

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Update W24 2018 (Jun11- Jun17)

Annexes W24 2018 (Jun 11 – Jun 17)



**World Health
Organization**
South Sudan



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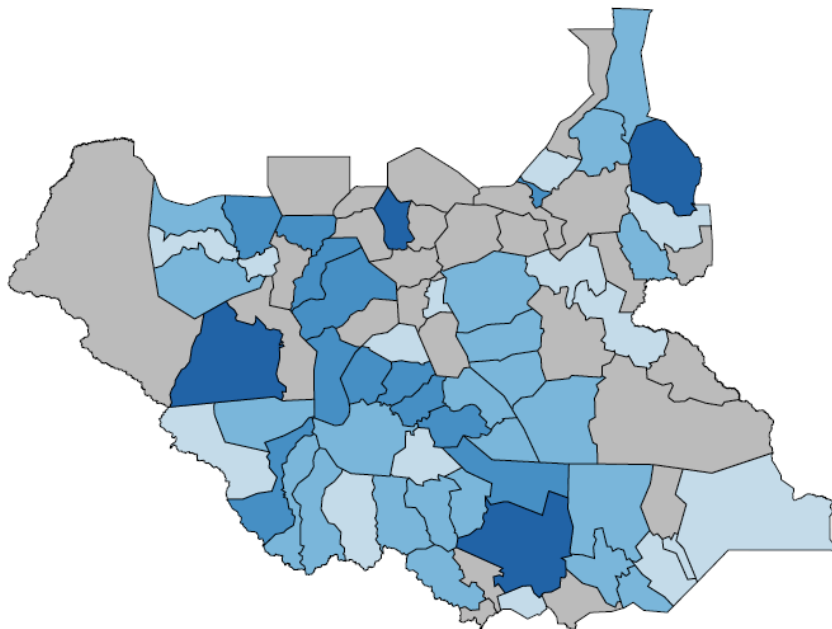
Slide 13 **Measles maps and alert management**

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 (W24 2018)

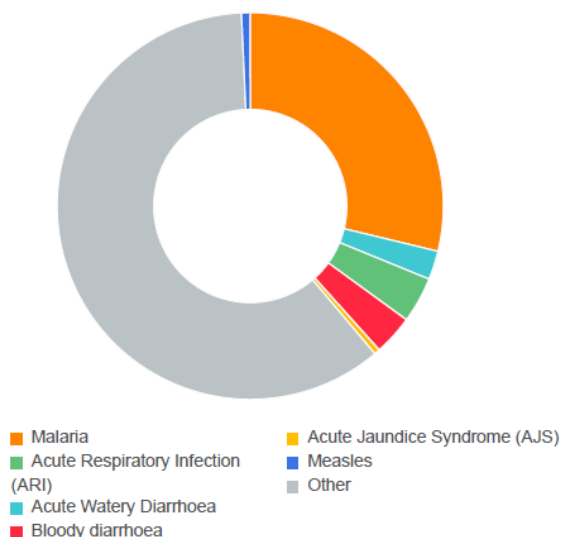


Hub	W24	2018
Aweil	6,653	287,817
Bentiu	6,749	356,847
Bor	7,328	243,357
Juba	13,730	260,330
Kwajok	13,585	541,584
Malakal	16,482	291,798
Rumbek	19,546	386,157
Torit	6,252	132,635
Wau	8,495	205,267
Yambio	15,239	276,275
South Sudan	114,059	2,982,067

The total consultation in the country since week 1 of 2018 is 2,982,067 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)

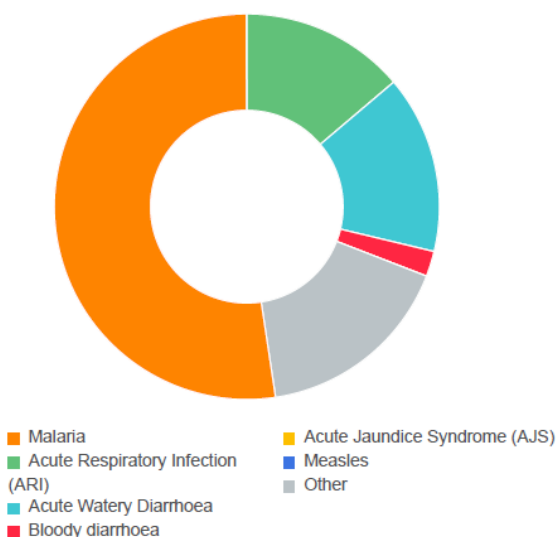


Syndrome	W24		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	6	60.0%	120	28.8%
ARI	1	10.0%	16	3.8%
AWD	1	10.0%	10	2.4%
Bloody diarrhoea	0	0.0%	14	3.4%
AJS	0	0.0%	2	0.5%
Measles	0	0.0%	3	0.7%
Other	2	20.0%	252	60.4%
Total deaths	10	100%	417	100%

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 28.8% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

Proportional morbidity

Figure 2 | Proportional morbidity (2018)

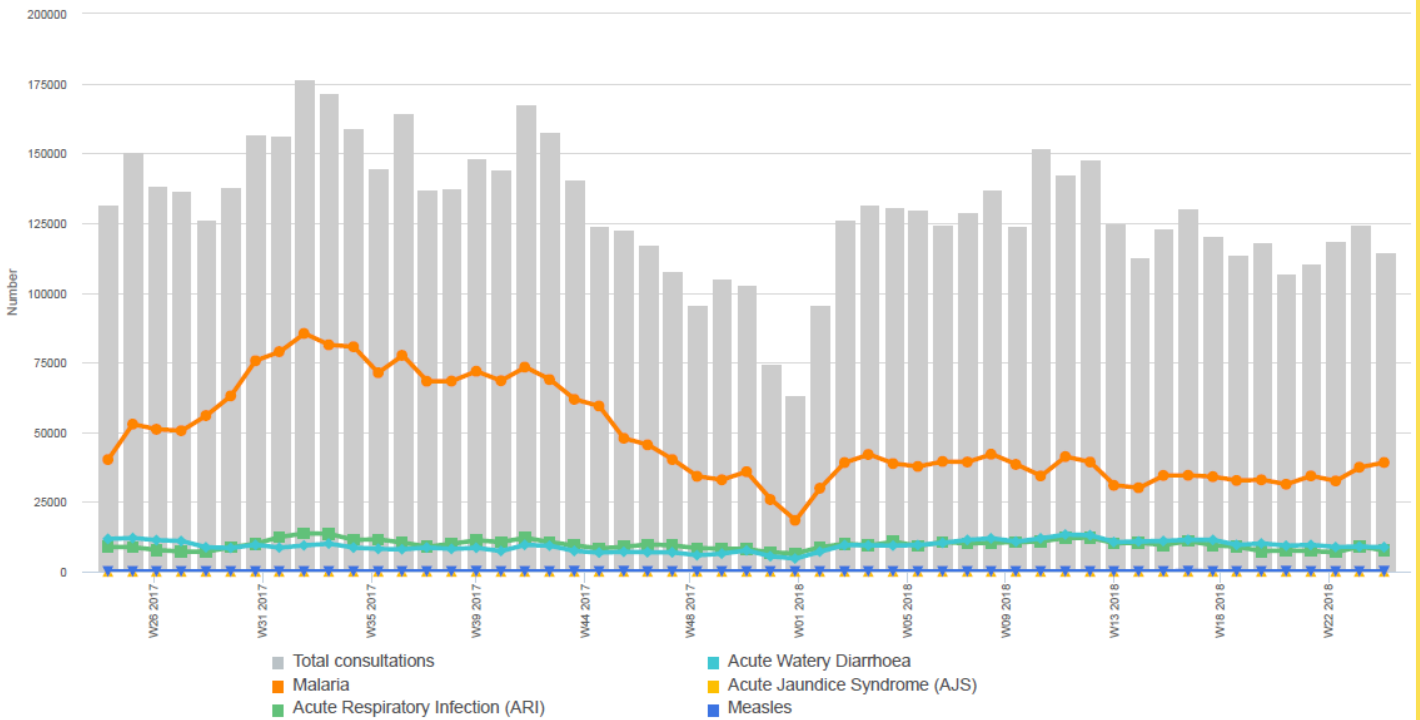


Syndrome	W24		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	39,056	59.3%	864,231	52.4%
ARI	7,460	11.3%	228,074	13.8%
AWD	8,675	13.2%	246,294	14.9%
Bloody diarrhoea	942	1.4%	35,137	2.1%
AJS	0	0.0%	149	0.0%
Measles	54	0.1%	410	0.0%
Other	9,644	14.6%	276,272	16.7%
Total cases	65,831	100%	1,650,567	100%

Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 864,231 (52.4%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

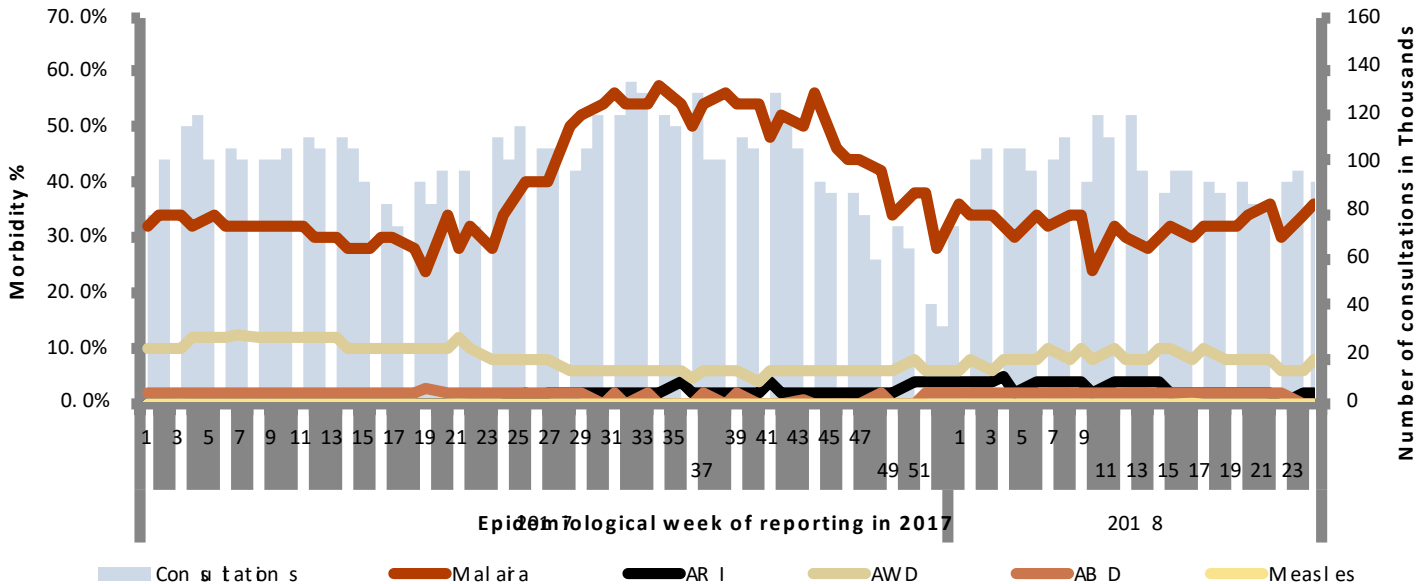
Trend in consultations and key diseases

Figure 3 | Trend in total consultations and key diseases (W24)



IDSR Proportionate morbidity trends - in relatively stable states

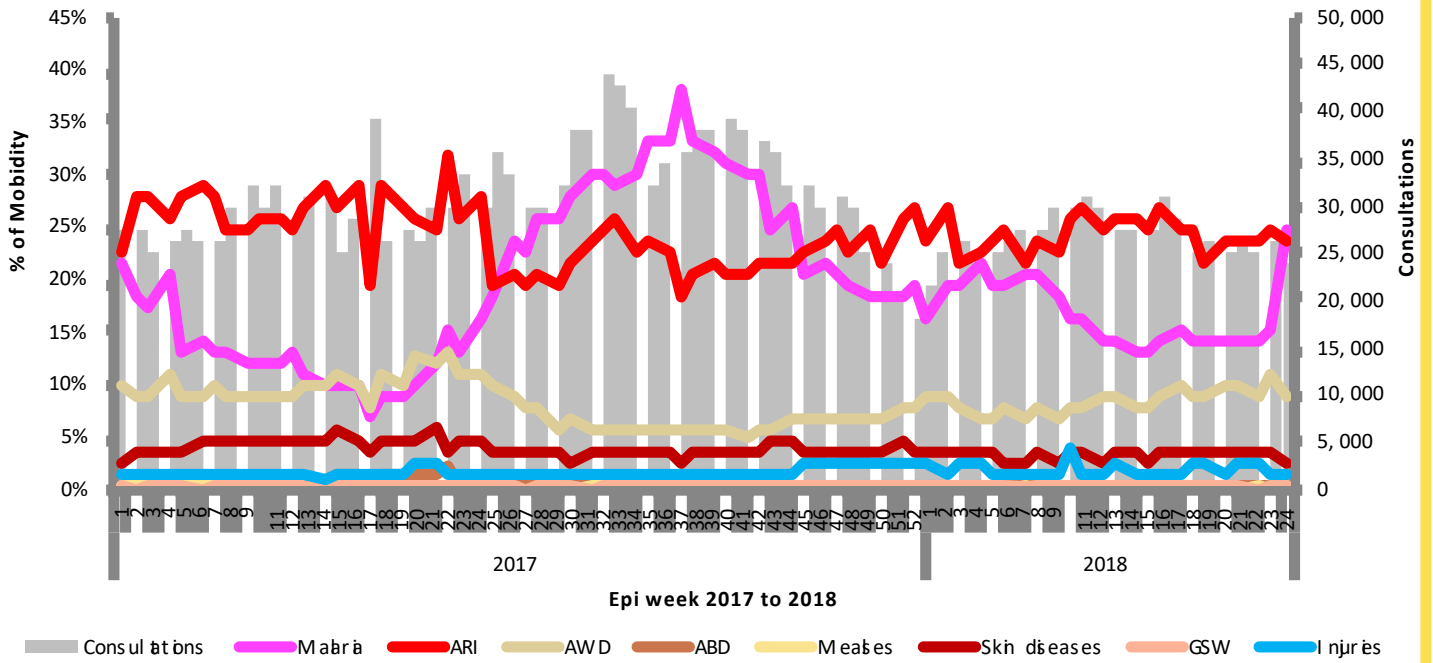
Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 24, 2018



In the relatively stable states, malaria is the top cause of morbidity accounting for 36.8% of the consultations in week 24 (representing an increase from 34% in week 23).

IDP Proportionate Morbidity trends – in displaced Population

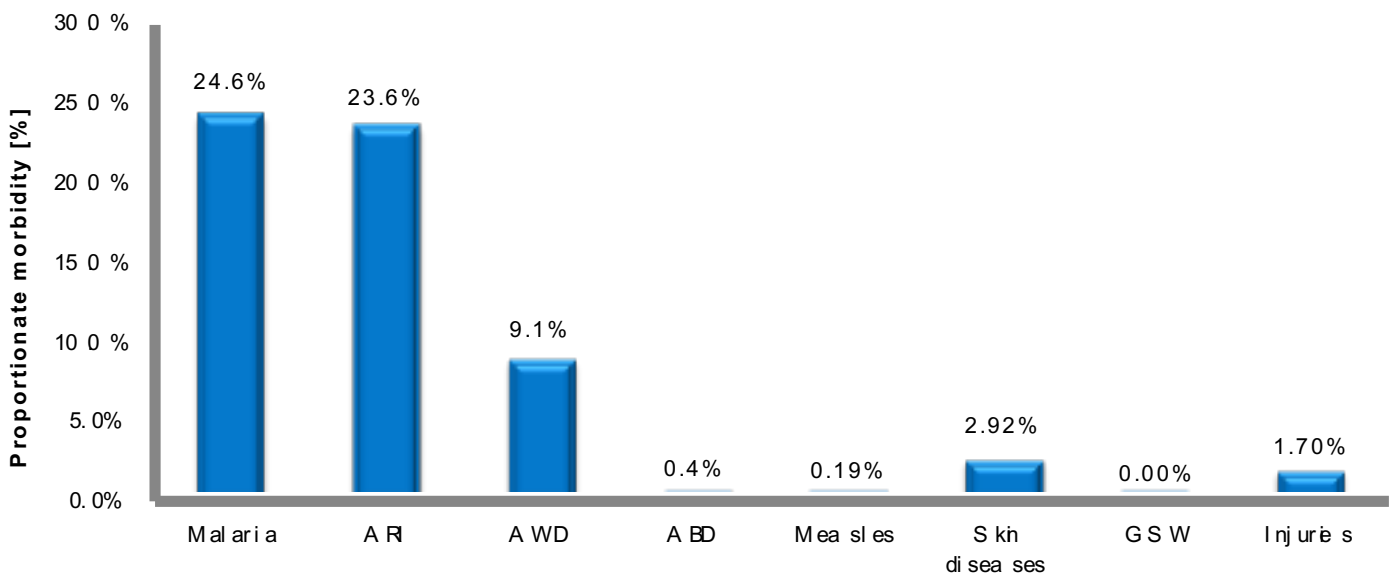
Fig. 2 | IDP Proportionate morbidity trends, week 01, 2017, to week 24, 2018



Among the IDPs, ARI and Malaria accounted for 24.6% and 23.6% of the consultations in week 24. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

IDP Proportionate Morbidity trends – in displaced Population

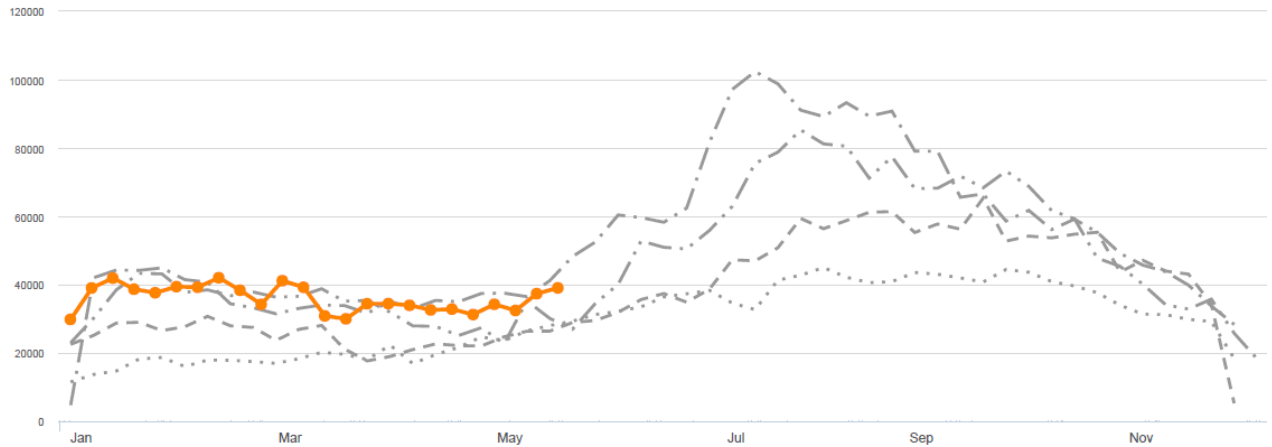
Causes of morbidity among the IDPs weeks 24, 2018



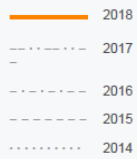
The top causes of morbidity in the IDPs in 2018 include ARI, Malaria, AWD, Skin diseases, Injuries and ABD.

Malaria | Trends over time

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



Graph legend



Key malaria indicators (2018)

864,231 Cases
120 Deaths
66 Alerts

Figure 4b | % morbidity

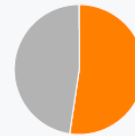


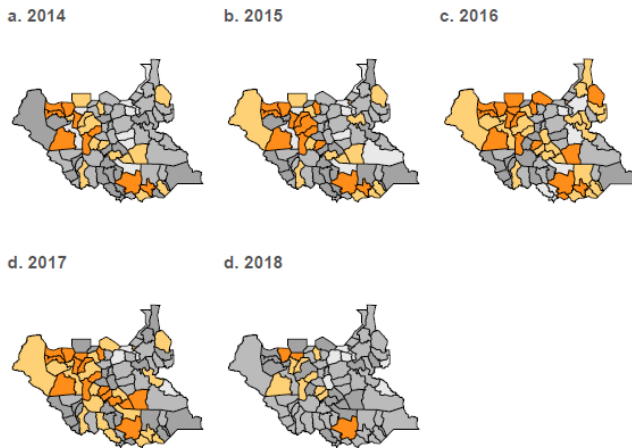
Figure 4c | Age breakdown



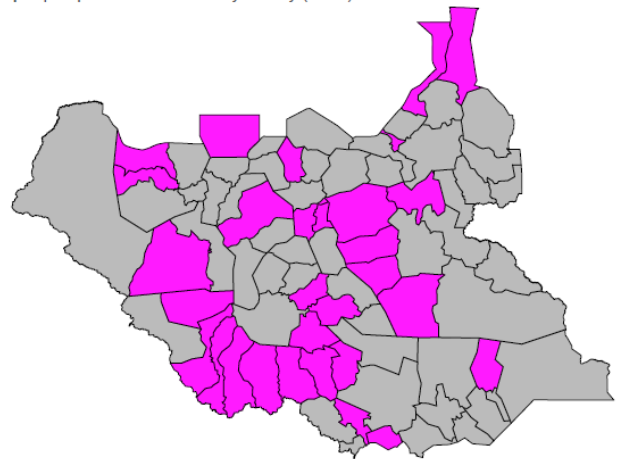
Malaria is the top course of Morbidity in the country, a total of 864,231 cases with 120 deaths registered since week 1 of 2018. malaria trend for week 24 of 2018 is above 2014, 2015, and 2016 however, it's below the trend for 2017 as shown in the figure 4a, above.

Malaria | Maps and Alert Management

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



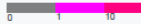
Map 3 | Map of malaria alerts by county (2018)



Map legend



Number of malaria alerts



Alert threshold

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

66

Alerts

40

Verified

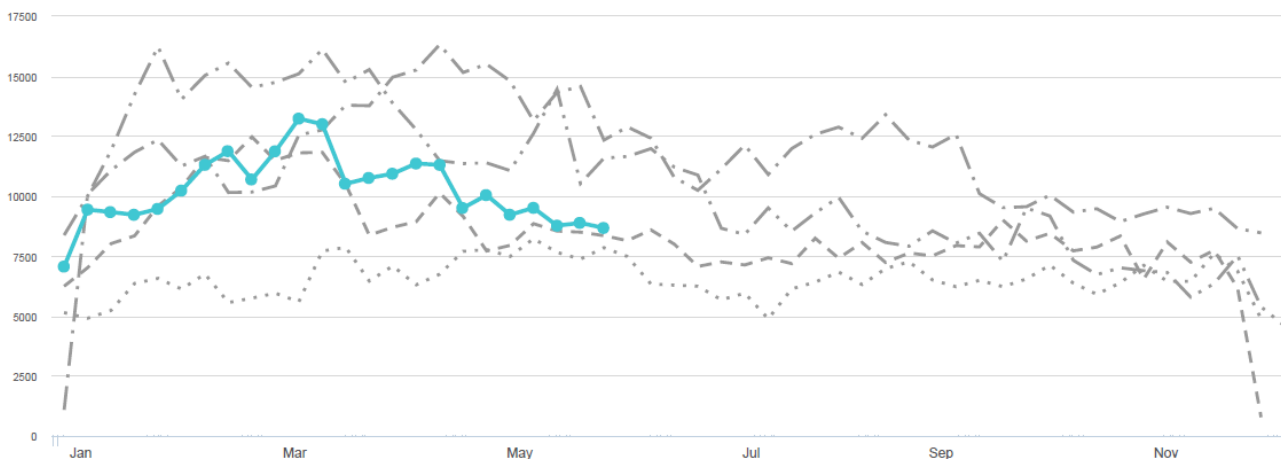
Risk Assessment



Since the beginning of the year, a total of 66 malaria alerts have been triggered, 40 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)

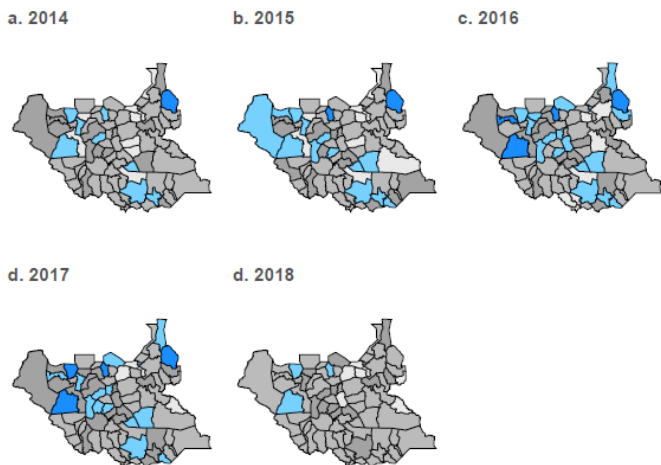


<p>Graph legend</p> <ul style="list-style-type: none"> —●— 2018 - - - 2017 - - - 2016 - - - 2015 - - - 2014 	<p>Key AWD indicators (2018)</p> <table border="0"> <tr> <td style="font-size: 24px; font-weight: bold;">246,294</td> <td style="font-size: 24px; font-weight: bold;">10</td> <td style="font-size: 24px; font-weight: bold;">85</td> </tr> <tr> <td>Cases</td> <td>Deaths</td> <td>Alerts</td> </tr> </table>	246,294	10	85	Cases	Deaths	Alerts	<p>Figure 5b % morbidity</p>	<p>Figure 5c Age breakdown</p>
246,294	10	85							
Cases	Deaths	Alerts							

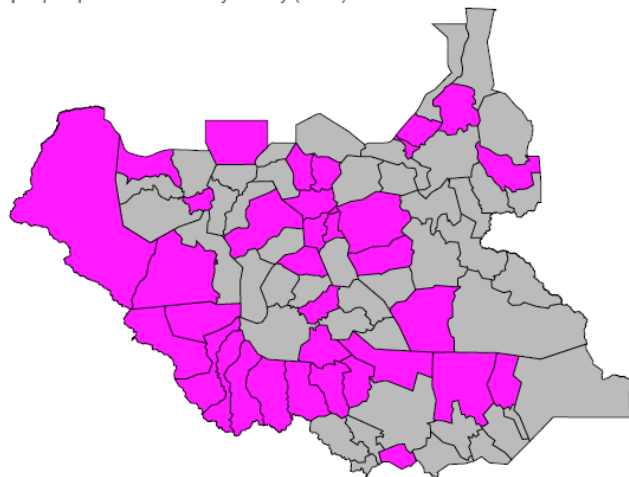
AWD is one of the top causes of morbidity in the country with 246,294 cases reported since week 1 of 2018 including 10 deaths. AWD trend for 2018 is below 2014, & 2015 as shown in figure 5a, above.

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)

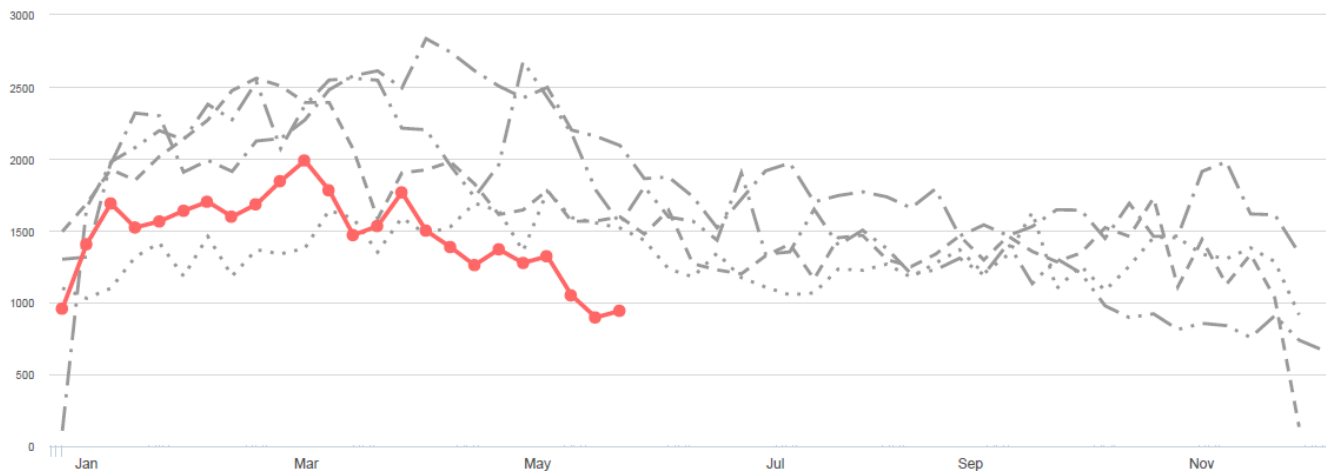


<p>Map legend</p> <p>Number of AWD cases</p> <p>Number of AWD alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>85</p> <p>Alerts</p>	<p>51</p> <p>Verified</p>	<p>Risk Assessment</p> <table border="1"> <tr> <td style="background-color: green; color: white; font-weight: bold; font-size: 24px;">0</td> <td style="background-color: orange; color: white; font-weight: bold; font-size: 24px;">1</td> <td style="background-color: red; color: white; font-weight: bold; font-size: 24px;">0</td> <td style="background-color: darkred; 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>	0	1	0	0	Low Risk	Moderate Risk	High Risk	Very High Risk
0	1	0	0								
Low Risk	Moderate Risk	High Risk	Very High Risk								

The number of AWD alerts triggered since week 1 of 2018 is 85, out of which 51 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)

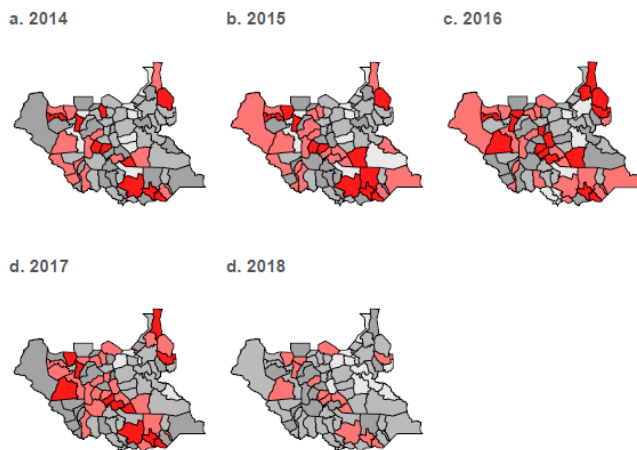


<p>Graph legend</p> <ul style="list-style-type: none"> —●— 2018 - - - - - 2017 - - - - - 2016 - - - - - 2015 - - - - - 2014 	<p>Key bloody diarrhoea indicators (2018)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>35,137</p> <p>Cases</p> </div> <div style="text-align: center;"> <p>14</p> <p>Deaths</p> </div> <div style="text-align: center;"> <p>93</p> <p>Alerts</p> </div> </div>	<p>Figure 6b % morbidity</p>	<p>Figure 6c Age breakdown</p>
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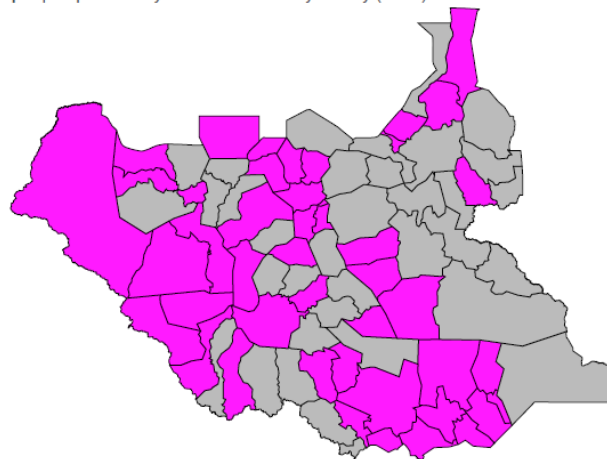
Since week 1 of 2018, a total of 35,137 cases of ABD have been reported country wide including 14 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

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)

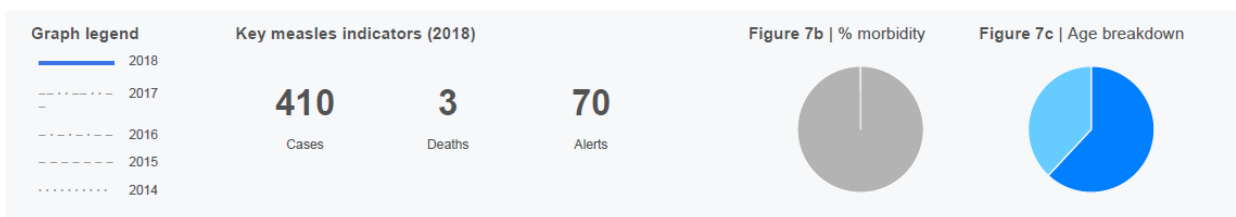
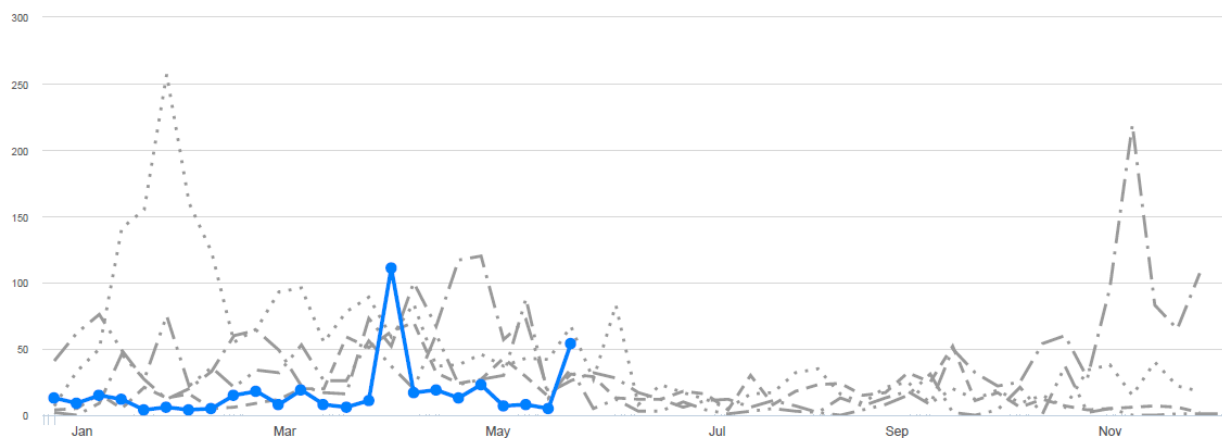


<p>Map legend</p> <p>Number of bloody diarrhoea cases</p> <p>Number of alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>93</p> <p>Alerts</p>	<p>56</p> <p>Verified</p>	<p>Risk Assessment</p> <table border="1" style="width: 100%; text-align: center;"> <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 93 alerts were generated since week 1 of 2018, of which 56 were verified by the county surveillance team. Maps indicating areas triggering alerts since 2014 to 2018 are shown above.

Measles | Trends over time

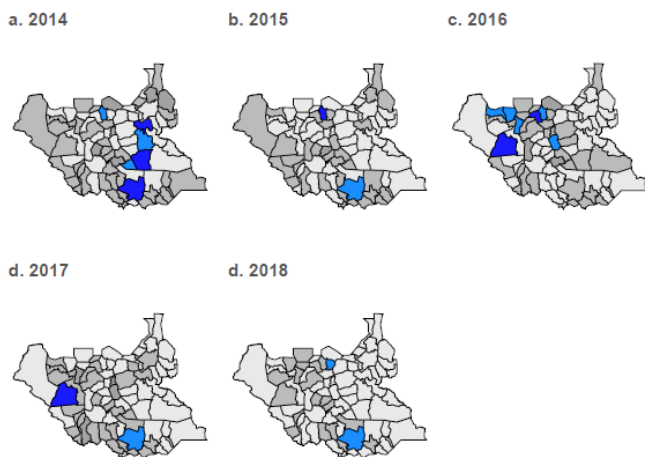
Figure 7a | Trend in number of cases over time (South Sudan)



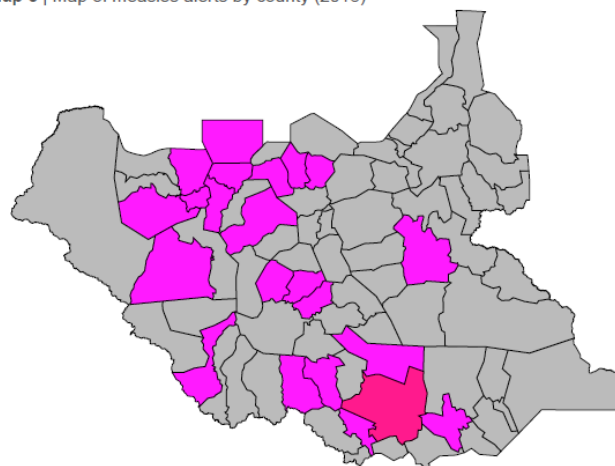
Since the beginning of 2018, at least 410 suspect measles cases including 3 death (CFR 0.73%) have been reported. Of these, 84 suspect cases have undergone measles case-based laboratory-backed investigation with 68 samples collected out of which 14 measles IgM positive cases; 14 clinically confirmed cases; and 3 cases confirmed by epidemiological linkage.

Measles | Maps and Alert Management

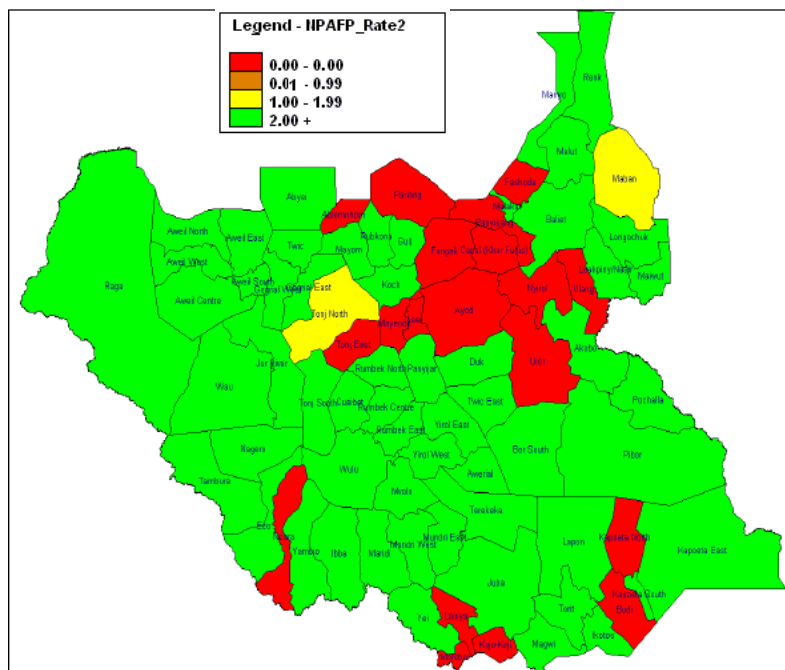
Map 7 | Map of measles cases by county (2018)



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



Since week 1 of 2018, 70 alerts of measles were triggered and 51 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

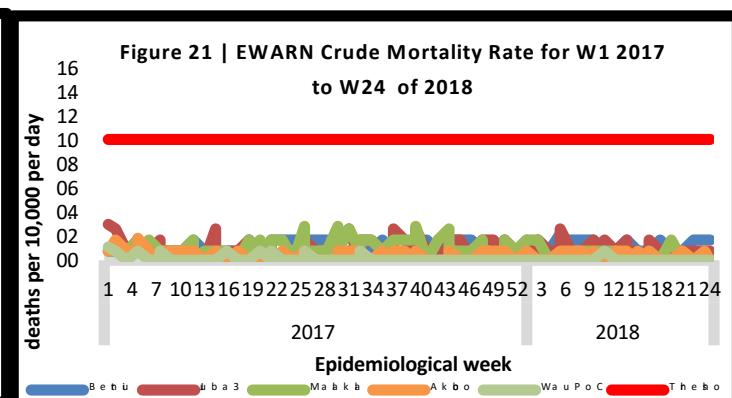
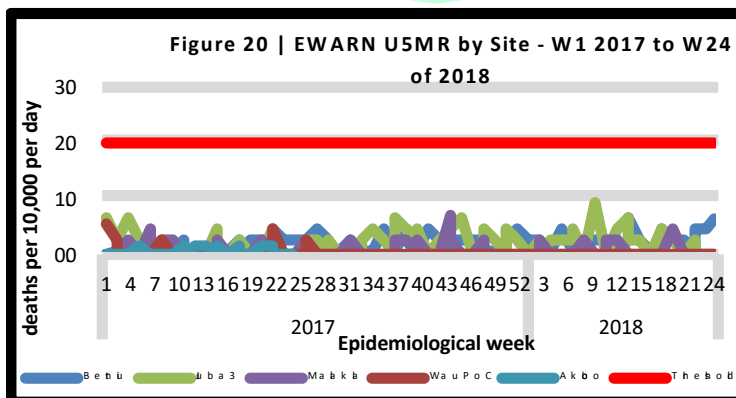
Table 6 | Proportional mortality by cause of death in IDPs W24 2018

Cause of Death by IDP site	Bentiu		Juba 3	Total deaths
	<5yrs	≥ 5 yrs	≥ 5 yrs	
Car accident	2			2
Drown	1			1
malaria			1	1
Neonatal Sepsis		1		1
Renal failure	1			1
Septic shock	1			1
TB/HIV/AIDS	1			1
LRTI	1			1
Anaemia			1	1
Severe dehydration			1	1
Domestics Violence	1			1
Abdominal Obstruction	1			1
Acute Liver Failure	1			1
Total deaths	10	1	3	14

Among the IDPs, mortality data was received from Bentiu PoC, & UN House PoC in week 24. (Table 6). **A total of 14** deaths were reported during the week. Bentiu PoC report 11 deaths (78.6%) in the week. During the week, 10 (71%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 24 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 24 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 24 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 W24, 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	1	2	1	2	7	3	15	10	1	9	16	9	1	13	7	144	249
Luba 3	1	1			1		7			3		2		1		4	7	39	66
Malakal		1			3	1			1	1							2	17	26
Akobo				1		2	3			2		1	2	1	1			6	19
Wau PoC							1											0	1
Grand Total	8	3	1	3	5	5	18	3	16	16	1	12	18	11	2	17	16	206	361
Proportionate mortality [%]	2%	1%	0%	1%	1%	1%	5%	1%	4%	4%	0%	3%	5%	3%	1%	5%	4%	57%	100%

A total of 361 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>

