World Health Organization
Regional Office for the Eastern Mediterranean

# Weekly Epidemiological Monitor

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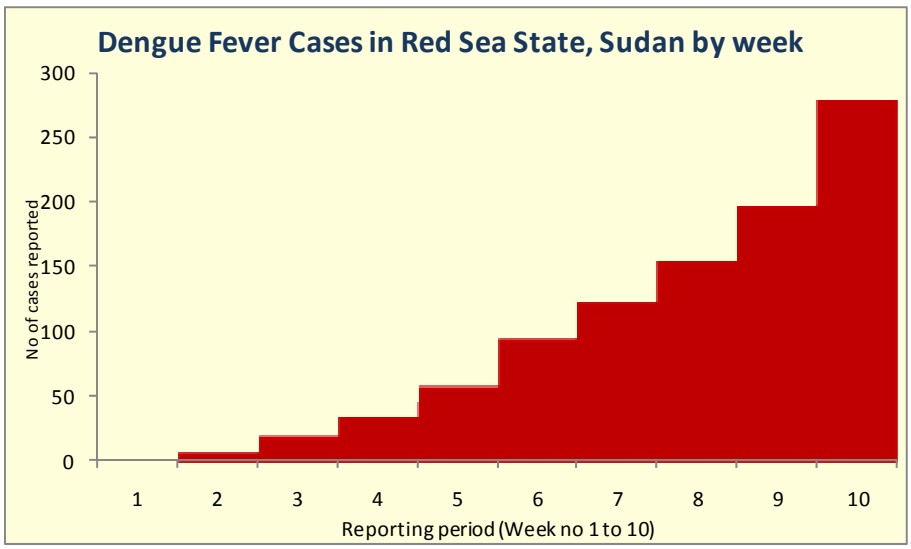
## Current major events

### Dengue Fever in Sudan: Cases continue to rise

Dengue fever (DF) cases continues to rise in Red Sea state of Sudan. Since the beginning of this year until 12 March 2010, a total of 975 suspected cases of Dengue fever including 5 deaths (CFR - 0.5%) were reported from the Red Sea state of Sudan. Many of these DF cases have been laboratory confirmed (68 out of 135 blood samples collected). About one-quarter of these DF cases presented with one or more haemorrhagic manifestations.




## Editorial note

The occurrence of epidemic dengue fever/dengue haemorrhagic fever (DF/DHF) in the Red Sea state of Sudan is not well documented. Epidemics of DF/DHF were reported from Port Sudan, the capital of Red Sea State of Sudan in the past. The isolation of dengue virus was first documented in Port Sudan during the period of 1984 to 1986 when serological evidence found the circulation of dengue virus-2 (DEN-2) amongst 17 patients with febrile illness and dengue virus-1 (DEN-1) in one patient with febrile illness. This year, the total number of cases reported until the first two weeks of March has already exceeded the total numbers reported in the past two years combined together *(Please see the table)*. The laboratory evidence confirmed the circulation of DEN-2 in the port city attributing to this current outbreak this year.

In the last 20 years, the incidence of dengue fever epidemics has increased globally as well as in the Eastern Mediterranean Region and hyperendemic transmission has been established over a geographically expanding area. The risk of sequential infections, and consequently the incidence of DHF, has also risen dramatically.

At the root of the emergence of dengue as a major health problem are changes in human demography and behavior, leading to unchecked populations of and increased exposure to the principal domestic mosquito vector-*Aedes aegypti*.

DF/DHF in Red Sea State of Sudan

| Year | Type of virus | Cases | Deaths | CFR (%) |
|---|---|---|---|---|
| 1984-6 | DEN-1 DEN-2 | 18 | 0 | 0 |
| 2008 | ? | 449 | 25 | 5.5 |
| 2009 | ? | 447 | 6 | 1.3 |
| 2010 (March) | DEN-2 | 975 | 5 | 0.5 |

Modern transportation ensures a rapid transit of both viruses and mosquitoes. Uncontrolled urbanization and a breakdown in the public health infrastructure increase the probability that secondary transmission will occur after a virus is introduced. There is nothing on the horizon that suggests that these ecologic factors, which greatly facilitate transmission, will change in the near future.

The continuous rise in number of DF cases in Port Sudan gives an early signal that the outbreak season, this year, could be prolonged since the high risk season for the epidemic is yet to arrive. While the current focus to contain this outbreak should be on strengthening emergency response to the epidemic, improving case management, intensive social mobilization campaign for avoiding risky behaviour and vector control, in the longer run, the country should focus on effective prevention strategies to reverse this trend of perpetual outbreak of DF/DHF. An integrated vector management programme with maximum community participation may hold the key.

## Update on outbreaks
*in the Eastern Mediterranean Region*

**Avian Influenza A(H5N1)** in Egypt.; **Dengue fever** in Sudan

**Current public health events of international concern**
[cumulative N° of cases (deaths), **CFR %**]

| | |
|---|---|
| **Avian influenza** | |
| Egypt | [106 (32), **30.1%**] |
| Vietnam | [115 (58), **50.4%**] |
| Global total | [488(289), **59.2%**] |
| **Meningococcal meningitis** | |
| Chad | [167 (17), **10.1%**] |
| CAR | [24 (5), **20.**8%] |
| Uganda | [74 (4), **5.4%**] |
| Burkina Faso | [1596 (246), **15.4%**] |
| **Dengue fever** | |
| Sudan | [975 (5), **0.5%**] |
| **Pandemic (H1N1) 2009** | |
| AFRO | No of deaths: 167 |
| AMRO | No of deaths: At least 7576 |
| EMRO | No of deaths: 1019 |
| EURO | No of deaths: At least 4571 |
| SEARO | No of deaths: 1664 |
| WPRO | No of deaths: 1716 |
| **GLOBAL Total** | No of deaths: 16,713 |

*CFR=Case-Fatality Rate*