

Patients with Asthma: Considerations for Clinicians Regarding 2009 H1N1 Influenza Virus

- Persons with asthma are at higher risk for influenza-related complications, such as pneumonia.
- **ASTHMA ACTION PLAN:** All persons with asthma should have and use an updated, written Asthma Action Plan, developed with their healthcare professional, for daily treatment and for control of worsening asthma symptoms. The Asthma Action Plan should include what they should do for the earliest onset of symptoms of influenza-like illness. Children with asthma should have an Asthma Action Plan on file at their school or daycare center, and the plan and medication(s) should be readily accessible.
- **SEASONAL FLU VACCINE:** Anyone with asthma at least 6 months of age and older should be vaccinated against seasonal influenza with the injectable trivalent inactivated influenza vaccine (TIV). Children aged 6 months through 8 years who never have had a seasonal flu shot will need two doses the first time. Persons with asthma *should not* use the inhaled "FluMist®" vaccine due to an increased risk of wheezing post-vaccination.
- **2009 H1N1 MONOVALENT FLU VACCINE:** Persons with asthma aged 6 months through 64 years are listed in the priority groups to receive initial doses of the injectable, inactivated, 2009 H1N1 influenza A monovalent vaccine when it becomes available in their community. At this time, FDA has approved two doses for children 6 months through 9 years of age. Immunogenicity data for the 2009 flu H1N1 vaccine among adults is similar to that for seasonal influenza vaccines. If this is also the case among children, then it is likely that younger children will require two doses and older children will require one dose. As with seasonal vaccine, children 6 months through 35 months of age should get two doses of 2009 H1N1 flu vaccine, which contains one-half of the dose used for older children and adults. Persons with asthma *should not* use a nasal spray vaccine.
- **ANTIVIRAL MEDICATIONS:** At this time, most 2009 H1N1 influenza viruses are susceptible to oseltamivir (trade name, "Tamiflu"). However, antiviral treatment regimens might change depending on new antiviral resistance or viral surveillance information. Zanamivir (trade name, "Relenza") is *not* recommended for treatment in patients with underlying airways disease (including asthma) because of the risk for adverse events such as bronchospasm.
 - Clinical judgment is of primary importance in making decisions regarding treatment and chemoprophylaxis of infection with 2009 H1N1 influenza virus. **See Table (below) for antiviral medication dosing information.** Information on the use of antiviral medications can be found elsewhere in this kit or at: http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm

- Treatment with antiviral medication should be initiated as early as possible and should not wait for laboratory confirmation of influenza. A negative rapid test for influenza does not rule out influenza. The sensitivity of rapid tests can range from 10 percent to 70 percent. Information on the use of rapid influenza diagnostic tests can be found elsewhere in this kit or at: http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm.

Table 1. Oseltamivir Antiviral Medication Dosing Recommendations for Treatment or Chemoprophylaxis of 2009 H1N1 Infection.

(Table extracted from product information for Tamiflu®)

Medication		Treatment (5 days)	Chemoprophylaxis (10 days)
Oseltamivir			
Adults			
		75-mg capsule twice per day	75-mg capsule once per day
Children ≥ 12 months			
Body Weight (kg)	Body Weight (lbs)		
≤15 kg	≤33lbs	30 mg twice daily	30 mg once per day
> 15 kg to 23 kg	>33 lbs to 51 lbs	45 mg twice daily	45 mg once per day
>23 kg to 40 kg	>51 lbs to 88 lbs	60 mg twice daily	60 mg once per day
>40 kg	>88 lbs	75 mg twice daily	75 mg once per day

Health care providers and pharmacists should be aware that an oral dosing dispenser with 30 mg, 45 mg and 60 mg graduations is provided with TAMIFLU® for Oral Suspension, rather than graduations in milliliters (mL) or teaspoons (tsp). There have been cases where the units of measure on the prescription instructions (mL, tsp) do not match the units on the dosing device (mg), which has lead to patient or caregiver confusion and dosing errors. When dispensing commercially manufactured TAMIFLU® for Oral Suspension, pharmacists should ensure that the units of measure on the prescription instructions match the dosing device. If prescription instructions specify administration using milliliters (mL) or teaspoons (tsp), then the device included in the TAMIFLU® product package should be removed and replaced with an appropriate measuring device, such as an oral syringe if the prescribed dose is in milliliters (mL). An online version of this table can be found at: <http://www.cdc.gov/h1n1flu/recommendations.htm#table1>.