



Republic of South Sudan



World Health Organization

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

Week 51

15 – 21 December 2014

General Overview

- ✦ Completeness for weekly reporting in week 51 of 2014 was 96% compared to 100% for the corresponding week of 2013.
- ✦ Malaria, ARI, AWD, ABD, and suspect measles are the top causes of morbidity among IDPs with children under five years being more affected than persons five years and above.
- ✦ During week 51 of 2014, malaria registered the highest proportionate morbidity of 16.4% and incidence of 44 cases per 10,000 population.
- ✦ During week 51 of 2014, four measles case were reported from Lankien (3 cases), and Renk (1 case). A measles vaccination campaign was conducted in the week in Lankien (Thol and Pulturuk Payams).
- ✦ One new HEV case was reported from Mingkaman in week 51 of 2014. The cumulative for HEV in Mingkaman is 130 cases including four deaths (CFR 3.08%).
- ✦ There are no new cholera cases reported since week 47 of 2014. The cumulative remains at 6,421 cholera cases including 167 deaths (CFR 2.60%) from 16 counties in South Sudan.
- ✦ The under-5 and crude mortality rates by IDP site were below the emergency threshold in week 51 of 2014.

Editorial note

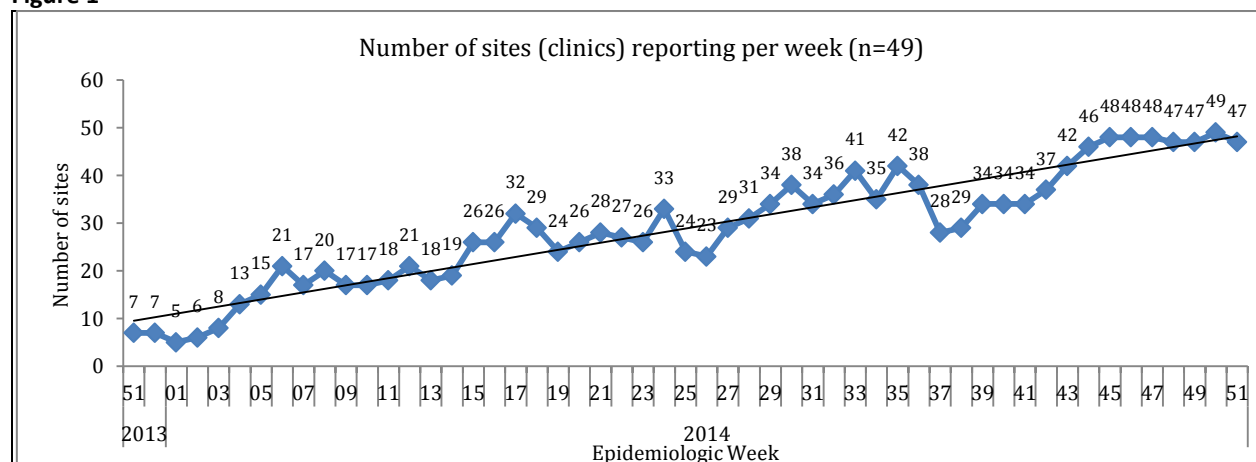
In this bulletin, we present priority disease trends using data submitted through the Early Warning Alert and Disease Network (EWARN) by health partners providing health services to internally displaced persons (IDPs) in South Sudan. Additional data from the integrated disease surveillance and response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

Since this week marks one year since the establishment of the EWARN for disease surveillance in select locations affected by the current crisis, we have presented priority disease trends for the entire period and in addition included highlights of the priority disease-specific descriptive epidemiology.

Completeness and Timeliness of Reporting

- ✦ Figure 1 shows the completeness for weekly reporting from week 51 of 2013 to week 51 of 2014.

Figure 1



- During this period, the number of health facilities expected to submit weekly reports increased from seven to 49.
- Completeness for weekly reporting in week 51 of 2014 was 47 (96%) compared to 7 (100%) for the corresponding week of 2013. In week 51 of 2014, we did not receive reports from **two facilities** (Table1).

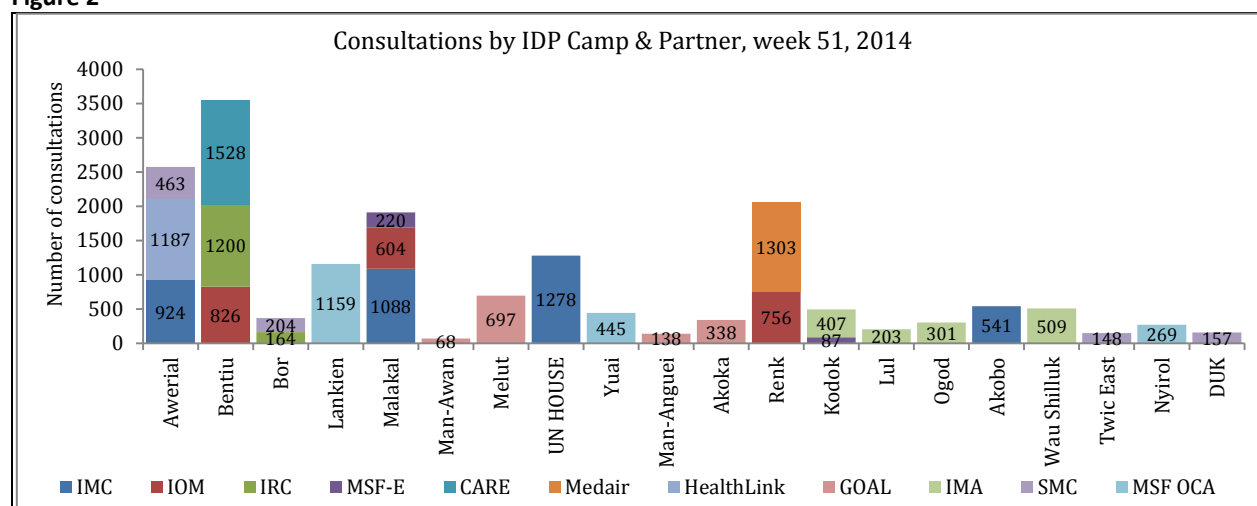
Table 1: List of silent health facilities during week 51, 2014

No.	IDP site	Health Facility/Partner
1	Bentiu	MSF Hospital MSF OCA
2	Melut	Melut MSF-E

Consultations (All patients seen at Outpatient and Inpatient facilities)

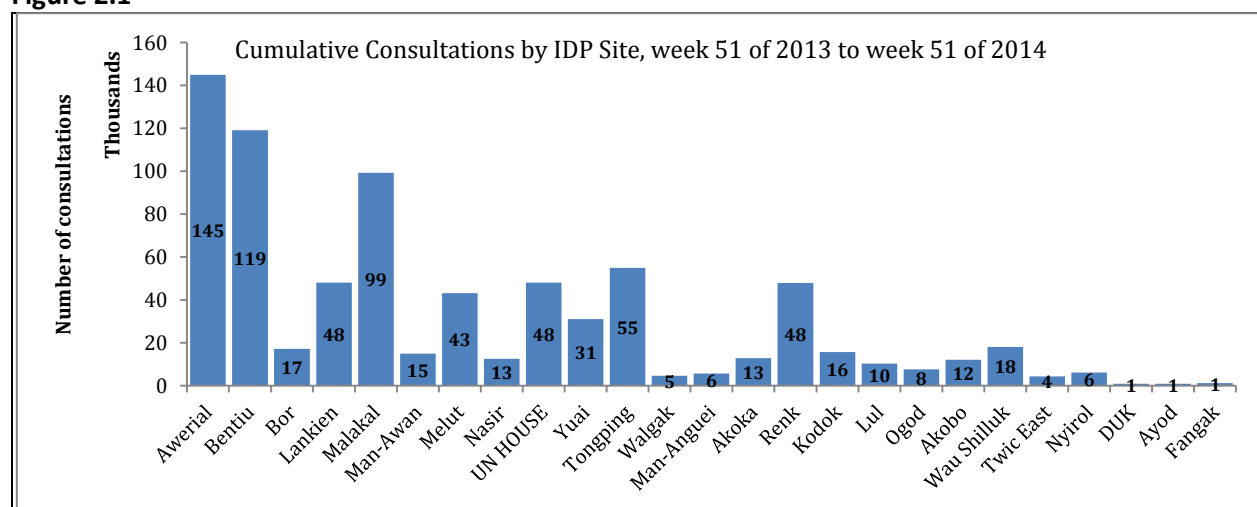
- The total consultations in week 51 of 2014 were 17,212, which represents an increase from the 1193 consultations reported during the corresponding week in 2013. Figure 2 shows the consultations by site in week 51 of 2014.

Figure 2



- The cumulative consultations since week 51 of 2013 have risen to 780,498. Figure 2.1 shows the cumulative consultations by IDP site since week 51 of 2013.

Figure 2.1



- The overall annualised OPD utilisation rate is 1.0 consultation per person per year (Figure 2.2). The IDP site-specific annualised OPD utilization rates are shown in Figure 2.2.

Figure 2.2

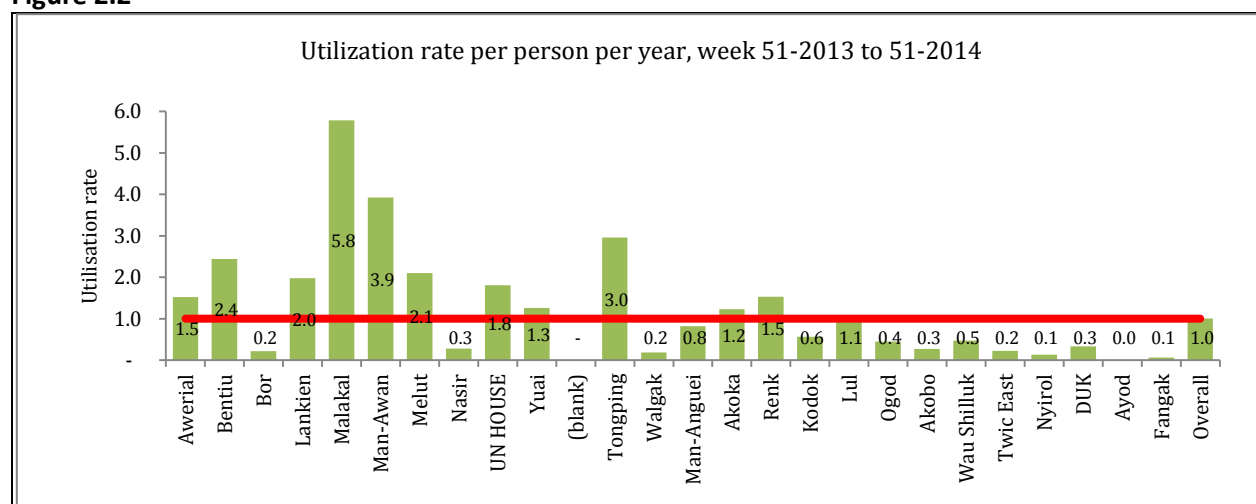
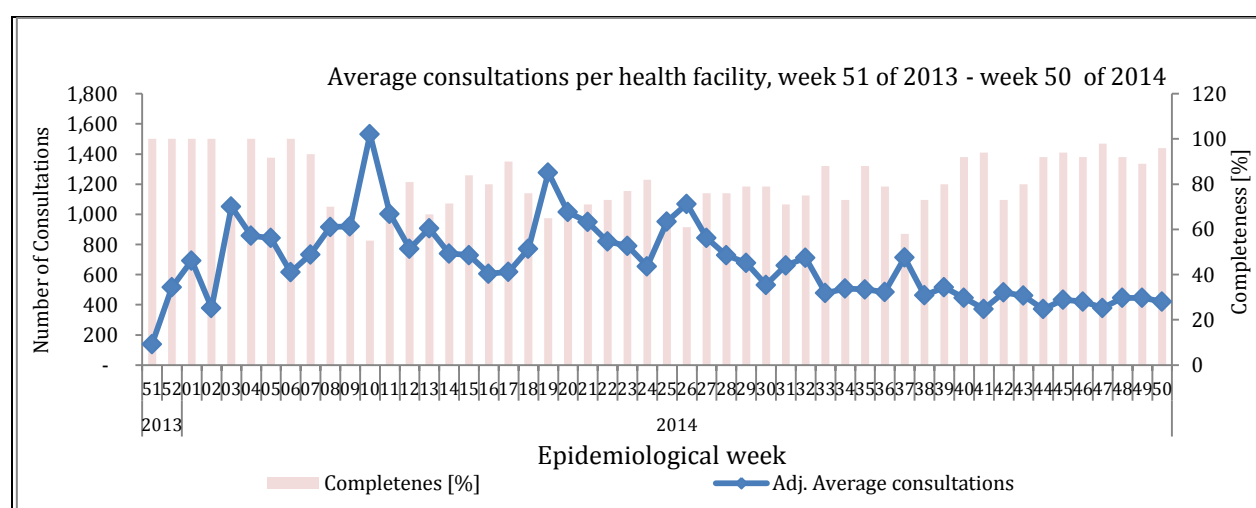


Figure 2.3 shows the average consultations per IDP site by epidemiological week. The average consultations per IDP site during week 51 of 2014 were 366 consultations, which represents an increase from 170 consultations registered in week 51 of 2013.

Figure 2.3



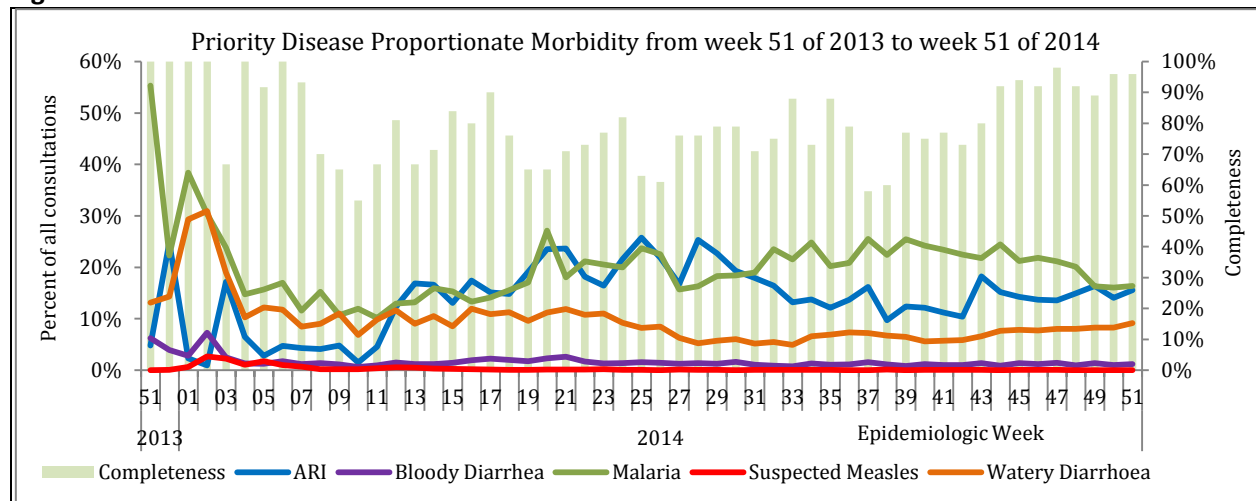
Overall Trends of Priority Epidemic-prone Diseases

Table 2 shows the cumulative number of cases for the top five causes of morbidity among IDPs with malaria being at the top, followed by Acute Respiratory Infection (ARI), Acute Watery Diarrhoea (AWD), Acute Bloody Diarrhoea (ABD), and suspected measles. Also presented in table 2 are the corresponding disease trends for week 51 of 2013 and 2014 respectively.

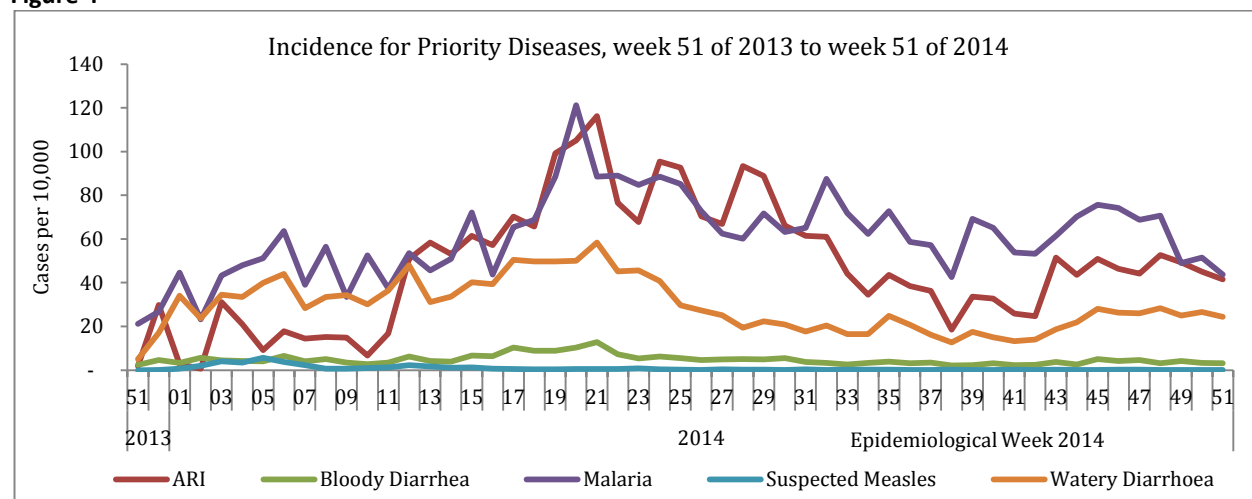
Table 2

No.	Disease	New cases for weeks		Cumulative cases since week 51 of 2013
		51 of 2013	51 of 2014	
1	Malaria	660	2819	150,309
2	AWD	157	1573	67,506
3	ARI	57	2680	117,034
4	ABD	74	204	11,034
5	Measles	0	4	1,533

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

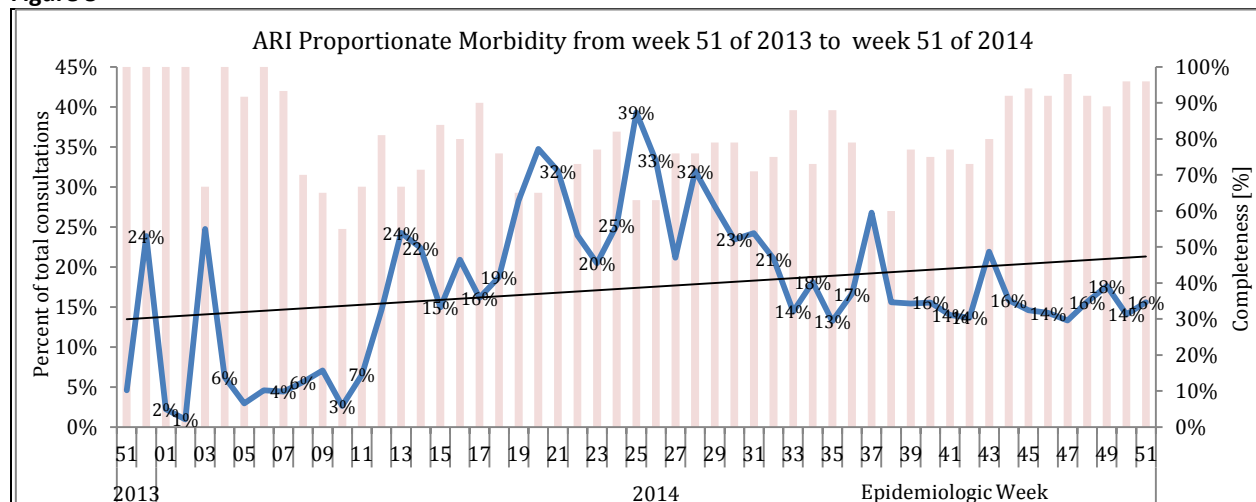
Figure 3

✦ During week 51 of 2014, malaria was the top cause of morbidity followed by ARI and AWD while in week 51 of 2013, malaria was the top cause of morbidity followed by AWD and ABD (Figure 3 and 4).

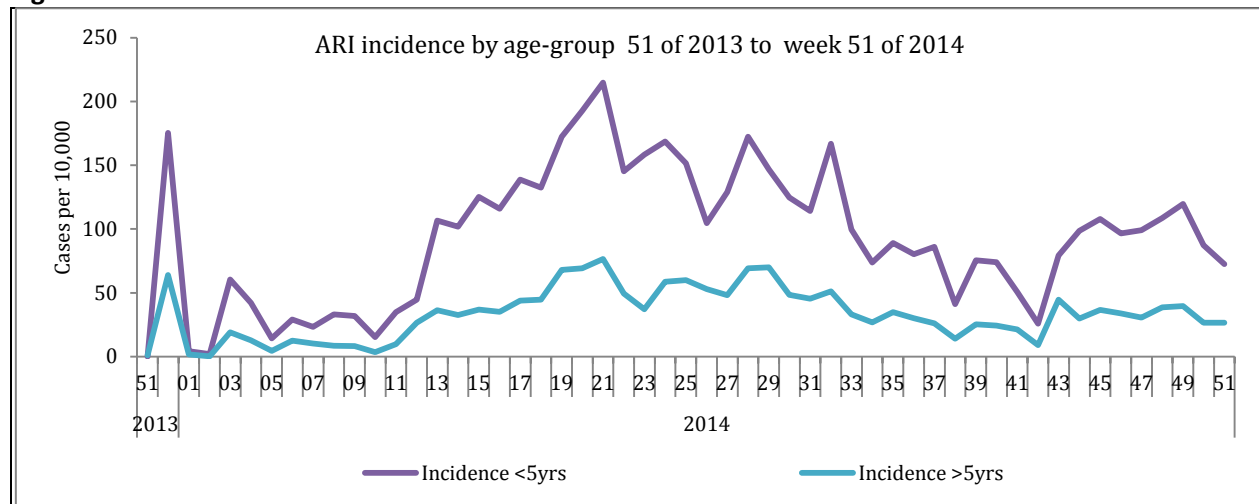
Figure 4

Specific Priority Epidemic-Prone Diseases

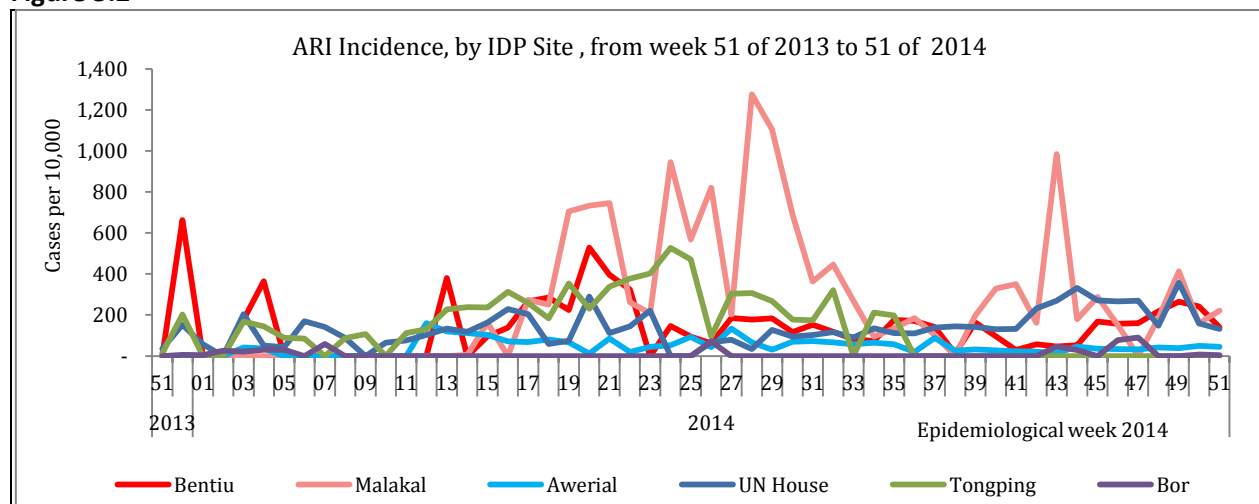
Acute Respiratory Infection (ARI)

Figure 5

- During week 51 of 2014, ARI registered the second highest proportionate morbidity of 15.6% and incidence of 42 cases per 10,000 population (Figures 4 & 5). During the corresponding week of 2013, ARI had the third highest proportionate morbidity of 4.8% and incidence of 2 cases per 10,000 population respectively. Overall, the ARI trend has been rising since the beginning of the crisis (Figure 5).

Figure 5.1

- As seen from figure 5.1, children under five years have consistently had a higher incidence of ARI since week 51 of 2013. During this period, the cumulative incidence of ARI in children under five years was three times higher than in persons five years and above (incidence of 47% in <5yrs versus 17% in ≥5yrs).

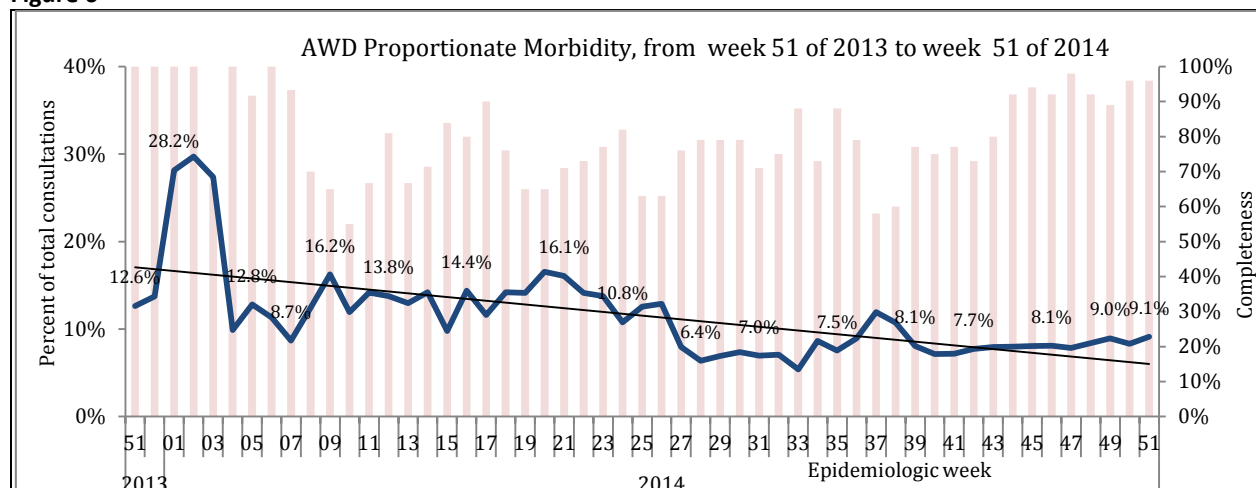
Figure 5.2

- During week 51 of 2014, the highest ARI incidence (cases per 10,000) was registered by Malakal (221), followed Bentiu (140), UN House (133), Melut (60), and Awerial (45) (Figure 5.2). During the corresponding week of 2013, the ARI incidence (cases per 10,000) was 36 in UN House and 13 in Tongping.

Acute Watery Diarrhoea (AWD)

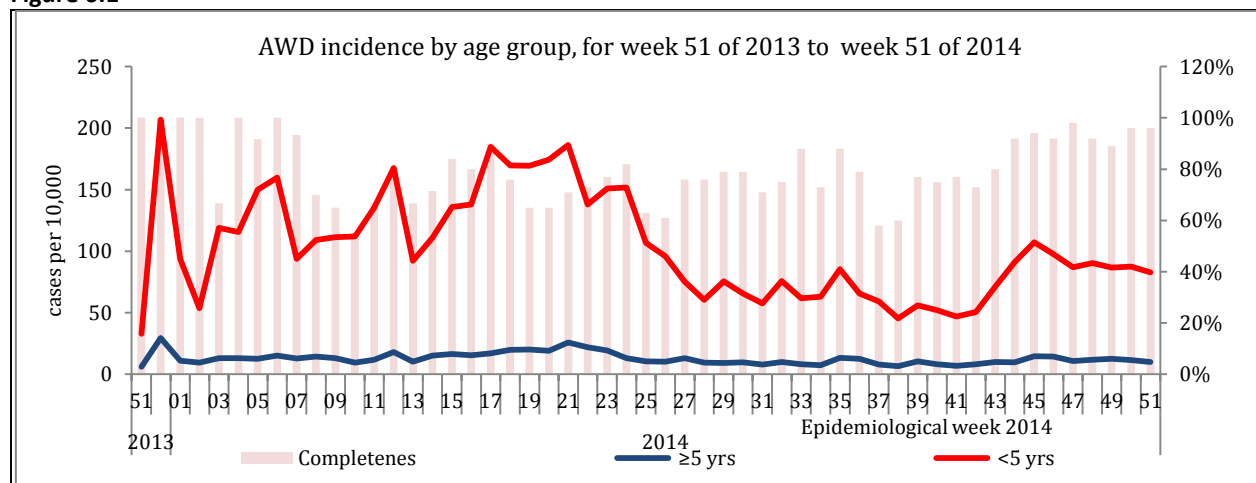
- During week 51 of 2014, AWD registered the third highest proportionate morbidity of 9.1% and incidence of 24 cases per 10,000 population (Figures 4 & 6). During the corresponding week of 2013, AWD had the second highest proportionate morbidity of 13.2% and incidence of 21 cases per 10,000 population. Overall, the AWD trend has been on the decline since the beginning of the crisis (Figure 6).

Figure 6



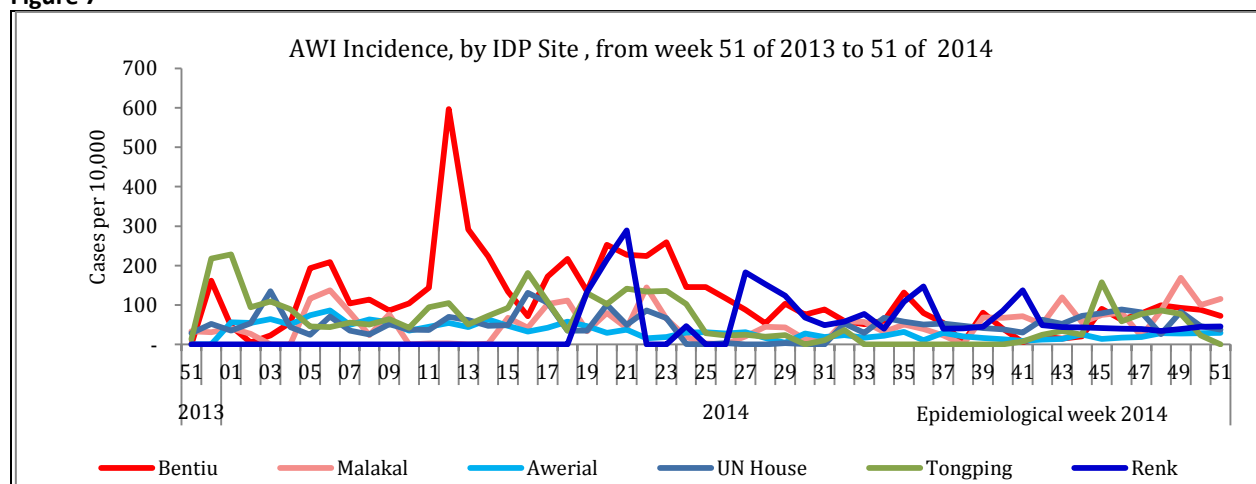
⊕ As seen from figure 6.1, children under five years have consistently had a higher AWD incidence since week 51 of 2013. During this period, the cumulative AWD incidence in children under five years was eight times higher than in persons five years and above (incidence of 44.2% in <5yrs versus 5.5% in ≥5yrs).

Figure 6.1



⊕ During week 51 of 2014, the highest AWD incidence (cases per 10,000) was registered by Malakal (116), followed Bentiu (72), Renk (46), UN House (38), and Awerial (29) (Figure 5.2). During the corresponding week of 2013, the AWD incidence (cases per 10,000) was 33 in Malakal, 33 in Nasir, 28 in UN House, and 13 in Tongping.

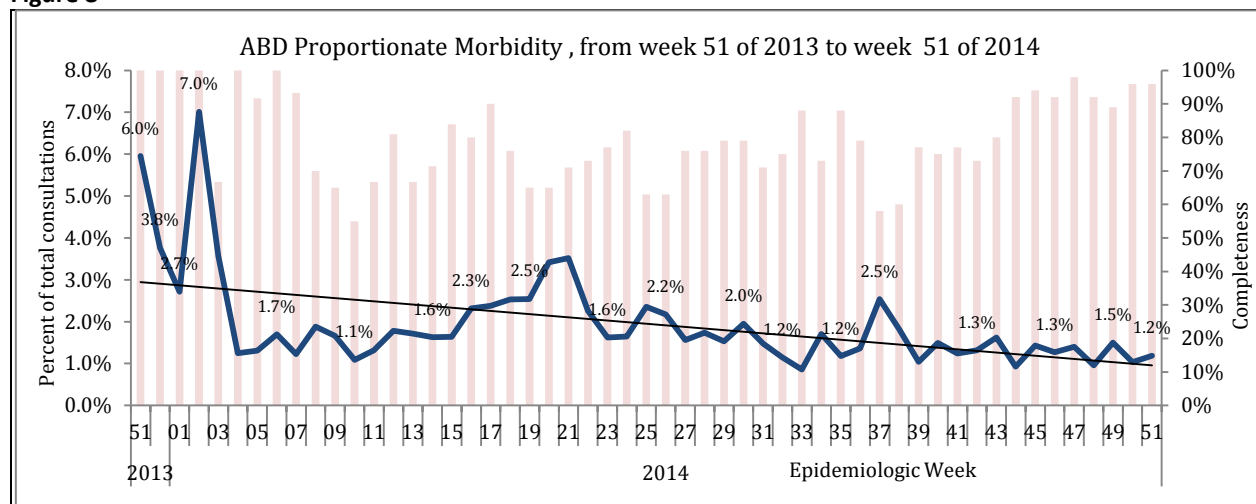
Figure 7



Dysentery / Acute Bloody Diarrhoea (ABD)

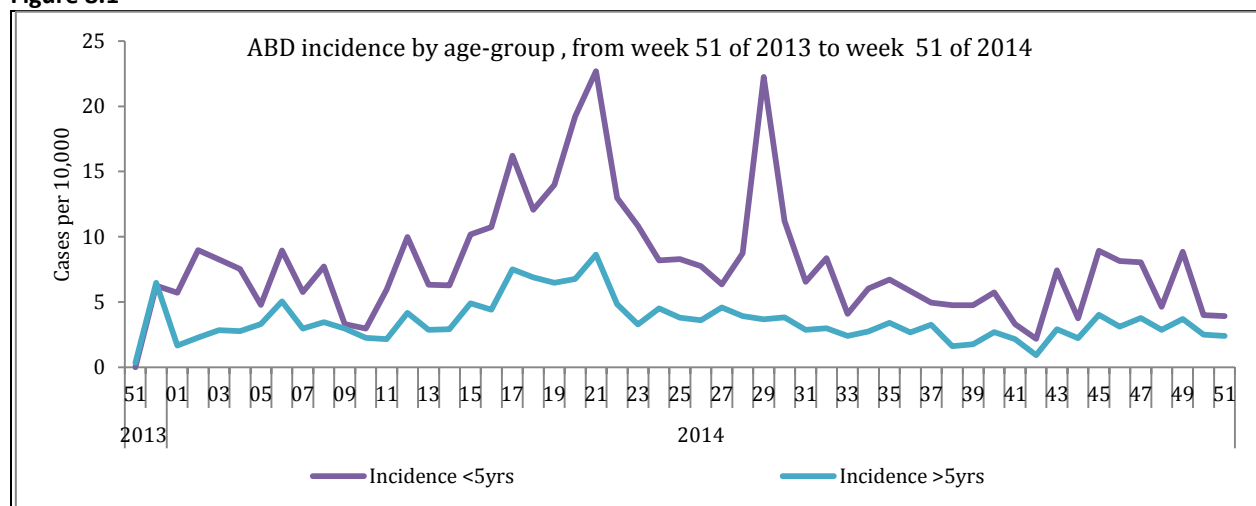
- During week 51 of 2014, ABD registered the fourth highest proportionate morbidity of 1.2% and incidence of 3 cases per 10,000 population (Figures 4 & 8). During the corresponding week of 2013, ABD had the third highest proportionate morbidity of 6.2% and incidence of 2 cases per 10,000 population. Overall, the ABD trend has been on the decline since the beginning of the crisis (Figure 8).

Figure 8



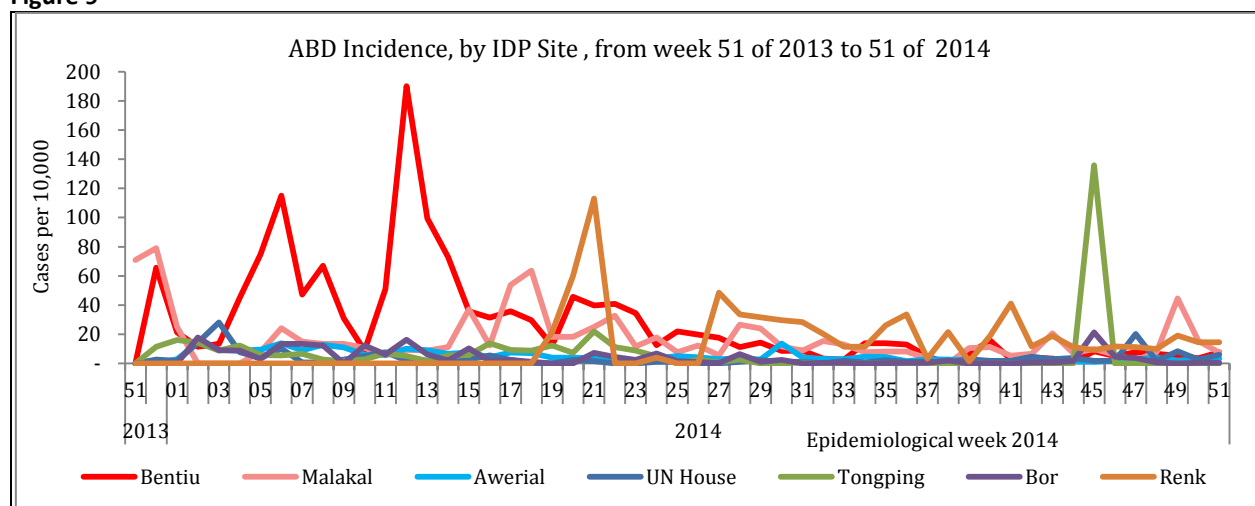
- As seen from figure 8.1, children under five years have consistently had a higher ABD incidence since week 51 of 2013. During this period, the cumulative incidence of ABD in children under five years was two times higher than in persons five years and above (incidence of 3.9 in <5yrs versus 1.7 in ≥5yrs).

Figure 8.1



- During week 51 of 2014, the highest ABD incidence (cases per 10,000) was registered by Renk (14), followed Bentiu (7.7), Akoka (7.5), Malakal (7.4), and UN House (5.9) (Figure 9). During the corresponding week of 2013, the ABD incidence (cases per 10,000) was 71 in Malakal, and 1 in Nasir.

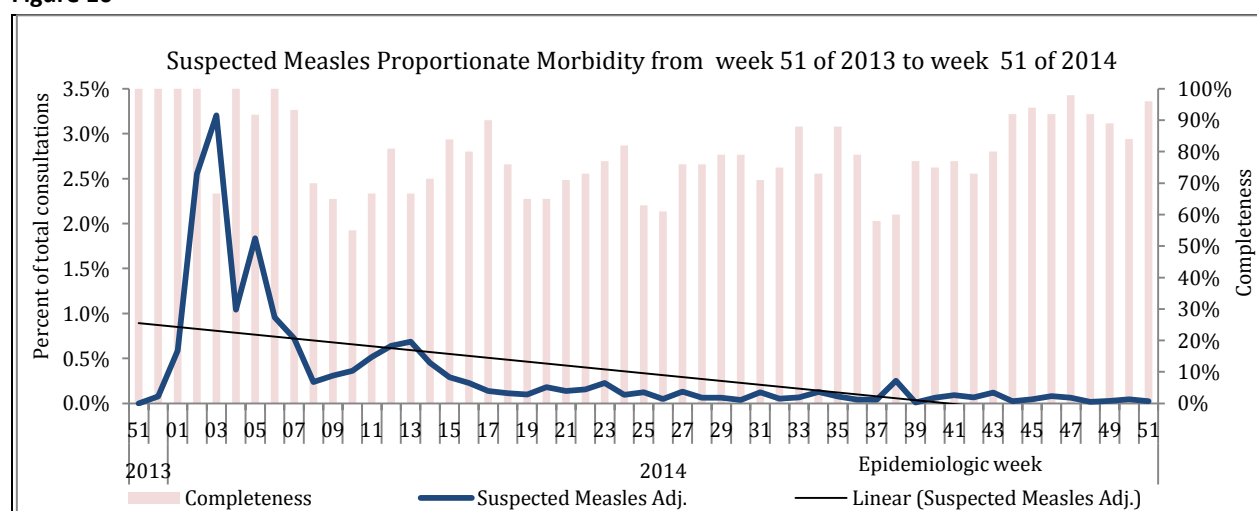
Figure 9



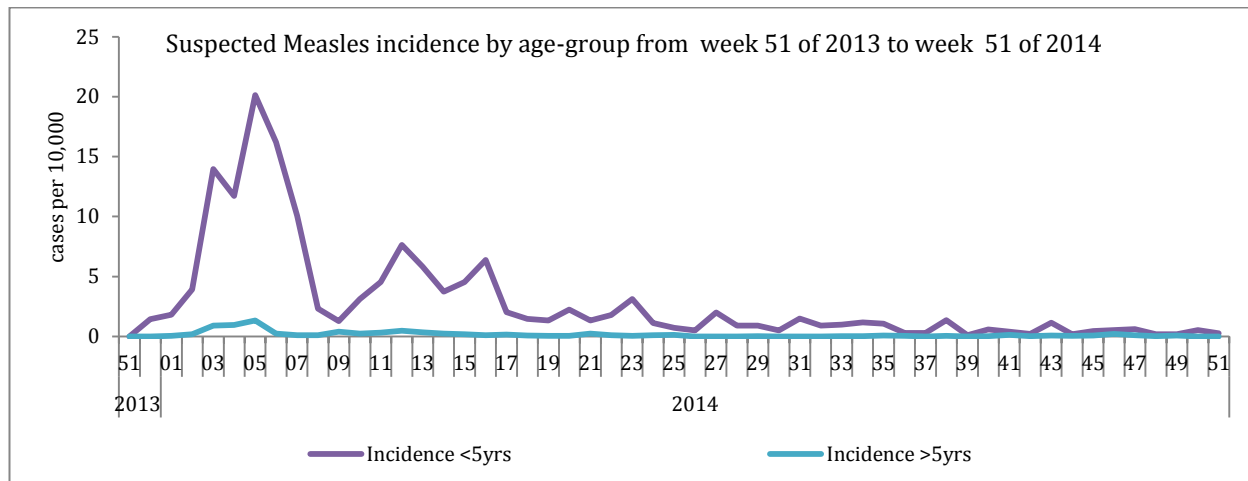
Measles

- During week 51 of 2014, measles registered the fifth highest proportionate morbidity of 0.02% and incidence of 0.1 cases per 10,000 population (Figures 4 & 10). During the corresponding week of 2013, there were no suspect measles cases reported from any of the IDP sites. Overall, the ABD trend has been on the decline since the beginning of the crisis (Figure 10).

Figure 10

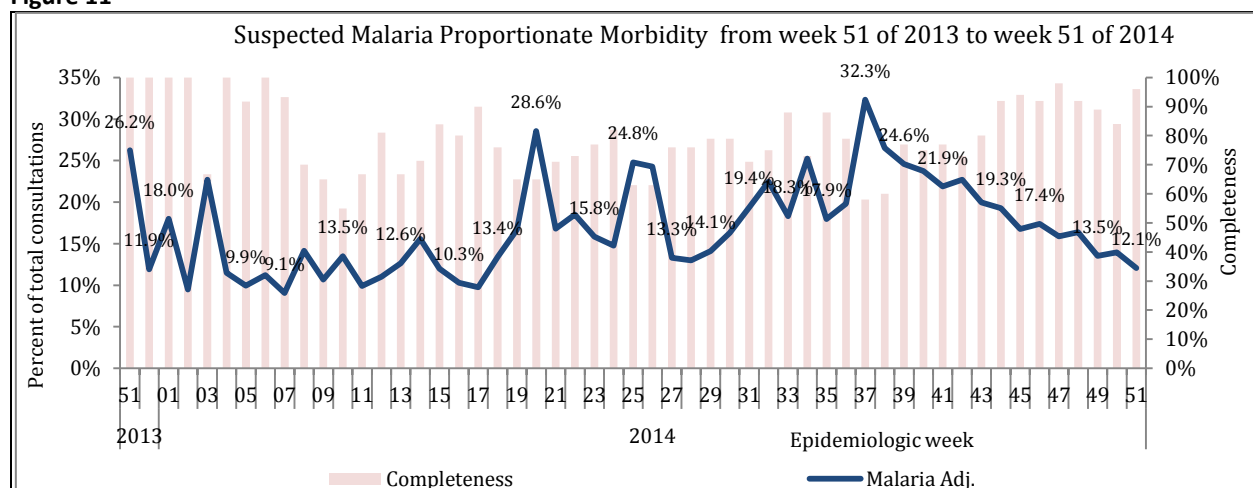
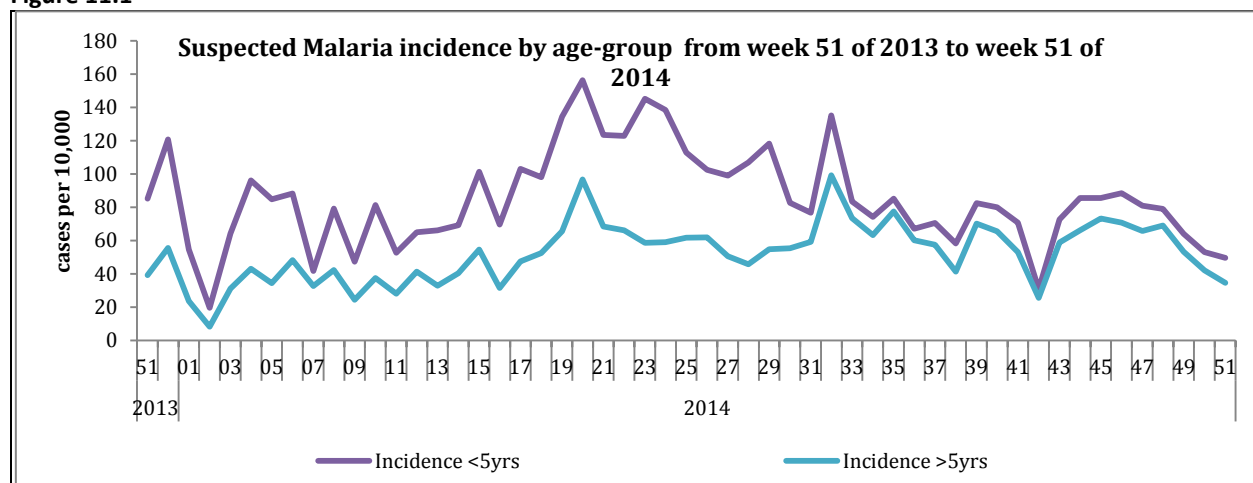


- This trend is attributed to a series of reactive measles vaccination campaigns conducted to contain the outbreaks in UN House, Tongping IDP camp, Bor, Yuai, Lankien, Cueibet and in Thol Payam, Nyirol County in Jonglei State.
- During week 51 of 2014, four suspect measles case were reported from Lankien (3 cases), and Renk (1 case).
- During week 51 of 2014, a measles campaign was conducted by MSF-OCA in two Payams in Lankien (Thol and Pulturuk) – the immunization coverage results will be shared later.
- As seen from figure 10.1, children under five years have consistently had a higher suspected measles incidence since week 51 of 2013. During this period, the cumulative incidence of suspected measles in children under five years was 18 times higher than in persons five years and above (incidence of 1.25% in <5yrs versus 0.07% in ≥5yrs).

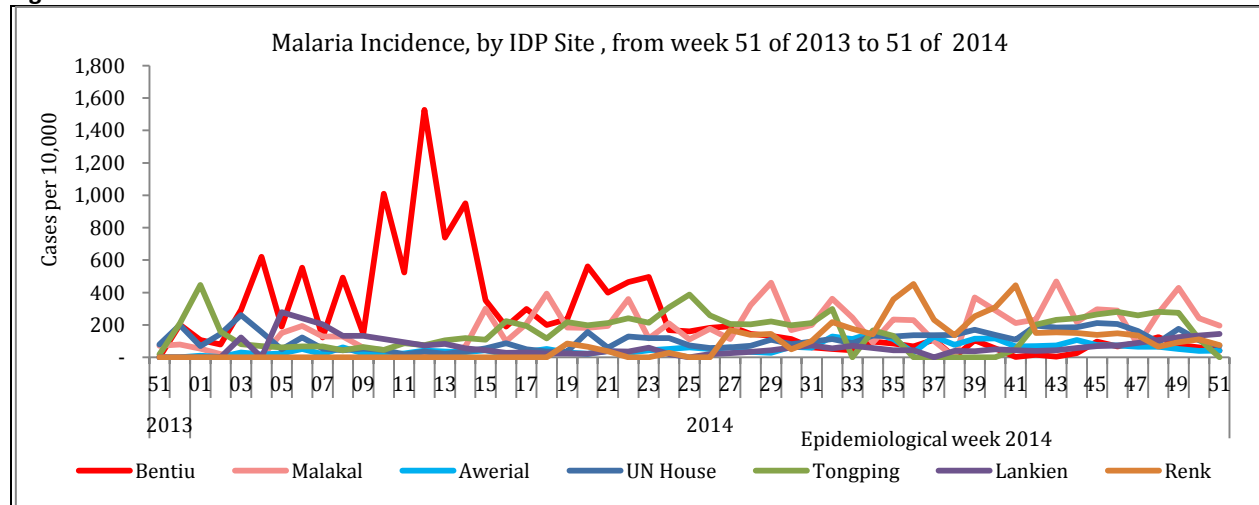
Figure 10.1

Malaria

- ⊕ During week 51 of 2014, malaria registered the highest proportionate morbidity of 16.4% and incidence of 44 cases per 10,000 population (Figures 4 & 11). During the corresponding week of 2013, malaria had the highest proportionate morbidity of 55.3% and incidence of 21 cases per 10,000 population. The malaria trend has been on the decline since week 37 of 2014 (Figure 11).

Figure 11**Figure 11.1**

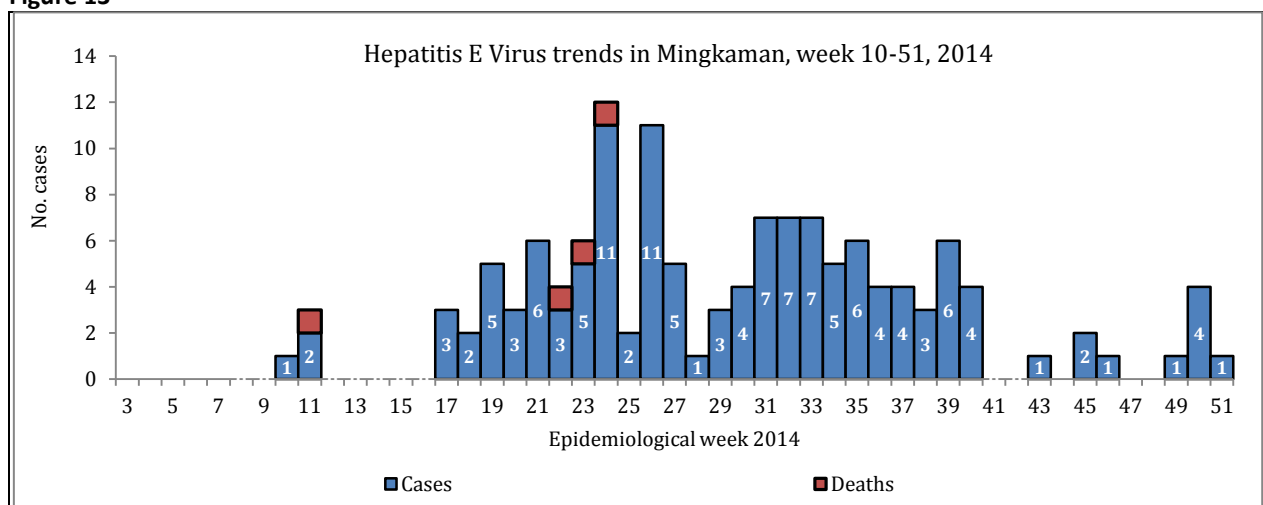
- As seen from figure 11.1, children under five years have consistently had a higher malaria incidence since week 51 of 2013. During this period, the cumulative incidence of malaria in children under five years was 1.6 times higher than in persons five years and above (incidence of 42% in <5yrs versus 27% in ≥5yrs).

Figure 12

- During week 51 of 2014, the highest malaria incidence (cases per 10,000) was registered by Malakal (195), followed Lankien (144), Renk (76), UN House (71), and Awerial (42) (Figure 12). During the corresponding week of 2013, the malaria incidence (cases per 10,000) was 175 in Nasir, 78 in UN House, and 71 in Malakal.

Hepatitis E Virus (HEV)

- As seen in Figure 14, Acute Jaundice Syndrome (AJS) cases were first reported in week 10 in Mingkaman and after reaching the highest peak in week 24, the cases have been declining steadily. At least eight cases were confirmed through laboratory testing (ELISA/PCR).
- One new HEV case was reported from Mingkaman in week 51 of 2014; hence the cumulative has now increased to 130 cases including four deaths (CFR 3.08%). Three (75%) deaths occurred among pregnant women (Figure 13).
- Overall, 155 AJS cases have been reported from the various IDP sites as shown in Figure 14.

Figure 13

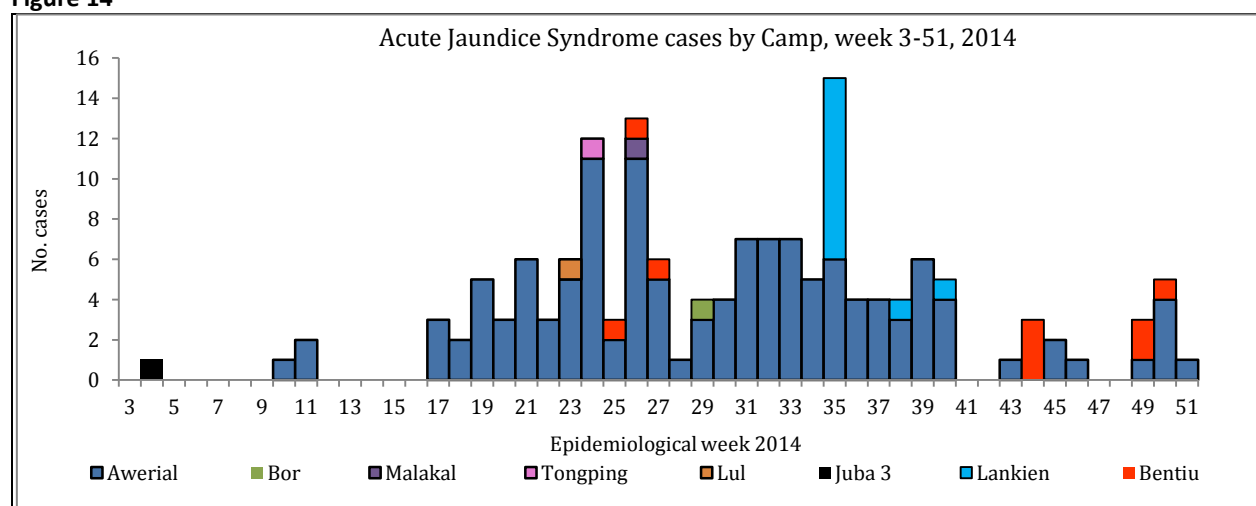
- ⊕ As seen from table 3, 68 (53%) of HEV cases have occurred in females with more females than males being affected within the 10-14 yrs and 15-44 yrs age groups. Out of the 128 HEV with age recorded, 52 (40.6%) were 15-44yrs, 29 (22.7%) were 10-14 yrs, and 21 (16.4%) were 5-9 years.

Table 3: Distribution of HEV cases by age & sex, Mingkaman, week 10 – 51, 2014

Age-group	Female n (%)	Male n (%)	Total n (%)
<2yrs	2 (2.9)		2 (1.6)
2-4yrs	6 (8.8)	9 (15)	15 (11.7)
5-9yrs	10 (14.7)	11 (18.3)	21 (16.4)
10-14yrs	19 (27.9)	10 (16.7)	29 (22.7)
15-44yrs	27 (39.7)	25 (41.7)	52 (40.6)
≥45yrs	4 (5.9)	5 (8.3)	9 (7)
Grand Total	68 (100)	60 (100)	128 (100)

- ⊕ Several interventions including 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 visits are being conducted by partners in response to the HEV trends.

Figure 14



Cholera

- ⊕ The Ministry of Health, working in collaboration with partners, rolled out a comprehensive response to the cholera outbreak that started in Juba in week 17 of 2014. The national cholera taskforce coordinated the implementation of comprehensive interventions for cholera prevention and control.

Table 4: Cholera cases and deaths by county week 17 – 51, 2014

No.	State	County	New cases by Epidemiological week													Total cases 2014	Total deaths	CFR [%]
			39	40	41	42	43	44	45	46	47	48	49	50	51			
1	CES (IDP)	Tongping PoC	0	0	0	0	0	0	0	0	0	0	0	0	0	72	3	4.2
2		Juba 3 PoC	0	0	0	0	0	0	0	0	0	0	0	0	0	97	0	0
3	CES	Juba	3	0	8	3	2	0	0	0	0	0	0	0	0	2,091	43	2.1
4		Kajo-Keji	0	0	0	0	0	0	0	0	0	0	0	0	0	93	7	7.5
5		Yei River	0	0	0	0	0	0	0	0	0	0	0	0	0	47	2	4.3
6	JS	Bor	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7	EES	Torit	0	0	0	0	0	0	0	0	0	0	0	0	0	2,032	36	1.8

No.	State	County	New cases by Epidemiological week													Total cases 2014	Total deaths	CFR [%]
			39	40	41	42	43	44	45	46	47	48	49	50	51			
8		Lopa-Lafon	0	0	0	53	3	4	0	0	0	0	0	0	0	264	16	6
9		Kapoeta North	7	1	0	0	0	0	0	0	0	0	0	0	0	83	1	1.2
10		Kapoeta South	0	0	0	0	0	12	2	0	0	0	0	0	0	14	0	0
11		Ikotos	19	19	5	41	30	31	4	10	0	0	0	0	0	297	27	9
12		Magwi	0	0	0	0	0	0	0	0	0	0	0	0	0	301	11	3.7
13		Budi	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
14	UNS	Manyo	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
15		Malakal	0	0	0	0	0	0	0	0	0	0	0	0	0	1,024	21	2.1
16	WES	Mundri East	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
	Total	South Sudan	29	20	13	97	35	47	6	10	0	0	0	0	0	6,421	167	2.60

Source of data: Ministry of Health Integrated Disease Surveillance & Response (IDSR); EWARN reporting

- ⊕ No new cholera cases have been reported since week 47 of 2014. Table 4 shows the cholera cases reported through the EWARN reporting network for the internally displaced populations and through the IDSR reporting system for the rest of affected populations living outside the IDP settlements.
- ⊕ The cumulative for cholera in South Sudan is 6,421 cases including 167 deaths (CFR 2.60%) from five states and 16 counties (Table 4).

Acute Flaccid Paralysis (AFP)

- ⊕ During week 48, seven new AFP cases were reported making cumulative of 287 cases since the beginning of 2014 (Table 5). The annualized non-Polio AFP (NPAFP) rate is 3.78 cases per 100,000 population children 0-14 years (target ≥ 2 per 100,000 children 0-14 years). All states with the exception of three (30%), (Jonglei, Upper Nile, and Unity), have attained the targeted NPAFP rate of ≥ 2 per 100,000 children 0-14 years (Table 5). The non-Polio Enterovirus (NPEV) isolation rate (a measure of the quality of the specimen cold chain) is 17%, which is above the global threshold of $\geq 10\%$. Stool adequacy is 93%, a rate that is higher than the global target of $\geq 80\%$ (Table 5). However active surveillance continues to be hampered by insecurity in the three states that are directly affected by the current crisis.

Table 5: Summary of AFP indicators by state as of week 48, 2014

Basic Summary of AFP Indicators by State as of Week 48, 2014																		
State		Population <15 years	Cumulative AFP Cases	Non Polio Cases	Cases of Week 48	Polio cases		Pending			NPAFP Rate	Stool Adequacy			Lab indicators			
						Confirmed WPV1	VDPV	Pending Lab/CLT	Pending Lab/ITD	Pending ECR		Specimens (#)	Adequate Specimens	Stool adequacy	NPEV		Sabin like	
															Number	Percent	Number	Percent
2014	CENTRAL EQUATORIA	737148	25	21	0	0	0	4	0	0	3.67	24	24	100%	5	21%	0	0%
	EASTERN EQUATORIA	674008	28	23	2	0	0	5	0	0	4.5	27	26	96%	1	4%	2	8%
	JONGLEI	982693	9	8	0	0	0	1	0	0	0.99	9	8	89%	3	33%	0	0%
	LAKES	791864	49	49	0	0	0	0	0	1	6.7	49	47	96%	7	14%	0	0%
	NORTHERN BAHR EL GHAZAL	987309	31	28	0	0	0	3	0	0	3.4	31	30	97%	7	23%	0	0%
	UNITY	864151	10	8	0	0	2	0	0	0	1.25	10	8	80%	1	10%	2	20%
	UPPER NILE	895541	11	9	0	0	0	2	0	0	1.33	11	8	73%	3	27%	0	0%
	WARRAP	1456973	40	33	2	0	0	6	0	1	2.97	40	36	90%	4	11%	1	3%
	WESTERN BAHR EL GHAZAL	316372	33	27	2	0	0	6	0	0	11.3	32	24	75%	4	13%	0	0%
	WESTERN EQUATORIA	516397	51	50	1	0	0	1	0	0	10.7	51	50	98%	11	22%	3	6%
SOUTH SUDAN	8222455	287	256	7	0	2	28	0	2	3.78	284	261	92%	46	17%	8	3%	

Other diseases of public health importance

Guinea worm (Dracunculiasis)

- ⊕ There were no new suspect Guinea worm cases reported during week 51.

Viral Haemorrhagic Fever

- ⊕ The Republic of South Sudan continues to enhance its readiness capacities 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 five alerts have been investigated in Ezo, Nzara, Terekeka (Tali), and Juba (Hai Jalaba and Gudele).
- ⊕ Community sensitization on Ebola prevention and control is ongoing through radio messages, talk shows on radio and television as well as the distribution of IEC materials (posters and brochures).

Visceral Leishmaniasis (Kala-azar)

- ⊕ Kala-azar cases have been on the decline in recent weeks. Given the high number of cases reported this year when compared to last year, the decline in Kala-azar cases in the recent weeks is largely attributed to under reporting and poor access to endemic areas.
- ⊕ During week 49 (no updates for weeks 50 & 51), four (21%) treatment centres reported 52 new Kala-azar cases and one death. Of the 52 new cases reported this week, 23 cases were reported from Rom, 19 cases from Walgak, two cases from Malakal IDP, and eight cases including one death from Melut.
- ⊕ Since the beginning of the year 7,204 Visceral Leishmaniasis (Kala-azar) cases and 199 deaths (CFR 2.76%) have been reported from 19 treatment centres. Of these 6,738 were new cases and 446 relapses or Post Kala-azar Dermal Leishmaniasis (PKDL), while 228 were defaulters. In comparison 2,992 cases and 88 deaths were reported during the same period in 2013, of which 2,772 were new cases, 220 relapses/PKDL and 42 defaulters.
- ⊕ During 2014, most of the Kala-azar cases have been reported from Lankien (4,282 cases), Chuil (1,239 cases), Walgak (648 cases), Melut (241 cases) and Malakal IDP (206 cases).
- ⊕ Most of the cases reported this year are male 3,930 (54.6%) while the most affected age group is 5-17 years 3,064 (42.52%) followed by 17 years and above 2,511 (34.72%) and less than 5 years 1569 (21.78%).
- ⊕ A higher number of Kala-azar cases have been reported this year in comparison to last year and this is attributed to several factors including displacement of non-immune populations to endemic areas, congregation of populations in settlements, malnutrition, poor housing, and reduced access to treatment centres leading to late detection and diagnosis of cases.
- ⊕ WHO is supporting implementing partners with case management supplies and adequate stockpiles have been assembled in endemic states.
- ⊕ Training of health workers in Visceral Leishmaniasis case management, prevention and control is ongoing.

Meningitis

- ⊕ Two suspect viral meningitis cases including one death were reported by MSF-OCA from Thol Payam in Urol County and Mutot Payam in Nyirol County. Viral meningitis was confirmed in one of the cases following rapid pastorex testing. This case recovered on supportive treatment while the second case had a negative rapid pastorex test and passed away on 22 December 2014.

All-Causes Mortality Data

- ⊕ During week 51 of 2014, mortality lists were received from Bor PoC, Mingkaman IDP settlement, Malakal PoC, and Juba 3 PoC.

- ✦ A total of 10 deaths were reported during week 51 of 2014, with the majority 7 (70%) being reported from Juba 3 PoC (see Table 6). During the corresponding period of 2013, 15 deaths were reported with the majority 7 (47%) occurring in Tongping PoC (table 6).

Table 6: Causes of death by IDP camp during week 51 of 2013 and 2014

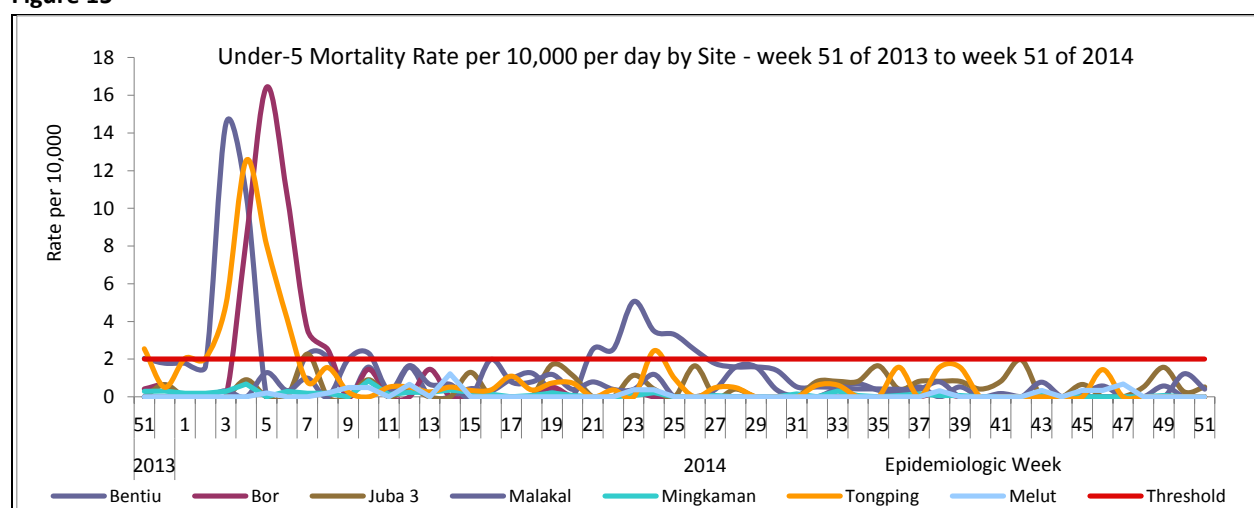
Camp or Site	Cause of Death	Week 51 of 2013	Week 51 of 2014
Bentiu	Measles	1	NR
	Pneumonia	1	NR
Bor	Chronic liver Disease	0	1
	Pneumonia	1	0
Juba 3	Alcohol intoxication	0	1
	Chronic diarrhoea with severe wasting	0	1
	Gastroenteritis	0	1
	Gunshot wound	1	0
	Liver cirrhosis	0	1
	Liver Disease	0	1
	Persistent diarrhoea	0	1
	TB/HIV/AIDS	0	1
Malakal	Cirrhosis, Ascitis and severe anemia	0	1
	Perinatal death	0	1
Mingkaman	Acute watery diarrhoea	3	0
	Bloody diarrhoea	1	0
Tongping	Gunshot wound	3	closed
	Not Stated	3	closed
	Perinatal death	1	closed
Grand Total		15	10

NR: no report

Under-five Mortality Rate

- ✦ The under-five mortality rates (U5MR) per 10,000 per day from week 51 of 2013 to week 51 of 2014 are shown in Figure 15.
- ✦ The under-five mortality rates for all the four IDP sites that reported in week 51 of 2014 were lower than the emergency threshold of 2 deaths per 10,000 per day.
- ✦ During week 51 of 2014, two children under five years died from acute watery diarrhoea and persistent diarrhoea in Juba 3 PoC while the third was perinatal death in Malakal PoC.

Figure 15

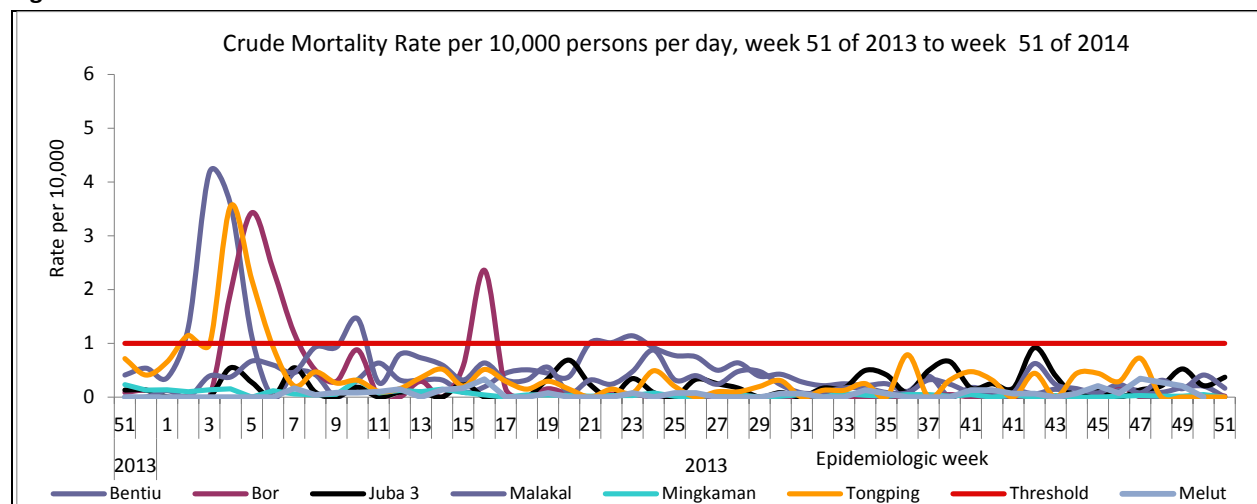


Crude Mortality Rate

- ✦ The crude mortality rates (CMR) from week 51 of 2013 to week 51 of 2014 are shown in Figure 16. During week 51 of 2014, the CMRs were below the emergency threshold for the four IDP sites that submitted mortality data.

- During week 51 of 2014, there was one death attributed to disseminated TB with severe wasting from Juba 3 PoC.

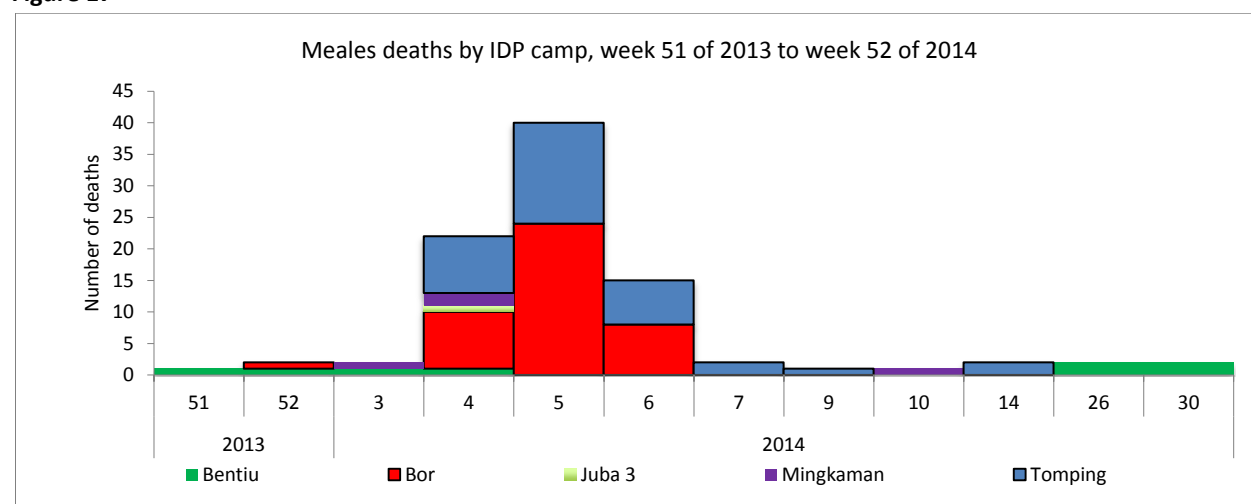
Figure 16



Disease specific mortality

Measles related deaths

Figure 17

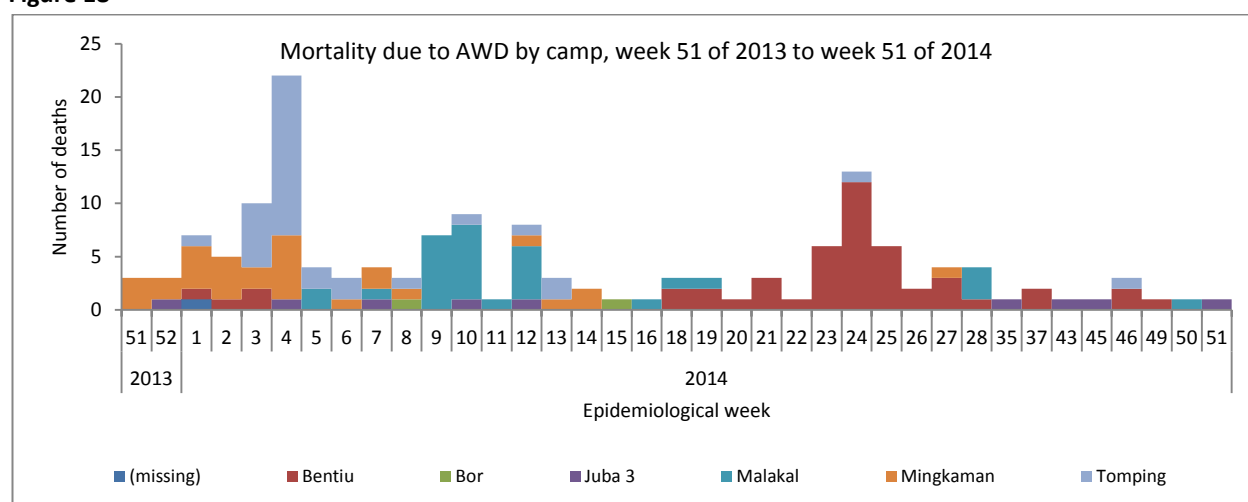


- Figure 17 shows mortality due to measles from week 51 in 2013 to week 51 in 2014. Measles has caused the fourth highest number of deaths with a cumulative of 92 deaths since the onset of the crisis.
- Most measles deaths were reported from Bor (42), Tongping (37), Bentiu (8), and Mingkaman (4) (Fig. 17).
- No new measles deaths have been reported since week 30 of 2014.

Acute watery diarrhoea related deaths

- Figure 18 shows mortality due to AWD from week 51 in 2013 to week 51 in 2014. AWD has caused the highest number of deaths with a cumulative of 153 deaths since the onset of the crisis.
- The majority of AWD related deaths have been reported from Mingkaman, Tongping, Malakal and Bentiu (Figure 18).

Figure 18



Overall Mortality

- ✦ Since the onset of the crisis, at least 1,336 deaths have been reported from the IDP sites. Children under five years account for 633 (47.4%) of the deaths. The majority of the deaths occurred in Bentiu, Tongping, Malakal, Mingkaman and Bor. The top causes of mortality during the period include AWD, severe pneumonia, malnutrition, and measles (Table 7).

Table 7: Overall mortality by settlement, week 51 of 2013 to week 51 of 2014

IDP site	Acute Jaundice Syndrome	Acute watery diarrhoea	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	Grand Total
Agok							1												2	3
Bentiu		48	2	1	9	3	2		14	1	8	2	46	47	14	1	25	6	119	348
Bor		2				1	1		1		42	2	10	3	1		2		60	125
Juba 3	1	9		4	1	2			10	1	1	33	8	5	1	2	19		26	123
Kodok															1				0	1
Malakal	1	30		1	38	14	1	13	12			13	5	15	7	1	18	6	85	260
Melut				1		2		13	7	2		2	5	5	1		6		13	57
Mingkaman	6	30	4			1	1		18	1	4	8	9	3	8	1	8	2	43	149
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	153	8	13	54	34	7	26	72	5	92	75	108	94	34	8	82	15	448	1336

General recommendations

- ✦ Malaria preventive interventions including the use of Long Lasting Insecticide Treated Nets (LLITN), 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 five 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, acute jaundice syndrome, bloody diarrhea and cholera.
- ✦ Interventions for cholera prevention should be sustained countrywide with a major focus on identifying long-term strategies to improve access to safe drinking water and sanitation in high-risk areas.

- ⊕ In response to the HEV cases in Mingkaman and AJS cases in the other IDP sites, the following interventions should be prioritized: household sanitation and hygiene promotion; improve access to safe water; and targeted interventions to prevent new infections in pregnant women.
- ⊕ 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, and communication on Kala-azar prevention and control should be sustained.
- ⊕ Support the implementation of the Ebola preparedness and response so as to enhance capacities 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_2007@yahoo.com.
- ⊕ IDSR reports and mortality line lists should be submitted by COB Monday after the close of each epidemiologic week.

For comments or questions, please contact

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E-mail: outbreak_ss_2007@yahoo.com,

HF radio frequency: 8015 USP; Selcall: 7002