Management of Swine-origin Influenza A (H1-N1) in OMRDD Facilities
May 1, 2009

Please note: this is a rapidly evolving situation. This advice represents interim guidance, based on recommendations from the CDC and the NYS Department of Health, as of 12:00 PM on May 1, 2009. Guidance may change in the upcoming days and weeks as more information becomes available.

The term "individual(s)" will be used in this document to indicate individuals with developmental disabilities.

Swine Influenza, also called swine-origin Influenza A (H1-N1) virus [S-OIV], is a respiratory disease of pigs caused by type A influenza viruses. Outbreaks of S-OIV happen regularly in pigs and occasionally among humans. Most commonly, human cases of S-OIV happen in people who are around pigs but as apparently is the case this year, it's possible for S-OIV viruses to spread from person to person.

The management of S-OIV in facilities operated and/or certified by OMRDD is a complex task. Complicating factors include:

1. Large and small congregate care settings. Residential facilities range from 2 people to over 200 people in a building. They range from apartments and small residences to large institutional settings.

2. Day programs. Individuals from many residences may attend a single day program. Staff from residences may be assigned for part of their day to the day program. Bus drivers and bus aides are exposed to individuals within the confines of a bus for sometimes upwards of 2 hours/day.

3. Medical conditions of individuals. While some people have few medical issues, many have a complex medical profile with multiple complicating diagnoses. Pulmonary, cardiac, gastrointestinal and neurological conditions are common, with many individuals having two or more such conditions. Individuals are frequently unable to articulate how they are feeling, so it is often difficult to diagnose the flu.

4. Ability of individuals to participate in infection control measures and/or respiratory "etiquette." While some individuals are able to follow simple infection control measures, the vast majority are unable to participate in any infection control measures or to comply with the most basic part of respiratory etiquette.

5. Staff. Staff frequently provides close personal care for the individuals they serve. This close personal contact coupled with the limited ability of individuals to participate in transmission prevention places staff in a "high exposure" category.

PREVENTION

The best treatment for S-OIV is to prevent it. Unfortunately, there is currently no human vaccine against S-OIV. It is not known whether the current human flu vaccine provides partial protection against S-OIV. CDC has already begun development of a vaccine for S-OIV, but this will not be available for months.

There are everyday actions that can help prevent the spread of germs that cause respiratory illnesses like S-OIV:

- Cover the nose and mouth with a tissue when coughing or sneezing. Throw the tissue in the trash after use.
- Wash hands often with soap and water, especially after coughing or sneezing. Alcohol-based hand cleaners are also effective.
- Try to avoid close contact with sick people.
- Avoid touching eyes, nose or mouth.
- If a person is sick with respiratory symptoms, the CDC recommends that the person stay home from work (this includes staff) or day program and limit contact with others to keep from infecting them.

TRANSMISSION

S-OIV viruses are spread from person to person primarily through the coughing and sneezing of infected persons. S-OIV transmission occurs predominantly by large respiratory droplets (particles >5 μ in diameter) that are expelled from the respiratory tract during coughing or sneezing. Particles usually do not remain suspended in the air, and close contact (<3 feet) usually is required for transmission. Transmission also occurs through direct contact with respiratory droplets or secretions (such as on used tissues), followed by touching the eyes, nose or mouth.

Swine influenza viruses are not spread by food. A person cannot get swine influenza from eating pork or pork products. Eating properly handled and cooked pork products is safe.

INCUBATION PERIOD

The incubation period for influenza is 1–4 days, with an average of 2 days. However, as a precaution, the CDC recommends observing people exposed to S-OIV for a period of 7 days.

Adults with S-OIV infection should be considered contagious as long as they are symptomatic or for up to 7 days following illness onset. Persons who continue to be ill longer than 7 days after illness onset should be considered potentially contagious until symptoms have resolved. Children, especially younger children, might potentially be contagious for longer periods.

Signs and symptoms

Symptoms of S-OIV in humans are similar to the symptoms of seasonal human flu and include:

- fever,
- muscle aches,
- headache,
- significant lack of energy,
- chills and fatigue,
- dry cough,
- sore throat, and
- possibly a runny nose

Some people have also reported diarrhea and vomiting associated with S-OIV.

Initially, the flu may seem like a common cold, with a runny nose, sneezing and sore throat. But colds usually develop slowly, whereas the flu tends to come on suddenly. Like seasonal flu, S-OIV can vary in severity from mild to severe, and may cause a worsening of underlying chronic medical conditions. The severity of illness from the current S-OIV strain is not yet clear. The few cases found in the United States so far have been mild to moderate and self-limiting.

CASE DEFINITIONS FOR INFECTION WITH S-OIV

The CDC case definitions for the purpose of investigation of suspected, probable, and confirmed cases of S-OIV infection are as follows:

A ***confirmed case*** of S-OIV infection is defined as a person with an acute febrile respiratory illness with laboratory confirmed S-OIV infection by one or more of the following tests:

- real-time RT-PCR
- viral culture

A ***probable case*** of S-OIV infection is defined as a person with an acute febrile respiratory illness who is positive for influenza A, but negative for H1 and H3 by influenza RT-PCR

A ***suspected case*** of S-OIV infection is defined as a person with acute febrile respiratory illness

- with onset within 7 days of close contact with a person who is a confirmed case of S-OIV infection, **or**
- with onset within 7 days of travel to a community either within the United States or internationally where there are one or more confirmed S-OIV cases, **or**
- that resides in a community where there are one or more confirmed S-OIV cases.

Acute febrile respiratory illness is defined as a measured temperature of ≥37.8°C (100°F) and recent onset of at least one of the following:

- rhinorrhea or nasal congestion
- sore throat
- cough

DIAGNOSIS

These guidelines are intended to provide a general approach. Clinicians are urged to continue their normal practice to every extent possible and apply sound clinical judgment to the approach of each individual patient. It is important to remember that the clinical symptoms and presentation of S-OIV infection may be similar to other respiratory illnesses and should be considered in the context of a complete differential diagnosis.

Exposure (to a confirmed or probable S-OIV case or to a geographic area where S-OIV has been identified) alone is not an indication for hospital or emergency room referral.

If an individual has mild illness AND no underlying medical conditions that place him/her at higher risk of complications from influenza, agencies should call the physician's office to determine if the person needs to be seen. These individuals may be able to be screened by phone and given symptomatic treatment recommendations. Typically the instructions will also include a caveat that the physician be contacted for any signs of worsening severity of illness. With the current limitations in confirmatory testing capacity, for typical clinical management purposes, individuals with mild illness will not necessarily be tested for influenza because screening tests will not influence treatment decisions.

Individuals with serious illness will need to be evaluated; the most appropriate setting for the evaluation of a severely ill patient may be the hospital emergency room. However, the State Department of Health is advising these individuals should not be sent to an emergency department unless you believe they are severely ill and may require admission to the hospital.

REPORTING REQUIREMENTS

Any unusual clusters of febrile respiratory illness or any outbreaks (defined as two or more cases) of influenza-like illness should be reported to the Local Health Department (LDH) and to the Infection Control Nurse and/or Medical Director of the appropriate DDSO immediately.

Confirmed cases of influenza are reportable to the NYS Department of Health (NYSDOH). Facilities operated or certified by OMRDD must report by telephone any confirmed cases to the Infection Control Nurse and/or the Medical Director of the appropriate DDSO, the Local Health Department (LDH) and to the NYSDOH (Regional Epidemiology Program). Contact info for NYSDOH Regional Epidemiology Offices is available at http://www.health.state.ny.us/professionals/diseases/reporting/communicable/infection/regional_epi_staff.htm

TREATMENT –Excerpted from the SDOH communication on S-OIV Dated April 30, 2009
(recommendations may change as data on antiviral susceptibilities become available)

Current CDC guidance indicates that empiric antiviral treatment should be considered for confirmed, probable or suspected cases of S-OIV. Treatment of persons at higher risk for influenza complications should be prioritized. SDOH has defined higher risk for S-OIV complications to include individuals who meet the following criteria:

- Chronic pulmonary, cardiovascular, renal, hepatic, hematological, or metabolic disorders (including diabetes mellitus)
- Immunosuppression
- HIV-infection
- Compromised respiratory function, including conditions which increase the risk for aspiration
- Pregnancy
- Over the age of 50 years (especially those > 65 years)
- Residence (regardless of age) in a nursing home or other long-term care institution
- Children <5 years (especially those ≤2 years)

Antiviral treatment is ***recommended*** for the following individuals:

- Confirmed, probable, or suspected cases of S-OIV infection in hospitalized patients.
- Confirmed, probable, or suspected cases of S-OIV infection in patients with high-risk for influenza complications.

Antiviral treatment can be ***considered*** for any other confirmed, probable, or suspected cases of S-OIV infection.

Antiviral treatment with the neuraminidase inhibitors oseltamivir (Tamiflu) or zanamivir (Relenza) should be initiated as soon as possible after the onset of symptoms. Recommended duration of treatment is five (5) days. Antiviral doses recommended for treatment of S-OIV in adults or children one year of age or older are the same as those recommended for seasonal flu.

Antiviral treatment should begin within 48 hours of symptom onset if possible, but there is evidence for benefit, including reductions in mortality even for persons whose treatment is started more than 48 hours after illness.

ANTIVIRAL CHEMOPROPHYLAXIS

Antiviral chemoprophylaxis with either oseltamivir or zanamivir is ***recommended*** for close contacts of a confirmed or probable case of S-OIV who are at high-risk for complications. This would include all persons (individuals and staff) in smaller residences where there is unrestricted interaction among the individuals and staff. Duration of antiviral chemoprophylaxis *post-exposure* is **10** days after the last known exposure to an ill, confirmed case of S-OIV.

Chemoprophylaxis should be ***considered*** for:

- Close contacts of a suspected case of S-OIV who are at high-risk for complications (see above)
- Individuals who are at high risk for complications of influenza (see above) who are in the area of the facility that contains/contained a person with confirmed S-OIV.
- All staff who are caring for an individual with any acute febrile respiratory illnesses

RESTRICTION OF ACTIVITY (Note: Team leaders and/or residence managers should develop a plan to address the possibility that individuals may be prohibited from attending day program and other group activities secondary to S-OIV.)

As there is no evidence that treatment with antiviral medication reduces a person's contagious state, it must be assumed that persons remain contagious for 7 days after the onset of symptoms regardless of whether or not they are treated with antiviral medication. The following restrictions on activity shall be implemented when there is a suspected, probable or confirmed case of influenza.

1. To the extent possible, maintain individuals with suspected or confirmed influenza on droplet precautions in their bedroom for 7 days from the onset of symptoms. It is not necessary to move roommates; however their primary care provider should be notified of their exposure.

2. At a minimum, restrict individuals(s) with suspected or confirmed influenza to the affected unit/residence.

3. To the extent possible, individuals with suspected or confirmed influenza are to dine in their rooms.

4. If dining in the common area, individuals(s) with suspected or confirmed influenza are to dine separately from those who are well/not exposed, with the well individuals dining first followed by the individuals(s) with suspected or confirmed influenza.

5. When in common areas, promote spatial separation of at least 6 feet whenever possible between individuals(s) with suspected or confirmed influenza and other individuals.

6. Bedrooms, bathrooms, dining and common areas and "high touch" areas such as doorknobs, telephones, faucet handles, remote controls, etc. should be thoroughly cleaned frequently with a product that is effective against influenza. It is important that staff use any product according to the manufacturer's recommendations, paying particular attention to any "sit time" that is required.

7. To the extent possible in large facilities, cohort individuals with suspected influenza with other individuals with suspected influenza; cohort individuals confirmed to have influenza with other individuals with confirmed influenza.

8. All individuals in a residence (or in a large facility, in the area, wing or unit) who have suspected or confirmed influenza or who have been exposed to influenza are not to

attend day program, to interact with individuals or staff from other residences or units, or go to activities outside of the residence.

9. Individuals must remain out of day program for a minimum of 7 days after the last known **exposure**. Individuals may return to day program after 7 days provided the following criteria are met:
    a. the individual has completed at least 5 days of prophylactic medication; AND
    b. the individual is asymptomatic and has been afebrile for at least 48 hours; AND
    c. there is no evidence of on-going transmission in the residence, area, wing or unit.

    (NOTE: if the primary care provider determines that a person cannot/should not receive prophylactic medication, conditions b and c above must be met prior to the person returning to program.

10. During the period of possible contagion, staff must be restricted from floating into or out of the residence, area, wing or unit. In addition, staff that have been exposed must be restricted from doing overtime or extra service in other programs, residences, areas, wings or units for at least 7 days after the last known exposure. Staff restrictions may be lifted after the following criteria are met:
    a. the staff person has completed at least 5 days of prophylactic medication; AND
    b. the staff person is asymptomatic and has been afebrile for at least 48 hours; AND
    c. there is no evidence of on-going transmission in the residence, area, wing or unit

11. Restrict visitors to the residence to the extent possible until the contagious period is over.

12. Restrict the use of respite in any residence with an individual with influenza. Restrict the use of respite to individuals who are free of respiratory symptoms or a known exposure to influenza.

13. Restrict admissions, discharges or transfers of individuals during the period of infectivity. In the event that an individual must be re-located, the following measures should be followed:

    a. Carefully screen individuals to be relocated for symptoms of, and exposure to, influenza.
    b. If discharging/transferring an individual with respiratory symptoms or a known exposure to influenza, notify the receiving facility.
    c. Individuals admitted with respiratory symptoms or known exposure to influenza are to be placed on droplet precautions.
    d. Individuals admitted without respiratory symptoms or known exposure may be admitted to the residence and treated as any other individual in the residence without influenza.

USE OF MASKS

1. Provide instruction for individuals and staff on the proper use and disposal of masks.

2. Persons with suspected or confirmed influenza: Masks are to be used for persons who are coughing or have other respiratory infection when they are in common areas as appropriate and based on their ability to safely wear a mask. Masks are to be worn until it is determined that the cause of the symptoms is not an infectious agent or for the duration recommended for the specific infectious agent.

3. A mask is to be worn by staff that are in close contact (i.e. within 3 feet) with a person who has symptoms of a respiratory infection, particularly if fever is present. This precaution is to be maintained until the person has been determined to be noninfectious or for the duration recommended for the specific infectious agent. Masks should be of the tie type and should be tight-fitting. Do not use a mask with ear loops.

OTHER MANAGEMENT STRATEGIES

1. Reinforce the need for strict hand hygiene in staff, individuals and visitors. Instruct everyone to cleanse their hands if they come in contact with blood, body fluids, secretions or excretions and contaminated items; after removing gloves; and between contacts with individuals. Hands must be washed with soap and warm water if they are visibly soiled.

2. Provide hand hygiene materials in common room areas (as appropriate) and encourage individuals and staff to clean their hands often.

3. Staff are to wear gloves if hand contact with respiratory secretions, blood, body fluids, secretions or excretions or potentially contaminated surfaces is anticipated.

4. Staff are to wear a gown if soiling of clothes with a resident's respiratory secretions is anticipated.

5. Provide tissues and instruction on when to use them (i.e. when coughing, sneezing or controlling nasal secretions), how and where to dispose of them and the importance of hand hygiene after handling dirty tissues. If hands are visibly contaminated with respiratory secretions, they are to be washed with soap and water.

6. Individuals with respiratory symptoms are to be physically segregated from other individuals, to the extent possible. Spatial separation of at least 3 feet, preferably 6 feet, is recommended.

7. Promote respiratory hygiene and cough etiquette to the extent possible.

8. Notification is to be sent to all day programs that individuals in the residence attend.

ADDITIONAL DAY PROGRAM CONSIDERATIONS

1. Day programs where an individual with developmental disabilities or staff person has been diagnosed with S-OIV need to assess the pattern of interaction among participants and staff.

2. Notification is to be sent to all residences that have individuals attending the day program, including families of individuals who live at home. Residences must ensure that any exposed individuals get appropriate prophylaxis and that other individuals in the residence be closely monitored for signs and symptoms of the flu. Should any individuals or staff become ill, the residence is to immediately seek medical attention for the person.

3. Day program and residential nurses must maintain close contact. The day program nurse must notify the residential nurse of any respiratory illness or confirmed cases of influenza. The residential nurse must notify the day program nurse of the same. The day program nurse and the residential nurse are to coordinate their efforts in the management of influenza.

4. Individuals and staff, including bus drivers, bus aides, cafeteria workers and others who have been exposed to the flu are to be notified of their exposure. Staff are to be instructed to notify their primary care physician, inform the provider that they have been exposed to a diagnosed case of the flu and indicate that the agency has recommended that they receive influenza prophylaxis.

STAFF CONSIDERATIONS

1. In addition to the measures noted above, all staff are to be instructed to stay home from work if they have any respiratory symptoms.

2. If a staff person calls off work, the manager or supervisor is to ask if the cause is respiratory symptoms. If the cause is respiratory symptoms, the staff person is to be directed to seek medical attention.

3. If a staff person is diagnosed with the flu, the staff person is to be off duty for a minimum of 7 days from the onset of symptoms. The staff person is not to return to work until
    a) they have completed 5 days of medication (unless their health care provider has determined that antiviral treatment is contraindicated) AND
    b) have no evidence of continuing exposure to influenza AND
    c) been afebrile for <u>at least</u> 48 hours.

    If they continue to cough they are to be required to wear a mask whenever they are within 6 feet of any other person in the residence.

4. Staff returning from travel to an affected area, including New York City: According to the NYS DOH, if the person is symptomatic, he/she should be advised to stay

home and seek medical care as needed until at least 24/48hr after symptoms resolve. If the person is asymptomatic, there is no need to exclude them from work. Recent travel to affected area, including New York City is not grounds for any action except that the staff should monitor self and family for symptoms. If the staff member becomes ill with ANY respiratory symptom (cough, sore throat, shortness of breath, fever) he/she needs to report that to the facility and stay home. On April 27, 2009 the CDC issued an advisory recommending that people refrain from unnecessary travel to Mexico. Other areas with S-OIV include San Diego County and Imperial County, California; San Antonio, Texas; Dickinson County, Kansas; Lorain County, Ohio; and New York City. CDC maintains a Travelers' Health web site at: http://wwwn.cdc.gov/travel/contentSwineFluUS.aspx. This site should be checked for any restrictions. This site also provides recommendations to help reduce the risk of infection.

If you have any questions or concerns, or require assistance in implementing these management strategies, please feel free to contact the Infection Control Nurse at the appropriate DDSO.