CDC Influenza Division Key Points
December 6, 2013

In this document:

Summary Key Messages

- This week's FluView shows that seasonal influenza activity is continuing to increase in parts of the United States. (See the FluView Activity Update below.)
- Increases in influenza activity across the U.S. are expected to continue in the coming weeks.
- If you have not gotten your flu vaccine yet this season, you should get one now. It takes about two weeks after flu vaccination for antibodies to develop in the body that protect against influenza virus infection.
- While how well the flu vaccine works can vary, the Centers for Disease Control and Prevention (CDC) recommends a yearly flu vaccination as the first and most important step in protecting against flu and its potentially serious complications.
- Flu vaccination can reduce flu illnesses, doctors' visits, missed work due to flu, as well as prevent flu-related hospitalizations and deaths.
- You need this season's influenza vaccine to protect against influenza viruses most likely to circulate and cause illness this season.
- More than 128 million doses of flu vaccine had been delivered in the United States as of late-November with manufacturers projecting total production of 138-145 million doses this season.
- Some children 6 months through 8 years of age will require 2 doses of flu vaccine. The second dose should be given at least 28 days after the first dose. Your child's health care provider can tell you whether two doses are recommended for your child.
- Flu vaccines are offered in many locations, including doctor's offices, clinics, health departments, retail stores, pharmacies, health centers, and by many employers and schools.
- There are several flu vaccine options available for the 2013-2014 flu season. Traditional flu vaccines made to protect against three different flu viruses (called "trivalent" vaccines) are available this season. In addition, flu vaccines made to protect against four different flu viruses (called "quadrivalent" vaccines) also are available.
- With regard to trivalent vaccine, in addition to the traditional seasonal flu shot available for people 6 months and older, an egg-free flu shot is available for people 18 through 49 years of age, a high dose flu shot is available for people 65 and older, and an intradermal flu shot is approved for people 18 to 64 years of age.

- Regarding the quadrivalent vaccine, standard dose nasal spray vaccines are available for healthy, non-pregnant people 2 through 49 years of age; standard dose flu shots also are available.
- CDC does not recommend any one flu vaccine over another. The important thing is to get a flu vaccine every year.
- Next week (Dec. 8-14) is National Influenza Vaccination Week (NIVW). NIVW is a national observance that was established to highlight the importance of influenza vaccination.
- NIVW was established by CDC in 2005 to underscore the importance of continuing flu vaccination through the holiday season and beyond.
- CDC recommends influenza vaccination all flu season, which can last as late as May. As long is flu is circulating, influenza vaccination can still be beneficial.
- NIVW provides an opportunity for public health and health care professionals, health advocates, communities and families across the country to work together to promote flu vaccination.
- NIVW activities include:
    - a live Twitter chat on Monday, Dec. 9 with CDC's Dr. Michael Jhung,
    - a press conference on Thursday, Dec. 12 with the director of CDC's National Center for Immunization and Respiratory Diseases (NCIRD), Dr. Anne Schuchat,
    - a national radio media tour featuring CDC influenza experts, and
    - flu-related communications to health care providers and the general public through various media channels with partners.
- Learn more about CDC's NIVW activities and find resources and updates at www.cdc.gov/flu/nivw/.

FluView Activity Update

- According to this week's FluView report, flu activity continues to increase in parts of the United States, particularly in the South Central and Southeast regions of the country. Additional increases in activity are likely in the coming weeks.
- Below is a summary of the key indicators for the week of November 24-30, 2013:
    - For the week of November 24-30, the proportion of people seeing their health care provider for influenza-like illness (ILI) increased, but remains below the national baseline. The Southeast and South Central regions (Regions 4 and 6) reported ILI activity above their region-specific baseline level. The other eight regions reported activity levels below region-specific baselines.

- Mississippi and Texas experienced high ILI activity again this week. Two states (Alabama and Louisiana) experienced moderate ILI activity. New York City and two states (Arkansas and Delaware) experienced low ILI activity. Forty-four 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.
- Nine states reported regional geographic influenza activity; an increase from six jurisdictions in the previous week. Thirteen states reported local activity. This is an increase from ten states last week. The District of Columbia, Guam, Puerto Rico, and 27 states reported sporadic influenza activity. The U.S. Virgin Islands and one states (Vermont) reported no influenza activity. Geographic spread data show how many areas within a state or territory are seeing flu activity.
- Data regarding influenza-associated hospitalizations for the 2013-2014 influenza season is now available. Since October 1, 2013, 333 laboratory-confirmed influenza-associated hospitalizations have been reported. This translates to a cumulative rate of 1.2 hospitalizations per 100,000 people in the United States.
    - Hospitalization data are collected from 15 states and represent approximately 9% 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 remains below the epidemic threshold.
- One influenza-associated pediatric death was reported to CDC during the week of November 24-30. The death was associated with a 2009 H1N1 virus. A total of three influenza-associated pediatric deaths have been reported for the 2013-2014 season.
- Nationally, the percentage of respiratory specimens testing positive for influenza viruses in the United States during the week of November 24-30 increased for the fifth consecutive week from 9.0% to 10.1%. During the last three weeks, the regional percentage of respiratory specimens testing positive for influenza viruses ranged from 2.2% to 13.8%.
- Influenza A (H3N2), 2009 influenza A (H1N1), and influenza B viruses have all been identified in the U.S. this season. During the week of November 24-30, 501 of the 536 influenza-positive tests reported to CDC were influenza A viruses and 35 were influenza B viruses. Of the 221 influenza A viruses that were subtyped 3.6% were H3 viruses and 96.4% were 2009 H1N1 viruses.
- CDC has antigenically characterized 156 influenza viruses, including 120 2009 influenza A (H1N1) viruses, 31 influenza A (H3N2) viruses, and 5 influenza B virus, collected since October 1, 2013.

- All 120 of the 2009 influenza A (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.
- All 31 of the 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.
- Two of the 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 three other influenza B viruses belonged to the B/Brisbane lineage of viruses, were characterized as B/Brisbane/60/2008-like. This is an influenza B component of the 2013-2014 Northern Hemisphere quadrivalent influenza vaccine.

o Since October 1, 2013, CDC has tested 265 2009 influenza A (H1N1), 46 influenza A (H3N2), and 11 influenza B virus samples for resistance to neuraminidase inhibitors. While the majority of the tested viruses showed susceptibility to the antiviral drugs oseltamivir and zanamivir, six 2009 H1N1 viruses have shown resistance to oseltamivir so far this season. (See section "Oseltamivir-Resistant Influenza Viruses" for more information.)

- High levels of resistance to the adamantanes (amantadine and rimantadine) persist among 2009 influenza A (H1N1) and A (H3N2) viruses. Adamantanes are not effective against influenza B viruses.

o 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 pediatric death was reported to CDC during the week of November 24-30, 2013 (Week 48). This is the third pediatric death reported for the 2013-2014 flu season.
- Because of confidentiality issues, CDC does not discuss or give details on individual cases.
- During the 2012-2013 influenza season, a total of 169 influenza-associated pediatric deaths were reported to CDC.

- A pediatric death is a death in a person younger than 18 from an illness associated with infection with an influenza virus.
- A review of the available pediatric death reports from the 2012-2013 season indicates that:
    - Of the 162 deaths in which the child's medical history was known, 56% occurred in children who had underlying medical conditions that placed them at high risk of developing serious flu-associated complications. However, 44% 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 169 (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.
- Vaccination is especially important for children younger than 5 years of age and children of any age with an underlying medical condition like asthma, a neurological 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. Laboratory-confirmed influenza hospitalization data reported during the 2012-2013 flu season indicated that approximately 47% 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 will be 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.