

Swine Flu Update #9

Diagnosis and Treatment of Influenza A H1N1

Guidelines for Clinicians

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Background

Ongoing surveillance conducted by the SNHD has confirmed that influenza A (H1N1) virus has been circulating throughout the district during the summer and continues to cause illness in persons in all age groups. Influenza A (H1N1) is causing illness throughout the United States and Nevada. As we head into the fall influenza season, we can anticipate seeing widespread illness due to this new virus.

Fortunately, most persons who have become ill with the influenza A (H1N1) virus have had very mild illness with rapid and full recovery. Just as for routine seasonal influenza, most persons who become ill do not need to seek medical care and do not need to have laboratory testing to confirm the diagnosis. Unfortunately, just as for seasonal influenza, some individuals experience much more serious illness, and hospitalizations and fatalities have occurred and are to be expected.

Diagnosis

A number of different laboratory tests are available for detecting the presence of influenza viruses in respiratory specimens. They differ in their sensitivity and specificity, as well as their availability, the amount of time needed from specimen collection until results are available, and the ability of the tests to identify different influenza virus types (A versus B) and influenza A subtypes (novel H1N1) versus seasonal H1N1 versus seasonal H3N2 viruses.

Rapid influenza diagnostic tests (RIDTs) are antigen detection tests that detect influenza viral

nucleoprotein antigen. Recently, CDC evaluated the performance of RIDTs. CDC found the sensitivity of RIDTs for detecting novel influenza A (H1N1) to range from 10 – 70 %. Therefore, a negative RIDT result does not rule out novel influenza A (H1N1) virus infection. While RIDTs are capable of detecting novel influenza A (H1N1) in respiratory specimens, many infections will be missed, especially in specimens with low viral titers.

A RIDT may provide useful information that might impact on patient care. Understanding the limitations of RIDTs is very important to appropriately interpret results for clinical management. When influenza viruses are circulating in a community, a positive test result indicates that influenza virus infection is likely present. However, a negative result does not rule out influenza virus infection.

Patients with illnesses compatible with novel influenza A (H1N1) virus infection but with negative RIDT results should be treated empirically based on the level of clinical suspicion, underlying medical conditions, severity of illness, and risk for complications. If a more definitive determination of infection with influenza virus is required, testing with real-time reverse transcription—polymerase chain reaction (rRT-PCR) or virus isolation should be performed.

Treatment

Oseltamivir or zanamivir are antivirals recommended for the treatment of novel influenza A (H1N1). Recommendations for use of antivirals may change as data on antiviral effectiveness, clinical spectrum of illness, adverse events from antiviral use, and antiviral susceptibility data become available.

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Clinical judgment is an important factor in treatment decisions. Persons with suspected novel H1N1 influenza who present with an uncomplicated febrile illness typically do not require treatment unless they are at higher risk for influenza complications.

Treatment is recommended for:

1. All persons with suspected or confirmed influenza requiring hospitalization.
2. For persons with suspected or confirmed influenza who are at higher risk for complications (children younger than 5 years old, adults 65 years and older, pregnant women, persons with certain chronic medical or immunosuppressive conditions, and persons younger than 19 years of age who are receiving long-term aspirin therapy).

Many patients who have had novel influenza (H1N1) virus infection, but who are not in a high-risk group have had a self-limited respiratory illness similar to typical seasonal influenza. For most of these patients, the benefits of using antivirals may be modest. Testing, treatment and chemoprophylaxis efforts should be directed primarily at persons who are hospitalized or at higher risk for influenza complications.

Once the decision to administer antiviral treatment is made, treatment with zanamivir or oseltamivir should be initiated as soon as possible after the onset of symptoms. Treatment should not wait for laboratory confirmation of influenza because laboratory testing can delay treatment and because a negative rapid test for influenza does not rule out influenza.

Antiviral chemoprophylaxis generally should be reserved for persons at higher risk for influenza-related complications who have had contact with someone likely to have been infected with influenza. Clinicians should be judicious in prescribing antivirals for prophylaxis to reduce the likelihood that the novel influenza (H1N1) virus will develop resistance.

References

Interim Guidance for the Detection of Novel Influenza A Virus Using Rapid Influenza Diagnostic Tests. Centers for Disease Control and Prevention. August 10, 2009.

Updated Interim Recommendations for Use of Antiviral Medications in the Treatment and Prevention of Influenza for the 2009 – 2010 Season. Centers for Disease Control and Prevention.

Evaluation of Rapid Influenza Diagnostic Tests for Detection of Novel Influenza A (H1N1) Virus – United States, 2009. *MMWR* 2009;58; 826-829.