

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Annexes W21 2018 (May 21 – May 27)



**World Health
Organization**
South Sudan



Ministry of Health
Republic of South Sudan

Access and Utilisation

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Disease trends and maps

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

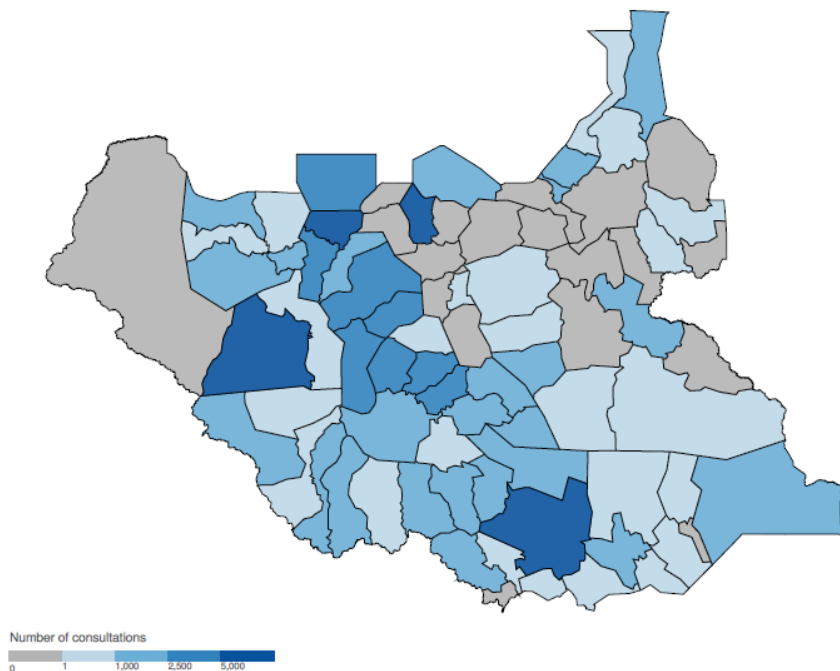
Slide 13 **Measles maps and alert management**

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 (W21 2018)

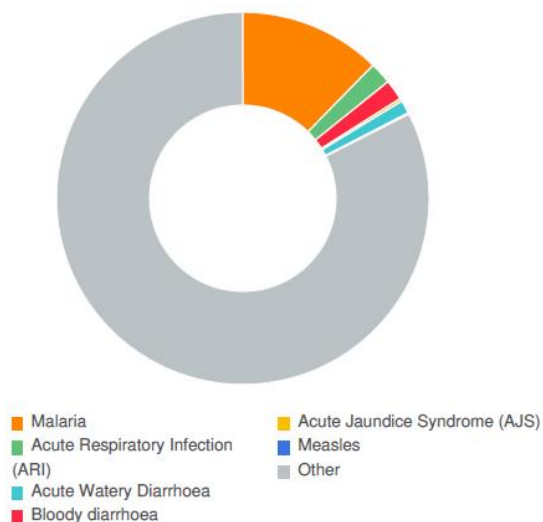


Hub	W21	2018
Aweil	6,579	263,363
Bentiu	8,759	334,110
Bor	4,207	215,119
Juba	9,755	216,621
Kwajok	24,846	493,970
Malakal	7,363	205,175
Rumbek	17,396	333,200
Torit	5,864	115,018
Wau	7,036	175,700
Yambio	10,311	230,192
South Sudan	102,116	2,582,468

The total consultation in the country since week 1 of 2018 is 2,582,468 by hub, Bentiu 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)

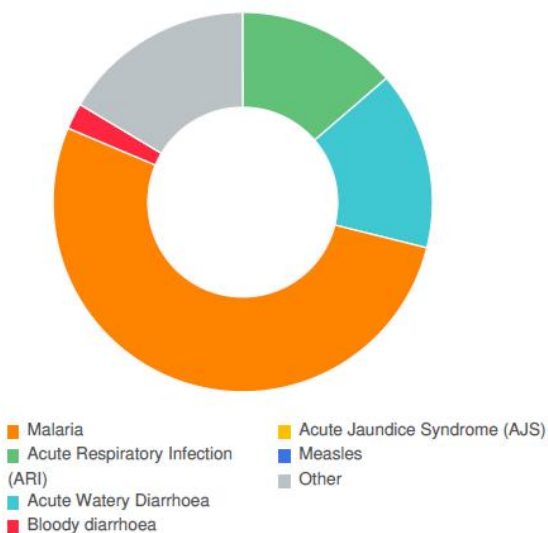


Syndrome	W21		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	5	22.7%	97	12.3%
ARI	2	9.1%	15	1.9%
AWD	0	0.0%	9	1.1%
Bloody diarrhoea	0	0.0%	14	1.8%
AJS	0	0.0%	2	0.3%
Measles	0	0.0%	1	0.1%
Other	15	68.2%	649	82.5%
Total deaths	22	100%	787	100%

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 12.3% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

Proportional morbidity

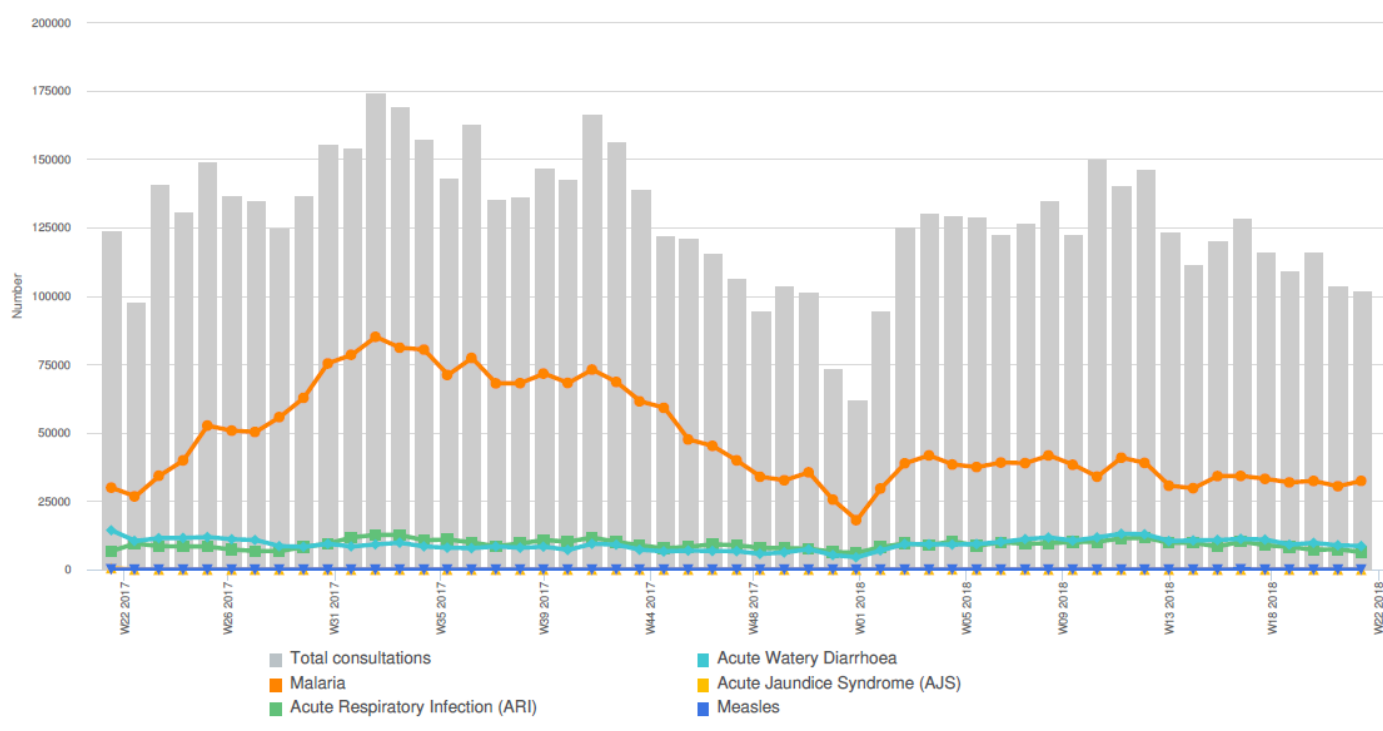
Figure 2 | Proportional morbidity (2018)



Syndrome	W21		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	32,450	54.4%	747,789	52.5%
ARI	6,392	10.7%	194,952	13.7%
AWD	8,655	14.5%	216,603	15.2%
Bloody diarrhoea	1,232	2.1%	31,854	2.2%
AJS	0	0.0%	105	0.0%
Measles	7	0.0%	343	0.0%
Other	10,900	18.3%	233,017	16.4%
Total cases	59,636	100%	1,424,663	100%

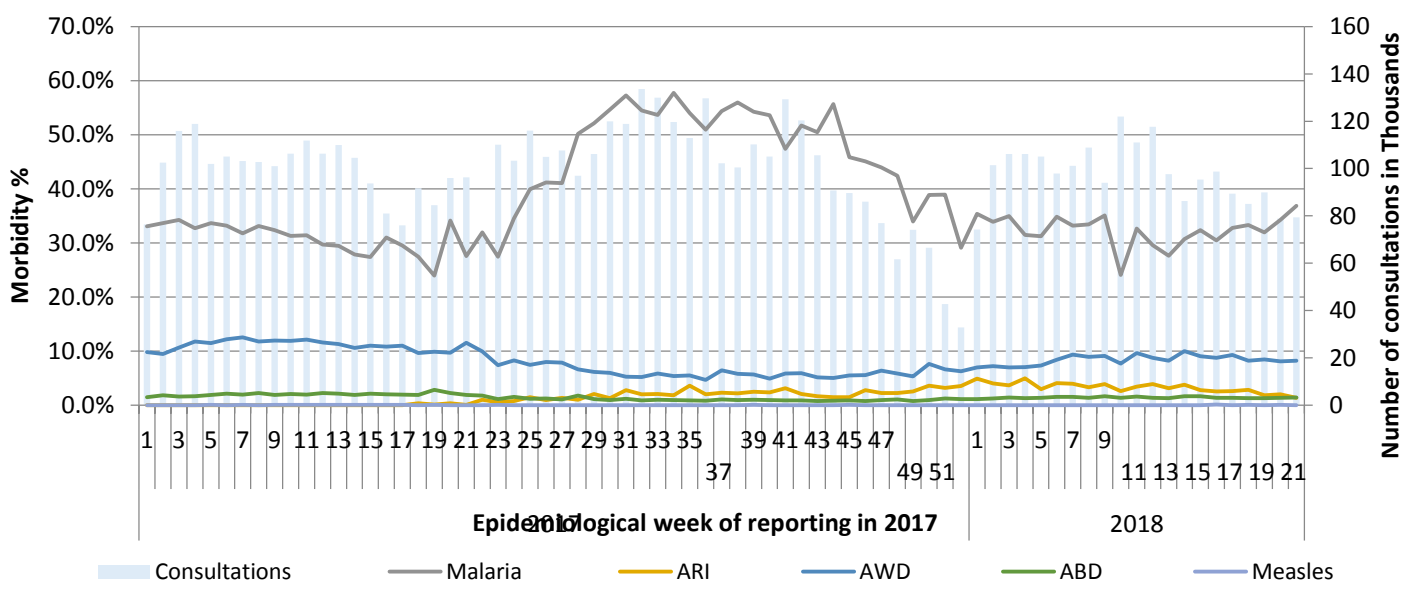
Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 747,789 (52.5%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

Figure 3 | Trend in total consultations and key diseases (W21)



IDSR Proportionate morbidity trends - in relatively stable states

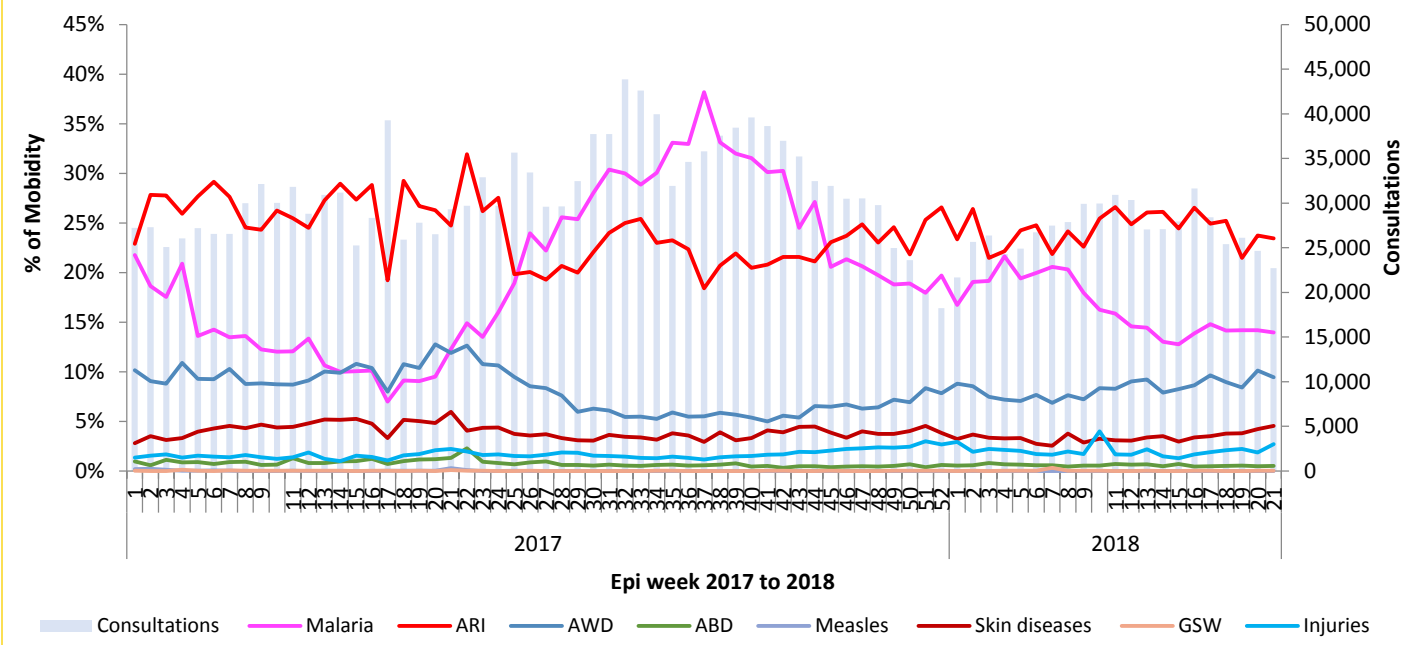
Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 21, 2018



In the relatively stable states, malaria is the top cause of morbidity accounting for 36.9% of the consultations in week 21 (representing an increase from 34.2% in week20).

IDP Proportionate Morbidity trends – in displaced Population

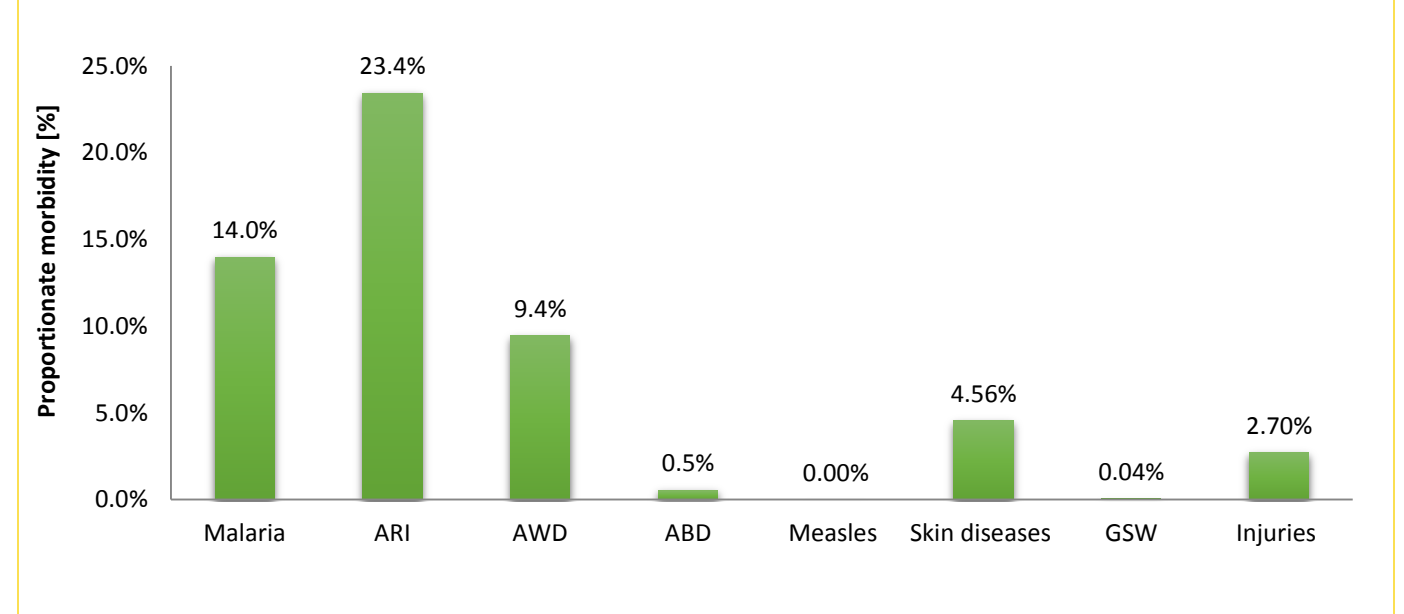
Fig. 2 | IDP Proportionate morbidity trends, week 01, 2017, to week 21, 2018



Among the IDPs, ARI and Malaria accounted for 21.6% and 15.3% of the consultations in week 21. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

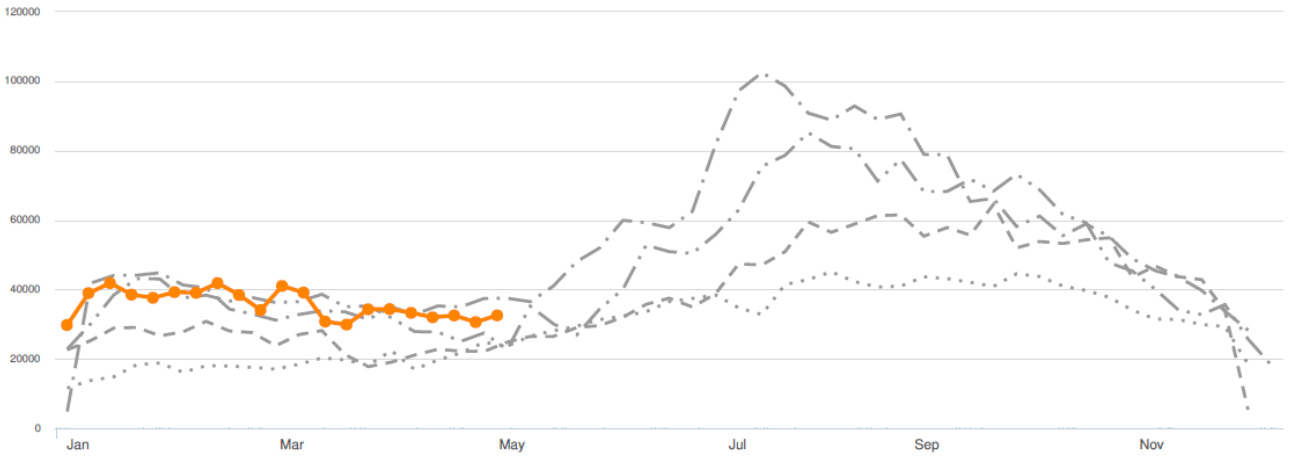
IDP Proportionate Morbidity trends – in displaced Population

Causes of morbidity among the IDPs weeks 21, 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)

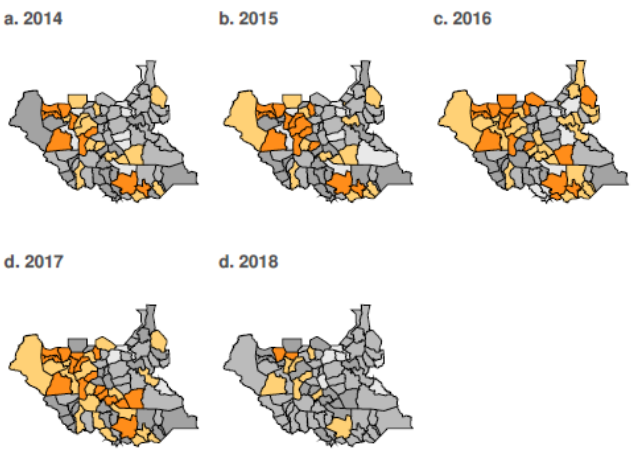


<p>Graph legend</p> <ul style="list-style-type: none"> —●— 2018 - - - - 2017 - · - · - 2016 - - - - 2015 ····· 2014 	<p>Key malaria indicators (2018)</p> <p>747,789 97 51</p> <p>Cases Deaths Alerts</p>	<p>Figure 4b % morbidity</p>	<p>Figure 4c Age breakdown</p>
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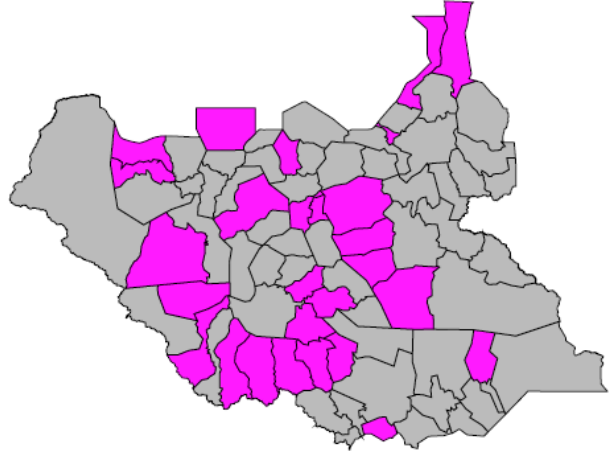
Malaria is the top course of Morbidity in the country, a total of 747,789 cases with 97 deaths registered since week 1 of 2018. malaria trend for week 21 of 2018 is above 2014, 2015, and 2016 however, is below the trend for 2017 as shown in the figure 4a, above.

Malaria | Maps and Alert Management

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



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

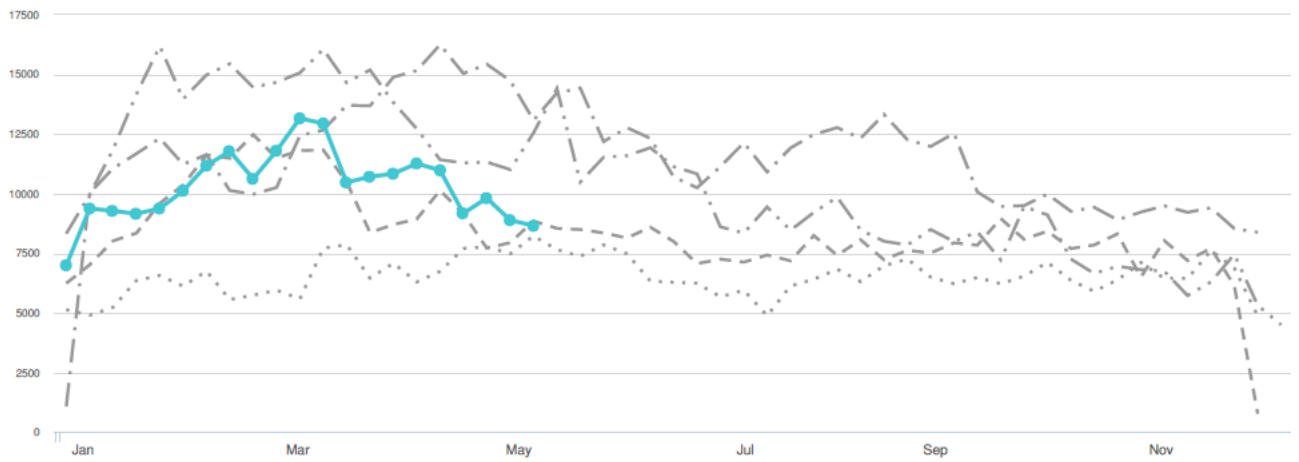


<p>Map legend</p> <p>Number of malaria cases</p> <p>Number of malaria alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>51</p> <p>Alerts</p>	<p>34</p> <p>Verified</p>	<p>Risk Assessment</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #28a745; color: white; padding: 10px;">2 Low Risk</td> <td style="background-color: #ffc107; color: white; padding: 10px;">0 Moderate Risk</td> <td style="background-color: #dc3545; color: white; padding: 10px;">0 High Risk</td> <td style="background-color: #dc3545; color: white; padding: 10px;">1 Very High Risk</td> </tr> </table>	2 Low Risk	0 Moderate Risk	0 High Risk	1 Very High Risk
2 Low Risk	0 Moderate Risk	0 High Risk	1 Very High Risk				

Since the beginning of the year, a total of 51 malaria alerts have been triggered, 34 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)

216,603

Cases

9

Deaths

70

Alerts

Figure 5b | % morbidity



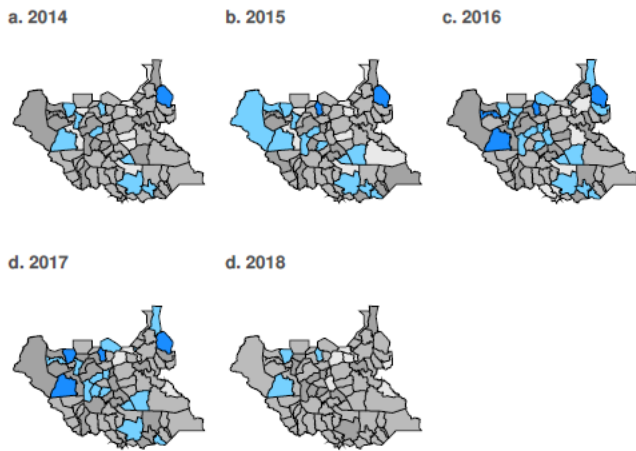
Figure 5c | Age breakdown



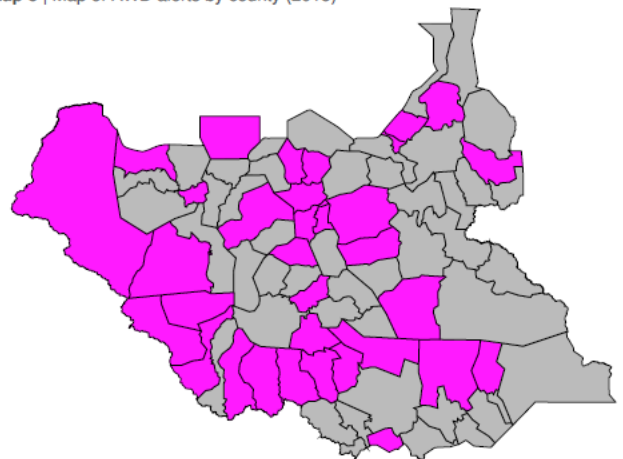
AWD is one of the top causes of morbidity in the country with 216,603 cases reported since week 1 of 2018 including 9 deaths. AWD trend for 2018 is below 2014, & 2015 as shown in figure 5a, above.

Acute Watery Diarrhoea | Maps and Alert Management

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

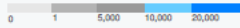


Map 5 | Map of AWD alerts by county (2018)

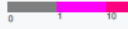


Map legend

Number of AWD cases



Number of AWD alerts



Alert threshold

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

70

Alerts

49

Verified

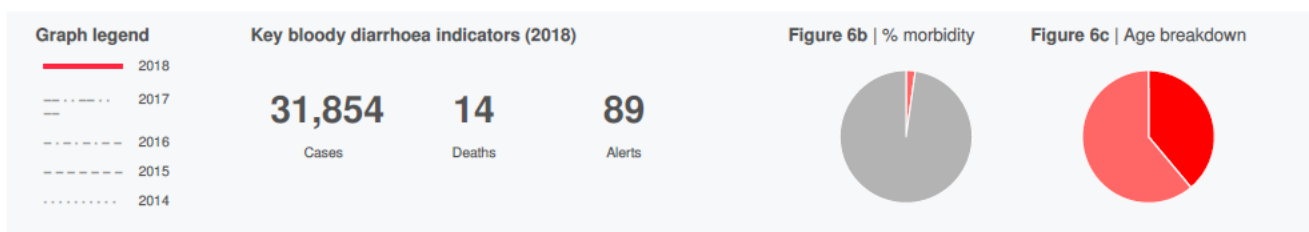
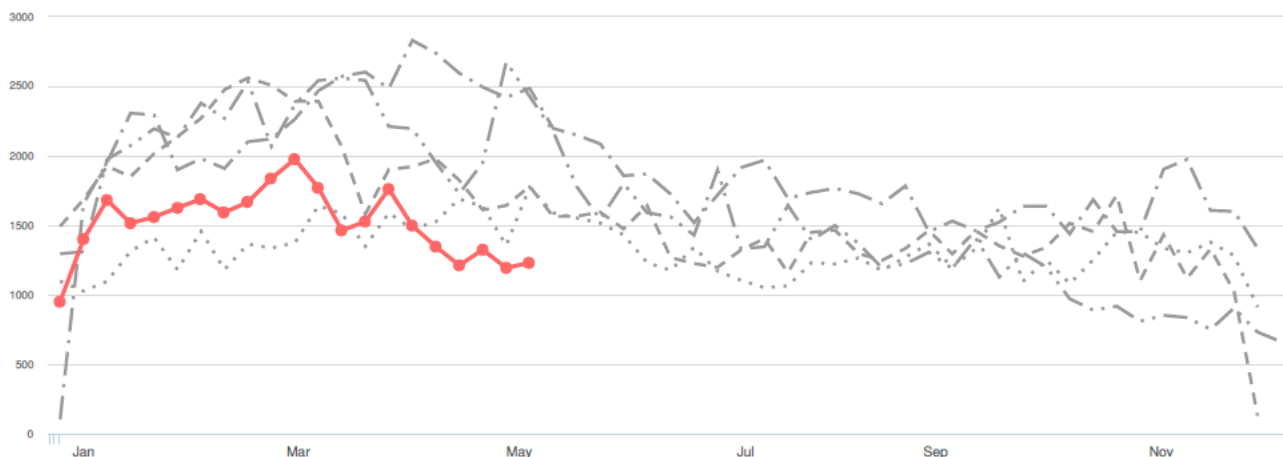
Risk Assessment



The number of AWD alerts triggered since week 1 of 2018 is 70, out of which 49 were verified. Maps above highlight the areas reporting AWD alerts from 2014 to 2018.

Acute Bloody Diarrhoea | Trends over time

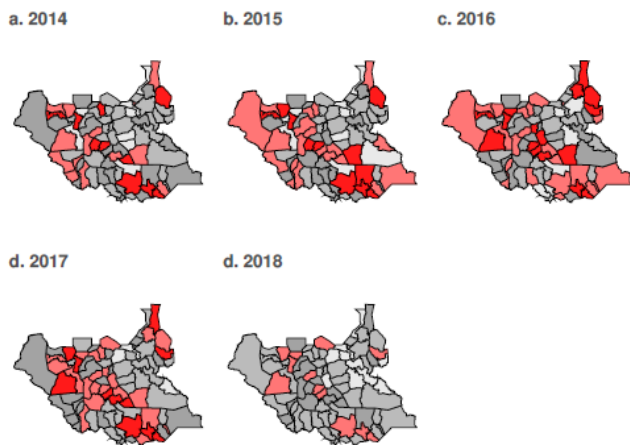
Figure 6a | Trend in bloody diarrhoea cases over time (South Sudan)



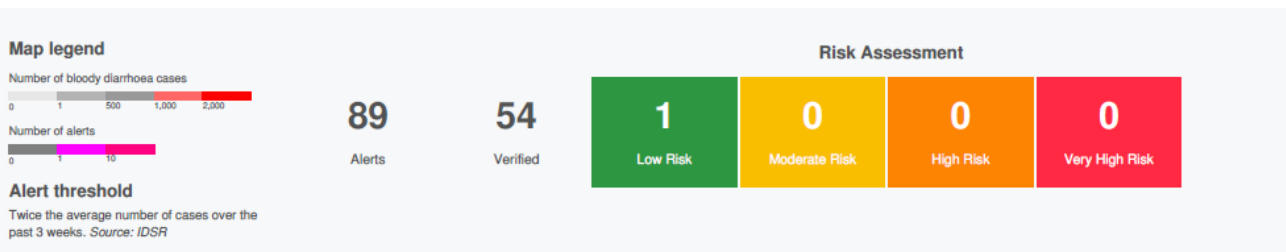
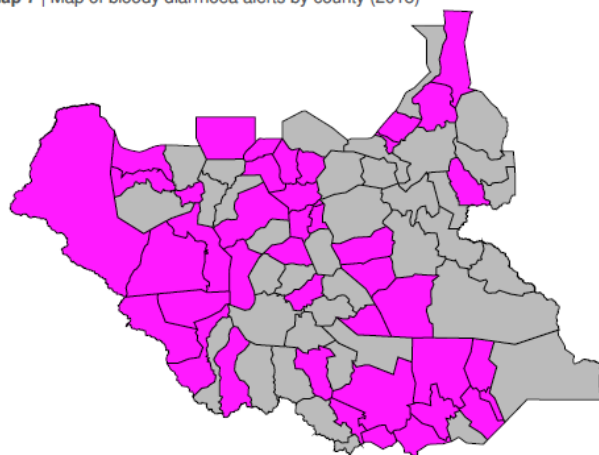
Since week 1 of 2018, a total of 31,854 cases of ABD have been reported country wide including 14 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

Acute Bloody Diarrhoea | Maps and Alert Management

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

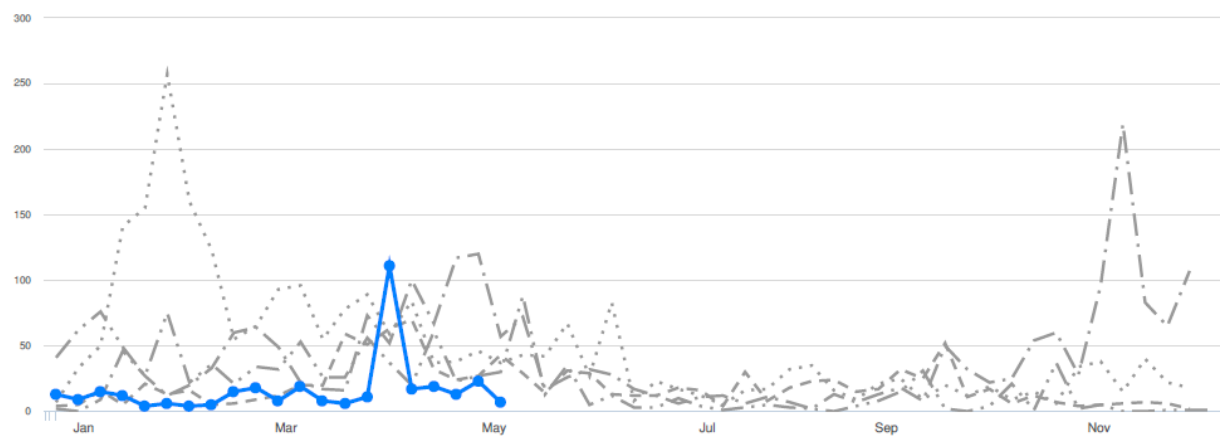


Map 7 | Map of bloody diarrhoea alerts by county (2018)



Total of 89 alerts were generated since week 1 of 2018, of which 54 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)

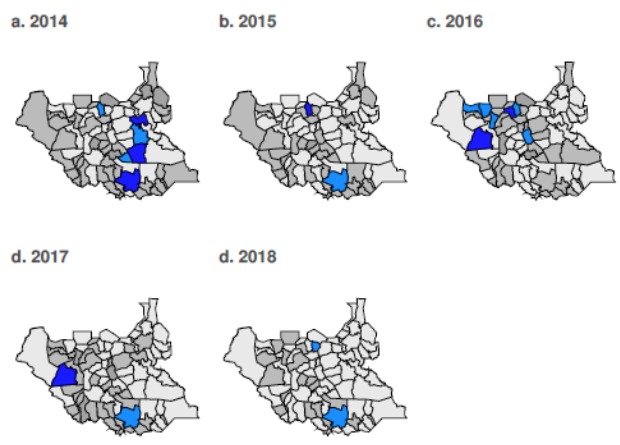


<p>Graph legend</p> <ul style="list-style-type: none"> — 2018 - - - 2017 - · - · 2016 - - - - 2015 ····· 2014 	<p>Key measles indicators (2018)</p> <table border="0" style="width: 100%;"> <tr> <td style="font-size: 24px; font-weight: bold;">343</td> <td style="font-size: 24px; font-weight: bold;">1</td> <td style="font-size: 24px; font-weight: bold;">63</td> </tr> <tr> <td>Cases</td> <td>Deaths</td> <td>Alerts</td> </tr> </table>	343	1	63	Cases	Deaths	Alerts	<p>Figure 7b % morbidity</p>	<p>Figure 7c Age breakdown</p>
343	1	63							
Cases	Deaths	Alerts							

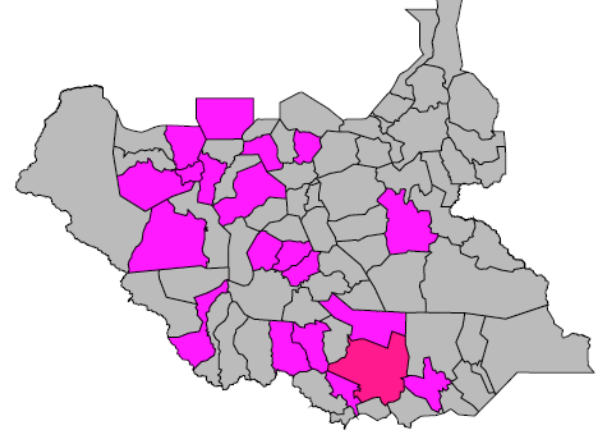
Since the beginning of 2018, at least 343 suspect measles cases including 1 death (CFR 0.8%) have been reported. Of these, 84 suspect cases have undergone measles case-based laboratory-backed investigation with 68 samples collected out of which 14 measles IgM positive cases; 14 clinically confirmed cases; and 3 cases confirmed by epidemiological linkage.

Measles | Maps and Alert Management

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

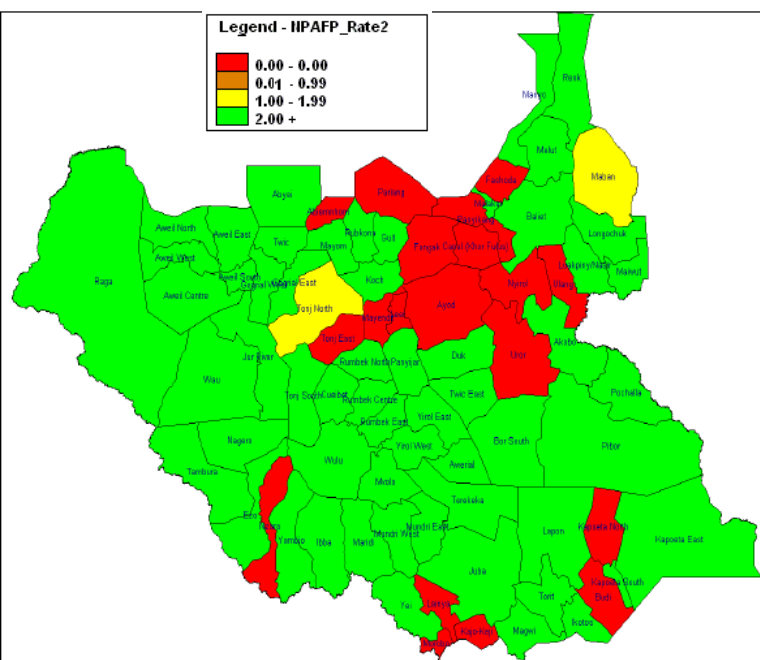


Map 8 | Map of measles alerts by county (2018)



<p>Map legend</p> <p>Number of measles cases</p> <p>Number of measles alerts</p> <p>Alert threshold 1 case. Source: IDSR</p>	<p>63</p> <p>Alerts</p>	<p>50</p> <p>Verified</p>	<p>Risk Assessment</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #2e8b57; color: white; font-weight: bold; font-size: 24px;">1</td> <td style="background-color: #ffd700; color: black; font-weight: bold; font-size: 24px;">1</td> <td style="background-color: #ffa500; color: black; font-weight: bold; font-size: 24px;">2</td> <td style="background-color: #ff0000; color: white; font-weight: bold; font-size: 24px;">0</td> </tr> <tr> <td>Low Risk</td> <td>Moderate Risk</td> <td>High Risk</td> <td>Very High Risk</td> </tr> </table>	1	1	2	0	Low Risk	Moderate Risk	High Risk	Very High Risk
1	1	2	0								
Low Risk	Moderate Risk	High Risk	Very High Risk								

Since week 1 of 2018, 63 alerts of measles were triggered and 50 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.



In week 19, 2018, Fourteen (14) new AFP cases were reported from Lakes, Northern Bahr el Ghazal, Upper Nile, Eastern Equatoria and Warrap hubs. This brings the cumulative total for 2018 to 148 AFP cases.

The annualized non-Polio AFP (NPAFP) rate (cases per 100,000 population children 0-14 years) in 2018 is 4.9 per 100,000 population of children 0-14 years (target ≥ 2 per 100,000 children 0-14 years).

Stool adequacy was 88% 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 seven (7) NPEV positive sample in 2018.

Source: South Sudan Weekly AFP Bulletin

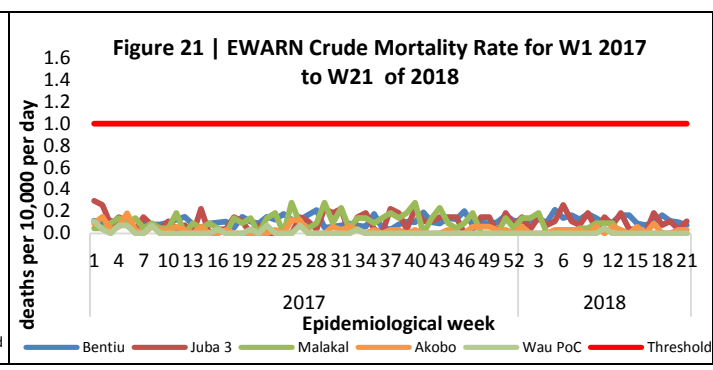
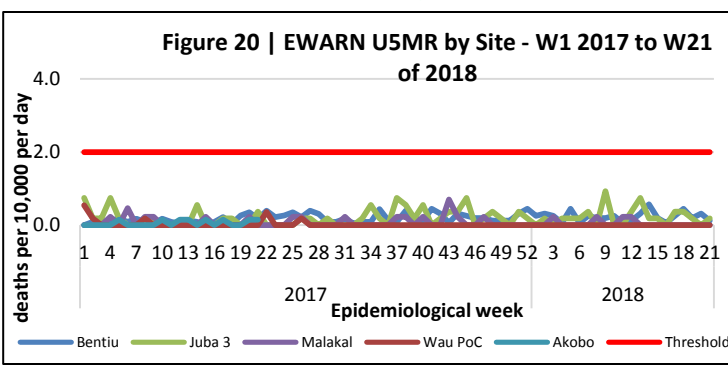
Mortality in the IDPs

Table 6 | Proportional mortality by cause of death in IDPs W21 2018

Cause of Death by IDP site	Akobo	Bentiu		Juba 3		Total deaths
	<5yrs	<5yrs	≥ 5 yrs	<5yrs	≥ 5 yrs	
acute watery diarrhoea		1				1
Multi Organ Failure			1			1
Severe Pneumonia			1			1
Severe Respiratory Distress			1			1
liver cirrhosis					1	1
Cardio Pulmonary Arrest		1				1
Multi Malformation			1			1
SAM+Sepsis		1				1
Renal Failier					1	1
pneumonia					1	1
Total deaths	1	2	4	1	2	10

Among the IDPs, mortality data was received from Bentiu PoC, & UN House PoC in week 21. (Table 6). **A total of 10** deaths were reported during the week. Bentiu PoC report 6 deaths (60%) in the week. During the week, 5 (50%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 21 are shown in Table 6.



The U5MR in all the IDP sites that submitted mortality data in week 21 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 21 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 W21, 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	6	1	1	2	1	2	7	3	14	8	1	7	15	7	1	12	7	115	210
Juba 3	1	1			1		6			3		2		1		4	7	33	59
Malakal		1			2	1			1								2	11	18
Akobo				1		2	2			2		1	2	1	1			6	18
Wau PoC							1											0	1
Grand Total	7	3	1	3	4	5	16	3	15	13	1	10	17	9	2	16	16	165	306
Proportionate mortality [%]	2%	1%	0%	1%	1%	2%	5%	1%	5%	4%	0%	3%	6%	3%	1%	5%	5%	54%	100%

A total of 306 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>

