

Weekly Influenza Update

January 16, 2009

Wisconsin:

Influenza activity has stabilized at fairly low levels in Wisconsin.

To date, there have been 25 confirmed cases in Wisconsin including 14 A(H1N1), 7 A(H3N2), 1 A (not subtyped) and 3 B viruses. As this is still early in the seasonal outbreak of influenza, immunization presents the best protection against influenza. At present, there appears to be a good match between the vaccine and circulating strains. 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 an estimated to be 2.2%.

15.1% 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
- a limited number of viruses have been tested for neuraminidase inhibitor resistance this season
 - 86 out of 88 A(H1N1) viruses were resistant to Oseltamivir (98%)
 - 0/14 A(H3N2) and 0/40 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
 - 0/88 A(H1N1) viruses were resistant to adamantanes
 - 14/14 A(H3N2) viruses were resistant to adamantanes (100%)
 - Adamantane antivirals are ineffective against influenza B viruses

Across the upper Midwest, 69% of influenza viruses to date have been A(H1N1), 12% A(H3N2) and 19% B. Therefore:

- Oseltamivir alone will be effective in 31% 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 69% 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

- Adenovirus is the predominant virus at present
- 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 3rd, 1,173 positive surveillance cultures have been recorded in the United States. 3.2% of respiratory specimens during week 53 (December 29-January 3) were positive for influenza.

-81.2% 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

-18.8% of isolates have been type B

-7.0% of deaths during week 53 (December 29-January 3) were due to pneumonia or influenza

[below the epidemic threshold of 7.6%] -one pediatric influenza death [from Minnesota] has been reported to CDC this season

Global News [from the WHO]: The Ministry of Health and Population of Egypt has announced a new human case of avian influenza A(H5N1) virus infection in a 21-months old female whose symptoms began on 9 January 2009. She was initially hospitalized on 10 January and is currently in a stable condition. Investigations into the source of her infection indicate a recent history of contact with sick and dead poultry.

Since 2003, there have been 394 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 248 associated deaths (case fatality rate= 62.9%). 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:

Benefits of PNC7: Please click on the attached URL for a recent MMRW article underscoring the overall value of pneumococcal immunization in young children. The introduction and widespread use of PNC7 has resulted in a 35% decline in all-cause pneumonia hospitalizations in children under 2 years of age.

<http://www.cdc.gov/mmwr/PDF/wk/mm5801.pdf>

January 16 Phenology: We are approaching the average low point of annual temperature in Wisconsin (January 21). Today's photoperiod is 9 hours and 24 minutes, and daylength is increasing by 1 minute and 43 seconds per day.

Jonathan L. Temte, MD/PhD

Advisory Committee on Immunization Practices Associate Professor Department of Family Medicine University of Wisconsin School of Medicine and Public Health
777 South Mills Street
Madison, Wisconsin 53715

Telephone: 608-263-3111

Fax: 608-263-6663

email: Jon.Temte@fammed.wisc.edu