CDC Influenza Division Key Points

January 22, 2016

In this document:

Summary Key Points

- Flu activity remains low across most of the United States, but is showing slight increases.
- Reports of influenza-like-illness are at the national baseline.
- Flu seasons vary in their timing, duration and intensity, but it is likely that there are still many weeks of flu activity to come.
- Influenza A (H1N1) viruses have now become the predominant viruses this season.
- Laboratory data so far show that most circulating flu viruses are still like the viruses recommended for the 2015-2016 influenza vaccines.
- The similarity between vaccine viruses and circulating viruses is one factor that can influence how well the vaccine works.
- With most of the flu season still to come, getting a flu vaccine now can still protect you from illness this season.
- Each flu season, flu causes millions of illnesses, hundreds of thousands of hospitalizations and thousands or sometimes tens of thousands of deaths.
- CDC recommends annual flu vaccination for everyone 6 months and older.
- While flu vaccine can vary in how well it works, a flu vaccine is our best defense against getting the flu.
- Vaccination can reduce flu illnesses, doctors' visits, and missed work and school due to flu, as well as prevent flu-related hospitalizations.
- Flu vaccine is designed to protect against the three or four flu viruses that research suggests will be most common during the season.
- It takes about two weeks after vaccination for protection to set in. Now is a good time to get vaccinated.
- Manufacturers report having shipped more than 145.6 million doses of flu vaccine as of January 15, 2016.
- Go to http://vaccine.healthmap.org/ or www.cdc.gov/flu to find a location near you where you can get vaccinated.

FluView Activity Update

According to this week's Fluview report, flu activity remains low across most of the country but is showing slight increases. While influenza A H3N2 viruses were most common early in the season, H1N1 viruses are now predominant. This is the same H1N1 virus that emerged in 2009 to cause a pandemic. Seasonal flu vaccines have included the H1N1 pandemic virus since 2010. CDC recommends an annual flu vaccine for everyone 6 months of age and older. If you have not gotten vaccinated yet this season, you should get vaccinated now. Below is a summary of the key flu indicators for the week ending January 16, 2015:

- For the week ending January 16, the proportion of people seeing their health care provider(http://www.cdc.gov/flu/weekly/#S4) for influenza-like illness (ILI) is 2.1%, which is at the national baseline (2.1%). Six of 10 regions (Regions 1, 2, 3, 4, 6 and 10) reported ILI at or above their region-specific baseline levels. One way that CDC measures the length of the influenza season is the number of consecutive weeks during which ILI is at or above the national baseline.
- Puerto Rico experienced high ILI activity. Three states (Arizona, Maryland, and South Carolina) experienced moderate ILI activity. New York City and four states (Arkansas, Illinois, New Jersey, and Virginia) experienced low ILI activity. 43 states experienced minimal ILI activity. The District of Columbia did not have sufficient data to calculate an activity level. ILI activity data indicate the amount of flu-like illness that is occurring in each state.
- Widespread flu activity was reported by three states (Maryland, Massachusetts, and North Carolina). Regional flu activity was reported by Puerto Rico and ten states (Arizona, California, Connecticut, Iowa, Maine, Oregon, Rhode Island, Utah, Virginia, and Washington). Guam and twelve states (Indiana, Michigan, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, Texas, and Vermont) reported local influenza activity. The U.S. Virgin Islands and 24 states reported sporadic influenza activity. No influenza activity was reported by the District of Columbia and one state (Alabama). Geographic spread data show how many areas within a state or territory are seeing flu activity. Since October 1, 2015, 494 laboratory-confirmed influenza-associated hospitalizations have been reported through

FluSurv-NET, a population-based surveillance network for laboratory-confirmed influenza-associated hospitalizations. This translates to a cumulative overall rate of 1.8 hospitalizations per 100,000 people in the United States. More data on hospitalization rates, including hospitalization rates during other influenza seasons, are available at http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html and http://gis.cdc.gov/grasp/fluview/FluHospChars.html.

  - The highest hospitalization rates are among people 65 and older (6.1 per 100,000), followed by children younger than 5 years (3.2 per 100,000). During most seasons, children younger than 5 years and adults 65 years and older have the highest hospitalization rates.
  - FluSurv-NET hospitalization data are collected from 13 states and represent approximately 8.5% of the total U.S. population. The number of hospitalizations reported does not reflect the actual total number of influenza-associated hospitalizations in the United States.

- The proportion of deaths(http://www.cdc.gov/flu/weekly/#S2) attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the NCHS Mortality Surveillance System and above the system-specific epidemic threshold in 122 Cities Mortality Reporting System.
- No influenza-associated pediatric deaths were reported to CDC during the week ending January 16. A total of seven influenza-associated pediatric deaths have been reported during the 2015-2016 season.
- Nationally, the percentage of respiratory specimens(http://www.cdc.gov/flu/weekly/overview.htm#Viral) testing positive for influenza viruses in clinical laboratories during the week ending January 16 was 4.2%. For the most recent three weeks, the regional percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories ranged from 0.8% to 6.7%.
  - During the week ending January 16, of the 565 influenza-positive tests reported to CDC by clinical laboratories, 398 (70.4%) were influenza A viruses and 167 (29.6%) were influenza B viruses.
- The most frequently identified influenza virus type reported by public health laboratories during the week ending January 16 was influenza A viruses, with influenza A (H1N1)pdm09 viruses predominating.

  - During the week ending January 16, 142 (78.5%) of the 181 influenza-positive tests reported to CDC by public health laboratories were influenza A viruses and 39 (21.5%) were influenza B viruses. Of the 120 influenza A viruses that were subtyped, 32 (26.7%) were H3 viruses and 88 (73.3%) were A (H1N1)pdm09 viruses.
  - Cumulatively from October 4, 2015-January 16, 2016, influenza A (H3) viruses were predominant in two of the four age groups ranging from 40.2% (ages 5-24 years) to 60.2% (ages 65 years and older). Influenza A (H1N1)pdm09 viruses were predominant in the 0-4 years age group (54.0%) and in the 25-64 years age group (52.9%).
- CDC has characterized 259 specimens (74 influenza A (H1N1)pdm09, 135 influenza A (H3N2) and 50 influenza B viruses) collected in the U.S. since October 1, 2015.
  - All 74 (100%) influenza A (H1N1)pdm09 viruses were antigenically characterized as similar to A/California/7/2009, the influenza A (H1N1) component of the 2015-2016 Northern Hemisphere vaccine.
  - All 135 H3N2 viruses were genetically sequenced and all viruses belonged to genetic groups for which a majority of viruses antigenically characterized were similar to cell-propagated A/Switzerland/9715293/2013, the influenza A (H3N2) component of the 2015-2016 Northern Hemisphere vaccine.
  - A subset of 80 H3N2 viruses also were antigenically characterized; 79 of 80 (98.8%) H3N2 viruses were similar to A/Switzerland/9715293/2013 by HI testing or neutralization testing.
  - All 25 (100%) of the B/Yamagata-lineage viruses were antigenically characterized as similar to B/Phuket/3073/2013, which is included in both the 2015–16 Northern Hemisphere trivalent and quadrivalent vaccines.
  - All 25 (100%) of the B/Victoria-lineage viruses were antigenically characterized as similar to B/Brisbane/60/2008, which is included in the 2015-16 Northern Hemisphere quadrivalent vaccine.
- Since October 1, 2015, CDC has tested 93 influenza A (H1N1)pdm09, 180 influenza A (H3N2), and 77 influenza B viruses for resistance to the neuraminidase inhibitors antiviral drugs. While the vast majority of the viruses that have been tested are sensitive to oseltamivir, zanamivir, and peramivir, one influenza A (H1N1)pdm09 virus

was reported during the week ending December 12, 2015 that showed resistance to oseltamivir and peramivir (but was sensitive to zanamivir).

FluView(http://www.cdc.gov/flu/weekly/fluactivitysurv.htm) is available – and past issues are archived(http://www.cdc.gov/flu/weekly/pastreports.htm) – on the CDC website.

Note: Delays in reporting may mean that data changes over time. The most up to date data for all weeks during the 2015-2016 season can be found on the current FluView(http://www.cdc.gov/flu/weekly/)

Influenza-Associated Hospitalizations

- This is the second week CDC is reporting influenza-associated hospitalizations.
- Laboratory-confirmed influenza-associated hospitalizations in children and adults in 13 states and more than 70 counties are monitored through the Influenza Hospitalization Surveillance Network (FluSurv-NET).
- The data are used to calculate a rate of laboratory-confirmed influenza-associated hospitalizations that is nationally representative and describes characteristics of person's hospitalized with severe flu illness.
    - The rate describes the proportion of people during a given time period that were hospitalized and who tested positive for influenza during their hospital stay.
- Data regarding influenza-associated hospitalizations for the 2015-2016 influenza season is now available (week 2) in both FluView and FluView Interactive.
- A total of 494 laboratory-confirmed influenza-associated hospitalizations have been reported since October 1, 2015.
- This translates to a cumulative overall rate of 1.5 hospitalizations per 100,000 people in the United States.
- The highest rate of hospitalization is among adults aged ≥65 years (5.2 per 100,000 population), followed by children aged 0-4 years (2.9 per 100,000 population. This is typical for seasonal influenza.
    - Additional FluSurv-NET data can be found at: http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html and http://gis.cdc.gov/grasp/fluview/FluHospChars.html.