

CDC Influenza Division Key Points

August 26, 2016

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Human Infections with Influenza A (H3N2) Variant ("H3N2v") Viruses

- This week's FluView includes seven additional reported human infections with influenza A (H3N2) variant ("H3N2v") viruses. Four of these infections were reported by Michigan and three were reported by Ohio. (<http://www.cdc.gov/flu/weekly/>)
- To date, there have been 18 human H3N2v infections reported during August, 2016 Michigan [12] and Ohio [6]).
- All 18 people infected with H3N2v reported exposure to swine at fair settings in the week preceding illness. No person-to-person transmission has been identified.
- Human infections with influenza viruses that have been found to circulate in swine are rare, but do happen. When that happens, these are called "variant virus" infections.
- A case count table summarizing reports of variant influenza virus infections in the United States since 2005 is available at: <http://www.cdc.gov/flu/swineflu/variant-cases-us.htm>.
- CDC is working with state public health and agriculture officials to investigate the extent of disease among people and swine; additional cases may be identified as the investigation continues.
- It is fair season in the United States and that typically brings an increase in the number of interactions between people and pigs.
- It's not surprising to see sporadic instances of human infection with influenza viruses that normally circulate in pigs.
- Agricultural fairs are only one setting which can result in many exposures to swine.
- CDC has issued guidance for people attending agricultural fairs where swine might be present during fair season, including additional precautions for people who are at high risk for serious flu complications. (<http://www.cdc.gov/flu/swineflu/variant/preventspreadfactsheet.htm>)
- CDC recommendations for people at high risk:

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- Anyone who is at [high risk of serious flu complications](http://www.cdc.gov/flu/about/disease/high_risk.htm) (http://www.cdc.gov/flu/about/disease/high_risk.htm) planning to attend a setting where pigs will be present should avoid pigs and swine barns.
- People who are at high risk of serious flu complications include children younger than 5 years, people 65 years and older, pregnant women, and people with certain long-term health conditions (like asthma and other lung disease, diabetes, heart disease, weakened immune systems, and neurological or neurodevelopmental conditions).
- CDC recommendations for people not at high risk:
 - Don't take food or drink into pig areas; don't eat, drink or put anything in your mouth in pig areas.
 - Don't take toys, pacifiers, cups, baby bottles, strollers, or similar items into pig areas.
 - Avoid close contact with pigs that look or act ill.
 - Take protective measures if you must come in contact with pigs that are known or suspected to be sick. This includes minimizing contact with pigs and wearing personal protective equipment like protective clothing, gloves and masks that cover your mouth and nose when contact is required.
 - Wash your hands often with soap and running water before and after exposure to pigs. If soap and water are not available, use an alcohol-based hand rub.
 - To further reduce the risk of infection, minimize contact with pigs in the pig barn and arenas.
 - Watch your pig (if you have one) for illness. Call a veterinarian if you suspect illness.
 - Avoid contact with pigs if you have flu symptoms. Wait to have contact with pigs until 7 days after your illness started or until you have been without fever for 24 hours without the use of fever-reducing medications, whichever is longer. If you must have contact with pigs while you are sick, take the protective actions listed above.
- People with high risk factors who develop flu symptoms should call a health care provider. Tell them about your high risk condition and any exposure to pigs or swine barns you've had recently. Human seasonal flu vaccine will not protect against commonly circulating swine influenza viruses, but prescription influenza antiviral drugs can treat infections with these viruses in people, especially when initiated early.

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Communications Materials:

- A fact sheet for the public on what steps to take to help protect against variant viruses is available at <http://www.cdc.gov/flu/swineflu/variant/preventspreadfactsheet.htm>.
- CDC also has guidance for exhibitors of swine at fairs at http://www.cdc.gov/flu/pdf/swineflu/fair_exhibitor_factsheet.pdf.
- CDC also has created a [Swine Influenza/Variant Influenza microsite](https://tools.cdc.gov/medialibrary) (<https://tools.cdc.gov/medialibrary>) an easily embeddable collection of information that can supplement a website with CDC content. Microsites are automatically updated in real time as CDC updates its content on the topic of swine influenza in pigs, variant virus infections in people, and recommended actions to prevent the spread of flu viruses between pigs and people.
- For instructions on how to get the Swine Influenza/Variant Influenza microsite and for technical support, visit the CDC Public Health Media Library at: <https://tools.cdc.gov/medialibrary>.
- CDC also has posted guidance for clinicians on how to treat human infections with variant viruses at <http://www.cdc.gov/flu/swineflu/interim-guidance-variant-flu.htm>.
- CDC posted an online spotlight on August 12, describing the first reported four infections, which is available at <http://www.cdc.gov/flu/news/variant-virus-pig-exposure.htm>.

Background

- 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." They also may be denoted by adding the letter "v" to the end of the virus subtype designation.
- Human infections with H1N1v, H1N2v, and H3N2v viruses have been detected in the United States.
- Illness associated with variant virus infection has been mostly mild with symptoms similar to those of seasonal flu.
- Like seasonal flu, however, serious illness resulting in hospitalization and death is possible.
- In 2012, for example, of 309 human infections with H3N2v, 16 people were hospitalized and one of these people died.

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- Most of the people who were hospitalized and the person who died had one or more health or age factor that put them at high risk of serious flu-related complications.
- People at high risk of serious complications from seasonal influenza and H3N2v include children younger than 5, people with certain chronic conditions like asthma, diabetes, heart disease, weakened immune systems, pregnant women and people 65 years and older.
- Most commonly, human infections with variant viruses occur in people with exposure to infected pigs (e.g., children near pigs at agricultural fairs or workers in the swine industry).
- There have been documented cases of multiple persons becoming sick after exposure to one or more sick pigs and also cases of limited spread of variant influenza viruses from person to person.
- The vast majority of human infections with variant influenza viruses do not result in person-to-person spread.
- However, each case of human infection with a variant influenza virus should be fully investigated to a) be sure that such viruses are not spreading in an efficient and ongoing way in humans, and b) to limit further exposure of humans to infected animals if infected animals are identified.
- Like all influenza viruses, it's possible that mutations could occur that would allow a variant virus to become more severe or to spread more easily between people.