



# COLLIN COUNTY HEALTH CARE SERVICES

## Epidemiology Influenza Report

### Weekly Report 7, Ending 2/21/2009

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### Overview

*(All data are preliminary and may change as more reports are received)*

Texas Viral Activity	
<b>Influenza activity level</b>	Widespread
<b>Dominant influenza isolate submitted</b>	Influenza A/H1
<b>Influenza-associated pediatric mortality*</b>	
Week 1: 16 yo, Health Service Region (HSR) 8, underlying medical condition present (flu B; unvaccinated)	
Week 5: 15 yo, HSR 6, no underlying medical conditions (flu B; MRSA positive; unk. vaccination status)	
Week 6: 7 yo, HSR 3, no underlying medical conditions (flu A/H1; unvaccinated)	
Week 6: 7 mo, HSR 9, no underlying medical conditions (flu A/H1, 1 dose of vaccine)	
Week 7: 12 yo, HSR 1, no underlying medical conditions (flu A/H1; MRSA positive; unvaccinated)	

\*Courtesy DSHS, <http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2009>

**Figure 1. Antigenic Characteristics of Influenza Isolates 2008-2009, Texas**

Antigenic Characteristics of Influenza Isolates, Texas, 2008-09			
Subtype	Submitted Influenza Isolates <sup>1</sup>	Vaccine Composition 2008-2009 <sup>1</sup>	Recommended Vaccine Composition 2009-2010 <sup>2</sup>
Influenza A H1	14 of 14 (100%) A/Brisbane/59/2007	A/Brisbane/59/2007	A/Brisbane/59/2007-like
Influenza A H3	1 of 1 (100%) A/Brisbane/10/2007-like	A/Brisbane/10/2007	A/Brisbane/10/2007-like
Influenza B	6 of 18 (33%) Yamagata lineage 12 of 18 (67%) Victoria lineage	B/Florida/04/2006 (Yamagata lineage)	B/Brisbane/60/2008-like (Victoria lineage)

<sup>1</sup>Courtesy DSHS, <http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2009>; through Week 7

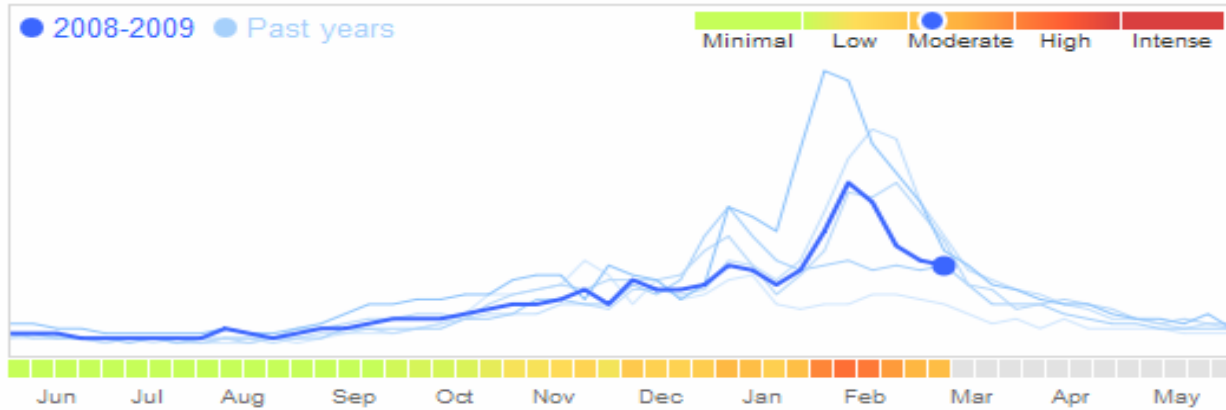
<sup>2</sup>Courtesy CDC, <http://www.cdc.gov/flu/weekly/>. CDC reports that WHO and FDA made the same recommendations for the U.S. influenza vaccine based on surveillance data related to epidemiology and antigenic characteristics, serological responses to 2008-09 vaccines, and the availability of candidate strains and reagents.

**Figure 2. Virologic Surveillance 2008-2009, United States**

	Week 7	Cumulative for the Season
<b>No. of specimens tested</b>	5,715	115,870
<b>No. of positive specimens (%)</b>	1,405 (24.6%)	11,635 (10.0%)
<b>Positive specimens by type/subtype</b>		
<b>Influenza A</b>	950 (67.6%)	9,089 (78.1%)
<b>A (H1)</b>	297 (31.3%)	2,918 (32.1%)
<b>A (H3)</b>	31 (3.3%)	328 (3.6%)
<b>A (unsubtyped)</b>	622 (65.5%)	5,843 (64.3%)
<b>Influenza B</b>	455 (32.4%)	2,546 (21.9%)

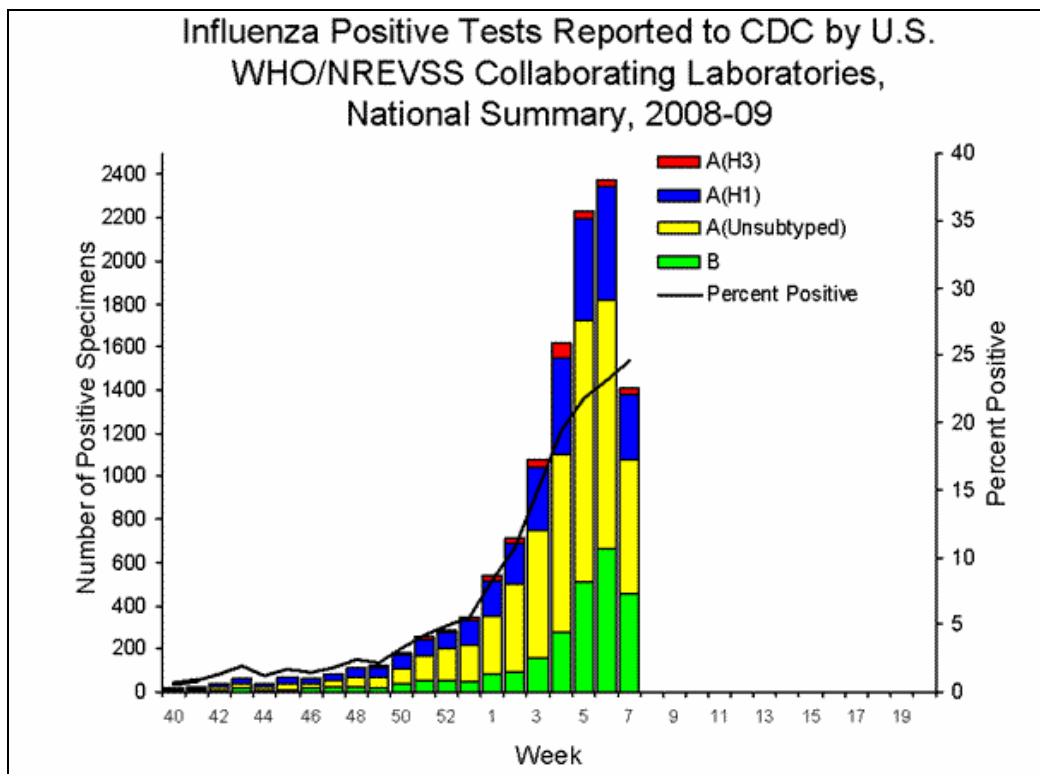
<sup>2</sup>Courtesy CDC, <http://www.cdc.gov/flu/weekly/>

**Figure 3. Google Flu Trends 2008-2009, Texas Flu Activity**



<sup>3</sup>Courtesy Google; <http://www.google.org/flutrends/>

**Figure 4. National Respiratory and Enteric Viruses Surveillance System (NREVSS) United States, 2008-09 season, Week 7**



<sup>4</sup>Courtesy CDC; <http://www.cdc.gov/flu/weekly/>

**Figure 5. Antiviral Resistance, CDC**

	Isolates tested (n)	Resistant Viruses, Number (%)		Isolates tested (n)	Resistant Viruses, Number (%)
		Oseltamivir	Zanamivir		
<b>Influenza A (H1N1)</b>	325	321 (98.8%)	0 (0)	325	2 (0.6%)
<b>Influenza A (H3N2)</b>	54	0 (0)	0 (0)	54	54 (100%)
<b>Influenza B</b>	125	0 (0)	0 (0)	N/A*	N/A*

\*The adamantanes (amantadine and rimantadine) are not effective against influenza B viruses.

<sup>5</sup>Courtesy CDC; <http://www.cdc.gov/flu/weekly/>

## Interim Recommendations for the Use of Influenza Antiviral Medications in the Setting of Oseltamivir Resistance among Circulating Influenza A (H1N1) Viruses

*CDC Health Advisory: December 19, 2008*

Because preliminary data are indicating a high prevalence of influenza A (H1N1) virus strains with resistance to oseltamivir, CDC has issued interim recommendations for antiviral treatment and chemoprophylaxis of influenza during the current 2008-09 season: <http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00279>

- Review local surveillance data to determine which types and subtypes of influenza are currently circulating in the area.
- Consider use of influenza tests that can distinguish influenza A from B. Confirmatory testing with a diagnostic test capable of distinguishing influenza caused by influenza A (H1N1) virus from influenza A (H3N2) or influenza B can also be used to guide treatment.
- When influenza A (H1N1) infection is suspected, zanamivir or a combination of oseltamivir and rimantadine are more appropriate options than oseltamivir alone.
- Persons who are candidates for chemoprophylaxis should be provided with medications most likely to be effective against the influenza virus which is the cause of the outbreak. Zanamivir should be used when persons require chemoprophylaxis due to exposure to influenza A (H1N1) virus.

See the attached table (from the Health Advisory) for a more detailed summary of treatment recommendations, and also: <http://www.cdc.gov/flu/professionals/antivirals/index.htm>

### Interim recommendations for the selection of antiviral treatment using laboratory test results and viral surveillance data, United States, 2008-09 season<sup>‡</sup>

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 A+B**	H1N1 or unknown	Zanamivir	Oseltamivir + Rimantadine*
Positive A+B**	H3N2 or B	Oseltamivir or Zanamivir	None

\*Amantadine can be substituted for rimantadine but has increased the risk of adverse events. Human data are lacking 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.

\*\*Positive A+B indicates a rapid antigen test that cannot distinguish between influenza A and influenza B viruses.

‡ Influenza antiviral medication 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.

**Thank you for participating in our disease reporting system.  
Please send any comments or inquiries to Collin County Health Department:  
Health Care Analyst: [bpollard@co.collin.tx.us](mailto:bpollard@co.collin.tx.us)  
Chief Epidemiologist: [pwittie@co.collin.tx.us](mailto:pwittie@co.collin.tx.us)**