

Current major event

MERS infections reported in healthcare workers in 2018

From January to March 2018, a total of 63 laboratory-confirmed cases of Middle East respiratory syndrome (MERS) including 18 deaths (CFR=28.6%) were reported by the Ministry of Health (MOH) of Saudi Arabia. The reported cases included related clusters of 10 cases and 4 deaths in two hospitals. Three of these cases were health-care workers (HCW).

Editorial note

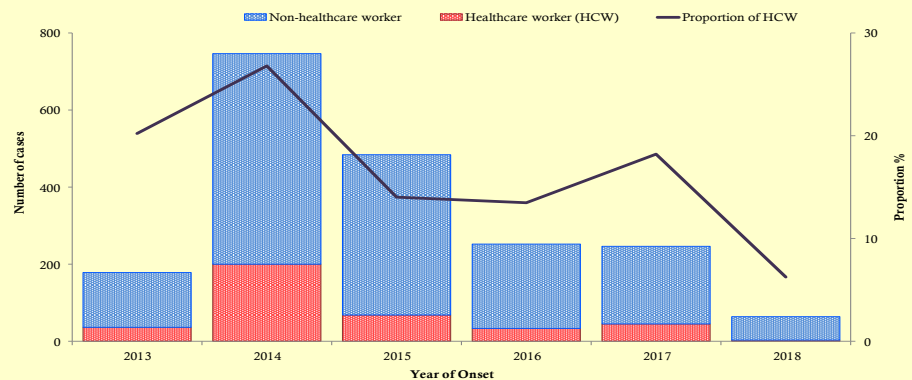
MERS, an emerging viral respiratory disease, was first identified in Saudi Arabia in 2012. Since its emergence, a total of 2,199 laboratory confirmed cases including 783 associated deaths have been reported globally. This represents a high cumulative case-fatality rate (CFR) of 35.6% for the disease. Saudi Arabia has had the highest burden of the disease accounting for more than 82% of the reported cases to date.

There has been a significant drop in the general trend of the incidence of MERS infection in Saudi Arabia since 2012, and the frequency and magnitude of reported hospital outbreaks of the disease have significantly reduced over the past three years. However, hospital outbreaks have continued to occur and transmission of the disease among health care workers in particular remains a cause for great concern.

From 2013 to March 2018, 18% of the MERS cases that were reported globally were among healthcare workers (HCWs). Since the beginning of 2018, small sized hospital outbreaks have characterized MERS' occurrence in Saudi Arabia (see the table). Transmission of MERS among healthcare workers in Saudi Arabia and elsewhere has generally been associated with hospital outbreaks. During 2018, 3 out of 10 reported lab confirmed MERS cases were health care workers.

Even though the proportion of reported cases of MERS among healthcare workers continue to decline from one year to another (see the graph), the situation is yet to be reversed. Since the emergence of Middle East Respiratory Syndrome coronavirus (MERS-CoV) in September 2012, the highest proportion of cases among healthcare workers (27%) was reported in 2014. This was possibly attributed to one of the biggest hospital outbreaks of

Distribution of healthcare workers among MERS cases reported in Saudi Arabia, 2013- March 2018



Cases and deaths reported from hospital outbreaks of MERS, Jan-April, 2018

	Survived	Died	HCW	Total
First outbreak (Jan)	3	1	3	4
Second outbreak (Feb-Mar)	3	3	0	6
Total	6	4	3	10

MERS reported in Jeddah, in Kingdom of Saudi Arabia. As hospital outbreaks continued to occur in 2015, 2016 and in 2017, though smaller in size and frequency, healthcare workers continued to be infected. During the current year in 2018 till the month of March, a very low number of healthcare workers (6%) were infected.

One of the other mysteries in the "puzzle" is that a number of these healthcare workers who are laboratory-confirmed as MERS show no symptoms (Asymptomatic). The reported number of "asymptomatic" healthcare workers from hospital outbreaks in Saudi Arabia has been increasing owing to aggressive policy of the government on contact tracing and mandatory testing of all healthcare workers who have presumably been occupationally exposed to a case of MERS. While research efforts to identify determinants of transmissibility of MERS in healthcare settings are ongoing, the role of "asymptomatic" cases of the MERS in onward transmission of the virus is still poorly understood.

The current situation underscores the importance of proper infection prevention and control (IPC) practices at the hospitals to be consistently and systematically applied in all healthcare settings irrespective of the diagnosis of the patient presenting to a hospital.

Update on outbreaks in the Eastern Mediterranean Region

MERS in Saudi Arabia; **cholera** in Somalia; **cholera** in Yemen; **dengue** in Sudan.

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) [4 (0)]

Avian influenza A (H7N9): 2013-2017

China [1,565 (612), 39.1%]

Chikungunya: 2016-2018

Pakistan [8,521 (0)]

Cholera: 2017-2018

Somalia [2,460 (11), 0.4%]
Yemen [1,091,288 (2,275), 0.2%]

Diphtheria: 2018

Yemen [1,633 (88), 5.3%]
Bangladesh [6,687 (42), 0.6%]

Dengue fever: 2017-2018

Sudan [233 (3), 1.2%]

MERS: 2012-2018

Saudi Arabia [1,823 (709), 38.9%]

Wild poliovirus: 2018

Afghanistan [7 (0)]
Pakistan [1 (0)]

Yellow Fever: 2017-2018

Brazil [1,157 (342)] 29.5%