



## SWINE INFLUENZA

### Agent Overview:

**Swine Influenza A H1N1:** Causative agent is an influenza virus predominantly found in pig populations. People do not normally get Swine Influenza A (H1N1), but this strain has acquired the ability to transmit from pigs to humans, and humans to humans. An outbreak of human cases of Swine Influenza A (H1N1) infection is occurring internationally. While the disease has resulted in deaths, most cases appear to be mild.

Since humans are unlikely to have inherent immunity, there is the potential that this outbreak can become a pandemic. There is no current vaccine. The virus is susceptible to antiviral drugs.

### Lab Specimen Submittal:

***Delaware Laboratories should send all rapid influenza A+ specimens as soon as possible to the Delaware Public Health Laboratory (DPHL) for subtyping. Although Swine flu is subtype H1, it does not subtype using the current FDA approved PCR method. Any specimens that DPHL is unable to subtype as H1 or H3 will be sent to CDC's Influenza Division for further diagnostic testing.***

Clinicians should consider submitting specimens from patients presenting with febrile respiratory illness who:

- Live in an area where human cases of swine influenza A (H1N1) has been identified, **OR**
- Have traveled to an area where human cases of swine influenza A (H1N1) has been identified, **OR**
- Have been in contact with ill persons from these areas in the 7 days prior to their illness onset.

Case Definition for Infection with Swine Influenza A (H1N1) Virus: A confirmed case is defined as a person with an acute respiratory illness confirmed as swine influenza A (H1N1) virus infection by CDC laboratory testing using 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.

Probable Case Definition of Swine Influenza A (H1N1) virus: A person with an acute respiratory illness with an influenza test that is positive for influenza A, but H1 and H3 negative.

Suspected Case Definition of Swine Influenza A (H1N1) virus:

1. A person with an acute respiratory illness who was a close contact to a confirmed case of Swine Influenza A (H1N1) virus infection while the case was ill **OR**

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2. A person with an acute respiratory illness with a recent history of contact with an animal with confirmed or suspected Swine Influenza A (H1N1) virus infection **OR**
3. A person with an acute respiratory illness who has traveled to an area where there are confirmed cases of Swine Influenza A (H1N1) within 7 days of suspect case's illness onset.

**Type of Specimens  
Necessary for Testing:**

Clinical specimens for testing: If Swine Flu is suspected, clinicians should obtain a respiratory swab for Swine Influenza testing and place it in a refrigerator. Use two dry Dacron swabs (not cotton) to collect specimen and put in a sterile tube.

SPECIMEN COLLECTION from ill patients: Upper Respiratory: nasopharyngeal aspirate and oropharyngeal swabs. Lower Respiratory: Bronchoalveolar lavage (BAL), tracheal aspirate or pleural tap.

To diagnose Swine Influenza A infection, a respiratory specimen would generally need to be collected within the first 4 to 5 days of illness (when an infected person is most likely to be shedding virus). However, some persons, especially children, may shed virus for 10 days or longer. At this time, identification as a Swine Flu Influenza A virus requires sending the specimen to CDC for laboratory confirmatory testing.

When influenza is detected in your laboratory by RAPID TESTING methods, please send an aliquot (1-2 ml) of the original suspension (not exposed to test kit reagents) in viral transport media or sterile diluent; or if an additional original specimen is available, that is preferable.

When influenza is detected in your laboratory by VIRAL CULTURE, please send the actively growing viral culture tube with 2 ml of viral maintenance media.

**Packaging Instructions:**

Pack collected clinical specimens in a sterile tube and place them in a refrigerator (not a freezer). Once collected, the clinician should contact the Delaware Public Health Laboratory at (302) 223-1520 to facilitate transport and timely diagnosis. Transported specimens should be in a cooler and in unbreakable double containers. Avoid manipulation of specimen.

**Receiving Specimens:**

DPHL couriers pick up specimens daily at designated locations throughout the state. Specimens are also accepted at the back of the building by the loading dock. Submitters must have the proper submission form completed.

**Reporting Results:**

A positive or negative test result is issued upon completion of PCR. PCR may take 4 to 24 hrs. However, all A positive nonsubtypeable PCR results must be confirmed by CDC.

**Contact Information:**

Jane Getchell, DrPH, DPHL director, or Christina Pleasanton, Deputy Director 302-223-1520 (24/7 coverage).

**Website:**

For locations of courier pick-up sites, specimen submission forms, and other information see the DPHL website at <http://www.dhss.delaware.gov/dhss/dph/lab/labs.html>.

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