Interim Guidance and Information
2009 H1N1 Influenza A Virus

Key Facts about the 2009H1N1 Influenza A situation:
Clinicians should consider testing suspected cases of swine-origin influenza A (H1N1), especially those with severe illness, by obtaining an upper respiratory specimen to test for swine-origin influenza A (H1N1) virus (S-OIV). 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. All influenza A positive specimens should be sent to State Public Health Laboratories for further testing.
For complete details: http://www.cdc.gov/swineflu/casedef_swineflu.htm.

Preferred respiratory specimens:
Specimens should be collected as soon as possible after illness onset. Collection of nasopharyngeal swabs/aspirates or nasal washes/aspirates is preferred. If these specimens cannot be collected, a combined nasal swab with an oropharyngeal swab is acceptable. Specimens should be placed into sterile viral transport media and immediately placed on ice or cold packs or at 4°C (refrigerator) for transport to the laboratory.
For complete details: http://www.cdc.gov/swineflu/specimencollection.htm.

Specimen Collection & Transport:
Ideally, swab specimens should be collected using swabs with a polyester or Dacron® tip and an aluminum or plastic shaft. Calcium alginate swabs are not acceptable, and swabs with cotton tips and wooden shafts are not recommended. Specimen collection vials should contain 1-3 ml of viral transport medium, such as Remel M4RT™. All respiratory specimens should be kept at 4°C until they can be placed at -70°C. If a -70°C freezer is not available, specimens should be kept at 4°C, preferably no longer than 1 week. Clinical specimens should be shipped on dry ice in appropriate packaging.

Safety:
Diagnostic laboratory work on clinical samples from patients who are suspected cases of swine influenza A (H1N1) virus infection should be conducted in a BSL2 laboratory. All sample manipulations should be done inside a biosafety cabinet (BSC). Viral isolation on clinical specimens from patients who are suspected cases of swine influenza A (H1N1) virus infection should be performed in a BSL2 laboratory with BSL3 practices (enhanced BSL2 conditions).
For complete details: http://www.cdc.gov/swineflu/guidelines_labworkers.htm.

Test recommendations:
Real-time RT-PCR for influenza A, B, H1, H3 at a State Health Department Laboratory is recommended. Currently, swine-origin influenza A (H1N1) virus will test positive for influenza A and negative for H1 and H3 by real-time RT-PCR. If reactivity of real-time RT-PCR for influenza A is strong (e.g. Ct ≥30), it is more suggestive of a novel influenza A virus. Confirmation as swine-origin influenza A (H1N1) virus is performed at CDC currently, but may be available in state public health laboratories soon.

Rapid influenza antigen testing:
Commercially available rapid tests can detect and distinguish between influenza A and B viruses. The ability of these tests to detect this new strain of virus has not been determined. A patient with a positive rapid test for influenza A may meet the criteria for a probable case. A negative rapid test may be a false negative and should not be assumed a final diagnostic test for swine influenza infection.

Immunofluorescence (DFA or IFA):
These tests can distinguish between influenza A and B viruses. A patient with a positive for influenza A by immunofluorescence may meet criteria for a suspected case. However, it is not possible to differentiate from seasonal influenza A viruses. Immunofluorescence depends upon the quality of a clinical specimen, operator skills, and has unknown sensitivity and specificity to detect human infection with swine-origin influenza A (H1N1) virus in clinical specimens. A negative immunofluorescence could be a false negative and should not be assumed a final diagnostic test for swine-origin influenza infection.

Viral culture:
Isolation of swine-origin influenza A (H1N1) virus is diagnostic of infection, but may not yield timely results for clinical management. A negative viral culture does not exclude infection with swine-origin influenza A (H1N1) virus.

The above information is adapted from content provided by the Centers for Disease Control and Prevention (CDC) at www.cdc.gov/swineflu.