



# CDC 2009-2010 Influenza Season: Information for Pharmacists

September 23, 2009, 4:00 PM ET

## Background



As of September 18, 2009 influenza activity is increasing in most of the United States with 21 states reporting widespread influenza activity. So far, most influenza viruses isolated are 2009 H1N1 flu (sometimes called "swine flu"), the virus that has been declared pandemic by the World Health Organization. CDC expects both 2009 H1N1 flu and seasonal flu to cause illness, hospital stays and deaths this influenza season and while influenza is unpredictable, it's possible the United States could experience an early, prolonged and severe influenza season.

CDC recommends a three-step approach to fighting the flu: vaccination, everyday preventive actions including frequent hand washing and staying home when sick, and the correct use of antiviral drugs if prescribed by a doctor.

CDC has issued [recommendations for clinicians on the use of antiviral medications](#) in the treatment and prevention of influenza for the 2009-2010 season. Oseltamivir ([Tamiflu®](#) ) and zanamivir ([Relenza®](#) ) are the two recommended influenza antiviral drugs at this time. The priority use for these drugs this season is to treat people who are very sick (hospitalized) or people who are sick with flu symptoms and who are at increased risk of serious flu complications, such as pregnant women, young children, people 65 and older and people with chronic health conditions.

The current situation will likely impact the nation's pharmacies as a greater number of people than usual seek to fill prescriptions for influenza antiviral drugs or antibiotics to treat secondary infections, in addition to seeking advice on over-the-counter flu medications. This may impact supplies and availability of antiviral medications and other materials that may be needed to fill such prescriptions.

## Update on Antiviral Availability

At this time, CDC discussions with the antiviral supply chain (manufacturers, distributors and retailers) indicate that supplies of adult formulation (75 mg) oseltamivir (Tamiflu®) and zanamivir (Relenza®) are meeting current demand for this product. However, the Food and Drug Administration (FDA) and [Roche](#)   (maker of Tamiflu®) have acknowledged that commercial and stockpiled supplies of Tamiflu® oral suspension are limited.



Pharmacies should be aware of the importance of providing patients with these influenza medications as quickly as possible when they are prescribed. Both Tamiflu® and Relenza® work best when administered within 48 hours of onset of symptoms. Having product at the pharmacy

store level, including doses of oseltamivir and zanamivir and supplies to compound Tamiflu® if necessary, will be critical to ensuring that patients needing treatment receive it as quickly as possible.

## Alternatives to Tamiflu® Oral Suspension for Pediatric Patients

FDA has a statement on their website


(<http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm>  )

reminding health care providers and pharmacists of the FDA-approved instructions for the emergency compounding of an oral suspension from Tamiflu® 75mg capsules as described in the [FDA approved manufacturer package insert for oseltamivir \(Tamiflu®\)](#)  .

Compounding an oral suspension from Tamiflu® 75mg capsules provides an alternative when commercially manufactured oral suspension formulation is not readily available. Tamiflu® capsules 75 mg may be compounded using either of two vehicles: Cherry Syrup (Humco®) or Ora-Sweet® SF (sugar-free) (Paddock Laboratories). Other supplies needed to compound include mortar and pestle and amber glass or amber polyethyleneterephthalate (PET) bottle.

In addition, for children who may not be able to swallow capsules, Tamiflu® capsules may be opened and mixed with sweetened liquids, such as regular or sugar-free chocolate syrup, if oral suspension is not available.

## Note on Tamiflu Oral Suspension Syringe

Pharmacists with access to Tamiflu® oral suspension should be aware that an oral dosing dispenser with 30 mg, 45 mg, and 60 mg graduations is provided in the packaging for the manufacturer's product rather than graduations in milliliters (mL) or teaspoons (tsp). There have been cases where the units of measure on the prescription dosing instructions (mL, tsp) do not match the units on the dosing device (mg), which can lead to patient or caregiver confusion and dosing errors. When dispensing commercially manufactured Tamiflu® oral suspension, pharmacists should ensure the units of measure on the dosing instructions match the dosing device provided. If dosing instructions specify administration using mL or tsp the device included in the Tamiflu® product package should be removed and replaced with an appropriate measuring device. When dispensing Tamiflu® oral suspension for children younger than 1 year of age, the oral dosing dispenser that is included in the product package should always be removed and replaced with an appropriate measuring device. (The Food and Drug Administration has issued [an Emergency Use Authorization \(EUA\) for the use of Tamiflu](#)  in pediatric patients younger than 1 year of age.)

CDC will provide additional information and updates as needed.