October 7, 2010

Key Points: 2010-2011 Influenza Season/Vaccination

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2010-2011 Influenza Season Vaccination Kick-Off

- Today, October 7, 2010, the National Foundation for Infectious Diseases (NFID)*, the Centers for Disease Control, and other partners including the American Medical Association, American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists, American Pharmacists Association (APhA), AARP, Indian Health Services and the National Medical Association and National Influenza Vaccine Summit joined together to kick off vaccination efforts for the 2010-2011 season and to discuss the importance of influenza and pneumonia vaccination.
- CDC Director Dr. Thomas Frieden and CDC Influenza Division Deputy Director Dr. Dan Jernigan participated in the press conference and follow-up interviews.
- Key points related to influenza vaccination this season include:

2010-2011 Influenza Season & Universal Vaccination Recommendation

- Influenza is unpredictable, but every season, flu causes illnesses, hospitalizations and deaths.
- The first and more important step in protecting against the flu is to get a flu vaccination each season.
  - Getting a flu vaccine is easy and safe.
  - Flu vaccines have a very good safety history, including the 2009 H1N1 monovalent vaccine (See “2009 H1N1 Monovalent Vaccine” for more information.)
  - The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) hold vaccines to the highest safety standards. The safety of flu vaccines is closely monitored with long-established systems that have demonstrated their usefulness in detecting vaccine safety problems. See http://www.cdc.gov/vaccines/vac-gen/safety/.
  - The flu vaccine provides protection that lasts through the flu season.
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- A flu vaccine reduces your risk of illness, hospitalization, or even death and can prevent you spreading the virus to your loved ones.
- You need to get the 2010-11 seasonal flu vaccine even if you got the 2009 H1N1 flu vaccine last season.

This season, there is a universal recommendation for influenza vaccination. This means that everyone 6 months of age and older is recommended to be vaccinated against influenza.

This recommendation will result in the protection of the greatest numbers of people possible from influenza.

While there is a universal vaccination recommendation this season, it’s continues to be especially important that people at increased risk of serious flu complications get vaccinated against the flu. This includes:
  - older people,
  - young children
  - people with chronic lung disease (such as asthma and COPD), diabetes (type 1 and 2), heart disease, neurologic conditions, and certain other long-term health conditions, and
  - pregnant women

This year, there are two new “high risk groups” added to the CDC/ACIP vaccine recommendations:
  - American Indians and Alaska Natives and people who are morbidly obese (defined as Body Mass Index (BMI) of 40 or more.

Providers should begin administering vaccine to their patients when the vaccine becomes available and continue vaccinating into the winter and beyond.

October is a good time to be vaccinated, but flu season doesn’t usually peak until January or later, and in some years, can continue into the spring.

So, vaccination efforts should continue throughout November, December and beyond.

Notes on protecting children from influenza
  - Because children younger than 6 months of age are too young for influenza vaccination, but are one of the groups at highest risk of influenza-related hospitalization, vaccination of household contacts and caregivers of young children is recommended to reduce their risk of influenza illness.
  - In addition, research shows that vaccination of pregnant women not only protects the mothers against influenza, but also reduces the risk of influenza illness in their babies during the first 6 months of life.
  - CDC recommends that children younger than 9 years of age who have never received a seasonal flu vaccine get two doses of vaccine spaced at least 4 weeks apart.
  - Two doses given at least 4 weeks apart are recommended for children aged 6 months through 8 years of age who are getting a flu vaccine for the first time. Children who only got 1 dose in their first year of vaccination should get 2 doses the following year.
All children 6 months up through 8 years of age getting a flu vaccine for the first time need two doses, at least 4 weeks apart, the first year they are vaccinated in order to develop immune protection. This includes children who received one or two doses of the 2009 H1N1 flu vaccine, but who have never received a seasonal flu vaccine.

- For more information about the seriousness of influenza and the benefits of vaccination, talk to your doctor or nurse, visit [www.cdc.gov](http://www.cdc.gov) or call CDC at 1-800-CDC-INFO.

### 2010-2011 Vaccine

- Early and significant quantities of influenza vaccine are available in the United States.
- Flu vaccine manufacturers estimate that about 119 million doses of influenza vaccine have already been distributed in the United States.
- This is more seasonal influenza vaccine than has every previously been distributed in the United States.
- Manufacturers project that a total of about 160 million doses will be made available in the U.S. market this season.
- The cumulative weekly total number of seasonal influenza vaccine doses distributed in the U.S. as reported to CDC by influenza vaccine manufacturers will be updated weekly at [http://www.cdc.gov/flu/professionals/vaccination/vaccinesupply.htm](http://www.cdc.gov/flu/professionals/vaccination/vaccinesupply.htm)
- The flu vaccine is available in two forms: the flu shot and the nasal spray vaccine.
- The flu shot is approved for use in people 6 months of age and older, including healthy people and people with chronic medical conditions.
- The flu shot (also called inactivated influenza vaccine) cannot give you the flu. It is comprised of killed viruses. Most people generally do not experience any side effects from the flu shot. When they do occur, they are usually mild. The most common side effects from the flu shot, including the shot made to protect against the 2009 H1N1 virus last season, are soreness, redness, tenderness or swelling where the shot is given.
- The nasal spray vaccine is approved for use in healthy people 2-49 years of age who are not pregnant.
- The nasal spray vaccine cannot give you the flu. It is made from weakened flu viruses that can only infect the nasal passages. Most people don’t have any side effects. When side effects do occur they tend to be mild, for example runny nose, cough, or nasal congestion.
- This season there is a new vaccine available for people 65 and older: Fluzone High-Dose manufactured by Sanofi Pasteur Inc.
- Fluzone High-Dose vaccines contain four times the amount of antigen (the part of the vaccine that prompts the body to make antibody) contained in regular flu shots. The additional antigen is intended to create a stronger immune response (more antibody) in the person getting the vaccine. Whether or not the improved immune response leads to greater protection against influenza disease after vaccination is not yet known.
- CDC and the Advisory Committee on Immunization Practices (ACIP) recommends flu vaccination as the first and most important step in protecting against the flu, however, neither CDC nor ACIP is expressing a preference of one vaccine over another at this time.
Influenza Vaccine and 2010-2011 Preliminary Information Regarding Vaccine Match for 2010-2011

- For decades flu vaccines have protected against three influenza viruses: an A (H1N1); an A (H3N2) and an influenza B virus.
- Because flu viruses change each season, flu vaccines are updated yearly based on worldwide surveillance to protect against the three viruses that research indicates are the most likely to cause widespread illness.
- When health experts met last February to decide what this season’s vaccine should protect against, they recommended the following:
  - The 2009 H1N1 virus (which is different from the H1N1 virus that was in the seasonal vaccine, but the same as what was in the monovalent vaccine),
  - A different influenza A (H3N2) virus from what was in the seasonal vaccine
  - And the same influenza B virus that was included in the seasonal vaccine.
- This year's flu vaccines are being made using the same production and safety methods that have been used for other seasonal influenza vaccines
- Millions of flu vaccines have been safety given over the many decades that influenza vaccines have been recommended.
- The effectiveness of flu vaccines can vary and depends in part on the match between the viruses in the vaccine and the flu viruses that are circulating in the community as well as the age and health of the person being vaccinated.
- While flu is unpredictable, current evidence leads us to be optimistic that this season’s vaccine will prove a good match against circulating viruses this season.
- There has been influenza activity over the summer in the Southern Hemisphere with a mix of pandemic 2009 H1N1 influenza A viruses, influenza A H3N2 virus and influenza B viruses.
- In the United States over the summer, influenza activity was low, which is normal, although several localized outbreaks of influenza A (H3N2) virus occurred.
- The viruses that have been circulating in the U.S. and abroad – including the 2009 H1N1 and influenza A (H3N2) viruses – are like the viruses included in this year’s vaccine.
- For more information, see the section entitled MMWR: Influenza Activity—United States and Worldwide, June 12—September 18, 2010.
- On September 29, 2010, WHO recommended that the composition of the Southern Hemisphere’s upcoming seasonal influenza vaccine remain unchanged, which indicates that we have not seen substantial drift in the most common influenza viruses in circulation.
- Now is the time to begin a concerted and long-term vaccination effort.

2009 H1N1 Monovalent Vaccine

- Last year, the 2009 H1N1 virus emerged too late to be included in the seasonal vaccine, but it was different enough from common seasonal H1N1 influenza viruses that a separate one-component pandemic vaccine was produced.
• That pandemic vaccine was made using the same production and safety standards that have been used for decades for seasonal flu vaccine.
• More than 80 million doses of 2009 H1N1 were administered with a very good safety profile – similar to what we see for seasonal flu vaccines.


U.S. Surveillance Systems

• In the United States, CDC collaborates with federal and local partners to collect information via multiple surveillance systems. U.S. influenza surveillance systems in operation during the summer period of June 13—September 25, 2010, included the following:
  o World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories, which conduct viral surveillance.
  o The U.S. Outpatient Influenza Surveillance Network (ILINet), which reports outpatient visits for influenza-like illness (ILI).
  o The BioSense surveillance system which includes Emergency Department visits due to ILI.
  o Influenza and pneumonia deaths from the 122 Cities Mortality Reporting System.
  o Influenza-associated pediatric deaths from the Influenza-Associated Pediatric Mortality Reporting System.
  o Reports of novel influenza A virus cases from the National Notifiable Disease Surveillance System (NNDSS).

U.S. Virologic (Virus) Surveillance

• From June 13—September 25, 2010, WHO and NREVSS collaborating laboratories analyzed 25,833 respiratory specimens from the United States.
• Testing results for these specimens are as follows: 326 (1.3%) tested positive for influenza. Of the 326 influenza positive specimens, 261 (80%) were influenza A viruses. 185 (71%) were subtyped, of which 130 (70%) were A (H3) and 55 (30%) were pandemic 2009 H1N1 viruses. Of the 326 influenza positive specimens, 65 (20%) were influenza B viruses.
• The percentage of respiratory specimens that tested positive for flu remained low during the summer and varied slightly over time. Less than 1% of specimens tested positive for influenza until late July, and from late July through late Sept, 1-2.6% of specimens per week tested positive for influenza.

U.S. Influenza-Like Illness (ILI) Surveillance

• The weekly percentage of outpatient visits to sentinel providers from June 13 to September 25, 2010, for ILI ranged from 0.7% to 1%, which is below the national baseline of 2.3%.
• This was consistent with data provided by the BioSense system, which reported a low level of influenza-like illness visits in emergency departments.
U.S. Influenza Deaths Surveillance Associated with Pneumonia and Influenza

- Mortality attributed to pneumonia and influenza as reported by the 122 Cities Mortality Reporting System was below the epidemic threshold throughout the period covered by this report except for two non-consecutive weeks.

U.S. Influenza-Associated Deaths in Children

- No influenza-associated pediatric deaths were reported to the Influenza-Associated Pediatric Mortality Reporting System.

Worldwide Influenza Virus Surveillance

- From June 13—September 25, 2010, pandemic 2009 influenza A (H1N1), influenza A (H3N2) and influenza B viruses were identified through laboratory testing worldwide. Seasonal influenza A (H1N1) viruses were rarely reported.
- Reports by the WHO Global Influenza Surveillance Network showed that the predominant influenza virus reported worldwide switched from pandemic 2009 H1N1 to influenza B beginning in March 2010.
- However, in early July 2010, the pandemic 2009 H1N1 virus again became the most commonly identified virus worldwide.
- Starting in late August, influenza A (H3N2) viruses became the most commonly identified virus worldwide.
- In Asia, 2009 H1N1 was the predominant virus identified (44% of analyzed specimens) followed by influenza A (H3N2) (32% of specimens), and then followed by influenza B (13%), but results varied by country.
- In Africa, influenza B was the predominant virus identified (44% of analyzed specimens), followed by influenza A (H3N2) (31% of specimens).
- In South America, 2009 H1N1 was the predominant virus identified (32% of specimens), followed by influenza B (32% of specimens).
- In North America, influenza A (H3) was the predominant virus (69% of specimens).
- In Oceania, 2009 H1N1 was the predominant virus (63% of specimens).
- In Europe, a small number of cases were reported, and the predominant virus was influenza B (59% of specimens), followed by 2009 H1N1 (19%).

CDC Data on Antigenic Characterization of Influenza Viruses Circulating Internationally

- Virus isolates from around the world are received and analyzed at the WHO Collaborating Center for Surveillance, Epidemiology, and Control of Influenza, located at CDC.
- Of 79 pandemic 2009 H1N1 viruses analyzed from June 13 to September 25, 2010, all were similar to A/California/7/2009 (2009 H1N1), which is the H1N1 component of the 2010-2011 Northern Hemisphere vaccine.
- Of the 101 influenza A (H3) viruses characterized, all were antigenically similar to A/Perth/16/2009, the H3N2 component of the 2010-2011 Northern Hemisphere vaccine.
- Of the 45 influenza B viruses characterized, 34 (76%) belong to the B/Victoria Lineage and 30 of 34 (88%) were antigenically similar to B/Brisbane/60/2008, which is the influenza B component of the 2010-2011 Northern Hemisphere vaccine.
- The remaining seven influenza B viruses belong to the B/Yamagata lineage.
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- Overall, antigenic characterization of the viral isolates submitted to CDC during the summer has demonstrated that the majority are antigenically similar to the influenza vaccine candidates included in the 2010-2011 Northern Hemisphere vaccine.

**Antiviral Resistance Surveillance**
- CDC received 70 virus isolates collected internationally from June 13—September 25, 2010, and analyzed them for resistance to the antiviral medications oseltamivir (Tamiflu®) and zanamivir (Relenza®).
- The isolates tested were from 19 countries and consisted of 69 pandemic 2009 H1N1 viruses, 110 influenza A (H3N2) viruses, and 53 influenza B viruses.
- None of the tested viruses were found to be resistant to either oseltamivir or zanamivir.

**Human Cases of Avian Influenza A (H5N1) Infection**
- During June 13—September 25, 2010, Egypt and Indonesia reported a combined total of 6 human cases of avian influenza A (H5N1) infection to WHO.
- Five of these six cases were fatal.
- Since December 2003, there have been 505 human cases of infection with avian influenza A (H5N1) reported from 15 countries in Asia and Africa. Among the 505 cases, 300 have resulted in death.
- No human cases of avian influenza A (H5N1) infection have been identified from North America or South America.

Final estimates for 2009-10 Seasonal Influenza and Influenza A (H1N1) 2009 Monovalent Vaccination Coverage — United States, August 2009 through May, 2010

**Seasonal Influenza Vaccination Coverage**
- National 2009-10 seasonal influenza vaccination coverage among all persons aged ≥6 months in the United States was 41.2% (95% confidence interval [CI] 40.8-41.6%).
- Among children aged 6 months -17 years, national seasonal influenza vaccination coverage [43.7% (95% CI 42.7-44.7)] was higher than coverage for adults ≥18 years [40.4% (95% CI 40.0-40.8%)].
- For adults aged 18–49 years, national seasonal influenza vaccination coverage was higher for persons with high-risk conditions [38.2% (95% CI 36.9-39.5%)] compared to those without high-risk conditions [28.4% (95% CI 27.8-29.0%)].
- Nationally, seasonal influenza vaccination coverage was highest among adults aged ≥65 years [69.6% (95% CI 69.0-70.2%)]. Among adults aged 50-64 years, national seasonal influenza vaccination coverage was 45.0% (95% CI 44.4-45.6%).
For children aged 6 months - 17 years, healthy adults aged 18-49 years, adults aged 18–49 years with high-risk conditions and adults aged ≥65 years, 2009-10 final estimates were higher than estimates for the same groups in the 2008-09 season [2008-09 estimates: 30.2% (95% CI 28.4-32.0%), 19.5% (95% CI 18.2-20.8%), 33.0% (95% CI 29.8-36.5%) and 65.6% (95% CI 63.3-67.8%) respectively; CDC, unpublished data, 2009 National Health Interview Survey (NHIS)].

One or more seasonal influenza vaccine doses were administered to 31.6 million (95% CI 30.9-32.3 million) children and 91.6 million (95% CI 90.7-92.5 million) adults, for an estimated 123.3 million (95% CI 122.1-124.5 million) seasonal influenza vaccinees during August 2009 through May 2010.

**Influenza A (H1N1) 2009 Monovalent Vaccination Coverage**

- Nationally, among all persons aged ≥6 months, 2009 H1N1 vaccination coverage was 27.0% (95% CI 26.6-27.4%).
- Among children aged 6 months – 17 years, national 2009 H1N1 vaccination coverage was 40.5% (95% CI 39.7-41.3%) and was higher compared to corresponding level among adults aged ≥18 years [22.7% (95% CI 22.3-23.1%)].
- For persons in the initial ACIP target groups, national 2009 H1N1 vaccination coverage was 34.2% (95% CI 33.6-34.8%). Among the subset of adults aged 25-64 years with high-risk conditions included in the target group, national coverage was 28.6% (95% CI 27.5-29.7%).
- Among persons not in the initial target groups, national coverage was significantly higher in adults aged ≥65 years [28.9% (95% CI 28.2-29.6%)] compared to adults 25-64 years [18.7% (95% CI 18.1-19.3%)].
- One or more doses of 2009 H1N1 vaccine were administered to 29.3 million children (95% CI 28.7-29.9 million) and 51.5 million adults (95% CI 50.6-52.4 million), for an estimated 80.8 million (95% CI 79.6-82.0 million) 2009 H1N1 vaccinees during October 2009 through May 2010.

*The National Foundation for Infectious Diseases (NFID) is a non-profit, tax-exempt (501c3) organization founded in 1973 and dedicated to educating the public and health care professionals about the causes, treatment and prevention of infectious diseases. NFID’s annual news conference has served as the influenza vaccination season launch for nearly 15 years.*

For more information, visit [www.cdc.gov/flu](http://www.cdc.gov/flu), or call CDC at 800-CDC-INFO.