



# THE CITY OF NEW YORK

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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## 2009 New York City Department of Health and Mental Hygiene (NYC DOHMH) Health Alert #13: Swine Influenza Update

Please distribute to staff in the Departments of Critical Care, Emergency Medicine, Family Practice, Geriatrics, Internal Medicine, Infectious Disease, Infection Control, Pediatrics, Pharmacy, Neonatal Units, Pulmonary Medicine and Laboratory Medicine

April 28, 2009

**PLEASE NOTE: This is a rapidly evolving situation. This alert provides interim guidance. Guidance is likely to change in the upcoming days and weeks as more information becomes available.**

- **Diagnostic testing at the Centers for Disease Control and Prevention (CDC) has now confirmed 44 cases of swine influenza A/H1N1 among students and staff at the St. Francis Preparatory High School in Queens (see case definitions below)**
  - To date, all illness appears to be no more severe than usual seasonal influenza, and all patients we know of are recovering, with the overwhelming majority having had mild illness.
  - In some households with ill students, transmission to household members does appear to have occurred.
  - Treatment and prophylaxis recommendations are provided below.
- **In addition, 5 new probable cases have been identified in New York City residents.** Two of the probable cases involve people with links to Mexico, and three are from the St. Francis Preparatory High School community. Given the evolving epidemiology of this outbreak in NYC and elsewhere, the number of NYC cases is expected to increase in the coming days.
- **Reporting and management of hospitalized patients in NYC with severe, unexplained febrile, respiratory illness:**
  - Immediately report all patients with severe, unexplained febrile respiratory illness (e.g., pneumonia, acute respiratory distress syndrome, respiratory distress) to the Provider Access Line at 1-866-NYC-DOH1 (1-866-692-3641). **Note that this is a change in the PAL number.**
  - Test patients with severe febrile respiratory illness for influenza A using a commercially available rapid test, PCR or immunofluorescence test (e.g., DFA or IFA). If hospitals are not able to conduct initial rapid influenza testing, please contact the DOHMH PAL at 1-866-NYC-DOH1 (1-866-692-3641) to arrange for testing for influenza A. Note that the sensitivity of rapid tests may be less than 70%; patients who are rapid test negative may still have swine influenza.
  - In order to ensure sufficient laboratory resources are available to closely monitor for an increase in patients with severe, unexplained febrile respiratory illness in NYC, testing at the Public Health Laboratory will only be approved for cases that are first reported to DOHMH via the Provider Access Line. DOHMH staff will evaluate the case and advise whether testing for swine influenza at the Public Health Laboratory is indicated. DOHMH will facilitate specimen transport and testing for cases when testing is indicated.
- **Management of patients with mild influenza-like illness in New York City**
  - Patients with suspected (see epidemiologic risk factors listed below), probable or confirmed swine influenza and mild influenza-like illness (ILI) should **stay home for 7 days after onset of symptoms, or until 24-48 hours after resolution of symptoms, whichever is longer.**

**Categories of urgency levels for NYC DOHMH Broadcast Notification System:**

**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

- All patients with ILI, regardless of risk factors for swine influenza, should be instructed to stay home until at least 24-48 hours after their symptoms are resolved, wash their hands frequently, especially after coughing or sneezing, cough into a tissue (not into bare hands or onto another person), and dispose of tissues in the trash.
- **At this time, we are not recommending influenza testing for persons with mild ILI.**
- For patients with mild illness, treatment is only strongly recommended for people who also have underlying conditions that increase the risk for more severe illness due to influenza (listed below). For patients with mild illness who do not have underlying conditions, antiviral treatment can be offered but is NOT strongly recommended. In order to conserve supplies, providers are encouraged to be judicious in prescribing antivirals for uncomplicated mild ILI in patients without underlying conditions.
- Mild illness should only be treated if treatment can be started within 48 hours of symptom onset.
- Do not report cases of mild ILI to the DOHMH, unless they are associated with a cluster of illness (3 or more cases of ILI) in an institution such as a school, congregate living facility, or a long term care or medical facility.
- **Infection control guidelines have been updated by CDC, and are available at [http://www.cdc.gov/swineflu/guidelines\\_infection\\_control.htm](http://www.cdc.gov/swineflu/guidelines_infection_control.htm)**
  - As always, medical facilities have screening and isolation protocols in place for patients presenting with fever and respiratory illness.
  - Signs should be posted asking all patients with fever and respiratory symptoms to notify medical staff immediately upon arrival.
  - Patients with influenza-like illness should be asked to don a face mask.
  - DOHMH requests that the following screening questions be asked at triage: During the 7 days prior to illness onset did you:
    - Travel to Mexico
    - Have close contact with an ill person associated with the St. Francis Preparatory High School in Queens, or
    - Have close contact with a known case of swine influenza.
  - At this time, patients who have ILI and any one of the above epidemiologic risk factors are considered suspected cases of swine influenza in New York City. This definition may be broadened at any time if wider community ILI transmission is documented.
  - Medical personnel caring for or obtaining respiratory specimens from patients with suspected, probable or confirmed swine influenza should take personal protective measures, including wearing a disposable fit-tested N95 mask and eye protection (goggles).
- **Additional information on the outbreaks in the US and Mexico, including NYC, as well as further clinical guidance will be provided as it becomes available. For updated information on the national situation, see [http://www.cdc.gov/swineflu/general\\_info.htm](http://www.cdc.gov/swineflu/general_info.htm).**

Dear Colleagues,

Testing at the CDC on April 26, 2009 has confirmed that an outbreak of influenza at the St. Francis Preparatory High School in Queens is due to swine influenza (H1N1). As of April 28, 2009, there are 44 confirmed cases among students and staff from the school. The DOHMH is actively investigating this outbreak and to date, all illnesses associated with the school appear to be mild. In addition, DOHMH has identified 5 probable cases of swine influenza, two of which are not associated with St. Francis Preparatory High School but are related to travel to Mexico.

As of April 28, 2009, the CDC has reported 64 laboratory confirmed human cases of swine influenza A/H1N1 in the US (45 in New York State, 10 in California, 6 in Texas, 2 in Kansas and 1 in Ohio). All 44 case patients in NYC have had illness that appears to be no more severe than seasonal influenza, with only one requiring brief hospitalization. All patients we know of in NYC appear to be recovering, and the overwhelming majority have had mild illness. No deaths have been reported. The virus is being described as

a new subtype of A/H1N1 not previously detected in swine or humans. Isolates from California and Texas have been found to be susceptible to the neuraminidase inhibitors (oseltamivir and zanamivir) but resistant to the adamantanes (amantadine and rimantadine). As of April 26, 2009, the Government of Mexico had reported 18 laboratory confirmed cases of swine influenza A/H1N1. Investigation is continuing to clarify the spread and severity of the disease in Mexico. Suspect clinical cases have been reported in 19 of the country's 32 states, including thousands of cases and more than 80 deaths – however many of these may be unconfirmed cases. Multiple other countries are also reporting cases. The World Health Organization yesterday raised the pandemic influenza alert level from phase 3 to phase 4.

The symptoms of swine influenza cases in the United States to date have been similar to routine seasonal influenza; they include fever, cough, sore throat, headache, chills, myalgias and fatigue. The incubation period is unknown at this time, but is likely similar to seasonal influenza (1-7 days). Anecdotally, the incubation period has been somewhat shorter, in the range of 1-3 days, but data are still being collected. The infectious period for a confirmed case of swine influenza A (H1N1) virus infection is defined as 1 day prior to the case's illness onset to 7 days after onset (day -1 to day 7). Viral shedding may be prolonged in children or the immunocompromised.

### **Surveillance for Swine Influenza in Hospitalized Cases Citywide**

In order to determine whether the swine influenza virus is causing severe illness in New York City, DOHMH is focusing its surveillance efforts on hospitalized patients with severe illness.

DOHMH requests that providers immediately report any patient with severe unexplained febrile respiratory illness (e.g., pneumonia, ARDS, or respiratory distress) via the Provider Access Line 1-866-NYC-DOH1 (1-866-692-3641). These patients should be tested for influenza using either a commercial rapid test, or direct or indirect immunofluorescence. DOHMH will arrange for transportation of clinical specimens to the Public Health Laboratory for additional testing for swine influenza.

**Note: The sensitivity of the rapid test for influenza is unknown and may be less than 70%. To reduce the likelihood that severe cases of swine influenza are missed, contact the health department to discuss testing of severely ill patients even if rapid influenza testing is negative.**

**To allow DOHMH to prioritize laboratory testing, providers should not send specimens to the Public Health Laboratory unless advised to do so and arranged with DOHMH.** (See attached instructions for collecting and submitting laboratory diagnostic specimens for swine influenza testing.) Nasopharyngeal swabs are the preferred specimens for influenza testing in the current swine influenza context. Please note that strict personal protective measures should be taken when obtaining specimens, or providing patient care, including the donning of an disposable fit-tested N-95 mask, goggles, and placement of the patient in an airborne infection isolation room (AIIR), or if not available, a single room with a closed door.

### **What to report to the Health Department**

Only patients with severe febrile respiratory illness of unknown etiology should be reported to the Health Department. Do not report patients with mild illness, even if there is a known risk factor for swine influenza.

### **Antiviral Treatment**

**At this time antiviral treatment with oseltamivir or zanamavir is strongly recommended for the following:**

- All hospitalized patients with suspected, probable or confirmed swine influenza (see case definitions below)
- All hospitalized patients with severe febrile unexplained respiratory illness (including ARDS, pneumonia or respiratory distress) pending testing for swine influenza.

- Patients with mild influenza-like illness AND underlying conditions (e.g., chronic pulmonary, cardiovascular, renal, hepatic, hematological or metabolic disorders, immunosuppression, compromised respiratory function, including conditions which increase the risk for aspiration, long-term aspirin therapy, pregnancy, age > 65 years, and age < 2 years) that increase the risk for more severe illness due to influenza. ]
- Treatment for any patient with mild ILI should only be started if within 48 hours of symptom onset.

**At this time, antiviral treatment with oseltamivir or zanamavir is NOT strongly recommended for the following:**

- Patients with mild illness who do not have underlying conditions. For these individuals, antiviral treatment can be offered at the discretion of their provider. However, as above, treatment should only be started if within 48 hours of symptom onset.
- In order to conserve supplies and to minimize the emergence of resistance, providers should be judicious in prescribing antiviral medications to patients with mild ILI and no underlying conditions.

### **Antiviral Prophylaxis**

Currently, DOHMH is recommending antiviral prophylaxis for the following persons:

- Healthcare workers who provided care to ill patients, and who either were not using or had a breach in appropriate personal protection when caring for or obtaining specimens from patients with influenza-like illness who have suspected, probable or confirmed swine influenza (see infection control guidance referenced below)
- Asymptomatic household and other close contacts of ill persons of suspected, probable or confirmed swine influenza cases who are either a) at higher risk for complications of influenza (listed below) or b) health care workers themselves.

**Detailed guidance on antiviral therapy and prophylaxis is available at:**

<http://www.cdc.gov/swineflu/recommendations.htm>, and at <http://www.cdc.gov/flu/professionals/antivirals/dosagetable.htm#table>

### **Oseltamivir Supplies**

The possible increased demand for oseltamivir (Tamiflu®) may lead to shortages, and anecdotal reports suggest that the local supply may be limited. While there is a national and state stockpile of Tamiflu®, it is not readily available for use by the public. In order to avoid causing a shortage, we are ***urging providers to use prudent judgment*** when evaluating patients and deciding if antiviral treatment or prophylaxis is indicated.

### **Summary of Management of Persons with Mild Influenza-like Illness**

At this time, providers assessing patients with mild ILI in clinical settings, including emergency departments, should not test for influenza. If these patients have already been diagnosed with probable or confirmed swine influenza, or if they have an epidemiologic risk factor for swine influenza, including travel to Mexico, close contact with a confirmed case of swine influenza or close contact with an ill person associated with St. Francis Preparatory High School, they should be sent home with instructions to stay at home for 7 days after onset of symptoms, or until 24-48 hours after their symptoms resolve, whichever is later, and instructed on the importance of hand and respiratory hygiene. Instructions should be given to seek medical care with worsening of symptoms (see signs of worsening illness below). Please see accompanying document regarding home isolation of patients with suspected swine influenza. This document should be provided to outpatients with suspected, probable or confirmed swine influenza upon discharge.

## **Summary of Management of Persons with Mild Influenza-like Illness and Underlying Conditions that Increase the Risk of Severe Influenza Infection**

Patients with mild ILI and underlying conditions placing them at higher risk for severe illness should be treated empirically for influenza. See <http://www.cdc.gov/swineflu/recommendations.htm> for specific guidelines. No specific testing for influenza is recommended. These patients may be sent home with instructions to stay at home for 7 days after onset of symptoms, or until 24-48 hours after their symptoms resolve, whichever is later, and instructed on the importance of hand and respiratory hygiene. Instructions should be given to seek medical care with worsening of symptoms.

These underlying conditions include chronic pulmonary, cardiovascular, renal, hepatic, hematological or metabolic disorders, immunosuppression, compromised respiratory function, including conditions which increase the risk for aspiration, long-term aspirin therapy, pregnancy, age  $\geq$  65 years, and age  $<$  2 years.

### **Updated Infection Control Recommendations**

Recommendations for infection control are evolving and have been revised almost daily. For detailed current infection control recommendations for medical facilities please see the attached Swine Influenza Q&A for Providers and the CDC website: [http://www.cdc.gov/swineflu/guidelines\\_infection\\_control.htm](http://www.cdc.gov/swineflu/guidelines_infection_control.htm).

Please note that for infection control purposes, NYC defines patients with suspected swine influenza as those who have acute febrile respiratory illness (regardless of severity), and an epidemiologic risk factor as described above. This differs from the current CDC suspected case definition. This definition may be broadened at any time if wider transmission is documented.

**The Health Department requests that providers also immediately report any clusters of influenza-like illness (3 or more cases) in medical facilities, congregate settings such as long-term care facilities, or schools.**

#### **Additional resources:**

\*CDC Swine Influenza Page - <http://www.cdc.gov/swineflu/>

CDC Health Advisory - [http://www.cdc.gov/swineflu/pdf/HAN\\_042509.pdf](http://www.cdc.gov/swineflu/pdf/HAN_042509.pdf)

NYC DOHMH Swine Flu Information - <http://www.nyc.gov/html/doh/html/cd/cd-swineflu.shtml>

\*NYC DOHMH Home Page - <http://www.nyc.gov/html/doh/html/home/home.shtml>

New York State Swine Flu Resources -

[http://www.nyhealth.gov/diseases/communicable/influenza/seasonal/swine\\_flu/index.htm](http://www.nyhealth.gov/diseases/communicable/influenza/seasonal/swine_flu/index.htm)

**To contact the Health Department, including to report suspected cases of swine influenza in hospitalized patients and arrange for specimen testing, please call the Provider Access Line at 866-NYC-DOH1. This number is also available for questions or consultations by providers.**

As always, we appreciate the cooperation of the medical community in New York City and will update you with further information when it becomes available.

Sincerely,

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## **New York City Case Definitions for Infection with Swine Influenza A (H1N1) Virus**

1. A Confirmed case of swine influenza A (H1N1) virus infection is defined as a person with influenza-like illness (ILI) with laboratory confirmed swine influenza A (H1N1) virus infection at CDC by one or more of the following tests:
  1. real-time RT-PCR
  2. viral culture
  3. four-fold rise in swine influenza A (H1N1) virus specific neutralizing antibodies
2. A Probable case of swine influenza A (H1N1) virus infection is defined as a person with ILI with an influenza test that is positive for influenza A, but H1 and H3 negative.
3. A Suspected case\* of swine influenza A (H1N1) virus infection is defined as a person with ILI who, during the 7 days prior to symptom onset
  1. Traveled to Mexico
  2. Had close contact with an ill person associated with St. Francis Preparatory High School
  3. Had close contact with a confirmed or probable case of swine influenza.

\* Note that the NYC case definition for suspected swine influenza differs from the CDC case definition.

## **Conditions which increase the risk of severe influenza infection**

- chronic pulmonary, cardiovascular, renal, hepatic, hematological, or metabolic disorders,
- immunosuppression,
- compromised respiratory function, including conditions which increase the risk for aspiration,
- long-term aspirin therapy
- pregnancy
- age  $\geq$  65 years
- age  $<$  2 years

## **Signs and symptoms of worsening illness**

**In children** emergency warning signs that need urgent medical attention include:

- Fast breathing or trouble breathing
- Bluish skin color
- Not drinking enough fluids
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Flu-like symptoms improve but then return with fever and worse cough
- Fever with a rash

**In adults**, emergency warning signs that need urgent medical attention include:

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting