Influenza activity peaking

Wisconsin:
Wisconsin’s influenza activity is near peak across Wisconsin. To date, there have been 599 reported influenza-associated hospitalizations across Wisconsin (41% were for individuals aged 65+ years) 107 ICU admissions (48% were for individuals aged 65+ years) and 25 patients requiring mechanical ventilation.

Influenza A has accounted for most of the positives reported by Wisconsin clinical labs performing PCR, and 97% of all subtyped influenza A specimens were 2009 H1N1.

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 at 2.8% and is near peak.

12.7% of last week's primary care patients had all-cause respiratory infections. The prevalence of acute diarrheal illness (ADI) in Wisconsin's primary care patients is at 1.5%

Primary Care Snapshot:
The most commonly identified viral causes of Acute Respiratory infections (ARI) in Wisconsin are Influenza A and human Metapneumovirus. Over the past 4 weeks the typical ARI case presenting for primary care has been 30.6 years old and 61% of patients have been female. 55% of patients identified a sick contact 1-to-3 days before illness onset and typically present to the clinic 4.2 days after illness onset. 30% of illnesses are characterized as mild, with 64% having moderate symptoms and 5% having severe symptoms.

The typical symptoms reported include:
- cough - 85%
- nasal congestion - 66%
- nasal discharge - 61%
- fever - 59%
- sore throat - 50%
- headache - 50%
- malaise - 48%
- myalgia - 36%

Clinical Notes:

Prophylaxis - Continue to vaccinate
- Influenza vaccine is recommended universally everyone over the age of 6 months, including pregnant women
- Pneumococcal vaccine PPSV23 is indicated for smokers, people with asthma and other chronic lung conditions as well as a number of other chronic conditions
- ACIP routinely recommends PCV13 for individuals 65 years and older PPSV23 should be given 12 months after PCV13
Performance of Rapid Influenza Diagnostic Tests (RIDTs) depends on age and time from symptom onset.

Higher sensitivities are attained at younger ages and within the first 3 days of symptoms. Clinical judgment is essential in diagnosis.

- influenza infections are at low levels at this time
- PPV of rapid antigen tests at this time is high
- NPV of rapid antigen tests at this time is moderately high

Treatment:
Antivirals need to be started with 48 hours of symptom onset to be effective against influenza. Antivirals started after 48 hours may be effective for hospitalized patients with confirmed influenza.

Resistance Patterns:
- 326 influenza A[H3N2], 554 influenza A[H1N1] and 321 influenza B viruses have been tested
  - two H1N1 viruses (0.4%) was resistant to oseltamivir and to peramivir
  - all other isolates have been sensitive to oseltamivir, zanamivir and peramivir

- high levels of adamantane antiviral resistance exist in influenza A isolates from around the world
  - adamantanes include amantadine and rimantadine; there are ineffective for influenza B

Other
- Human metapneumovirus, coronaviruses, and rhinovirus/enterovirus are dominating Wisconsin’s respiratory viruses; adenovirus and parainfluenza virus are also co-circulating in Wisconsin.
- RSV detections are at peak

Across the U.S.:
3,803 (17.6%) respiratory specimens during week 8 (February 21-27, 2016) were positive for influenza.

For the 2015-2016 season-to-date (last week):
- 71.4% (78.3%) of subtyped isolates have been type A
  - 23.2% (9.2%) of A viruses have been H3N2
  - 76.8% (90.8%) of all sub-typed A viruses have been 2009 H1N1
- 28.6% (21.7%) of isolates have been type B
  - 75.1% (68.0%) have been of the Yamagata lineage (TIV strain)
  - 24.9% (32.0%) have been of the Victoria lineage (additional strain in QIV)

- 7.4% of deaths during week 8 (February 21-27, 2016) were due to pneumonia or influenza [above the seasonally-adjusted epidemic threshold of 7.2%]

- four additional pediatric deaths were reported this week; two deaths were due to A[H1N1], one to influenza A (no subtyping) and one due to influenza B. There have been 18 pediatric deaths reported this season; 1 death was attributed to untyped influenza; 4 deaths were attributed to influenza A (no subtyping performed), 1 to AH3, 6 to AH1, and 6 to influenza B.

Global News [from the WHO and CDC]: 
**Zika:** Zika virus disease is advancing in the Americas. As of last count, 153 cases—all acquired elsewhere—were reported in the US; 17 cases in Puerto Rico and the US Virgin Islands, however, were locally acquired (see: [http://www.cdc.gov/zika/geo/united-states.html](http://www.cdc.gov/zika/geo/united-states.html)).

For a good, concise resource, see: [Zika Virus For Health Care Providers](http://www.cdc.gov/zika/hc-providers/index.html)

**Ebola:** On 14 January, 68 days into the 90-day surveillance period, a new confirmed case of EVD was reported is Sierra Leone. On 20 January, the aunt of the index case developed symptoms and tested positive for Ebola virus. All contacts linked to these two cases have completed follow-up by 11 February 2016. If no further cases are detected, transmission linked to this cluster of cases will be declared to have ended on 17 March.

Since the initial case in December 2013, there have been 28,639 reported cases of, and 11,316 deaths (CFR = 39.5%) due to Ebola Virus Disease, primarily in the coastal West African nations of Guinea, Liberia and Sierra Leone.

**Other Observations:**

**March 10th Phenology:** Today's photoperiod is 11 hours and 41 minutes, and daylength is increasing by 2 minute and 56 seconds per day. We are now very, very close to the maximal increase of light per day (2 minute and 57 seconds) that we'll achieve at the Vernal Equinox (March 19).


**Decorah Eagle Cam:** The eagles are now nesting. See [http://www.ustream.tv/decoraeagles](http://www.ustream.tv/decoraeagles) for livestreaming.

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