



Every Record. In Real Time. Automatically.

Influenza (FLU) Update for Week #4 Week Ending 1-27-18

The CDC reported that **influenza (Flu)** activity, including diagnosed flu and **Influenza-Like-Illness (ILI)**, increased again; there was no indication that flu/ILI was waning. All but two states, Hawaii and Oregon reported widespread flu activity. There was an increase in the number of states that reported high ILI levels again, nearing the levels seen during the 2009 Pandemic. The rate of hospitalizations for this flu season is greater than that seen during the most recent severe flu season of 2014-15.

The dominating flu subtype remained A H3N2, which is typically a more severe subtype of flu with increased complication rates. Cases caused by Influenza B flus increased.

Although the highest risk for complications & hospitalizations remained in those 65 years or older, other age groups, ages 50-64 and in young children ages 0-4, also had higher rates of complications and hospitalizations.

See this link for more details, including charts, graphs & maps. <https://www.cdc.gov/flu/weekly/>

A quick glance at the graphs for *Percentage of Visits for ILI and Pneumonia and Influenza Mortality Surveillance*, gives a pictorial presentation of the severity of this flu season.

FirstWatch **RIN (Regional Influenza Network)** Alerts continued to occur often, which correlated with CDC ILI and Flu reports.

For the most recently reported week ending January 27, 2018, the CDC reported:

- **ILI visits** to clinics & other non-hospital facilities remained elevated at 7.1% (was 6.6% last week) and at or above the national baseline of 2.2% for the 10th week in a row. This neared the highest rate of 7.7% for the 2009 H1N1 Pandemic. All 10 regions reported ILI at or above their region-specific baselines again. On average for the past five flu seasons, the ILI has remained at/above baseline for an average of 16 weeks, suggesting elevated activity may extend into March.
- **Flu cases** (documented by positive flu tests) remained elevated, with widespread flu reported in 48 states. Clinical lab testing for influenza was positive for flu in 26.1% of the total tests (compared with 26.7% last week), which is a slight decrease.
- **Influenza A** remained the dominant flu type for 76.4% of the flu tests reported (78.5% last week), with H3N2 the subtype 84.3% (80.5% last week) and 15.7.% (12.7% last week) as A (H1N1)pdm09 viruses. The rest of the tests showed 23.6% (21.5% l.w.) tested as Influenza B viruses.

This again shows a decrease in Influenza A cases and more Influenza B cases. Typically, Influenza B viruses cause less severe flu and occur more in the latter part of the flu season, but this earlier shift is what Canada and Europe are reporting also.

Vaccine Coverage: the majority of the flu viruses collected this season are well matched to the seasonal vaccine offered. However, there was genetic diversity noted in the H3N2 samples and, out of 245, 3 were not inhibited by the vaccine. The very dominant B flu lineage Yamagata samples were completely covered by the vaccine while the B lineage Victoria was only covered in about 41.4% of the its samples. H3 flu components of flu vaccines do not protect as well, however, and vaccine effectiveness for this flu season appears to be somewhere between 10 and 30 percent, much as it was for last year's flu season. **It is still recommended that anyone who has not had flu vaccine should get it ASAP** since even if it doesn't prevent the flu in everyone, the length and severity of the flu would likely be lessened as well as the time when a person is able to infect someone else (called shedding).



Every Record. In Real Time. Automatically.

The CDC provides an interactive U.S. map that will link to each state's public health authorities. ILI and Flu information and processes, as well as other diseases and public health topics. This site includes a tremendous amount of information at the State and even Local level.

Find it at this site: <https://www.cdc.gov/flu/weekly/usmap.htm>

-- **For Influenza-like illness (ILI):**

High ILI Activity: (New York City, Washington D.C. & 42 states): Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming

Moderate ILI Activity: (Puerto Rico & 2 states): California and Idaho

Low Activity: (3 states): Delaware, North Dakota, and Washington

Minimal Activity (3 states): Maine, Montana, and Utah

-- **For Flu (positive flu tests):**

Widespread Activity (Puerto Rico & 48 states): Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

Regional Activity: (Guam and 1 state): Oregon

Local Activity: (Washington D.C. and 1 state): Hawaii

Sporadic Activity: US Virgin Islands

-- **Other Data:**

Hospitalizations from Flu since Oct. 1, 2017 have had a cumulative rate of 54.1 per 100,000 population. Each age group reported significantly higher rates than last week. Both the cumulative rate and the rates by age breakdown were greater than the rates at the same point of the the 2014-15 flu season. Specifically, those 65 years & older with 226.8/100,000 ; ages 50-64 at 54.0/100,000, and ages 0-4 at 33.3/100,000. The majority tested positive for A H3N2, but H1N1pmd09 and B flu were also represented.

Death rates for pneumonia and influenza in adults increased to 9.7% and remained above the epidemic threshold of 7.1%. Note: death reports often aren't submitted for data purposes in the same time frame as flu and ILI cases are, so they lag behind most other Flu reporting.

There were 16 more pediatric deaths from flu reported for week #4, for a total of 53 for this flu season. There was another pediatric death reported during the week, but it occurred during the 2015-16 Flu Season.



Every Record. In Real Time. Automatically.

-- **Flu in Canada and Europe::**

According to the Public Health Agency of Canada (**PHAC**) for Week #4 (ending 1/27/18), Canada still had high flu activity but stated there were indications that it's beginning to slow in some areas. H3N2 remained the dominant subtype, although Influenza B cases remained at 40%. Most of the diagnosed flu cases, hospitalizations, and deaths remained in those 65 years and older.

For more information see: <https://www.canada.ca/en/public-health/services/diseases/flu-influenza.html>

According to the European Center for Disease Prevention & Control (**ECDC**), flu was widespread in most of the reporting countries for Week 4 (ending 1/28/18). They reported that activity was increasing but the intensity for most countries was low to medium. Influenza A & Influenza B viruses were co-circulating with more Influenza B than A cases noted again. Different patterns of circulation were detected amongst countries in the Region. For those being tested who presented with ILI or **ARI (acute respiratory infection)** at PCPs, 51.9% tested positive for flu (compared to 52% last week).

For more information see: <http://flunewseurope.org/>

First Responder Specific Information

There are many websites that may be helpful in planning and managing seasonal flu within First Responder organizations. There is a list of various links in a document called *Seasonal Influenza Resources*. Three of those websites are included here: <https://www.cdc.gov/flu/weekly/usmap.htm> & <https://flunearyou.org/#/> and <http://www.healthmap.org/en/>

- First Responders should be vaccinated for Flu each season to prevent getting flu themselves, taking it home to family members or transmitting it to patients in their care. Family members and patients may be at increased risk of complications from flu.
- Perform proper hand hygiene including frequent handwashing and the use of hand sanitizers in general, and particularly when providing patient care or after touching surfaces.
- Masks (N95 or 100) should be used in the presence of patients with cough and/or fever.
- Care should be taken to avoid touching their own face and mucous membranes (eyes, mouth, nose) since the flu virus is frequently found on surfaces such as door knobs, cot and equipment handles, phones, as well as clothing, bed clothes, etc.
- Report signs/symptoms of flu to your physician or other appropriate provider for early assessment and care.
- Cough and sneeze into your sleeve, if a tissue is not available, and not onto your hands.
- Stay away from others if you are sick.
- Be aware of your exposure risk and history. Take extra precautions or avoid those with immunocompromise, when possible, if there you have a known or likely exposure.
- Antivirals may be indicated for the treatment of flu, particularly for those in high risk groups, those who are hospitalized or have severe, complicated or progressing flu. Those that present with 48 hours of the onset of symptoms may also be given antivirals, based on PCP judgement but make sure the practitioner is aware of their First Responder Role. See <https://www.cdc.gov/flu/antivirals/whatyoushould.htm>
- A study was published by the Institute for Clinical Evaluative Sciences in *NEJM*; details below

Flu infection may raise risk of heart attack, particularly in first 7 days



Study confirms importance of flu vaccination for people at risk of heart disease.

Researchers looked at nearly 20,000 Ontario adult cases of lab-confirmed influenza (2009-2014) and then identified 332 patients who were hospitalized for a heart attack within one year of flu diagnosis.



For this population, the risk of heart attack was **6 times higher** within the first week of a flu diagnosis.

Factors that may be associated with more risk:

- being age 65 and older
- infection with influenza B
- no previous heart attack

The researchers say that people at risk of heart disease should take care to prevent flu through measures including handwashing and vaccination, and should not delay medical evaluation for heart symptoms, particularly in the first week of an acute respiratory infection.

Kwong JC et al. NEJM. 2018.

Institute for Clinical Evaluative Sciences
ices.on.ca

Public Health Ontario | Santé publique Ontario

Image courtesy of ICES/PHO

Note: The Flu is much more worrisome for the very young and the very old. Signs of ILI in this group require careful assessment to rule out complications and these groups are much more likely to be transported to assure adequate care. Since A H3N2 is, so far, this year's dominant flu, young children and those over 65 are typically at greater risk for complications, hospitalization and even death, although hospitalizations were higher for those aged 50-64 than for aged 0-4. Consideration should be given to perhaps monitoring these groups more closely, with consideration for more comprehensive assessment and transport for further evaluation, with a presentation of possible flu and any signs of complications. "The researchers add that patients should not delay medical evaluation for heart symptoms particularly within the first week of an acute respiratory infection." (Lisa Schnirring, News Editor: CIDRAP News ;Jan 25, 2018)

For more information on the Influenza and Heart Attack Study, please see the link below.
https://www.eurekalert.org/pub_releases/2018-01/pho-rci011818.php

This document is provided by FirstWatch as a service to prehospital and public health providers. The information has been compiled from a variety of sources such as the CDC, Health Canada and WHO. It is copyrighted, but may be freely copied and distributed as long as it remains intact. For up-to-date, EMS specific information on emerging diseases, please visit www.firstwatch.net/hi