

## Summary and Action Items

- 1) Provide awareness of variant and novel influenza viruses.
- 2) Remind local health departments (LHDs) and providers that influenza testing and subtyping is available at IDPH labs if novel influenza is suspected and encouraged if influenza is occurring outside of the normal influenza season
- 3) Encourage LHDs to work with directors at fairs and other events where swine and poultry will be present to ensure signage is posted.

## Background

Novel influenza A virus is a virus that has caused human infection but is different from current seasonal human influenza A viruses that circulate among people. Novel influenza A viruses are often influenza A viruses that circulate among animals that shift to human infections. Some novel influenza A viruses are believed to pose a greater pandemic threat than others and are more concerning to public health officials because they have caused serious human illness and death and have been able to spread in a limited manner from person-to-person. Novel influenza A viruses are of extra concern because of the potential impact they could have on public health if they gain the ability to spread easily from person to person, which might cause the next influenza pandemic.

Avian influenza A viruses do not normally infect humans, but sporadic human infections have occurred. U.S. public health and clinical partners continue to monitor and respond to the global outbreak of highly pathogenic avian influenza A(H5N1). In November 2022, the U.S. surpassed the previous record for number of birds affected, making this the worst domestic outbreak of avian influenza in poultry, with more than 58 million poultry affected in the U.S. to date. Thirteen human cases have been reported globally including one in the U.S. between January 2022 and June 1, 2023.

Swine influenza (swine flu) is a respiratory disease in pigs caused by type A influenza viruses. Swine flu viruses do not normally infect humans; however, sporadic human infections with influenza viruses that normally circulate in swine have occurred. When this happens, these viruses are called “variant viruses.” If this new virus causes illness in people and is transmitted easily from person-to-person, an influenza pandemic can occur such as the 2009 H1N1 pandemic. During the 2022-2023 influenza season, there was one case of variant influenza detected in the United States (one case of H3N2v).

**Illinois has not seen a variant influenza case since 2013.**

## Symptoms

Most recent illnesses associated with novel and variant viruses have been mild with similar symptoms of seasonal flu. As with seasonal influenza, novel and variant influenza can cause more severe illness in persons with high-risk conditions such as asthma, diabetes, heart disease, neurological or neurodevelopmental conditions, and pregnancy. Those younger than five years or older than 65 years are also at higher risk. Some novel strains, such as highly pathogenic avian influenza A(H5N1), are associated with severe pneumonia and mortality greater than 50%

## Transmission

Most commonly, human infections with novel and variant viruses occur in people with exposure to infected birds or swine. Transmission is similar to seasonal influenza which primarily occurs through

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droplet spread. Transmission may also occur by direct or indirect contact with oral secretions or fecal material from infected animals. The vast majority of human infections with novel and variant influenza viruses do not result in person-to-person spread.

## Diagnosis

Influenza RT-PCR testing can be performed at one of the IDPH laboratories on a case-by-case basis in unique circumstances (such as influenza-like illness (ILI) outside of normal flu season and/or respiratory illness with exposure to swine and/or birds). Clusters of ILI should also be reported to the LHD for consultation regarding testing. Please refer to the [IDPH Lab Manual of Services](#) for submission guidelines and utilize ETOR (if possible) or the [requisition form](#) when submitting specimens.

*\*Note: A negative rapid influenza diagnostic test (RIDT) result does not exclude infection with any influenza virus. A positive RIDT result for influenza A cannot specifically identify variant virus infections because these tests cannot distinguish between influenza A virus subtypes.*

Approval for testing must be completed by the LHD prior to sending specimens to IDPH on the [online influenza laboratory request form](#). The LHD will create an authorization code and provide the code to the provider or submitting laboratory. This code must be printed on the submission form.

## Prevention

The best prevention is to avoid sources of exposure. CDC also recommends that everyone 6 months and older get a seasonal flu vaccine every year. It is especially important that people who may have potential exposure to get a seasonal flu vaccine, ideally 2 weeks before their potential exposure, if possible. Seasonal flu vaccination may not prevent infection from novel or variant viruses and is not designed to protect from bird or swine flu viruses but can reduce the risk of getting seriously ill with seasonal flu and novel or variant flu at the same time.

## IDPH and LHD Response

LHDs are encouraged to work with [agricultural fair directors](#) and directors of other events where animals will be present in their areas to ensure :

- [Signage](#) is posted at the event, encouraging animal exhibitors and attendees to reduce the risk of influenza or enteric diseases.
- If a person is believed to have acquired a variant or novel influenza virus from swine, report this to IDPH so they can coordinate with the Illinois Department of Agriculture to follow up on the animals involved.

CDC is encouraging testing for influenza among persons with severe respiratory illness. CDC is requesting that during the late spring and summer months, influenza A positive samples from patients in the ICU that are not subtyped in clinical labs be submitted to state or local public health laboratories for subtyping. This is an important step for continued surveillance of influenza A(H5N1) in the U.S. as well as variant influenza cases, especially in the summer when influenza testing may not be as routine as it is during flu season, and exposure to poultry and swine may increase during agricultural fair season.

## Contact

Contact the IDPH Communicable Disease Section, Influenza Surveillance Program at 217-782-2016 or your local health department with questions about novel or variant influenza viruses.

## Additional Resources

[CDC Key Facts for People Exhibiting Pigs at Fairs](#)

[CDC Influenza A \(H3N2\) Variant Virus](#)

[CDC What People who Raise Pigs Need to Know about Influenza](#)

[CDC Viruses of Special Concern](#)

[Illinois 2023 County Fair Schedule](#)

[IDPH Influenza, Novel \(Avian and Variant\) Sharepoint Page](#)

[Signage for events](#) (Posters available for download)

**Target Audience**

Local Health Departments, Infectious Disease Physicians, Hospital Emergency Departments, Infection Control Preventionists, Health Care Providers, and Laboratories

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