World Health Organization
Regional Office for the Eastern Mediterranean

# Weekly Epidemiological Monitor

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## Current major event

### Chikungunya Outbreak in Pakistan

The Chikungunya outbreak reported from Pakistan *(Please see weekly epidemiological monitor-issue no 01; volume-10; 01 January 2017)* showed a slight peak in recent time with additional cases reported. A total of 2,267 cases were notified to WHO from 19 December 2016 to 05 May 2017. All the cases have been reported from Karachi, Sindh Province.

## Editorial note

Chikungunya virus (CHIKV) belongs the genus *alphavirus* genus in the family *Togaviridae*. CHIKV disease is a febrile illness characterized by debilitating and prolonged arthralgic syndrome that primarily affects the peripheral small joints. While the acute febrile phase of the illness normally resolves within a few days, the joint pains typically persists for weeks or months.

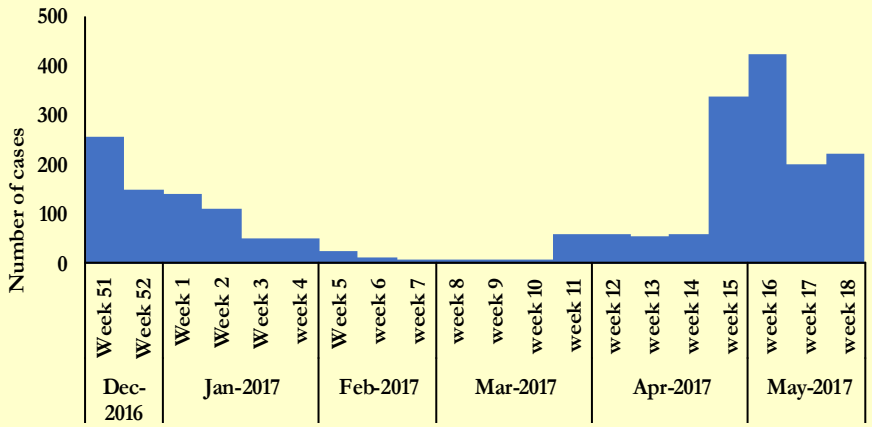
CHIKV disease is also a vector borne disease transmitted by *Aedes Aegypti* mosquito. Incubation period of the disease lasts from 3-11 days. There is no evidence of person to person transmission. All infected person recover from the disease followed by lasting homologous immunity.

Since the outbreak was first reported in December last year, Pakistan has reported a total of 2,266 cases as of 5 May 2017. The outbreak has been concentrated in Karachi city of Sindh province in the southern part of the country. The outbreak is far from being controlled as 221 new cases were reported during the week of 24 April to 5 May 2017.

The distribution of the infection shows a clustering pattern in 4 districts in Karachi that have reported the cases so far. Bin Qasim town in Malir district has been the most affected with 885 reported cases followed by Malir Town in Korangi district with 712 cases so far. The focal and clustering nature of the outbreak suggests that risk factors and increased vector activity may be localized in these areas of high transmission. These areas should be targeted with appropriate inventions including vector control and personal protective measures. The age distribution of the diseases *(please see the table)* suggest presence of differential immunity among the affected population. The younger 1-19 years age group appears to have lowest rate of transmission (AR=0.007%) perhaps from a combination of previous exposure and acquired maternal antibodies. The older- over 59 years age group had the second lowest attack rate (AR=0.009%) perhaps due to repeated previous exposure. The highest transmission was observed in the 20-59 years age group; this may be due to waning immunity from previous exposure or due to circulation of new strain of the virus.

As there is no vaccine against CHIKV infection, vector control measures should be intensified and at risk population should adopt appropriate protective measures. The most appropriate measure would be source reduction through community engagement.

**Chikungunya cases reported from Pakistan, 19-December 2016 to 05-May 2017**




**CHIKV cases in Karachi, Pakistan by age group from 19 Dec 2016 – 5 May 2017**

| Age group | Pop. (ml) | Cases | AR (%) |
|---|---|---|---|
| 1-19yrs | 10.6 | 804 | 0.007 |
| 20-39yrs | 5.5 | 896 | 0.02 |
| 40-59yrs | 3.0 | 452 | 0.01 |
| >59yrs | 1.1 | 103 | 0.009 |
| **Total** | **20.2** | **2266** | **0.01** |

## Update on outbreaks

*in the Eastern Mediterranean Region*

**MERS-CoV** in Saudi Arabia; Cholera in Somalia; Cholera in Yemen; Chikungunya in Pakistan.

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

| | |
|---|---|
| **Avian Influenza: 2006-2017** | |
| Egypt (A/H5N1) | [359 (122), 34%] |
| Egypt (A/H9N2) | [3 (0) ] |
| **Chikungunya: 2016-2017** | |
| Pakistan | [2,267 (0) ] |
| **MERS-CoV: 2012-2017** | |
| Saudi Arabia | [1,586 (640), 40.4%] |
| **Cholera: 2016-2017** | |
| Somalia | [29,140 (628), 2.2%] |
| Yemen | [24,506 (108), 0.44%] |
| **Meningococcal disease: 2017** | |
| Nigeria | [8,057 (745), 9.3%] |
| **Avian Influenza A (H7N9): 2013-2017** | |
| China | [1,320 (492), 37.3%] |
| **Yellow fever** | |
| Brazil | [1,561 (264), 16.9%] |
| **Wild poliovirus: 2014-2017** | |
| Pakistan | [382 (0) ] |
| Afghanistan | [64 (0) ] |
| **Zika Virus Infection: 2015-2017** | |
| 84 countries and territories have reported transmission so far. | |