

Current major event

Dengue fever Sudan

The Federal Ministry of Health, Republic of Sudan has recently declared an outbreak of dengue fever in Kassala State that started from August 8, 2019. Between August 8 and October 13, 2019, a total 142 cases of suspected dengue fever with one associated death was reported from two states; Kassala and North Darfur. The outbreak has been laboratory-confirmed with 31 samples out of 77 collected testing positive for dengue.

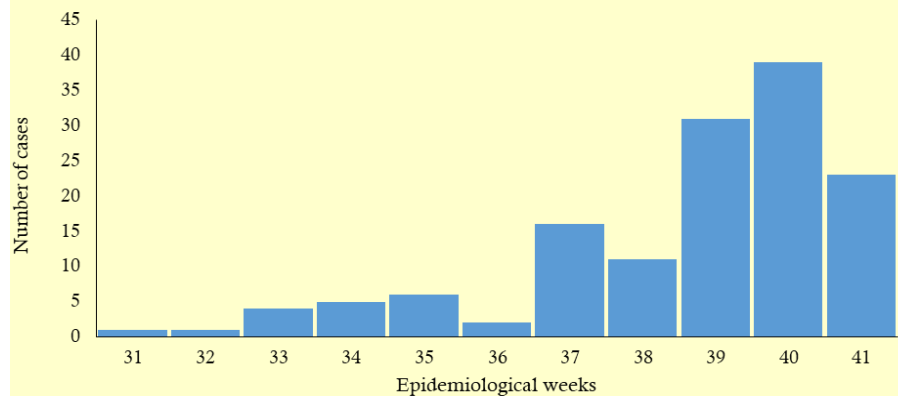
Editorial note

Dengue fever is mosquito-borne disease and the dengue viruses are the most prevalent emerging arboviruses. It is the most rapidly spreading arbovirus worldwide and is endemic in every inhabited region of the world. There are 4 distinct, but closely related, serotypes of the virus that cause dengue (DEN-1, DEN-2, DEN-3 and DEN-4). Recovery from infection by one provides lifelong immunity against that particular serotype. However, cross-immunity to the other serotypes after recovery is only partial and temporary. Subsequent infections by other serotypes increase the risk of developing severe dengue.

In Sudan, dengue is an endemic disease and is considered a major public health threat. Over the past 20 years, major outbreaks of dengue fever have occurred in different parts of the country causing significant morbidity and mortality. The Eastern part of Sudan, particularly Red Sea and Kassala are the most affected states. In recent years, these states have experienced frequent outbreaks of dengue throughout the year including dengue hemorrhagic fever.

During 2019, a total of 142 cases of suspected dengue fever and one associated death was reported from two states. The cases were first reported from Kassala during week 31 and afterwards also from North Darfur, with the peak of reported cases occurring during week 40 (See graph). There are 5 localities of two states reporting DF cases. The majority of cases were reported from Kassala state (125) followed by North Darfur (17) state. Among all cases, 62% are female and the age group most affected is 5-30 years of age. There is one death reported from North Darfur states of the country. Blood samples were collected from 77 patients from two states, 31 came positive and 41 negative by ELISA and PCR, as reported

Dengue fever cases reported from week 31 to week 41 2019, Sudan



Source: Federal Ministry of Health, Republic of Sudan

Distribution of dengue fever cases by geographical distribution

State	Locality	Cases	Laboratory findings		
			# samples collected	Positive	Negative
Kassala	Kassala	112	62	29	33
	West Kassala	8			
	Rural Kassala	5			
North Darfur	Maliet	2	15	2	8
	Al fashar	15			
Total		142	77	31	41

ed by the National Public Health Laboratory of Sudan. (See table).

The FMOH of Sudan is focusing on vector control activities, health education, surveillance, proper use of insecticide-treated mosquito nets, case management, coordination and health staff and health system capacity building.

As per the outbreak response activities, entomological survey is ongoing in the country and the results are showing that one third of the houses in Kassala City harbored breeding sites for *Aedes* mosquitoes. According to a report from Sudan's Federal Ministry of Health, *Aedes aegypti* was also detected in majority states of Sudan which puts Sudan at risk of transmission for the disease.

As there is no specific treatment for dengue fever, but early detection and access to proper medical care lowers fatality rates below 1%. Therefore, there is an urgent need for strengthening the surveillance, prevention and control measures for dengue fever infection. Dengue prevention and control depends on extensive community engagement and effective integrated vector control measures especially source reduction.

Update on outbreaks

in the Eastern Mediterranean Region

MERS in Saudi Arabia; **cholera** in Somalia; **cholera** in Yemen; **cholera** in Sudan ; **Multi drug-resistant typhoid fever** in Pakistan; **Rift Valley fever** in Sudan

Current public health events of concern

[cumulative N° of cases (deaths), CFR %]

Avian influenza: 2006-2017

Egypt (A/H5N1) [359 (122), 33.98%]

Egypt (A/H9N2) [4 (0)]

Ebola virus disease (EVD): 2018-2019

Democratic Republic of Congo (DRC) [3 218 (2 150), 66.81%]

Cholera: 2017-2019

Somalia [8 832 (46), 0.52%]

Yemen [2 113 289 (3 656), 0.17%]

Sudan [288 (8), 2.80%]

Diphtheria: 2018-2019

Yemen [3 906 (218), 5.58%]

Bangladesh [8 789 (45), 0.51%]

MERS: 2012-2019

Saudi Arabia [2 077 (773), 37.22%]

Multidrug-resistant typhoid fever: 2016-2019

Pakistan [11 209 (0)]

Rift Valley fever: 2019

Sudan [76 (2), 2.63%]