



# HUMAN EMERGING RESPIRATORY PATHOGENS BULLETIN

## MONTHLY SITUATIONAL ANALYSIS OF EMERGING RESPIRATORY DISEASES AFFECTING HUMANS

Issue No 40 April 2020

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### COVID-2019 UPDATE

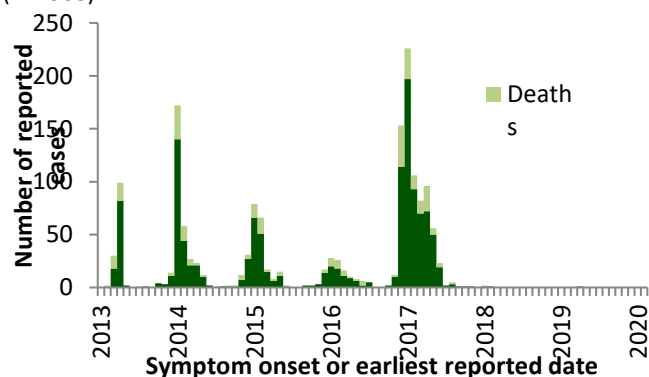
On December 31, 2019, cases of a pneumonia of unknown etiology were reported in Wuhan, China which have since been determined to be due to a novel coronavirus (COVID-2019). On January 30, 2020, the World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern (PHEIC).

As of April 30, 2020, 52,056 cases of COVID-2019 have been reported in Canada. Globally, 3,155,382 cases and 227,804 deaths have been reported in 209 countries/jurisdictions. The highest number of cases were reported from the United States, followed by Spain, Italy, the United Kingdom, Germany and France.

The Public Health Agency of Canada is monitoring the situation closely. For more information, please visit: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html>

### AVIAN INFLUENZA UPDATES

**Figure 1.** Temporal distribution of human infection with avian influenza A(H7N9), globally, by month and year, January 1, 2013 to April 30, 2020 (n=1568).



**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, 2020.

### UPDATE ON HUMAN EMERGING RESPIRATORY PATHOGEN PUBLIC HEALTH EVENTS (AS OF APRIL 30, 2020)

#### NOVEL INFLUENZA<sup>1</sup> [N CUMULATIVE CASES<sup>2</sup> (DEATHS), CFR%<sup>3</sup>]

A(H7N9)	[1568 (615), 39%]
A(H5N1)	[879 (461), 52%]
A(H9N2)	[56 (1), 2%]
A(H5N6)	[24 (7), 29%]
A(H7N4)	[1 (0), 0%]
A(H1N2)	[2 (0), 0%]
A(H3N2)v	[435 (1), <1%]
A(H1N2)v	[26 (0), 0%]
A(H1N1)v	[23 (0), 0%]

#### MERS-CoV<sup>1</sup>

Global case count	[2552 (871), 34%]
Saudi Arabia	[2156 (793), 37%]

<sup>1</sup>**Date of 1<sup>st</sup> 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. A(H3N2)v with M gene from pH1N1: 2011. A(H1N2)v: 2005. A(H1N1)v: 2005.

<sup>2</sup>**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).

<sup>3</sup>**Case Fatality Rate:** The proportion of cases that resulted in death.

### AVIAN INFLUENZA A(H7N9)

No new H7N9 cases were reported to the WHO in April 2020. The last case was globally reported in April 2019. Two travel-related cases were reported in Canada in January 2015. A total of 1568 human cases of avian influenza A(H7N9), including at least 615 deaths, have been reported globally since 2013 (Figure 1).

### AVIAN INFLUENZA A(H9N2)

No new cases of H9N2 were reported to the WHO in April 2020. Globally, 56 cases, including 1 death, have been reported since 1998.

## AVIAN INFLUENZA A(H5N1)

No new H5N1 cases were reported to WHO in April 2020. The most recent case was reported in March 25, 2019 in Nepal. A total of 879 cases including 461 deaths have been reported globally since 1997. One fatal travel-related case of H5N1 was reported in Canada in January 2014.

## AVIAN INFLUENZA A(H5N6)

No new cases of H5N6 were reported to WHO in April 2020. The most recent case of H5N6 was reported in China in August 2019. There have been a total of 24 cases, including seven deaths, reported globally since 2014, all in China.

## AVIAN INFLUENZA A(H7N4)

No new cases of H7N4 were reported to WHO in April 2020. On February 14, 2018, the WHO was notified of the first known human case of H7N4. The case was associated with poultry exposure. No cases have been reported since.

## SWINE INFLUENZA UPDATES

### SWINE ORIGIN INFLUENZA A(H3N2)v

The most recent case of swine origin influenza H3N2v was reported in June 2018 in the United States. The case reported exposure to swine at an agricultural fair. A total of 435 cases, including one death, have been reported globally since 2011. One locally acquired case of H3N2v was reported in Canada in December 2016.

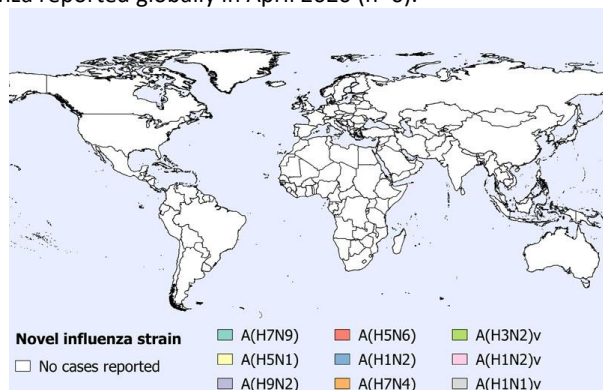
### SWINE ORIGIN INFLUENZA A(H1N2)v

The most recent case of swine origin influenza H1N2v was reported in August 2018 in the United States. The case reported exposure to swine at an agricultural fair. A total of 26 confirmed cases of H1N2v have been reported in the United States since 2005. Most of the reported cases resulted in mild illness.

### SWINE ORIGIN INFLUENZA A(H1N1)v

The most recent case of swine origin influenza H1N1v was reported in May 2019 in the United States. A total of 23 cases have been reported globally since 2005. To date, the reported H1N1v infections have been associated with mild illness.

**Figure 2.** Spatial distribution of human cases of avian and swine influenza reported globally in April 2020 (n=0).

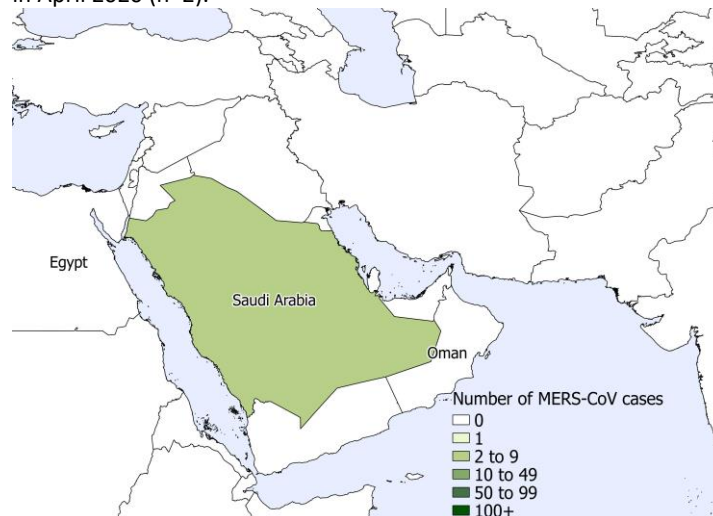


**Note:** Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of April 30, 2020.

## MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS (MERS-COV) UPDATE

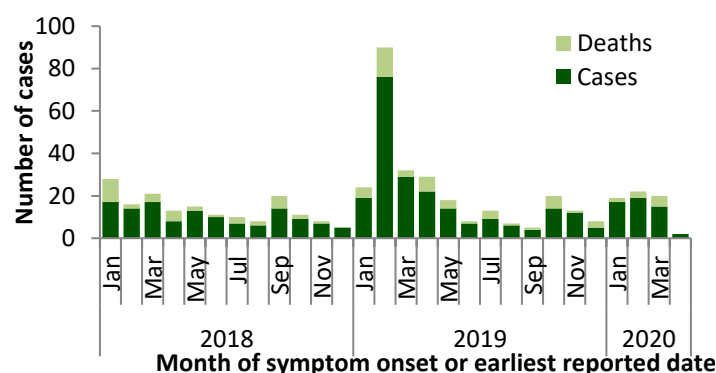
In April 2020, 2 cases of MERS-CoV were reported across two regions of Saudi Arabia; Aseer and Damman regions (Figure 3, Figure 4). Both of the cases were male (n=2, 100%), ages 41 and 43, and had primary exposure, meaning it is likely that they acquired the infection from a dromedary camel. No cases were healthcare workers. A total of 2552 laboratory-confirmed cases of MERS-CoV, including 871 deaths, have been reported globally since 2012 by the WHO. No cases have been reported in Canada.

**Figure 3.** Spatial distribution of human cases of MERS-CoV reported in April 2020 (n=2).



**Note:** Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Disease Outbreak News and Saudi Arabia's Ministry of Health. This map reflects data available through these risk assessments as of April 30, 2020.

**Figure 4.** Temporal distribution of human cases of MERS-CoV reported to the WHO, globally, by month and year, January 1, 2018 to April 30, 2020 (n=397).



**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, 2020.