



North Carolina Department of Health and Human Services  
Division of Public Health • Epidemiology Section

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Jeffrey Engel, Health Director

January 21, 2010 (**1 page**) – *replaces version dated November 23, 2009*

To: All North Carolina Health Care Providers  
From: Megan Davies, MD, State Epidemiologist  
Re: **Oseltamivir for treatment of 2009 Pandemic H1N1 Influenza Virus Infections**

Cases of oseltamivir-resistant 2009 pandemic H1N1 influenza continue to occur sporadically in North Carolina and elsewhere. At this time, the majority of 2009 pandemic H1N1 viruses tested have been susceptible to oseltamivir; all have been susceptible to zanamivir. No cases of the 2008-2009 seasonal H1N1 have been identified in North Carolina since May, 2009. Therefore, **oseltamivir is still considered effective therapy for infection with 2009 pandemic H1N1 influenza virus**. Weekly updates on antiviral resistance are available at [www.cdc.gov/flu/weekly](http://www.cdc.gov/flu/weekly).

As a reminder, antiviral medications are not recommended for treatment of healthy patients with uncomplicated illness. Treatment with oseltamivir or zanamivir is recommended for all persons with suspected or confirmed influenza requiring hospitalization or persons presenting with more severe symptoms such as evidence of lower respiratory tract infection or clinical deterioration.

Early empiric treatment with oseltamivir or zanamivir is also recommended for persons with suspected or confirmed influenza who are at higher risk for complications including:

- Children younger than 2 years old;
- Persons aged 65 years or older;
- Pregnant women and women up to 2 weeks postpartum (including following pregnancy loss);
- Persons of any age with certain chronic medical or immunosuppressive conditions; and,
- Persons younger than 19 years of age who are receiving long-term aspirin therapy.

Limited quantities of IV zanamivir are available from the manufacturer for compassionate use via an emergency Investigational New Drug (IND) application to the FDA. Additional information is available at [www.cdc.gov/H1N1flu/EUA/Peramivir\\_recommendations.htm](http://www.cdc.gov/H1N1flu/EUA/Peramivir_recommendations.htm). The US Food and Drug Administration (FDA) has issued an emergency use authorization for the use of the investigational antiviral drug Peramivir intravenous (IV) in certain patients with confirmed or suspected 2009 pandemic H1N1 influenza infection who are admitted to a hospital. However, oseltamivir-resistant influenza may also be resistant to Peramivir. 2009 pandemic H1N1 influenza is universally resistant to amantidine and rimantidine.

CDC will consider requests to test specimens from patients for antiviral resistance in certain circumstances. Requests for antiviral resistance testing should be directed to the North Carolina Division of Public Health or to CDC Emergency Operations Laboratory desk at: [eoclaboratory@cdc.gov](mailto:eoclaboratory@cdc.gov).

**Monovalent 2009 pandemic H1N1 influenza vaccine remains a good match for the circulating strain and is the most effective protection against infection with 2009 pandemic H1N1 influenza.** Resistance to oseltamivir does not affect vaccine effectiveness. Updated information on flu activity in North Carolina and recommendations for NC health care providers are available in the "Guidance for Professionals" section at [www.flu.nc.gov](http://www.flu.nc.gov).

