CDC Influenza Division Key Points
April 18, 2014

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Summary Key Messages

- The current FluView report indicates that flu activity is low nationally though flu viruses are still causing illness in parts of the country.
- Flu activity continues to decline in most of the country, but two regions in the northeast are seeing increases in influenza-like-illness driven by a wave of influenza B virus activity.
- It is not uncommon for there to be a second wave of flu activity caused by another seasonal virus later in the flu season.
- While H1N1 viruses have predominated overall, right now influenza B viruses are the most common nationally.
- Most of the influenza B viruses that have been analyzed (about 70%) are like the influenza B component in the 2013-14 trivalent influenza vaccine.
- The remaining influenza B viruses that have been analyzed are like the second B component in the 2013-14 quadrivalent vaccine.
- CDC continues to recommend vaccination as long as influenza viruses are circulating, but people who have already been vaccinated this season do not need to get vaccinated again unless they are children requiring two doses.
- At this point in the season, people may have to check with more than one vaccine provider in order to locate vaccine, but supplies of vaccine should still be available.
- And remember that flu antiviral drugs are a second line of defense to treat flu illness.
- Influenza vaccination and rapid antiviral treatment are especially important for people at high risk for flu complications.
- People at high risk for serious flu complications include: people with underlying chronic medical conditions such as asthma, diabetes, heart disease, or neurological conditions; pregnant women; those younger than 5 years or older than 65 years of age; or anyone with a weakened immune system. A full list of high risk factors is available at http://www.cdc.gov/flu/about/disease/high_risk.htm.

- As always, people who are at high risk for influenza complications should see their health care provider promptly if they get flu symptoms, even if they have been vaccinated this season.
- Flu symptoms include fever, cough, sore throat, runny or stuffy nose, muscle or body aches, headache, chills and fatigue.
- A health care provider can determine if the patient needs influenza antiviral drugs. Antiviral drugs can treat flu illness and prevent serious flu complications. These drugs work best when started soon after influenza symptoms begin (within 2 days), but persons with high-risk conditions can benefit even when antiviral treatment is started after the first two days of illness.

FluView Activity Update

- According to the latest FluView report, seasonal influenza activity is low across most of the country but a wave of influenza B activity is affecting parts of the country. This week influenza B viruses account for 55% of viruses nationally and are causing an increase in influenza-like-illness in parts of the northeast especially.
- Below is a summary of the key indicators for the week ending April 12, 2014:
    - For the week ending April 12, the national proportion of people seeing their health care provider for influenza-like illness (ILI) decreased and remains below the national baseline of 2.0% for the fifth week. ILI was above or at baseline for 15 weeks this season. However, two of 10 regions (Regions 1 and 2) reported ILI activity above their region-specific baseline levels. Additional information regarding regional activity is available through FluView Interactive.
    - No states experienced high ILI activity. Three states (New Jersey, New York, Texas) and New York City experienced moderate ILI activity. Four states (Connecticut, Delaware, Massachusetts, and Rhode Island) experienced low ILI activity. Forty-three 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.
    - Six states reported widespread geographic influenza activity (Connecticut, Delaware, Maine, New Jersey, New York, and Rhode Island). This is a slight increase from the five states that reported widespread activity in the previous week. Guam and four states reported regional activity. Puerto Rico, the District of Columbia and 14 states reported local activity. 24 states reported sporadic influenza activity. The U.S. Virgin Islands and two states (Kansas and Mississippi) reported no influenza activity. Geographic spread data show how many areas within a state or territory are seeing flu activity.

- 8,995 laboratory-confirmed influenza-associated hospitalizations have been reported since October 1, 2013. This translates to a cumulative overall rate of 33.2 hospitalizations per 100,000 people in the United States. The cumulative hospitalization rate for the same week last season (week 14) was 43.5 per 100,000. More data on hospitalization rates are available through FluView Interactive.
    - The highest hospitalization rates are among people 65 and older (78.7 per 100,000), followed by people 50-64 years (51.5 per 100,000) and children younger than 5 years (44.5 per 100,000). During most seasons, children younger than 5 years and adults 65 years and older have the highest hospitalization rates.
    - Of the 8,995 influenza-associated hospitalizations that have been reported this season, approximately 60% have been in people 18 to 64 years old. This trend of increased hospitalizations among younger people was also seen during the 2009 H1N1 pandemic.
    - 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 attributed to pneumonia and influenza (P&I) based on the 122 Cities Mortality Reporting System decreased to 6.4% and remains below the epidemic threshold.
- One influenza-associated pediatric death was reported to CDC during the week of April 6-April 12 (week 15). The death was associated with an influenza B virus and occurred during week 14 (week ending April 5, 2014). A total of 86 influenza-associated pediatric deaths have been reported for the 2013-2014 season at this time. Additional information about the pediatric deaths from this season and previous seasons is available through FluView Interactive.
- Nationally, the percentage of respiratory specimens testing positive for influenza viruses in the United States during the week ending April 12, 2014 increased to 14.5%. Averaged over the last three weeks, the regional percentage of respiratory specimens testing positive for influenza viruses ranged from 3.4% to 26.9%.
- Influenza A (H3N2), 2009 H1N1, and influenza B viruses have all been identified in the U.S. this season. 2009 H1N1 viruses have predominated overall during the 2013-14 season, though this week influenza B viruses account for the largest proportion of circulating viruses and the proportion of influenza A (H3) viruses is increasing as well. During the week ending April 12, 301 (45%) of the 675 influenza-positive tests reported to CDC were influenza A viruses and 374

(55%) were influenza B viruses. Of the 158 influenza A viruses that were subtyped, 87% were H3 viruses and 13% were 2009 H1N1 viruses. It is not uncommon for there to be a second wave of flu activity toward the end of the flu season with another seasonal influenza virus. It's possible that significant flu activity could continue into May.

- CDC has antigenically characterized 2,309 influenza viruses; 1,755 2009 H1N1 viruses, 307 influenza A (H3N2) viruses, and 247 influenza B viruses, collected since October 1, 2013.
  - 1,752 (99.8%) of the 1,755 2009 H1N1 viruses tested were characterized as A/California/7/2009-like. This is the influenza A (H1N1) component of the Northern Hemisphere quadrivalent and trivalent vaccines for the 2013-2014 season.
  - 301 (98.0%) of the 307 influenza A (H3N2) viruses tested were characterized as Texas/50/2012-like. This is the influenza A (H3N2) component of the Northern Hemisphere quadrivalent and trivalent vaccines for the 2013-2014 season.
  - 172 (69.6%) of the 247 influenza B viruses tested belonged to the B/Yamagata lineage of viruses, and were characterized as B/Massachusetts/02/2012-like. This is an influenza B component for the 2013-2014 Northern Hemisphere quadrivalent and trivalent influenza vaccines.
  - The 75 (30.4%) other influenza B viruses belonged to the B/Victoria lineage of viruses, and were characterized as B/Brisbane/60/2008-like. This is the recommended influenza B component of the 2013-2014 Northern Hemisphere quadrivalent influenza vaccine.
- Since October 1, 2013, CDC has tested 4,899 2009 H1N1, 416 influenza A (H3N2), and 296 influenza B virus samples for resistance to the neuraminidase inhibitor influenza antiviral drugs. So far this season 56 (1.1%) 2009 H1N1 viruses have shown resistance to oseltamivir. No influenza A (H3N2) or influenza B viruses have shown resistance to oseltamivir. No viruses have shown resistance to zanamivir.
  - The neuraminidase inhibitors oseltamivir and zanamivir are currently the only recommended influenza antiviral drugs.
  - As in recent past seasons, high levels of resistance to the adamantanes (amantadine and rimantadine) continue to persist among 2009 H1N1 and influenza A (H3N2) viruses. Adamantanes are not effective against influenza B viruses. Adamantanes are not recommended for use against influenza this season.

- FluView is available – and past issues are archived – 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 2013-2014 season can be found on the current FluView.

Influenza-Associated Pediatric Death

- One influenza-associated pediatric death was reported to CDC for the week ending April 12, 2014 (Week 15).
- This brings the total of influenza-related pediatric deaths that have been reported for the 2013-2014 flu season to 86.
- Additional information regarding pediatric deaths is available through FluView Interactive.
- A pediatric death is a death in a person who is a U.S. resident and younger than 18 years old from an illness associated with infection with an influenza virus.
- During the 2012-2013 influenza season, a total of 171 influenza-associated pediatric deaths were reported to CDC.
- A review of the available pediatric death reports from the 2012-2013 season indicates that:
    - Of the 164 deaths in which the child's medical history was known, 55% occurred in children who had underlying medical conditions that placed them at high risk of developing serious flu-associated complications. However, 45% had no recognized underlying health problems.
    - The proportions of pediatric deaths that occurred in unvaccinated children and among children with underlying medical conditions that placed them at high risk from flu complications are largely consistent with what has been seen in the past.
- Since 2004, when flu-associated pediatric deaths became a nationally notifiable condition, the number of deaths reported to CDC each season has ranged from 35 (2011-2012 season) to 171 (2012-2013 season).
- During the 2009 H1N1 pandemic — April 15, 2009 to October 2, 2010 — 348 pediatric deaths were reported to CDC.
- These deaths are a somber reminder of the danger flu poses to children.
- The single best way to protect children against seasonal flu and its potential severe consequences is to have them receive a seasonal flu vaccine each year.

- Among children, vaccination is especially important for those younger than 5 years of age and those of any age with an underlying medical condition like asthma; a neurological, neuromuscular or neurodevelopmental disorder; or immune suppression. These children are at higher risk of serious complications if they get the flu.
- Yearly vaccination also is especially important for people who come in contact with high risk children in order to protect the child (or children) from the flu.
- Even previously healthy children can become seriously ill if they get the flu. Data on laboratory-confirmed influenza hospitalizations during the 2012-2013 flu season indicated that 46% of children hospitalized with the flu had no identified underlying medical conditions.
- Flu-associated deaths in children younger than 18 years old should be reported through the Influenza-Associated Pediatric Mortality Surveillance System. The number of flu-associated deaths among children reported during the 2013-2014 flu season is updated each week and can be found at http://www.cdc.gov/flu/weekly/.
- Additional information about the pediatric deaths, including basic demographics, underlying conditions and week and place of death, for the 2013-2014 season as well as past influenza seasons, is available through the Influenza Associated Pediatric Mortality application of FluView Interactive at http://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html.

Message to Health Care Providers: Ordering 2014-2015 Flu Vaccine

- The 2014-2015 influenza vaccine can be ordered at this time from manufacturers.
- Most of the flu vaccine offered for the 2014-2015 flu season will be trivalent (three-component).
- Some quadrivalent (four-component) vaccine will be available for ordering according to manufacturers; however, supplies are expected to be limited.
- All nasal spray vaccine is expected to be quadrivalent. However this will make up only a small portion of total flu vaccine availability.
- Trivalent vaccine offers important protection from flu. Ordering flu vaccine should not be delayed if quadrivalent flu vaccine is not available.