

Weekly Influenza Update

January 22, 2009

Wisconsin:

Influenza activity has stabilized at fairly low levels in Wisconsin.

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 2.1%.

12.2% 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

Continue to offer influenza vaccine to anyone interested. Full immunity is achieved within 2 weeks of vaccination.

Vaccination is targeted towards:

- all high risk individuals
- children from 6 months to 18 years
- adults 50 years and above
- pregnant women
- healthcare workers

Diagnosis

- influenza infections continue to be rare at this time
- PPV of rapid influenza tests is poor, NPV is excellent

Treatment

- Antivirals need to be started with 48 hours of symptom onset to be effective
- Antivirals may be effective for hospitalized patients even when started after 48 hours
- a limited number of viruses have been tested for neuraminidase inhibitor resistance this season
101 out of 103 A(H1) viruses were resistant to Oseltamivir (98%)

0/23 A(H3) and 0/61 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
0/103 A(H1N1) viruses were resistant to adamantanes
23/23 A(H3N2) viruses were resistant to adamantanes (100%)
Adamantane antivirals are ineffective against influenza B viruses

Across the upper Midwest, 72% of influenza viruses to date have been A(H1N1), 11% A(H3N2) and 17% B. Therefore:

- Oseltamivir alone will be effective in 28% of cases
(cost per Rx = \$119.99)
- Zanamivir alone will be effective in 100% of cases
(cost per Rx = \$72.99)
- Amantadine/Rimantadine alone will be effective in 72% of cases
(cost per Rimantadine Rx = \$28.19)
(cost per Amantadine Rx = \$12.89)
- Oseltamivir plus Amantadine/Rimantadine will be effective in 100% of cases
(cost per combined Rx = \$132.79 - \$148.18)

Other

- parainfluenza and rhinoviruses continue to circulate in Wisconsin
- RSV prevalence is increasing
- Rotavirus isolations are at low levels

Across the U.S.:

As of January 10th, 1,626 positive surveillance cultures have been recorded in the United States. 7.1% of respiratory specimens during week 1 (January 4-10) were positive for influenza.

-83.0% of isolates have been type A

89.2% of all sub-typed A viruses have been H1N1

10.8% of A viruses have been H3N2

-17.0% of isolates have been type B

-6.9% of deaths during week 1 (January 4-10) were due to pneumonia or influenza

[below the epidemic threshold of 7.7%] -one pediatric influenza death [from Minnesota] has been reclassified as not due to influenza

Global News [from the WHO]: The Ministry of Health in China has reported 3 new cases of human infection with the H5N1 avian influenza virus. The first case is a 27 year old female who symptoms on 5 January, was hospitalized, and died on 17 January. The source of her infection is presently under investigation. The second case is a 2 year old female who developed symptoms on 7 January, was hospitalized, and is in a critical condition. The source of her infection is presently under investigation. The third case is a 16 year old male who developed symptoms on 8 January, was hospitalized on 16 January, and is in a critical condition. The case had exposure to sick and dead poultry.

Since 2003, there have been 397 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 249 associated deaths (case fatality rate= 62.7%). 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:

Air and Simple Gifts: "Air and Simple Gifts" is a classical quartet by American composer John Williams composed for, and first played at, the January 20, 2009, inauguration of Barack Obama. The piece was performed by Anthony McGill (clarinet), Itzhak Perlman (violin), Yo-Yo Ma (cello) and Gabriela Montero (piano). Of note is the composition of the quartet: McGill - an African American born in Chicago, Perlman - a Jewish American born in Israel who contracted polio at age four, Ma - a Chinese American born in France, and Montero - born in Venezuela.

Williams based the piece on the familiar nineteenth century Shaker hymn "Simple Gifts," by Joseph Brackett. The source piece is famous for its appearance in Aaron Copland's ballet Appalachian Spring. Williams chose the selection from Copland, one of Obama's favorite classical composers.

A nice video is available at:

<http://www.youtube.com/watch?v=02Ao9jyg5Vk>

January 22 Phenology: We have passed the statistical low point in seasonal temperature in Wisconsin (January 21). This year has been slightly colder than the average, resulting in a 3% rise in heating degree days. Today's photoperiod is 9 hours and 35 minutes (a full 36 more minutes of day than a month ago), and daylength is increasing by 2 minutes and 4 seconds per day.

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