



PREVENTION OPPORTUNITIES UNDER THE BIG SKY

Use of Influenza Antiviral Medication for 2009 H1N1 Infections

At the current time influenza is widespread in the U.S. and in Montana. At least through November 9, essentially all the current influenza infections have been caused by the 2009 influenza A H1N1 virus. Most persons with influenza will recover completely on their own after about a week of illness and do not need to seek medical attention; these ill persons should stay home (away from work, away from school) until at least 24 hours after they are fever-free, i.e., temperature less than 100 F. However, some persons with influenza-like illness, (i.e., fever, sore throat, cough, muscles aches) should seek medical attention. These persons are at high risk for complications from influenza infection and may benefit from treatment with influenza antiviral medication. This issue of *Montana Public Health* highlights these risk groups and medications currently available. [NOTE: Influenza viruses are famed for being unpredictable. Recommendations regarding risk groups or medication use may change if other influenza viruses begin to circulate or if circulating viruses develop resistance to certain medications. Important details about information in this issue as well as timely updates are available at <http://www.cdc.gov/h1n1flu/recommendations.htm>.]

Persons at risk for complication from 2009 H1N1 influenza infection. Clinicians should consider treating persons in the following categories with influenza antiviral medications. While treatment should be initiated within 48 hours of the onset of illness some studies have suggested benefit even when treatment was started more than 48 hours after illness onset. Treatment for these groups should NOT be delayed to await the results of laboratory testing. A negative rapid test for influenza does not rule out an influenza infection.

- Persons hospitalized with influenza-like illness (ILI).
- Persons presenting with ILI and severe symptoms.*
- Children younger than 2 years with ILI.
- Persons older than 65 years with ILI.
- Pregnant women including those up to 2 weeks postpartum (or following pregnancy loss) with ILI.
- Persons of any age with certain medical or immunosuppressive conditions who have ILI.
- Persons younger than 19 years who are receiving long-term aspirin therapy and who have ILI.

*Examples of severe symptoms include:

(Children) fast breathing or trouble breathing, bluish or gray skin color, not waking up or interacting, ILI improves but then returns.

(Adults) difficulty breathing or shortness of breath, pain or pressure in the chest, confusion, ILI improves but then returns.

Treatment, prophylaxis Children aged 2 to 4 years without high risk conditions and with ILI do not necessarily require treatment with influenza antiviral/medications. Using these medications for prophylaxis should generally be reserved for persons at higher risk for influenza-related complications who have had contact with someone likely to have been infected with influenza. However, early treatment is an emphasized alternative to chemoprophylaxis after a suspected exposure.

For persons vaccinated with H1N1 vaccine, early recognition of illness and treatment when indicated is preferred to chemoprophylaxis after a suspected exposure.

Reduce delay of treatment initiation Steps to take to reduce delay in treatment initiation include the following:

- Inform persons at higher risk for influenza-related complications of the signs and symptoms of ILI and the importance of early treatment.
- Ensure rapid access to telephone consultation and clinical evaluation for these patients.
- Treat patients at higher risk of influenza-related complications empirically based on telephone contact.
- Emphasize early recognition of ILI for household or close contacts at high risk for influenza-related complications who have had close contact with someone likely to have been infected with influenza.

Influenza antiviral medications currently available

At the current time the 2009 influenza A H1N1 virus is susceptible to neuraminidase inhibitors (oseltamivir, zanamivir, peramivir) but not to adamantanes (amantadine, rimantadine). Clinicians should stay attuned to updates of recommendations for influenza antiviral use since resistance patterns may change or other influenza viruses may begin causing illness.

Physicians who care for patients hospitalized with ILI should be aware of the availability and indications for use of peramivir.¹ This investigational intravenous influenza antiviral medication can be obtained directly from CDC in certain circumstances. See <http://www.cdc.gov/h1n1flu/eua/peramivir.htm>.

Availability and compounding of pediatric oral suspension Pharmacists and physicians who care for pediatric patients should be aware of (a) the possible need to compound oseltamivir onsite if commercially manufactured pediatric suspension is not available, and (b) the need to ensure that the units of measure on the dosing dispenser and the dosing instructions match.² See

http://www.cdc.gov/h1n1flu/recommendations_pediatic_supplement.htm.
<http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm>.

Recommendations: Dosing guidelines for oseltamivir and zanamivir *

<u>Medication</u>	<u>Patient Group</u>	<u>Treatment (5days)</u>	<u>Prophylaxis (10 days)</u>
Oseltamivir	Adults	75 mg, p.o. bid **	75 mg, p.o. qday **
	Children > 1 year ***		
	15 kg or less	30 mg, p.o., bid	30 mg, p.o., qday
	15-23 kg	45 mg, p.o., bid	45 mg, p.o., qday
	24-40 kg	60 mg, p.o., bid	60 mg, p.o., qday
	>40 kg	75 mg, p.o., bid	75 mg, p.o., qday
Zanamivir	Adults	Two 5 mg inhalations, bid	Two 5 mg inhalations, qday
	Children aged ≥ 7 year	Two 5 mg inhalations, bid	Two 5 mg inhalations, qday

*For more information related to these guidelines including timely updates, see

<http://www.cdc.gov/h1n1flu/recommendations.htm>.

**bid, twice each day; qday, once each day

***Dosing information for infants younger than 1 year is described at

<http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm183870.htm>

For more information contact Bonnie Barnard, MPH, CIC, Communicable Disease Epidemiology Section, 406-444-0273, bbarnard@mt.gov.

References:

1. Birnkraut D, Cox E. The emergency use authorization of peramivir for treatment of 2009 H1N1 influenza. NEJM 2009; 10-1056/NEJMp0910479, accessed online Nov 2, 2009.
2. Budnitz DS, Lewis LL, Shehab N, Birnkraut D. CDC and FDA response to risk of confusion on dosing Tamiflu oral suspension. NEJM 2009; 10-1056/NEJM c0909190, accessed online Sept 30, 2009.

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1400 Broadway
Helena, MT 59620-2951

Anna Whiting Sorrell, Director, DPHHS
Steven Helgerson, MD, MPH, State Med. Officer
Jane Smilie, MPH, Administrator, PHSD