

South Sudan

Integrated Disease Surveillance and
Response (IDSR)

Annexes W28 2018 (Jul 09 – Jul 15)



**World Health
Organization**
South Sudan



Ministry of Health
Republic of 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**

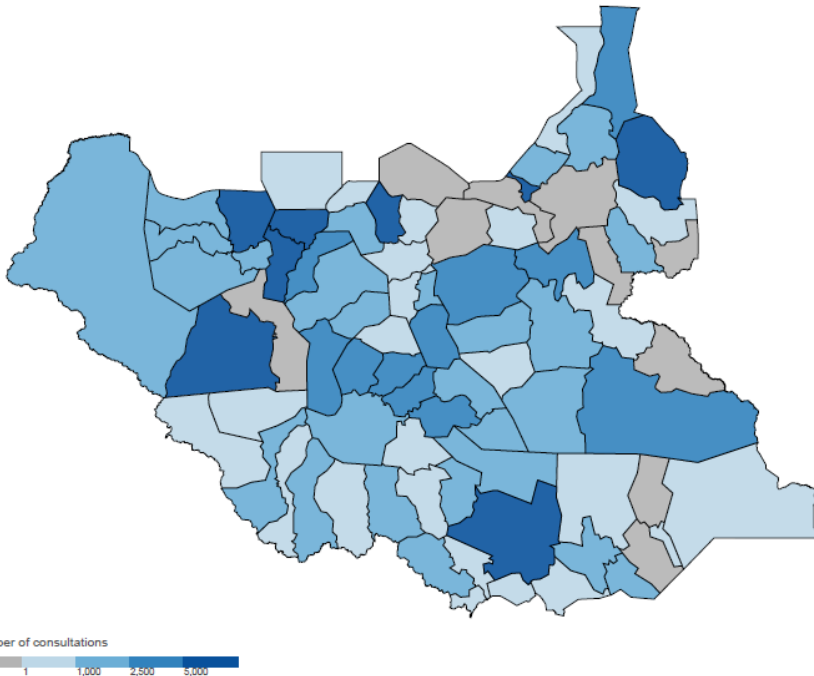
Slide 13 **Measles maps and alert management**

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 (W28 2018)

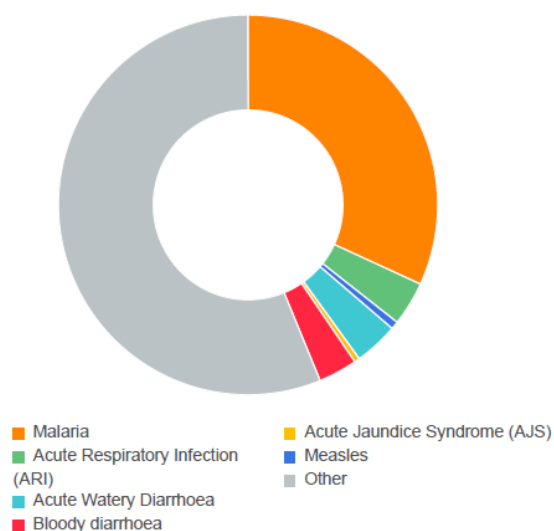


Hub	W28	2018
Aweil	12,759	331,820
Bentiu	17,137	415,825
Bor	16,875	295,193
Juba	13,735	317,881
Kwajok	23,910	650,762
Malakal	24,757	374,785
Rumbek	20,363	463,918
Torit	4,861	160,003
Wau	8,238	242,644
Yambio	11,017	329,231
South Sudan	153,652	3,582,062

The total consultation in the country since week 1 of 2018 is 3,582,062 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)

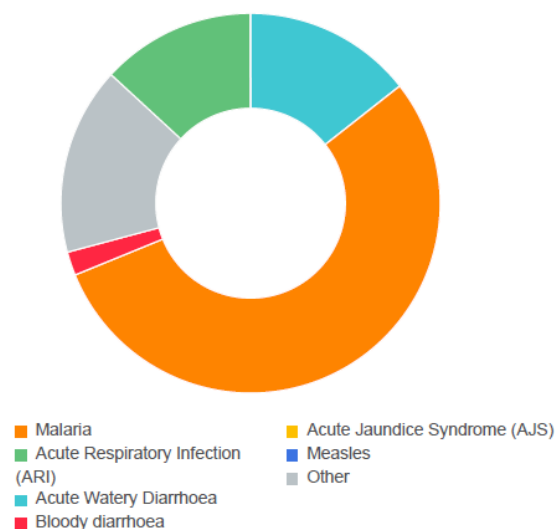


Syndrome	W28		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	6	60.0%	144	31.9%
ARI	0	0.0%	17	3.8%
AWD	3	30.0%	17	3.8%
Bloody diarrhoea	1	10.0%	15	3.3%
AJS	0	0.0%	2	0.4%
Measles	0	0.0%	3	0.7%
Other	0	0.0%	254	56.2%
Total deaths	10	100%	452	100%

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 31.9% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

Proportional morbidity

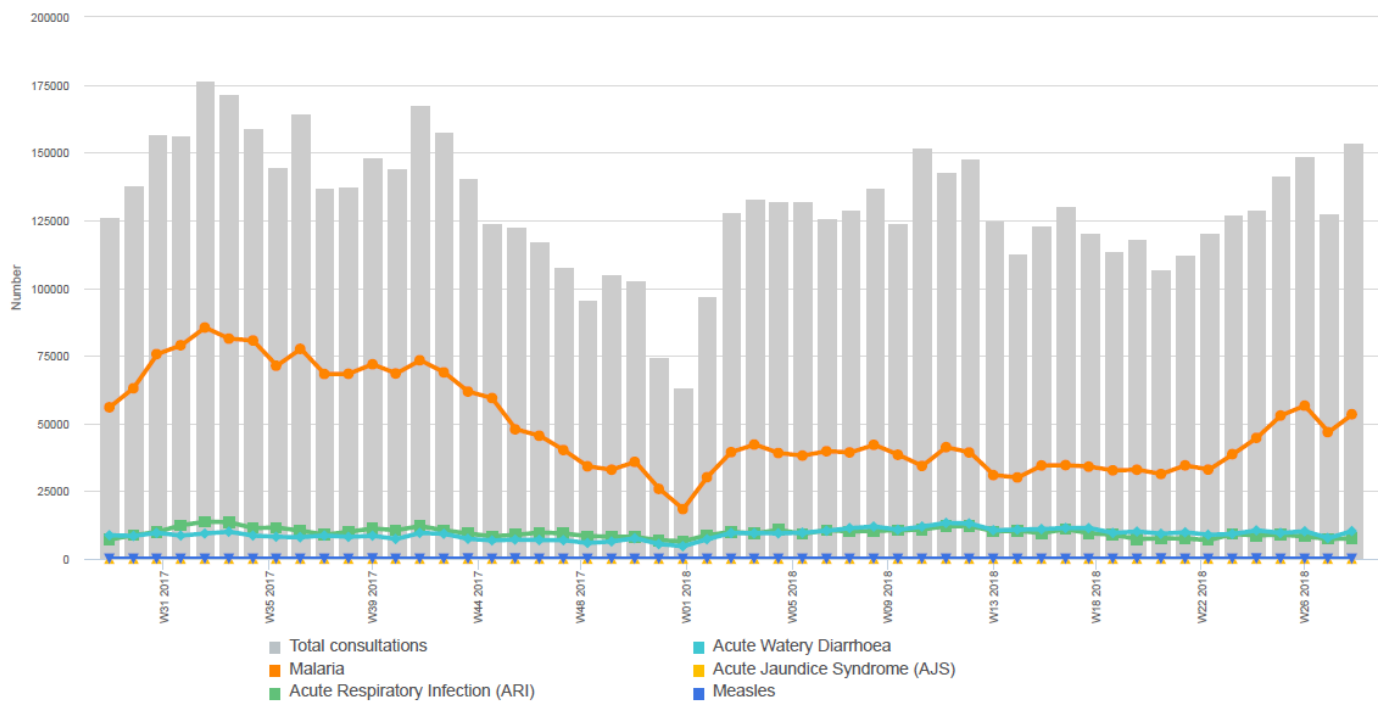
Figure 2 | Proportional morbidity (2018)



Syndrome	W28		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	53,319	66.3%	1,082,893	54.4%
ARI	7,448	9.3%	261,294	13.1%
AWD	10,233	12.7%	286,666	14.4%
Bloody diarrhoea	1,013	1.3%	40,114	2.0%
AJS	2	0.0%	180	0.0%
Measles	10	0.0%	347	0.0%
Other	8,446	10.5%	318,094	16.0%
Total cases	80,471	100%	1,989,588	100%

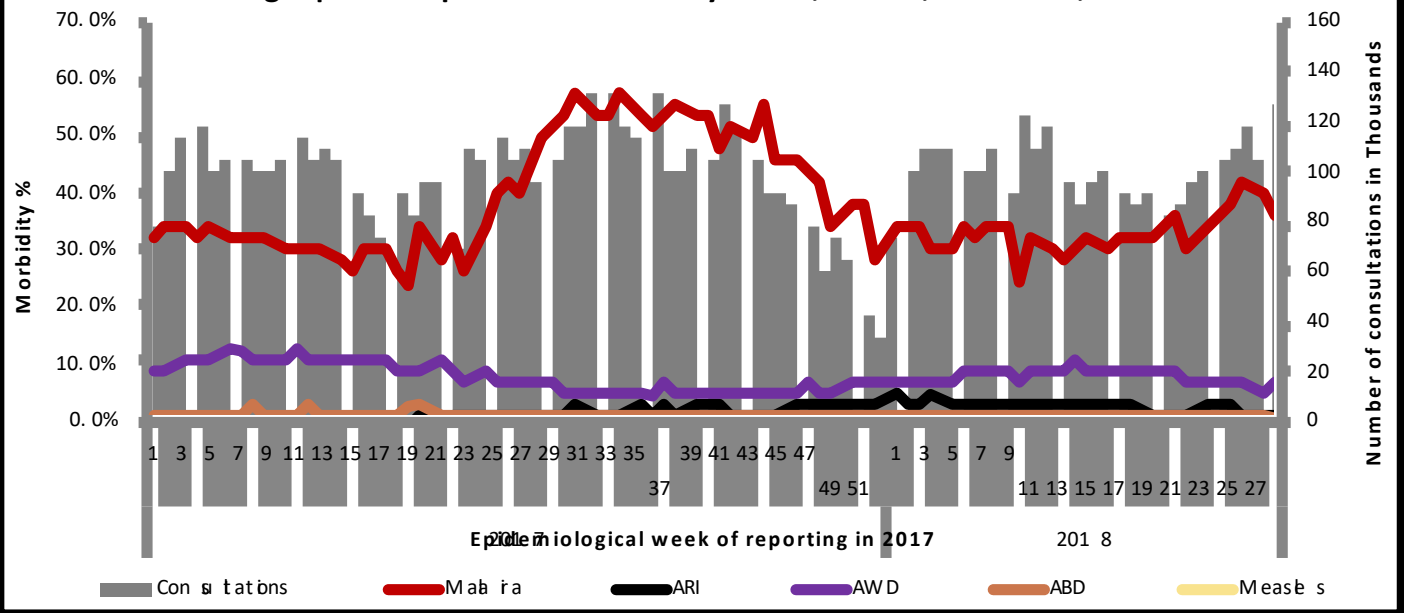
Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 1,082,893 (54.4%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

Figure 3 | Trend in total consultations and key diseases (W28)



IDSR Proportionate morbidity trends - in relatively stable states

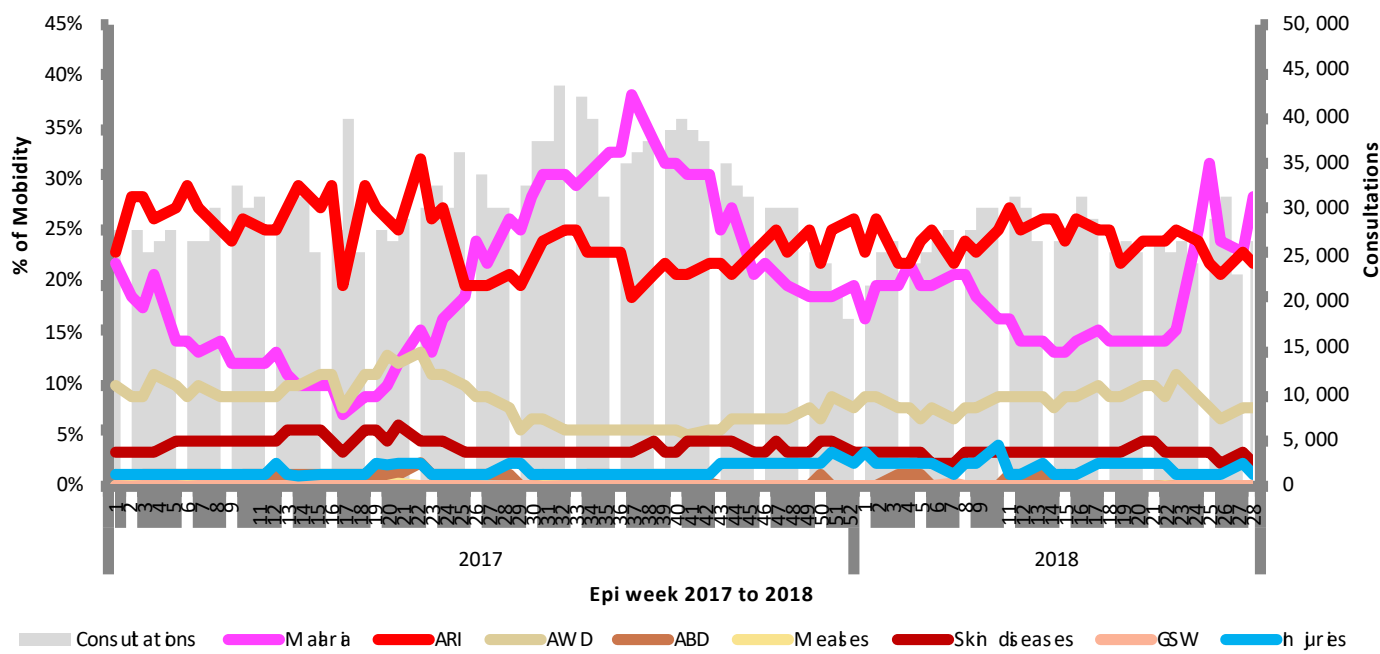
Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 28, 2018



In the relatively stable states, malaria is the top cause of morbidity accounting for 36% of the consultations in week 28 (representing an decrease from 40% in week 27).

IDP Proportionate Morbidity trends – in displaced Population

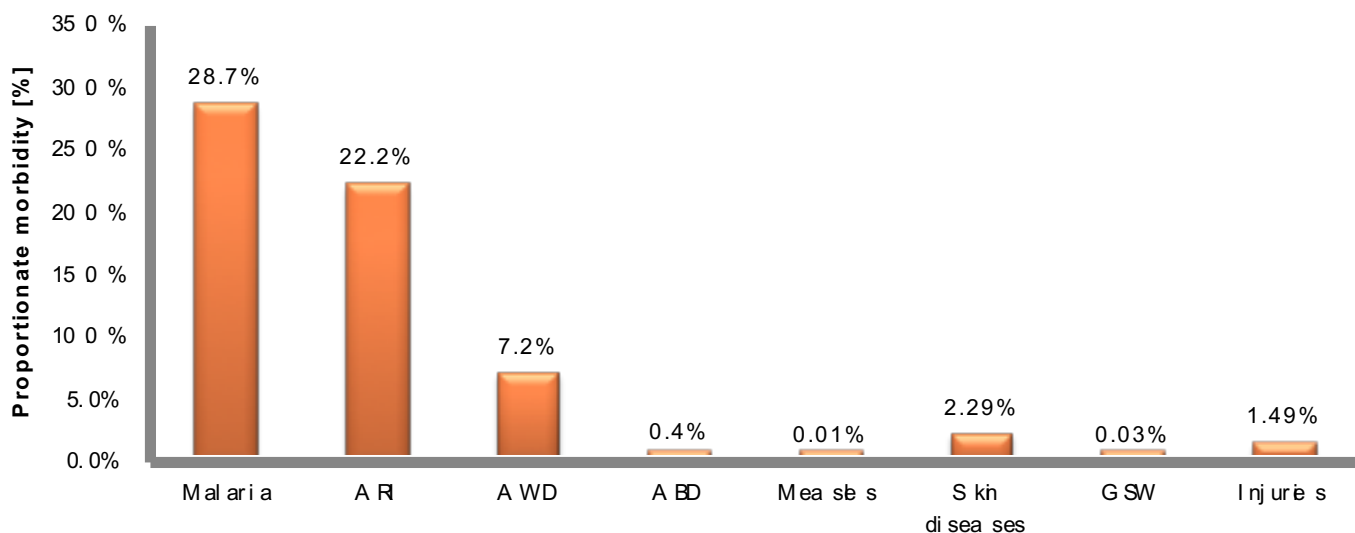
Fig. 2 | IDP Proportionate morbidity trends, week 01, 2017, to week 28, 2018



Among the IDPs, ARI and Malaria accounted for 22.2% and 28.7% of the consultations in week 28. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

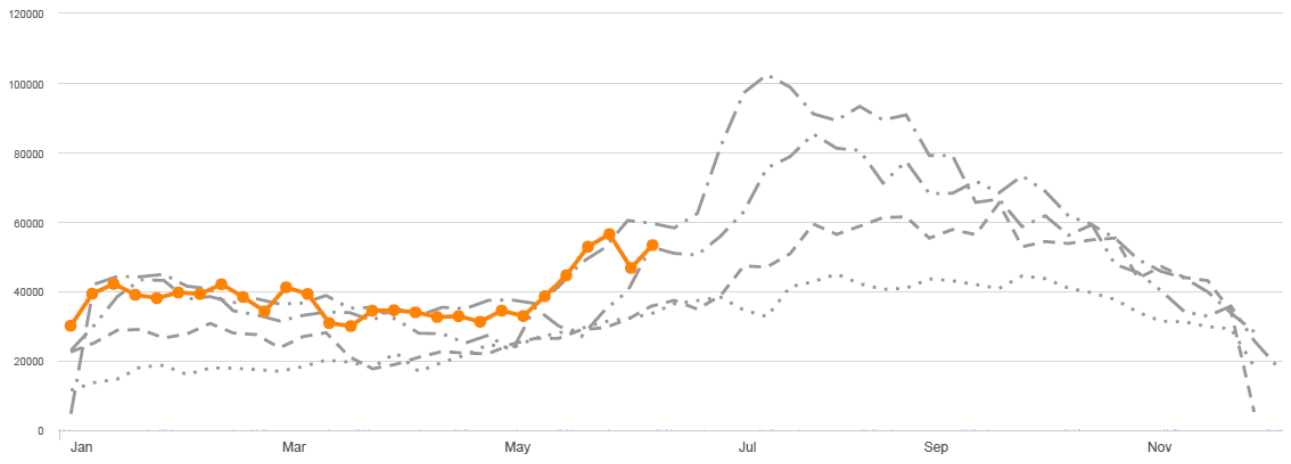
IDP Proportionate Morbidity trends – in displaced Population

Causes of morbidity among the IDPs weeks 28, 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)

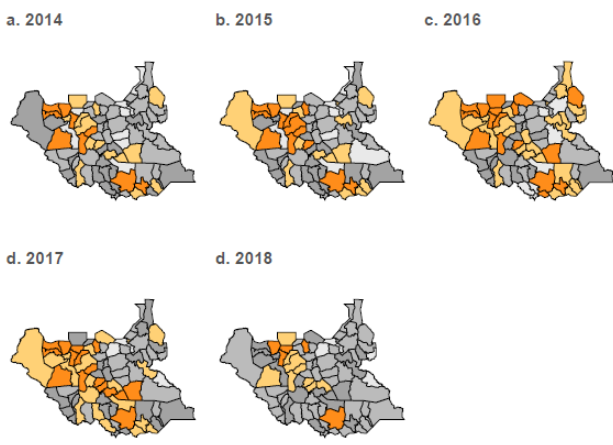


<p>Graph legend</p> <ul style="list-style-type: none"> —●— 2018 - - - - - 2017 - - - - - 2016 - - - - - 2015 2014 	<p>Key malaria indicators (2018)</p> <div style="display: flex; justify-content: space-around; font-size: 24px; font-weight: bold;"> 1,082,893 144 81 </div> <div style="display: flex; justify-content: space-around; font-size: 12px;"> Cases Deaths Alerts </div>	<p>Figure 4b % morbidity</p>	<p>Figure 4c Age breakdown</p>
---	---	---------------------------------------	---

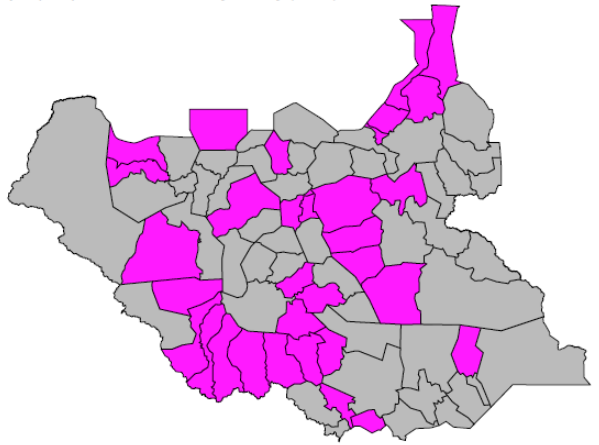
Malaria is the top course of Morbidity in the country, a total of 1,082,893 cases with 144 deaths registered since week 1 of 2018. malaria trend for week 28 of 2018 is above 2014, 2015, and 2016 as shown in the figure 4a, above.

Malaria | Maps and Alert Management

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



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

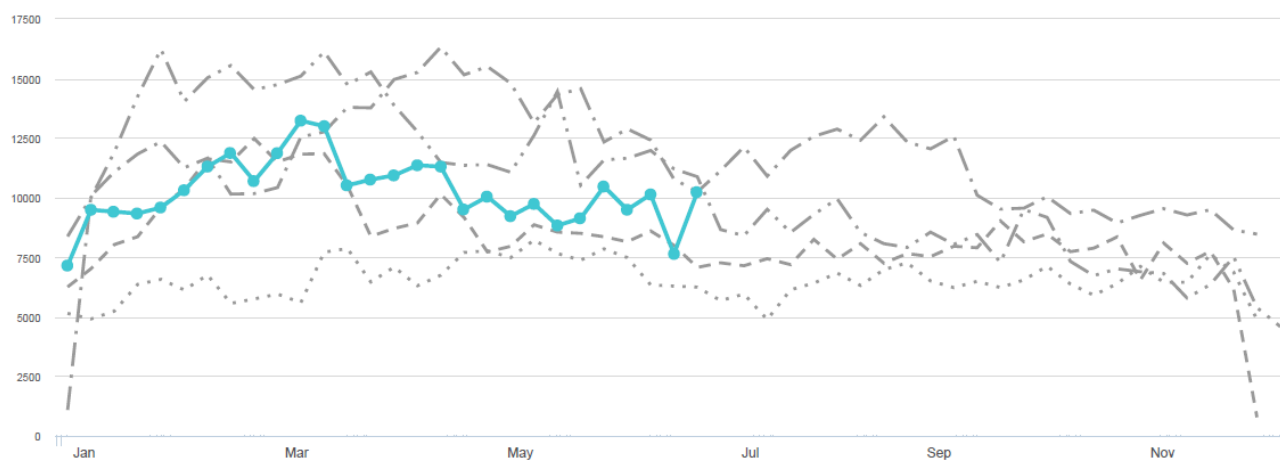


<p>Map legend</p> <p>Number of malaria cases</p> <p>Number of malaria alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>81</p> <p>Alerts</p>	<p>45</p> <p>Verified</p>	<p>Risk Assessment</p> <div style="display: flex; justify-content: space-around;"> <div style="background-color: green; color: white; padding: 5px; text-align: center;"> <p>2</p> <p>Low Risk</p> </div> <div style="background-color: yellow; padding: 5px; text-align: center;"> <p>0</p> <p>Moderate Risk</p> </div> <div style="background-color: orange; padding: 5px; text-align: center;"> <p>1</p> <p>High Risk</p> </div> <div style="background-color: red; padding: 5px; text-align: center;"> <p>1</p> <p>Very High Risk</p> </div> </div>
---	--------------------------------	----------------------------------	--

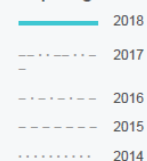
Since the beginning of the year, a total of 81 malaria alerts have been triggered, 45 of those were verified. The Maps above indicate the location reporting malaria alerts from 2014, 2015, 2016, 2017, and 2018.

Acute Watery Diarrhoea | Trends over time

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



Graph legend



Key AWD indicators (2018)

286,666

Cases

17

Deaths

92

Alerts

Figure 5b | % morbidity

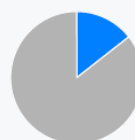


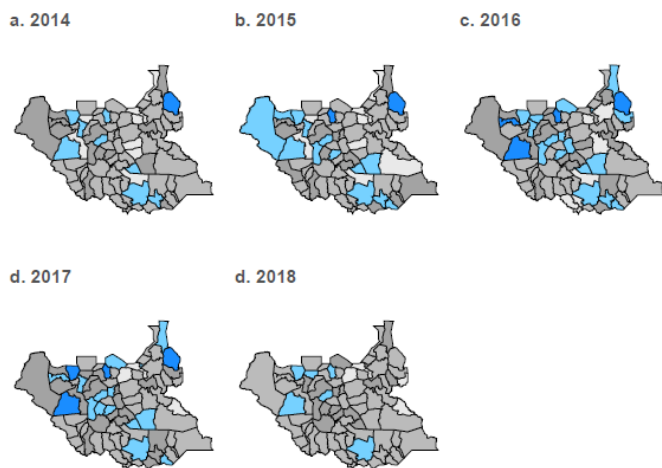
Figure 5c | Age breakdown



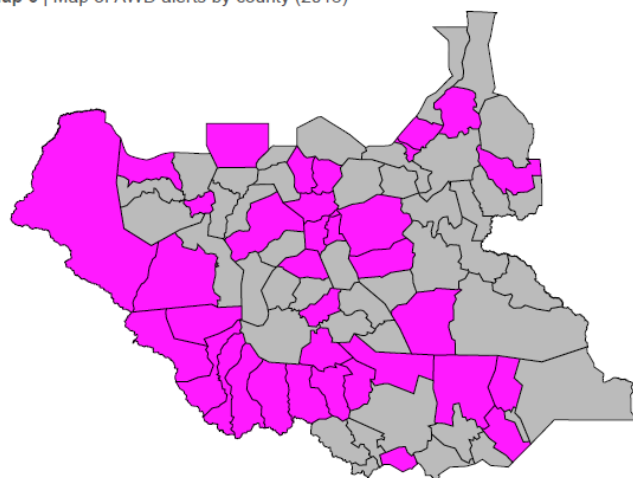
AWD is one of the top causes of morbidity in the country with 286,666 cases reported since week 1 of 2018 including 17 deaths. AWD trend for 2018 is above 2014, 2015 and 2016, as shown in figure 5a, above.

Acute Watery Diarrhoea | Maps and Alert Management

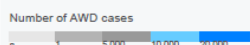
Map 4 | Map of AWD cases by county (2018)



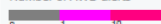
Map 5 | Map of AWD alerts by county (2018)



Map legend



Number of AWD alerts



Alert threshold

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

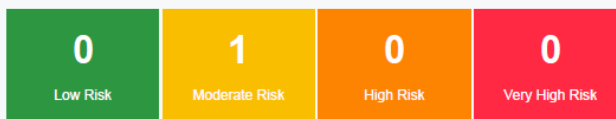
92

Alerts

57

Verified

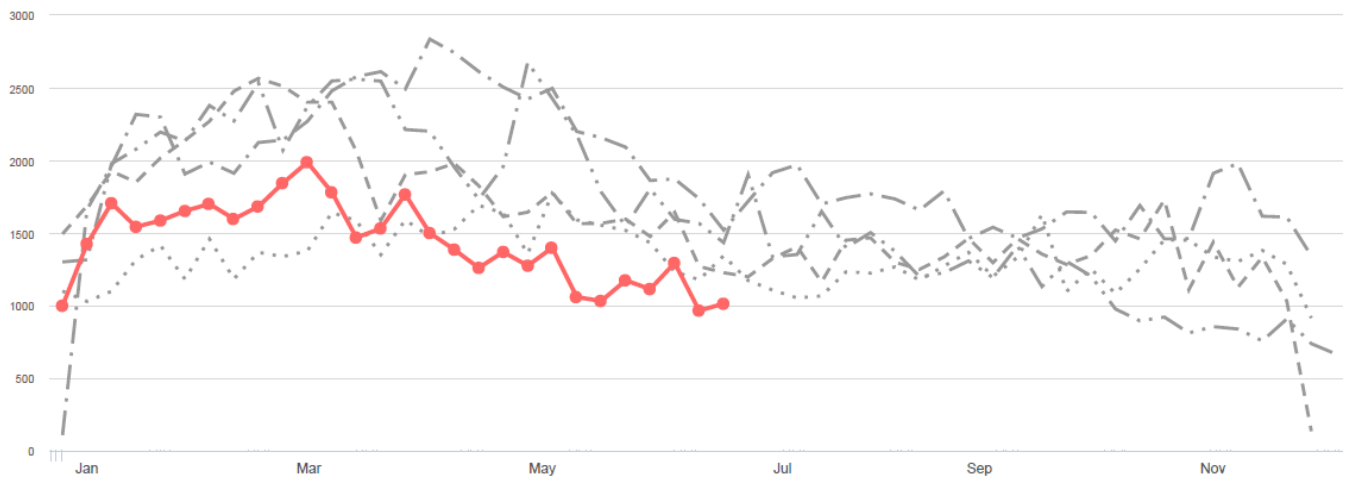
Risk Assessment



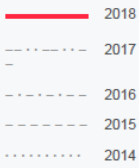
The number of AWD alerts triggered since week 1 of 2018 is 92, out of which 57 were verified. Maps above highlight the areas reporting AWD alerts from 2014 to 2018 .

Acute Bloody Diarrhoea | Trends over time

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



Graph legend



Key bloody diarrhoea indicators (2018)

40,114 Cases
15 Deaths
105 Alerts

Figure 6b | % morbidity



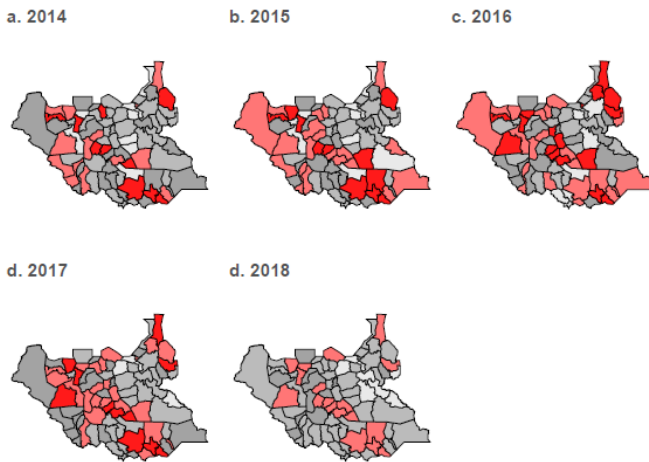
Figure 6c | Age breakdown



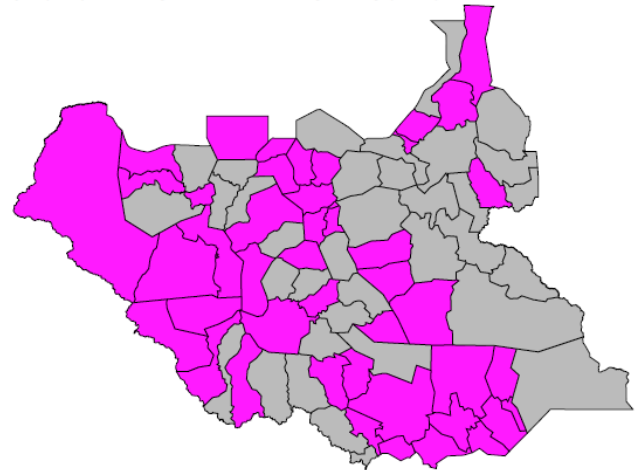
Since week 1 of 2018, a total of 40,114 cases of ABD have been reported country wide including 15 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

Acute Bloody Diarrhoea | Maps and Alert Management

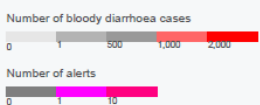
Map 6 | Map of bloody diarrhoea cases by county (2018)



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



Map legend



105 Alerts
65 Verified

Risk Assessment

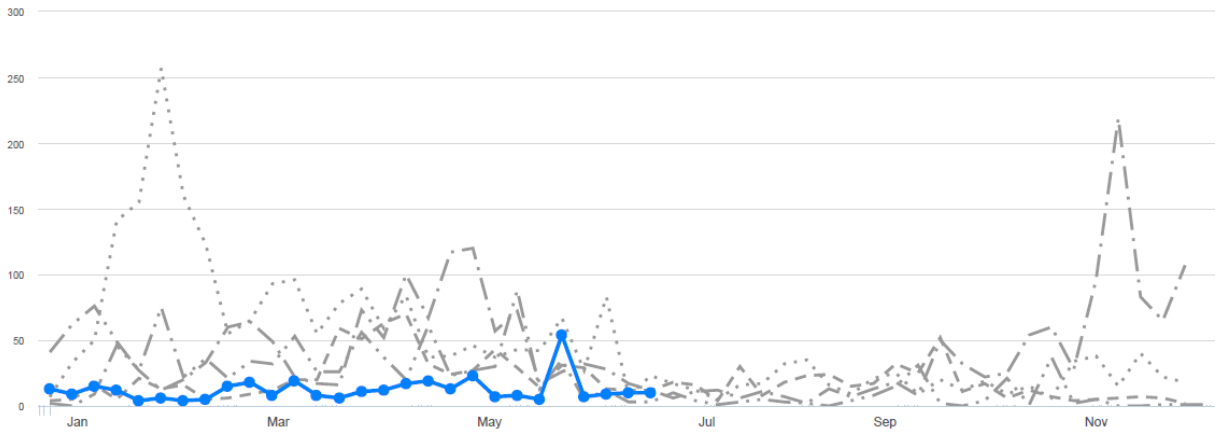


Alert threshold

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

Total of 105 alerts were generated since week 1 of 2018, of which 65 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)

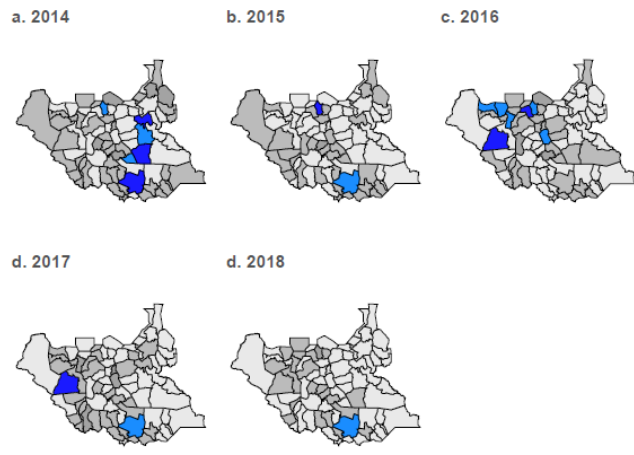


Graph legend — 2018 - - - 2017 - · - 2016 - - - 2015 ····· 2014	Key measles indicators (2018)			Figure 7b % morbidity 	Figure 7c Age breakdown
	347 Cases	3 Deaths	82 Alerts		

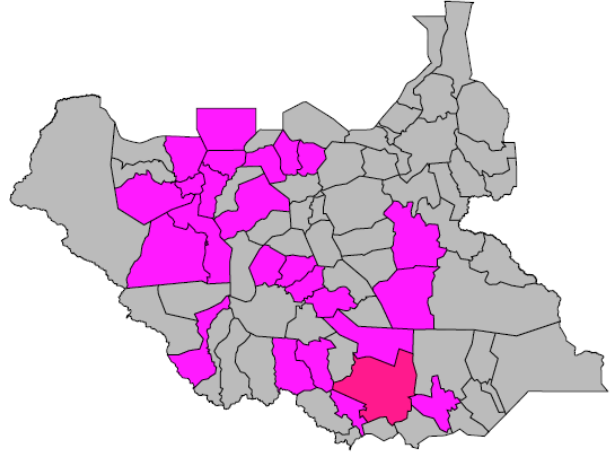
Since the beginning of 2018, at least 347 suspect measles cases including 3 death (CFR 0.86%) have been reported. Of these, 84 suspect cases have undergone measles case-based laboratory-backed investigation with 68 samples collected out of which 14 measles IgM positive cases; 14 clinically confirmed 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)



Map legend Number of measles cases 0 1 50 100 200 Number of measles alerts 0 1 10	82 Alerts	62 Verified	Risk Assessment			
				1 Low Risk	1 Moderate Risk	2 High Risk

Alert threshold: 1 case.
Source: IDSR

Since week 1 of 2018, 82 alerts of measles were triggered and 62 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.

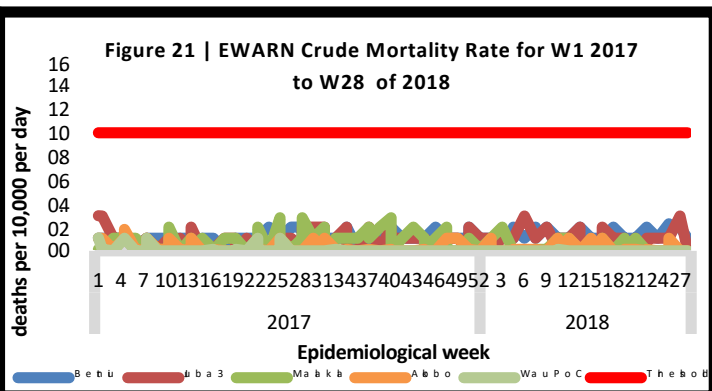
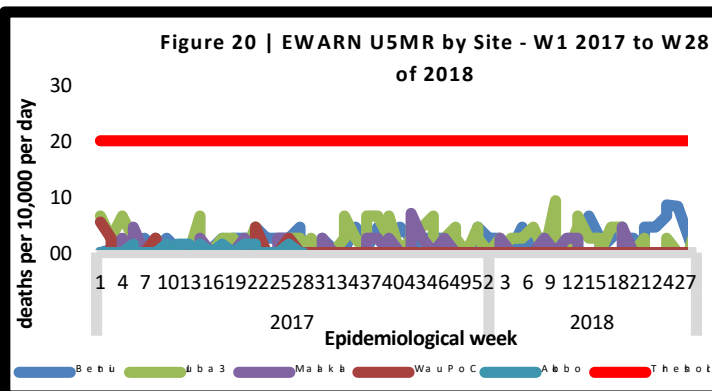
Mortality in the IDPs

Table 6 | Proportional mortality by cause of death in IDPs W28 2018

Cause of Death by IDP site	Bentiu		Juba 3	Total deaths
	<5yrs	≥5yrs	<5yrs	
Acute heart failure		1		1
Anemia		1		1
malaria		1		1
Respiratory distress	1			1
Respiratory failure		1		1
SAM	1			1
TB/HIV/AIDS		1		1
Unkown		2		2
Pree term			1	1
Persistent Diarrhoea		1		1
Total deaths	2	8	1	11

Among the IDPs, mortality data was received from Bentiu PoC, & UN House PoC in week 28. (Table 6). **A total of 11** deaths were reported during the week. Bentiu PoC report 10 deaths (91%) in the week. During the week, 3 (27%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 28 are shown in Table 6.



The U5MR in all the IDP sites that submitted mortality data in week 28 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 28 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 W28, 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	19	3	20	10	1	13	16	12	1	15	7	171	303
Juba 3	1	1			2		7			4		2		1		6	7	49	80
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	31	3	21	17	1	16	18	14	2	21	16	244	431
Proportionate mortality [%]	2%	1%	0%	1%	1%	1%	7%	1%	5%	4%	0%	4%	4%	3%	0%	5%	4%	57%	100%

A total of 431 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:**

Dr. Pinyi Nyimol Mawien
Director General Preventive Health Services
Ministry of Health
Republic of South Sudan
Telephone: +211 955 604 020

Dr. Mathew Tut Moses
Director Emergency Preparedness and Response (EPR)
Ministry of Health
Republic of South Sudan
Telephone: +211 916 010 382

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>

