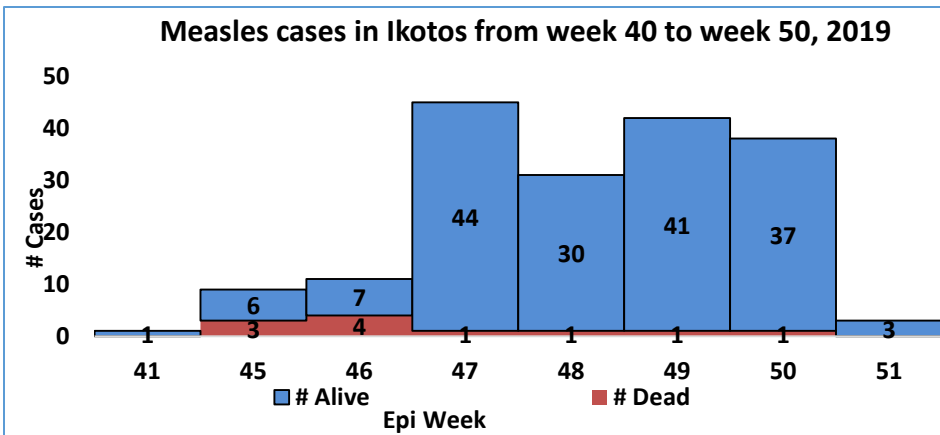
- Initial cases were reported on 11<sup>th</sup> November 2019
- A total of 06 suspected measles case have been in Juba county since week 45 of 2019.
- 01 new cases were reported in week 48, 2019
- 04 samples were collected and all tested positive for measles IgM
- The most affected payam is Mangateen
- 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



## Descriptive Epidemiology:

- Initial cases were reported on 15<sup>th</sup> November 2019
- A total of 169 Suspected Measles case have been in Ikotos county since week 45 of 2019.
- 03 new cases were reported in week 51, 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: Ikotos, Ramula and Huma
- 67% of the cases are less than 5 years of age
- 58% of cases are females while 42% are male
- Total of 9 deaths reported CFR of (9.9%)

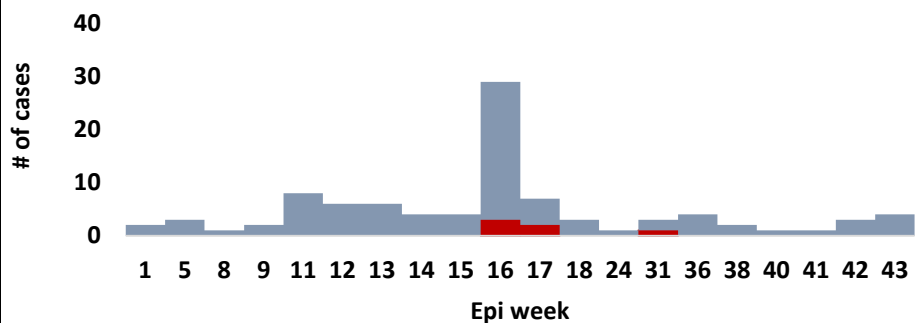
## Response and Recommendations:

- Rapid response team deployed to support the response
- Reactive campaign was conducted by; SMoH, HLSS are partners with coverage of 93.98%, NMOH and WHO is planning for the PCE
- Surveillance and line-listing are ongoing
- Case management underway

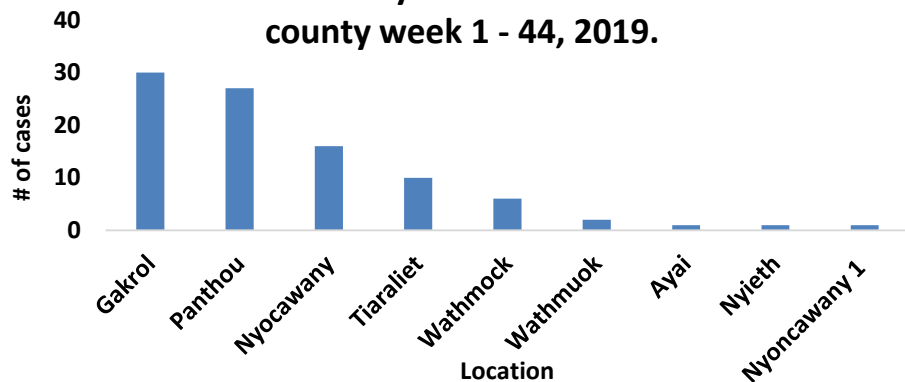
Age Group	Cases	Deads	Percentage	CFR	Cum. %
0 - 4 Years	114	8	67%	7.0%	67%
5 - 9 Years	30	3	18%	10.0%	85%
15+ Years	18	0	11%		96%
10 - 14 Years	7	0	4%		100%
<b>Grand Total</b>	<b>169</b>	<b>11</b>	<b>100%</b>	<b>6.5%</b>	

# 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>	

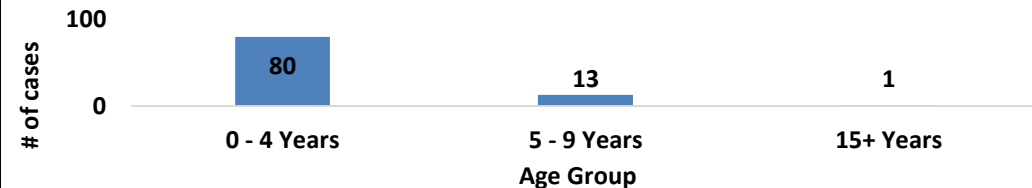
## Descriptive Epidemiology:

- 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:

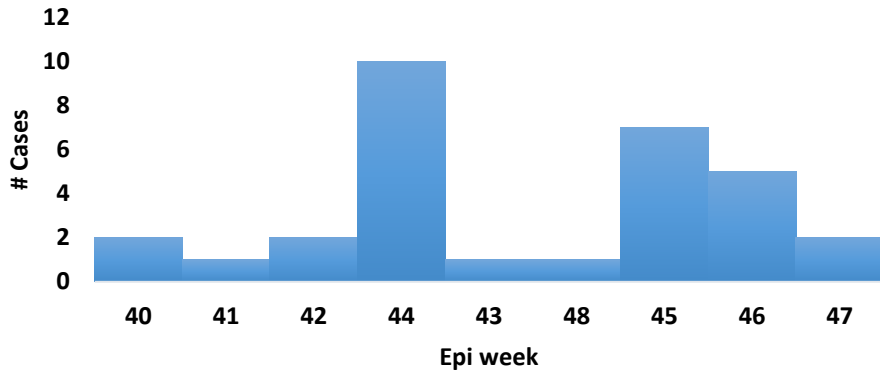
- Rapid response team deployed to support the response
- Reactive campaign micro plan development, campaign will wait for the mass measles campaign in February 2020
- Surveillance and line-listing are ongoing
- Case management underway

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



# Confirmed Measles Outbreak in Budi County

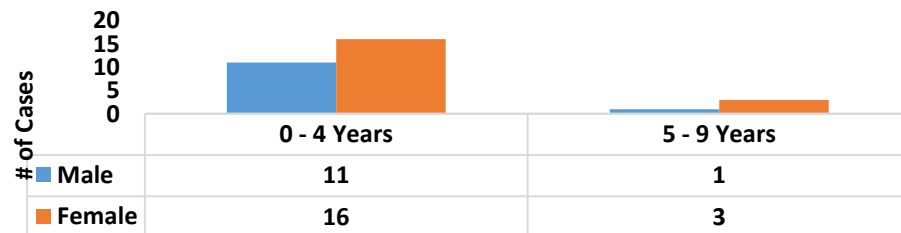
Measles cases in Budi from week 40 to week 47, 2019



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



Measles cases in Budi from week 40 – 47, 2019



## Descriptive Epidemiology:

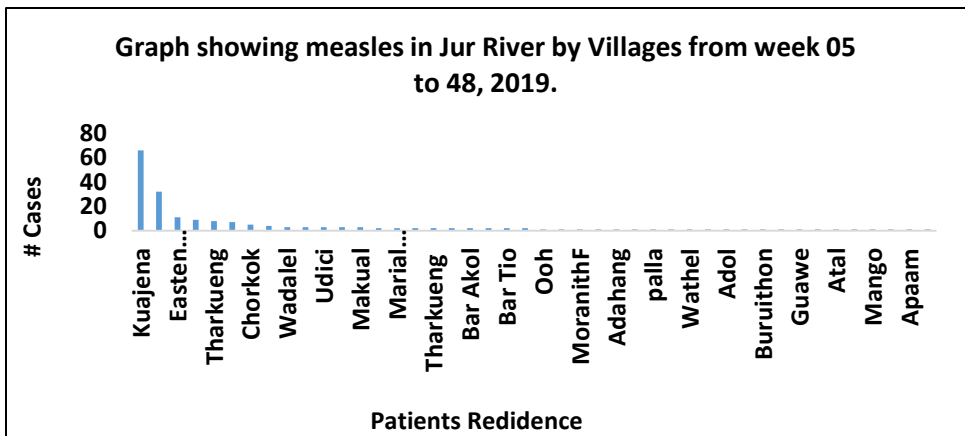
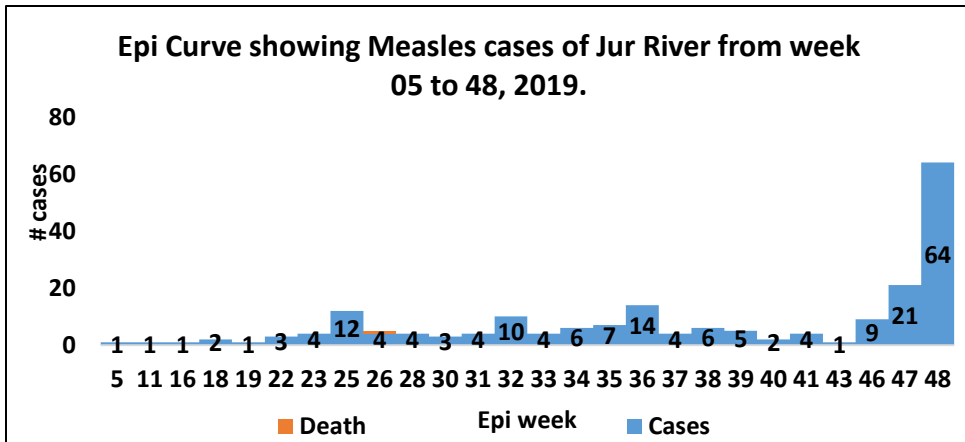
- A total of 31 Suspected Measles case have been in Budi county since week 40 of 2019.
- 2 new cases were reported in week 47, 2019
- Initially 3 samples were collected for testing in which 2 samples tested positive for measles and 1 negative
- 10 samples were collected last week of which ( 8) samples 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 completed the campaign with a coverage of 80%. NMOH and WHO are planning for the PCE
- 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

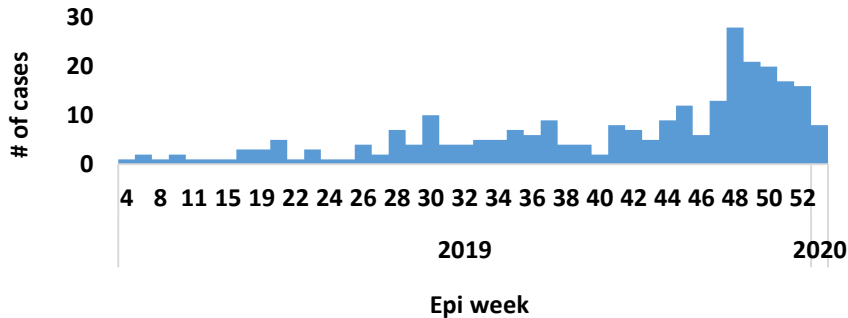
## Response and Recommendations:

- 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**

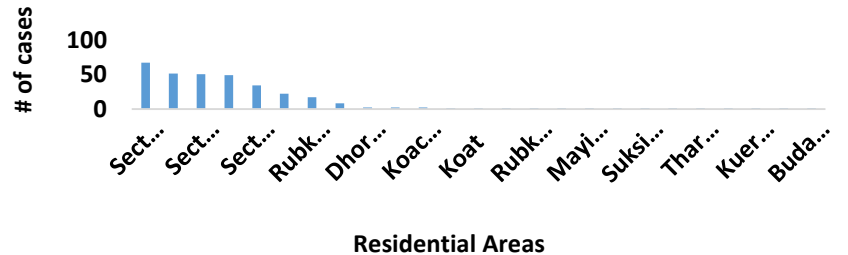


## Confirmed Measles and Rubella outbreak in Bentiu PoC

Measles cases in Bentiu from week 4 to week 1, 2020



Measles cases in Bentiu by Location from 2018 to 2020.



### Epidemiological description

- Bentiu PoC has been reporting suspected measles/rubella cases since week 4 of 2019.
- 13 new cases reported in week 01, 2020
- At least 318 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.
- 47% of cases are female and 53% are male
- 95% are under 5 yrs old, 5% 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).

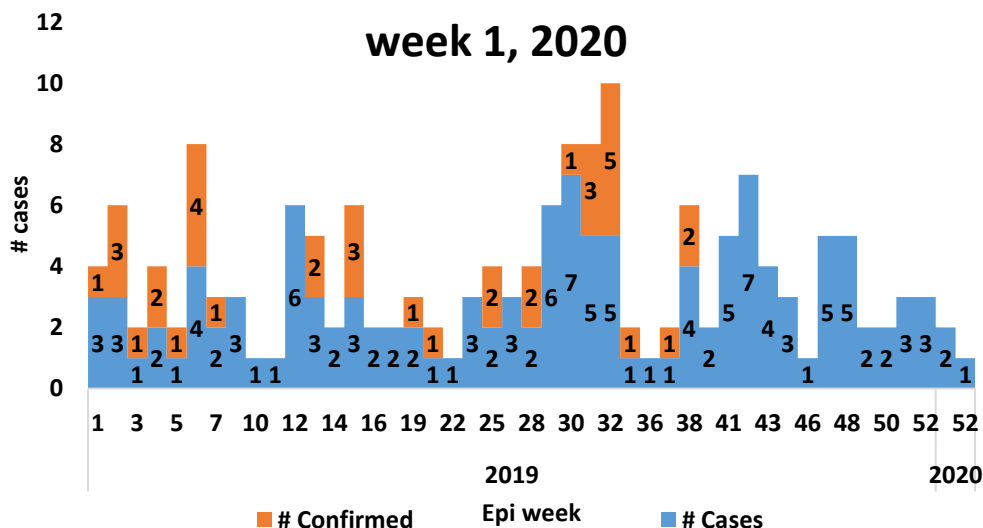
### Response actions

- 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%.
- Another campaign was conducted by SMOH, IOM and partners which was completed during the week of 20<sup>th</sup> January 2020, coverage will be shared.
- 

Age Group	Cases	Percentage	Cum. %
0 - 4 Years	302	95%	95%
5 - 9 Years	9	3%	98%
10 - 14 Years	5	2%	99%
15+ Years	2	1%	100%
<b>Grand Total</b>	<b>318</b>	<b>100%</b>	

## Hepatitis E, Bentiu PoC

HEV Cases in Bentiu from week 1 to week 1, 2020



### Recommended actions

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

### Descriptive epidemiology

- The persistent transmission of HEV in Bentiu PoC continues with 130 cases since beginning of 2019
- There were (03) cases reported in week 52; & (01) case in week 01, 2020.
- 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
- Half (50%) out of 130 cases are male.
- Age group less than 15 years had the most cases with 66 (73%) 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 52, 2019; there were 125 cases of HEV in Bentiu PoC including 2 deaths (CFR 0.16%)

Age-Group	Alive	Dead	Grand Total	Percentage	CFR	Cum. %2
1 - 4 Years	42		42	32%	0%	32%
10 - 14 Years	22		22	17%	0%	49%
15+ Years	34	1	35	27%	3%	76%
5 - 9 Years	30	1	31	24%	3%	100%
<b>Grand Total</b>	<b>128</b>	<b>2</b>	<b>130</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
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
Measles	Yambio	6/1/2019	2	72(0.23)	yes	Yes	yes	N/A

# EBOLA VIRUS DISEASE[EVD] PREPAREDNESS IN SOUTH SUDAN

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

# Ebola update DRC 14 January 2019

## Current situation

- Currently as of **12 January 2019**
- **3398** Cases [ 3280 confirmed & 118 probable]
- **2280** Deaths [2141 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 (23 December 2019 to 12 January 2020), 36 confirmed cases were reported from 14 of the 87 health areas in seven active health zones in North Kivu and Ituri Provinces: Mabalako (36%; n=13), Butembo (22%; n=8), Beni (8%; n=3), Kalunguta (14%; n=5), Katwa (6%; n=2), Musienene (3%; n=1) Health Zones in North Kivu Province and Mambasa (11%; n=4) Health Zone in Ituri Province.

# *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>

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

