

Weekly Influenza Update

April 16, 2009

Wisconsin:

Influenza activity is declining in Wisconsin. In the last week, influenza B viruses have comprised 73% of isolates. The prevalence of influenza-like illness [fever of 100°F or higher and either cough or sore throat] in Wisconsin's primary care patients is estimated to be 2.0%.

12.9% of last week's primary care patients had acute respiratory infections (ARI).

The prevalence of acute diarrheal illness (ADI) in Wisconsin's primary care patients is at 1.7%.

CLINICAL NOTES:

Prophylaxis

Based on historic trends, 96% of influenza cases have already occurred.

Given the high percentage of B viruses in Wisconsin and low vaccine match for B viruses, vaccine offers little protection at this time.

Diagnosis

- influenza infections are at low levels at this time
- PPV of rapid influenza tests is moderate, NPV is high

Treatment

- Antivirals need to be started with 48 hours of symptom onset to be effective
- Antivirals started after 48 hours may be effective for hospitalized patients with confirmed influenza
- a limited number of viruses have been tested for neuraminidase inhibitor resistance this season
 - 694 out of 699 A(H1) viruses were resistant to Oseltamivir (99.3%)
 - 0/103 A(H3) and 0/274 B viruses have been resistant to oseltamivir.
 - All viruses tested have been sensitive to zanamivir
- a limited number of viruses have been tested for adamantane resistance this season
 - 3/683 A(H1N1) viruses were resistant to adamantanes (0.4%)
 - 100/100 A(H3N2) viruses were resistant to adamantanes (100%)
 - Adamantane antivirals are ineffective against influenza B viruses

Across Wisconsin, 73% of influenza viruses in the last week have been B, with 27% A(H1) and 0% A(H3). Therefore:

- Zanamivir alone will be effective in 100% of cases
(cost per Rx = \$72.99)
- Oseltamivir plus Amantadine/Rimantadine will be effective in 100% of cases
(cost per combined Rx = \$132.79 - \$148.18)
- Oseltamivir alone will be effective in 73% of cases
(cost per Rx = \$119.99)
- Amantadine/Rimantadine alone will be effective in 27% of cases
(cost per rimantadine Rx = \$28.19)
(cost per Amantadine Rx = \$12.89)

Other

- RSV prevalence is declining to low levels
- adenoviruses, rhinoviruses, and parainfluenza viruses are circulating in Wisconsin and causing acute respiratory symptoms
- Rotavirus isolations have peaked at low levels and are declining

Across the U.S.:

As of April 4th, 24,793 positive surveillance cultures have been recorded in the United States. 12.3% of respiratory specimens during week 13 (March 29 - April 4) were positive for influenza.

- 67.9% of isolates have been type A
 - 89.8% of all sub-typed A viruses have been H1N1

10.2% of A viruses have been H3N2

-32.1% of isolates have been type B

-7.4% of deaths during week 13 (March 29 - April 4) were due to pneumonia or influenza

[below the epidemic threshold of 7.8%]

-45 pediatric influenza deaths have been reported this season

Global News [from the WHO: Since 2003, there have been 417 laboratory-confirmed cases of Avian influenza (A-H5N1). The cases been confined to Laos, Viet Nam, Thailand, Indonesia, Cambodia, the People's Republic of China, Turkey, Iraq, Azerbaijan, Egypt, Djibouti Nigeria, Myanmar and Pakistan. There have been 257 associated deaths (case fatality rate= 61.6%). There is enhanced avian influenza surveillance in Wisconsin. Contact Tom Haupt at the Wisconsin Division of Public health (608-266-5326) prior to submitting specimens for fee-exempt testing for patients with influenza-like illness returning from Southeast Asia within 10 days.

Other Observations:

Inspiration: One of my favorite quotes [anonymous] was published at the beginning of a fine essay - "The Hidden Teacher" by the naturalist/anthropologist Loren Eiseley -

"Sometimes the best teacher teaches only once to a small child or to a grownup past hope"

My corollary is that sometimes the simple act of a child or a grownup past hope provides the most profound teaching. The word "inspiration" (the action or power of moving the intellect or emotions) is derived from the Latin "inspiratus" - literally in-"in" + spirare "to breathe."

I invite you the "breath in" a story of an unemployed, middle-aged woman from the small village of Blackburn in Scotland who simply wanted an opportunity to sing in front of an audience. She has never been married and, by her own admission, "never kissed" ...

<http://www.youtube.com/watch?v=9lp0IWv8QZY>

Use of northern hemisphere influenza vaccines by travelers to the southern hemisphere. (CDC). MMWR Morb Mortal Wkly Rep. 2009 Apr 3;58(12):312. The influenza season in temperate climates extends from October through March in the northern hemisphere and from April through September in the southern hemisphere. Recent studies indicate that influenza viruses can circulate throughout the year in the tropics and that influenza is the most frequently acquired vaccine-preventable disease among those traveling to tropical and subtropical countries.

Influenza outbreaks have been reported among persons who travel from the northern hemisphere to the southern hemisphere and among persons from the northern hemisphere on group tours. To reduce the risk for influenza during travel, the Advisory Committee on Immunization Practices (ACIP) recommends that persons from the northern hemisphere who are recommended for annual vaccination or who want to avoid influenza illness but have not yet received the 2008--09 influenza vaccine should consider being vaccinated 1) before travel to the southern hemisphere during influenza season, 2) before travel to the tropics at any time of year, or 3) when traveling as part of a tour group that includes persons from areas where influenza circulates during April--September (e.g., the southern hemisphere). Vaccine formulations for each hemisphere are updated yearly but might differ according to virus surveillance information from each hemisphere.

April 16 Phenology: Today's photoperiod is 13 hours and 28 minutes, and daylength is increasing by 2 minutes and 47 seconds per day.

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