



# HUMAN EMERGING RESPIRATORY PATHOGENS BULLETIN

## MONTHLY SITUATIONAL ANALYSIS OF EMERGING RESPIRATORY DISEASES AFFECTING HUMANS

Issue No 45 September 2020

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

#### COVID-19 UPDATE

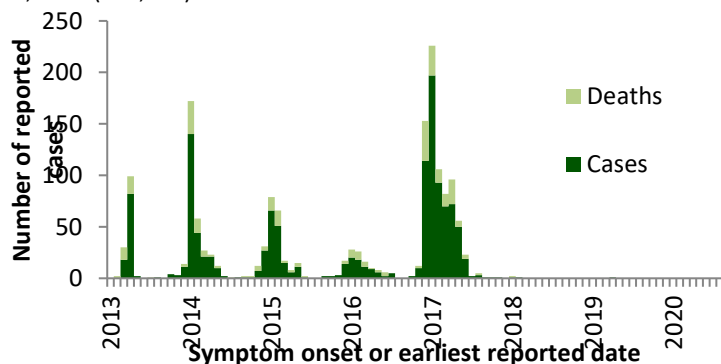
On December 31, 2019, cases of a pneumonia of unknown etiology were reported in Wuhan, China. These cases have since been determined to be due to a novel coronavirus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes coronavirus disease 2019 (COVID-19). On January 30, 2020, the World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern (PHEIC).

As of September 30, 2020, 158,758 cases and 9,297 deaths of COVID-19 have been reported in Canada.

The Public Health Agency of Canada is monitoring the situation closely. For the most up-to-date 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 September 30, 2020 (n=1,568).



**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, 2020.

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

|          |                    |
|----------|--------------------|
| A(H7N9)  | [1,568 (615), 39%] |
| A(H5N1)  | [879 (461), 52%]   |
| A(H9N2)  | [59 (1), 2%]       |
| A(H5N6)  | [24 (7), 29%]      |
| A(H7N4)  | [1 (0), 0%]        |
| A(H1N2)  | [2 (0), 0%]        |
| A(H3N2)v | [436 (1), <1%]     |
| A(H1N2)v | [26 (0), 0%]       |
| A(H1N1)v | [26 (0), 0%]       |

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

|                   |                    |
|-------------------|--------------------|
| Global case count | [2,553 (872), 34%] |
| Saudi Arabia      | [2,157 (794), 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 September 2020. The last case was reported by China in April 2019. Two travel-related cases were reported in Canada in January 2015. A total of 1,568 human cases of avian influenza A(H7N9), including at least 615 deaths, have been reported globally since 2013 (Figure 1).

#### AVIAN INFLUENZA A(H5N1)

No new H5N1 cases were reported to WHO in September 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.



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## AVIAN INFLUENZA A(H9N2)

On August 28, 2020, the National Health Commission of the People's Republic of China notified WHO of one confirmed human case of avian influenza A(H9N2) (Figure 2). The case is a 4 year old female from Meizhou, Guangdong Province, China who reported exposure to domestic poultry before symptom onset on August 3, 2020. She was hospitalized on August 4, 2020 and has since recovered. Globally, 59 human cases, including one death, have been reported since 1998.

## SWINE INFLUENZA UPDATES

### SWINE ORIGIN INFLUENZA A(H3N2)v

The most recent case of swine origin influenza H3N2v was reported in July 2020 in the United States and this case was the first human case of A(H3N2)v reported out of the United States since 2018. A total of 436 cases, including one death, have been reported globally since 2011. One locally acquired case of H3N2v was reported in Canada in December 2016.

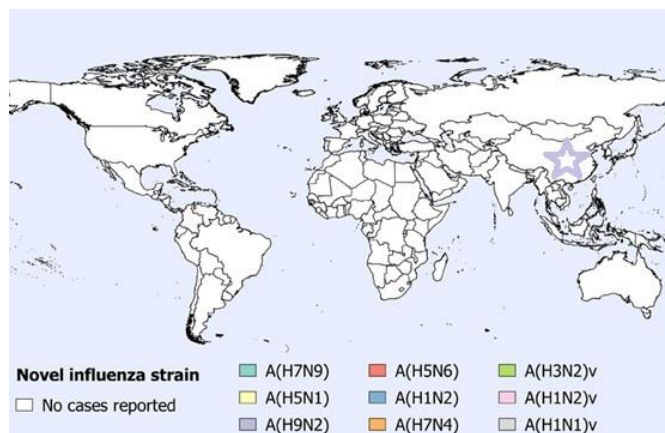
### SWINE ORIGIN INFLUENZA A(H1N2)v

The most recent case of swine origin influenza H1N2v was reported in June 2020 in Brazil. The case reported exposure to swine at a slaughterhouse. Most reported H1N2v cases result in mild illness.

### SWINE ORIGIN INFLUENZA A(H1N1)v

The most recent case of swine origin influenza A(H1N1) infection was detected in Germany in June 2020. This case presented with influenza-like illness after contact with pigs during a farm visit. To date, reported H1N1v infections have been associated with mild illness.

**Figure 2.** Spatial distribution of human cases of avian and swine influenza reported globally in August and September 2020 (n=1).

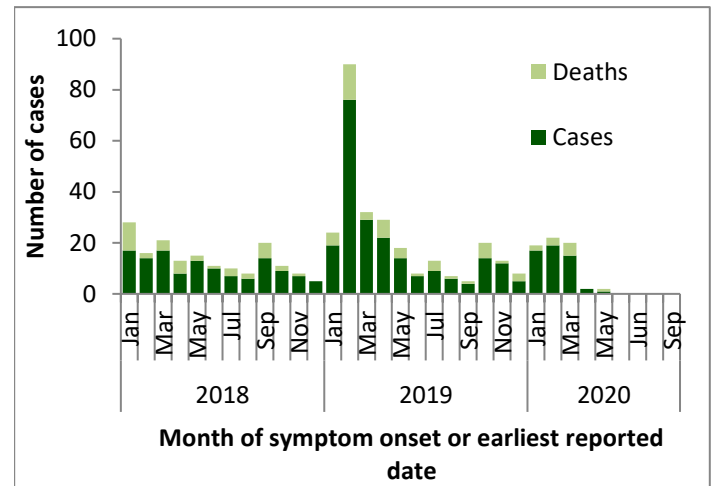


**Note:** Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of September 30, 2020.

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

No new cases of MERS-CoV were reported in September 2020 (Figure 3). A total of 2,553 laboratory-confirmed cases of MERS-CoV, including 872 deaths, have been reported globally since 2012 by the WHO. No cases have been reported in Canada.

**Figure 3.** Temporal distribution of human cases of MERS-CoV reported to the WHO, globally, by month and year, January 1, 2018 to September 30, 2020 (n=398).



**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, 2020.