

Current Situation

The proportion of patient visits to sentinel providers for influenza-like illness (ILI), characterized by temperature of 100°F or greater and sore throat or cough, during the week ending April 5th (week 14) was 1.2%*. The peak for influenza in Clark County was during week 7, ending February 16, 2008, when the percent ILI was 2.33%*. Overall, the 2007-2008 influenza season has been more active than the past flu season as seen by increases in positive influenza test results and higher ILI percentages from sentinel sites.

Nationally during week 14, 1.7% of patient visits to sentinel providers were due to ILI; this is below the national baseline of 2.2%. Regionally, the percent of visits ranged from 1.0 to 3.0%. Regions reporting ILI percentages above their region-specific baselines included East North Central and West North Central (1).

During week 14 the proportion of mortality due to pneumonia and influenza (P&I) in Clark County was 8.0%. Over the flu season the P&I percentages have ranged from 5.3-10.5%. Nationally during week 14, the percentage of P&I mortalities was 6.9%; which is above the epidemic threshold for week 14. This is the 13th consecutive week that the national P&I has been above the epidemic threshold (1).

Influenza Antiviral Drug Resistance

In the United States, two groups of antiviral drugs have been approved by the Food and Drug Administration (FDA) for use in treating and preventing influenza infections. These two groups of drugs are neuraminidase inhibitors (oseltamivir and zanamivir) and adamantanes (amantadine and rimantadine).

Neuraminidase Inhibitors

For the 2007-2008 season, 1,153 influenza A and B viruses have been tested for antiviral resistance

by the Centers for Disease Control and Prevention (CDC). Eight percent (84) of 1,018 influenza A viruses tested and 0.0% of 135 influenza B viruses tested have been found to be resistant to oseltamivir. Currently all of the resistant viruses are influenza A (H1N1). All viruses tested were sensitive to zanamivir.

Adamantane Antivirals

Resistance to the adamantanes is high for the season among influenza A (H3N2) viruses with 99.6% (260) of 261 influenza A viruses tested have been found to be resistant to the adamantanes. Adamantane resistance among influenza A (H1N1) viruses has been detected but at a much lower level. Of 729 influenza A (H1N1) viruses tested, 11.1% (81) were resistant to the adamantanes. The adamantanes are not effective against influenza B viruses. Since late January, the majority of influenza circulating in the United States has been influenza A (H3N2) and during week 14, 100% of viruses subtyped were A (H3N2).

Recommendations

Based on the findings of oseltamivir resistance in only influenza A (H1N1), along with persisting high levels of resistance to the adamantanes in H3N2 viruses, and the predominance of H3N2 circulating in the United States during the 2007-2008 season with co-circulation of influenza B, the CDC is recommending oseltamivir and zanamivir for treatment and prevention of influenza. At this time, the use of amantadine or rimantadine is not recommended (1).

The next influenza newsletter update will contain information provided by the CDC regarding the 2007-2008 influenza vaccine and its effectiveness in preventing influenza this season.

*Weighted average

(1) Centers for Disease Control Prevention. Flu View: A weekly influenza surveillance report prepared by the influenza division. Accessed at: <http://www.cdc.gov/flu/weekly/index.htm>.