

## Current major event

### Hospital Outbreaks of MERS in 2017

In 2017, a total of 226 laboratory-confirmed cases of Middle East respiratory syndrome (MERS) including 59 deaths (CFR:26%) were reported in Saudi Arabia. Among those cases, there were 91 cases with 12 associated deaths reported from eight hospital outbreaks. 41 cases out of these 91 (45%) were reported to be 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 2,127 laboratory confirmed cases including 757 associated deaths with a case-fatality ratio (CFR) of 35.5% were reported globally. Saudi Arabia carries more than 80% of the global case burden.

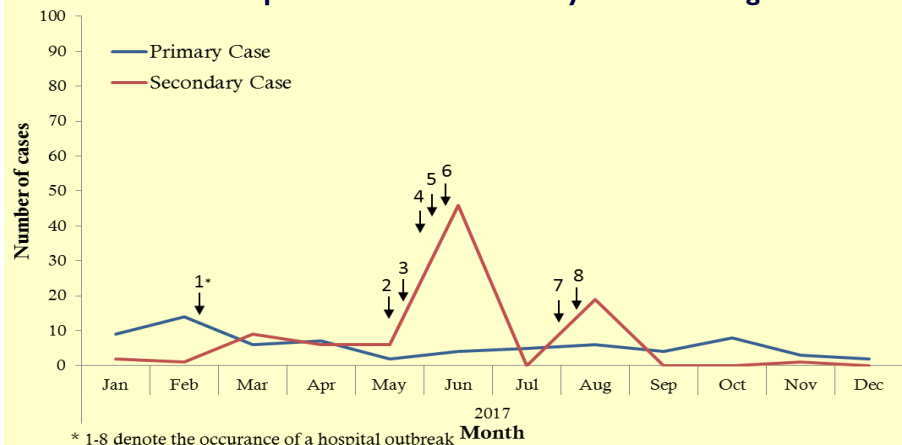
While sporadic cases of MERS continue to occur in communities exposed to camels, clusters of cases are primarily being reported throughout healthcare settings. This particular trend has been continuing since the first appearance of this novel respiratory pathogen in 2012. It is still unclear why such clusters do not occur in the communities; the virus (MERS-CoV) seems to be more transmissible in hospital settings.

In 2017, frequent occurrences of small sized hospital outbreaks characterized MERS' occurrence in Saudi Arabia. There was a significant drop in the frequency and magnitude of hospital outbreaks from MERS reported in 2015 and 2016. However, a total of eight hospital outbreaks were reported in 2017 (*see graph*) raising the fear once again about infection prevention and control (IPC) measures in the hospitals. Perhaps, the complacency and consistency in their application have not yet been addressed completely.

Although the hospital outbreak sizes were small, in terms of numbers of secondary cases, the high frequency of their occurrence this year (2017) has become a matter of concern. Furthermore, the fact that 41 (45%) of the cases were HCW is even more alarming (*see table*).

Transmission of MERS among HCW in Saudi Arabia and elsewhere has always been associated with hospital outbreaks. From 2013 to 2017, 23% of the MERS

### MERS cases reported in Saudi Arabia by month during 2017



### MERS cases and deaths from hospital outbreaks in Saudi Arabia, 2017

Month	Survived	Died	HCW	Total
Feb	2	0	0	2
Mar	8	0	2	8
Apr	5	1	1	6
May	5	3	4	8
Jun	40	7	26	47
Jul	0	1	0	1
Aug	19	0	8	19
<b>Total</b>	<b>79</b>	<b>12</b>	<b>41</b>	<b>91</b>

cases that are reported globally are HCWs. Many of these HCWs are also reported to be "asymptomatic". While we continue to unearth the knowledge on the transmissibility of this virus in healthcare settings, it is still not clear what role these "asymptomatic" cases play in the MERS transmission chain.

Some of the 41 HCWs affected in Saudi Arabia have also been reported to be "asymptomatic". Recently, the reported number of "asymptomatic" HCWs from hospital outbreaks has been increasing, owing to Saudi Arabia's aggressive policy for contact tracing and mandatory testing of MERS for all HCWs who have presumably been occupationally exposed to a case of MERS.

MERS-CoV remains an opportunistic virus. IPC practices have improved in Saudi Arabia, as evidenced by the small sizes of the hospital outbreaks. However, despite that, the current situation also suggests that the standard IPC practices and measures need to be consistently and systematically applied in all healthcare settings to prevent these recurrent threats.

### 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 [8,462 (0)]

#### Cholera: 2017-2018

Somalia (2018) [268 (1), 0.4%]

Yemen [1,046,674 (2248), 0.21%]

#### Diphtheria: 2018

Yemen [799 (54), 6.75%]

Bangladesh [4,907 (35), 0.71%]

#### Dengue fever: 2017-2018

Sudan [197 (3), 1.5%]

#### MERS: 2012-2018

Saudi Arabia [1,753 (683), 38.9%]

#### Wild poliovirus: 2018

Afghanistan [1 (0)]

#### Yellow Fever: 2017-2018

Brazil [145 (20)] 13.7%