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Influenza (FLU) Update for Week #12 Week Ending 3-24-18

Although Flu and ILI remained elevated above the national baseline respectively, they each continued to decrease last week. Week #12 was the sixth week with decreases in FLU/ILI indicators. The peak of the season occurred when ILI was at a high of 7.5%, which occurred during Week #5, ending 2/3/18.

On average for the past five Flu seasons, ILI remained at/above the national baseline for 16 weeks; 20 weeks was the longest. **This is the 18th week this Flu season that ILI has been at/above baseline, which correlates with the highly active season experienced.** Flu and ILI activity is likely to remain elevated well into April.

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

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

FirstWatch RIN (Reginal Influenza Network) Alerts occurred occasionally, which correlated with CDC reports of decreased activity.

For the most recently reported week ending March 24, 2018, the CDC reported:

--**ILI visits** to clinics and other non-hospital facilities decreased again but remained above the baseline at 2.5% (was 2.7% last week); the baseline is 2.2%. The same 9 out of 10 Regions reported ILI at or above their region-specific baselines with 39 of 54 jurisdictions reporting "ELEVATED"; Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) was listed as "NORMAL".

--**Flu cases** (documented by positive Flu tests) decreased again but remained elevated with widespread flu reported in 16 states, down from 17 states last week. Clinical lab testing for influenza was positive for Flu in 14.7% of the total tests (compared with 15.3% last week). There may be occasional slight upticks but this trend should continue.

--**Influenza B** remained the dominant Flu type with 57.8% of the positive flu tests reported (57.7% last week). The remainder of the positive Flu tests were Influenza A at 42.6% (42.3% last week), with the subtype H3N2 68.7% of the time (54.3% last week) and 26.0% (36.4% last week) as A (H1N1)pdm09; 5.3% were not subtyped.

--**Vaccine Coverage:** Using reported data from Nov 2, 2017 through Feb 3, 2018, the CDC published an early vaccine effectiveness report on Feb 16, indicating that the 2017-2018 Seasonal Flu vaccine reduced the risk of having to go to a health care provider for Flu by 36% overall. Specific vaccine effectiveness (VE) breaks down as follows: H3N2 was 25%; H1N1 was 67%; and for the circulating B viruses was 42%. A complete vaccine effectiveness report, using all the data from this season, will be published in September, 2018.

With several more weeks of elevated Flu activity expected, it is still recommended that anyone who has not received flu vaccine this season, and without contraindications, get vaccinated ASAP. This is recommended since even if it doesn't prevent the flu in everyone, the length and severity of the Flu would likely be lessened as well the time when a person is able to infect someone else.

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>



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--For Influenza-Like Illness (ILI)

High ILI Activity (4 states): Alaska, South Carolina, Virginia and Wyoming

Moderate ILI Activity (8 states): Arizona, Indiana, Kentucky, Missouri, Nebraska, New Mexico, Pennsylvania and South Dakota

Low Activity (New York City, Washington D.C., Puerto Rico and 14 states): California, Connecticut, Georgia, Hawaii, Illinois, Kansas, Massachusetts, Minnesota, New Jersey, North Carolina, Oregon, Rhode Island, Vermont and Washington

Minimal Activity (24 states): Alabama, Arkansas, Colorado, Delaware, Florida, Idaho, Iowa, Louisiana, Maine, Maryland, Michigan, Mississippi, Montana, Nevada, New Hampshire, New York, North Dakota, Ohio, Oklahoma, Tennessee, Texas, Utah, West Virginia and Wisconsin

--For Flu (positive Flu tests)

Widespread Activity (Puerto Rico and 16 states): Alaska, California, Connecticut, Delaware, Indiana, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, New York, Ohio, Oklahoma, Rhode Island, Virginia and Wisconsin

Regional Activity (22 states): Arizona, Colorado, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, New Jersey, New Mexico, North Dakota, Pennsylvania, South Carolina, South Dakota, Utah, Washington and Wyoming

Local Activity (Washington D.C., Guam and 8 states): Arkansas, Louisiana, Nevada, North Carolina, Oregon, Tennessee Texas and West Virginia

Sporadic Activity (4 states): Alabama, Hawaii, Mississippi and Vermont

No Reported Activity: U.S. Virgin Islands

--Other Data:

Hospitalizations from Flu since Oct. 1, 2017 have had a cumulative rate of 96.1 per 100,000. The cumulative and each age group again reported higher rates than those of the previous week and higher than the same point in the "Severe" 2014-15 Flu season. Specifically, those 65 years and older with 412.6 per 100,000 (401.8 /100,000 last week); ages 50-64 at 104.2 per 100,000 (101.5/100,000); and ages 0-4 at 68.7 per 100,000 (66.4/100,000). The percentage of pregnant women from the females of childbearing age group (15-44) who were hospitalized were again at/near 30% (30.2%), while it had been around 25% in previous weeks.

Death rates for pneumonia & influenza in adults decreased again to 7.7% (7.8% last week) but remained above the epidemic threshold of 7.4%. 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. These numbers are from Week #10, ending 3/10/18.

There were 4 more pediatric deaths from Flu reported in Week #12, for a total of 137 for this Flu season.

--Flu in Canada and Europe for Week #12

According to the **Public Health Agency of Canada (PHAC)**, not all agencies reported their data due to the shortened reporting week but lab testing for FLU continues to decrease every week. Influenza activity remained elevated in many areas although it peaked in mid-February. The majority of the diagnosed flu cases, hospitalizations, and deaths remained in those 65 years and older.

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

The European Center for Disease Prevention & Control (ECDC) did not update their report from last week (week ending 3/18/18). However, the CDC did report, as the ECDC did last week, on a viral reassortment of seasonal flu type, which mixed genes from A(H1N1)pdm09 and A(H3N2) and was found in the Netherlands. Although it reassorted, the genes remained the same and are expected to be covered by the current vaccine.

For more info see: <http://www.flunewseurope.org/>

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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*.

Two of those websites are included here: <https://www.cdc.gov/flu/weekly/usmap.htm> 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

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“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

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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