



HUMAN EMERGING RESPIRATORY PATHOGENS BULLETIN

MONTHLY SITUATIONAL ANALYSIS OF EMERGING RESPIRATORY DISEASES AFFECTING HUMANS

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IN THIS BULLETIN

1. COVID-19 update
2. Novel influenza updates
3. MERS-CoV update

UPDATE ON HUMAN EMERGING RESPIRATORY PATHOGEN PUBLIC HEALTH EVENTS (AS OF JULY 31, 2021)¹

NOVEL INFLUENZA ¹	[N CUMULATIVE CASES ² (DEATHS), CFR% ³]
A(H7N9)	[1,568 (615), 39%]
A(H5N1)	[880 (461), 52%]
A(H9N2)	[81 (1), 1%]
A(H5NX)	[1 (1), 100%]
A(H5N6)	[36 (21), 58%]
A(H5N8)	[7 (0), 0%]
A(H7N4)	[1 (0), 0%]
A(H1N2) ⁴	[2 (0), 0%]
A(H3N2)v	[439 (1), <1%]
A(H1N2)v	[31 (0), 0%]
A(H1N1)v	[33 (0), 0%]
A(H10N3)	[1 (0), 0%]
Eurasian avian-like A(H1N1)	[5 (0), 0%]
Reassortant novel influenza ⁵	[1 (0), 0%]
MERS-CoV ¹	
Global case count	[2,569 (877), 34%]
Saudi Arabia	[2,172 (799), 37%]

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) first declared the outbreak a Public Health Emergency of International Concern (PHEIC). On March 11, 2020, the WHO characterized the outbreak as a global pandemic. The WHO Director-General convened the International Health Regulations (IHR) Emergency Committee (EC) on COVID-19 eight times throughout 2020 and 2021, continually assessing that COVID-19 constitutes a PHEIC.

As of July 30, 2021, 1,430,483 COVID-19 cases and 26,592 deaths 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

AVIAN INFLUENZA A(H5NX)

On July 21, 2021, the India Ministry of Health and Family Welfare reported an H5NX case in New Delhi. The case, an 11-year-old male with underlying conditions, presented with acute respiratory illness in June 2021, was hospitalized on July 2, 2021, and died on July 12, 2021. Samples tested at the National Institute of Virology showed positive results for A/H5 and Influenza type B (Victoria lineage). Whole genome sequencing and virus isolation is in process with full sub-typing results pending. Health practitioners that treated the patient were monitored for any development of influenza-like-illness and none of the case's close contacts developed any symptoms.



Public Health
Agency of Canada

Agence de la santé
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Canada

AVIAN INFLUENZA A(H5N6)

Four human cases of avian influenza A(H5N6) were detected in July 2021, all from China.

The first case, a 55-year-old male farmer from Sichuan province, reported illness onset on June 30, 2021. He was hospitalized with severe pneumonia on July 4, 2021 and was stated to be in critical condition at the time of report. Case two was a 57-year-old male farmer from Sichuan province with an illness onset date of June 22, 2021. He was hospitalized on July 5, 2021 and died as a result of his infection. Case three, a 66-year-old male farmer from the Tongnan district, reported illness onset on June 23, 2021. He was hospitalized on June 30, 2021 and was in critical condition at the time of report. The last case, a 51-year-old female farmer from Sichuan province, reported illness onset on June 25, 2021 and was hospitalized on July 2, 2021. She also died as a result of her infection.

All four cases reported above were exposed to backyard poultry prior to illness onset. Environmental samples collected by health authorities tested positive for A/H5.

Globally, 36 human cases of A(H5N6) have been reported since 2014 (21 of them fatal), with 35 of these cases reported from China. No A(H5N6) detections have been reported in Canadian residents since reporting began in 2014.

SWINE INFLUENZA UPDATES

SWINE ORIGIN INFLUENZA A(H3N2)v

The most recent case of swine origin influenza A(H3N2)v was reported in June 2021 in Manitoba, Canada. This was the second case of A(H3N2)v detected in Canada. The first case was notified in December 2016 in a child residing in Ontario who had contact with symptomatic infected swine. Globally, 439 A(H3N2)v cases have been reported since 2005, with <1% case fatality rate.

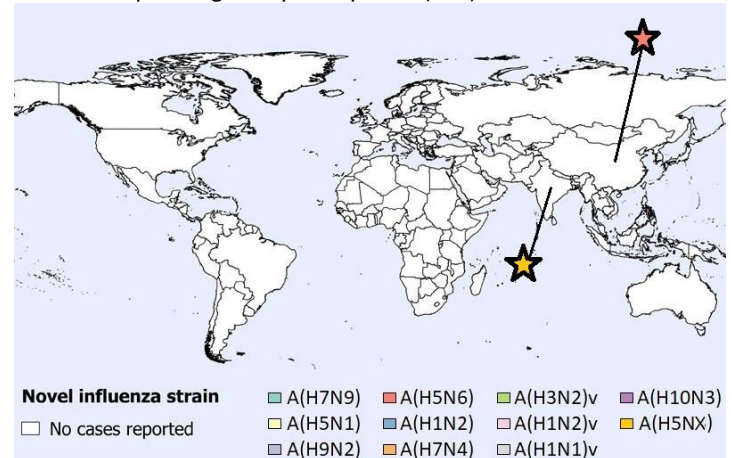
SWINE ORIGIN INFLUENZA A(H1N2)v

The most recent case of swine origin influenza A(H1N2)v was reported in June 2021 from Taiwan. Two A(H1N2)v detections have been reported in Canadian residents since reporting began in 2005, with the latest case reported in April 2021. A total of 31 cases have been reported globally since 2005.

SWINE ORIGIN INFLUENZA A(H1N1)v

The most recent case of swine origin influenza A(H1N1)v was reported in June 2021 from the United States. Two A(H1N1)v detections have been reported in Canadian residents since reporting began in 2005, with the latest case reported in April 2021. Globally, 33 human cases of A(H1N1)v have been reported since 2005, with no associated fatalities.

Figure 1. Spatial distribution of human cases of avian and swine influenza reported globally in July 2021 (n=5).



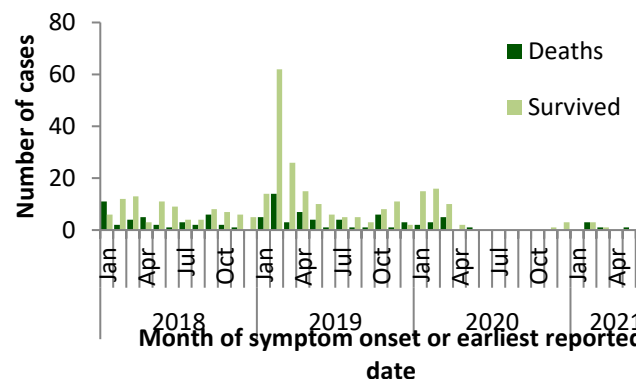
Note: Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of July 31, 2021.

MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS (MERS-COV) UPDATE

Two new MERS-CoV cases were reported from Saudi Arabia in July 2021. The first case, a 67-year-old male from Riyadh, reported exposure to camels prior to illness onset and was classified as a primary case (the case likely did not contract the virus from another human). The second case, a 65-year-old male from Riyadh, also reported camel contact prior to illness onset and was also classified as a primary case.

Including these cases, 12 cases of MERS-CoV have been reported around the world in 2021 (5 of them fatal), with 11 of these cases reported from Saudi Arabia. A total of 2,569 laboratory-confirmed cases of MERS-CoV, including 877 deaths, have been reported globally since 2012 by the WHO. No cases have been reported in Canada.

Figure 2. Temporal distribution of human cases of MERS-CoV reported to the WHO, globally, by month and year, January 1, 2018 to July 31, 2021 (n=414).



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 July 31, 2021.