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UPDATED GUIDANCE FOR SWINE-ORIGIN H1N1 INFLUENZA VIRUS TESTING (05/07/09)

The Centers for Disease Control and Prevention (CDC) and State Health Departments continue to identify human infections with swine-origin H1N1 influenza virus across the United States (for current updates see <http://www.cdc.gov/h1n1flu/>). In addition, H1N1 influenza infections have been identified globally.

Laboratory testing for H1N1 swine influenza is available only at the Georgia Public Health Laboratory, and is used primarily for public health surveillance, **not for primary diagnosis of individual patients**. At this time, the H1N1 virus seems to be epidemiologically similar to seasonal influenza, so we are focusing our surveillance efforts to gain information about severe outcomes of H1N1 infection (such as **hospitalization**) and clusters/outbreaks in institutional or social venues. Patients must meet certain criteria to be tested for H1N1 influenza.

Note: Influenza-like illness (ILI) is defined as an illness with fever (temperature of $\geq 37.8^{\circ}\text{C}$ or 100°F) and recent onset of at least one of the following: 1) rhinorrhea or nasal congestion, 2) sore throat, 3) cough in the absence of a KNOWN cause other than influenza.

Criteria for H1N1 influenza testing at the Georgia Public Health Laboratory:

Specimens can be submitted for:

1. Patients **hospitalized** with influenza-like illness (see definition above).
2. Infants, persons ≥ 65 yrs, or persons with a compromised immune system who are **hospitalized** with a sepsis-like syndrome, if H1N1 influenza is suspected and other causes are less likely. (See #5 in attached algorithm)
3. At this time, **NO** specimens from suspect cases with mild ILI should be sent to the Georgia Public Health Laboratory for testing.

(Note: these recommendations may continue to change as investigations continue)

Clinicians MUST contact an epidemiologist at their local health department (<http://health.state.ga.us/regional/index.asp>) or the Georgia Division of Public Health Acute Disease Epidemiology Section (404-657-2588) to obtain approval to submit specimens for testing, the appropriate submission form, and to coordinate specimen shipping. After business hours, specimens can be collected and held in the refrigerator at 4°C until Public Health can be consulted. **SAMPLES SUBMITTED DIRECTLY TO THE PUBLIC HEALTH LABORATORY WITHOUT APPROPRIATE PUBLIC HEALTH SCREENING AND THE APPROPRIATE SUBMISSION FORM MAY NOT BE TESTED.**

Specimen Collection:

(Please be sure to follow appropriate infection control guidance during collection of specimens. Current infection control guidance is available at http://www.cdc.gov/swineflu/guidelines_infection_control.htm)

If a patient meets testing criteria, collect a respiratory specimen as soon as possible after illness onset. Acceptable specimens include either a nasopharyngeal swab/aspirate or a nasal wash/aspirate. Collect 2 swabs per patient. If these specimens cannot be collected, a combined nasal swab with an oropharyngeal swab is acceptable. For patients who are intubated, an endotracheal aspirate should also be collected. Specimens **must** be placed into **sterile viral transport media (VTM)** and immediately placed on ice or cold packs or at 4°C (in a refrigerator). Do not freeze.

Note: Ideally, swab specimens should be collected using swabs with a synthetic tip (e.g. polyester or Dacron®) and an aluminum or plastic shaft. Swabs with cotton tips and wooden shafts are not recommended. Specimens collected with swabs made of calcium alginate are not acceptable. The swab specimen collection vials must contain 1-3ml of viral transport medium (e.g. containing, protein stabilizer, antibiotics to discourage bacterial and fungal growth, and buffer solution), such as M4RT or the [BD Universal Viral Transport System](#)

Storing and Shipping Specimens:

- Respiratory specimens can be kept at 4°C for up to 1 week.
- After screening, District or State Epidemiology will provide the appropriate Georgia Public Health Laboratory Submission Form.
- Please package samples for Category B shipping to the Georgia Public Health Laboratory:
 - Wrap the primary specimen tube(s) in bubble wrap or some other cushioning material and secure with tape.
 - Place the specimens in a plastic bag with a biohazard symbol, place an absorbent sheet in the bag and expel the air before sealing the bag.
 - Place the sealed bag in a second sealable, water resistant bag (e.g. a tyvek envelope), expel the air and seal the bag.
 - Place the cool pack in the bottom of a styrofoam container, put specimen, along with the appropriate submission form, in the shipper along with a list of the contents.
 - Place the styrofoam shipping container in an outer cardboard box, seal the box and be sure the following markings/labels are placed on the box:
 - A) Triangular 3373 label;
 - B) Category B Biological Substance label;
 - C) Complete shipper's address, including the name and telephone number of a contact person who can be contacted in case the package is damaged;
 - D) Georgia Public Health Laboratory address:
Georgia Public Health Laboratory
1749 Clairmont Road, Decatur, GA 30033

Current guidance for treatment of suspected cases of swine H1N1 influenza infections is available at <http://www.cdc.gov/swineflu/recommendations.htm>

Antiviral treatment should be considered for confirmed, probable, or suspect cases of swine H1N1 infection. Treatment of hospitalized patients and patients at higher risk for

influenza complications should be prioritized (See Table 1). Antiviral treatment with either zanamivir or oseltamivir should be initiated as soon as possible after the onset of symptoms. Recommended duration of treatment is five days. Recommendations for use of antivirals may change as data on antiviral susceptibilities become available. Antiviral doses recommended for treatment of swine H1N1 infection in adults or children 1 year of age or older are the same as those recommended for seasonal influenza and can be found at <http://www.cdc.gov/flu/professionals/antivirals/dosagetable.htm#table>.

Table 1: Summary of testing and treatment recommendations for patients with suspect, probable, or confirmed H1N1 infection*

	Mild Illness		Severe Illness/Hospitalized	
	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	TEST?	TREAT?	TEST?	TREAT?
	NO	Consider	YES	Recommended

*Adapted from the State of New York Department of Health, Health Advisory #3, 4/30/09

If you have any questions, please call the Georgia Division of Public Health (404-657-2588 during normal working hours or 1-866-PUB-HLTH after hours) or your local health department (<http://health.state.ga.us/regional/index.asp>) for information. Additional information can be found on the Centers for Disease Control and Prevention website: <http://www.cdc.gov/flu/swine/index.htm>