

Current major event

Dengue fever in Sudan

The Federal Ministry of Health (FMOH) in Sudan recently reported cases of dengue fever (DF) from Red Sea state. As of 17 June, 2014, a total of 738 cases with six deaths (CFR 0.81%) have been reported. 48 laboratory samples were tested positive for DF by ELISA.

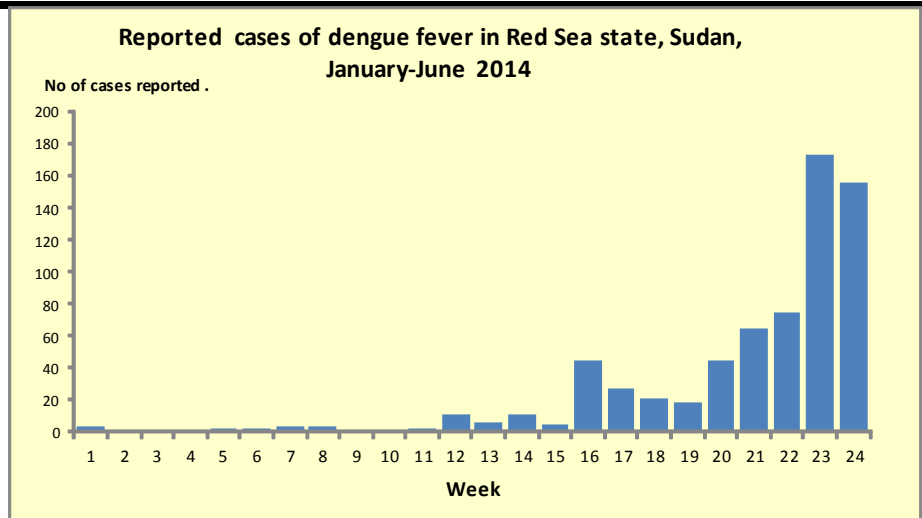
Editorial note

The Red Sea State in Sudan has been experiencing repeated DF outbreaks since 2003. During the past years, the predominantly circulating dengue viruses serotypes causing epidemic were DEN-2 and DEN-3. The first documented DF outbreak in this area of Sudan, however, was in 1984 caused by both DEN-1 and DEN-2 viruses.

During the recent time, the incidence of dengue has increased dramatically in the world. Nowadays, over 40% of the world's population are at risk from DF. Almost 100 countries around the world are endemic with active circulation of the virus.

At least 6 countries in the region have reported DF cases in the past. Most of these countries are surrounding the Red Sea rim (Djibouti, Saudi Arabia, Somalia, Sudan and Yemen). In addition, Pakistan is also an endemic country for DF. There were 2 reported DF cases among Italian travelers who returned from Egypt in 2010, although the country was free from the disease for a long period.

In Sudan, particularly in the Red Sea state, some factors contributed to the persistence of the circulation of DF viruses. One of these factors are the practice of domestic water storage in addition to the presence of stagnant water around the residential areas during the rainy season. These factors enhance increased breeding of the mosquito vector - *Aedes aegypti* that is responsible for transmission of DENG virus in the area. The circulation of more than one dengue virus serotype at the same time also enhance the risk of severe dengue amongst the cases. Although recovery



Year *	Cases	Deaths	CFR%
2003	366	-	-
2004	127	-	-
2005	233	-	-
2006	7	-	-
2007	-	-	-
2008	449	25	5.6
2009	447	6	1.3
2010	4008	12	0.3
2011	257	10	3.9
2012	59	2	3.4

* Reports of some reporting years were not available

from one serotype provides lifelong immunity against the particular serotype and partial cross immunity to others, but subsequent infection by other serotypes increase the risk of developing severe dengue.

Since no specific treatment and no vaccines are currently available for DF, efforts should be put on other important public health interventions like vector control for source reduction, social and behavioral interventions by the at-risk community for prevention and control of the spread and transmission of DENG virus during the high risk season. Inter-sectoral coordination, Strengthening of the surveillance system so as to early detect any outbreak of DF and appropriate case management during an outbreak should also be apart of the outbreak response operations.

Update on outbreaks in the Eastern Mediterranean Region

MERS-CoV in Saudi Arabia

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

Avian Influenza A (H5N1): 2003-2014
Egypt [175 (63), 36%]

MERS-CoV: 2012-2014
Saudi Arabia [590 (256), 43.4%]
Jordan [11 (6), 54.5%]
Oman [2 (2), 100%]
UAE [67 (8), 11.9%]
Kuwait [3 (1), 33.3%]
Tunisia [3 (1), 33.3%]
Yemen [1 (1), 100%]
Iran [3 (1), 33.3%]

Ebola Hemorrhagic Fever: 2014
Guinea [351 (226), 64.4%]
Liberia [12 (11), 91.7%]
Sierra Leone [89 (7), 7.9%]

Wild poliovirus: 2012-2014
Pakistan [222 (0), 0%]

Dengue Fever: 2014
Sudan [681 (6), 0.9%]

Cholera 2014
South Sudan [2003 (42), 2.1%]

CFR=Case-Fatality Rate; # Suspected cases