

## Highlights

The reporting timeliness of Early Warning and Alert Response System, (EWARS) of Darfur for the current week was 71%.

As the humanitarian access to IDP settlements and camps throughout Darfur plummets owing to increasing insecurity situation in the region, the surveillance coverage of EWARS drops significantly. The health facility utilization rate for this week was 1.4 visits/person/year

ARI, Bloody Diarrhoea, Malaria and Unidentified Fever are the leading causes of morbidity in Darfur

Following confirmed cases of meningitis from an IDP camp of south Darfur, mass vaccination campaign is being planned

Following the Hepatitis-E Outbreak in one of the IDP camps of South Darfur, environmental control of risk factors has been strengthened to contain the outbreak and limit the spread.

Reporting timeliness.....	2
Population under surveillance.....	2
Proportionate morbidity and mortality.....	3
Distribution of reported cases and CFR.....	4
Weekly incidence of selected endemic diseases.....	5
Surveillance for Measles.....	5
Surveillance for Malaria.....	6
Surveillance for Bloody Diarrhoea.....	6
Acute Jaundice Syndrome in South Darfur.....	7
Meningitis in South Darfur.....	8

This weekly epidemiological bulletin is published jointly by the FMOH of the Government of Sudan and WHO. This bulletin is built upon surveillance data that are reported, every week, by the health services providers to the Disease Early Warning System of Darfur which presently cover over 90% of IDP settlements in the region. The Weekly Morbidity and Mortality Bulletin (WMMB) provides a snapshot of weekly trend of epidemic prone diseases that are registered in the health facilities serving only the IDPs in Darfur. The bulletin does not, however, cover health information from areas where no health services are currently offered to the IDPs in Darfur.

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### Reporting timeliness

During the current week (7 – 13 April 2007), 90 of 126 reporting units (71%) of the **Early Warning and Alert Response System (EWARS)** of Darfur have sent their surveillance data on time. The “benchmark” for reporting timeliness of EWARS, in order to periodically monitor the quality of the surveillance performance of EWARS, has been set at 85%. Despite the fact that there has been an improvement of reporting timeliness of the EWARS this year, the target still remains to be achieved. The trend shows that from the 14<sup>th</sup> epidemiological week of 2006 onwards, the reporting timeliness of the EWARS in Darfur has plummeted considerably as a result of increasing insecurity situation in Darfur resulting in diminished access of humanitarian agencies to IDP camps and settlements of conflict torn Darfur region.

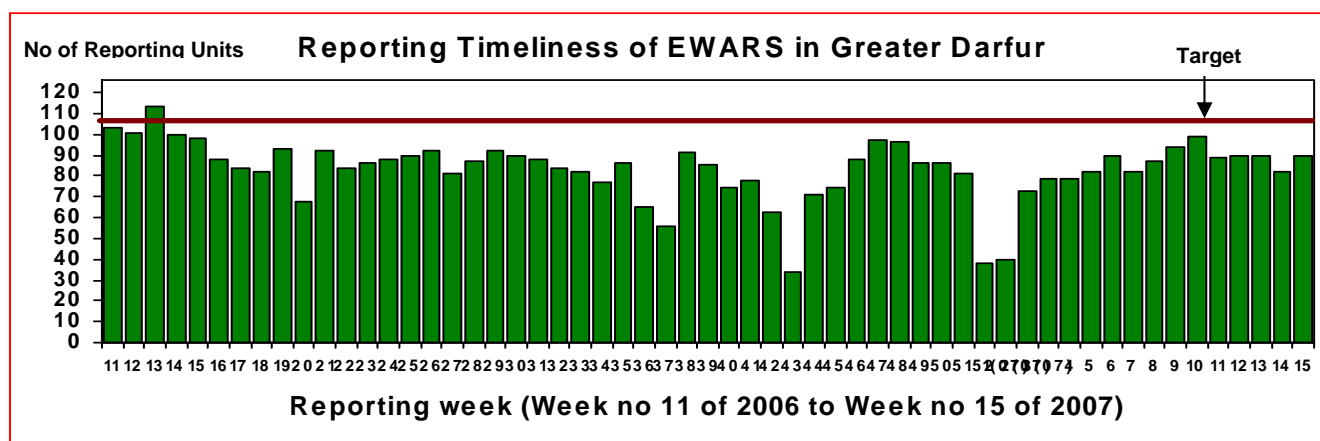


Figure 1. Reporting units, Greater Darfur, Sudan, week 11 of 2006 to week 15 of 2007

### Population under surveillance and consultations

The total number of **consultations** reported throughout Greater Darfur this week was **49,687** (Figure-2) which shows a decrease (by 0.5%) over total consultations reported last week (49,959). The number of **population under surveillance** for the current reporting week, was **1,848,714** which shows an increase by 7.8% over the previous week (From 1,714,236 reported last week to 1,848,714 reported this week). The **health facility utilization rate**, for the current week, was 1.4 visit/person/year.

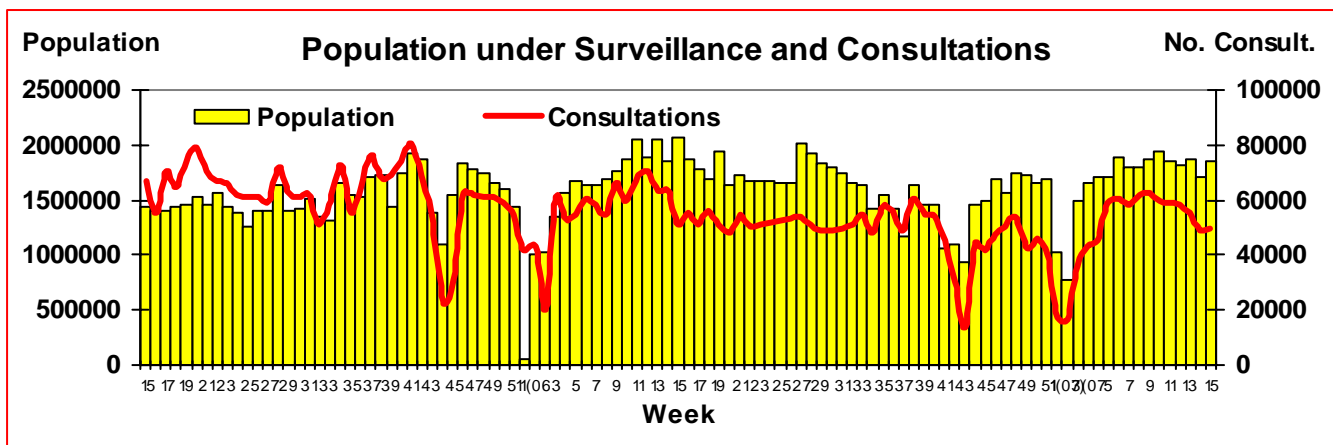


Figure 2. Weekly distribution of population under surveillance and consultations, Greater Darfur, Sudan, Week 15 2006 – week 15 2007

**Proportionate morbidity and mortality of reported health events**

Between 7-13 April 2007, a total of 49,687 health events under surveillance were reported from Darfur. Of these, 17,770 health events (36%) were reported in the less than 5 year age group while the remaining 31,917 health events (64%) were reported in the above 5 year age group. In the above 5 year age group, excepting the category “others”, 13 % of reported cases were attributed to **Acute Respiratory Tract Infection (ARI)** while **Clinically Diagnosed Malaria** contributed to 4% of all reported cases. By comparison, 28% of reported cases in the under 5 year age group was attributed to **Acute Respiratory Tract Infection (ARI)** followed by **Clinically Diagnosed Malaria** (5%)

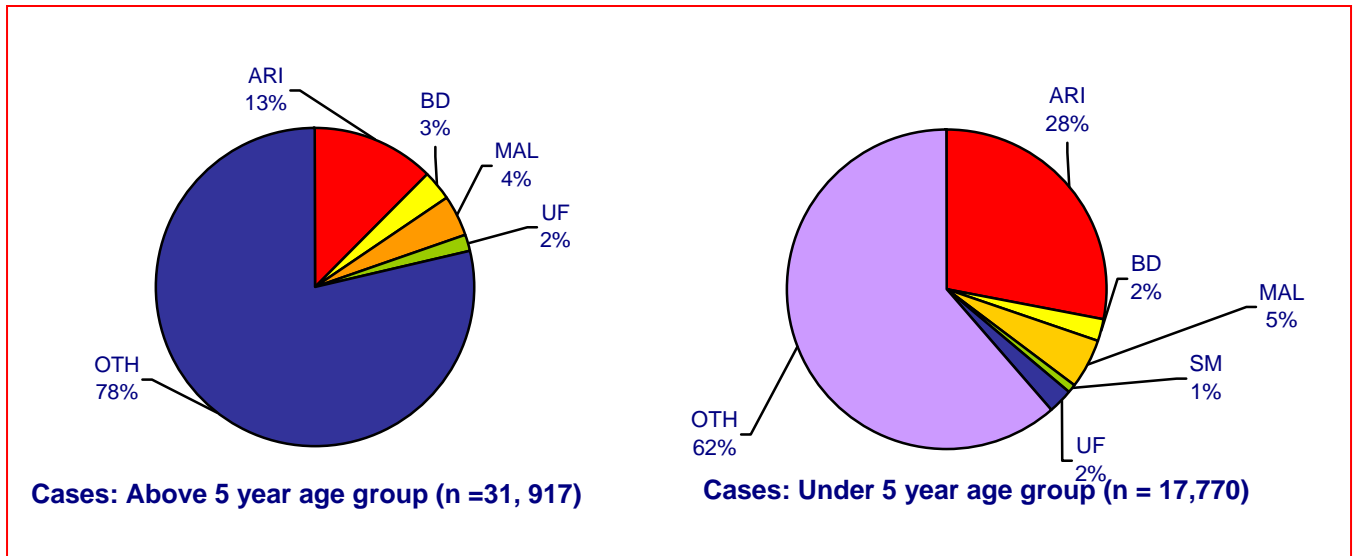


Figure 3: Proportion of all reported cases, Greater Darfur, Sudan, 7-13 April 2007

During the same period, there were **30 reported deaths** in all age groups (Figure-4). Of these, **15 deaths** were reported in the **below 5 year age group** representing 50% of total deaths reported during the current week. In less than 5 year age group, out of 15 reported deaths, 1 death was attributed each to Malnutrition and neo-natal tetanus, 2 deaths due to meningitis and 3 deaths were reported due to ARI. The overall **Case Fatality Rate (CFR)** for children under 5 years was **0.08%**. In the above 5 year age group, excepting the category “others”, 1 death was reported each due to ARI and meningitis. The overall **Case Fatality Rate (CFR)** for cases above 5 year age group was **0.05%**.

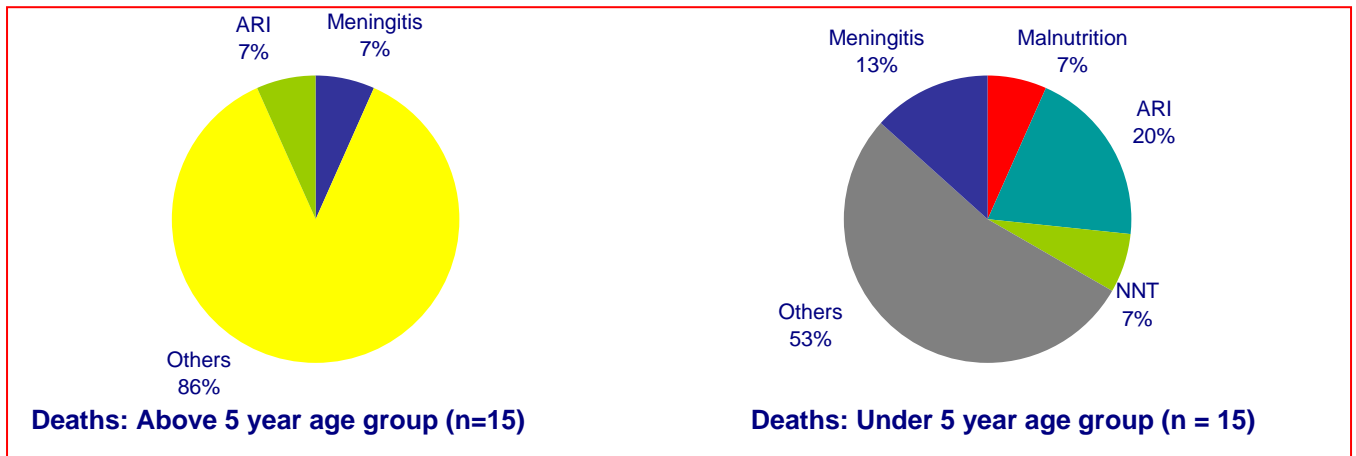


Figure 4: Proportion of all reported deaths, Greater Darfur, Sudan, 7 – 13 April 2007

### Distribution of reported cases and case fatality rate

During the current reporting week, the **CFR** (Figure-5) for NNT was highest (50%) followed by meningitis (40%), Severe Malnutrition (0.7%) and ARI (0.06%). No death was reported from any other category excepting “others”.

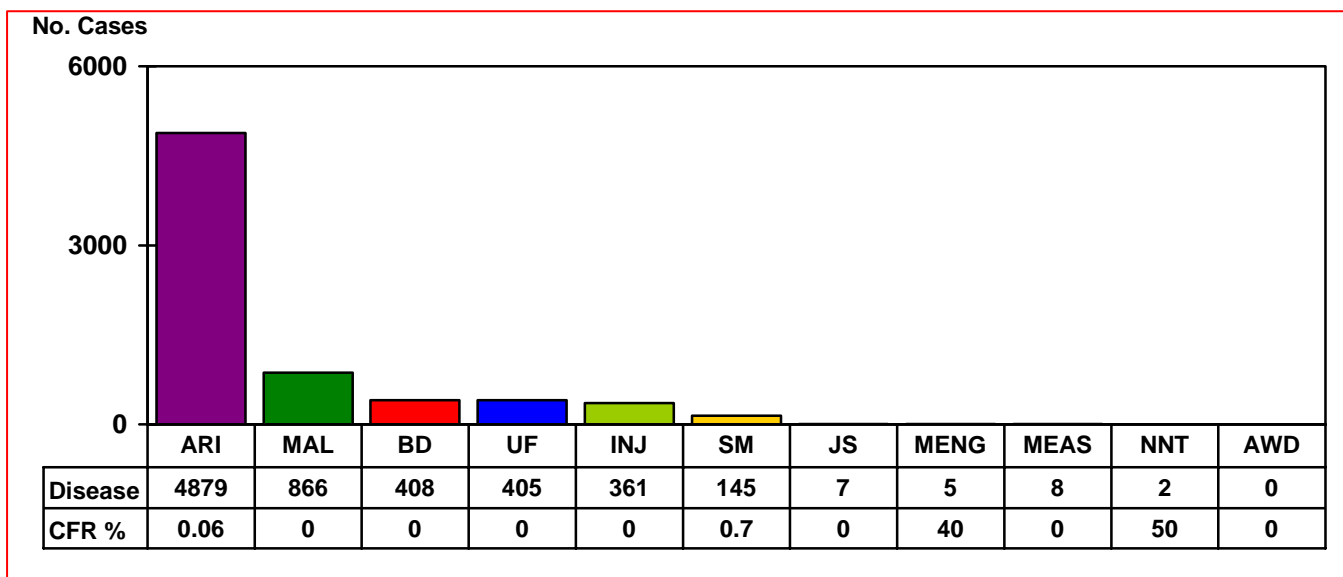


Fig.5: Distribution of reported cases and CFR in the under 5 year age group, Greater Darfur, 7 – 13 April 2007

On the other hand, in the above 5 year age group, CFR was the highest (10%) for the Meningitis followed by ARI (0.03%). Additionally, 13 deaths (CFR: 0.05%) were reported in the “others” category.

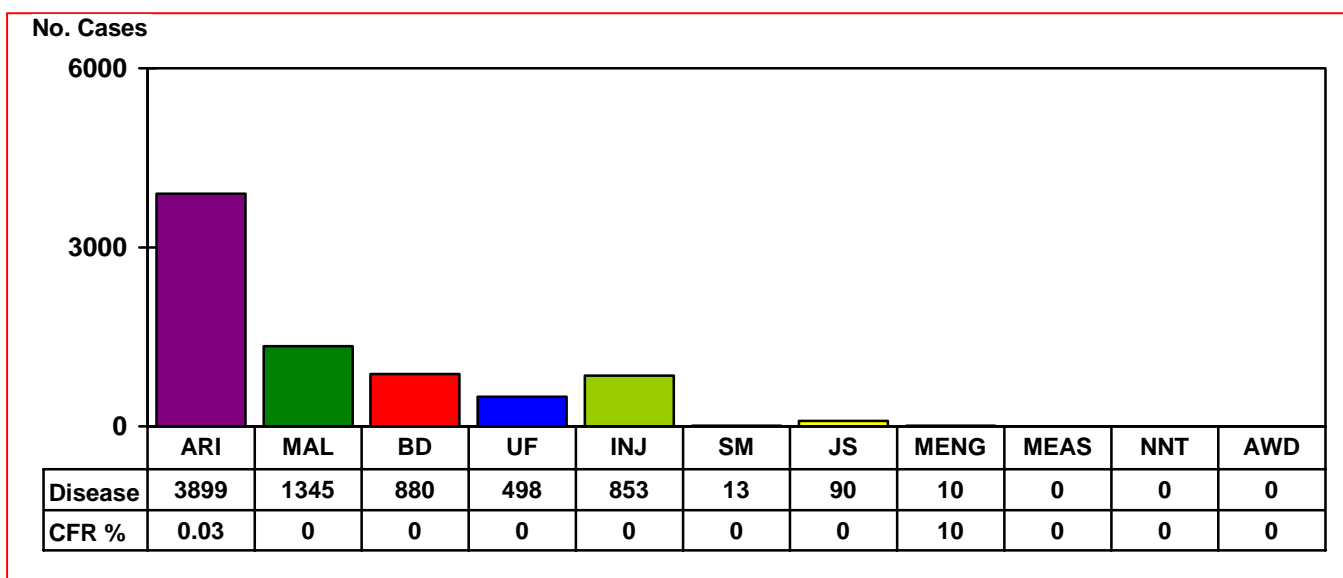


Fig.6: Distribution of reported cases and CFR in the above 5 year age group, Greater Darfur, 7 – 13 April 2007

### Weekly incidence rate of selected endemic diseases

During the current week (7 – 13 April 2007), the case load of selected endemic diseases, barring Acute Jaundice Syndrome, were usual given the seasonality of these diseases reported earlier from Greater Darfur. West Darfur continues to report high number of Bloody Diarrhoea cases.

**Table-1: Cases and weekly incidence rate of selected endemic diseases reported from Darfur. (Epidemiological week 15: 7 – 13 April 2007)**

Diseases	North Darfur		West Darfur		South Darfur	
	Cases	IR (cases/10,000)	Cases	IR (cases/10,000)	Cases	IR (cases/10,000)
Acute Respiratory Infection	3844	61.4	4590	72.4	1859	24.1
Bloody Diarrhea	215	4	619	12.5	439	5.7
Clinically Diagnosed Malaria	232	5.3	735	15.9	1193	13.9
Acute Jaundice Syndrome	14	0.3	3	0.06	80	1

Excepting for the weekly incidence rate of AJS reported from South Darfur, no “unusual trend” was observed for other epidemic prone diseases this week. For Acute Respiratory Infection, the global average rate for whole of Darfur, reported this week, was 48 cases/10,000 populations. The same for the north, west and south Darfur were 61.4, 72.4 and 24.1 per 10,000 respectively. For Clinically Diagnosed Malaria, the highest weekly incidence rate was in West Darfur (15.9 cases/10,000) and the lowest was in North Darfur (5.3 cases/10,000) while the global average rate for Greater Darfur, reported this week, was 11.9 cases per 10,000. The weekly incidence rate for Bloody Diarrhea was highest in West Darfur (12.5 cases/10,000) followed by South Darfur (5.7 cases /10,000) and North Darfur (4 cases/10,000). The global average rate for Bloody Diarrhoea reported from Greater Darfur this week was 6.9 cases per 10,000. The weekly incidence rate of Acute Jaundice Syndrome was highest in South Darfur (1 case/10,000) while the global average rate for Acute Jaundice Syndrome reported from Greater Darfur, this week, was 0.5 case/10,000.

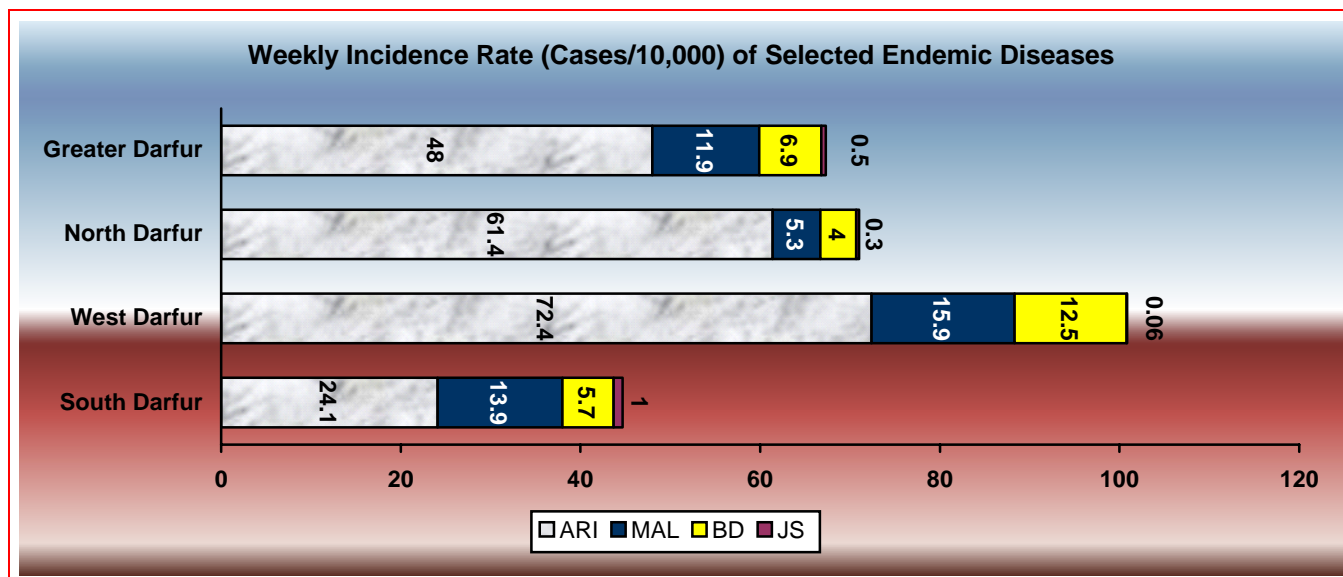


Figure 7. Reported weekly incidence rate of selected communicable diseases, Greater Darfur, Sudan, 7 – 13 April 2007

### Surveillance for Measles

From 1 January 2005 to date, the EWARS has notified **518** clinically diagnosed measles cases from Greater Darfur with 2 deaths. During the current week, 9 cases were reported from Darfur (7 from West Darfur and 1 each from North & South Darfur).

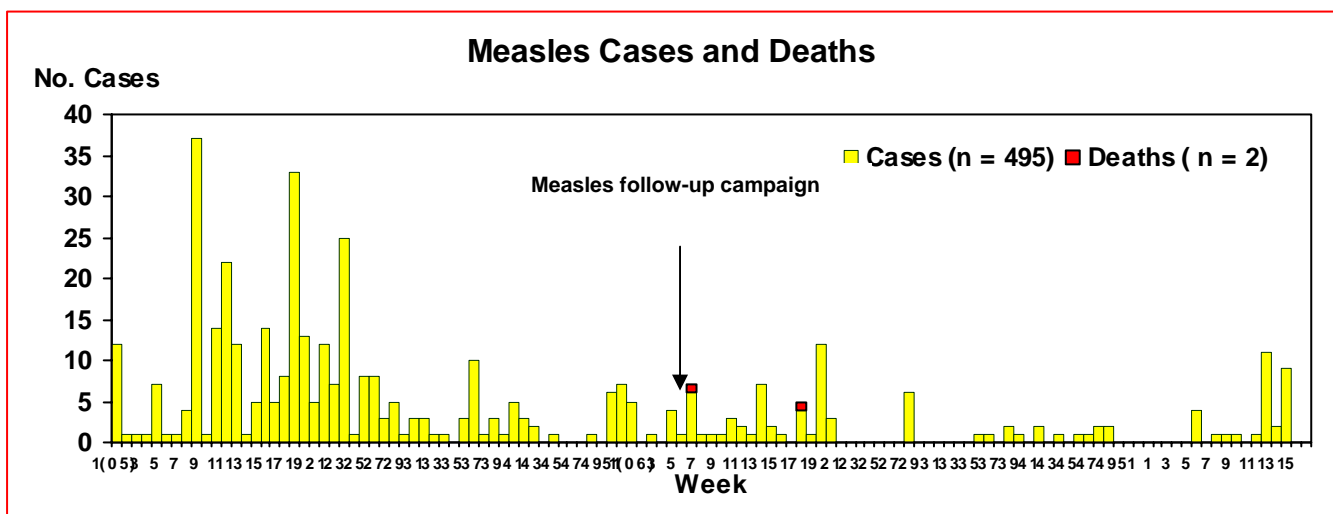


Figure 8. Weekly reporting of measles cases and death, Greater Darfur, 1 January 2005 to 13 April 2007

### Surveillance for Malaria

With the onset of high risk season for malaria in Darfur, epidemiological surveillance for malaria has been enhanced throughout Greater Darfur. The weekly attack rate of malaria for the current epidemiological week was observed to be **1.19 cases per 1000** (Figure-9) which is below the mean attack rate (3 cases per 1000) of malaria observed during 2006 as well as below the historical value (past attack rates observed during the same period in 2006).

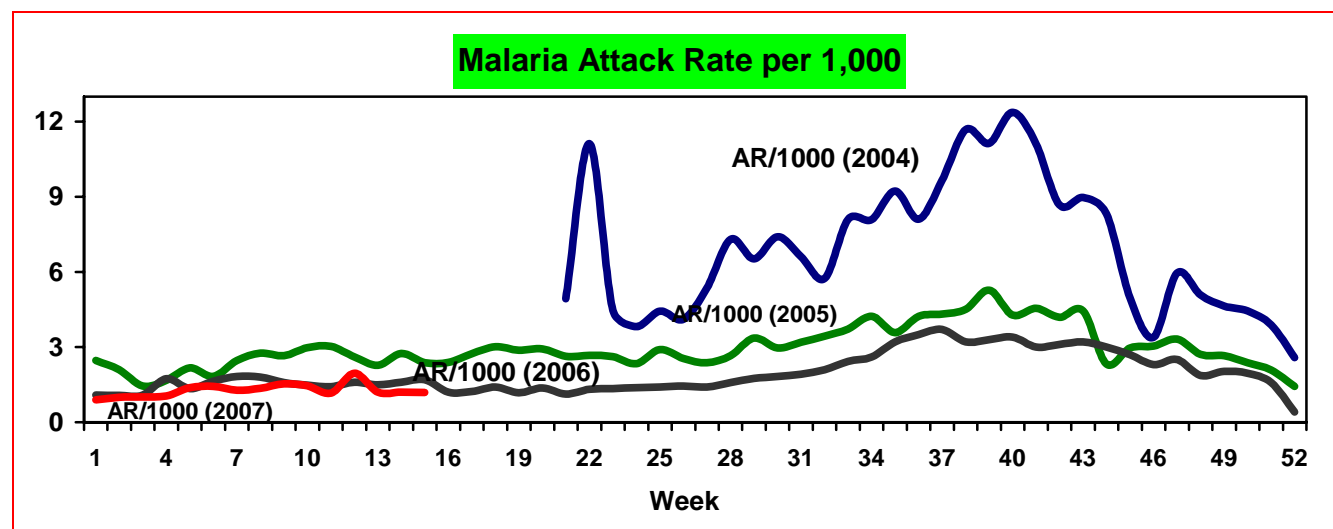


Figure-9: Comparison of current attack rate of malaria with historical value

### Surveillance for Bloody Diarrhoea

The attack rate of bloody diarrhoea, observed during the current week, was **7 cases per 10,000** which has crossed the attack rate (6 cases per 10,000) observed during the same period in 2006 (Figure-10). West Darfur continues to report significantly higher rates compared to North and South Darfur.

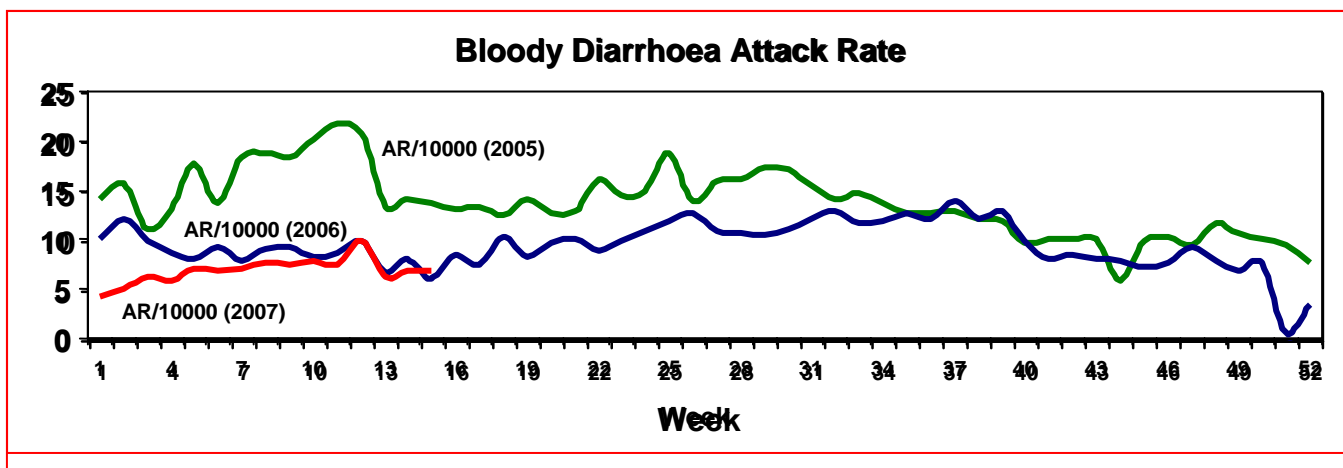


Figure-10: Comparison of current attack rate of Bloody Diarrhoea with historical value

### Acute Jaundice Syndrome in South Darfur

An outbreak of Hepatitis-E has been laboratory confirmed in Ottash camp of South Darfur. Out of 20 serum samples, 17 samples have been tested positive for IgM by ELISA test at the National Public Health Laboratory (NPHL) of Khartoum. Increased numbers of Acute Jaundice Syndrome cases were being reported from the camp from Week 3 onwards and during epidemiological week 6, highest number of cases (165 cases with an incidence rate of 27 cases /10,000) was reported from the camp. Improvement of environmental health including hygiene promotion has been strengthened throughout the camp through collaborative efforts between the State Ministry of Health (SMOH) of South Darfur, Water and Environmental Sanitation department, WHO, UNICEF and other NGOs partners. Surveillance for monitoring the progression of the outbreak has also been enhanced. Although less in numbers, cases have continued to occur in the camp that requires further strengthening of environmental interventions.

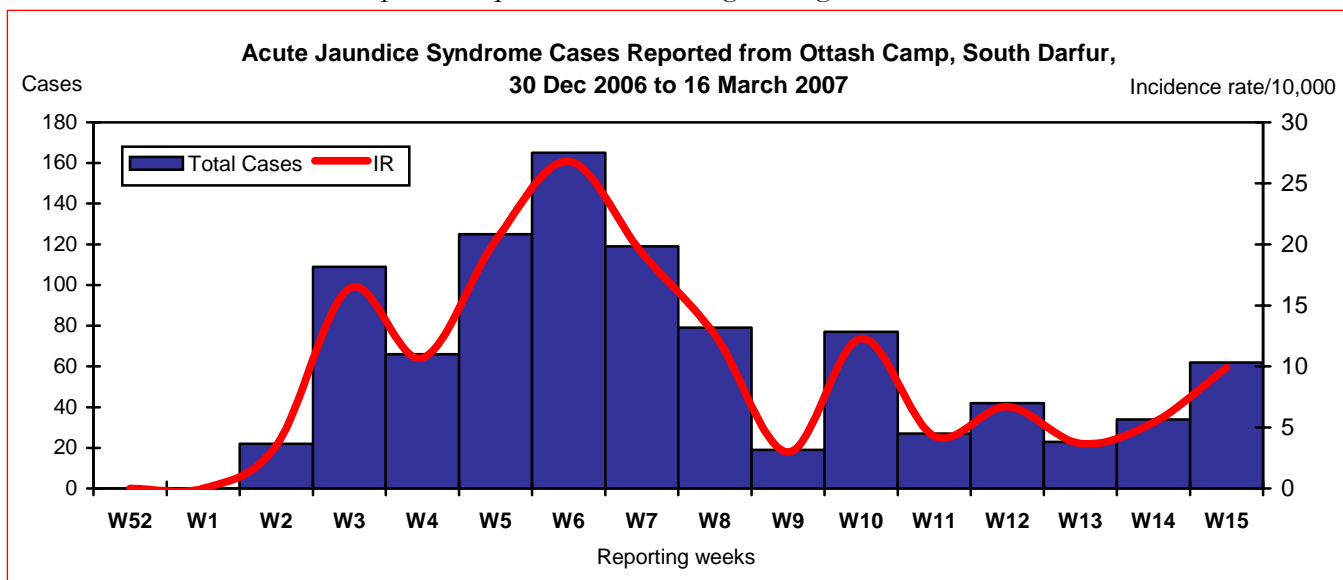


Figure-11: Weekly progression of Acute Jaundice Syndrome cases in Ottash camp, South Darfur

## Meningitis in South Darfur

Between week 5 and 15, a total of 45 cases of meningitis have been reported from different IDP camps and localities of south Darfur. All the reported cases have been under the age of 30 years with male: female distribution being 70:30. Fourteen (14) cases have been confirmed positive by latex and/or culture and A, C and W135 strains have been identified. Following two confirmed cases of *N Meningitidis W135* from Seleah camp in one week (week no. 13), a trivalent meningitis vaccine request was sent to the Geneva based International Coordinating Group (ICG) that controls Epidemic Meningitis Vaccines. 100,000 doses of the vaccine have been approved by the ICG and the microplanning for the mass vaccination campaign is being finalized by the FMOH and SMOH in coordination with the partners. Surveillance and case management activities have been intensified in the entire state as new localities continue to report meningitis cases.

