

Current major event

Unknown VHF in Sudan

An outbreak of Viral Haemorrhagic Fever (VHF) of unknown illness has been reported from Darfur in Sudan. Between 30 August to 27 November 2015, a total of 469 suspected cases of VHF including 120 deaths (CFR: 26%) were reported from 27 localities in Greater Darfur.

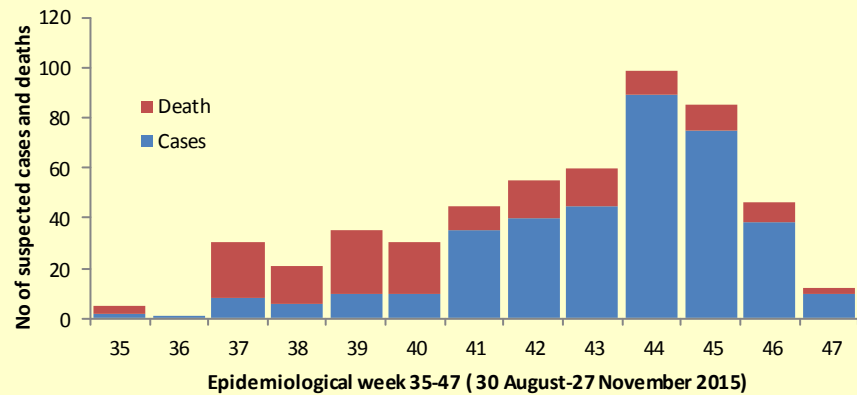
Editorial note

This is the fifth time that Sudan has reported an outbreak of viral haemorrhagic fever (VHF) in last 10 years (*please see the table*). In all these outbreaks of VHF, high mortality rate was observed in the past. The current outbreak probably started during the epidemiological week of 35 (during the month of August) and still continuing (*please see the graph*) without showing any sign of abating.

Laboratory analysis of 84 blood samples collected from cases and tested at the Central Public Health Laboratory of Sudan revealed 6 samples positive for Dengue fever and 8 samples positive for West Nile virus and one sample positive for Chikungunya fever. However, these samples were shipped to the Pasteur Institute in Dakar which is also the WHO Collaborating Centre for arboviral haemorrhagic fever for re-testing. The test result performed at this Pasteur Institute on these samples was inconclusive. All the samples were found negative by rt-PCR, for Ebola Sudan, Ebola Zaire, Marburg virus, Rift Valley Fever, Crimean-Congo haemorrhagic fever, West Nile, Chikungunya, Yellow Fever, and Zika viruses.

The areas in Darfur from where these suspected VHF cases are reported was the foci of a big epidemic of Yellow fever (YF) in 2012. This was the biggest YF outbreak in Africa in recent time with a total of 849 cases including 171 deaths. Following this outbreak, the whole population of Greater Darfur was vaccinated against YF following a mass reactive immunization campaign. This makes Yellow fever a less likely potential cause of the present outbreak of VHF in Darfur.

Reported cases and deaths from unknown VHF, Darfur, Sudan, epidemiological week no 35 to 47, 2015



Reported VHF outbreak in Sudan in the past (2005-2015)

Year	Diagnosis	Case	Death	CFR (%)
2005	Yellow fever	615	183	30
2007	Rift Valley fever	723	230	32
2012	Yellow fever	849	171	20
2013	Yellow fever	22	8	40
2015	Unknown	469	120	26

The aetiology of the current outbreak of VHF, since remains unknown, is a concern. At the initial stage of the outbreak high densities of *Aedes aegypti* mosquitos were detected during the field investigation, particularly from the areas where the suspected cases were reported. Although no human-to-human transmission has been reported amongst the reported suspected cases, the fact that a number of cases are presenting with bleeding manifestations and high death rates amongst the reported cases have been reported, the situation remains a public health concern.

At the moment, what is important is to collect more samples from the geographically represented cases and screen and test these fresh samples for all arboviral disease as well as for other bacteriological conditions that may also cause haemorrhagic manifestations for example leptospirosis, louse borne-relapsing fever or similar other conditions like borrelias. At the same time, all efforts should also continue to improve case management and enhance surveillance.

Update on outbreaks

in the Eastern Mediterranean Region

MERS-CoV in Saudi Arabia; Cholera in Iraq

Current public health events of international concern

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

Avian Influenza : 2006-2015

Egypt (A/H5N1)	[346 (117), 33.8%]
Egypt (A/H9N2)	[3 (0)]

MERS-CoV: 2012-2015

Saudi Arabia	[1277 (549), 42.9%]
Jordan	[18 (8), 44%]
Oman	[6 (3), 50%]
UAE	[75 (10), 13.3%]
Kuwait	[3 (1), 33.3%]
Republic of Korea	[186 (36), 19.3%]
Qatar	[12 (4), 33.3%]
Iran	[6 (2), 33.3%]

Cholera

Iraq	[4915 (2)]
Tanzania	[9871 (150), 1.5%]

Ebola Virus Disease: 2014-2015

Guinea	[3804 (2536), 66.6%]
Liberia	[10666 (4806), 45%]
Sierra Leone	[14122 (3955), 28%]

Viral Haemorrhagic Fever (of unknown aetiology)

Sudan	[469 (120), 26%]
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Wild poliovirus: 2015

Pakistan	[49 (0)]
Afghanistan	[17(0)]

Dengue

Egypt	[253(0)]
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