

Highly Pathogenic Avian Influenza in Canada

HPAI affected areas

[Locate affected zones](#)

[Affected locations by provinces](#)

Highly pathogenic avian influenza (HPAI) A (H5N1) viruses first emerged in southern China in 1996.

Since then, 19 countries have reported human cases of HPAI H5N1, ranging from asymptomatic to severe disease.

There is currently an unprecedented level of HPAI activity in wild and domestic birds on a global scale since the fall of 2020.

As of October 25, 2022 190 farms have been infected, and over 3.2 million birds depopulated.

With the fall migration of wild birds from their Arctic breeding grounds to their wintering areas in the south, a new wave of outbreaks is occurring across Canada in both wild and farmed birds.

Multiple viral reassortment events and spillovers into mammals have occurred in Canada since 2021. This, combined with the possibility of co-circulation with seasonal human and other endemic influenza viruses (e.g. influenza virus of swine origin), heightens the risk of mammalian adaptation, transmission and antigenic shift with enhanced pandemic potential.

WILDLIFE

Wildlife species have been found infected in all Provinces and territories.

[Locations of these detections.](#)

Wild Birds

The top 10 wild bird species affected in Canada to date include:



Northern Gannet
American Crow
Canada Goose
Snow Goose
Red-tailed Hawk
Mallard Duck
Great Horned Owl
Turkey Vulture
Great Black-backed Gull
Bald Eagle

Mass mortality events in wild birds have been occurring in a broad range of species around the world. Seabird mortalities in Canada have been particularly severe on the Atlantic Coast over the summer of 2022.

Mammals

Mammalian species affected in Canada to date include:



Black Bear
Grey Seal
Harbour Seal
Mink
Red Fox
Striped Skunk

Mammals have also been infected with HPAI, shown neurological signs, and died from the infection.

Other mammalian species affected globally



Bobcat
Civet
Coyote
Dolphin
Opossum
Porpoise
Raccoon

FOR CLINICIANS

Suspect

Suspect HPAI, H5N1 infection in cases of acute respiratory infection without another identified cause OR in cases of acute febrile neurological syndromes of unknown etiology AND with one of the following risk factors:

1. a history of farm, backyard or wild bird exposure
2. a history of farming
3. a history of hunting
4. a history of contact with sick wildlife.

Test/Tell

Testing is available. Many commercial and non-commercial PCR assays can detect HPAI H5N1 as influenza A; ask your institutional microbiology laboratory.

In cases where clinical suspicion is high or where an untypeable influenza A positive result is reported:

- the sample should be referred to a public health laboratory for influenza virus subtyping.
- tell the local medical officer of health or local public health officer.

Treat

Treatment with oseltamivir is currently recommended as per the [2021-2022 AMMI Canada guidance on the use of antiviral drugs for influenza in the COVID-19 pandemic setting in Canada](#). At this point in time there is no evidence of oseltamivir resistance.

Prevent

- The annual human influenza vaccine is not directed against HPAI H5N1 viruses, however it is effective at reducing the burden of seasonal influenza. This may reduce the likelihood of reassortment with HPAI viruses and antigenic shift.
- Routine infection prevention and control practices for influenza-like illness will reduce the risk of influenza spread.
- Guidance for those interacting with wild birds is provided by the Public Health Agency of Canada: [Wildlife and avian influenza – Handling guidelines to protect your health - Canada.ca](#)

Additional Links

Links to useful resources for HPAI are available on the website of the [Community for Emerging and Zoonotic Diseases](#).