

South Sudan

Integrated Disease Surveillance and
Response (IDSR)

Annexes W27 2018 (Jul 02 – Jul 08)



**World Health
Organization**
South Sudan



Access and Utilisation

Slide 2 **Map 1** Map of consultations by county (2018)

Indicator-based surveillance

Slide 3 **Figure 1** Proportional mortality

Slide 4 **Figure 2** Proportional morbidity

Slide 5 **Figure 3** Trend in consultations and key diseases

Disease trends and maps

Malaria

Slide 6 **Trend in malaria cases over time**

Slide 7 **Malaria maps and alert management**

Acute Watery Diarrhoea (AWD)

Slide 8 **Trend in AWD cases over time**

Slide 9 **AWD maps and alert management**

Bloody diarrhoea

Slide 10 **Trend in bloody diarrhoea cases over time**

Slide 11 **Bloody diarrhoea maps and alert management**

Measles

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

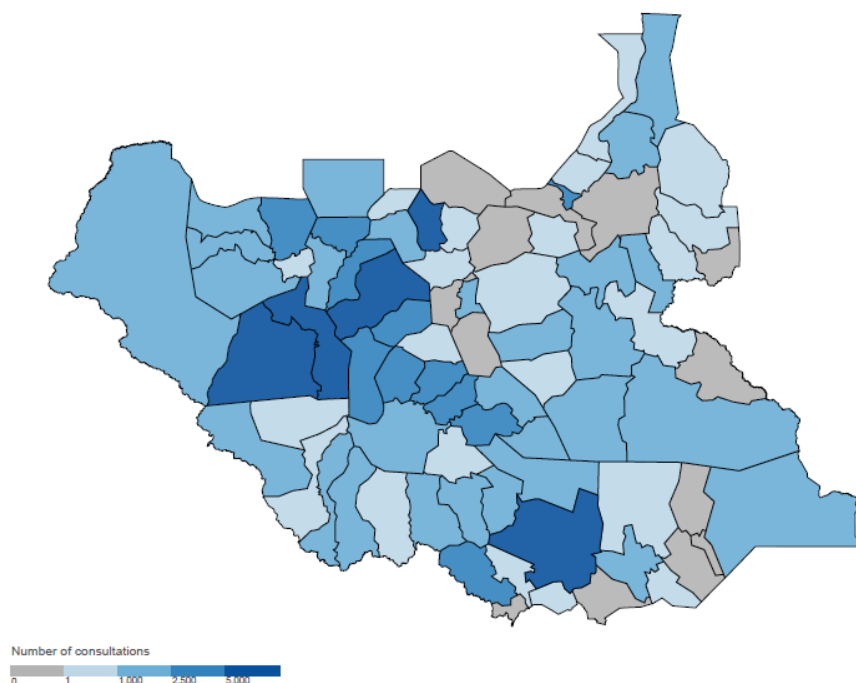
Slide 13 **Measles maps and alert management**

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 (W27 2018)

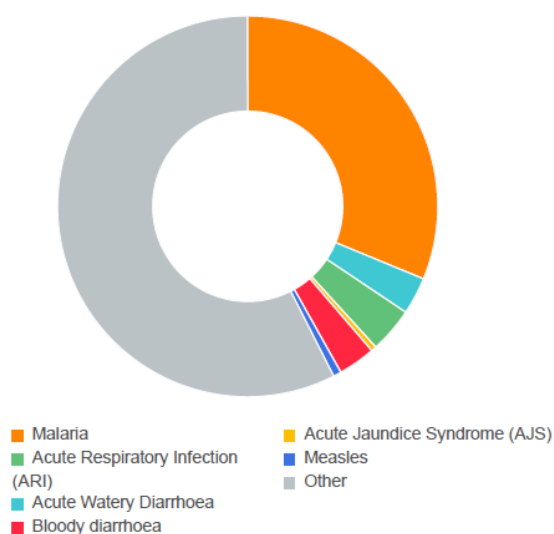


Hub	W27	2018
Aweil	9,930	319,061
Bentiu	10,606	398,688
Bor	9,760	278,318
Juba	15,667	304,146
Kwajok	22,609	626,852
Malakal	11,571	345,605
Rumbek	17,234	443,555
Torit	3,624	150,494
Wau	12,318	234,406
Yambio	13,362	318,214
South Sudan	126,681	3,419,339

The total consultation in the country since week 1 of 2018 is 3,419,339 by hub, Kwajok registered the highest number of consultations as indicated in the table above. The total number of consultations by county is indicated in the map above. See the key for more information.

Proportional mortality

Figure 1 | Proportional mortality (2018)

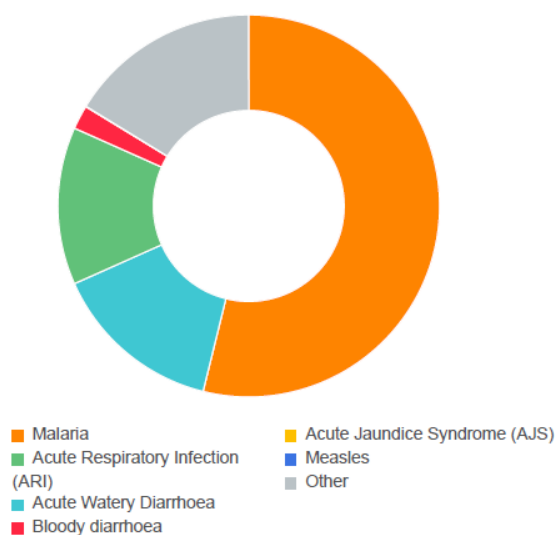


Syndrome	W27		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	1	100.0%	138	31.2%
ARI	0	0.0%	17	3.8%
AWD	0	0.0%	14	3.2%
Bloody diarrhoea	0	0.0%	14	3.2%
AJS	0	0.0%	2	0.5%
Measles	0	0.0%	3	0.7%
Other	0	0.0%	254	57.5%
Total deaths	1	100%	442	100%

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 31.2% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

Proportional morbidity

Figure 2 | Proportional morbidity (2018)



Syndrome	W27		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	46,517	66.1%	1,025,897	53.9%
ARI	7,286	10.3%	253,846	13.3%
AWD	7,615	10.8%	275,921	14.5%
Bloody diarrhoea	940	1.3%	38,890	2.0%
AJS	12	0.0%	178	0.0%
Measles	10	0.0%	436	0.0%
Other	8,041	11.4%	309,648	16.3%
Total cases	70,421	100%	1,904,816	100%

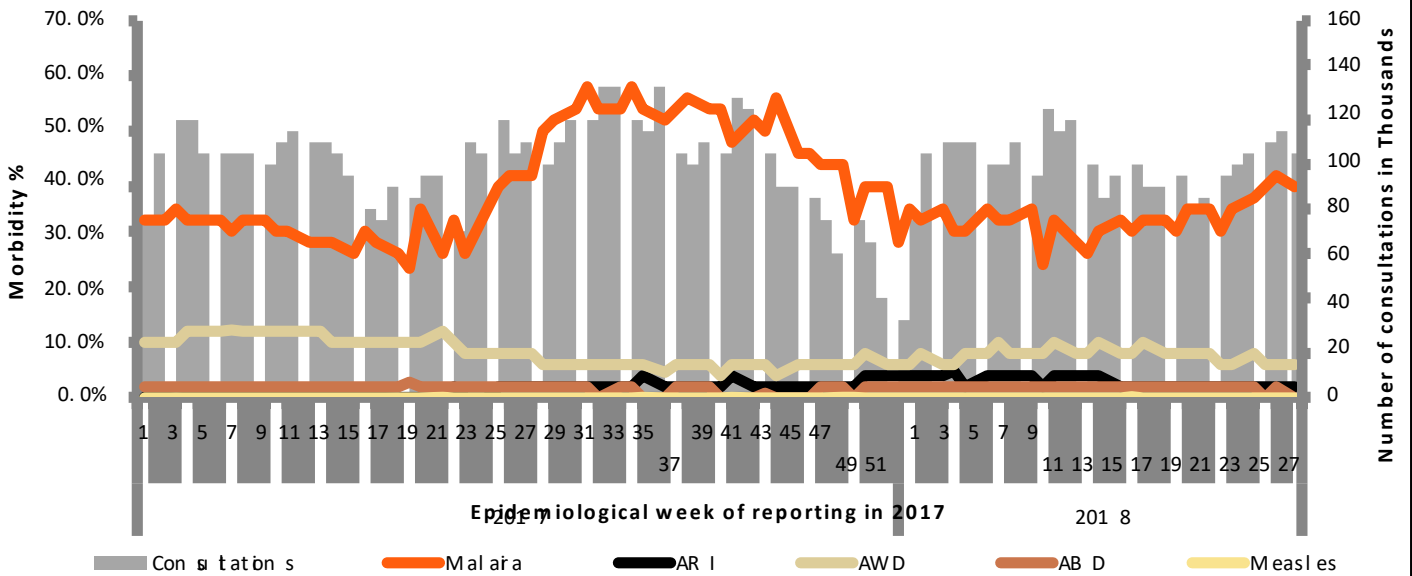
Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 1,904,816 (53.9%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

Figure 3 | Trend in total consultations and key diseases (W27)



IDSR Proportionate morbidity trends - in relatively stable states

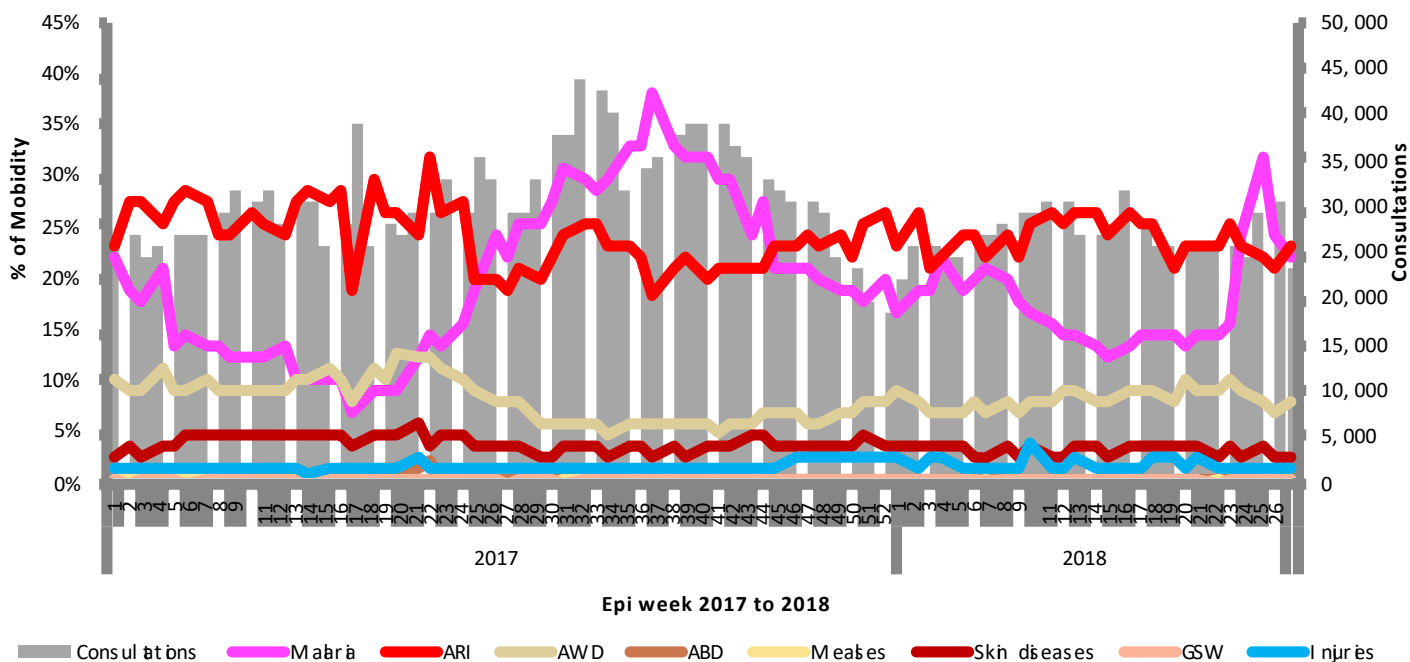
Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 27, 2018



In the relatively stable states, malaria is the top cause of morbidity accounting for 40% of the consultations in week 27 (representing an decrease from 41.5% in week 26).

IDP Proportionate Morbidity trends – in displaced Population

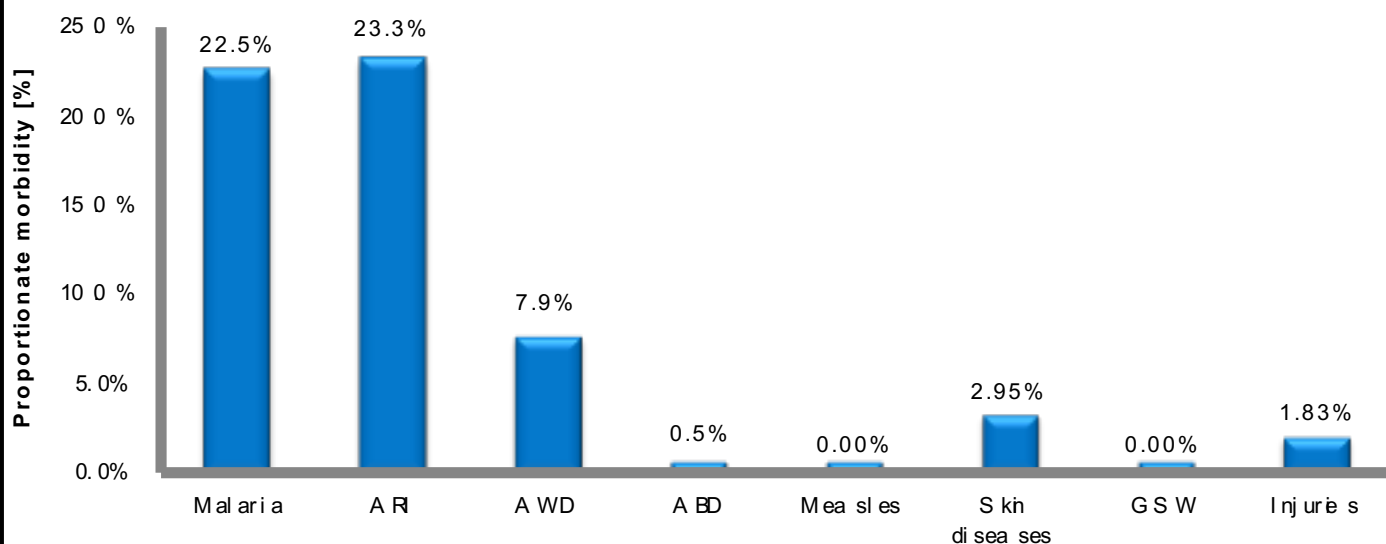
Fig. 2 | IDP Proportionate morbidity trends, week 01, 2017, to week 27, 2018



Among the IDPs, ARI and Malaria accounted for 23.3% and 22.5% of the consultations in week 27. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

IDP Proportionate Morbidity trends – in displaced Population

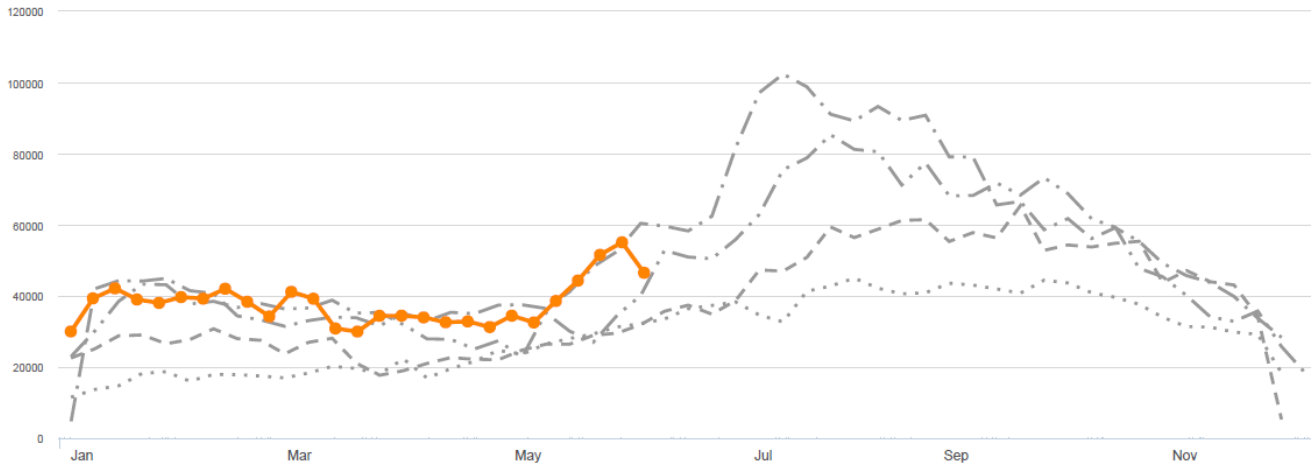
Causes of morbidity among the IDPs weeks 27, 2018



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

Malaria | Trends over time

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



Graph legend

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

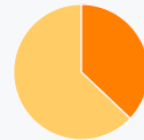
Key malaria indicators (2018)

1,025,897 **138** **80**
 Cases Deaths Alerts

Figure 4b | % morbidity



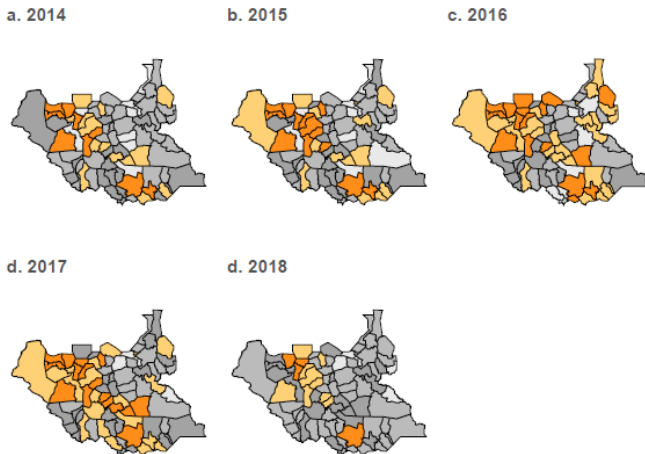
Figure 4c | Age breakdown



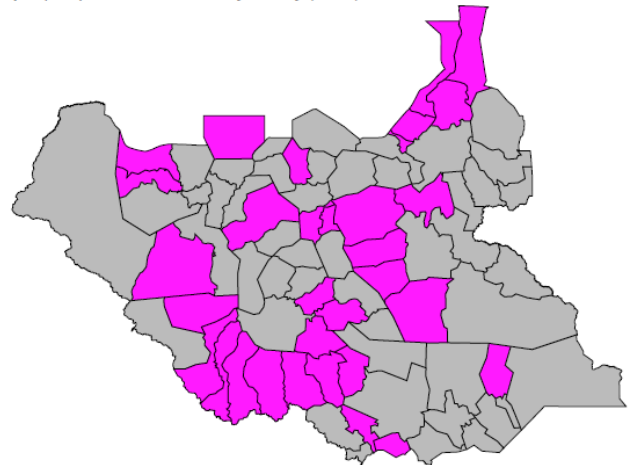
Malaria is the top course of Morbidity in the country, a total of 1,025,897 cases with 138 deaths registered since week 1 of 2018. malaria trend for week 27 of 2018 is above 2014, 2015, and 2016 as shown in the figure 4a, above.

Malaria | Maps and Alert Management

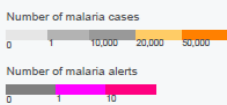
Map 2 | Map of malaria cases by county (2018)



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



Map legend



80 Alerts
44 Verified

Risk Assessment



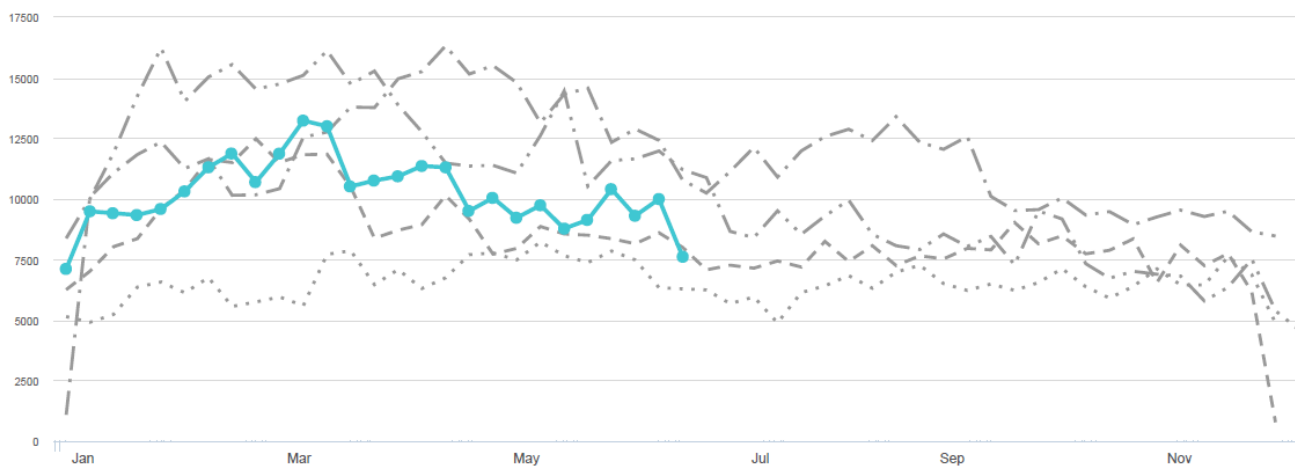
Alert threshold

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

Since the beginning of the year, a total of 80 malaria alerts have been triggered, 44 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)

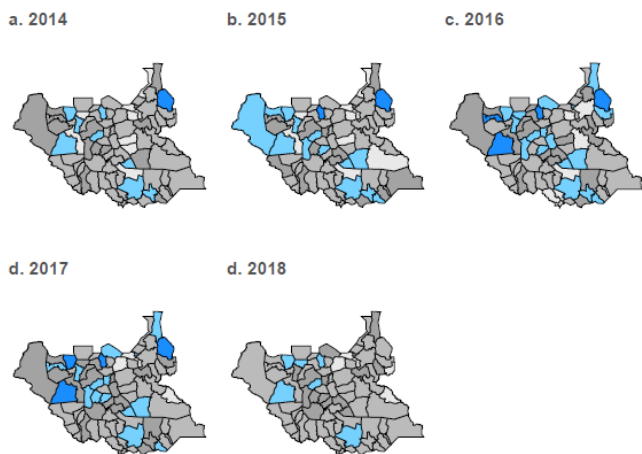


<p>Graph legend</p> <ul style="list-style-type: none"> — 2018 - - - 2017 - . - . 2016 - - - - 2015 2014 	<p>Key AWD indicators (2018)</p> <p>275,921 Cases</p> <p>14 Deaths</p> <p>88 Alerts</p>	<p>Figure 5b % morbidity</p>	<p>Figure 5c Age breakdown</p>
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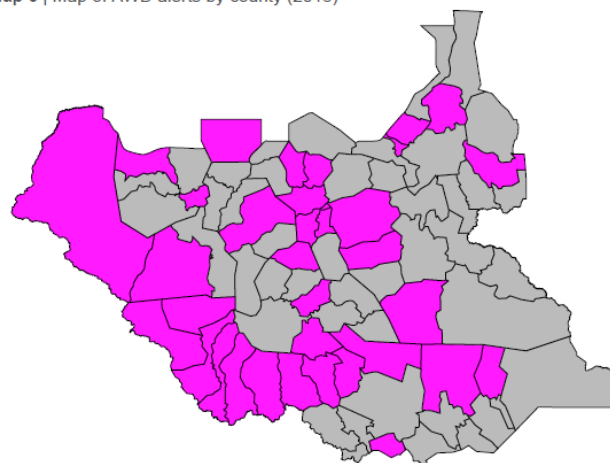
AWD is one of the top causes of morbidity in the country with 275,921 cases reported since week 1 of 2018 including 14 deaths. AWD trend for 2018 is above 2014, and below 2015, 2016 and 2017 as shown in figure 5a, above.

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)

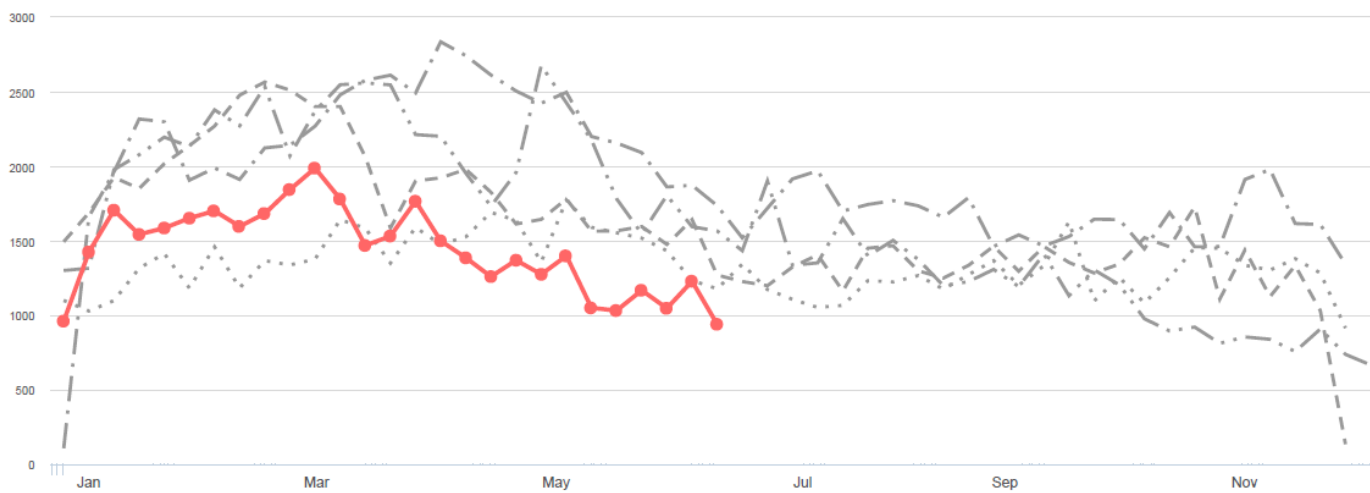


<p>Map legend</p> <p>Number of AWD cases</p> <p>Number of AWD alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>88 Alerts</p> <p>52 Verified</p>	<p>Risk Assessment</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #28a745; color: white;">0 Low Risk</td> <td style="background-color: #ffc107; color: white;">1 Moderate Risk</td> <td style="background-color: #ffc107; color: white;">0 High Risk</td> <td style="background-color: #dc3545; color: white;">0 Very High Risk</td> </tr> </table>	0 Low Risk	1 Moderate Risk	0 High Risk	0 Very High Risk
0 Low Risk	1 Moderate Risk	0 High Risk	0 Very High Risk			

The number of AWD alerts triggered since week 1 of 2018 is 88, out of which 52 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)

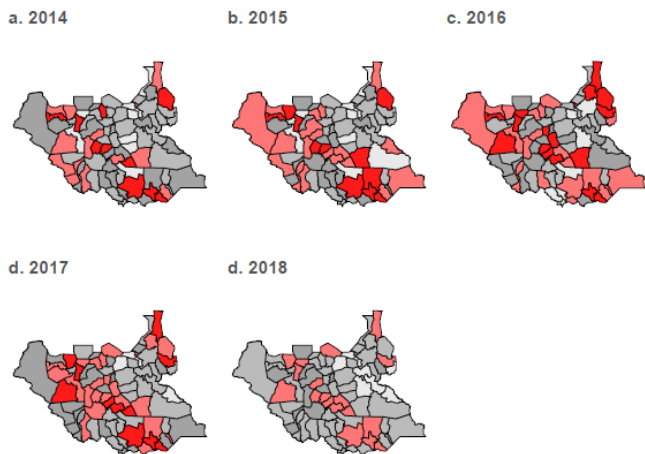


<p>Graph legend</p> <ul style="list-style-type: none"> —●— 2018 - - - - - 2017 - - - - - 2016 - - - - - 2015 - - - - - 2014 	<p>Key bloody diarrhoea indicators (2018)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>38,890</p> <p>Cases</p> </div> <div style="text-align: center;"> <p>14</p> <p>Deaths</p> </div> <div style="text-align: center;"> <p>100</p> <p>Alerts</p> </div> </div>	<p>Figure 6b % morbidity</p>	<p>Figure 6c Age breakdown</p>
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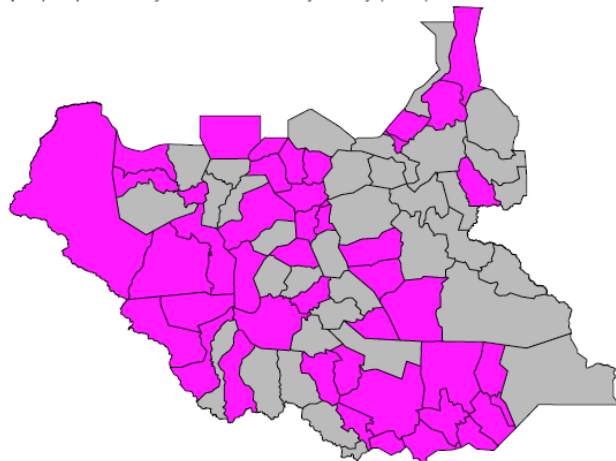
Since week 1 of 2018, a total of 38,890 cases of ABD have been reported country wide including 14 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

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)

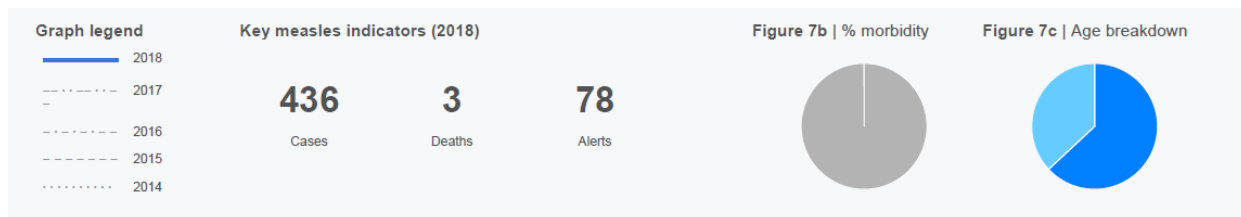
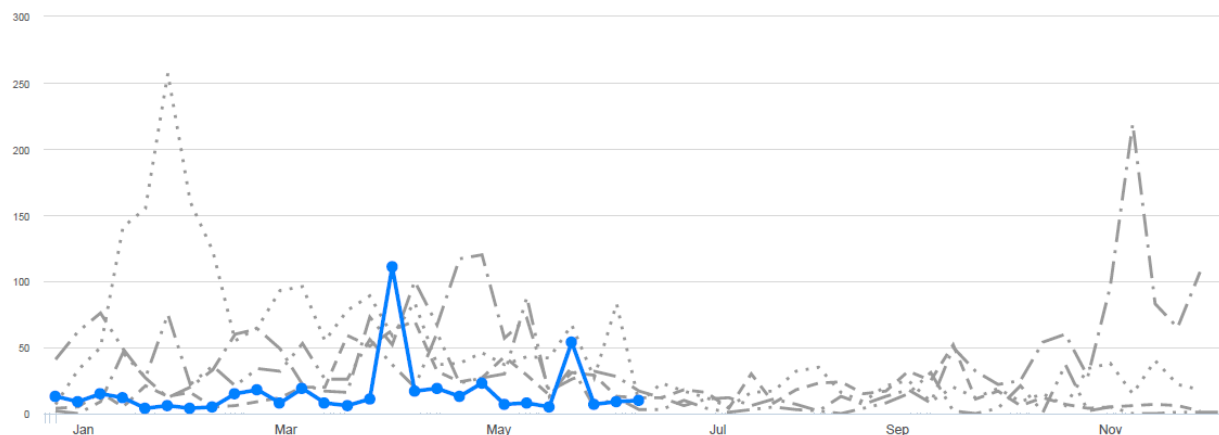


<p>Map legend</p> <p>Number of bloody diarrhoea cases</p> <p>Number of alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR.</p>	<p>100</p> <p>Alerts</p>	<p>61</p> <p>Verified</p>	<p>Risk Assessment</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: green; color: white;">1</td> <td style="background-color: yellow; color: black;">0</td> <td style="background-color: orange; color: black;">0</td> <td style="background-color: red; color: white;">0</td> </tr> <tr> <td>Low Risk</td> <td>Moderate Risk</td> <td>High Risk</td> <td>Very High Risk</td> </tr> </table>	1	0	0	0	Low Risk	Moderate Risk	High Risk	Very High Risk
1	0	0	0								
Low Risk	Moderate Risk	High Risk	Very High Risk								

Total of 100 alerts were generated since week 1 of 2018, of which 61 were verified by the county surveillance team. Maps indicating areas triggering alerts since 2014 to 2018 are shown above.

Measles | Trends over time

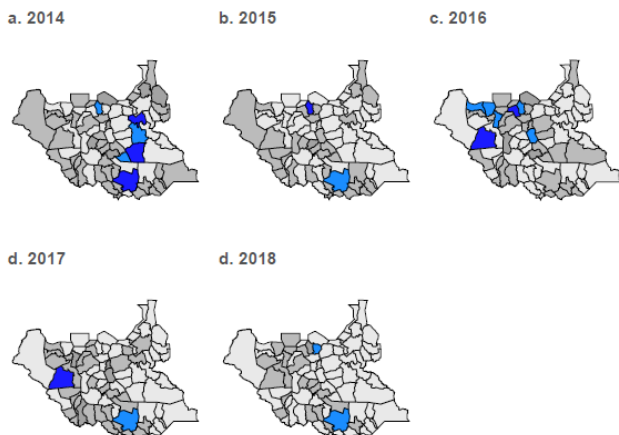
Figure 7a | Trend in number of cases over time (South Sudan)



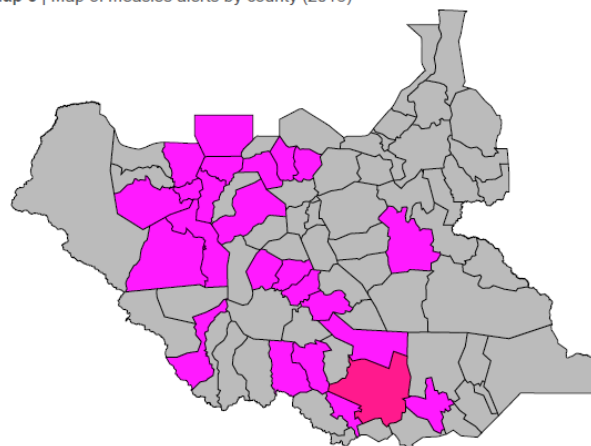
Since the beginning of 2018, at least 436 suspect measles cases including 3 death (CFR 0.73%) have been reported. Of these, 84 suspect cases have undergone measles case-based laboratory-backed investigation with 68 samples collected out of which 14 measles IgM positive cases; 14 clinically confirmed cases; and 3 cases confirmed by epidemiological linkage.

Measles | Maps and Alert Management

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

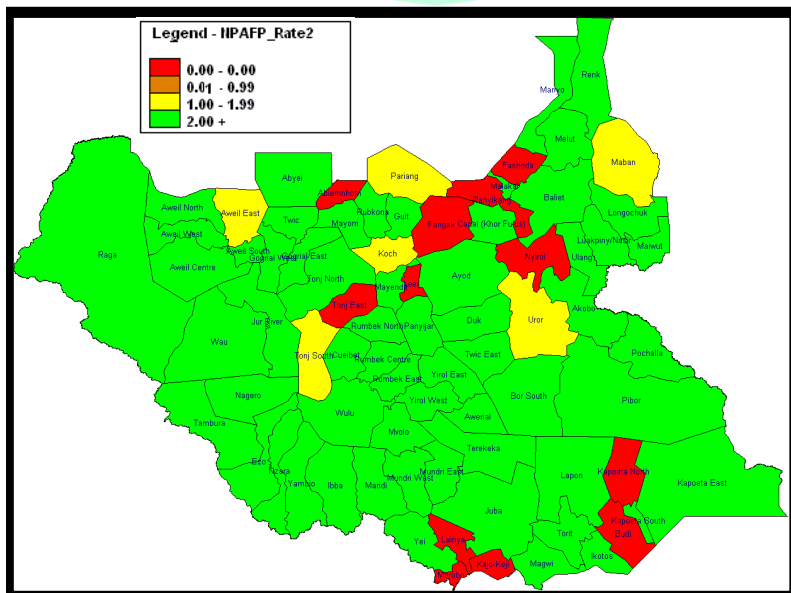


Map 8 | Map of measles alerts by county (2018)



Since week 1 of 2018, 78 alerts of measles were triggered and 57 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.

Acute Flaccid Paralysis | Suspected Polio



In week 26, 2018, Twenty four (24) new AFP cases were reported from Lakes, Northern Bahr el Ghazal, Upper Nile, Unity, Jonglei, and Warrap hubs. This brings the cumulative total for 2018 to 228 AFP cases.

The annualized non-Polio AFP (NPAFP) rate (cases per 100,000 population children 0-14 years) in 2018 is 5.6 per 100,000 population of children 0-14 years (target ≥ 2 per 100,000 children 0-14 years).

Stool adequacy was 84% in 2018, a rate that is higher than the target of $\geq 80\%$.

Environmental surveillance ongoing since May 2017; with 23 samples testing positive for non-polio enterovirus (NPEV) in 2017 and Twenty four (24) NPEV positive sample in 2018.

Source: South Sudan Weekly AFP Bulletin

Mortality in the IDPs

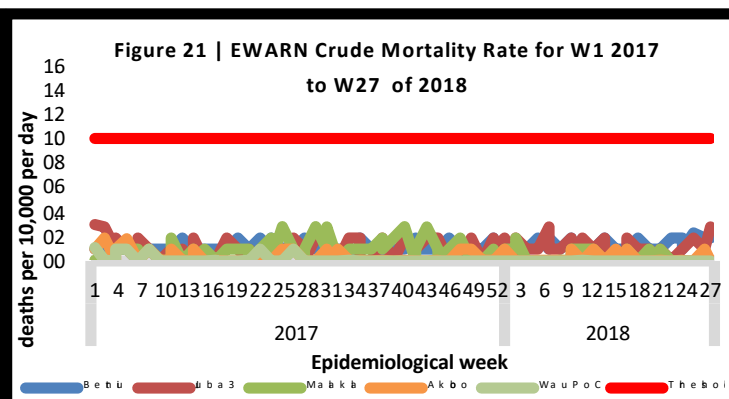
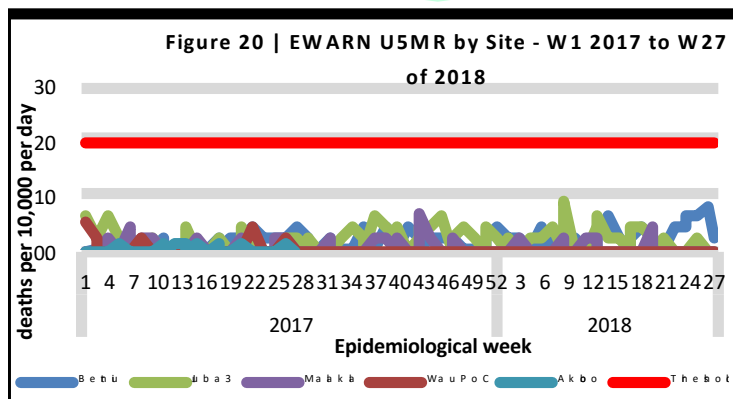
Table 6 | Proportional mortality by cause of death in IDPs W27 2018

Cause of Death by IDP site	Bentiu		Juba 3	Total deaths
	<5yrs	>5yrs	>5yrs	
Heart Failure			1	1
malaria			4	4
Neonatal Sepsis	1			1
perinatal death	2			2
pneumonia			1	1
Respiratory arrest			1	1
SAM	1			1
TB/HIV/AIDS			1	1
HIV/AIDS			1	1
TB			1	1
Unkown			2	2
Birth Asphyxia	1			1
Post Operation			1	1
P.V. ulcer			1	1
HBP			1	1
Total deaths	5	8	7	20

Among the IDPs, mortality data was received from Bentiu PoC, & UN House PoC in week 27. (Table 6). **A total of 20** deaths were reported during the week. Bentiu PoC report 13 deaths (65%) in the week. During the week, 5 (25%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 27 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 27 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 27 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 W27, 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	18	3	20	10	1	12	16	11	1	15	7	164	293
Juba 3	1	1			2		7			4		2		1		6	7	48	79
Malakal		1			3	1			1	1							2	17	26
Akobo				1		2	4			2		1	2	1	1			7	21
Wau PoC							1											0	1
Grand Total	8	3	2	3	6	5	30	3	21	17	1	15	18	13	2	21	16	236	420
Proportionate mortality [%]	2%	1%	0%	1%	1%	1%	7%	1%	5%	4%	0%	4%	4%	3%	0%	5%	4%	56%	100%

A total of 420 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](#).

**For more help and support,
please contact:**

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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>

