

PENNSYLVANIA DEPARTMENT OF HEALTH
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Guidance for Clinicians on Human infections
with Variant Influenza Viruses



DATE:	10/06/2017
TO:	Health Alert Network
FROM:	Dr. Rachel Levine, Acting Secretary of Health and Physician General
SUBJECT:	Guidance for Clinicians on Human infections with Variant Influenza Viruses
DISTRIBUTION:	Statewide
LOCATION:	Statewide
STREET ADDRESS:	Statewide
COUNTY:	Statewide
MUNICIPALITY:	Statewide
ZIP CODE:	Statewide

This transmission is a “Health Advisory”: provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING, AND LABORATORY STAFF IN YOUR HOSPITAL

EMS COUNCILS: PLEASE DISTRIBUTE AS APPROPRIATE

FQHCs: PLEASE DISTRIBUTE AS APPROPRIATE

LOCAL HEALTH JURISDICTIONS: PLEASE DISTRIBUTE AS APPROPRIATE

PROFESSIONAL ORGANIZATIONS: PLEASE DISTRIBUTE TO YOUR MEMBERSHIP

Background:

Maryland and Delaware have recently identified 40 cases of human infections with an influenza A/H3N2 strain that normally circulates in pigs. All of the cases had visited swine barns at county fairs in Maryland. Two cases were hospitalized, none have died.

Swine influenza viruses do not normally infect humans; however, sporadic human infections with swine influenza viruses (referred to as variant influenza) can occur. Most commonly, human infections with variant viruses occur in people with exposure to infected swine, for example, children visiting swine barns at a fair or workers in the swine industry. The vast majority of human infections with variant influenza viruses do not result in person-to-person spread. However, each human infection with a swine influenza virus should be fully investigated to determine if person-to-person spread has occurred, and if infected animals are identified, to limit further exposure of humans to these animals.

Clinical presentation and risk groups:

Clinical characteristics of human infections with variant influenza viruses generally have been similar to signs and symptoms of uncomplicated seasonal influenza, including fever, cough, pharyngitis, rhinorrhea, myalgia, and headache. Vomiting and diarrhea also have been reported in some infections in children. Milder clinical illness is possible, including lack of fever. The duration of illness appears to be similar to

uncomplicated seasonal influenza, approximately 3 to 5 days. While assumed to be similar to seasonal influenza virus infection, the duration of viral replication and possible infectiousness of variant virus infection has not been studied. Exacerbation of underlying conditions (e.g., asthma) has occurred. The same people at increased risk for complications of seasonal influenza are likely at high risk for serious complications from variant virus infection, including children younger than 5 years, pregnant women, people 65 years and older, those who are immunosuppressed, and persons with chronic pulmonary, cardiac, metabolic, hematologic, renal, hepatic, neurological or neurodevelopmental conditions, as well as those with other co-morbidities, including extreme obesity.

Clinical diagnosis:

Variant virus infection **cannot** be distinguished by clinical features from seasonal influenza virus infection, or from infection with other respiratory viruses that can cause influenza-like illness (fever and either cough or sore throat). Therefore, the key to suspecting variant virus infection in an ill patient is to determine if there was any exposure to pigs in the 7 days prior to illness onset. Exposure can be defined as follows:

- Direct contact with swine (e.g., showing swine, raising swine, feeding swine, or cleaning swine waste)
- Indirect exposure to swine (e.g., visiting a swine farm or walking through a swine barn), especially if pigs were known to be ill; or
- Close contact (being within 6 feet) with an ill person who had recent swine exposure or is known to be infected with a variant virus.

For patients with influenza-like illness and swine exposure as defined above, collect respiratory samples for influenza testing as outlined below. Clinicians should obtain a nasopharyngeal swab or aspirate (or a combined nasal swab and throat swab), place the swab or aspirate into viral transport medium, and contact their local health jurisdiction (call 1-877-PA-HEALTH) to arrange transport to the Pennsylvania Department of Health Bureau of Laboratories (BOL). **Routine testing for influenza will not identify variant infections; specimens on ill persons with swine exposure must be sent to the BOL.** If testing is also going to be done at the hospital or clinic, the specimen should be split or two specimens should be taken so that one can be immediately sent to the BOL. For collection guidance refer to the BOL website www.health.pa.gov/labs under Clinical Microbiology/Specimen Collection Guidance.

Reporting:

Clinicians should notify their local public health jurisdiction about any patient with influenza-like illness with exposure to pigs in the 7 days prior to illness, as described above. Call 1-877-PA-HEALTH if you do not know how to contact your local public health jurisdiction.

Clinical management and antiviral chemoprophylaxis:

Clinical management of variant virus infection is similar to management of seasonal influenza virus infections. Patients with uncomplicated variant virus infection can be managed on an outpatient basis, with close monitoring for clinical progression and development of complications. Early neuraminidase inhibitor antiviral treatment is indicated for all hospitalized patients, severe and progressive illness, and for any high-risk patients with suspected or confirmed variant virus infection. Variant viruses tested to date are susceptible to the neuraminidase inhibitor drugs oseltamivir, peramivir and zanamivir. These drugs can be prescribed to treat variant virus infections. However, most variant viruses are resistant to the antiviral drugs amantadine and rimantadine; therefore, amantadine and rimantadine should not be prescribed. CDC recommends against antiviral chemoprophylaxis (before or after swine exposure), including for persons who are at high risk for influenza complications. If such high-risk persons become

ill, they should seek medical care as soon as possible and early antiviral treatment should be started if influenza, including variant virus infection, is suspected.

Infection control:

Limited, non-sustained human-to-human transmission of some variant viruses has been reported, but the risk of human-to-human transmission is thought to be low. However, it should be assumed that variant viruses may be transmitted from person-to-person. Therefore, in health care settings, infection control recommendations are the same as for seasonal influenza, including standard and droplet precautions. Health care personnel who collect respiratory specimens from ill persons for influenza testing should follow standard and droplet precautions, as recommended for patient care.

Vaccination:

No vaccine specifically targeted against variant influenza viruses is available at this time. Immunization with seasonal influenza vaccine does not provide protection against infection with variant viruses. However, seasonal influenza vaccination is recommended for all persons aged 6 months and older to prevent seasonal influenza and to minimize co-infection with variant and seasonal influenza, which could lead to genetic reassortment and result in a new influenza strain.

For more information about variant influenza, visit the CDC website at:

<https://www.cdc.gov/flu/swineflu/interim-guidance-variant-flu.htm>

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of October 6, 2017, but may be modified in the future.
