

# South Sudan

## Integrated Disease Surveillance and Response (IDSR)

Annexes W31 2018 (Jul 30 – Aug 05)



**World Health  
Organization**  
South Sudan



Ministry of Health  
Republic of South Sudan

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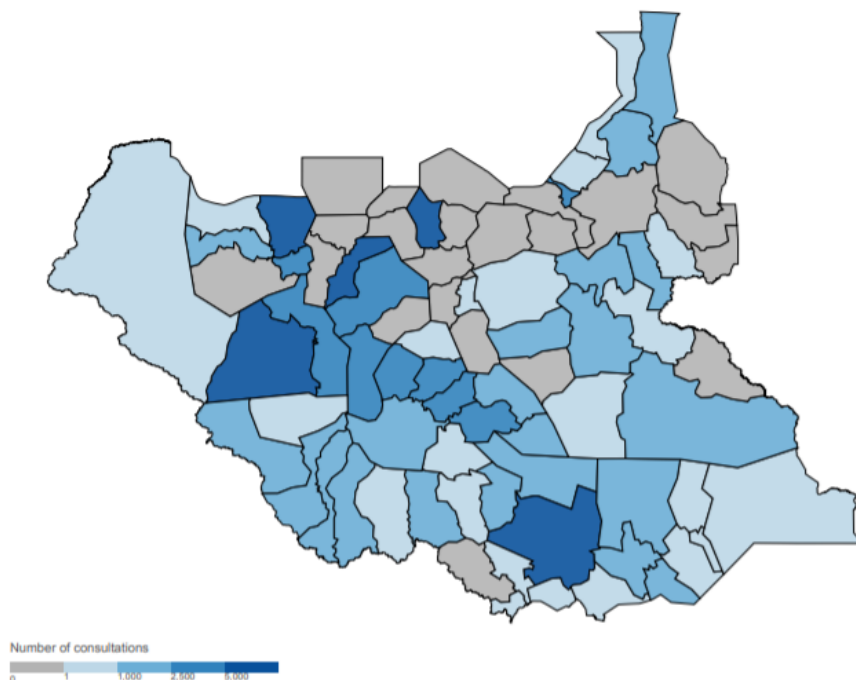
Slide 13 **Measles maps and alert management**

## Sources of data

1. Weekly IDSR Reporting Form
2. Weekly EWARS Reporting Form

## Access and Utilization | Map of consultations by county

Map 1 | Map of total consultations by county (W31 2018)

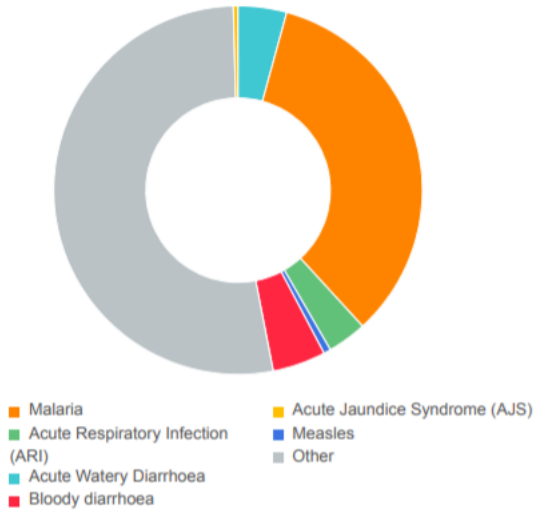


Hub	W31	2018
Aweil	11,667	386,993
Bentiu	13,092	475,063
Bor	8,286	343,783
Juba	10,757	360,581
Kwajok	13,570	731,759
Malakal	8,970	447,357
Rumbek	19,487	525,455
Torit	7,329	194,395
Wau	10,919	273,576
Yambio	11,146	362,137
<b>South Sudan</b>	<b>115,223</b>	<b>4,101,099</b>

The total consultation in the country since week 1 of 2018 is 4,101,099 by hub, Kwajok registered the highest number of consultations as indicated in the table above. The total number of consultations by county is shown in the map above. See the key for more information.

# Proportional mortality

Figure 1 | Proportional mortality (2018)

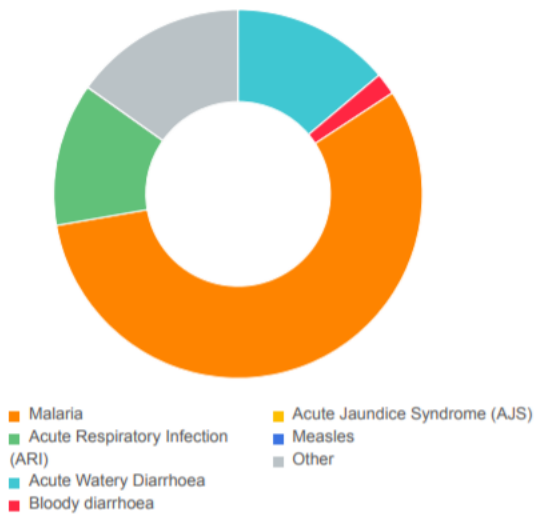


Syndrome	W31		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	7	70.0%	167	33.9%
ARI	0	0.0%	17	3.5%
AWD	1	10.0%	21	4.3%
Bloody diarrhoea	0	0.0%	23	4.7%
AJS	0	0.0%	2	0.4%
Measles	0	0.0%	3	0.6%
Other	2	20.0%	259	52.6%
<b>Total deaths</b>	<b>10</b>	<b>100%</b>	<b>492</b>	<b>100%</b>

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 33.9% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

# Proportional morbidity

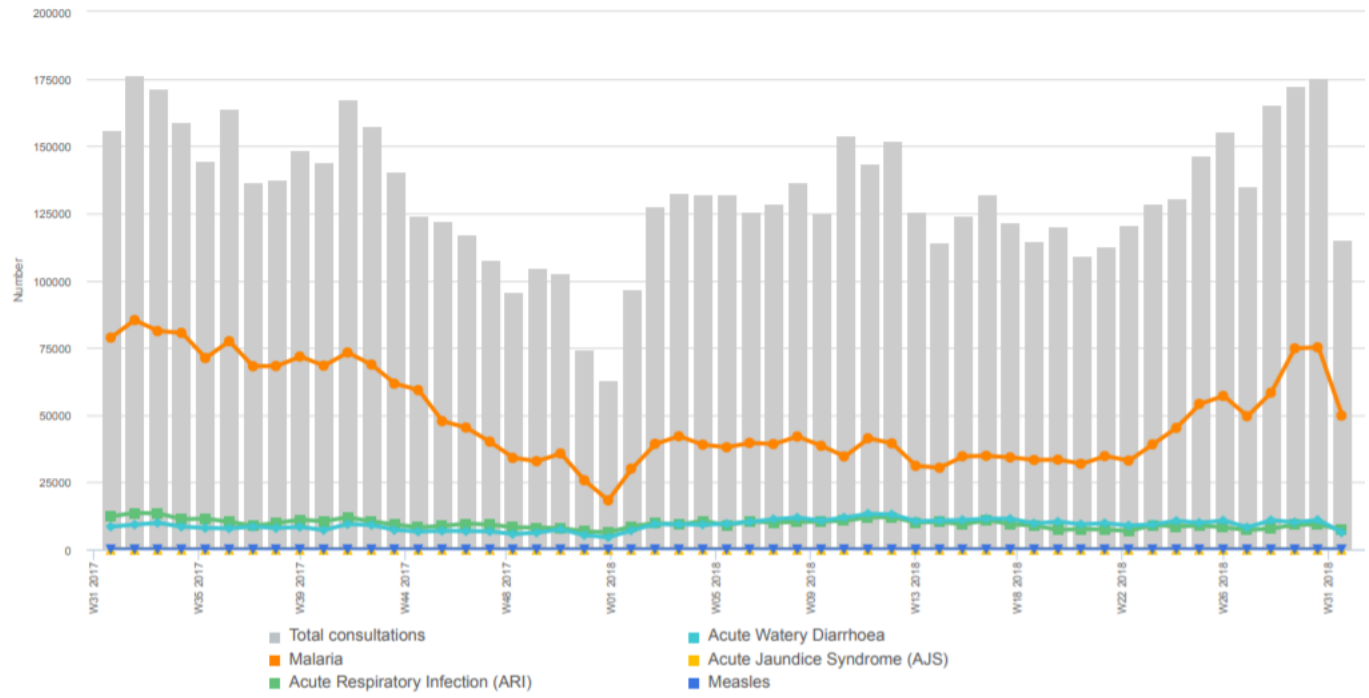
Figure 2 | Proportional morbidity (2018)



Syndrome	W31		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	49,817	68.3%	1,298,964	56.5%
ARI	7,382	10.1%	288,558	12.5%
AWD	6,385	8.8%	318,711	13.9%
Bloody diarrhoea	713	1.0%	44,169	1.9%
AJS	0	0.0%	185	0.0%
Measles	5	0.0%	372	0.0%
Other	8,612	11.8%	348,615	15.2%
<b>Total cases</b>	<b>72,914</b>	<b>100%</b>	<b>2,299,574</b>	<b>100%</b>

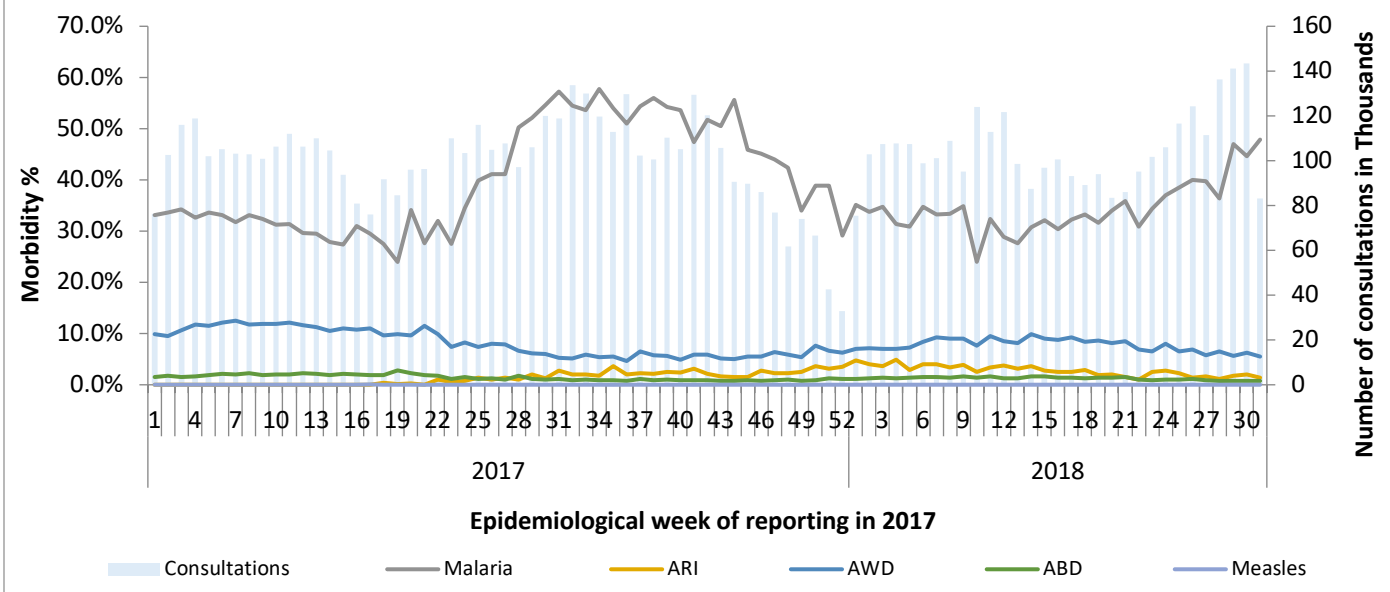
Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 1,298,964 (56.5%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

**Figure 3 | Trend in total consultations and key diseases (W31)**



## IDSR Proportionate morbidity trends - in relatively stable states

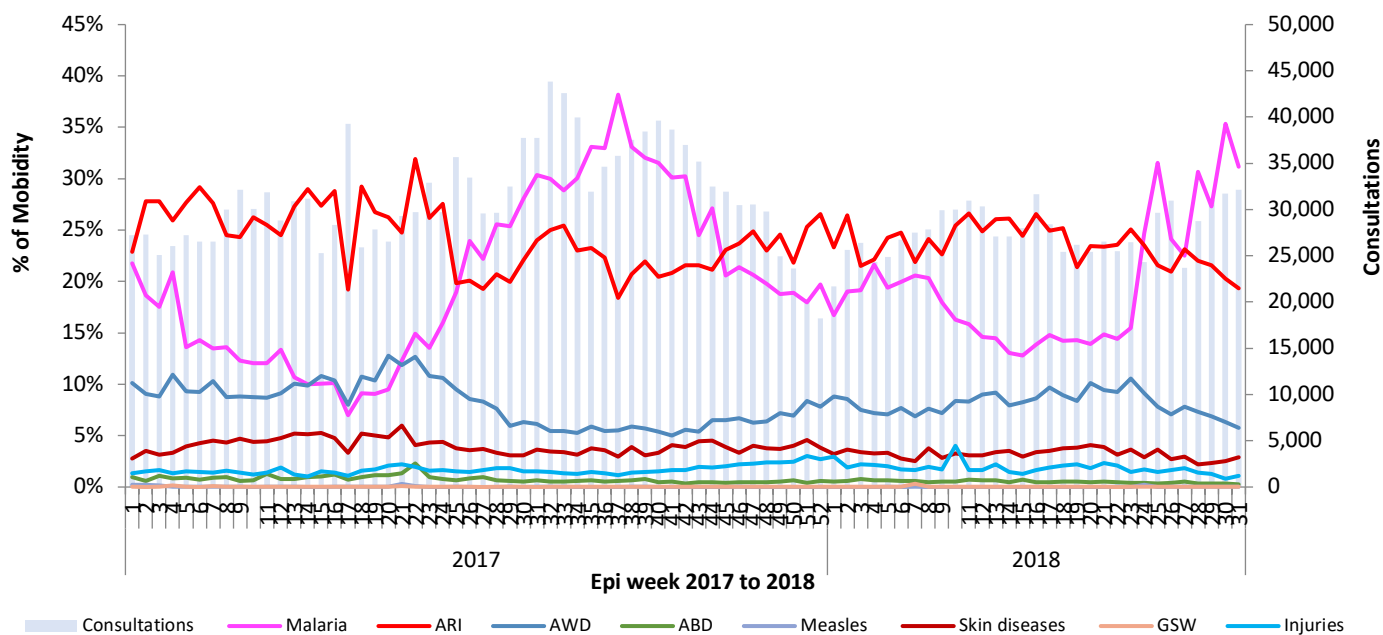
**Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 31, 2018**



In the relatively stable states, malaria is the top cause of morbidity accounting for 47.9% of the consultations in week 31 (representing an decrease from 44.6% in week 30).

## IDP Proportionate Morbidity trends – in displaced Population

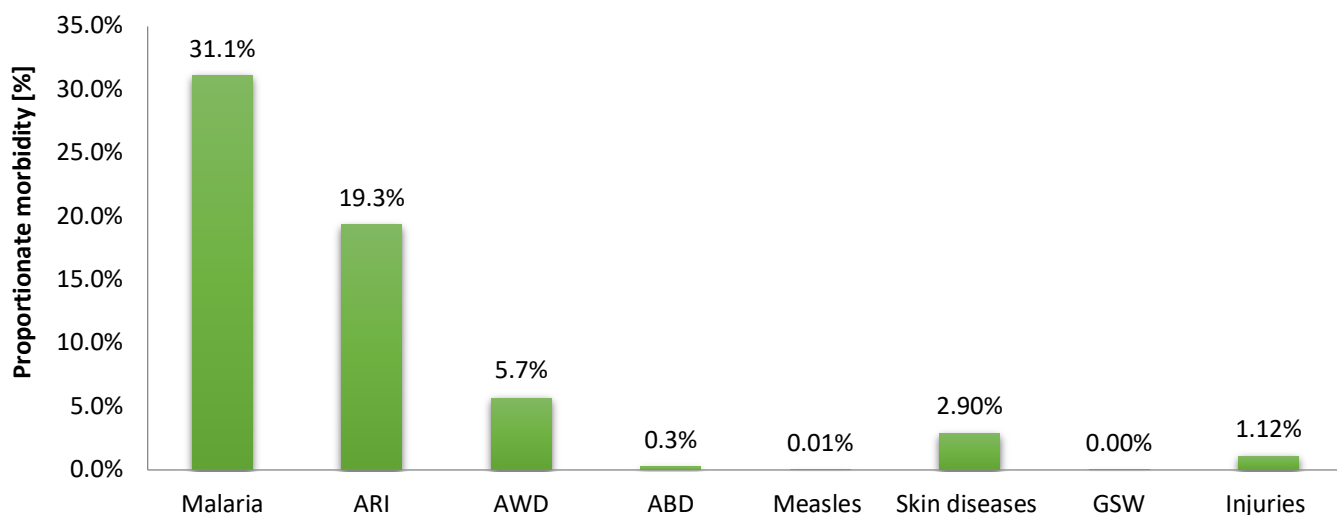
Fig. 2 | IDP Proportionate morbidity trends, week 01, 2017, to week 31, 2018



Among the IDPs, Malaria and ARI accounted for 31.1% and 19.3% of the consultations in week 31. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

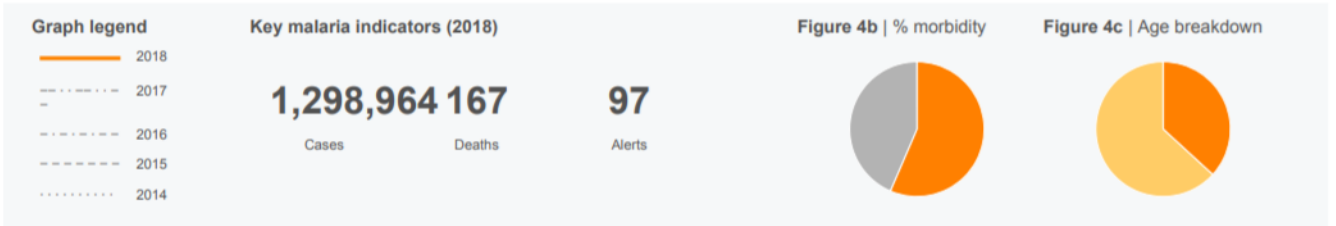
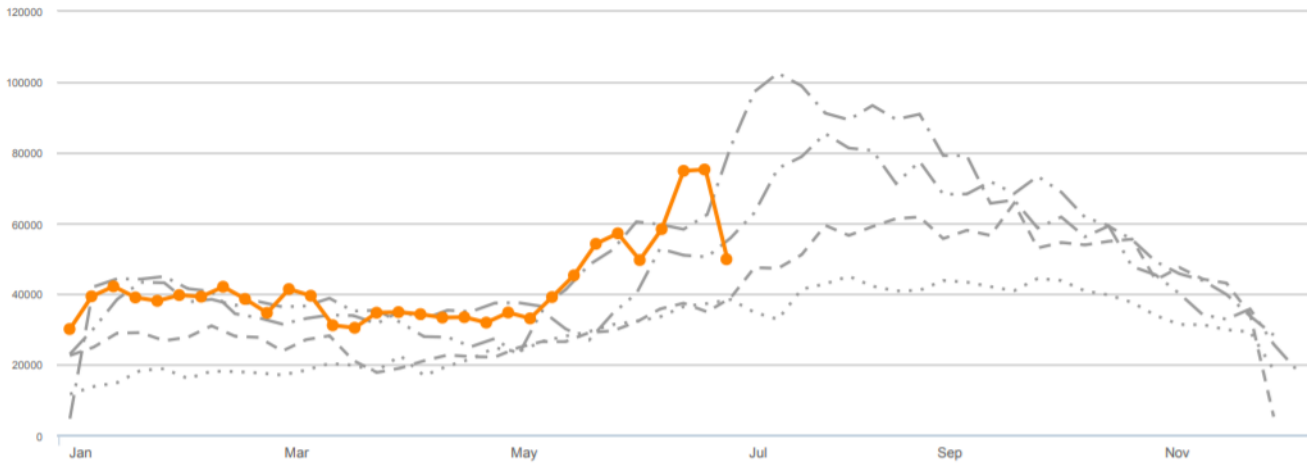
## IDP Proportionate Morbidity trends – in displaced Population

Causes of morbidity among the IDPs weeks 31, 2018



The top causes of morbidity in the IDPs in 2018 include ARI, Malaria, AWD, Skin diseases, Injuries and ABD.

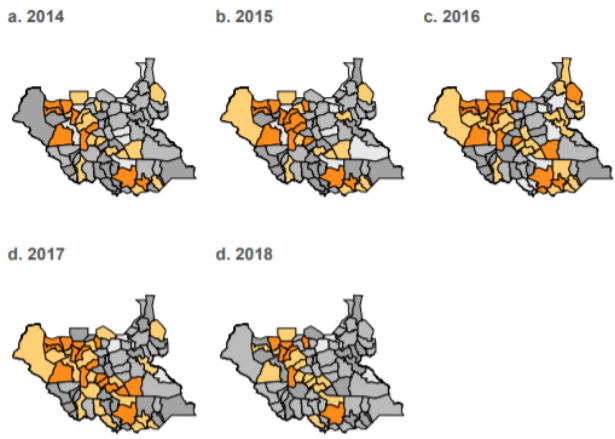
**Figure 4a |** Trend in number of cases over time (South Sudan)



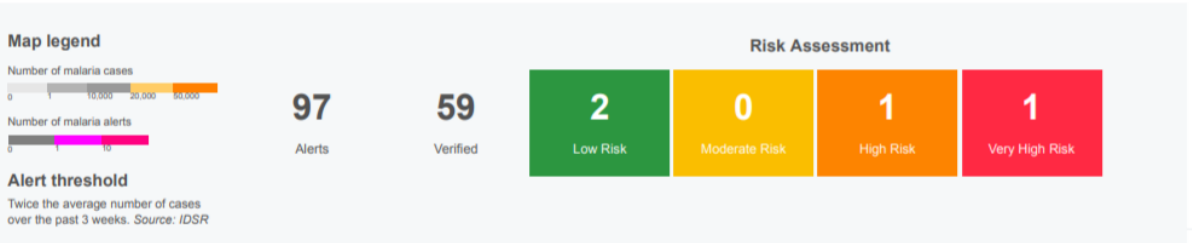
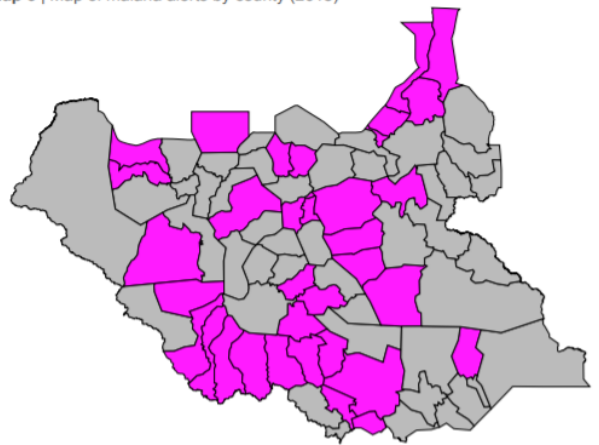
Malaria is the top course of Morbidity in the country, a total of 1,298,964 cases with 167 deaths registered since week 1 of 2018. malaria trend for week 31 of 2018 is above 2014, and 2015 as shown in the figure 4a, above.

## Malaria | Maps and Alert Management

**Map 2 |** Map of malaria cases by county (2018)



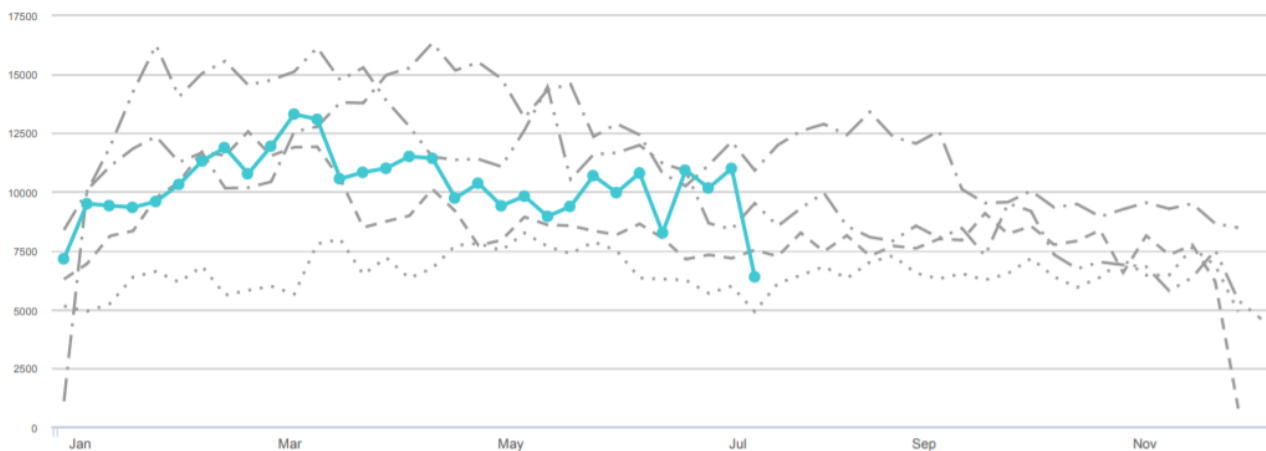
**Map 3 |** Map of malaria alerts by county (2018)



Since the beginning of the year, a total of 97 malaria alerts have been triggered, 59 of those were verified. The Maps above indicate the location reporting malaria alerts from 2014, 2015, 2016, 2017, and 2018.

# Acute Watery Diarrhoea | Trends over time

Figure 5a | Trend in AWD cases over time (South Sudan)



**Graph legend**

- 2018
- - - - - 2017
- - - - - 2016
- - - - - 2015
- ..... 2014

**Key AWD indicators (2018)**

**318,711** Cases  
**21** Deaths  
**98** Alerts

**Figure 5b | % morbidity**



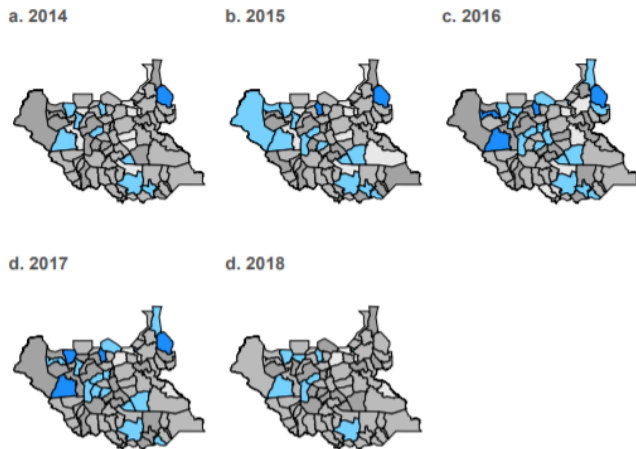
**Figure 5c | Age breakdown**



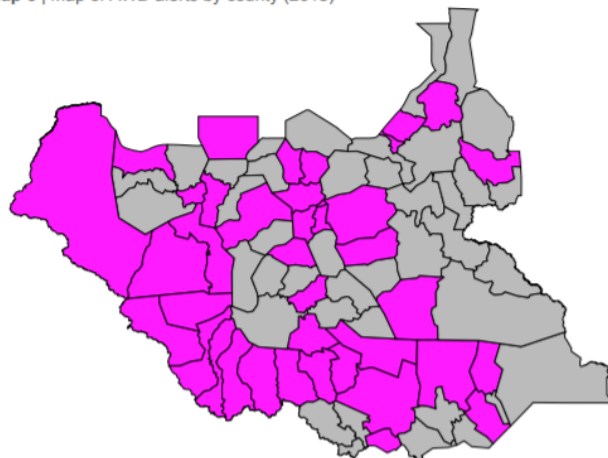
AWD is one of the top causes of morbidity in the country with 318, 711 cases reported since week 1 of 2018 including 21 deaths. AWD trend for 2018 is above 2015, 2016 and 2017, as shown in figure 5a, above.

# Acute Watery Diarrhoea | Maps and Alert Management

Map 4 | Map of AWD cases by county (2018)



Map 5 | Map of AWD alerts by county (2018)



**Map legend**

Number of AWD cases  
 0 5,000 10,000 20,000  
 Number of AWD alerts  
 0 1 10  
**Alert threshold**  
 Twice the average number of cases over the past 3 weeks. Source: IDSR

**98** Alerts  
**63** Verified

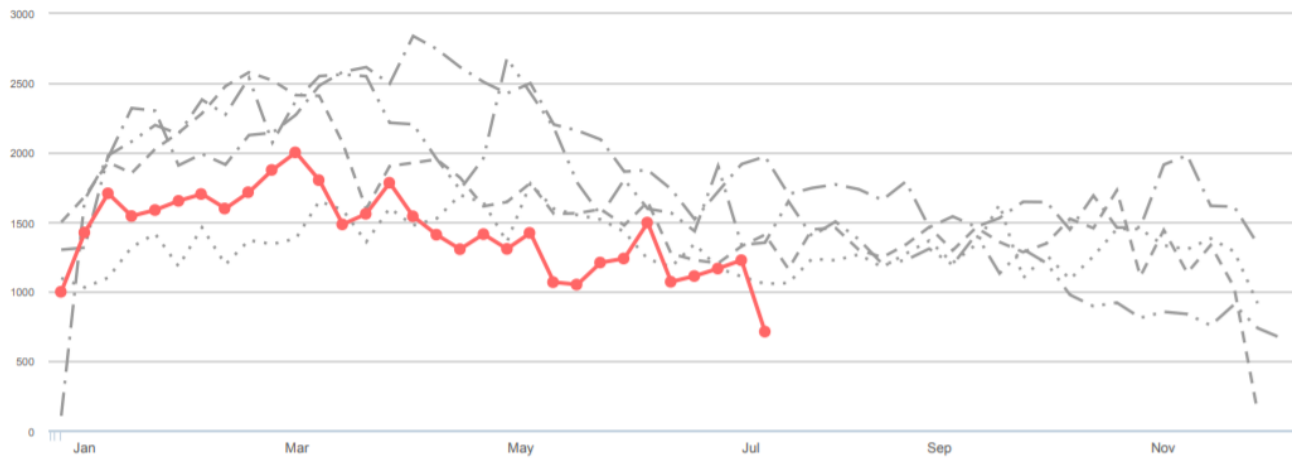
**Risk Assessment**



The number of AWD alerts triggered since week 1 of 2018 is 98, out of which 63 were verified. Maps above highlight the areas reporting AWD alerts from 2014 to 2018 .

# Acute Bloody Diarrhoea | Trends over time

**Figure 6a |** Trend in bloody diarrhoea cases over time (South Sudan)



**Graph legend**

- 2018
- - - - - 2017
- · - · - 2016
- - - - - 2015
- · · · · 2014

**Key bloody diarrhoea indicators (2018)**

**44,169** Cases  
**23** Deaths  
**119** Alerts

**Figure 6b | % morbidity**



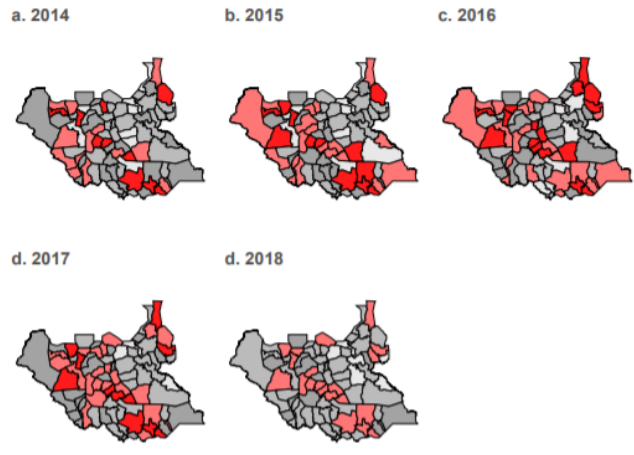
**Figure 6c | Age breakdown**



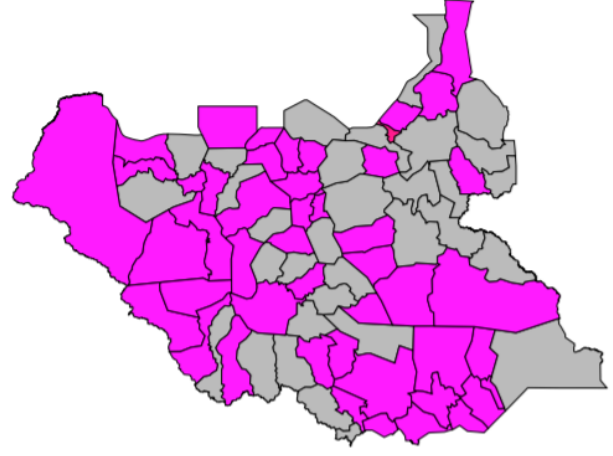
Since week 1 of 2018, a total of 44,169 cases of ABD have been reported country wide including 23 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

# Acute Bloody Diarrhoea | Maps and Alert Management

**Map 6 |** Map of bloody diarrhoea cases by county (2018)



**Map 7 |** Map of bloody diarrhoea alerts by county (2018)



**Map legend**



**Alert threshold**  
 Twice the average number of cases over the past 3 weeks. Source: IDSR

**119** Alerts  
**75** Verified

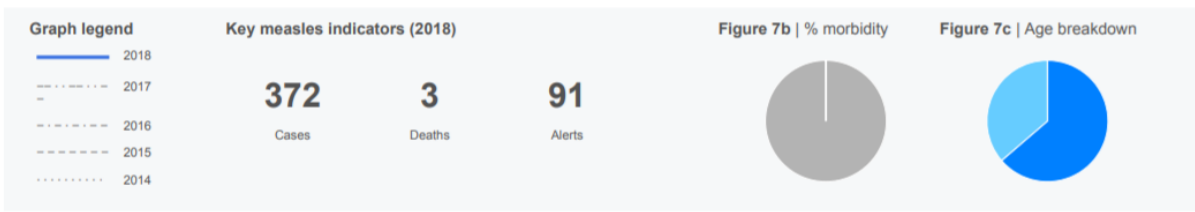
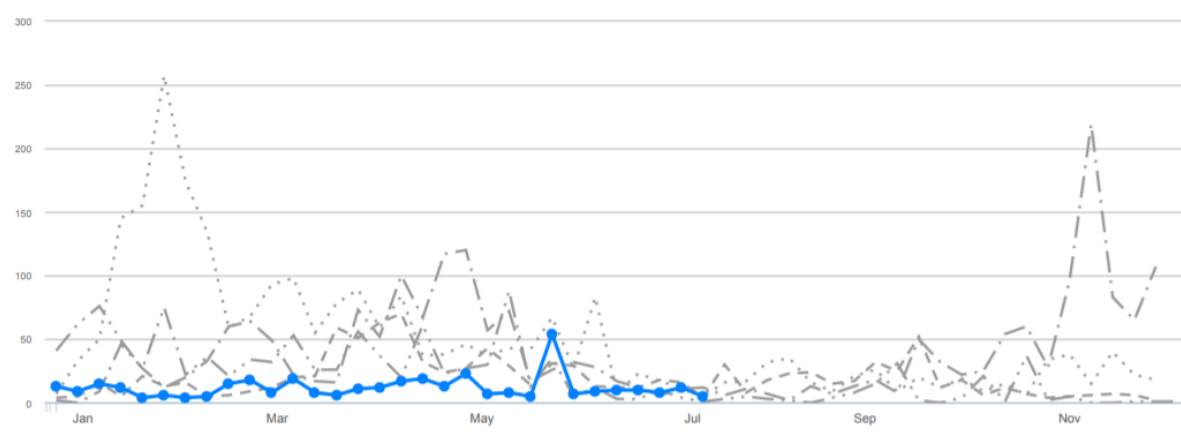
**Risk Assessment**



Total of 119 alerts were generated since week 1 of 2018, of which 75 were verified by the county surveillance team. Maps indicating areas triggering alerts since 2014 to 2018 are shown above.



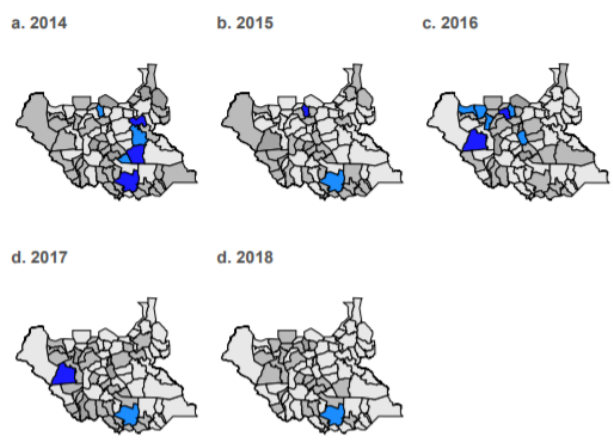
Figure 7a | Trend in number of cases over time (South Sudan)



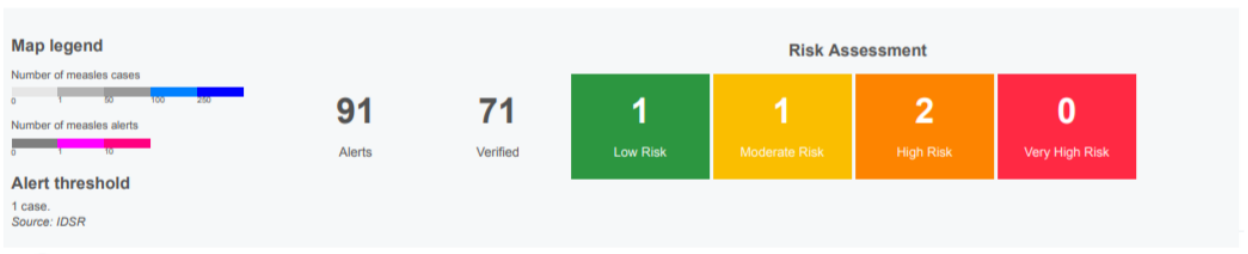
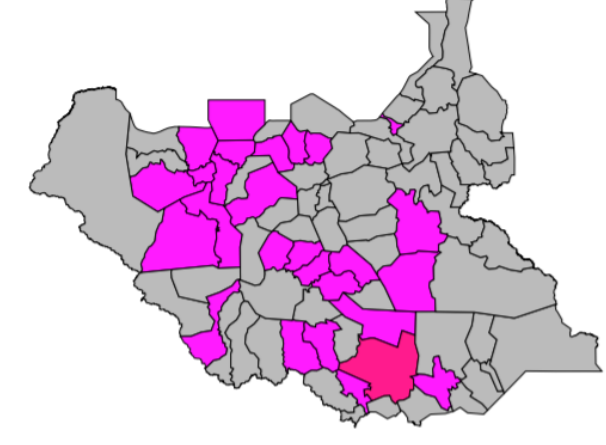
Since the beginning of 2018, at least 367 suspect measles cases including 3 death (CFR 0.82%) have been reported. Of these, 282 suspect cases have undergone measles case-based laboratory-backed investigation with 235 samples collected out of which 26 measles IgM positive cases; 63 clinically confirmed cases; and 34 cases confirmed by epidemiological linkage.

## Measles | Maps and Alert Management

Map 7 | Map of measles cases by county (2018)



Map 8 | Map of measles alerts by county (2018)



Since week 1 of 2018, 91 alerts of measles were triggered and 71 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.

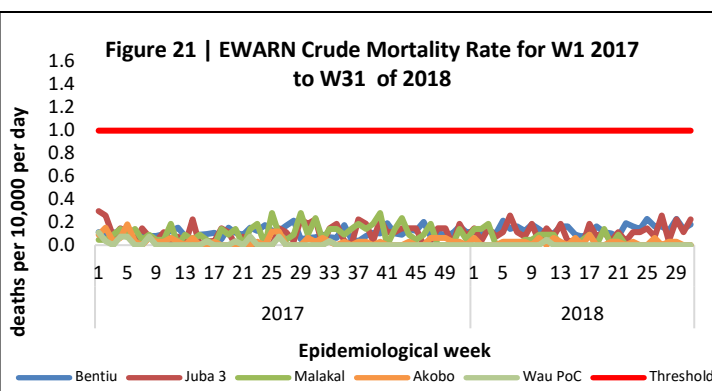
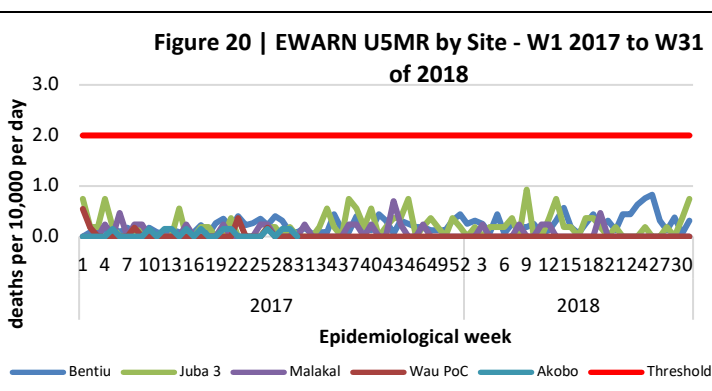
**Table 6 | Proportional mortality by cause of death in IDPs W31 2018**

Cause of Death by IDP site	Bentiu		Juba 3		Total deaths
	<5yrs	≥5yrs	<5yrs	≥5yrs	
Anaemia				1	1
Aspiration	1				1
Heart Failure			1		1
malaria	4	2			6
renal failure			1	1	2
TB		2			2
Unkown		3			3
Wasting Sydrom			1		1
Cardia		1			1
Chronic Otitis media		1			1
vominting			1		1
<b>Total deaths</b>	<b>5</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>20</b>

Among the IDPs, mortality data was received from Bentiu PoC & UN House PoC in week 31. (Table 6). **A total of 20** deaths were reported during the week. Bentiu PoC report 14 deaths (70%) in the week. During the week, 9 (45%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 31 are shown in Table 6.

# Mortality in the IDPs - Crude and Under five mortality rates



The U5MR in all the IDP sites that submitted mortality data in week 31 of 2018 is below the emergency threshold of 2 deaths per 10,000 per day (Fig. 20).  
 The Crude Mortality Rates [CMR] in all the IDP sites that submitted mortality data in week 31 of 2018 were below the emergency threshold of 1 death per 10,000 per day (Fig. 21).

## Mortality in the IDPs - Overall mortality in 2018

**Table 7 | Mortality by IDP site and cause of death as of W31, 2018**

IDP site	acute watery diarrhoea	cancer	GSW	Gunshot wound	Heart Failure	Kala-Azar	malaria	Meningitis	perinatal death	pneumonia	Rabies	SAM	Sepsis	TB/HIV/AIDS	Trauma	HIV/AIDS	TB	Others	Grand Total
Bentiu	7	1	2	2	1	2	30	3	24	10	1	13	16	13	1	19	7	194	<b>346</b>
Juba 3	1	1			5		10			5		2		1		6	7	57	<b>95</b>
Malakal		1			3	1			1	1							2	17	<b>26</b>
Akobo				1		2	4			2		1	2	1	1			9	<b>23</b>
Wau PoC							1											0	<b>1</b>
<b>Grand Total</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>5</b>	<b>45</b>	<b>3</b>	<b>25</b>	<b>18</b>	<b>1</b>	<b>16</b>	<b>18</b>	<b>15</b>	<b>2</b>	<b>25</b>	<b>16</b>	<b>277</b>	<b>491</b>
<b>Proportionate mortality [%]</b>	<b>2%</b>	<b>1%</b>	<b>0%</b>	<b>1%</b>	<b>2%</b>	<b>1%</b>	<b>9%</b>	<b>1%</b>	<b>5%</b>	<b>4%</b>	<b>0%</b>	<b>3%</b>	<b>4%</b>	<b>3%</b>	<b>0%</b>	<b>5%</b>	<b>3%</b>	<b>56%</b>	<b>100%</b>

A total of 491 deaths have been reported from the IDP sites in 2018 [Table 7](#).  
 The top causes of mortality in the IDPs in 2018 are shown in [Table 7](#).

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## Notes

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The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

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

