

## 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 Michigan.
- This is the second human infection with H3N2v reported in 2015; the first infection this year was reported by Minnesota in July. 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>).
- CDC confirmed the virus to be H3N2v on August 28, 2015 via RT-PCR and partial genome sequencing.
- Complete genome sequencing of the virus is ongoing, however initial testing shows the virus is similar to those currently circulating in swine.
- The reported case occurred in an adult male with a history of cancer, who sought medical care for his flu illness in June 2015.
- The patient was hospitalized and received oseltamivir treatment, and has since been discharged; the patient fully recovered from his illness.
- In the week prior to his illness, the patient reported direct contact with swine exhibiting signs of respiratory illness.
- There is no evidence of ongoing transmission related to this case.

## 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 humans, and b) to limit further exposure of humans to infected animals if infected animals are identified.
- CDC recommends that people with underlying health conditions 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 people having multiple exposures to swine.

CDC Influenza Key Points: H3N2v case  
September 4, 2015

- 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/h3n2v-other-guidance.htm>
- High-risk people include children younger than 5 years, people 65 years and older, and 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](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 variant influenza 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>).