

Influenza (FLU) Update for Week #5 Week Ending 2-03-18

The CDC reported that influenza activity (diagnosed flu and Influenza-Like-Illness) increased once again. Levels have met or exceeded flu and ILI markers from flu seasons over the last decade, including the 2009 Pandemic of H1N1. Although Week #5 is the 11th week of substantial flu activity, and flu activity would normally have peaked by now, that is not the case and the CDC suggests that flu activity may go on for as long as 20 weeks. The only potential good news is that the number of flu cases that were tested showed an increase in Influenza B results, and since flu vaccine is more effective on B flus than the H3N2 flu, hopefully less people will get sick and, therefore, less will spread it.

Although the greatest risk for complications & hospitalizations remained in those 65 years or older, other age groups, including those with and without high risk of complications from flu, are having to be hospitalized. This year's rate of hospitalizations due to flu is higher than it was at the same point in the 2014-15 season which was labeled a high severity flu season and which was also dominated by an H3N2 flu strain.

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 February 3, 2018, the CDC reported:

- **ILI visits** to clinics & other non-hospital facilities remained elevated at 7.7% (was 7.1% last week) and at or above the national baseline of 2.2% for the 11th week in a row. This matched the highest rate of 7.7% seen during the 2009 H1N1 Pandemic. All 10 regions reported ILI at or above their region-specific baselines again with 51 of 54 jurisdictions reporting ELEVATED. On average for the past five flu seasons, the ILI has remained at/above baseline for an average of 16 weeks, suggesting elevated activity will 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 26.3% of the total tests (compared with 26.1% last week), which is a slight increase. This follows a slight decrease from the previous week.
- **Influenza A** remained the dominant flu type for 69.2% of the flu tests reported (76.4% last week), with H3N2 the subtype 85.3% (84.3% last week) and 14.7% (15.7% last week) as A (H1N1)pdm09 viruses. The rest of the tests showed 30.8% (23.6% last week) 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; 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, although less so with the dominant H3N2, which has genetic changes so that not all are covered well. The remaining circulating flu strains (2009 H1N1) and the B flus have a much better response. Overall vaccine effectiveness is expected to be between 30-60%, depending on the strain of flu to which a person is exposed. **It is still recommended that anyone who has not received 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. Puerto Rico & 43 states): Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, 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 (3 states): Hawaii, Idaho and Washington

Low Activity (2 states): North Dakota and Utah

Minimal Activity (2 states): Maine and Montana

-- 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 (2 states): Hawaii and Oregon

Local Activity: Washington D.C. and Guam

Sporadic Activity: US Virgin Islands

-- Other Data:

Hospitalizations from Flu since Oct. 1, 2017 have had a cumulative rate of 59.9 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 in the 2014-15 flu season. Specifically, those 65 years & older with 263.6/100,000; ages 50-64 at 63.1/100,000; and ages 0-4 at 40.0/100,000. The majority tested positive for A H3N2, but H1N1pmd09 and B flu were also represented.

Death rates for pneumonia and influenza in adults increased again to 10.1% (9.7% last week) and remained above the epidemic threshold of 7.3%. 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 10 more pediatric deaths from flu reported for week #5, for a total of 63 for this flu season.

The pediatric death rate for this flu season is less than those in the previous 4 seasons.

-- Flu in Canada and Europe::

According to the Public Health Agency of Canada (**PHAC**) for Week #5 (ending 2/3/18), Canada still had high flu activity but stated there were indications that it's beginning to slow in some areas. The total number of Influenza A cases were about the same as those from Influenza B viruses. 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 the majority of the reporting countries for Week 5 (ending 2/4/18). Influenza A & Influenza B viruses were co-circulating with more Influenza B than A cases noted again. Different proportions of circulating flu viruses were noted among countries with an increase in positive specimens found in Eastern countries. For those being tested who presented with ILI or ARI (acute respiratory infection) at PCPs, 57% tested positive for flu (compared to 54% 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*; see 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

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Image courtesy of ICES/PHO

“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-rc1011818.php

Note: Flu is much more worrisome for the very young and the very old. Signs of ILI in this group requires 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 inclination for more comprehensive assessment and transport for further evaluation, when presented with possible flu and any signs of complications.

Complications of flu, sometimes requiring hospitalization and even leading to death, tend to occur after the person has begun to get better from the flu and then appears to relapse. EMS personnel may want to look more closely at those patients when the call is not about the initial signs and symptoms of flu, but about increasing or different signs that have appeared.

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