

## Highlights

- The weekly reporting timeliness of EWARS, this week, was 68% against a set target of over 85%.
- The number of population under surveillance for the current week was 1.7 million and the health facility utilization rate recorded in the IDP camps of Darfur for this week was 1.2 visit/person/year
- ARI remains the leading cause of morbidity for all age groups in the IDP camps in Darfur while Malaria registered as the leading cause of mortality in the above 5 years age group this week.
- The outbreak of Acute Watery Diarrhoea, caused by *Vibrio Cholera 01 Inaba*, has tailed off in Darfur but the public health containment measures are still ongoing throughout Greater Darfur.

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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 Early Warning and Alert Response Surveillance System (EWARS) which presently cover over 90% of IDPs currently living in camps and settlements across the three states of Darfur in Sudan. The Bulletin provides a snapshot of health events from the health facilities where these events are registered, and data collected and where, it can be argued, standards of access, care and assistance are comparatively better than the areas which are still inaccessible. The bulletin does not reflect information from areas where no health services are currently offered to the IDPs.

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### Reporting timeliness

During the current week, 86 of 126 reporting units (68%) of the **Early Warning and Alert Response Surveillance (EWARS)** system 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 was an improvement of reporting timeliness of the EWARS at the beginning of 2006, the target remains far from being 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 slumped as a result of rising inaccessibility of many parts of Greater Darfur.

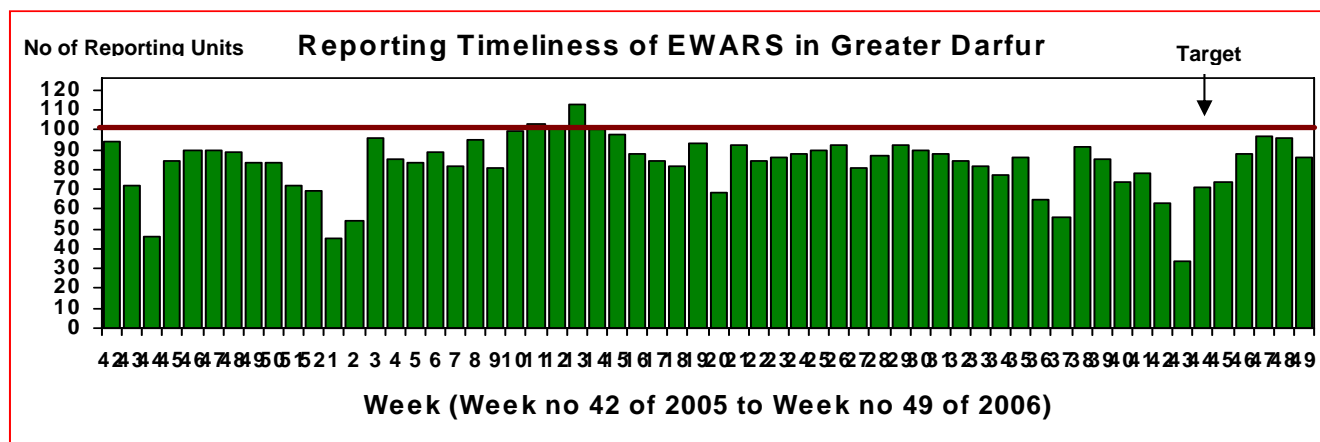


Figure 1. Reporting units, Greater Darfur, Sudan, October 2005 to 09 December 2006

### Population under surveillance and consultations

The total number of **consultations** reported throughout Greater Darfur this week was 42,207 (Figure-2). The number of **population under surveillance**, reported for the current week, was 1,723,026 which shows a decrease by 0.8 % over the previous week (From 1,737,435 reported last week to 1,723,026 reported this week). The **health facility utilization rate**, for the current week, was 1.2 visit/person/year reported this week.

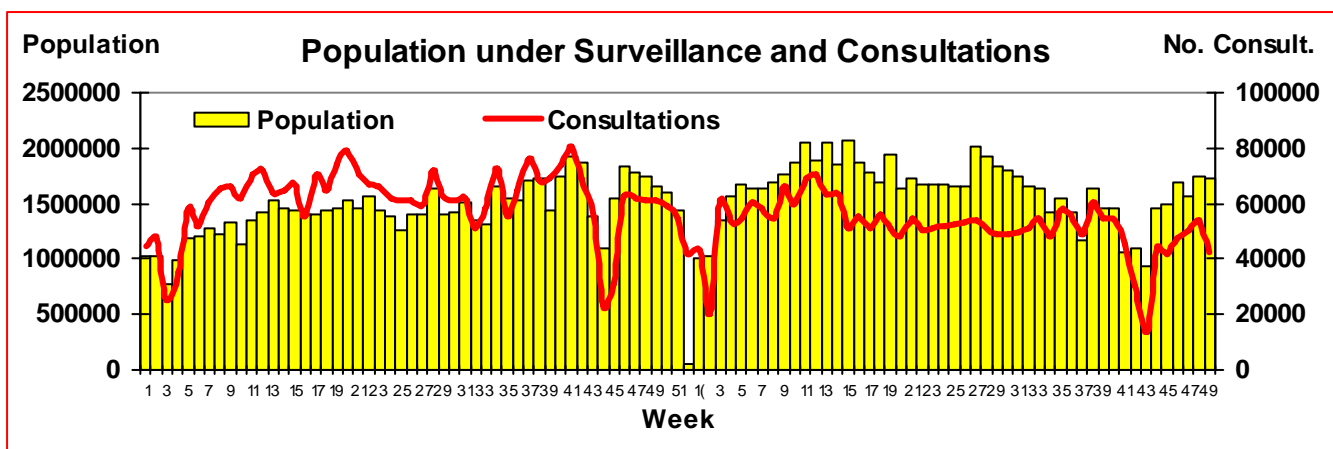


Figure 2. Weekly distribution of population under surveillance and consultations, Greater Darfur, Sudan, 1 Jan 2005 – 09 December 2006.

**Proportionate morbidity and mortality reported during the week**

Between 03-09 December 2006, a total of 42,207 cases of health events under surveillance were reported from all age groups. Of these, 14,067 (33%) cases of health events were reported from under 5 year age group while the remaining 28,140 (67%) cases of health events were reported from above 5 year age group. In the above 5 year age group, excepting the category “others”, 13 % (3557) of reported cases were due to **Acute Respiratory Tract Infection (ARI)** while **Clinically Diagnosed Malaria** contributed to 8% (2231) of all reported cases. By comparison, 22% (3118) of reported cases in the under 5 year age group was attributed to **Acute Respiratory Tract Infection (ARI)** followed by **Clinically Diagnosed Malaria** (9%; 1273/14,067)

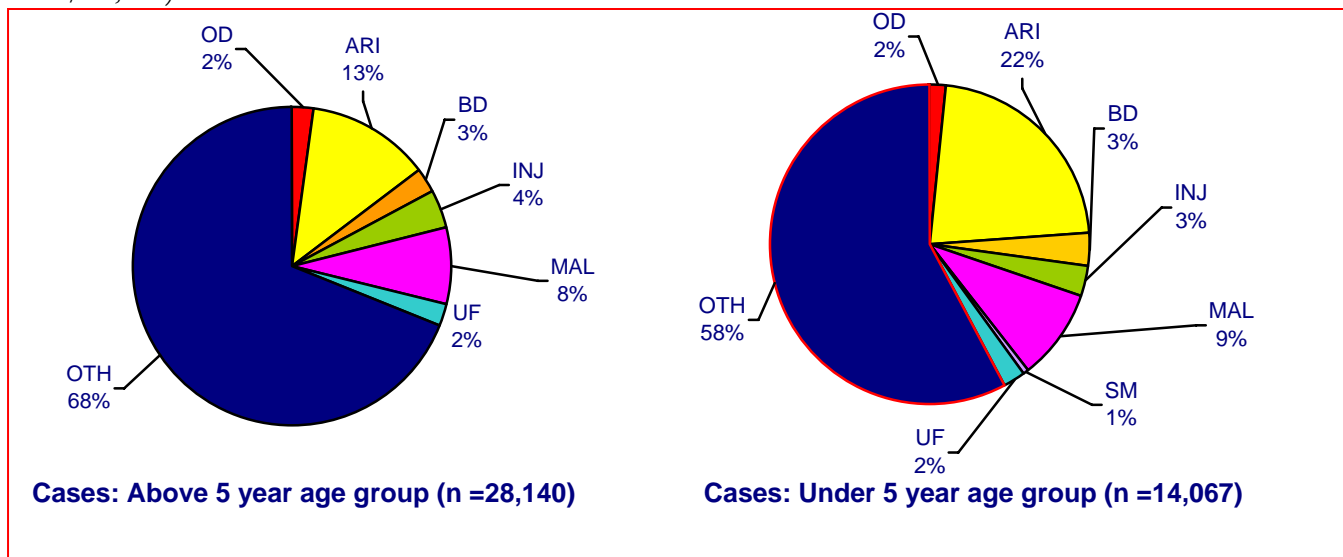


Figure 3: Proportion of all reported cases, Greater Darfur, Sudan, 03-09 December 2006

During the same period, there were **29 reported deaths** in all age groups (Figure-4). Of these, **8 deaths** were reported in the **less than 5 year age group** representing 27% of total deaths reported from Greater Darfur during this week. In the less than 5 years age group, two deaths (25%) were attributed to Severe Malnutrition and one death (13%) was attributed to Acute Respiratory Infection. The overall **Case Fatality Rate (CFR)** for children under 5 years for the current epidemiological week was **0.05%**. In the above 5 year age group, excepting the category “others”, three deaths (14%), each, were attributed to Malaria and Injury while 1 death (5%) was due to Acute Jaundice Syndrome. The overall **Case Fatality Rate (CFR)** for cases above 5 year age group for the current epidemiological week was **0.07%**.

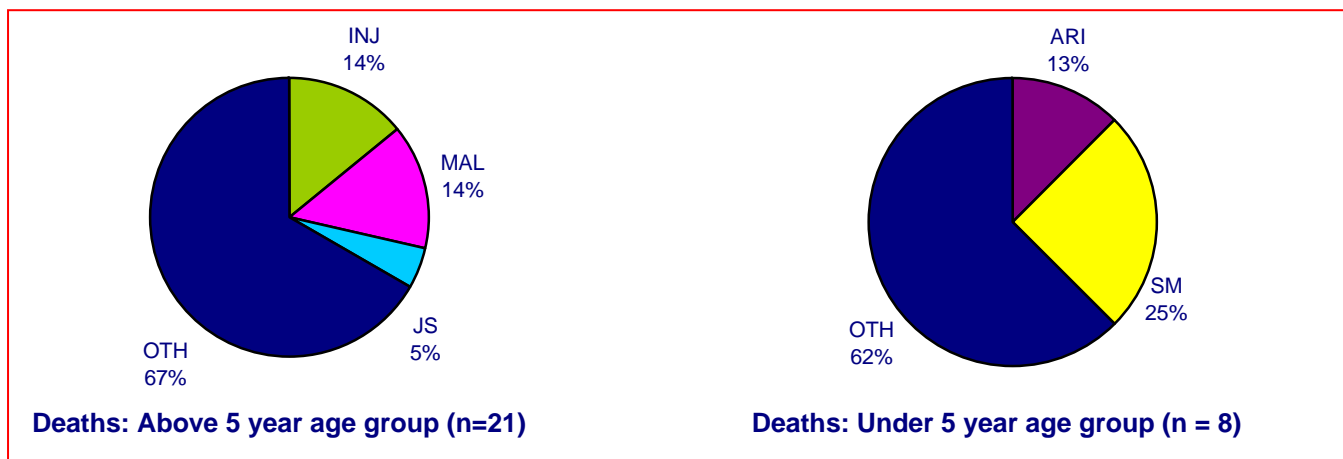


Figure 4: Proportion of all reported deaths, Greater Darfur, Sudan, 03-09 December 2006

### Distribution of reported cases and CFR in Darfur

During the current reporting week, the **CFR** (Figure-5) for **Severe Malnutrition** was highest (1.92%) followed by Acute Respiratory Infection (0.03%).

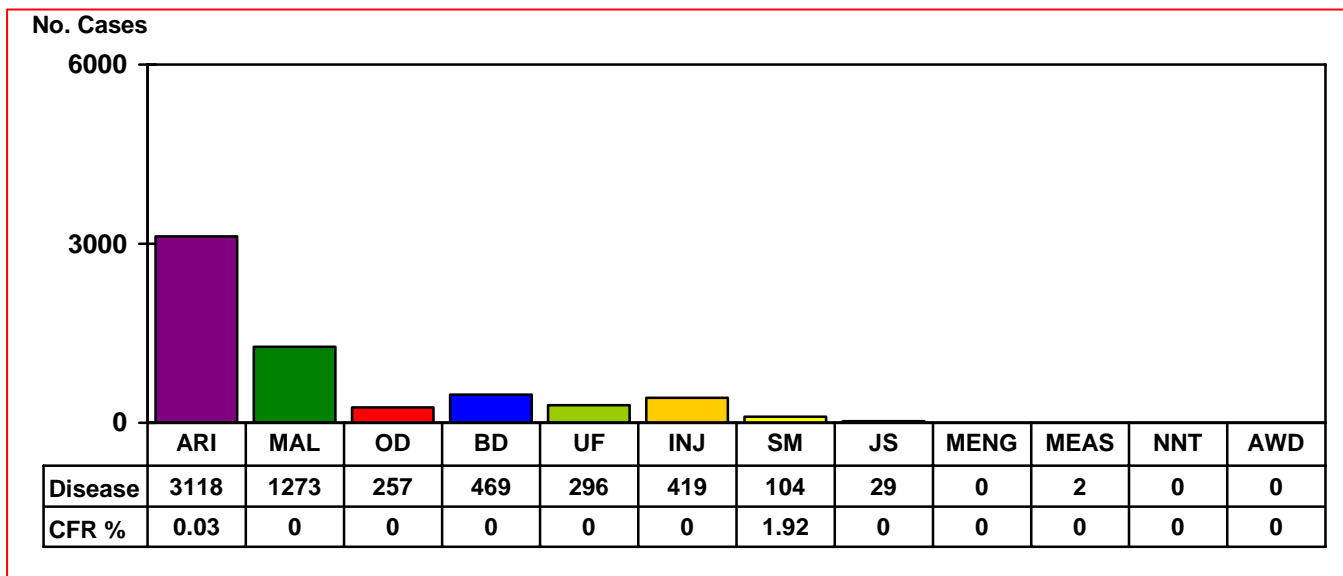


Fig.5: Distribution of reported cases and CFR in the under 5 year age group, Greater Darfur, 03-09 December 2006

On the other hand, in the above 5 year age group, Acute Jaundice syndrome (1.26%) had the highest **Case Fatality Rate** (Figure-6) followed by Injury (0.28%).

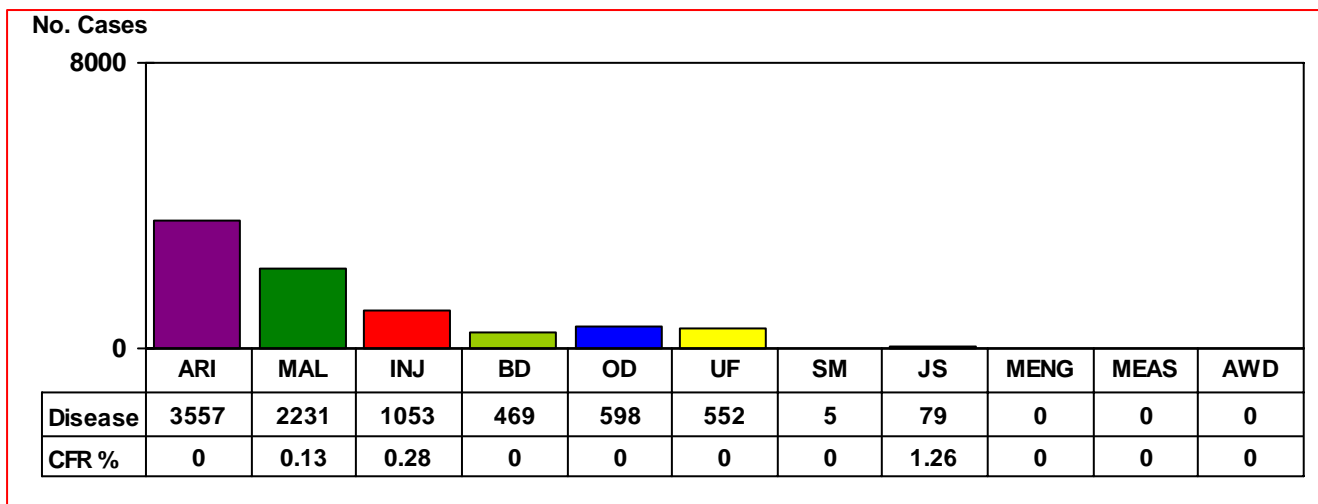


Fig.6: Distribution of reported cases and CFR in the above 5 year age group, Greater Darfur, 03-09 December 2006

### Reported weekly incidence rate of selected endemic diseases

During the current week (03-09 December 2006), the case load of selected endemic diseases, barring Acute Respiratory Infection (ARI), were usual given the seasonality of these diseases reported earlier from Greater Darfur.

**Table-1: Cases and weekly incidence rate of selected endemic diseases reported from Darfur. (Epidemiological week-49: 03-09 December 2006)**

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	1829	101.1	2493	51.3	2353	23.5
Bloody Diarrhea	82	4.5	495	10.2	595	6.2
Clinically Diagnosed Malaria	216	11.9	1442	29.7	1846	18.4
Acute Jaundice Syndrome	3	0.2	12	0.2	93	0.9

Excepting for the weekly incidence rate of ARI reported from North Darfur, no “unusual trend” was observed for the weekly incidence rate of other epidemic prone diseases from Darfur this week. For Acute Respiratory Infection, the global average rate for whole of Darfur reported this week was 39 cases/10,000 populations. However, except North Darfur (101 cases/10,000), the weekly incidence rate of ARI reported from South (24 cases/10,000) and West (51 cases /10,000) were not unusual for the current seasonal trend in Greater Darfur. For Clinically Diagnosed Malaria, the highest weekly incidence rate was in West Darfur (30 cases/10,000) and the lowest was in North Darfur (12 cases/10,000) while the global average rate for Greater Darfur reported this week was 20 cases per 10,000. The weekly incidence rate for Bloody Diarrhea was highest in West Darfur (10 cases/10,000) followed by South Darfur (6 cases /10,000) and North Darfur (5 cases/10,000). The global average rate for Bloody Diarrhoea reported from Greater Darfur this week was 7 cases per 10,000. The weekly incidence rate of acute jaundice syndrome was highest in South Darfur (0.9 case/10,000) while the global average rate for Acute Jaundice Syndrome reported from Greater Darfur, this week, was 0.02 case/10,000.

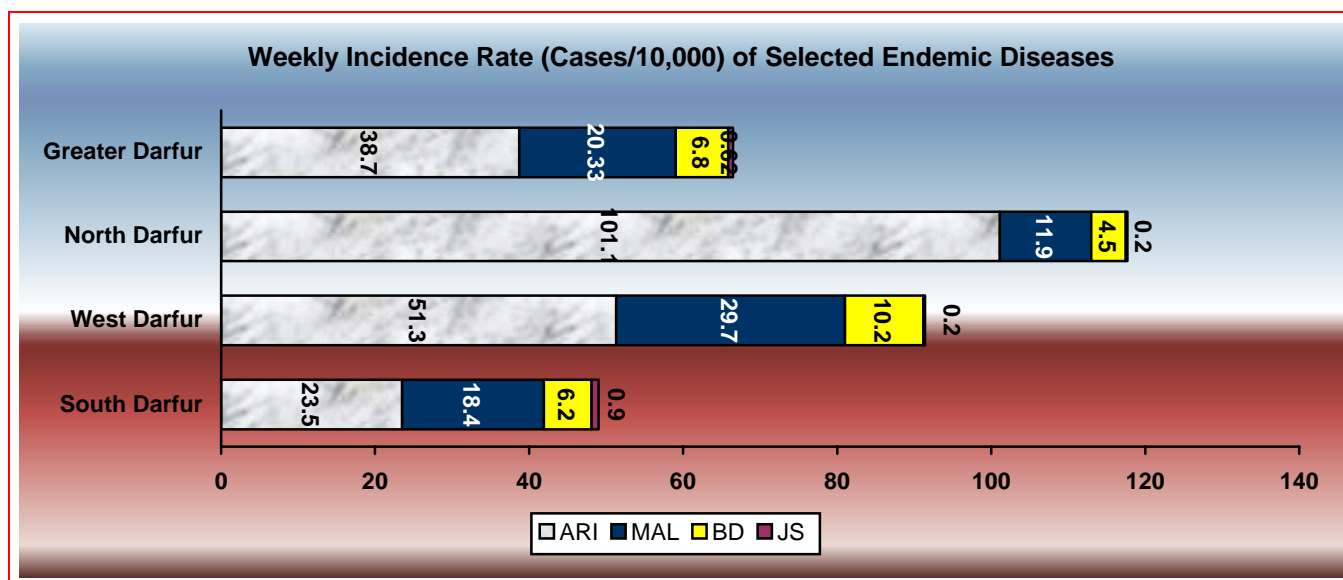


Figure 7. Reported weekly incidence rate of selected communicable diseases, Greater Darfur, Sudan, 03-09 December 2006

### Surveillance for Measles

From 1 January 2005 to date, the EWARS has notified 490 clinically diagnosed measles cases from Greater Darfur with 2 deaths. During the current week, two cases were reported from West Darfur .

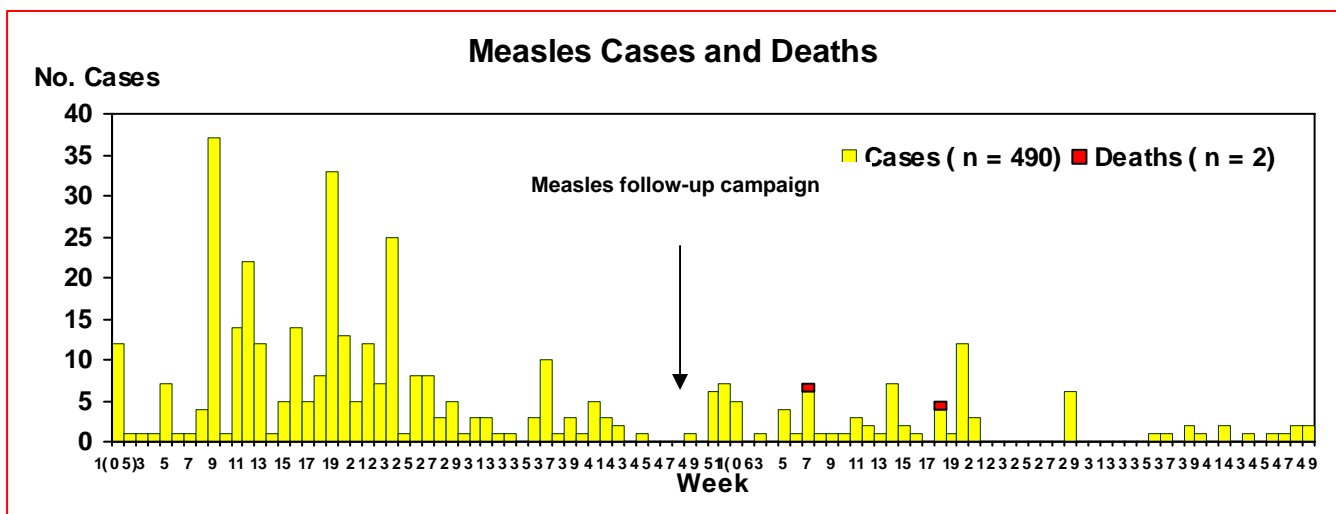


Figure 8. Weekly reporting of measles cases and death, Greater Darfur, 1 January 2005 to 09 December 2006.

### Surveillance for Malaria

With the onset of dry season, the attack rate as well as proportionate morbidity attributed to clinically diagnosed malaria is gradually increasing across Greater Darfur. The weekly attack rate of malaria, observed throughout Greater Darfur, during the current epidemiological week was **2.03 cases per 1000** (Figure-9) which is below the mean attack rate (3.2 cases per 1000) observed during 2005 and not above the historical value (past attack rates observed during the same period in 2005) reported from Darfur since mid-2004.

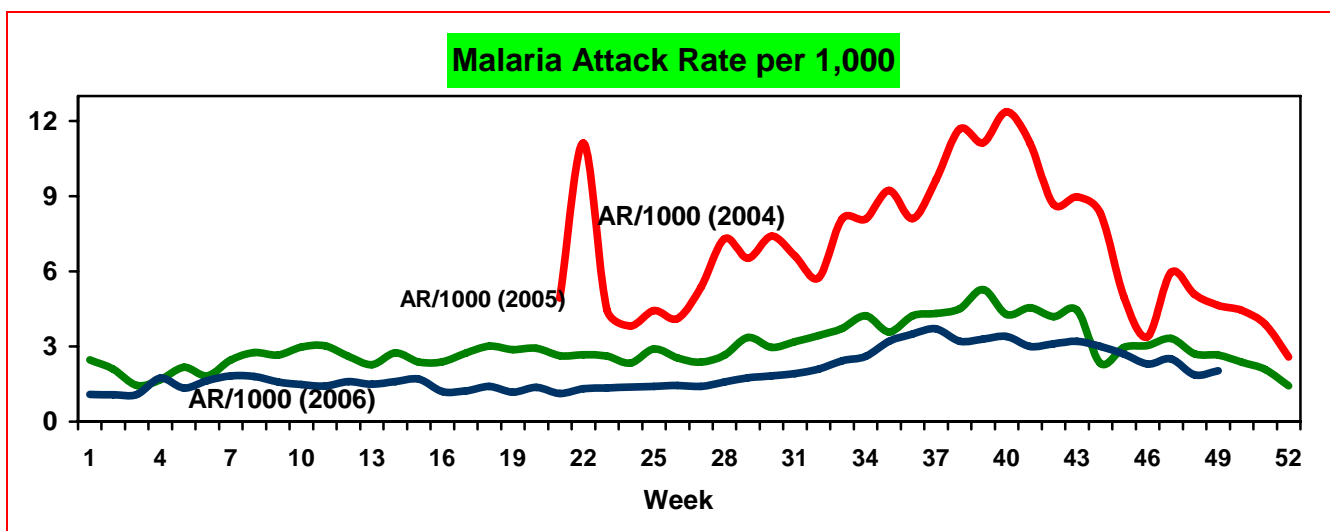


Figure-9: Comparison of current attack rate of malaria with historical value

### Surveillance for Bloody Diarrhoea

The attack rate of bloody diarrhoea, observed during the current week, was **6.8 cases per 10,000** which is below the attack rate (10.6 cases per 10,000) observed during the same period in 2005 (Figure-10). Higher attack rate is observed in West Darfur this week compared to either North or South Darfur.

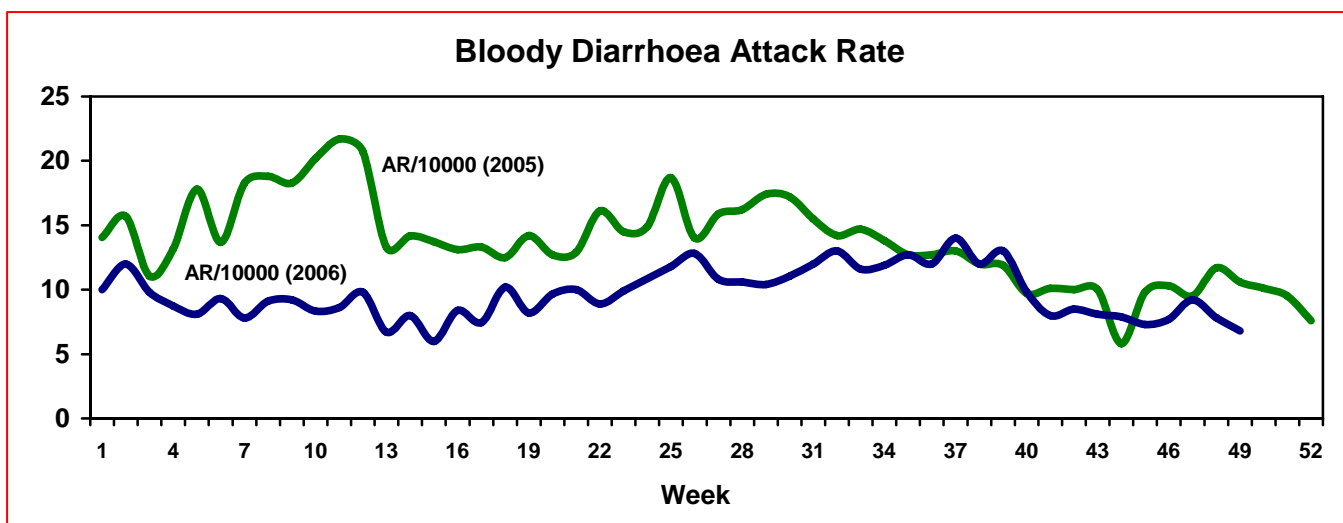


Figure-10: Comparison of current attack rate of Bloody Diarrhoea with historical value

### Acute Watery Diarrhoea Outbreak in Darfur

Between 24 May to 09 December 2006, a total of 2,768 cases of Acute Watery Diarrhoea including 147 deaths (CFR: 5.3 %) were reported from Greater Darfur. Of these, 61 % of cases were reported from South Darfur state (CFR: 4.5%), 28% have occurred in West Darfur state (CFR: 7.4%) and 10% were reported from North Darfur state (CFR: 4.1 %). During the current week, no case was reported from any of the Darfur state.

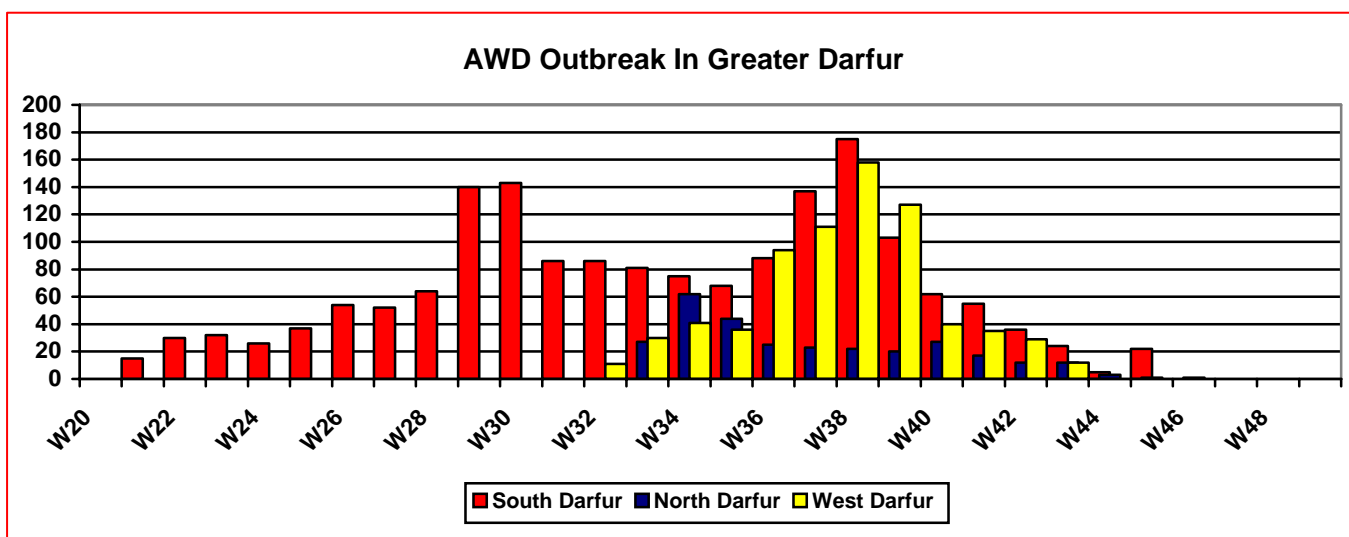


Figure-11: Weekly Incidence of Acute Watery Diarrhoea reported from Greater Darfur: Week no 21 to Week no 49

*Vibrio cholerae* 01 serotype *Inaba* has been laboratory confirmed by the National Public Health Laboratory (NPHL) of the FMOH from a number of stool samples collected from these reported cases of AWD from Greater Darfur. The current outbreak, first, started in South Darfur on 24 May 2006 and the "index" case was imported from North Kordofan by a passenger train (where an epidemic from AWD was ongoing). Gradually more cases were reported from other localities in South Darfur. In North Darfur, the index case reported to the El Fasher teaching hospital on 17 August and was not epidemiologically linked to cases in South Darfur. In West Darfur, on the other hand, the outbreak started on 5 August 2006 in an IDP camp (Mornei) and then spread to Nertiti and Jabel Mera localities. The death rate, initially very high, came down in all the three states of Darfur as the outbreak tailed off. The public health containment measures are still ongoing throughout Greater Darfur through joint efforts between SMOH, UNICEF and WHO.