

Current major event

Arboviral diseases in the EMR and the threat of ZIKV transmission

With the recent declaration of reported clusters of microcephaly and other neurological disorders, suspected to be associated with Zika virus (ZIKV) transmission, as a public health emergency of international concern (PHEIC), the focus has now been on the arboviruses transmitted by the same *Aedes* mosquitoes in the past.

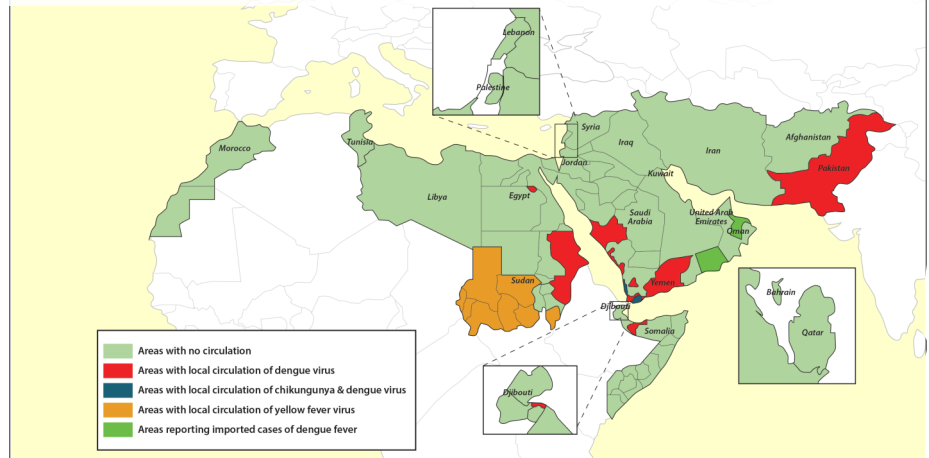
Editorial note

The Zika virus became the latest threat to global health security when the Director General of WHO declared on 1 February 2016 that recently reported clusters of microcephaly and other neurological disorders reported in Brazil constitute a Public Health Emergency of International Concern (PHEIC).

The Zika virus is a mosquito-borne arbovirus. The *Aedes* mosquitoes that primarily transmit the Zika virus infection to humans have been found to have existed in a number of countries in the Eastern Mediterranean Region (EMR) of WHO that includes Djibouti, Egypt, Oman, Pakistan, Saudi Arabia, Somalia, Sudan and Yemen. Sporadic cases of dengue fever, either locally transmitted or imported, have been reported from Djibouti, Egypt, and Oman while explosive outbreaks of dengue fever were reported, in the past, from Pakistan, Sudan and Yemen, chikungunya fever from Yemen and yellow fever from Sudan (*Please see the table and the map above*). These outbreaks have been propagated by high densities of *Aedes* mosquitoes.

The presence of *Aedes* mosquitoes in countries where outbreaks of arboviral diseases have been reported in the past, has the highest risk of local transmission of ZIKAV infection once the virus is introduced in these countries. Accordingly what would be important in these countries would be to enhance both epidemiological and entomological surveillance between now and the coming rainy seasons. Such efforts should be directed to early identification and recognition of clusters of Zika virus

Arboviral diseases reported in the Eastern Mediterranean Region in recent past



Some major outbreaks of arboviral diseases reported in the EMR

Disease	Country	Year	Cases	Death
Chikungunya	Yemen	2010	> 15,000	> 100
	Yemen	2012	234	-
Dengue	Sudan	2014	312	12
	Sudan	2010	3765	?
	Yemen	2010	914	> 20
	Pakistan	2011	452862	203
	Pakistan	2013	9022	36
Yellow fever	Sudan	2012	849	170

transmission as well as identification of any abnormal or sudden increase of congenital birth defect for which no plausible reasons could be explained.

As the density of *Aedes* mosquitoes is expected to peak during the rainy seasons, necessary vector control efforts need to be directed to reduce the potential breeding sites of adult mosquito populations or their interactions with human below a level which can no longer sustain an epidemic.

In addition, syndromic surveillance system for clusters of acute febrile illness covering symptoms for arboviral infections in areas of high vector densities need to be established. This type of surveillance along with event-based surveillance (EBS) system would be essential to early detect any sign of introduction or local transmission of ZIKV. All efforts should be directed to early detect and contain local transmission from ZIKV as soon as the signs of such appear.

Update on outbreaks

in the Eastern Mediterranean Region

MERS-CoV in Saudi Arabia; viral haemorrhagic fever of unknown aetiology in Sudan

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

Avian Influenza : 2006-2016

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

MERS-CoV: 2012-2016

Saudi Arabia	[1277 (549), 42.9%]
Jordan	[39 (12), 31%]
Oman	[7 (3), 42.8%]
UAE	[78 (11), 14.1%]
Kuwait	[3 (1), 33.3%]
Republic of Korea	[186 (36), 19.3%]
Qatar	[14 (5), 35%]
Iran	[6 (2), 33.3%]

Lassa fever: 2015-2016

Nigeria	[159(82), 51.5%]
Benin	[71 (23),32.3%

Ebola Virus Disease: 2014-2016

Guinea	[3804 (2536),66.6%]
Liberia	[10675 (4809),45%]
Sierra Leone	[14124 (3956),28%]

Viral Haemorrhagic Fever (of unknown aetiology)

Sudan	[561 (101),18%]
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Wild poliovirus: 2014-2016

Pakistan	[360 (0)]
Afghanistan	[47(0)]