

February 16, 2017  
Happy Valentine's Day  
Influenza Alert



For treatment guidance, see: <https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm>

**Wisconsin:**

Wisconsin is experiencing a significant increase in influenza activity, with outbreaks in schools, long-term care and communities. 85% of recent detections being influenza A; 97% of A viruses are H3N2. There have been 837 influenza-related hospitalizations since September 1, 2016, with 97 admitted to ICU and 12 requiring mechanical ventilation. This compares to 163 hospitalizations last year at this time, and 3,763 for the 2014-2015 season. 66% of hospitalizations have been in individuals age 65 and older. Influenza A[H3N2] is less kind to elders; across the US one out of every 870 people age  $\geq 65$  has been hospitalized with laboratory-confirmed influenza.

The estimated prevalence of influenza-like illness [fever of 100°F or higher with either cough or sore throat] in Wisconsin's primary care patients is at 4.3% and is increasing.

12.5% 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 1.4%

**Primary Care Snapshot:**

The most commonly identified viral causes of Acute Respiratory infections (ARI) in Wisconsin are **Coronavirus**, **RSV** and **Influenza A**. Over the past 4 weeks the typical ARI case presenting for primary care has been 33.7 years old and 58% of patients have been female. 61% of patients identified a sick contact 1-to-3 days before illness onset and typically present to the clinic 3.7 days after illness onset. 24% of illnesses are characterized as mild, with 67% having moderate symptoms and 7% having severe symptoms.

The typical symptoms reported include:

cough	- 86%
nasal congestion	- 69%
nasal discharge	- 61%
sore throat	- 61%
fever	- 58%
headache	- 49%
malaise	- 47%
myalgia	- 35%

**CLINICAL NOTES:**

Prophylaxis – there is a good match between this year's vaccine and circulating viruses

- 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

### Diagnosis

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 moderate 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: Oseltamivir is now available as a generic

See: <https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm>

Antivirals need to be started within 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:

- 633 influenza A[H3N2], 94 influenza A[H1N1] and 194 influenza B viruses have been tested  
no viruses (0.0%) were resistant to oseltamivir, zanamivir or peramivir
- high levels of adamantane antiviral resistance exist in influenza A isolates from around the world  
Adamantanes include amantadine and rimantadine; these are ineffective for influenza B

### Other

- Coronaviruses are the predominant respiratory viruses in Wisconsin
- RSV is near peak
- Rhinovirus/enteroviruses, human metapneumovirus, parainfluenza and adenovirus are co-circulating at lower levels

### **Across the U.S.: influenza is increasing**

5,722 (20.9%) respiratory specimens during week 5 (January 29-February 4) were positive for influenza.

For the 2016-2017 season to date (last week):

- 87.6% (87.7%) of subtyped isolates have been type A
  - 97.5% (97.6%) of A viruses have been H3N2
  - 2.5% (2.4%) of all sub-typed A viruses have been 2009 H1N1
- 12.4% (12.3%) of isolates have been type B
  - 69.1% (63.5%) of B viruses have been of the Yamagata lineage
  - 30.9% (36.5%) of B viruses have been of the Victoria lineage

-7.9% of deaths during week 3 (January 15-21) were due to pneumonia or influenza  
[above the seasonally-adjusted epidemic threshold of 7.4%]

-Five additional pediatric deaths were reported last week.

20 pediatric deaths have been reported this season. Nine deaths were associated with influenza A[H3]; one death was associated with influenza A[H1]; five deaths were associated with influenza A viruses for which no subtyping was performed; four deaths were associated with influenza B; and one death was associated with an influenza virus for which the type was not determined.

### **Global News [from the WHO/CDC]:**

**Zika:** 5,001 cases have been reported in the U.S. with 1,394 cases in pregnant women. Wisconsin has had 48 cases so far – all associated with travel. See: <https://www.cdc.gov/zika/> for up-to-date information.

### **Other Observations:**

#### **February 16<sup>th</sup> Phenology:**

Today's photoperiod is 10 hours and 37 minutes, and daylength is increasing by 2 minute and 45 seconds per day.

**Happy Valentine's Day:** I owe it to my wife (limnologist), daughters (influenza researcher & wildlife rehabber; psychology major), step-mother (biologist), my research team, and to all my women partners (doctors, public health practitioners, physician assistants, and nurse practitioners) to send my wishes for a Happy International Day of Women and Girls in Science (February 11).

<http://www.un.org/en/events/women-and-girls-in-science-day/>

**Giving is the best Communication:** One of our medical assistants posted the Spanish-language version of this video on Facebook; it took some looking, but I found it in its original Thai (with subtitles): [https://www.youtube.com/watch?v=XADBJjIAO\\_0](https://www.youtube.com/watch?v=XADBJjIAO_0)

**Morning has broken:** On Sunday, February 12<sup>th</sup>, the sun's crossing of the horizon sunrise moved back before 7am; the first time since November 21<sup>st</sup>. Our latest sunrise occurred on January 2<sup>nd</sup> (7:29am) and our earliest will be on June 15<sup>th</sup> (5:18am; 4:18am without daylight savings time). In celebration of this celestial event, a selection of some nice quotes pertaining to morning...

*"These are the great neglected hours of the day, the only time when the world is relatively perfect and at peace. But terror guards them. Once I am up, however, and out it's rather a delight, no matter what the weather, to be abroad in the thoughtful dawn."*

William Carlos Williams. *Comedy entombed. The Doctor Stories.* Compiled by Robert Coles (1984)

*"Smile my boy, it's sunrise"*

Last onscreen words spoken by the comedian Robin Williams as Teddy Roosevelt: *Night at the Museum: Secret of the Tomb* (2014)

*"This was not judgement day -- only morning. Morning: excellent and fair."*

William Styron, *Sophie's Choice*, (1979)

*"Suddenly it comes, the flaming globe, blazing on the pinnacles and minarets and balanced rocks, on the canyon walls and through the windows in the sandstone fins... Three ravens are wheeling near the balanced rock, squawking at each other and at the dawn... First things first. The ravens cry out in husky voices, blue-black wings flapping against the golden sky. Over my shoulder comes the sizzle and smell of frying bacon. That's the way it was this morning."*  
The first morning - Desert Solitaire, Edward Abbey (1968)

*"Morning has broken like the first morning,  
Blackbird has spoken like the first bird.  
Praise for the singing,  
Praise for the morning,  
Praise for them springing fresh from the word."*

Eleanor Farjeon, English poet and children's author who was asked to make a poem to fit the traditional Scottish Gaelic tune known as Bunessan (1931). Cat Stevens' (now Yusuf Islam) performance from 41 years ago: <https://www.youtube.com/watch?v=U5sSEkZ86ts>

Jonathan L. Temte, MD/PhD  
Chair, Wisconsin Council on Immunization Practices  
Professor, Department of Family Medicine and Community Health  
University of Wisconsin School of Medicine and Public Health  
1100 Delaplaine Court  
Madison, Wisconsin 53715

Telephone: 608-263-3111  
Fax: 608-263-6663  
email: [Jon.Temte@fammed.wisc.edu](mailto:Jon.Temte@fammed.wisc.edu)