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Influenza (FLU) Update for Week #51
Week Ending 12-23-17

Earlier in this flu season, the CDC posted an expectation that this flu season (2017-18) would likely start early and be more severe (as it was last year) than previous few flu seasons. This prediction was made based on the severe flu season that Australia was experiencing and since Influenza A H3N2 was the predominant strain. Flu seasons in the Southern Hemisphere are often good predictors of North American flu seasons since there winter occurs during our summer.

This prediction was correct and the CDC has posted a Health Advisory outlining the current flu season as early, severe and expecting a more serious impact on those over 65 and younger children than other age groups. **https://emergency.cdc.gov/han/han00409.asp** The Advisory goes on to say that Health Care Providers **(HCPs)** should being suspicious of influenza **(flu)** in those patients with any signs and symptoms consistent with flu. For those in high risk groups (including over age 65 or younger children), those hospitalized, or who have severe, complicated or worsening illness, should include the rapid start of appropriate antiviral medications, ideally within 48 hours of the onset of flu symptoms, but may be appropriate even beyond this time frame at the provider's discretion. Antivirals may also be given to those not in high risk groups who present within 1-2 days of the onset of symptoms, when the HCP thinks it's appropriate. There is no need to wait for flu test confirmation of flu before starting antivirals.

Week #51 (ending 12-23-17) is the 5th week in a row of increasing cases and all regions are reporting widespread flu and influenza-like-illness **(ILI)**This week showed a much sharper rise in the number of cases than previously seen this season. This pattern suggests a season similar to the 2014-15 one, which also had A H3N2 dominating and was considered severe.

There is a continuing uptick in the number of FirstWatch **RIN** (**Reginal Influenza Network**) Alerts that correlates with this rise in ILI and diagnosed flu.

Anyone who has not been vaccinated with this year's flu vaccine, should still be vaccinated until the flu season has ended. Those experiencing signs and symptoms of flu should be closely monitored for complications of flu. **https://www.cdc.gov/flu/weekly/**

For the most recently reported week ending December 23, 2017, the CDC reports:

-- Influenza-like illness visits to clinics & other non-hospital facilities remain elevated at 5.0% (was 3.5% last week) and above the national baseline of 2.2% for the 5th week in a row. In recent past flu seasons, ILI activity remained at or above the national baseline for an average of 13 weeks, suggesting that there is still more than half of the season to go. All 10 regions reported ILI at/above region-specific baselines.

-- Flu cases (documented by positive flu tests on respiratory specimens) remain elevated, with widespread flu reported in 36 states compared to 23 last week. Clinical lab testing for influenza was positive for flu in almost a quarter of the specimens (22.4%), compared with 14.0% for last week.

-- Eighty-nine percent (89%) of the flu tests reported were positive for Influenza A, with those that were subtyped as 88.1% A H3N2 and 7.4% as A (H1N1)pdm09 viruses. The rest of the tests showed 11% Influenza B viruses, with 57.1% of Yamagata lineage and 3.3% Victoria lineage; 39.6% did not have lineage testing done.

All but the Victoria lineage are well matched to the seasonal vaccine offered. The Victoria matched 57.1%; the others were 99-100% matches.

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The majority of the circulating flu viruses are susceptible to the antiviral medications oseltamivir, zanamivir, and peramivir.

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.

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

-- For Influenza-like illness (ILI):

High ILI Activity: (**21 states**): Alabama, Arizona, Arkansas, California, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Nebraska, Nevada, New Mexico, Oklahoma, Oregon, South Carolina, Tennessee, Texas and West Virginia

Moderate ILI Activity: (**NYC & 5 states**): New York City, Colorado, Hawaii, New York, North Dakota, and Virginia

Low Activity: (**8 states):** Alaska**,** Florida, Massachusetts, Minnesota, New Jersey, Pennsylvania, South Dakota, and Wyoming

Minimal Activity (**14 states**)**:** Delaware, Idaho, Iowa, Maine, Maryland, Michigan, Montana, New Hampshire, Ohio, Rhode Island, Utah, Vermont, Washington and Wisconsin

Not Enough Data to Report: Washington DC, Puerto Rico, Connecticut and North Carolina

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

Widespread Activity (**36 states**)**:** Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Virginia, Washington, West Virginia, Wisconsin, and Wyoming
Regional Activity (**PR & 13 states**)**:** Alaska, Hawaii, Iowa. Maine, Michigan, Nevada, New Hampshire, New Jersey, North Carolina, Rhode Island, Tennessee, Utah and Vermont
Local Activity (**1 state**)**:** Delaware
Sporadic Activity: None Reported
Not Enough Data to Report: Washington, DC, US Virgin Islands and Guam

-- Other Data:

Hospitalizations from Flu are going up steadily with a rate of 8.7 per 100,000 per population. Those 65 years and older have much higher rates of 35.8 / 100,000.

Death rates for pneumonia and influenza in adults is less than the seasonal baseline but death reports often aren't reported for data purposes in the same time as flu and ILI cases are.

There were 3 more pediatric deaths attributed to flu this week, with a total of 12 for this flu season; one (1) is from an untyped Influenza A & two (2) were associated with Influenza B. There have been a total of 12 influenza attributed deaths for this flu season.

-- Flu in Canada and Europe::

According to the Public Health Agency of Canada **(PHAC)**, Canada has also seen an early flu season with an increase in flu cases and hospitalizations for the week ending 12-16-17. H3N2 is also the dominant subtype for them but they are having more Influenza B cases compared to other years at this point in the season. There are above average hospitalizations of children but hospitalizations and deaths is the highest in seniors.

According to the European Center for Disease Prevention & Control **(ECDC)** and the World Health Organization **(WHO)** regional office for Europe, although flu activity began more slowly, flu levels are on the rise in Western, Northern, and Southern Europe, for the week ending Dec 24. Both influenza A and

influenza B viruses are circulating, with mixed patterns detected, but overall there are higher proportions of influenza B than influenza A and more H1N1 2009 than H3N2.

Respiratory specimens that were positive for flu, at sentinel healthcare sites, increased to 32% compared to 28% the week before.

First Responder Specific Information

- 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 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.

Note: the 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. Consideration should be given to perhaps monitoring these two 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.

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