



HUMAN EMERGING RESPIRATORY PATHOGENS BULLETIN

MONTHLY SITUATIONAL ANALYSIS OF EMERGING RESPIRATORY DISEASES AFFECTING HUMANS

Issue No 016 May 2018

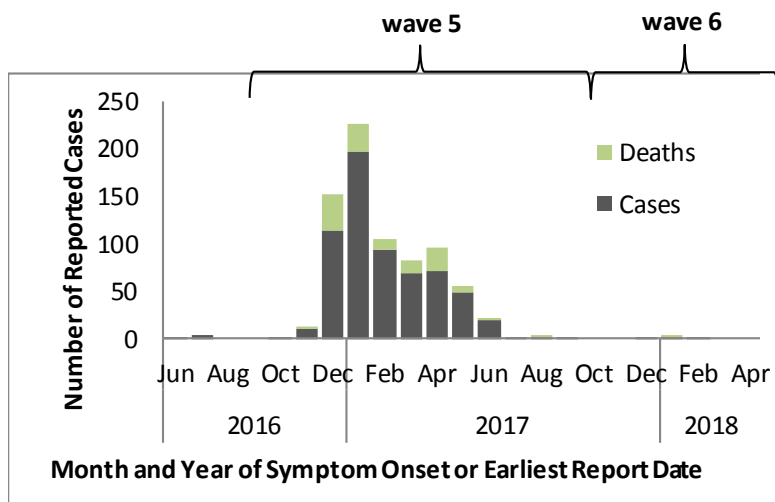
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AVIAN INFLUENZA A(H7N9)

In April 2018, there have been no new cases of H7N9 reported to the World Health Organization (WHO). In total, 3 cases have been reported in wave 6 (as of October 1, 2017) so far. The newest reported case occurred in a 59-year-old female farmer from Guangdong Province, China who had an exposure history to poultry farming. The number of cases reported monthly has continued to decline in recent months, similar to the seasonal distribution observed during previous waves [Figure 1]. Cases in the 5th wave are more spatially distributed: to date, 29 of 34 administrative regions in China have reported cases compared to 12 to 15 regions reporting cases in waves 1-4. The 3 cases in wave 6 have been spread across China in Guangdong Province, Xinjiang Uyghur Autonomous Region, and Yunnan Province [Figure 2]. A total of 1567 cases including at least 613 deaths have been reported globally since 2013. Two travel-related cases were reported in Canada in January 2015.

Figure 1. Temporal Distribution of Avian Influenza A(H7N9) in China, June 25, 2016 – April 30, 2018.



Note: Graph was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This graph reflects data available through these risk assessments as of April 30, 2018.

UPDATE ON HUMAN EMERGING RESPIRATORY PATHOGEN PUBLIC HEALTH EVENTS (AS OF APRIL 30TH 2018)

NOVEL INFLUENZAS ¹	N CUMULATIVE CASES ² (DEATHS), CFR% ³
A(H7N9)	[1567 (613), 39%]
A(H5N1)	[860 (454), 53%]
A(H9N2)	[45 (1), 2%]
A(H5N6)	[19 (9), 47%]
A(H7N4)	[1 (0), 0%]
A(H1N2)	[1 (0), 0%]
H3N2v	[434 (1), <1%]
H1N2v	[13 (0), 0%]
H1N1v	[22 (0), 0%]
MERS-CoV ¹	
Global case count	[2191 (765), 35%]
Saudi Arabia	[1836 (731), 40%]

¹Date of 1st Reported Case of Human Infection: MERS-CoV: February 2013 (retrospective case finding September 2012). A(H7N9): March 2013. A(H5N1): 1997. A(H9N2): 1998. A(H5N6): 2014. A(H7N4): February 2018 (retrospective case finding December 2017). H3N2v with M gene from pH1N1: 2011. H1N2v: 2005. H1N1v: 2005.

²Cumulative Case Counts: updated using data reported by the World Health Organization (avian and swine influenza, MERS CoV), and the United States Centers for Disease Control and Prevention (US CDC) (swine influenza).

³Case Fatality Rate: The proportion of cases that resulted in death.

Figure 2. Spatial Distribution of Avian Influenza A(H7N9) in China, Wave 6, October 1, 2017 to April 30, 2018.



Note: Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of April 30, 2018.



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AVIAN INFLUENZA A(H7N4)

On February 14, 2018, the WHO was notified of the first known human case of Avian Influenza A(H7N4). The case was a 68-year-old woman from Jiangsu Province, China who developed symptoms after exposure to backyard poultry farming. Subsequent genetic sequencing of the virus showed that the A(H7N4) originated from Avian Influenza viruses. The authorities in China have not yet released the genetic sequence through the Global Initiative on Sharing All Influenza Data (GISAID). No new cases have been reported since.

AVIAN INFLUENZA A(H9N2)

In April 2018, no new cases of H9N2 were reported to the WHO. A total of 45 cases, including 1 death, have been reported globally since 1998. No cases have been reported from Canada.

AVIAN INFLUENZA A(H5N1)

In April 2018, no new cases of H5N1 were reported to the WHO. A total of 860 cases including 454 deaths have been reported globally since 1997. One fatal travel-related case of A(H5N1) was reported in Canada in January 2014.

AVIAN INFLUENZA A(H5N6)

In April 2018, no new cases of H5N6 were reported to the WHO. There have been a total of 19 cases, including 9 deaths, reported globally since 2014, with all cases occurring in China.

AVIAN INFLUENZA A(H1N2)

In April 2018, there have been no new cases of reassortant A(H1N2). The last case was in a 1 year and 7 months old boy in the Netherlands that was notified to the WHO on March 20, 2018.

SWINE ORIGIN INFLUENZA A(H3N2)v

In April 2018, there have been no new cases of H3N2v. The latest H3N2v infection reported to the CDC was a case from Iowa whose onset of symptoms began in November 2017 following exposure to swine one week prior to symptoms. One locally-acquired case of H3N2v was reported in Canada in December 2016.

SWINE ORIGIN INFLUENZA A(H1N2)v

In April 2018, there have been no new cases of H1N2v. Since 2005, there have been a total of 13 confirmed cases of H1N2v in the United States, with four cases occurring in 2017. Most of the reported cases resulted in mild illness.

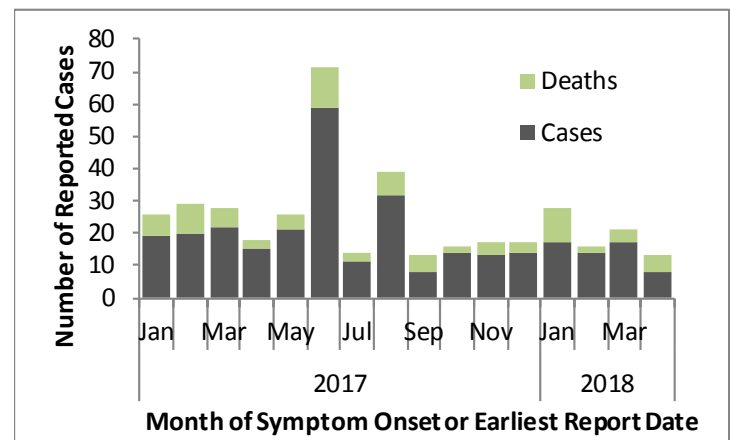
SWINE ORIGIN INFLUENZA A(H1N1)v

In April 2018, no new cases of H1N1v were reported to the WHO. There have been a total of 22 cases reported since 2005 and only one case reported in 2018.

MIDDLE EAST RESPIRATORY SYNDROME-CORONAVIRUS (MERS-COV)

From April 1st 2018 to April 30th 2018, 8 new cases of MERS-CoV, including 5 deaths, were reported by the Saudi Arabian Ministry of Health, with all cases originating from Saudi Arabia. The newly reported cases occurred in individuals 43 to 93 years of age (median: 63.5 years), and 75% were male. Among cases with available exposure information (n=8), 7 had documented exposure to camels and 1 was a secondary household contact. Since January 1st, 2017, a total of 304 cases have been reported [Figure 3], with 56 cases reported in 2018 so far [Figure 4]. A total of 2191 cases of MERS-CoV, including at least 765 deaths, have been reported globally since 2012. No cases have been reported in Canada.

Figure 3. Global Count of Human Cases of MERS-CoV Reported to the WHO, January 1, 2017 – April 30, 2018.



Note: Graph was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the WHO Disease Outbreak News and Saudi Arabia's Ministry of Health. This graph reflects data available as of April 30, 2018.

Figure 4. Spatial Distribution of MERS-CoV, January 1, 2018 to April 30, 2018.



Note: Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of April 30, 2018.