

CDC Influenza Key Points: H3N2v case

July 24, 2015

Human Infection with influenza A H3N2 variant virus (“H3N2v”)

- This week’s [FluView](#) includes a report of a human infection with an influenza A (H3N2) variant (“H3N2v”) virus in the state of Minnesota.
- This H3N2v infection is the first reported human infection with H3N2v in the United States in 2015.
 - See [Case Count: Detected U.S. Human Infections with H3N2v by State since August 2011](#) (<http://www.cdc.gov/flu/swineflu/h3n2v-case-count.htm>).
- The reported case occurred in a child. Direct exposure to swine (pigs) in the 7 days prior to illness onset was reported.
- An upper respiratory tract specimen was taken from the patient on July 6, 2015.
- The sample tested positive for H3N2v virus on RT-PCR testing conducted at the state public health laboratory on July 16, 2015.
- Additional RT-PCR testing performed at CDC on July 20, 2015, confirmed infection with an H3N2v virus.
- Genetic sequencing indicates that this influenza A H3N2v virus from Minnesota has the matrix (M) gene from the influenza A (H1N1) pdm09-lineage (the contemporary H1N1 subtype that has circulated in humans since the 2009 H1N1 pandemic). The other genes of this virus are typical of swine-origin H3N2 viruses.
- The patient remains hospitalized at the time of this report, but is recovering from their illness.
- No evidence of human-to-human transmission of H3N2v or any flu-like illness among the patient’s contacts were reported.

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.
- 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

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humans, and b) to limit further exposure of humans to infected animals if infected animals are identified.

- CDC recommends that people with health or age factors that put them at high risk for serious flu complications avoid pigs and swine barns.
- Agricultural fairs are one setting which can result in many exposures to swine.
- CDC has issued guidance for people attending 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/h3n2v-other-guidance.htm>
- High-risk people include children younger than 5 years, people 65 years and older, people with underlying health conditions like asthma, diabetes and heart disease, and pregnant women. A full list of conditions that increase the risk of influenza-related complications is available at http://www.cdc.gov/flu/about/disease/high_risk.htm.
- In addition, people at high risk of flu complications who develop flu symptoms after exposure to pigs at a fair or had other possible contact with pigs should contact a health care professional.
- People who go to a doctor for flu symptoms following direct or close contact with swine should tell their doctor about this exposure. (Clinicians should notify the local or state public health department regarding probable H3N2v cases as soon as possible.)
- CDC recommends that people at high risk of flu complications get influenza antiviral treatment as quickly as possible if they experience [flu-like symptoms](http://www.cdc.gov/flu/about/disease/symptoms.htm) (<http://www.cdc.gov/flu/about/disease/symptoms.htm>).