

# South Sudan

Integrated Disease Surveillance and  
Response (IDSR)

Annexes W46 2018 (Nov 12– Nov 18)



**World Health  
Organization**  
South Sudan



Ministry of Health  
Republic of South Sudan

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Slide 12 **Trend in measles cases over time**

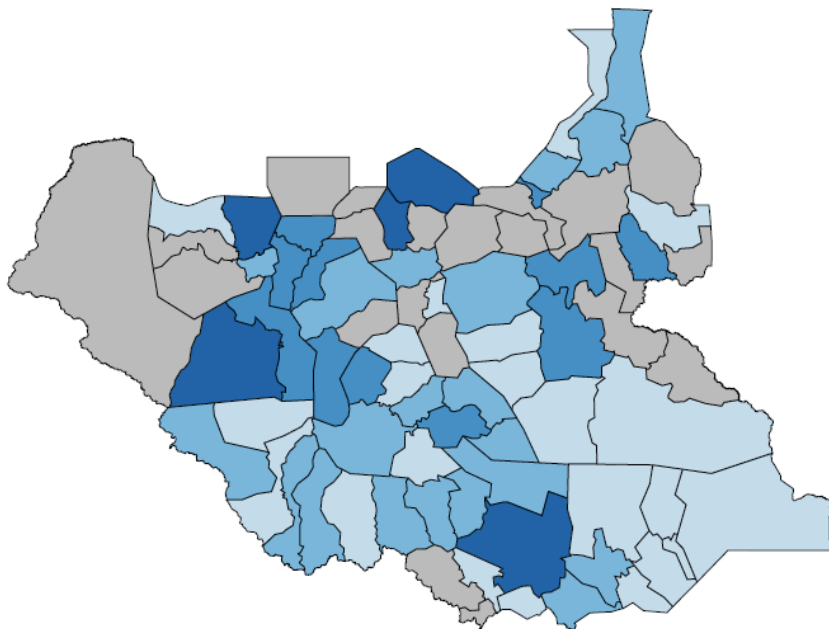
Slide 13 **Measles maps and alert management**

## 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 (W46 2018)

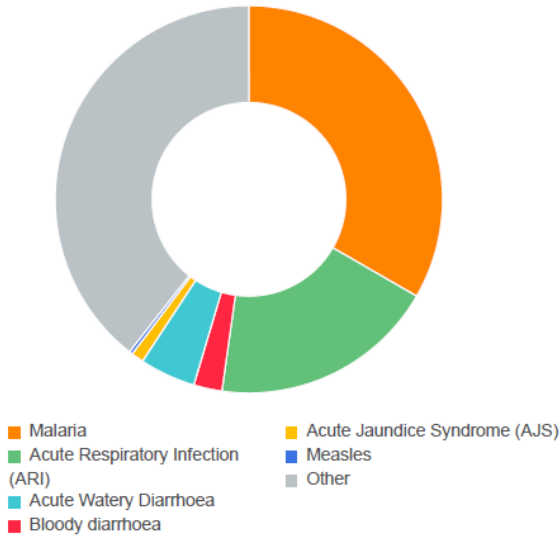


Hub	W46	2018
Aweil	9,638	655,127
Bentiu	13,096	758,683
Bor	11,574	524,504
Juba	11,415	586,747
Kwajok	17,260	1,188,980
Malakal	12,075	709,432
Rumbek	15,918	876,825
Torit	5,842	296,474
Wau	12,527	479,554
Yambio	11,316	513,057
<b>South Sudan</b>	<b>120,661</b>	<b>6,589,383</b>

The total consultation in the country since week 1 of 2018 is 6,489,383 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)

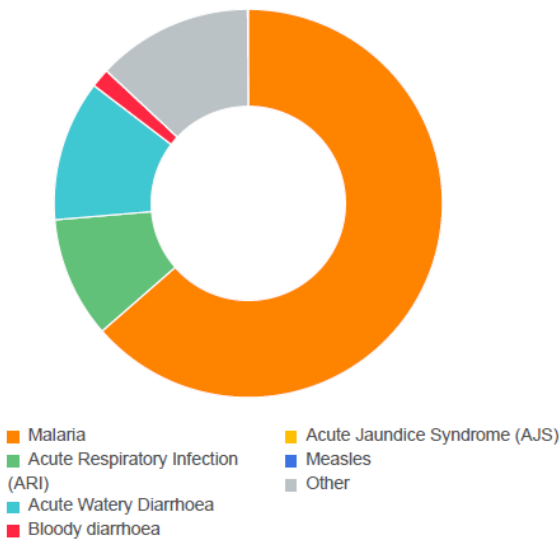


Syndrome	W46		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	6	8.6%	351	33.3%
ARI	0	0.0%	199	18.9%
AWD	1	1.4%	49	4.7%
Bloody diarrhoea	0	0.0%	25	2.4%
AJS	0	0.0%	11	1.0%
Measles	0	0.0%	3	0.3%
Other	63	90.0%	415	39.4%
<b>Total deaths</b>	<b>70</b>	<b>100%</b>	<b>1,053</b>	<b>100%</b>

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 33.3% of the deaths since week 1 of 2018, followed by ARI AWD and bloody diarrhoea.

# Proportional morbidity

Figure 2 | Proportional morbidity (2018)

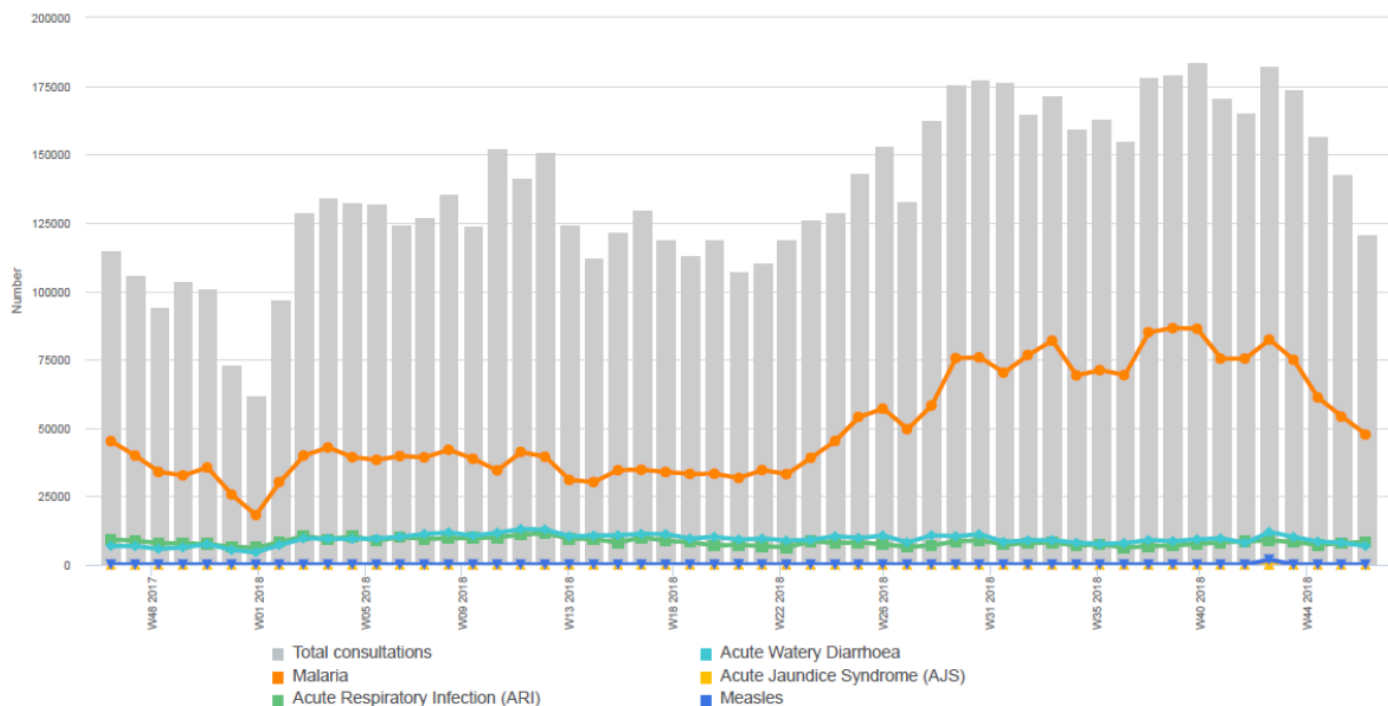


Syndrome	W46		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	47,509	65.4%	2,414,117	63.6%
ARI	8,278	11.4%	382,517	10.1%
AWD	6,714	9.2%	445,488	11.7%
Bloody diarrhoea	581	0.8%	60,506	1.6%
AJS	1	0.0%	213	0.0%
Measles	3	0.0%	2,191	0.1%
Other	9,578	13.2%	492,136	13.0%
<b>Total cases</b>	<b>72,664</b>	<b>100%</b>	<b>3,797,168</b>	<b>100%</b>

Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 2,414,117(63.6%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

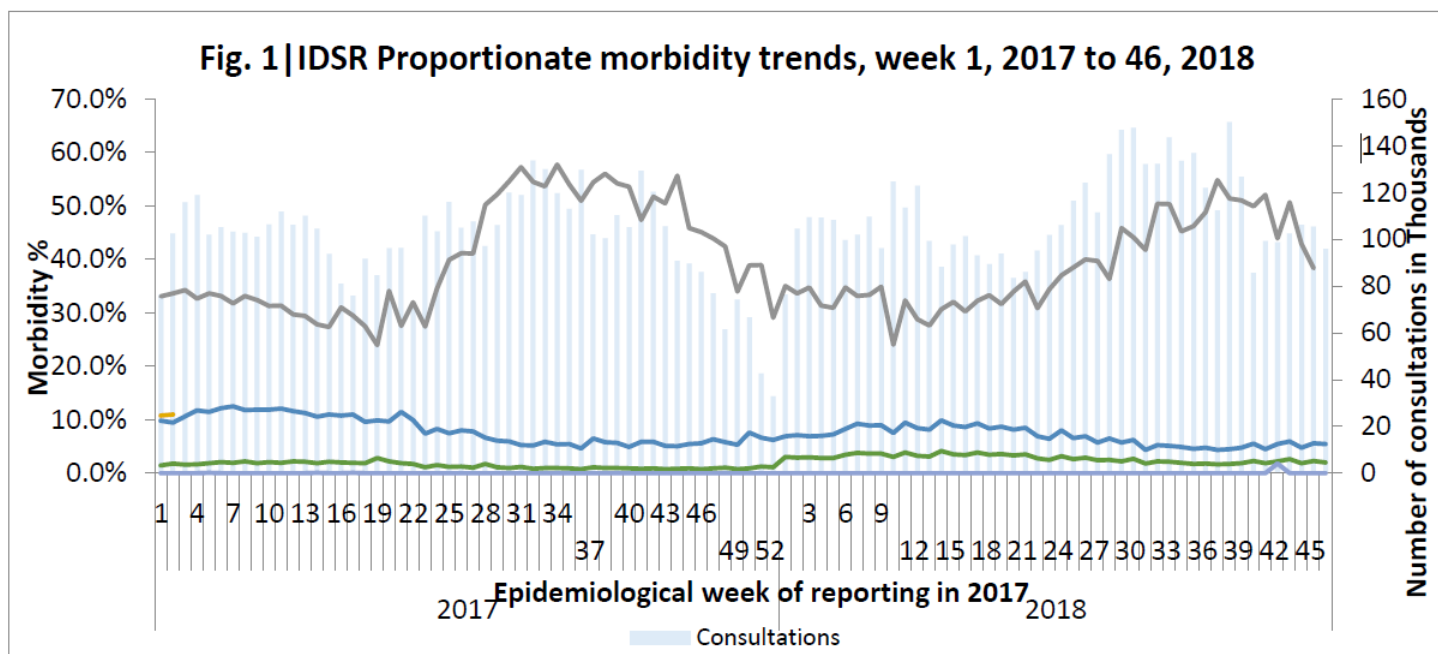
## Trend in consultations and key diseases

Figure 3 | Trend in total consultations and key diseases (W46)



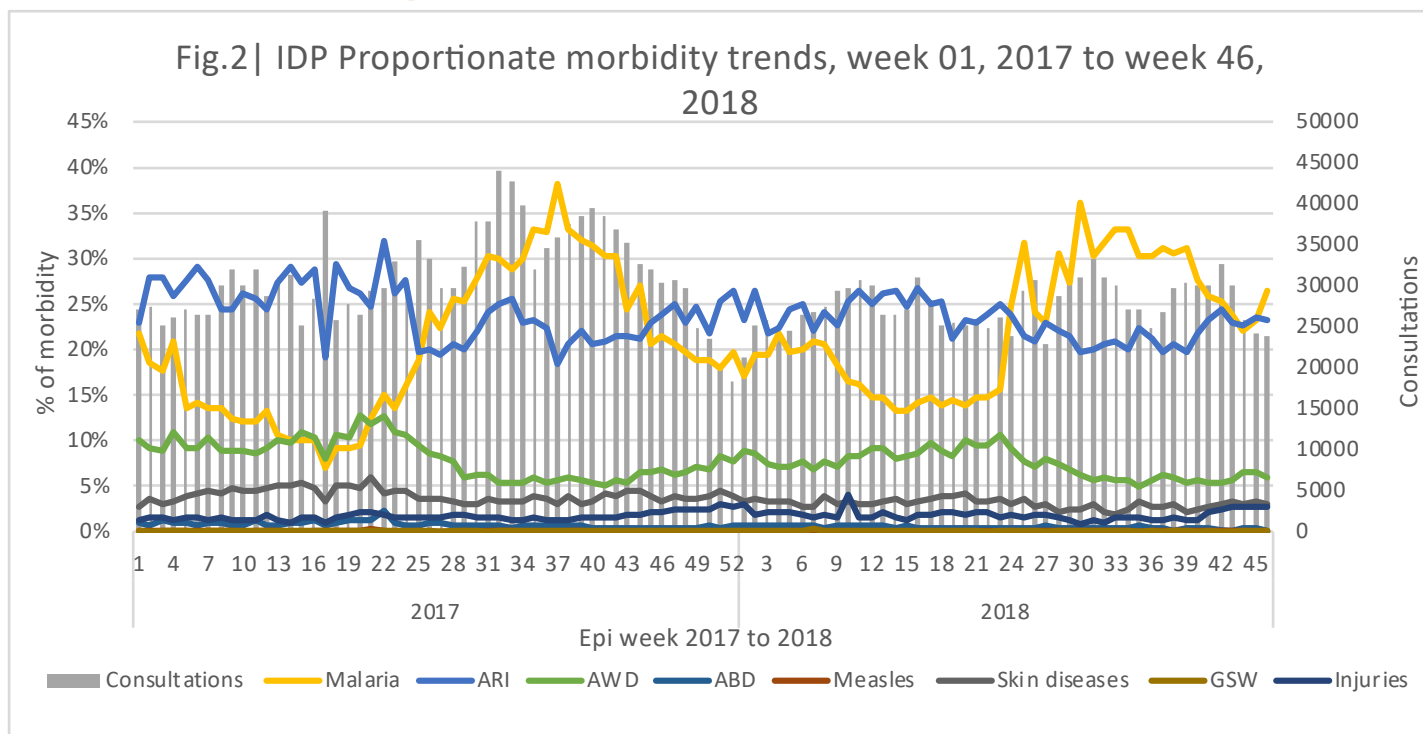
## IDSR Proportionate morbidity trends - in relatively stable states

Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 46, 2018



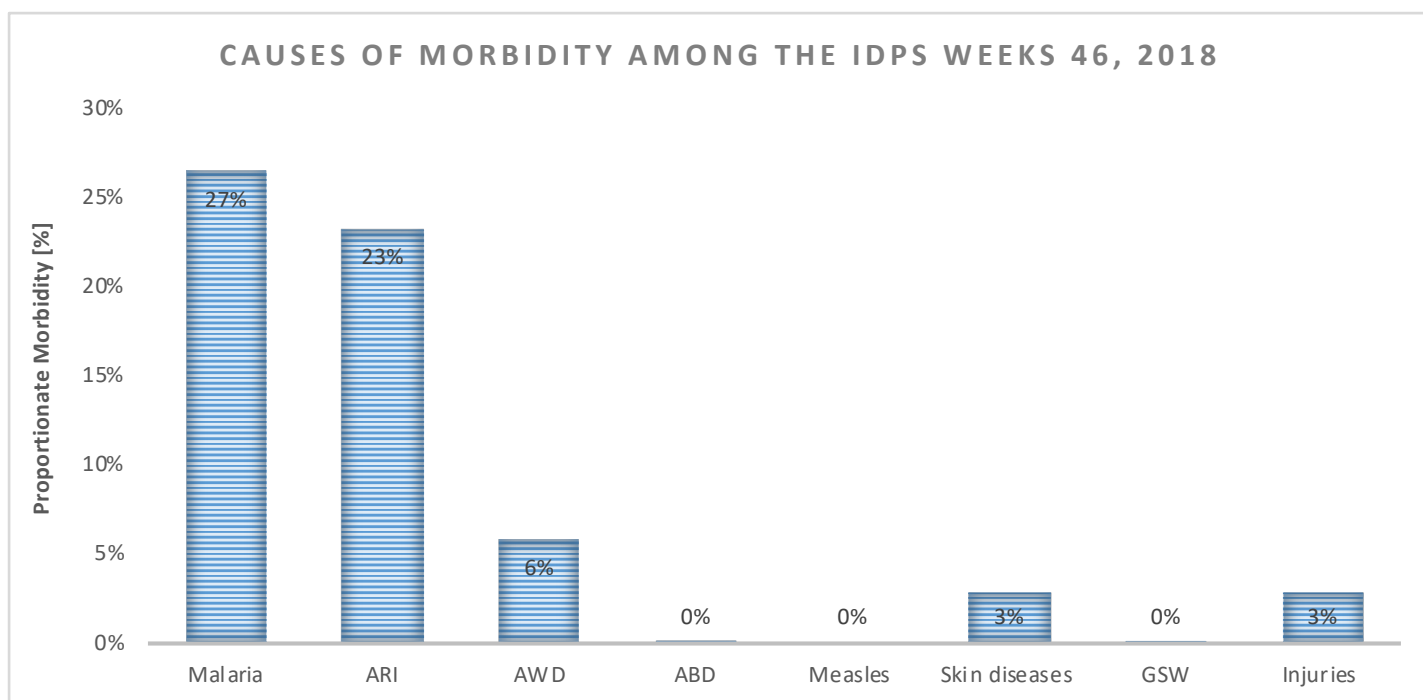
In the relatively stable states, malaria is the top cause of morbidity accounting for 42.8% of the consultations in week 46 (representing an increase from 38.3% in week 45).

## IDP Proportionate morbidity trends - in displaced population



Among the IDPs, Malaria and ARI accounted for 27% and 23% of the consultations in week 46. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Measles.

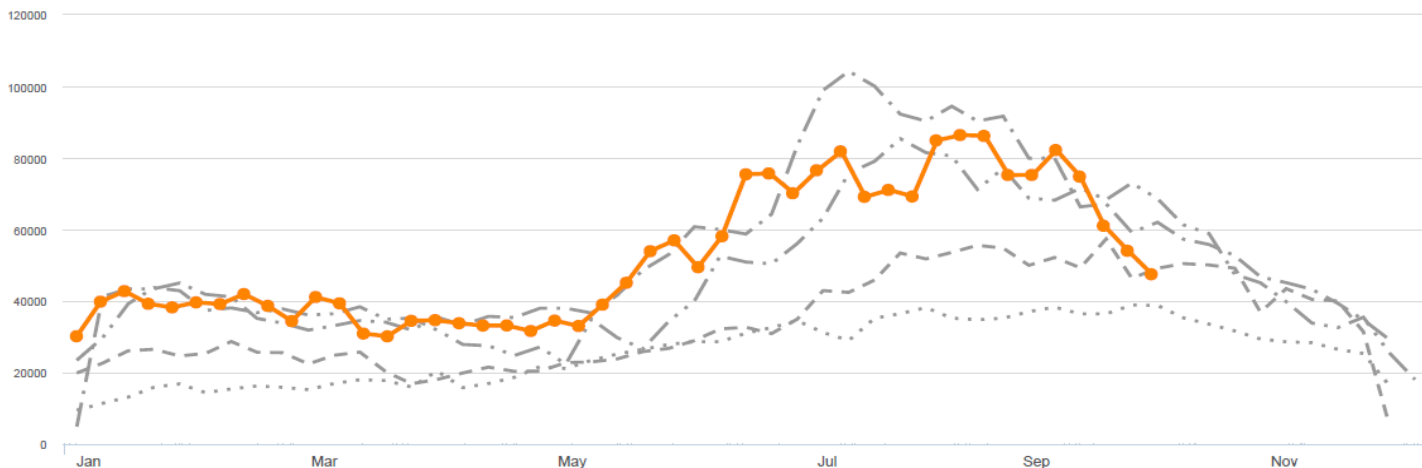
## IDP Proportionate morbidity trends - in displaced population



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

# Malaria | Trends over time

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



**Graph legend**

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

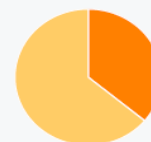
**Key malaria indicators (2018)**

**2,414,117** **351** **139**  
 Cases Deaths Alerts

**Figure 4b | % morbidity**



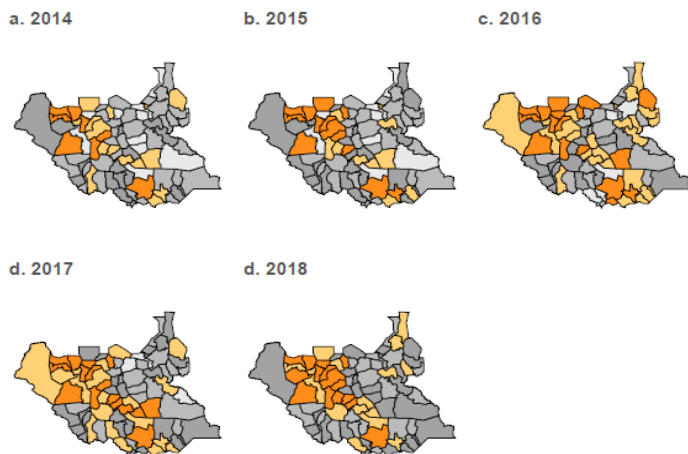
**Figure 4c | Age breakdown**



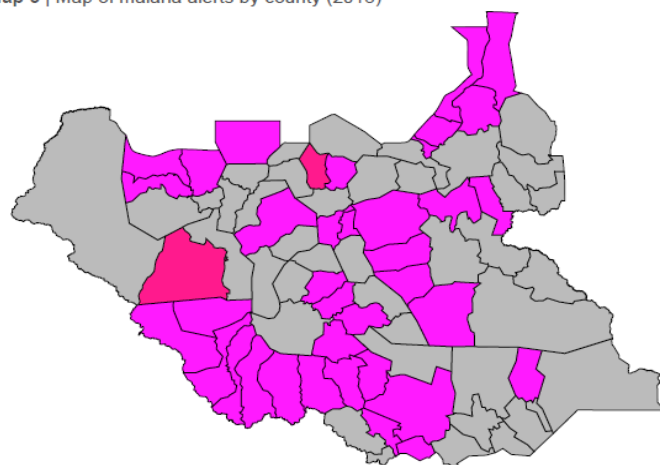
Malaria is the top course of Morbidity in the country, a total of 2,414,117 cases with 351 deaths registered since week 1 of 2018. malaria trend for week 46 of 2018 is below 2015, 2016, and 2017 as shown in the figure 4a, above.

# Malaria | Maps and Alert Management

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



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



**Map legend**

Number of malaria cases  
 0 10,000 20,000 50,000

Number of malaria alerts  
 0 1 10

**Alert threshold**

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

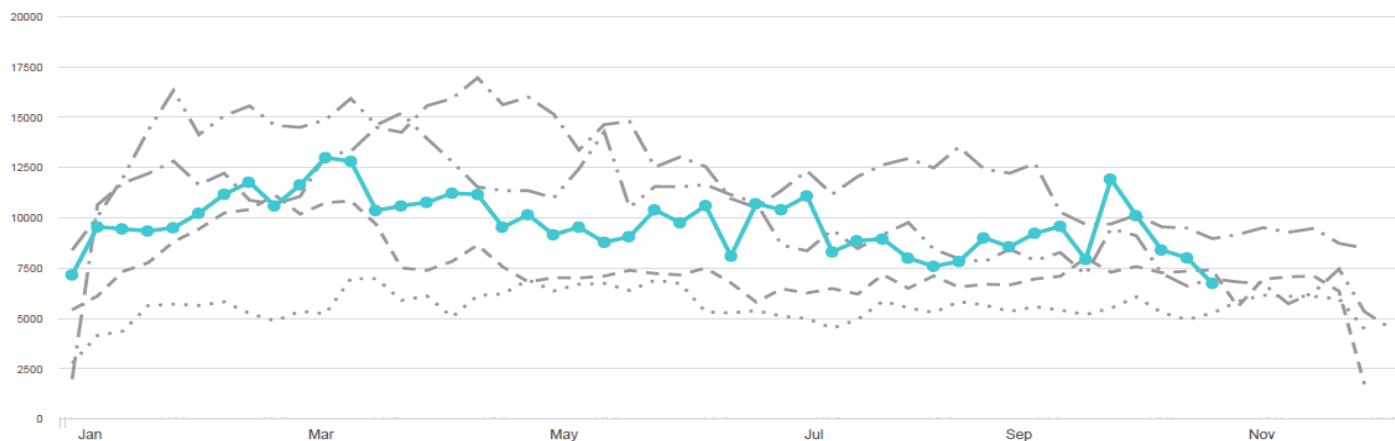
**139** Alerts  
**97** Verified



Since the beginning of the year, a total of 139 malaria alerts have been triggered, 89 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)



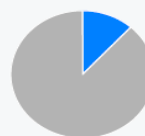
**Graph legend**

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

**Key AWD indicators (2018)**

**445,488** Cases  
**49** Deaths  
**135** Alerts

**Figure 5b | % morbidity**



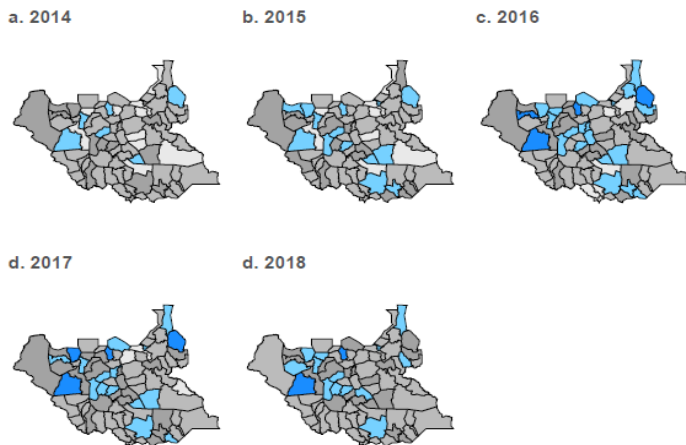
**Figure 5c | Age breakdown**



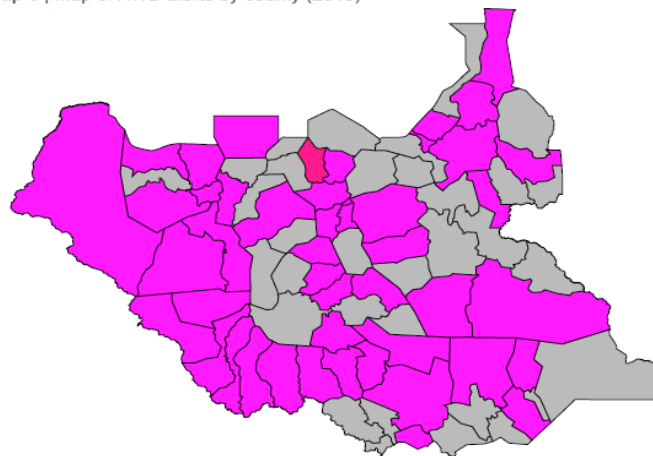
AWD is one of the top causes of morbidity in the country with 445,488 cases reported since week 1 of 2018 including 49 deaths. AWD trend for week 46 of 2018, shows a decline and is below 2016 and 2017, as shown in figure 5a, above.

# 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

**135**  
Alerts

**93**  
Verified

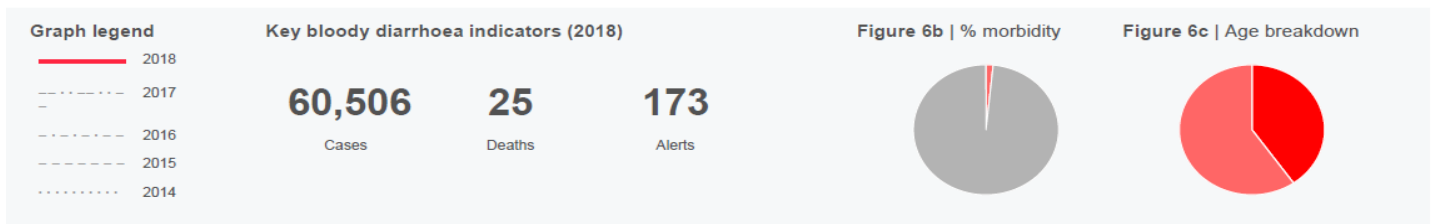
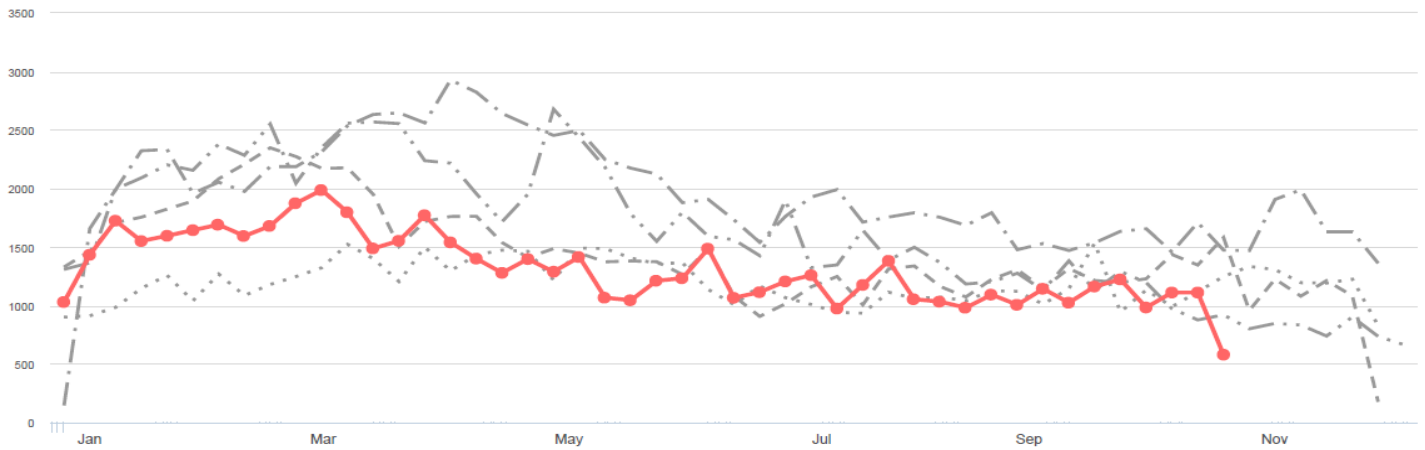
**Risk Assessment**



The number of AWD alerts triggered since week 1 of 2018 is 135, out of which 93 were verified. Maps above highlight the areas reporting AWD alerts from 2014 to 2018 .

# Acute Bloody Diarrhoea | Trends over time

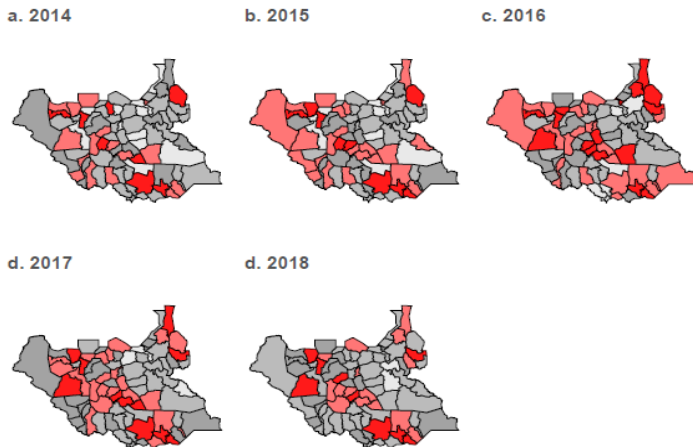
Figure 6a | Trend in bloody diarrhoea cases over time (South Sudan)



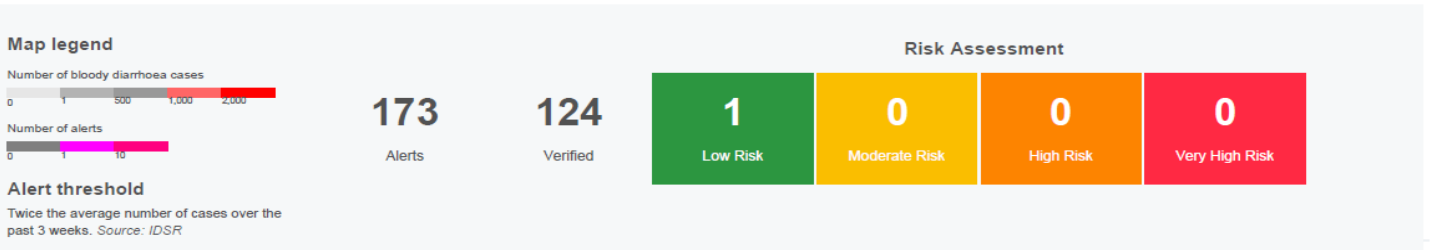
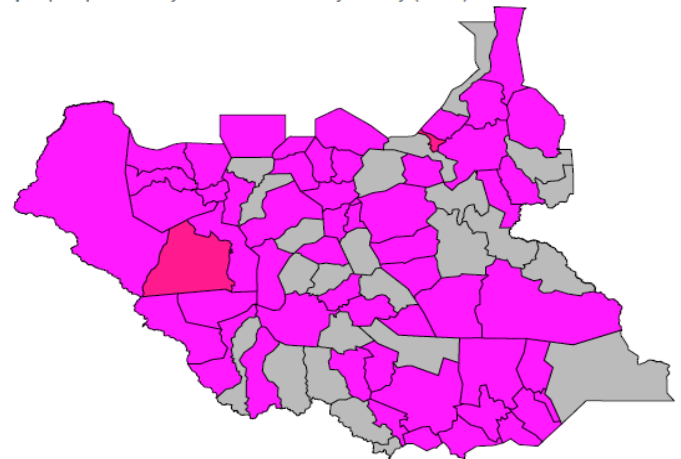
Since week 1 of 2018, a total of 60,506 cases of ABD have been reported country wide including 25 death. ABD trend for 2018 is below 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

# 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)

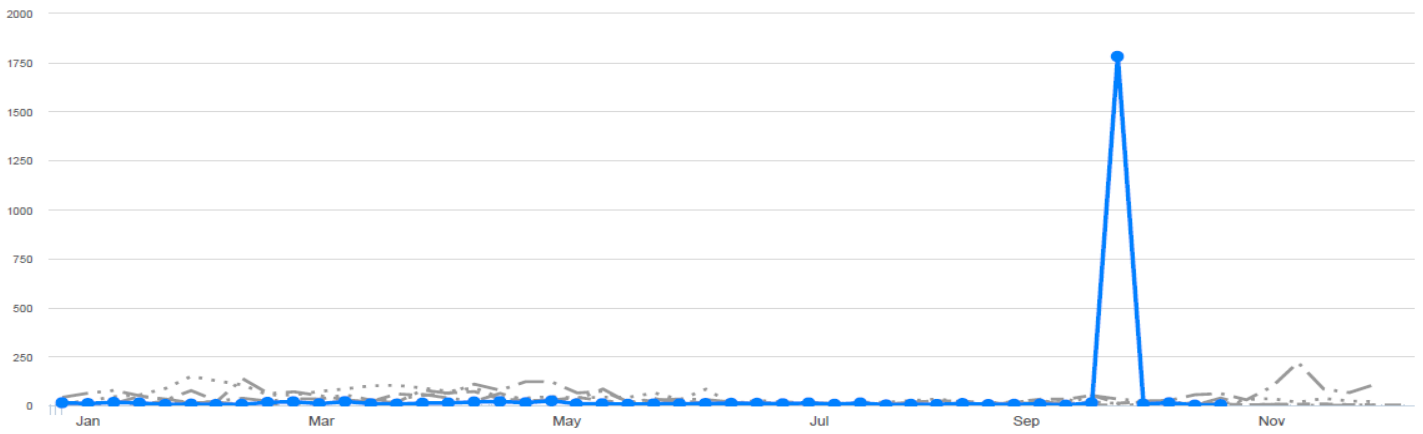


Total of 173 alerts were generated since week 1 of 2018, of which 124 were verified by the county surveillance team. Maps indicating areas triggering alerts since 2014 to 2018 are shown above.



# Measles | Trends over time

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



**Graph legend**

- 2018
- 2017
- 2016
- 2015
- 2014

**Key measles indicators (2018)**

**2,191**

Cases

**3**

Deaths

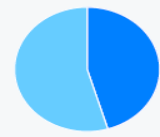
**143**

Alerts

**Figure 7b | % morbidity**



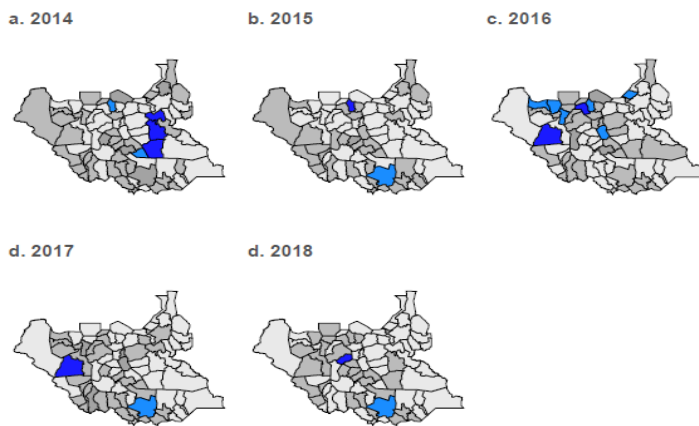
**Figure 7c | Age breakdown**



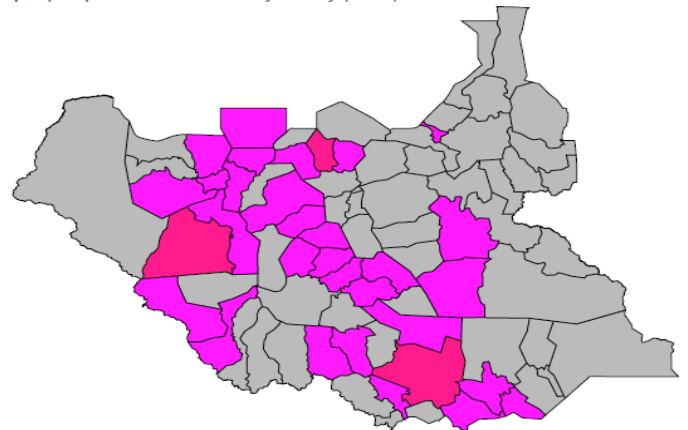
Since the beginning of 2018, at least 2,191 suspect measles cases including 3 death (CFR 0.74%) have been reported. . Of these, 292 suspect cases have undergone measles case-based laboratory-backed investigation with 245 samples collected out of which 26 measles IgM positive cases; 63 clinically confirmed 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)



**Map legend**



**Alert threshold**

1 case.  
Source: IDSR

**143**

Alerts

**115**

Verified

**Risk Assessment**



Since week 1 of 2018, 143 alerts of measles were triggered and 115 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.

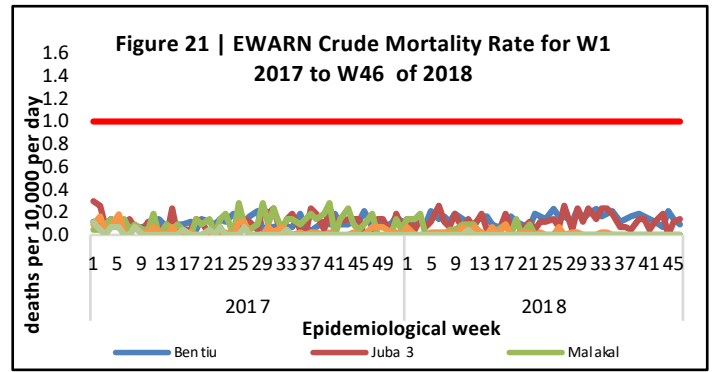
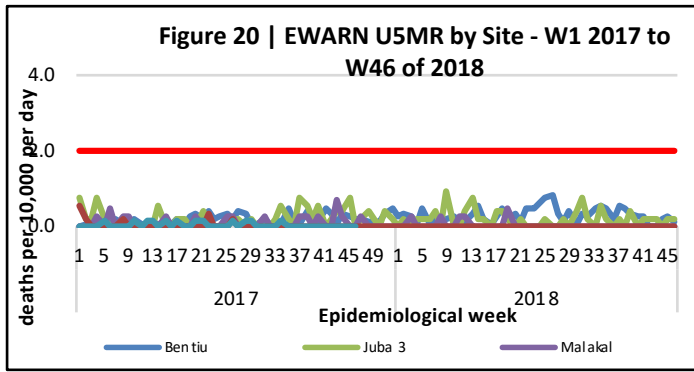
**Table 6 | Proportional mortality by cause of death in IDPs W46 2018**

Cause of Death by IDP site	Bentiu		Juba 3		Total deaths
	<5yrs	≥5yrs	<5yrs	≥5yrs	
Aspiration		1			1
malaria	1				1
pneumonia				1	1
Renal failure				1	1
Unknown			1	1	2
Chronic diseases		1			1
Wasting Sydrom				1	1
Old Age Stage		1			1
Gastritis		1			1
Pellagra + Paralysis		1			1
<b>Total deaths</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>11</b>

Among the IDPs, mortality data was received from Bentiu PoC and Juba 3 in week 46. (Table 6). **A total of 11** deaths were reported during the week; Bentiu PoC (7), Juba 3 (4) in the week. During the week, 8 (73%) of the deaths were recorded among children >5 years in (Table 6).

The causes of death during week46 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 46 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 46 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 W46, 2018**

IDP site	acute watery diarrhoea	cancer	GSW	Heart Failure	Kala-Azar	malaria	Meningitis	perinatal death	pneumonia	Rabies	SAM	Sepsis	TB/HIV/AIDS	Trauma	HIV/AIDS	TB	Others	Grand Total
Bentiu	11	1	8	2	3	55	3	30	13	1	19	24	14	1	30	7	304	526
Juba 3	1	1		5		12		2	7		3	1	1		15	7	90	145
Malakal		1		3	1			1	1							2	17	26
Akobo			1		2	4			2		2	2	1	1			10	25
Wau PoC						1											0	1
<b>Grand Total</b>	<b>12</b>	<b>3</b>	<b>9</b>	<b>10</b>	<b>6</b>	<b>72</b>	<b>3</b>	<b>33</b>	<b>23</b>	<b>1</b>	<b>24</b>	<b>27</b>	<b>16</b>	<b>2</b>	<b>45</b>	<b>16</b>	<b>421</b>	<b>723</b>
<b>Proportionate mortality [%]</b>	2%	0%	1%	1%	1%	##	0%	5%	3%	0%	3%	4%	2%	0%	6%	2%	58%	100%

A total of 723 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

WHO and the Ministry of Health gratefully acknowledge health cluster and health pooled fund (HPF) partners who have reported the data used in this bulletin. We would also like to thank ECHO and USAID for providing financial support.

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>

