Republic of South Sudan

EARLY WARNING AND DISEASE SURVEILLANCE BULLETIN (IDP CAMPS AND SETTLEMENTS)

Week 13 **23 – 29 March 2015**

General Overview

- Completeness for weekly reporting in week 13 of 2015 was 98% compared to 67% for the corresponding week of 2014.
- ARI, malaria, AWD, ABD and suspect measles are the top causes of morbidity among IDPs.
- During week 13 of 2015, ARI was the top cause of morbidity among IDPs and registered a proportionate morbidity of 16% and incidence of 62 cases per 10,000 population.
- Fifty six new suspect measles cases were reported from Bentiu (55 cases) and Lankien (1 case). A sharp increase in measles cases has been registered in Bentiu in week 13. This follows the confirmation of a measles outbreak in week 12. A response to the measles outbreak in Bentiu is already underway.
- In week 13, four new HEV cases were reported from Bentiu hence the cumulative is 46 cases without any deaths in Bentiu and 140 cases including six deaths (CFR 4.3%) in Mingkaman.
- The under-5 and crude mortality rates by IDP site were below the emergency threshold in week 13 of 2015.

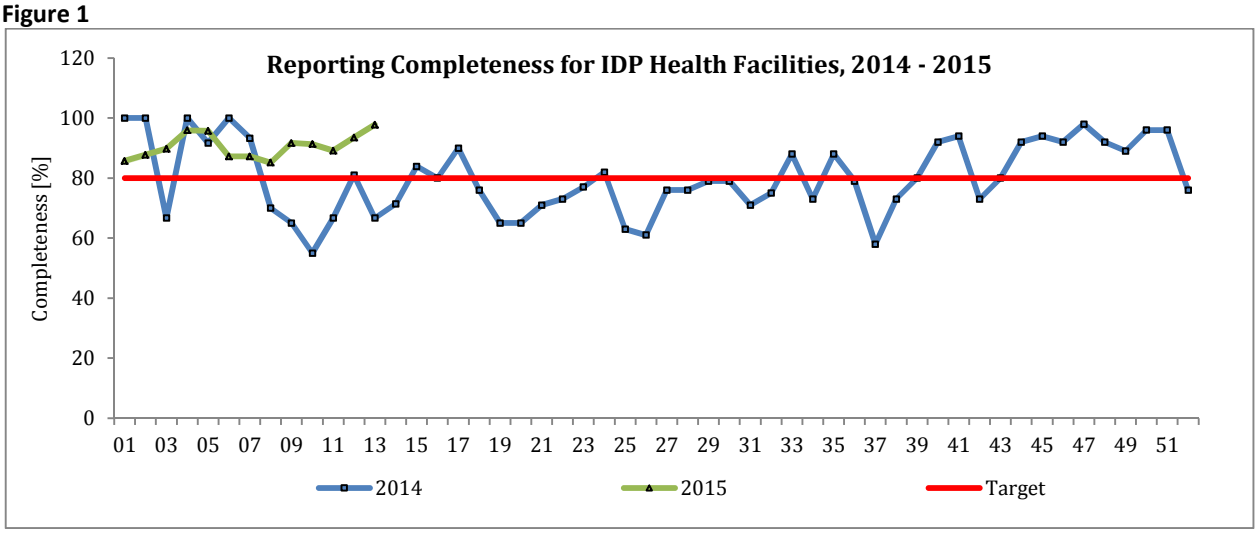
Editorial note

In this bulletin, we present priority disease trends using data submitted through the Early Warning Alert and Disease Network (EWARN) by health partners providing health services to internally displaced persons (IDP) in South Sudan. Additional data from the integrated disease surveillance and response (IDSR) is also presented for select diseases like cholera, Kala-azar and AFP. All other IDSR weekly reports are published through the IDSR weekly bulletin by the EPR department, MoH-RSS.

Completeness and Timeliness of Reporting

- Figure 1 shows the completeness for weekly reporting from week 01 of 2014 to week 13 of 2015.

Figure 1



- During this period, the number of health facilities expected to submit weekly reports increased from seven in week 01 of 2014 to 45 in week 13 of 2015.

- Timeliness for weekly reporting in week 13 of 2015 was 22 (49%) compared to 18 (68%) for the corresponding week of 2014.
- Completeness for weekly reporting in week 13 of 2015 was 44 (98%) compared to 18 (66.7%) for the corresponding week of 2014. In week 13 of 2015, we did not receive reports from **one facility** (Table1).

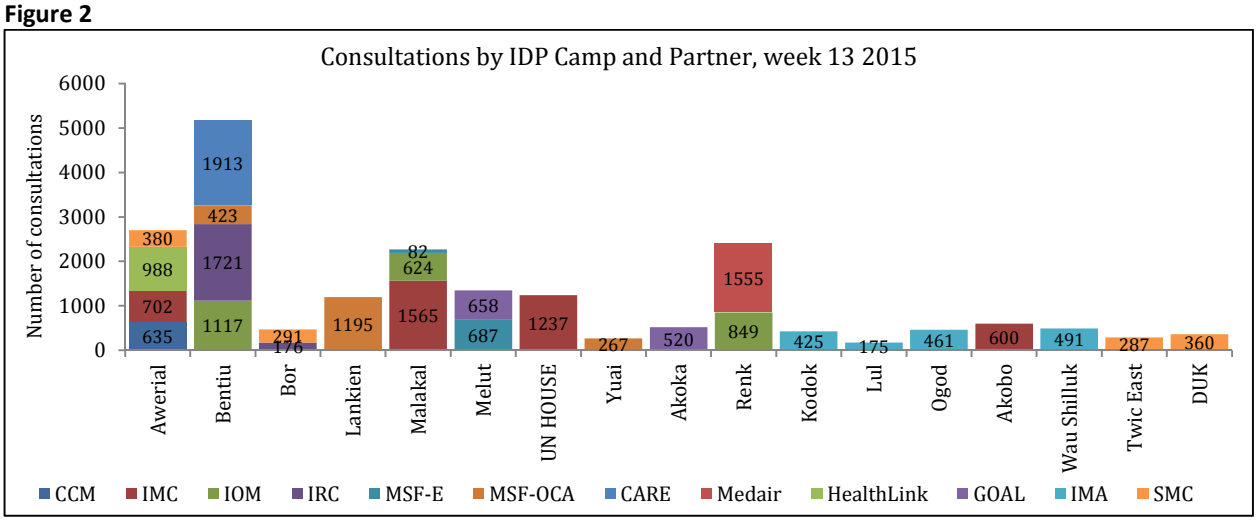
Table 1: List of silent health facilities during week 13, 2015

No.		IDP site /Health Facility	Reason of not reporting
1		Chuil PHCU	Due to inaccessibility to the area, the report will be submitted monthly.

Consultations (All patients seen at Outpatient and Inpatient facilities)

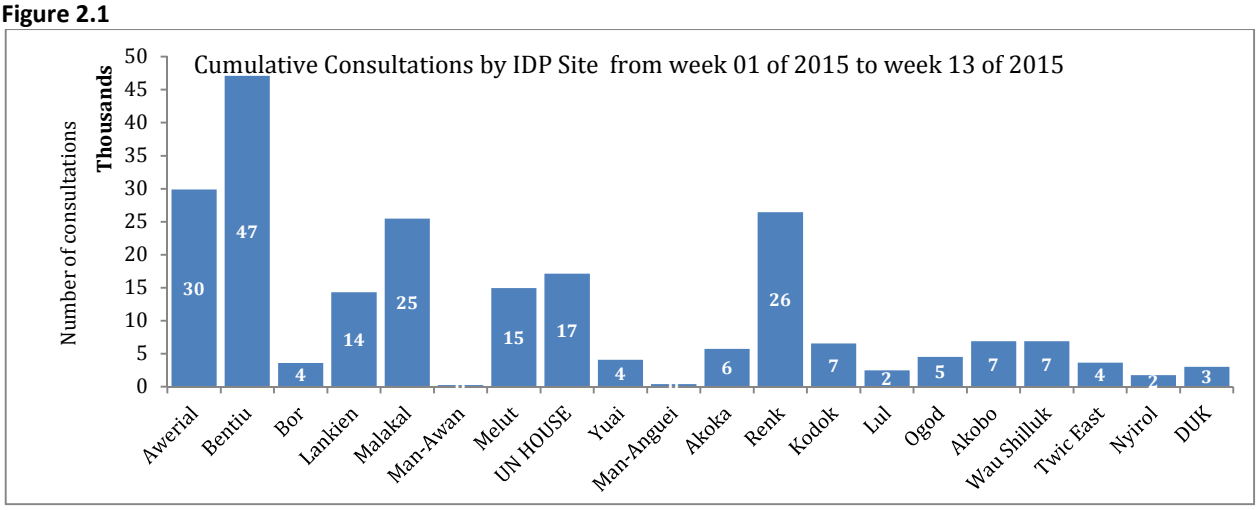
- The total consultations in week 13 of 2015 were 20,384, which is higher when compared to 11,335 consultations reported during the corresponding week in 2014. Figure 2 shows the consultations by site in week 13 of 2015.

Figure 2



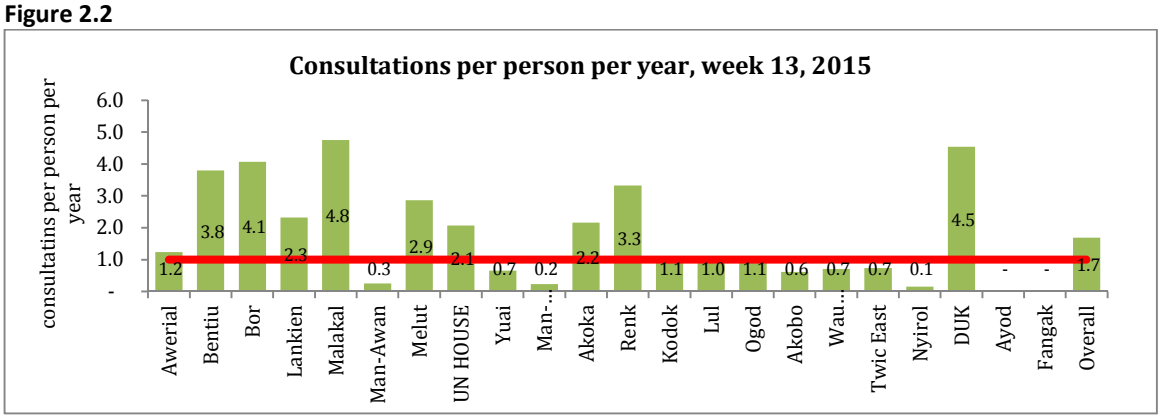
- The cumulative consultations since week 01 of 2015 have risen to 225,178. Figure 2.1 shows the cumulative consultations by IDP site since week 01 of 2015.

Figure 2.1



- The annualised outpatients department (OPD) utilization for 2015 is 1.7 consultations per person per year (Figure 2.2). The IDP site-specific annualised OPD utilization rates are shown in Figure 2.2.

Figure 2.2



Overall Trends of Priority Epidemic-prone Diseases

- Table 2 shows the top five causes of morbidity among IDPs with Acute Respiratory tract Infections (ARI) leading, followed by malaria, Acute Watery Diarrhoea (AWD), Acute Bloody Diarrhoea (ABD) and suspected measles. Also presented in Table 2 are the corresponding disease trends for week 13 of 2014 and 2015 respectively.

Table 2

No.	Disease	New cases for weeks		Cumulative cases since week 01 of 2015
		13 of 2014	13 of 2015	
1	Malaria	1,496	2,910	35,006
2	AWD	1, 021	2,236	22,398
3	ARI	1,911	3,284	39,740
4	ABD	135	308	2,913
5	Measles	54	56	143

- Figures 3 and 4 show the proportionate and incidence morbidity trends for ARI, malaria, AWD, suspected measles and ABD.

Figure 3

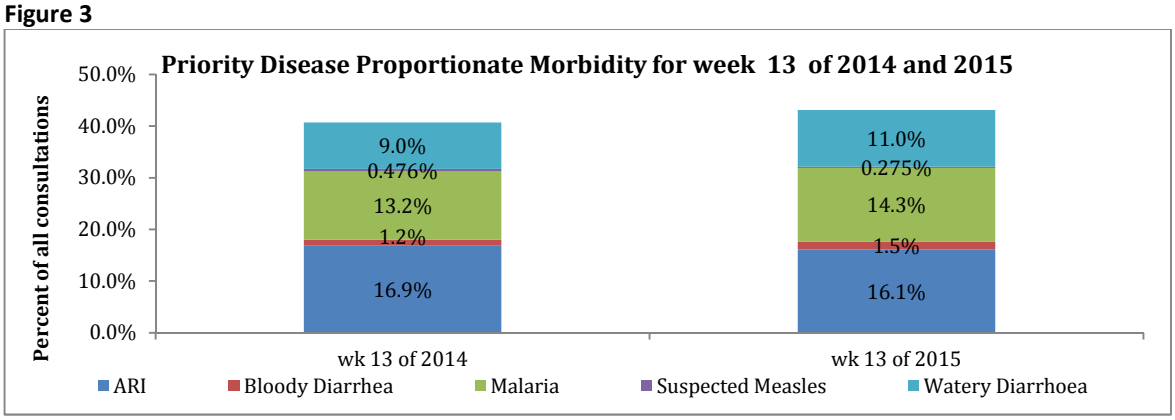
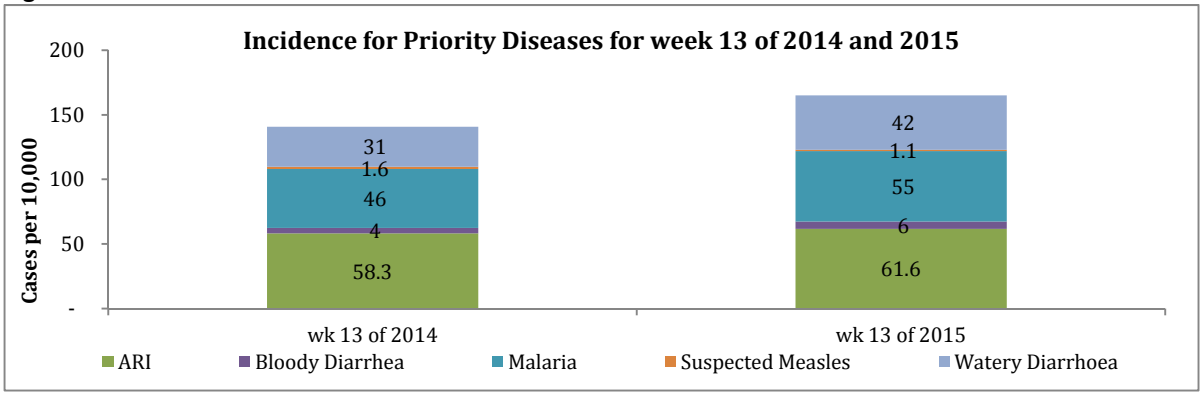


Figure 4

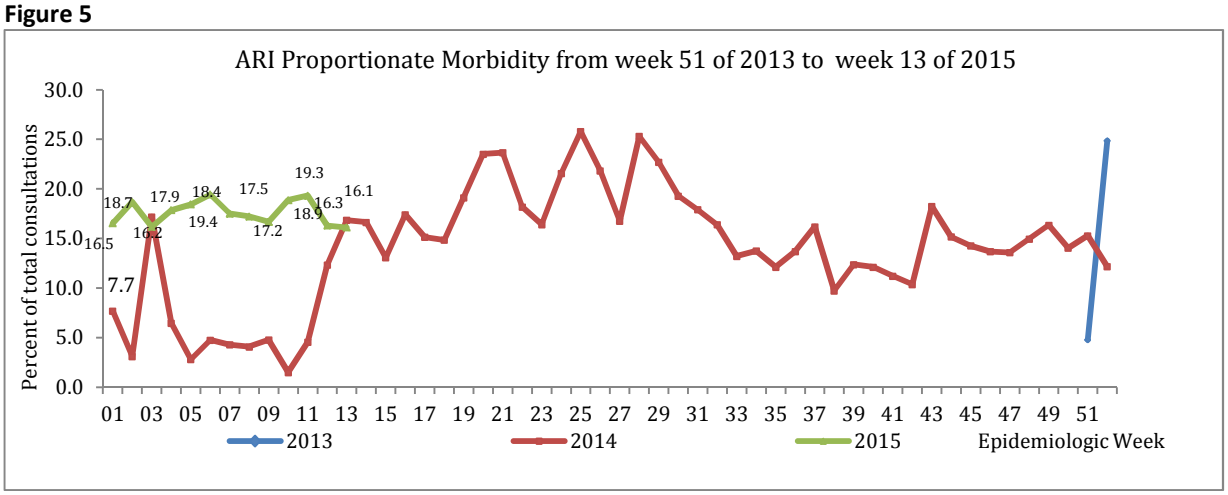


- During week 13 of 2015, ARI was the top cause of morbidity followed by malaria and AWD. During the corresponding week of 2014, ARI was the top cause of morbidity followed by Malaria (Figures 3 and 4).

Specific Priority Epidemic-Prone Diseases

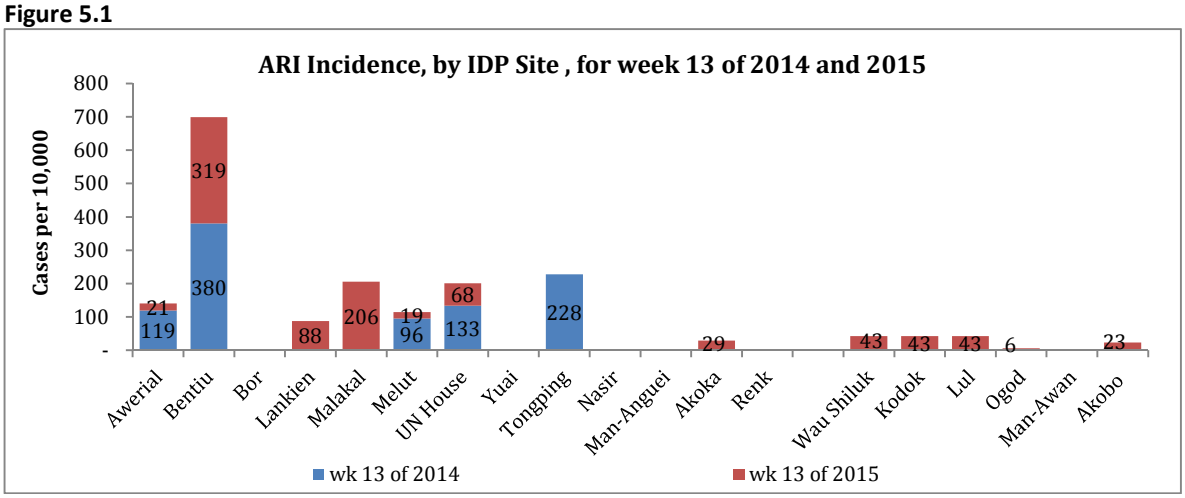
Acute Respiratory Infection (ARI)

Figure 5



- During week 13 of 2015, ARI registered the highest proportionate morbidity of 16.1% and incidence of 62 cases per 10,000 population (Figures 4 and 5). During the corresponding week of 2014, ARI had a proportionate morbidity of 16.9% and incidence of 58 cases per 10,000 population respectively. This shows that the ARI cases for the current period are lower when compared to the corresponding period of 2014. (Figure 5).

Figure 5.1

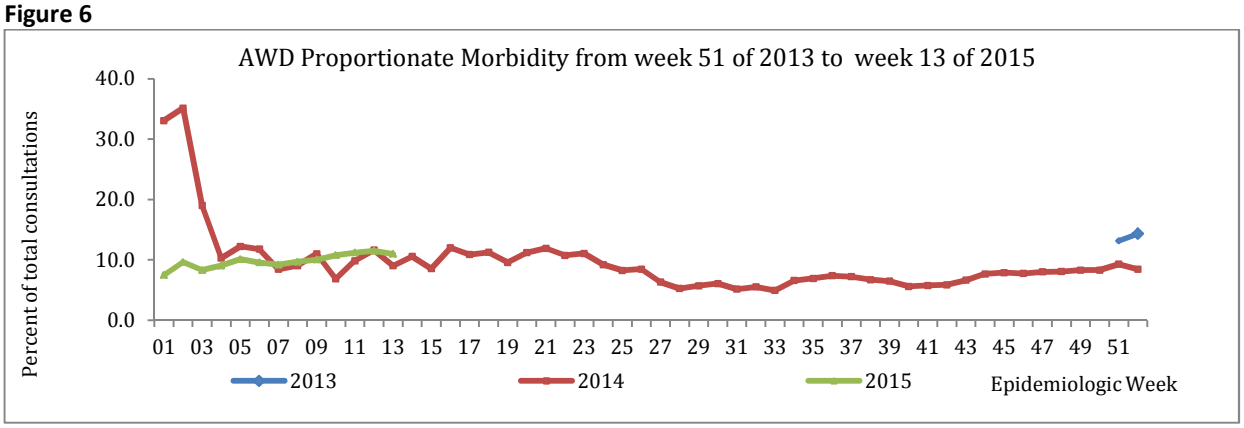


- During week 13 of 2015, the highest ARI incidence (cases per 10,000) was registered by Bentiu (319), followed by Malakal (206) and Lankien (88) see Figure 5.1. During the corresponding week of 2014, the ARI incidence (cases per 10,000) was 380 in Bentiu, 228 in Tongping and 133 in UN House.

Acute Watery Diarrhoea (AWD)

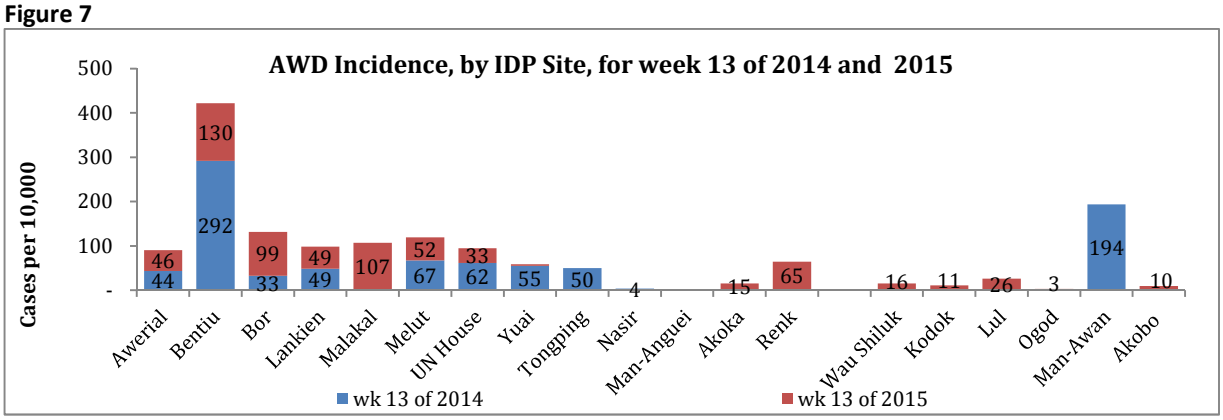
- During week 13 of 2015, AWD registered the third highest proportionate morbidity of 11.0% and incidence of 42 cases per 10,000 population (Figures 4 and 6). During the corresponding week of 2014, AWD had the third highest proportionate morbidity of 9.0% and incidence of 31 cases per 10,000 population (Figure 6). This shows that the AWD cases for the current period are slightly higher than the corresponding period of 2014. Conversely, the AWD trend has been rising gradually since the beginning of 2015.

Figure 6



- During week 13 of 2015, the highest AWD incidence (cases per 10,000) was registered by Bentiu (130), followed by Malakal (107) and Bor (99) as shown in Figure 7. During the corresponding week of 2014, the AWD incidence (cases per 10,000) was 292 in Bentiu, 194 in Man Awan and 67 in Melut.

Figure 7



Dysentery / Acute Bloody Diarrhoea (ABD)

- During week 13 of 2015, ABD registered the fourth highest proportionate morbidity of 1.5% and incidence of 6 cases per 10,000 population (Figures 4 and 8). During the corresponding week of 2014, ABD had a proportionate morbidity of 1.2% and incidence of 4 cases per 10,000 population. This shows that the ABD cases for the current period are slightly lower than the corresponding period of 2014. In the same way, the ABD trend has remained stable since the beginning of 2015 (Figure 8).
- During week 13 of 2015, the highest ABD incidence (cases per 10,000) was registered by Renk (29) followed by Melut (11) and Akoka (9), see Figure 9. During the corresponding week of 2014, the ABD incidence (cases per 10,000) was 99 in Bentiu, 9 in Awerial and 9 in Malakal.

Figure 8

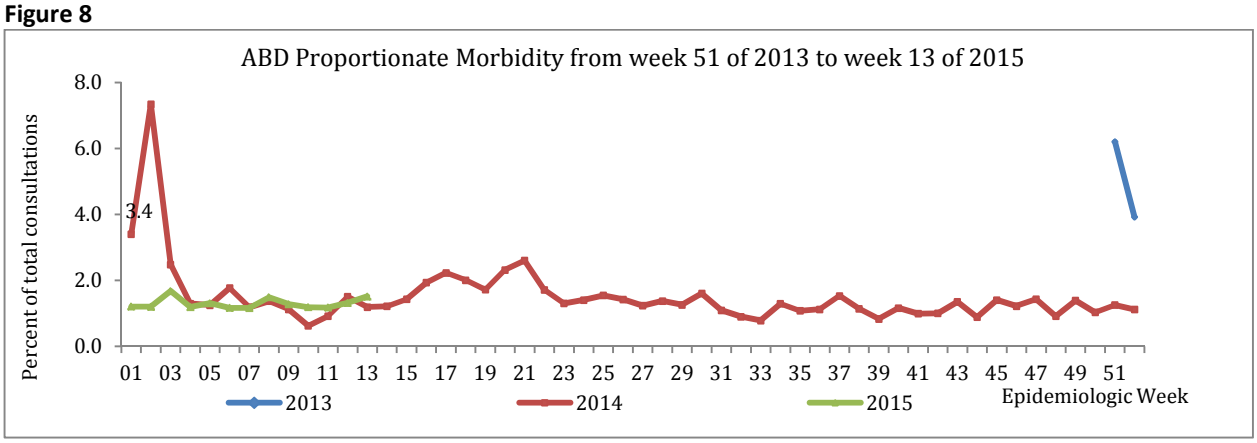
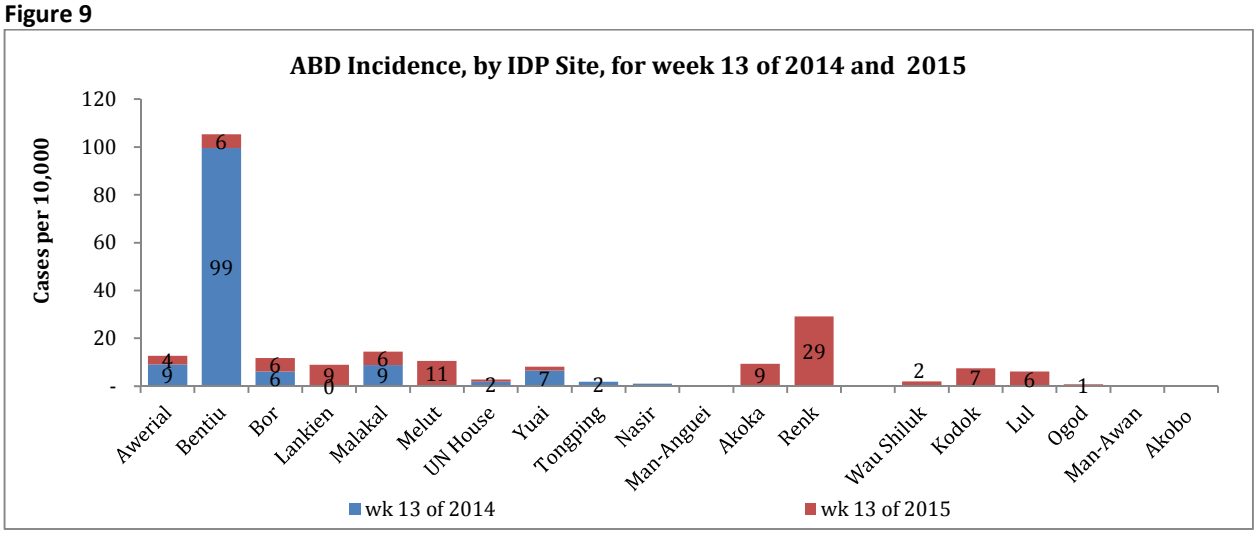
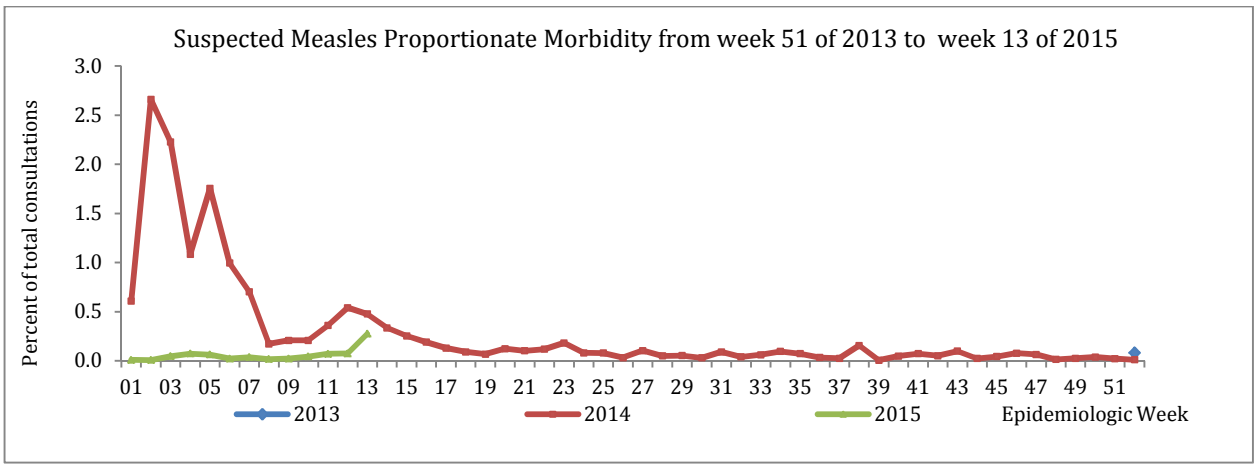


Figure 9



Measles

Figure 10

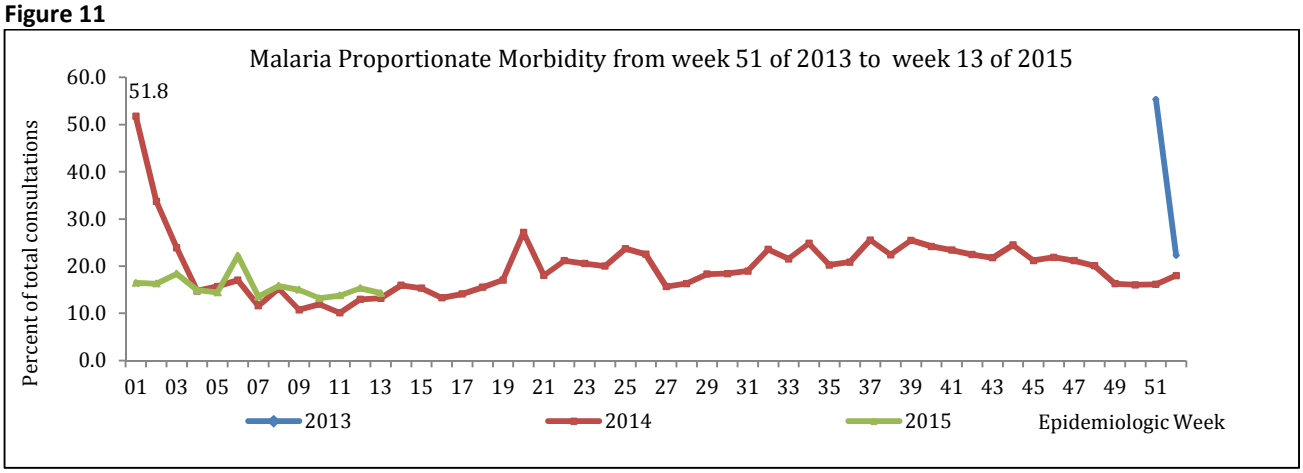


- During week 13 of 2015, measles registered the fifth highest proportionate morbidity of 0.28% and incidence of 1.1 cases per 10,000 population (Figures 4 and 10). During the corresponding week of 2014, the proportionate morbidity of suspect measles was 0.48% and incidence of 1.6 cases per 10,000 population. A sharp increase in the proportionate morbidity for measles cases was registered in week 13 of 2015 (0.28%) when compared to week 12 of 2015 (0.071%). However, the proportionate morbidity for measles during the current period is lower than the corresponding week of 2014 (0.48%), see Figure 10.
- During week 13 of 2015, a total of 56 suspect measles cases were reported from Bentiu (55 cases) and Lankien (1 case). An increasing number of suspect measles cases have been registered in Bentiu PoC in recent weeks. The trend is attributed to new arrivals in the PoC from counties that were not covered during the integrated measles campaigns. Vaccination of new arrivals has been reinvigorated. A measles outbreak was confirmed in Bentiu PoC in week 12 and a corresponding response is underway.

Malaria

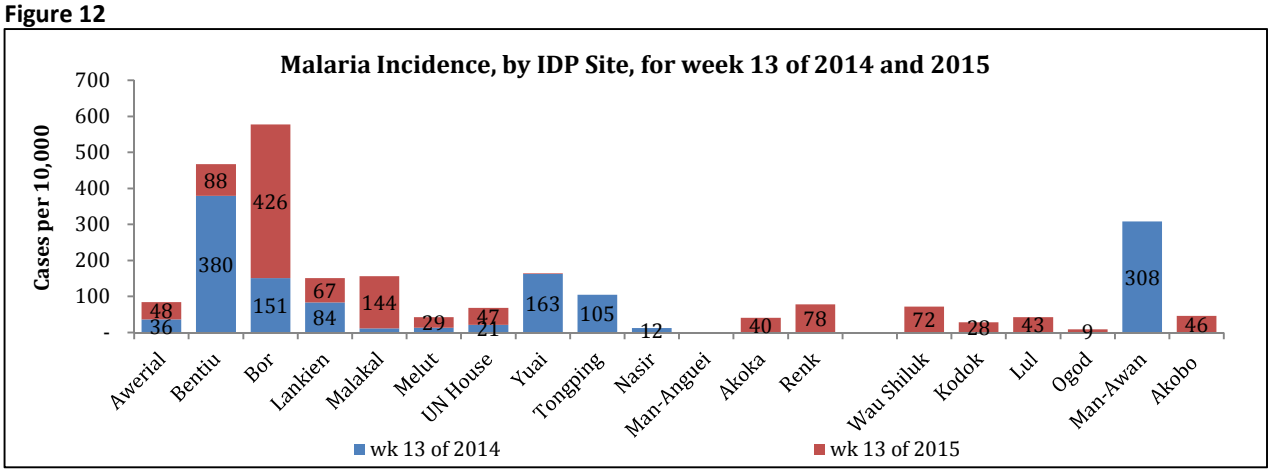
- During week 13 of 2015, malaria registered the second highest proportionate morbidity of 14.3% and incidence of 55 cases per 10,000 population (Figures 4 and 11). Malaria had the second highest proportionate morbidity of 13.2% and incidence of 46 cases per 10,000 population during the corresponding week of 2014. This shows that the malaria cases for the current period are slightly lower than the corresponding period of 2014. The overall malaria trend has remained relatively stable since the beginning of 2015.

Figure 11



During week 13 of 2015, the highest malaria incidence (cases per 10,000) was registered by Bor (426) followed by Malakal (144) and Bentiu (88) as seen in Figure 12. The malaria incidence (cases per 10,000) was 380 in Bentiu, 308 in Man Awan, and 163 in Yuai during the corresponding week of 2014.

Figure 12



Hepatitis E Virus (HEV)

Hepatitis E Virus remains a major public health problem among IDPs and has been confirmed in two out of eight IDP sites where Acute Jaundice Syndrome (AJS) cases have been reported (Figure 13 and 14).

Figure 13

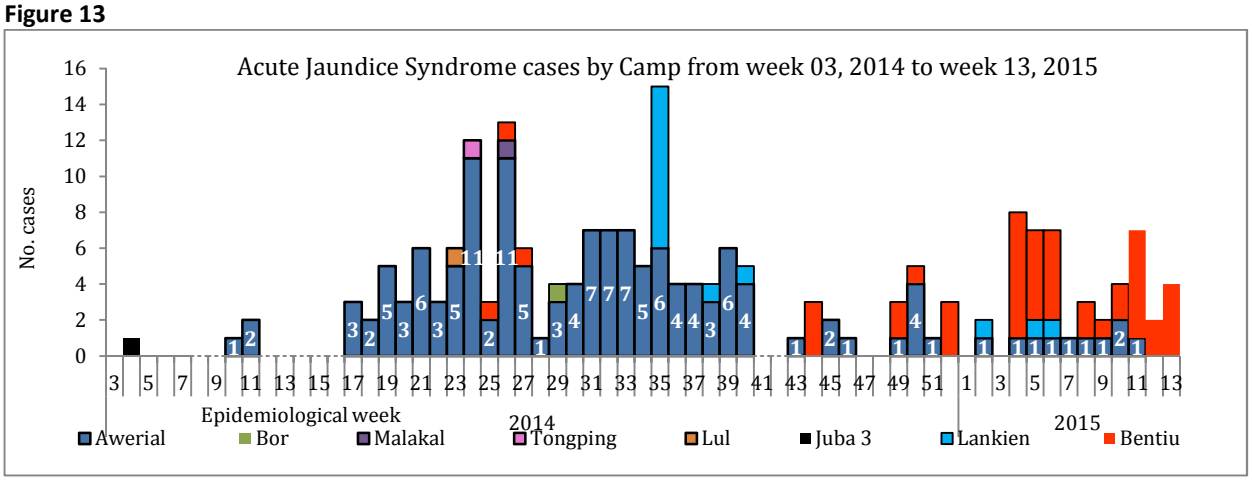
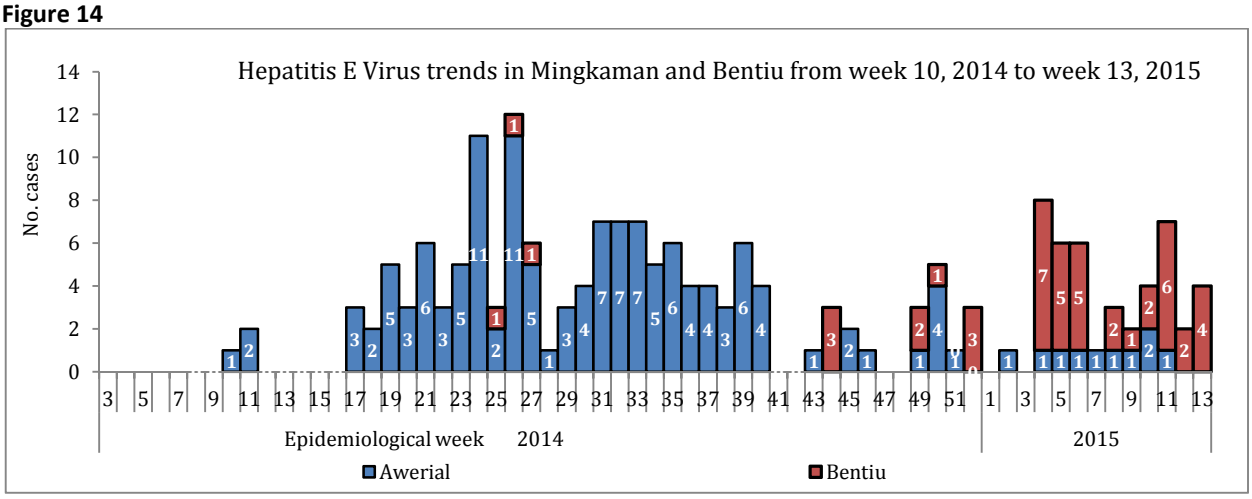


Figure 14



- AJS cases were first reported in week 4 of 2014 in Juba 3 PoC and since then, HEV has been confirmed in Mingkaman where eight cases tested positive for HEV by ELISA/PCR and in Bentiu where two cases tested positive for HEV by ELISA, see Figures 13 and 14. In addition, eight AJS cases seen in Lankien during the period 1 September 2014 to 17 March 2015 tested positive for HEV on rapid testing. Preparations are underway to secure definitive laboratory confirmation from the subsequent cases.
- In week 13, four new HEV cases were reported from Bentiu PoC hence the cumulative for HEV is 46 cases without any deaths in Bentiu and 140 cases including six deaths (CFR 4.3%) in Mingkaman.
- Response interventions by partners include supportive case management, targeted preventive interventions during antenatal visits, soap distribution, shock chlorination of boreholes, as well as house-to-house hygiene and sanitation promotion.

Cholera

- There are no new confirmed cholera cases in week 13.
- As the rain season starts, the national cholera preparedness matrix has been reviewed, updated and disseminated to enhance readiness and support the initiation of activities for cholera prevention and control.
- As part of the efforts to improve cholera readines in the PoC sites, an Oral Cholera Vaccine (OCV) coverage survey was conducted in week 12 in Bentiu PoC and results showed that 46% of the current population in the PoC had received two doses of OCV. Follow up surveys are planned for Malakal, Mingkaman, Juba 3 and Bor.

Acute Flaccid Paralysis (AFP)

Table 5: Summary of AFP indicators by state as of week 9, 2015

	State	Population <15 years	Cumulative AFP Cases	Non Polio Cases	Cases of Week 9	Polio cases		Pending			NPAFP Rate	Stool Adequacy			Lab indicators (Pending lab cases excluded)			
															NPEV		Sabin like	
						Polio Compatible	VDPV	Pending Lab/CLT	Pending Lab/ITD	Pending ECR		Specimens (#)	Adequate Specimens	Stool adequacy	Number	Percent	Number	Percent
2015*	CENTRAL EQUATORIA	737148	7	6	0	-	-	1	-	-	5.5	7	6	86%	0	0%	0	0%
	EASTERN EQUATORIA	674008	9	4	4	-	-	5	-	-	7.7	9	9	100%	1	11%	0	0%
	JONGLEI	982693	5	3	1	-	-	2	-	-	2.9	5	5	100%	0	0%	0	0%
	LAKES	791864	6	3	1	-	-	3	-	-	4.4	6	6	100%	0	0%	0	0%
	NORTHERN BAHR EL GHAZAL	987309	4	2	1	-	-	2	-	-	2.3	4	4	100%	0	0%	0	0%
	UNITY	864151	1	1	0	-	-	0	-	-	0.7	1	1	100%	0	0%	0	0%
	UPPER NILE	895541	2	2	0	-	-	0	-	-	1.3	2	2	100%	0	0%	1	50%
	WARRAP	1456973	3	2	0	-	-	1	-	-	1.2	3	3	100%	0	0%	0	0%
	WESTERN BAHR EL GHAZAL	316372	1	0	1	-	-	1	-	-	1.8	1	1	100%	0	0%	0	0%
	WESTERN EQUATORIA	516397	4	3	0	-	-	1	-	-	4.5	4	4	100%	0	0%	0	0%
	SOUTH SUDAN	8222455	42	26	10	-	-	16	-	-	3.0	42	41	98%	1	2%	1	2%

- During 2015, a total of 51 AFP cases have been reported, of which nine new AFP cases were reported in week 09 (Table 5). The annualized non-Polio AFP (NPAFP) rate (cases per 100,000 population children 0-14 years) is 3.0 per 100,000 population of children 0-14 years (target ≥2 per 100,000 children 0-14 years).
- Six (60%) states (Central Equatoria, Eastern Equatoria, Jonglei, Northern Bahr El Ghazal, Lakes and Western Equatoria) have attained the targeted NPAFP rate of ≥2 per 100,000 children 0-14 years. The non-Polio Enterovirus (NPEV) isolation rate (a measure of the quality of the specimen cold chain) is 2% (target ≥10%). Stool adequacy stands at 93%, a rate that is higher than the target of ≥80% .
- The type 2 circulating Vaccine Derived Poliovirus (cVDPV2) cases remained two and SIAD activities are being conducted in the accessible counties of of Jonglei, Unity and Upper NileStates. Three rounds of SIAD have been conducted reaching at least 1,563,214 children in 27 counties and three PoCs. However, active surveillance stalled due to the continued insecurity in these three states.

Other diseases of public health importance

Guinea worm (Dracunculiasis)

- There was no new suspect Guinea worm disease case reported during week 13 of 2015.

Viral Haemorrhagic Fever

- The Republic of South Sudan continues to enhance its readiness capacity for Ebola/Marburg virus disease.
- The national Ebola/Marburg taskforce is coordinating the implementation of interventions guided by a national Ebola/Marburg contingency plan.
- No Ebola/Marburg cases have been confirmed in South Sudan but six alerts have been investigated in Ezo, Nzara, Terekeka (Tali) and Juba (Hai Jalaba and Gudele) since 2014.
- Training of rapid response teams from seven states and 47 counties is underway with a total of 139 rapid response team members from five states and 139 counties trained to date. The main thrust of the training is to enhance national capacity for preparedness and response to disease outbreaks of Ebola, Marburg, cholera and epidemic meningitis.

Visceral Leishmaniasis (Kala-azar)

- Nine (56%) treatment facilities, namely Walgak, Ulang, Rom, Lankien, Leer, Batil, Bentiu, Malakal PoC and Melut PoC reported 40 cases (30 new cases, 10 secondary cases (PKDL/Relapse) 4 death and 1 defaulter.
- From week 1 to date, a total of 1,319 cases, (1,070 [81.58%] new cases; 249 [18.42 %] relapses/PKDL; 21 [1.71% defaulters]; and 39 [3.18%] deaths) have been reported from 16 treatment centres compared to 1,208 cases (1,102 new cases; 106 relapses/PKDL; 102 defaulters and; 30 deaths (CFR 2.3%) reported from 15 treatment centres by the end of week 13 of 2014.
- During 2015, Lankien has reported the highest number of cases – 686; followed by Walgak – 161; then Ulang 79; Chuil – 76; Melut IDP - 71 and; Narus (MOH/ARC) – 70.
- Males are the most affected gender with 728 cases making (54.3%) of the total cases and females, 596 cases making (44.44%) of the total cases.
- Patients aged ≥15years constitute 555 cases (41.4%) followed by those aged 5-14years with 542 cases (40.4%) and then the least affected are those <5years with 234 cases (17.5%).
- Generally the number of cases reported in 2015 is higher compared to those reported in 2014.

- The increase in cases is attributed to the displacement of non-immune population to the endemic areas, poor nutrition or malnutrition (which is both a risk factor as well as a complication in VL) among internally displaced persons, poor housing and in accessibility to health due to insecurity or floods. The number of treatment centres has also increased from 15 to 16. However, the number of cases reported this week is lower compared to those

reported in the previous weeks, reasons being the low number of health facilities that reported and the beginning of the transmission season.

- WHO continues to support enhanced surveillance, case management and interventions to interrupt transmission through the following: supporting implementing partners with case management supplies; training frontline healthcare workers on Kala-azar case management; support supervision of treatment facilities; supporting community sensitisation on Kala-azar; and distribution of long lasting insecticide treated nets (LLITN) in affected and high-risk areas.

Meningitis

- There were no new meningitis cases reported during week 13 of 2015.

All-Causes Mortality Data

- During week 13 of 2015, mortality lists were received from Mingkaman IDP settlement, Malakal, Bentiu, Bor, Melut, and Juba 3 PoC.
- A total of 20 deaths were reported during week 13 of 2015, with 7 (35%) deaths being reported from Bentiu PoC, see Table 6. During the corresponding week of 2014, a total of 27 deaths were reported as seen in Table 6.

Table 6: Causes of death by IDP camp during week 13 of 2014 and 2015

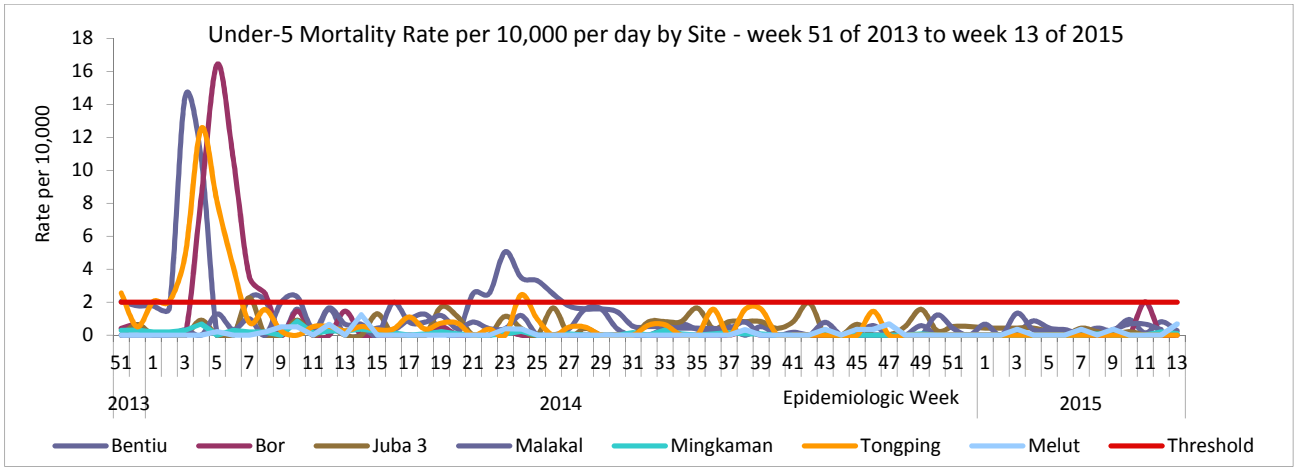
		2014		2015	
Camp or Site	Cause of Death	<5yrs	>5yrs	<5yrs	>5yrs
Bentiu	Gunshot wound				1
	Perinatal death			1	
	Stroke				1
	Trauma		1		
	Sub arachnoid hemorrhage				1
	Sepsis			1	
	GIT bleeding				1
Bor	SAM	1			
	Hepatitis B				1
Juba 3	Not Stated		1		
	Perinatal death			1	
	SAM			1	
Malakal	Meningitis				1
	Not Stated	1	9		
	Perinatal death	1			
	Stroke				1
	TB/HIV/AIDS				1
	Unknown				1
	SAM			1	
	Trauma				1
	Adverse effect				1
Melut	Kala-Azar		2	1	
	Stroke				1
	Neonatal Sepsis			1	
Mingkaman	Acute watery diarrhoea		1		
	Hypertension		1		
	Pneumonia	2			
	Severe Anemia			1	

		2014		2015	
Camp or Site	Cause of Death	<5yrs	>5yrs	<5yrs	>5yrs
Tongping	Acute watery diarrhoea		2		
	Liver cirrhosis		1		
	Not Stated	1	1		
	Pancreatitis		1		
	Stroke		1		
Grand Total		6	21	8	12

Under-five Mortality Rate

- The under-five mortality rates (U5MR) per 10,000 per day from week 51 of 2013 to week 13 of 2015 are shown in Figure 16.
- The under-five mortality rates for all the six IDP sites that reported in week 13 of 2015 were lower than the emergency threshold of 2 deaths per 10,000 per day.

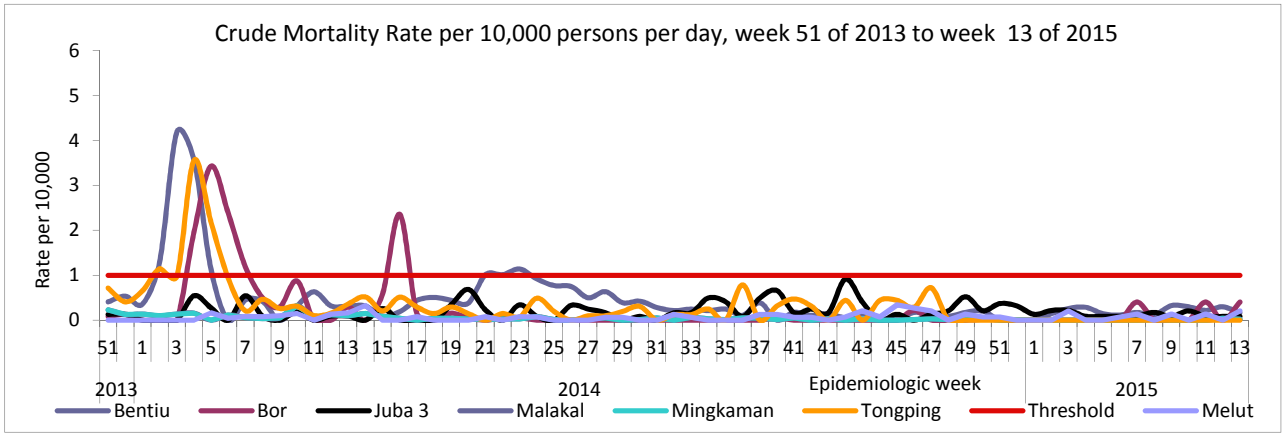
Figure 16



Crude Mortality Rate

- The crude mortality rates (CMR) from week 51 of 2013 to week 13 of 2015 are shown in Figure 17. During week 13 of 2015, the CMRs were below the emergency threshold for the six IDP sites that submitted mortality data.

Figure 17



Overall Mortality

- Since the onset of the crisis, at least 1,553 deaths have been reported from the IDP sites. Children under-5 years account for 709 (45.7%) of the deaths. The majority of the deaths occurred in Bentiu, Malakal, Tongping, Mingkaman and Juba 3 PoC. The top causes of mortality during the period include AWD, severe pnuemonia, TB/HIV/AIDS and malnutrition (Table 7).

Table 7: Overall mortality by settlement, week 51 of 2013 to week 13 of 2015

IDP site	Acute Jaundice Syndrome	Acute watery diarrhea	Acute bloody diarrhoea	Cancer	Gunshot wound	Heart Disease	Hypertension	Kala azar	Malaria	Maternal death	Measles	Perinatal death	Pneumonia	SAM	Septicemia	Stroke	TB/HIV/AIDS	Trauma	Others	Total
Agok							1												2	3
Bentiu		51	2	1	12	3	2		15	1	8	9	47	52	25	1	32	7	171	439
Bor		2				1	1		1		42	2	10	3	1		3		62	128
Juba 3	1	12		4	2	2	2		11	1	1	40	10	8	2	2	28		41	167
Kodok															1				0	1
Malakal	1	30		1	38	14	1	15	14			20	7	19	7	1	26	6	120	320
Melut				1		2		16	7	2		3	6	5	1		11		17	71
Mingkaman	6	30	4	2		1	1		18	1	4	8	9	4	8	1	8	2	47	154
Tongping		33	2	4	6	11	1		10		37	15	24	16	1	3	4	1	98	266
(Missing)		1											1						2	4
Grand Total	8	159	8	13	58	34	9	31	76	5	92	97	114	107	46	8	112	16	560	1553

General recommendations

- Conduct a measles vaccination campaign in Bentiu PoC in response to the confirmed outbreak of measles.
- Cholera preparedness should be enhanced countrywide through: monitoring AWD trends and ensuring stool samples are obtained from all suspect cholera cases; risk communication on cholera prevention and control should be intensified; sanitation and hygiene promotion should be enhanced; and stockpiles of supplies for cholera investigation and response should be prepositioned in all states.
- In response to the HEV cases in Mingkaman and Bentiu, the following interventions should be prioritized: household sanitation and hygiene promotion; improved access to safe water; and targeted interventions to prevent new infections among pregnant women.
- Malaria preventive interventions including the use of LLITNs, indoor residual spraying (IRS) and prompt case management should be sustained.
- Promote ARI prevention and control by sensitizing communities on respiratory hygiene, regular hand washing with soap and water, prompt recognition and treatment of pneumonia in children under-5 years and routine vaccination of children as per infant vaccination schedule.
- Integrate TB/HIV/AIDS prevention and control into the routine healthcare services in all the IDP sites.
- Biological samples should be obtained and shipped to Juba to allow laboratory confirmation of emerging outbreaks of measles, AJS, bloody diarrhea and cholera.
- The ongoing integrated response to Kala-azar that entails enhanced surveillance, improved access to diagnosis and treatment facilities, refresher training of healthcare workers on Kala-azar case management, replenishing of drug stocks in endemic areas, as well as communication on Kala-azar prevention and control should be sustained.
- Support the implementation of the Ebola preparedness and response so as to enhance the capacity for case detection, investigation, response and community awareness on Ebola prevention and control.
- Please send all disease surveillance information and any outbreak rumours to outbreak_ss_2010@yahoo.com.
- IDSR reports should be submitted by COB Monday after the close of each epidemiologic week.

For comments or questions, please contact

Department of Epidemics, Preparedness and Response, MoH-RSS

E-mail: **outbreak_ss_2010@yahoo.com**,

HF radio frequency: 8015 USP; Selcall: 7002