



HUMAN EMERGING RESPIRATORY PATHOGENS BULLETIN

MONTHLY SITUATIONAL ANALYSIS OF EMERGING RESPIRATORY DISEASES AFFECTING HUMANS

Issue No 21 October 2018

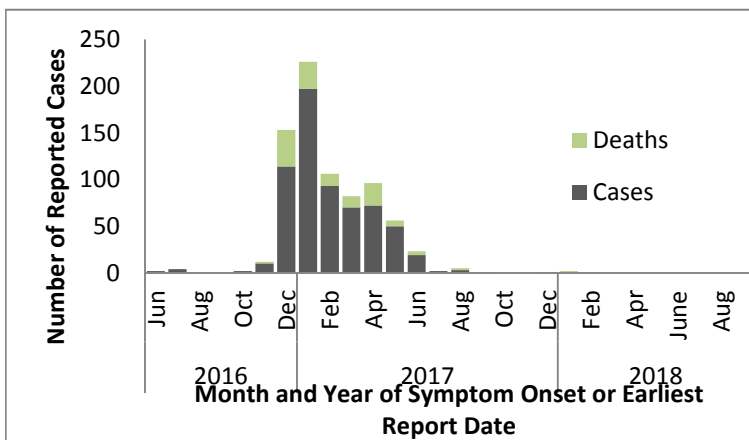
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AVIAN INFLUENZA A(H7N9)

The last H7N9 case was reported in February 2018 and no new cases have been reported since [Figure 1]. In total, 3 human cases of H7N9 have been reported to the World Health Organization (WHO) in wave 6 (October 2017 – September 2018). Cases in the 6th wave occurred in 3 out of 34 administrative regions across China [Figure 2], a drop from the 12-29 regions that reported cases in waves 1-5. This decrease in cases may be attributable to China's new vaccine against both H5 and H7 in poultry, which was deployed after the number of illnesses caused in the 5th wave. 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 – September 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 September 30, 2018.

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

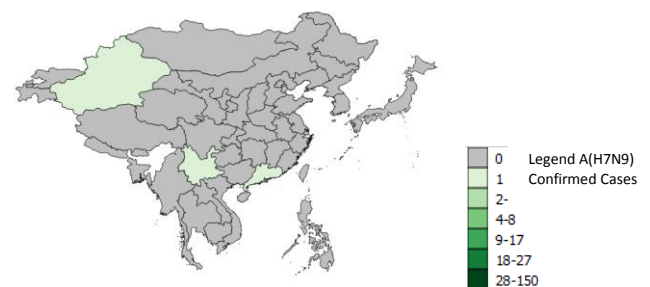
NOVEL INFLUENZAS ¹	N CUMULATIVE CASES ² (DEATHS), CFR% ³
A(H7N9)	[1567 (613), 39%]
A(H5N1)	[860 (454), 53%]
A(H9N2)	[45 (1), 2%]
A(H5N6)	[21 (14), 67%]
A(H7N4)	[1 (0), 0%]
A(H1N2)	[1 (0), 0%]
H3N2v	[435 (1), <1%]
H1N2v	[26 (0), 0%]
H1N1v	[22 (0), 0%]
MERS-CoV ¹	
Global case count	[2260 (803), 36%]
Saudi Arabia	[1882 (744), 40%]

¹**Date 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

²**Cumulative 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).

³**Case 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 September 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 September 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). No new cases have been reported since.

AVIAN INFLUENZA A(H9N2)

In September 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 September 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 September 2018, one new case of H5N6 was reported to the WHO. The case is a 22 year old male from Guangdong Province in China who developed symptoms and was hospitalized after contact with poultry. There have been a total of 21 cases, including 14 deaths, reported globally since 2014, with all cases occurring in China.

SWINE ORIGIN INFLUENZA A(H3N2)v

In September 2018, no new cases of H3N2v were reported to the WHO. The Indiana State Department of Health reported the first case of H3N2v this year in the United States in a county fairgoer who had been in close proximity to swine. The case is a child (<12 years old) who developed symptoms on June 18 and has since fully recovered. One locally-acquired case of H3N2v was reported in Canada in December 2016.

SWINE ORIGIN INFLUENZA A(H1N2)v

In September 2018, no new cases of H1N2v were reported to the WHO. Since 2005, there have been a total of 26 confirmed cases of H1N2v in the United States. Most of the reported cases resulted in mild illness.

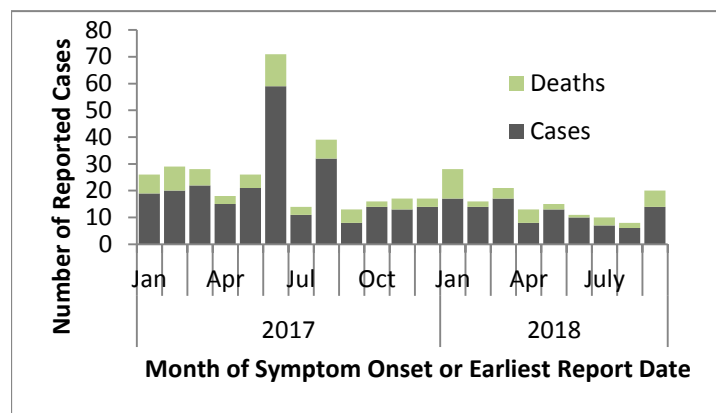
SWINE ORIGIN INFLUENZA A(H1N1)v

In September 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)

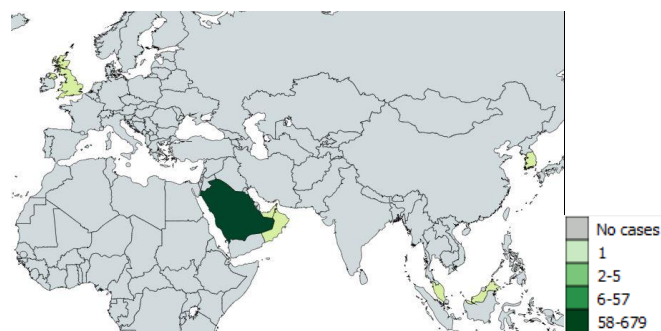
From September 1st 2018 to September 30th 2018, 14 new cases of MERS-CoV, of which 6 died, were reported by the Saudi Arabian Ministry of Health and the WHO [Figure 3], with most cases (13/14) originating from Saudi Arabia and one being reported by South Korea [Figure 4]. The South Korean case was a travel-associated case of a South Korean national who travelled to Kuwait for business before flying back to South Korea via Dubai. Of the cases reported in September 2018, 13/14 (92.9%) were male and the median age was 59 years old (age range of 34-66 years old). A total of 2260 laboratory-confirmed cases of MERS-CoV cases, including 803 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 – September 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 September 30, 2018.

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