

Weekly Influenza Update

November 19, 2009

With the holidays coming, reducing the spread influenza among travelers will be an important consideration. In preparation for the upcoming months when we expect many families and individuals to gather for the holidays, we encourage domestic and international travelers to take steps to prevent the spread of flu.

Wisconsin:

Influenza activity has decreased in Wisconsin over the past two weeks.

Since August 30, there have been 5,502 confirmed and probable cases, 405 hospitalizations and 22 deaths. As of 11/11/09, 695,000 doses of H1N1 vaccine have been shipped to Wisconsin.

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 3.2% with a predominance of cases in the people between 0 and 24 years.

13.4% 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 1.5%

CLINICAL NOTES:

Prophylaxis

Note: The FDA has approved the use of one dose of 2009 H1N1 flu vaccine for persons 10 years of age and older. For children 9 years of age and under, CDC recommends that the two doses of 2009 H1N1 vaccine be separated by 4 weeks. However, if the second dose is separated from the first dose by at least 21 days, the second dose can be considered valid.

H1N1 vaccine continues to be prioritized to the following groups (not in hierarchical order):

- pregnant women
- persons who live with or provide care for infants aged <6 months
- health-care and EM personnel who have direct contact with patients or infectious material
- children aged 6 months--4 years
- children and adolescents aged 5--18 years who have medical conditions Consider immunizing adults 19 years and older with high risk medical conditions if vaccine is available Continue vaccinating with seasonal influenza vaccine Pneumococcal vaccine is indicated for smokers, and people with asthma and other chronic lung conditions as well as a number of other chronic conditions. Go to the following URL for a CDC letter to providers:

<http://www.cdc.gov/h1n1flu/vaccination/provider/lettertoprovider.htm>

Demographics and Symptoms (based on initial clinical surveillance of ILI in primary care)

Median time from onset to clinic visit: 4 days

Mean age: 24.8 years

Sex Ratio: female 51%; Male 49%

% with probable exposure to similar illness within 1-3 days of onset: 48%

Common symptoms

Fever: 73%

Cough: 85%

Sore Throat; 60%

Runny Nose: 56%

Headache: 34%

Any GI symptom: 24%

Severity: mild - 45%; moderate 53%; severe 2%

Diagnosis

- influenza infections are at moderate levels at this time
- the best performing rapid antigen tests will miss 31% of true cases of 2009 H1N1. Trust the positives.
- a negative test in a patient with influenza-like illness does not rule out influenza

Treatment (see: <http://www.cdc.gov/h1n1flu/recommendations.htm>)

Antiviral treatment should be used judiciously. The target recipients for empiric therapy are:

- Children younger than 2 years old;
 - Persons aged 65 years or older
 - Pregnant women
 - Persons of any age with certain chronic medical or immunosuppressive conditions
 - Persons younger than 19 years of age who are receiving long-term aspirin therapy
- 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.

Resistance Patterns

- a limited number of viruses have been tested for neuraminidase inhibitor resistance this season
 - all tested 2009 H1N1 viruses have been sensitive to zanamivir
 - 0.3% of 2009 H1N1 viruses have been resistant to oseltamivir
 - 100% of 2009 H1N1 have been resistant to adamantane antivirals

Other

- Rhinovirus, and parainfluenza viruses are co-circulating at low levels in Wisconsin
- rare isolates of RSV have been detected

Across the U.S.:

30.1% of respiratory specimens during week 4 (November 1-7) were positive for influenza.

- 99.5% of isolates have been type A
 - 99.8% of all sub-typed A viruses have been 2009 H1N1
 - 0.1% of A viruses have been seasonal H1N1
 - 0.1% of A viruses have been H3N2
- 0.5% of isolates have been type B

Since August 30, 2009, there have been 22,364 lab-confirmed influenza-associated hospitalizations and 877 lab-confirmed influenza-associated deaths.

- 7.7% of deaths during week 44 (November 1-7) were due to pneumonia or influenza [above the epidemic threshold of 6.8%]

-178 pediatric deaths associated with 2009 H1N1 have been reported - bacterial co-infections were noted in 18 of 65 H1N1 cases which had samples collected from a normally sterile site (28%).

Global News [from the WHO]: As of 8 November 2009, worldwide more than 206 countries and overseas territories or communities have reported laboratory confirmed cases of pandemic influenza H1N1 2009; there have been more than 500,000 laboratory confirmed cases of pandemic influenza H1N1 2009 and over 6,2600 deaths reported to WHO.

Since 2003, there have been 442 laboratory-confirmed cases of Avian influenza (A-H5N1). There have been 262 associated deaths (case fatality rate= 59.3%).

Other Observations:

November 19th Phenology: Today's photoperiod is 9 hours and 35 minutes, and daylength is decreasing by 2 minutes and 1 second per day.

Influenza Vaccine and Pregnancy:

Three recent studies presented at the 40th Annual IDSA meeting indicate the benefits of influenza vaccine in pregnancy:

1. Infants born during the influenza season to vaccinated mothers were 70% less likely to be premature and 60% less likely to have low birthweight [Omer].
2. Seasonal influenza vaccine administration was associated with a 79.8% decline in influenza-related hospitalizations of infants during the first year of life and an 85.3% reduction in the first 6 months of life Vazquez].
3. In a RCT from Bangladesh, infants born during the influenza season to mothers vaccinated in the 3rd trimester averaged ½ pound heavier than those born to control mothers [Steinhoff].

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