

Weekly Influenza Update

March 12, 2009

Wisconsin:

Influenza activity appears to have peaked in Wisconsin, but only at a moderate level. In the last week, influenza B viruses have comprised nearly 40% of isolates. 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 3.4%.

17.5% 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

Continue to offer influenza vaccine to anyone interested. Keep in mind, however, that we are shifting to a higher percentage of B viruses and that the vaccine match for B viruses this year is low at 24%. 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 are at moderate levels at this time
- PPV of rapid influenza tests is moderately high, NPV is moderately high

Treatment

- Antivirals need to be started within 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
 - 359 out of 364 A(H1) viruses were resistant to Oseltamivir (98.6%)
 - 0/56 A(H3) and 0/166 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
 - 3/365 A(H1N1) viruses were resistant to adamantanes (0.8%)
 - 56/56 A(H3N2) viruses were resistant to adamantanes (100%)
 - Adamantane antivirals are ineffective against influenza B viruses

Across the upper Midwest, 76% of influenza viruses to date have been A(H1N1), 5% A(H3N2) and 19% B. Therefore:

- Zanamivir alone will be effective in 100% of cases
(cost per Rx = \$72.99)
- Oseltamivir plus Amantadine/Rimantadine will be effective in 99% of cases
(cost per combined Rx = \$132.79 - \$148.18)
- Amantadine/Rimantadine alone will be effective in 75% of cases
(cost per rimantadine Rx = \$28.19)
(cost per Amantadine Rx = \$12.89)
- Oseltamivir alone will be effective in 25% of cases
(cost per Rx = \$119.99)

Other

- RSV prevalence has peaked and is declining

- human metapneumovirus, coronaviruses, adenoviruses, rhinoviruses and parainfluenza viruses are circulating in Wisconsin
- Rotavirus isolations are at low levels

Across the U.S.:

As of February 28th, 14,356 positive surveillance cultures have been recorded in the United States. 21.2% of respiratory specimens during week 8 (February 22-28) were positive for influenza.

-75.6% of isolates have been type A

90.3% of all sub-typed A viruses have been H1N1

9.7% of A viruses have been H3N2

-24.4% of isolates have been type B

-7.2% of deaths during week 8 (February 22-28) were due to pneumonia or influenza

[below the epidemic threshold of 8.0%]

-22 pediatric influenza deaths have been reported this season – bacterial co-infections were noted in 14 of these cases, with Staphylococcus aureus implicated in 12/14 cases.

Global News [from the WHO]: The Ministry of Health and Population of Egypt has reported two new confirmed human cases of avian influenza. The first case is a two and a half year old male whose symptoms began on 3 March and he was hospitalized and remains in a stable condition. The second case is a one and a half year old female whose symptoms began on 6 March and was hospitalized on 9 March where she remains in stable condition. Investigations into the sources of infection indicate close contact with dead and sick poultry prior to becoming ill.

Since 2003, there have been 411 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= 62.3%). 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:

March 12 Phenology: Today's photoperiod is 11 hours and 46 minutes, and daylength is increasing by 2 minutes and 56 seconds per day. Over the 3 weeks, the rate of change in daylength is at the highest level.

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