

## Influenza Update

By Tista S. Ghosh, MD, MPH

### Active Surveillance: An Early Warning System for Influenza

In 2004, Tri-County Health Department (TCHD) implemented its own, active influenza surveillance system to identify laboratory test-positive influenza cases among both inpatients *and* outpatients. The goal of this surveillance system was to supplement the state of Colorado's surveillance system, which focused on hospitalized cases alone. That year, TCHD's surveillance efforts detected cases of both influenza A and B nearly 7-8 weeks prior to the state's hospitalized case reporting system. Thus, TCHD's active surveillance system appeared to be an effective early warning system for influenza and a useful supplement to the state's hospitalized case reporting system.

Consequently, TCHD's active surveillance efforts were continued again this year, with the collaboration and participation of infection control practitioners throughout our jurisdiction. Surveillance efforts involved phone calls, once a week, to eight infection control practitioners to gather information regarding any laboratory-positive cases of influenza seen in emergency departments, outpatient clinics, or inpatient wards. Calls began on Oct 15, 2005 and ended January 6, 2006, when the numbers of cases reported were high enough to indicate that the influenza season was well under way, and that enhanced surveillance of outpatients was no longer necessary to serve as an early warning system.

During the surveillance period, TCHD detected 97 cases of influenza, 73 of which lived within the Tri-County jurisdiction of Adams, Arapahoe, and Douglas counties. The rest were from surrounding counties or visitors from out-of-state. Among reported cases, 90 were positive for influenza A, 2 were positive for influenza B, and 5 were unclassified (identified as A/B). A total of 74 cases were outpatients and 23 cases were hospitalized.



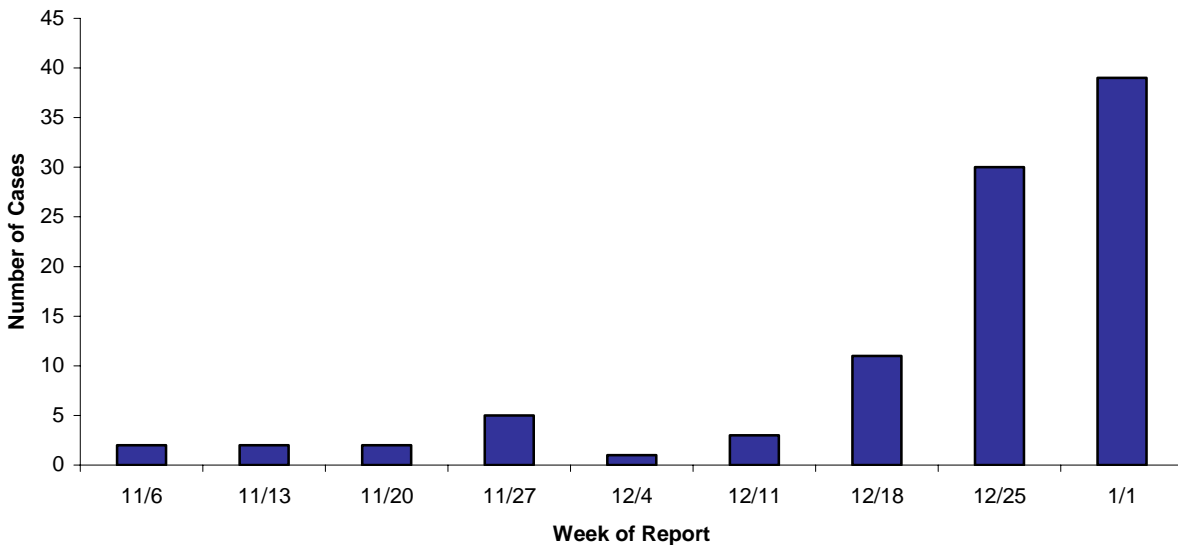
**Influenza Cases Identified Within the TCHD jurisdiction**

County Name	# of Cases
Adams	32
Arapahoe	29
Douglas	12

Selected Cities	# of Cases
Aurora	19
Brighton	7
Castlerock	3
Centennial	4
Commerce City	6
Englewood	4
Littleton	4
Northglenn	7
Parker	6
Thornton	10

The following graph illustrates the sharp rise in the number of influenza cases reported to TCHD during the last week of December and first week of January, indicating the full-blown arrival of the influenza season. The state of Colorado is currently classified as “widespread influenza activity”.

**Number of Influenza Cases Reported to TCHD by Week of Report  
(First week of November 2005 - First week of January 2006)**



**REMINDER: New CDC Advisory Against the Use of the Adamantine Class of Anti-Viral Agents (Amantadine and Rimantadine) during the 2005-2006 Influenza Season**

The Centers for Disease Control and Prevention (CDC) recently issued new guidelines advising against the use of adamantines, a class of anti-viral agents for influenza, due to high levels of resistance. Anti-viral agents are often used to treat high-risk individuals with influenza, as well as for chemoprophylaxis of high-risk individuals. There are two main classes of anti-viral agents available: adamantines, which are active against influenza A viruses only, and neuraminidase inhibitors, which are active against both influenza A and B viruses. These drugs are summarized in the tables below.

**Anti-Viral Agents that should NOT be used during the 2005-2006 Influenza Season**

Drug Class	Drug Name	Anti-Viral Activity	Uses
Adamantines	amantadine	Influenza A only	Prevention and treatment
	rimantadine	Influenza A only	Prevention and treatment

**Anti-Viral Agents that CAN be used during the 2005-2006 Influenza Season**

Drug Class	Drug Name	Anti-Viral Activity	Uses
neuraminidase inhibitors	Oseltamivir (Tamiflu)	Influenza A and B	Prevention and treatment
	Zanamivir (Relenza)	Influenza A and B	Treatment only

During this influenza season, CDC has noted high levels of resistance to the two adamantine drugs, amantadine and rimantadine. Since the 2005-2006 influenza season began, 91% of the influenza A viruses tested by CDC, from 23 different states, have been resistant to this class of drugs. Based on these results, CDC has recommended that neither amantadine nor rimantadine be used for influenza treatment or chemoprophylaxis for the remainder of this influenza season. The two neuraminidase inhibitors, oseltamivir and zanamivir, can both be used for treatment, but only oseltamivir has been approved for chemoprophylaxis. Please note that the Food and Drug Administration (FDA) recently changed chemoprophylaxis approval for oseltamivir to include children ages 1-12 years (This was previously limited to children aged 13 years or older).

For more information on the new anti-viral guidelines, visit

<http://www.cdc.gov/flu/about/qa/antiviral.htm#use>

### Indications for Use of Anti-Viral Agents for Influenza, 2005-2006 Season\*

<b>Indications for Treatment</b> (Use oseltamivir or zanamivir)	<b>Indications for Chemoprophylaxis</b> (Use oseltamivir only)
1) Persons at high-risk for serious complications from influenza. This includes people 65 years of age and older, children 12-23 months of age, people with chronic medical conditions (for example, heart or lung disease, diabetes), and pregnant women	1) Persons who live or work in institutions caring for individuals at high-risk for serious influenza-related complications  2) Persons at high risk for serious influenza-related complications if exposed to others with influenza

\*Note that none of the anti-virals are approved for use in children less than 1 year of age.

### Non-pharmacologic ways to prevent influenza in high-risk groups

While anti-viral agents are an important component of influenza prevention and treatment among high-risk groups, it is essential to remember some basic influenza prevention strategies. These strategies include:

- Influenza vaccination every fall
- Frequent hand-washing
- Avoiding close contact with sick people
- Covering the mouth and nose when sneezing
- Avoiding touching the mouth, nose, or eyes

***Note: It is important that staff members who work with high-risk groups stay at home when they are sick, to avoid spreading the disease.***

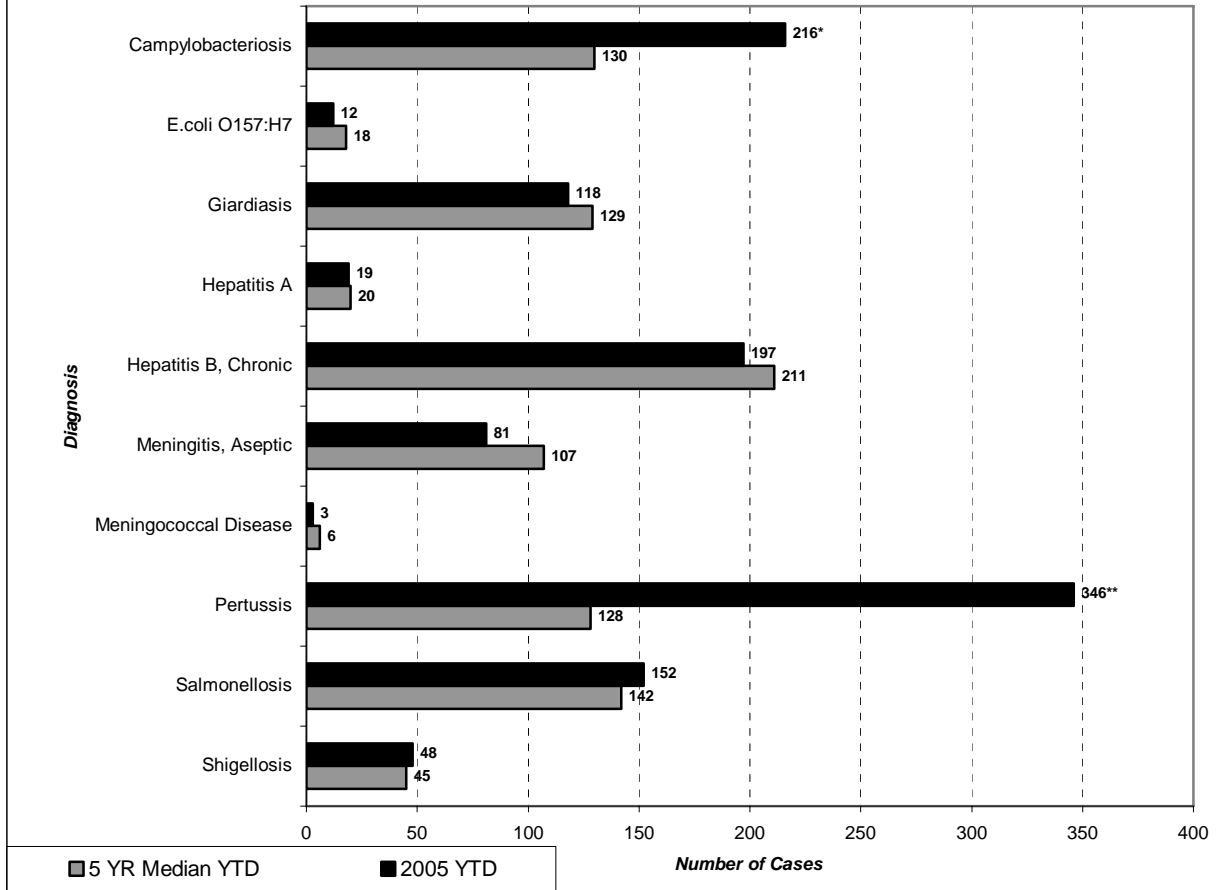
To find out more about groups at high-risk for influenza-related complications, as well as on influenza prevention strategies, visit: <http://www.cdc.gov/flu/keyfacts.htm>

For more information on influenza, please contact:

Colorado Department of Public Health and Environment:  
(303) 692-2700 / (303) 370-9395 (after hours)  
Fax: (303) 782-0338

Tri-County Health Department:  
(303) 220-9200 / 303-461-2342 (after hours)  
Fax: (303) 220-9208  
[www.tchd.org](http://www.tchd.org)

## Selected Diseases by Date of Report Adams, Arapahoe, and Douglas Counties 2005 Year-to-date Through December



\* The entire state of Colorado has seen increased reports of campylobacteriosis. Although the reason is currently unknown, investigation is ongoing.

\*\* There have been an excessive number of pertussis cases in the state of Colorado in the past year.