

Sudan Weekly Report on Meningococcal Disease in Northern Sudan

(Epidemiological week no 17: 21-27 April 2007)

Date of reporting: 30 April 2007

1. Overview

From 1 January to 27 April 2007, the Federal Ministry of Health of Sudan reported 1,153 suspected cases of meningococcal disease including 58 deaths (case-fatality rate: 5 %) from 13 out of 15 states in Northern Sudan. So far, since the beginning of this meningitis season, nine sectors (districts having population between 30,000 to 100,000) have exceeded the epidemic threshold¹ (Please see the map below). There are nine other sectors, which have also crossed alert threshold² till the date of reporting. Currently, however, three sectors are over the epidemic threshold and the overall situation remains steady. Except in Saleha IDP camp of South Darfur, the predominant epidemic strain of these localized meningococcal meningitis outbreaks in Northern Sudan is *Neisseria meningitidis serogroup- A*.

**Table-1: Meningococcal disease reported from Northern Sudan
Epidemiological week -17**

States	New cases reported during current week	New deaths reported during current week	CFR (%)	Number of sectors reached/exceeded alert threshold till the current week	Number of sectors reached/exceeded epidemic threshold till the current week	Cumulative * cases upto week no 17	Cumulative deaths upto week no 17	Overall case fatality rate
Kahrtoum	7	0	0%	0	0	457	7	1.5%
Gezira	7	0	0%	3	3	303	21	6.9%
Sinnar	0	0	0%	0	2	123	9	7.3%
Kassala	0	0	0%	2	2	65	4	6.2%
Gederef	2	0	0%	1	1	52	3	5.8%
Blue Nile	0	0	0%	0	0	11	2	18.2%
River Nile	0	0	0%	0	0	1	0	0%
White Nile	0	0	0%	0	0	20	0	0%
South Kordofan	0	0	0%	1	0	14	4	28.6%
North Darfur	0	0	0%	0	0	9	0	0%
South Darfur	0	0	0%	1	0	63	1	1.6%
West Darfur	2	0	0%	0	0	11	2	18.2%
North Kordofan	9	0	0%	1	1	24	5	20.8%
Total	27	0	0%	9	9	1153	58	5 %

Source: Daily Epidemiological Bulletin of Federal Ministry of Health, Sudan .

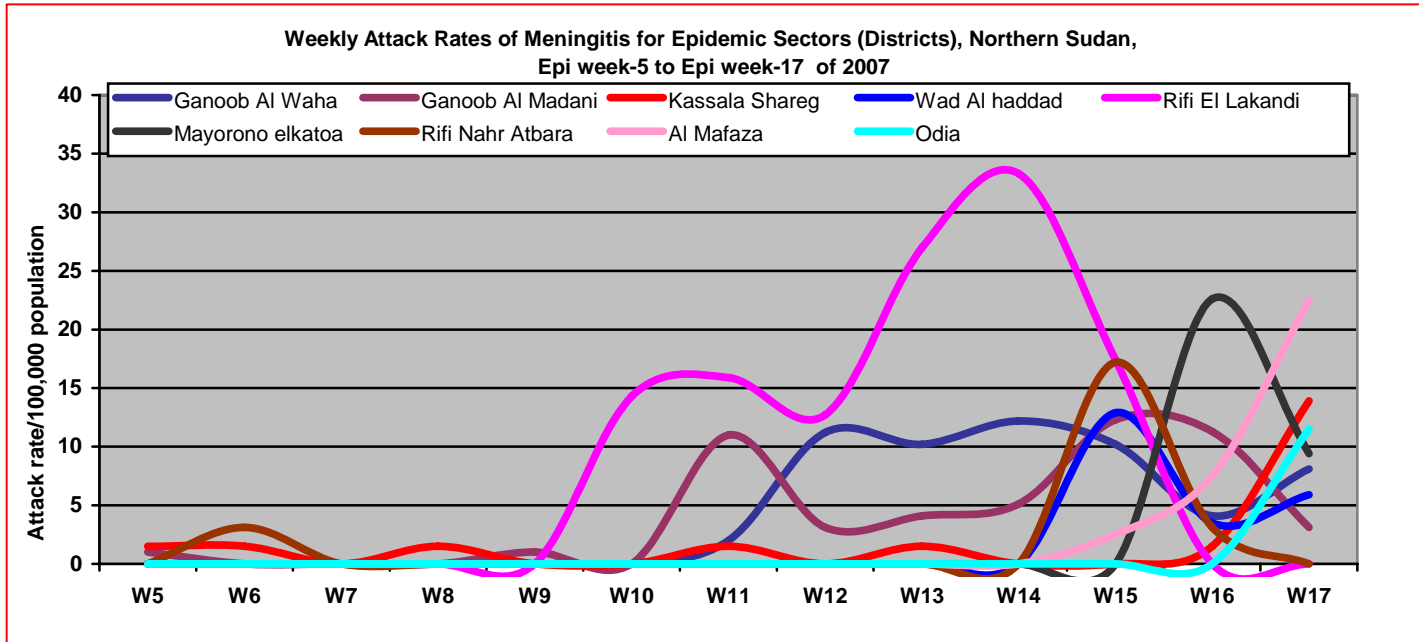
* Some cases were reported retrospectively.

¹ Epidemic threshold (used for detecting meningitis outbreak) for districts with a population between 30,000 to 100,000 is 10 cases/100,000 in a week

² Alert threshold for districts with a population between 30,000 to 100,000 is 5 cases /100,000 in a week

2. Epidemiological situation

So far, nine sectors (districts) in six states have crossed alert threshold (cases more than 5/100,000 in a week) and five sectors in 5 states have crossed epidemic threshold (cases more than 10/100,000 in a week). Although suspected cases were reported from 1 January 2007, the first sector (Rifi El Lakandi of Sinnar state) to cross the epidemic threshold, this year, was observed during epidemiological week no 10 (03-09 March 2007) of 2007 (please see the graph below). Afterwards, other sectors also started to exceed the alert and epidemic threshold in various weeks.



Following successful interventions in the epidemic sectors like mass immunization campaign as well as improvement in case management, the meningitis epidemics are levelling off in these sectors. However new sectors are also reaching/exceeding epidemic threshold every week as the high risk season for meningococcal meningitis epidemic enters a critical stage. In addition, Saleha IDP camp under Yassin locality of South Darfur has also exceeded epidemic threshold during week no 13 when there two laboratory confirmed cases from the same camp in a week. The causative strain of this meningococcal meningitis outbreak in the Saleha IDP camp was found to be *Neisseria meningitidis serogroup-W135*. No cases has, however, been reported from the camp since 02 April 2007 despite active case search which is still ongoing in the camp since the outbreak was confirmed.

3. Laboratory data

Out of 76 cerebrospinal fluid specimens collected from the suspected cases reported from different states, 30 (39%) samples were tested positive. Of the positive samples, 23 (76%) were tested positive for *Neisseria meningitidis serogroup- A* and 7 (24%) samples (All from IDP camps in South Darfur) were positive for *Neisseria meningitidis serogroup- W135*. All tests were done by culture at the National Public Health Laboratory (NPHL), in Khartoum.

Table-2: Number of CSF specimens collected and distribution of positive strains

No of samples collected	No positive	No contaminated	No with no growth	Distribution of positive strains			
				NM A	NM W135	S. Pneomonia	Hib
76	30 (39 %)	21 (28%)	25 (33%)	23	7	0	0

4. Buffer stock

The WHO Country Office has already supported the FMOH of the Government of Sudan to maintain an emergency stockpile of oily chloramphenicol drugs (CAF) as well as outbreak investigation supplies like transport media, LP kits and rapid test kits. In addition, through funding from the European Commission Humanitarian Aid Department (ECHO), WHO is procuring, through UNICEF, 300,000 doses of bivalent vaccines to augment the security stock pile of bivalent vaccines held by the Federal Ministry of Health (FMOH). The current stock position of some of the essential supplies are as follows:

Table-3: Security stockpile of essential drugs and vaccines held by the FMOH

Item	Current stock	Pipeline	Remark
Inj Chloramphenicol (CAF)	5,800 amp	10,000	Donated by WHO through ECHO funding
Inj. Ceftriaxone	8,000	0	WHO
Bivalent Vaccines (AC)	222,400	300,000	Donated by WHO/UNICEF through ECHO funding
Trivalent vaccines	100,000	0	Through ICG

5. Epidemic response

The Federal Ministry of Health has rapidly responded to the situation and stepped up control measures in the affected sectors. Several field investigations have been conducted by the FMOH through mobilization of rapid response teams. Case management has been standardized in all the affected sectors, community mobilization and health education are ongoing and surveillance has been strengthened to ensure early case detection and monitoring of the progression of the disease.

Mass vaccination campaign with bivalent AC vaccines has already started in all the epidemic sectors. So far, 101,903 high risk people (Between 2 to 30 years age group) living in these sectors have been vaccinated. The vaccination coverage achieved so far in these epidemic sectors range between 85 to 96%. These bivalent vaccines are used from the emergency stockpiles held by the Federal Ministry of Health of Sudan.

Another immunization campaign with trivalent ACW vaccines targeting about 55,000 high risk people living in Saleha IDP camp and the adjoining areas of South Darfur will begin on 6 May 2007. The trivalent vaccines have been secured from the International Coordinating Group (ICG) on Vaccine Provision for Epidemic Meningitis Control. The campaign would be supported jointly by WHO, UNICEF and Medecins sans Frontieres (MSF)

Moreover, WHO Country office in Sudan is fully involved in extending its technical support to the FMOH for continued risk assessment as well monitoring the progression of the disease.

