

Current major event

Avian influenza in Egypt: Sporadic cases reported in 2016

Human cases of avian influenza A (H5N1) continue to be reported sporadically in Egypt. A total of ten (10) cases were reported during the period from 1 January 2016 to 30 September 2016, including four deaths (case-fatality rate: 40%). The last case was reported in Egypt on 28 July 2016.

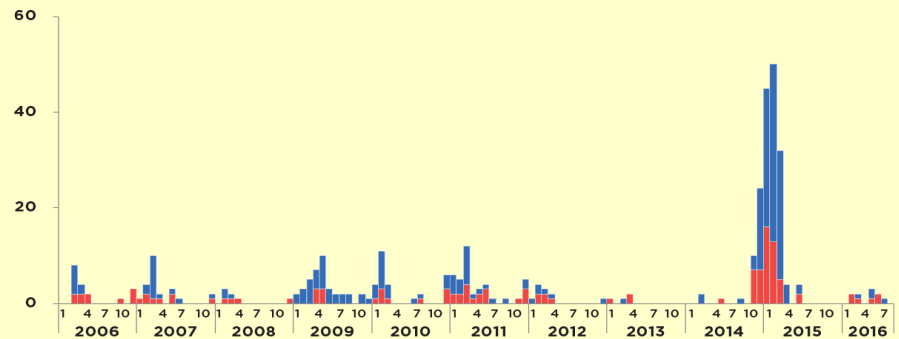
Editorial note

A total of 356 human cases of avian influenza A (H5N1) including 121 deaths have been reported in Egypt till 28 July 2016 since 09 March 2006 when the first human case of avian influenza A (H5N1) was reported in Egypt. This year, only 10 human infections were reported as opposed to a surge of human cases of avian influenza reported in Egypt during 2014-15 when 163 cases including 47 deaths were reported during the period from November 2014 to April 2015.

Avian influenza A (H5N1) infections remain a pandemic threat ever since the first few cases were reported globally in late 1990s. Although the virus has not since changed to make it more transmissible amongst humans, cases continue to be reported sporadically in Egypt. However, the surge of human infections observed during late 2014 to early 2015 in Egypt led to a heightened alert and public health concern regarding the possibilities of a change in virus and its pathogenesis. Since March 2015, cases continued to decline and in 2016 until now only 10 cases were reported in the country.

One of the characteristics of this H5N1 virus causing human infections is that children less than 5 years of age (*please see the table*) has relatively lower less case-fatality rate compared to higher age-groups. This trend has been persistently seen even during the surge of human infections in 2014-15. Although children in below 5 years of age have highest risk of acquiring infection in the country as evident from the epidemiological data, they have the lowest possibility of dying

Human cases of avian influenza A (H5N1) reported from Egypt, 2006-2016 (n=356)



Case-fatality rate of human cases of avian influenza in Egypt by age group (n=172)

Age Group	Cases	Deaths	CFR (%)
≤ 5 years	45	6	11
> 5-15 years	19	4	21
> 15-30 years	29	11	38
> 30-45 years	57	25	44
> 45 years	22	11	50

from the disease. The case-fatality rate tends to increase with higher age group and it is highest among those in the age group of more than 45 years.

These epidemiological data are valuable to understand how the virus behaves in human body and what type of preventive or therapeutic interventions the country needs to consider to clinically manage these cases in order to increase the clinical outcome. Data in Egypt has also shown that cases who have been treated with antivirals within 48 hours of onset of symptoms have 50% less probability of dying compared to those who have not received antiviral treatment within 48 hours of onset of symptoms.

As the pandemic threat from avian influenza continues, enhanced vigilance must be continued in order to detect any early change in the pathogenicity of the virus that makes it more transmissible as well as changes that is discernible by observing a shift in the epidemiological characteristics of the diseases caused by the virus. It is only then that the global health security will be protected.

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) [356 (121), 33.9%]
 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 [3867 (369), 9.5%]
 DRC [2269 (16), 0.7%]

Lassa fever : 2015-2016

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

Avian Influenza A (H7N9) : 2013-2016

China [775 (307), 36%]

Avian Influenza A (H5N6) : 2016

China [4 (0)]

Wild poliovirus: 2014-2016

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

Zika Virus Infection: 2007-2016

70 countries and territories have reported transmission so far