

# Weekly Influenza Update

March 26, 2009

Wisconsin:

Influenza activity is declining in Wisconsin. In the last week, influenza B viruses have comprised over 70% of isolates. Because of poor match of the 2008-2009 vaccine for the B viruses, influenza B infection in vaccine recipients has not been uncommon. The prevalence of influenza-like illness [fever of 100oF or higher and either cough or sore throat] in Wisconsin's primary care patients is estimated to be 2.7%.

16.7% 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 1.9%.

## CLINICAL NOTES:

### Prophylaxis

At this point, it is reasonable to stop vaccinating. Based on historic trends, 87% 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 additional protection at this time.

Continue to offer vaccine, however, to unvaccinated high risk individuals.

### Diagnosis

- influenza infections are at low to moderate levels at this time
- PPV of rapid influenza tests is moderately high, NPV is moderately 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
  - 469 out of 474 A(H1) viruses were resistant to Oseltamivir (98.9%)
  - 0/77 A(H3) and 0/227 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
  - 3/476 A(H1N1) viruses were resistant to adamantanes (0.6%)
  - 77/77 A(H3N2) viruses were resistant to adamantanes (100%)
  - Adamantane antivirals are ineffective against influenza B viruses

Across Wisconsin, 70% of influenza viruses in the last week have been B, with 27% A(H1) and 3% 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 30% of cases  
(cost per rimantadine Rx = \$28.19)  
(cost per Amantadine Rx = \$12.89)

### Other

- RSV prevalence has peaked and is declining
- human metapneumovirus, adenoviruses, rhinoviruses, parainfluenza viruses and enteroviruses are circulating in Wisconsin and causing acute respiratory symptoms
- Rotavirus isolations are increasing, but are at low levels

Across the U.S.:

As of March 14th, 17,005 positive surveillance cultures have been recorded in the United States. 21.7% of respiratory specimens during week 10 (March 8-14) were positive for influenza.

- 70.8% of isolates have been type A
  - 90.9% of all sub-typed A viruses have been H1N1
  - 9.1% of A viruses have been H3N2
- 29.2% of isolates have been type B
- 7.0% of deaths during week 10 (March 8-14) were due to pneumonia or influenza [below the epidemic threshold of 8.0%]
- 32 pediatric influenza deaths have been reported this season

Global News [from the WHO]: The Ministry of Health and Population of Egypt has reported a new confirmed human case of Avian Influenza in a 38-year old female. Her symptoms started with a fever and headache on March 14. She was admitted to the Hospital where she was started on oseltamivir the same day (March 14) and remains in a stable condition. Investigations into the source of her infection indicate a history of close contact with dead and sick poultry prior to becoming ill.

Since 2003, there have been 412 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 256 associated deaths (case fatality rate= 62.1%). 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:

Sometimes the curtain gets pulled back a bit and the underpinnings are there for us to see. Let me share with you...

an image of simple kindness...

<http://zainkhan.info/post/77497652/victorian-bushfire-koala-water-and-firefighter>

and a video of shared exuberance...

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

March 26 Phenology: Today's photoperiod is 12 hours and 27 minutes, and daylength is increasing by 2 minutes and 56 seconds per day. This rate of change is beginning to slow.

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