

New York State Clinical Guidance for Treatment of Swine-Origin Influenza A H1N1 (Swine Flu) Virus Infection—May 4, 2009

1. Background

This document describes the New York State Department of Health's current recommendations for clinical testing and treatment of H1N1 (Swine Flu) infection. As the epidemic evolves and new information becomes available, these recommendations are likely to change. The full document that includes this current information is found at http://www.nyhealth.gov/diseases/communicable/influenza/seasonal/swine_flu/docs/2009-04-30_h1n1_health_advisory_update_3.pdf. Please check the New York State Department of Health's Web site for updates at http://www.nyhealth.gov/diseases/communicable/influenza/seasonal/swine_flu

2. Case Definitions for Infection with H1N1 (Swine Flu)

The CDC case definitions for the purpose of investigation of suspected, probable, and confirmed cases of H1N1 (Swine Flu) infection are as follows:

A **confirmed case** of H1N1 (Swine Flu) infection is defined as a person with an acute febrile respiratory illness with laboratory confirmed H1N1 (Swine Flu) infection by one or more of the following tests:

- Real-time RT-PCR
- Viral culture

A **probable case** of H1N1 (Swine Flu) 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 H1N1 (Swine Flu) 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 H1N1 (Swine Flu) 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 H1N1 (Swine Flu) cases, or
- Who resides in a community where there are one or more confirmed H1N1 (Swine Flu) cases.

Acute febrile respiratory illness is defined as a measured temperature of $\geq 37.8^{\circ}\text{C}$ (100°F) and recent onset of at least one of the following:

- Rhinorrhea or nasal congestion
- Sore throat
- Cough

3. Clinical Guidance for Testing and Treatment

Current assumptions made for these clinical guidance recommendations:

- There are adequate stores of antiviral medications to treat all seriously ill patients.
- Prophylactic medication supply limitations are a likely inevitability that will require a focused approach to post exposure prophylaxis for both health care workers (HCW) and high-risk individuals.
- Most influenza illness, including H1N1 (Swine Flu) infection, will be mild to moderate and self-limiting.
- As a vaccine against H1N1 (Swine Flu) is developed, antiviral recommendations are likely to change.
- There are insufficient laboratory testing resources to perform H1N1 (Swine Flu) confirmatory testing on all patients with symptoms of influenza.

Clinical Assessment

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 H1N1 (Swine Flu) 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 H1N1 [Swine Flu] case or to a geographic area where H1N1 [Swine Flu] has been identified) alone is not an indication for hospital or emergency department referral.

Patients who report mild illness AND who have no underlying medical conditions that place them at higher risk of complications from influenza need not be seen in their physician's office. These patients can be screened by phone, given symptomatic treatment recommendations, and instructed to contact their physician for any signs of worsening severity of illness. With the current limitations in confirmatory testing capacity, for typical clinical management purposes, **patients with mild illness should NOT be tested for influenza because screening tests will not influence treatment decisions.**

Patients who report serious illness should be further evaluated; the most appropriate setting for the evaluation of a severely ill patient may be the hospital emergency department. Do **NOT** send patients to an emergency department unless you believe hospital admission may be warranted.

Any unusual clusters of febrile respiratory illness should be reported to the local health department (LHD) immediately. Local public health authorities may request testing of patients associated with a suspect outbreak, even if the patient's illness is mild.

Antiviral Treatment

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

- Confirmed, probable, or suspected cases of H1N1 (Swine Flu) infection in hospitalized patients
- Confirmed, probable, or suspected cases of H1N1 (Swine Flu) infection in patients with high risk for influenza complications

Antiviral treatment can be ***considered*** for the following individuals:

- Any other confirmed, probable, or suspected cases of H1N1 (Swine Flu) infection

Antiviral treatment with zanamivir or oseltamivir should be initiated as soon as possible (ideally within 48 hours) after the onset of symptoms. Recommended duration of treatment is 5 days. The H1N1 (Swine Flu) is sensitive (not resistant) to the neuraminidase inhibitors, oseltamivir and zanamivir, and resistant (not sensitive) to the adamantanes, amantadine and rimantadine.

There are insufficient data available at this point to determine who is at higher risk for complications of H1N1 (Swine Flu) infection. At this time, the same age and risk groups who are at higher risk for seasonal influenza complications should also be considered at higher risk for H1N1 (Swine Flu) infection complications. Conditions that increase the risk of complications of seasonal influenza infection include:

- Chronic pulmonary, cardiovascular, renal, hepatic, hematological, or metabolic disorders (including diabetes mellitus)
- Immunosuppression
- HIV-infected persons
- Compromised respiratory function, including conditions that increase the risk for aspiration
- Pregnancy
- Persons aged ≥ 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)

Table 1: Summary of testing and treatment recommendations for patients with suspect, probable, or confirmed H1N1 (Swine Flu) infection

	Mild Illness		Severe Illness	
	TEST?	TREAT?	TEST?	TREAT?
High-risk medical conditions that increase complications of influenza	NO	Recommended	YES	Recommended
NO high-risk medical conditions that increase complications of influenza	NO	Consider	YES	Recommended

Antiviral Prophylaxis

When prophylaxis is indicated, either oseltamivir or zanamivir should be initiated as soon as possible following the exposure and should continue for **10 days** following the last known exposure to H1N1 (Swine Flu) infection.

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

- Household close contacts who are at high risk for complications of influenza of a confirmed or probable case
- Health care workers or public health workers who were not using appropriate personal protective equipment during close contact with an ill confirmed, probable, or suspected case of H1N1 (Swine Flu) infection during the case’s infectious period

Antiviral chemoprophylaxis can be ***considered*** for the following individuals:

- Household close contacts who are at high risk for complications of influenza of a suspected case
- Children attending school or daycare who are at high-risk for complications of influenza and who had close contact (face-to-face) with a confirmed, probable, or suspected case
- Health care workers who are at high risk for complications of influenza who are working in an area of the health care facility that contains patients with confirmed H1N1 (Swine Flu) cases, or who are caring for patients with any acute febrile respiratory illness
- Travelers to Mexico who are at high risk for complications of influenza (Note: A travel warning is currently in effect indicating that nonessential travel to Mexico should be avoided.)
- First responders who are at high-risk for complications of influenza and who are working in areas with confirmed cases of H1N1 (Swine Flu) infection

Table 2: H1N1 (Swine Flu) antiviral medication dosing recommendations (table extracted from Infectious Disease Society of America guidelines for seasonal influenza)

Agent, group		Treatment	Chemoprophylaxis
Oseltamivir			
Adults		75 mg capsule twice per day for 5 days	75 mg capsule once per day
Children (age 12 months or older*) by weight	≤15 kg	60 mg per day divided into 2 doses	30 mg once per day
	15-23 kg	90 mg per day divided into 2 doses	45 mg once per day
	24-40 kg	120 mg per day divided into 2 doses	60 mg once per day
	>40 kg	150 mg per day divided into 2 doses	75 mg once per day
Zanamivir			
Adults		Two 5-mg inhalations (10 mg total) twice per day	Two 5-mg inhalations (10 mg total) once per day
Children		Two 5-mg inhalations (10 mg total) twice per day (age, 7 years or older)	Two 5-mg inhalations (10 mg total) once per day (age, 5 years or older)

* Oseltamivir use for children < 1 year old was recently approved by the U.S. Food and Drug Administration (FDA) under an Emergency Use Authorization (EUA) and dosing for these children is age-based. See <http://www.cdc.gov/swineflu/recommendations.htm>.