Washoe County Health District

EPI - NEWS

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Telephone (775) 328-2447
Fax (775) 328-3764
epicenter@washoecounty.us

WASHOE COUNTY HEALTH DISTRICT • P.O. BOX 11130 • RENO, NEVADA • 89520-0027 • (775) 328-2447

PCR-CONFIRMED SEASONAL INFLUENZA TYPE A (H1) IDENTIFIED IN WASHOE COUNTY

The Health District's Communicable Disease Program has received the first report of PCR-confirmed seasonal influenza in Washoe County for this season. The specimen was collected on December 11, 2008 by a local family practice office and was positive by reverse transcriptase polymerase chain reaction (RT-PCR) for influenza A (H1). Testing was performed by the Nevada State Health Laboratory. Culture results are pending. Although this is the first PCR-confirmed case, an additional 13 cases with rapid test-positives have been reported since October 23, 2008, bringing the total to date to 14 (see table 1). Age range of reported cases is 1 -46 years with a mean of 21 years. For up-to-date influenza surveillance data for Washoe County, please see the weekly influenza report at: http://www.washoecounty.us/health/cdpp/is.html.

Table 1 Influenza cases reported, Washoe County, 2008-09

# reported	Influenza Type	Subtype	Test
1	A	H1	PCR
8	A	Unknown	Rapid
3	B	N/A	Rapid
2	Unknown	N/A	Rapid

Influenza is a reportable disease as defined in Nevada Administrative Code 441.A. **Health care providers must report influenza cases with a positive laboratory test (including rapid tests performed in the office or lab) by faxing reports to (775) 328-3764 or by calling the Communicable Disease Program at (775) 328-2447.**

CDC ISSUES INTERIM RECOMMENDATIONS FOR THE USE OF INFLUENZA ANTIVIRAL MEDICATIONS IN THE SETTING OF OSELTAMIVIR RESISTANCE AMONG CIRCULATING INFLUENZA A (H1N1) VIRUSES, 2008-09 INFLUENZA SEASON *(Adapted from the CDC Health Advisory distributed via Health Alert Network December 19, 2008)*

Although influenza activity is low in the U.S. to date, preliminary data from a limited number of states indicate that the prevalence of influenza A (H1N1) virus strains resistant to the antiviral medication oseltamivir is high. Therefore, CDC is issuing interim recommendations for antiviral treatment and chemoprophylaxis of influenza during the 2008-09 influenza season. When influenza A (H1N1) virus infection or exposure is suspected, zanamivir or a combination of oseltamivir and rimantadine are more appropriate options than oseltamivir alone. Local influenza surveillance data and laboratory testing can help with physician decision-making regarding the choice of antiviral agents for their patients. The 2008-09 influenza vaccine is expected to be effective in preventing or reducing the severity of illness with currently circulating influenza viruses, including oseltamivir-resistant influenza A (H1N1) virus strains. Since influenza activity remains low and is expected to increase in the weeks and months to come, CDC recommends that influenza vaccination efforts continue. **Vaccination remains the cornerstone of influenza prevention efforts.** Influenza vaccine is still available at the Health District and other locations throughout the community. For more information call 775-328-3724 or visit: http://www.washoecounty.us/health/cchs/flu.html.

Background

Influenza A viruses, including two subtypes (H1N1) and (H3N2), and influenza B viruses currently circulate worldwide, but the prevalence of each can vary among communities and within a single community over the course of an influenza season. In the U.S., four prescription antiviral medications (oseltamivir, zanamivir, amantadine and rimantadine) are approved for treatment and chemoprophylaxis of influenza. Since January 2006, the neuraminidase inhibitors (oseltamivir, zanamivir) have been the only recommended influenza antiviral drugs because of widespread resistance to the adamantanes (amantadine, rimantadine) among influenza A (H3N2) virus strains. The neuraminidase inhibitors have activity against influenza A and B viruses while the adamantanes have activity only against influenza A viruses. In 2007-08, a significant increase in the prevalence of oseltamivir resistance was reported among influenza A (H1N1) viruses worldwide. During the 2007-08 influenza season, 10.9% of H1N1 viruses tested in the U.S. were resistant to oseltamivir.

Influenza activity has been low thus far this season in the United States. As of December 19, 2008, a limited number of influenza viruses isolated in the U.S. since October 1 have been available for antiviral resistance testing at CDC. Of the 50 H1N1 viruses tested to date from 12 states, 98% were resistant to oseltamivir, and all were susceptible to zanamivir, amantadine and rimantadine. Preliminary data indicate that oseltamivir-resistant influenza A (H1N1) viruses do not cause different or more severe symptoms compared to oseltamivir-sensitive influenza A (H1N1) viruses. Influenza A (H3N2) and B viruses remain susceptible to oseltamivir. The proportion of influenza A (H1N1) viruses among all influenza A and B viruses that will circulate during the 2008-09 season cannot be predicted, and will likely vary over the course of the season and among communities. Oseltamivir-resistant influenza A (H1N1) viruses are antigenically similar to the influenza A (H1N1) virus strain represented in 2008-09 influenza vaccine, and CDC recommends that influenza vaccination efforts continue as the primary method to prevent influenza.

Oseltamivir resistance among circulating influenza A (H1N1) virus strains presents challenges for the selection of antiviral medications for treatment and chemoprophylaxis of influenza, and provides additional reasons for clinicians to test patients for influenza virus infection and to consult surveillance data when evaluating persons with acute respiratory illnesses during influenza season. These interim guidelines provide options for treatment or chemoprophylaxis of influenza in the U.S. if oseltamivir-resistant H1N1 viruses are circulating widely in a community or if the prevalence of oseltamivir resistant H1N1 viruses is uncertain.

Please share this document with all physicians & staff in your facility/office.

Interim Recommendations

Health care providers seeing patients with suspected influenza or patients who are candidates for chemoprophylaxis against influenza should consider the following guidance for assessing and treating patients during the 2008-09 influenza season:

1) Review local or state influenza virus surveillance data weekly during influenza season, to determine which types (A or B) and subtypes of influenza A virus (H3N2 or H1N1) are currently circulating in the area. For Washoe County data, please see the weekly influenza report at: http://www.washoecounty.us/health/cdpp/is.html or call the Communicable Disease Program at 775-328-2447.
2) Consider use of influenza tests that can distinguish influenza A from influenza B.
   a. Patients testing positive for influenza B may be given either oseltamivir or zanamivir (no preference) if treatment is indicated.
   b. At this time, if a patient tests positive for influenza A, use of zanamivir should be considered if treatment is indicated. Oseltamivir should be used alone only if recent local surveillance data indicate that circulating viruses are likely to be influenza A (H3N2) or influenza B viruses. Combination treatment with oseltamivir and rimantadine is an acceptable alternative, and might be necessary for patients that cannot receive zanamivir, (e.g., patient is <7 years old, has chronic underlying airway disease, or cannot use the zanamivir inhalation device), or zanamivir is unavailable. Amantadine can be substituted for rimantadine if rimantadine is unavailable.
   c. If a patient tests negative for influenza, consider treatment options based on local influenza activity and clinical impression of the likelihood of influenza. Because rapid antigen tests may have low sensitivity, treatment should still be considered during periods of high influenza activity for persons with respiratory symptoms consistent with influenza who test negative and have no alternative diagnosis. Use of zanamivir should be considered if treatment is indicated. Combination treatment with oseltamivir and rimantadine (substitute amantadine if rimantadine unavailable) is an acceptable alternative. Oseltamivir should be used alone only if recent local surveillance data indicates that circulating viruses are likely to be influenza A (H3N2) or influenza B viruses.
   d. If available, confirmatory testing with a diagnostic test capable of distinguishing influenza caused by influenza A (H1N1) virus from influenza caused by influenza A (H3N2) or influenza B virus can also be used to guide treatment. When treatment is indicated, influenza A (H3N2) and influenza B virus infections should be treated with oseltamivir or zanamivir (no preference). Influenza A (H1N1) virus infections should be treated with zanamivir or combination treatment with oseltamivir and rimantadine is an acceptable alternative.
3) Persons who are candidates for chemoprophylaxis (e.g., residents in an assisted living facility during an influenza outbreak, or persons who are at higher risk for influenza-related complications and have had recent household or other close contact with a person with laboratory-confirmed influenza) should be provided with medications most likely to be effective against the influenza virus that is the cause of the outbreak, if known. Respiratory specimens from ill persons during institutional outbreaks should be obtained and sent for testing to determine the type and subtype of influenza A viruses associated with the outbreak and to guide antiviral therapy decisions. Persons whose need for chemoprophylaxis is due to potential exposure to a person with laboratory-confirmed influenza A (H3N2) or influenza B should receive oseltamivir or zanamivir (no preference). Zanamivir should be used when persons require chemoprophylaxis due to exposure to influenza A (H1N1) virus. Rimantadine can be used if zanamivir use is contraindicated.

Enhanced surveillance for influenza antiviral resistance is ongoing at CDC in collaboration with local and state health departments. Clinicians should remain alert for additional changes in recommendations that might occur as the 2008-09 influenza season progresses. Oseltamivir-resistant influenza A (H1N1) viruses are antigenically similar to the influenza A (H1N1) viruses represented in the vaccine, and **influenza vaccination should continue to be considered the primary prevention strategy regardless of oseltamivir sensitivity.** Information on antiviral resistance will be updated in weekly surveillance reports (available at http://www.cdc.gov/flu/weekly/fluactivity.htm).

For more information on antiviral medications and additional considerations related to antiviral use during the 2008-09 influenza season, visit http://www.cdc.gov/flu/professionals/antivirals/index.htm

Table 2 Interim recommendations for the selection of antiviral treatment using laboratory test results and viral surveillance data, United States, 2008-09 influenza season†

Rapid antigen or other laboratory test	Predominant virus(es) in community	Preferred medication(s)	Alternative (combination antiviral treatment)
Not done or negative, but clinical suspicion for influenza	H1N1 or unknown	Zanamivir	Oseltamivir + Rimantadine*
Not done or negative, but clinical suspicion for influenza	H3N2 or B	Oseltamivir or Zanamivir	None
Positive A	H1N1 or unknown	Zanamivir	Oseltamivir + Rimantadine*
Positive A	H3N2 or B	Oseltamivir or Zanamivir	None
Positive B	Any	Oseltamivir or Zanamivir	None
Positive, unknown A or B	H1N1 or unknown	Zanamivir	Oseltamivir + Rimantadine*
Positive, unknown A or B	H3N2 or B	Oseltamivir or Zanamivir	None

† Influenza antiviral medications used for treatment are most beneficial when initiated within the first two days of illness. Clinicians should consult the package insert of each antiviral medication for specific dosing information, approved indications and ages, contraindications/warnings/precautions, and adverse effects.

* Amantadine can be substituted for rimantadine but has increased risk of adverse events. Human data are lacking to support the benefits of combination antiviral treatment of influenza; however, these interim recommendations are intended to assist clinicians treating patients who might be infected with oseltamivir-resistant influenza A (H1N1) virus.