

Current major event

Potential link between Zika Virus Infection and microcephaly: Implications for Eastern Mediterranean Region

New evidence has now emerged about the causal association between Zika virus infection (ZIKV) and microcephaly and other types of congenital malformations in newborns.

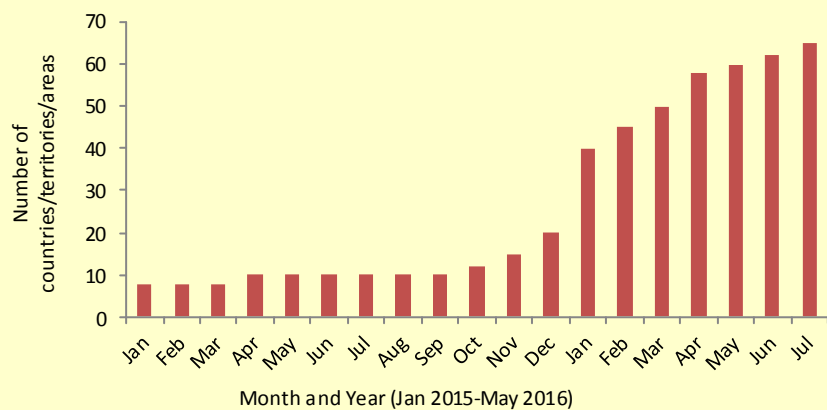
Editorial note

Since WHO declared that the association between Zika and the cluster of microcephaly cases and other neurologic disorders reported in Brazil, following a similar cluster in French Polynesia, constituted a Public Health Emergency of International Concern. A flurry of studies followed, as newborns, miscarriages, and stillbirths with brain abnormalities and their mothers were investigated. Zika was detected in amniotic fluid, the placenta, the umbilical cord, fetal blood, and fetal brain tissue. Many of these studies excluded co-infection with dengue and chikungunya and eliminated other known infectious causes of microcephaly, strengthening the evidence of causality. Further evidence came from laboratory studies demonstrating that Zika is neurotropic, meaning that it preferentially affects brain cells.

In children and adults, the full spectrum of effects on the central nervous system is likely yet to be discovered, as hinted by case reports of inflammation of the spinal cord, and cases consistent with a syndrome involving inflammation of the spinal cord and brain that resembles multiple sclerosis. For newborns, many experts believe that a virus capable of causing such severe abnormalities is likely to cause additional neurological problems as children develop.

Based on these and other studies, WHO concluded at the end of March 2016 that there is scientific consensus that Zika virus is a cause of microcephaly and Guillain-Barré syndrome. So far, cases of microcephaly and/or Central Nervous System (CNS) malformation cases that are thought to be potentially associated with ZIKV had been reported in Brazil, Cabo Verde, Colombia, Panama French

Cumulative number of countries, territories and areas reporting Zika virus transmission, Jan 2015 to July 2016



Countries and Territories that have reported microcephaly and/or CNS malformation cases potentially associated with ZIKV

Reporting Countries or territories	Number of microcephaly and/or CNS malformations suggestive of associated with ZIKV
Brazil	2063
Cabo Verde	9
Colombia	47
Dominican Republic	10
Guatemala	15
Spain	2
Thailand	2
USA	28

Polynesia, Spain, Thailand, USA etc (Please the box). A subsequent paper by scientists from the US Centers for Disease Control and Prevention, published in April 2016 in the New England Journal of Medicine, put to rest remaining doubts about the causal association between Zika infection during pregnancy and microcephaly in newborns.

Now that the causality between ZIKV infection and microcephaly and other types of congenital malformations in newborns have been established, it is also important that the countries of the EMR should introduce and enhance surveillance for microcephaly and Guillain-Barré syndrome in newborns particularly in countries with high risk of importation of ZIKV infection using both formal and informal mechanisms.

Update on outbreaks in the Eastern Mediterranean Region

MERS-CoV in Saudi Arabia;; Cholera in Somalia.

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

Avian Influenza : 2006-2016

Egypt (A/H5N1) [350 (117), 33.4%]
Egypt (A/H9N2) [3 (0)]

MERS-CoV: 2012-2016

Saudi Arabia [1414 (601), 42.5%]
Bahrain [1 (1), 100%]

Cholera : 2016

Somalia [8838 (433), 4.9%]

Yellow fever: 2015-2016

Angola [3137 (345), 10.9%]
DRC [1644 (71), 4.3%]

Lassa fever : 2015-2016

Nigeria [273(149), 54.5%]
Benin [54(28),51.8%]

Avian Influenza A (H7N9) : 2013-2016

China [775 (307),39.6%]

Avian Influenza A (H5N6) : 2016

China [4 (0)]

Wild poliovirus: 2014-2016

Pakistan [371(0)]
Afghanistan [54(0)]

Zika Virus Infection: 2007-2016

60 countries and territories have reported transmission so far