

CDC Influenza Division Key Points

September 18, 2015

In this document:

- [Summary Key Points](#)
- [Events and Publications](#)
- [FluView Summary](#)
- [MMWR:Update: Influenza Activity – United States and Worldwide, May 24-September 5, 2015](#)
- [Flu Vaccine Coverage Estimates for Last Season \(2014-2015\)](#)
- [MMWR: Influenza Vaccination Coverage Among Pregnant Women – United States, 2014-15 Influenza Season](#)
- [MMWR: Influenza Vaccination Coverage Among Health Care Personnel – United States, 2014-15 Influenza Season](#)
- [Report from the National Healthcare Safety Network on Flu Vaccination of Hospital-based Healthcare Professionals](#)

2015-2016 Influenza Season Key Points (Early edition)

- Flu is unpredictable. It's not possible to say when the 2015-2016 flu season will begin, how severe it will be or what viruses will predominate.
- The most recent [FluView](#) influenza activity report indicates that flu activity in the United States is low at this time.
- Each flu season, flu causes millions of illnesses, hundreds of thousands of hospitalizations and thousands or sometimes tens of thousands of deaths.
- The Centers for Disease Control and Prevention (CDC) recommends annual flu vaccination for everyone 6 months and older.
- A flu vaccine is our best defense against getting the flu.
- While flu vaccine can vary in how well it works, vaccination can reduce flu illnesses, doctors' visits, and missed work and school due to flu, as well as prevent flu-related hospitalizations.
- Flu vaccine will protect against three or four different flu viruses, depending on which vaccine you get.
- It takes about two weeks after vaccination for protection to set in so try to get vaccinated by October if possible.
- Manufacturers have begun shipping flu vaccine for the upcoming season. They report having shipped more than 40 million doses of vaccine as of September 4, 2015.
- The total projected supply of vaccine in the United States this season is between 171 million and 179 million doses of flu vaccine.
- As of September 11, 2015, 65.1 million doses of seasonal flu vaccine have been distributed.
- The composition of this season's vaccine has been updated. (The influenza A H3N2 and influenza B components were changed from last season.)

CDC Influenza Division Key Points
September 18, 2015

- Laboratory data so far suggest that most circulating viruses are like the vaccine viruses included in the vaccines for the upcoming season.
- Laboratory data can give a general indication of how well the vaccine might work.
- Laboratory data to date suggest that this season's vaccine should offer better protection against flu for the upcoming flu season.
- CDC will continue to carefully look at the results of laboratory studies of currently circulating viruses to look for any evidence of drift that may be occurring in these viruses.
- CDC also will conduct vaccine effectiveness studies to tell how well the vaccine is actually protecting against illness.
- Go to <http://vaccine.healthmap.org/> or www.cdc.gov/flu to find a location near you where you can get vaccinated.

Events and Publications

- The National Foundation for Infectious Diseases (NFID) held a press conference on September 17, 2015, launching the 2015-2016 influenza vaccination campaign: <http://www.adultvaccination.org/newsroom/events/2015-news-conference>
- An influenza activity update and final influenza vaccine coverage estimates for 2014-2015 were published in the Morbidity and Mortality Weekly Report (MMWR) and online on September 17, 2015.
 - [MMWR: Update: Influenza Activity – United States and Worldwide, May 24-September 5, 2015](#)
 - [MMWR: Influenza Vaccination Coverage Among Pregnant Women – United States, 2014-15 Influenza Season](#)
 - [MMWR: Influenza Vaccination Coverage Among Health Care Personnel – United States, 2014-15 Influenza Season](#)
 - [FluVaxView](#)

FluView Activity Update

- Below is a summary of the key flu activity indicators:
 - The proportion of visits to health care providers for influenza-like illness (ILI) is below the national baseline. All 10 U.S. regions reported ILI activity below region-specific baseline levels.
 - Nationally, the percentage of respiratory specimens testing positive for influenza in the United States is low.
 - Influenza A and influenza B viruses are currently circulating at low levels. This includes both of the subtypes of influenza A viruses, H3N2 and H1N1pdm09. For the week ending

September 12, 67 of the 85 influenza positive tests reported to CDC were influenza A and 18 were influenza B viruses. Among the 67 influenza A viruses identified that week, 39 were H3N2 viruses and 1 was influenza A (H1N1) pdm09 viruses; subtyping was not performed on the remaining 27 influenza A viruses.

- The [proportion of deaths](#) attributed to pneumonia and influenza (P&I) based on the 122 Cities Mortality Reporting System is below the epidemic threshold.

MMWR: Influenza Activity – United States and Worldwide, May 24–September 5, 2015

- The September 17, 2015 Morbidity and Mortality Weekly Report (MMWR) contains a summary of influenza activity in the United States and worldwide from May 24–September 5, 2015. *For the most recent data on influenza activity in the United States, please refer to weekly [FluView](#) report.*
- The MMWR report is available on the CDC website at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6436a4.htm?s_cid=mm6436a4_w
- Key findings from U.S. and international influenza activity during this time include the following:
 - Overall, the United States experienced typical low levels of influenza activity. Of the 80,345 respiratory specimens tested for influenza, 1,698 (2.1%) were positive for flu.
 - Influenza A (H1N1) pdm09 (pH1N1), influenza A (H3N2), and influenza B viruses were identified worldwide and sporadically in the United States.
 - During May 24–September 5, 2015, three influenza variant virus infections were reported; one influenza A (H3N2) variant virus (H3N2v) from Minnesota in July, one influenza A (H1N1) variant (H1N1v) from Iowa in August, and one H3N2v from Michigan in August. In all instances, direct contact with swine in the week preceding illness onset was reported.
 - Worldwide, from May 24 to September 5, typical seasonal patterns of influenza activity occurred in the temperate climate Southern Hemisphere. Overall influenza activity in tropical regions remained low. In temperate climate Northern Hemisphere countries, influenza activity was low. The predominant virus type and subtype varied by country.
 - Since May 24 to September 5, 2015, CDC has tested 169 U.S. and international flu virus samples for [resistance](#) to the neuraminidase inhibitor influenza antiviral drugs. None of the tested viruses were found to be resistant to oseltamivir, zanamivir, and peramivir.
 - CDC antigenically characterized 199 viruses collected during May 24–September 5 from the United States and worldwide, including 20 pH1N1 viruses, 118 influenza A (H3N2) viruses, and 61 influenza B viruses.
 - All of the influenza viruses collected from U.S. states and other countries have been characterized antigenically and/or genetically as being similar to the influenza vaccine viruses recommended for inclusion in the 2015–16 Northern Hemisphere vaccine.

CDC Influenza Division Key Points
September 18, 2015

- All 20 (100%) pH1N1 viruses were antigenically similar to the A/California/7/2009, the influenza A (H1N1) vaccine component of the 2015-16 flu vaccine for the Northern Hemisphere.
 - All 118 (100%) influenza A (H3N2) viruses characterized were antigenically similar to A/Switzerland/9715293/2013, or belonged to a genetic group for which a majority of antigenically characterized viruses were similar to the A/Switzerland/9715293/2013 vaccine component. This is the influenza A (H3N2) component of the 2015–16 flu vaccine for the Northern Hemisphere.
 - 35 (57%) of the 61 influenza B viruses collected and analyzed during this period belonged to the B/Yamagata lineage, and all were antigenically similar to the B/Phuket/3073/2013 virus, the influenza B component for both the 2015–16 Northern Hemisphere trivalent and quadrivalent vaccines.
 - The remaining 26 (43%) influenza B viruses were characterized as B/Brisbane/60/2008-like, the recommended influenza B component of the 2015-16 Northern Hemisphere quadrivalent flu vaccine.
- It is not possible to predict the type and subtype of flu viruses that might circulate or how severe influenza-related disease activity will be during the 2015–16 flu season.
 - It is also not possible to say with certainty how effective influenza vaccine will be, however, laboratory analysis of influenza viruses to date suggests that the majority of viruses circulating worldwide in the past few months are similar to 2015–16 vaccine viruses.
 - CDC recommends a yearly flu vaccination as the first and most important step in protecting against flu and its potentially serious complications.
 - For the 2015–16 influenza season, interim supply projections by manufacturers for the U.S. market range from 171 million to 179 million doses of vaccine.
 - This would be the largest supply of influenza vaccine distributed in the United States during one season with the exception of the 2009 pandemic.
 - Clinicians and the public should be aware that antiviral medication may be used as a second line of defense against flu. CDC’s influenza antiviral treatment recommendations are available at <http://www.cdc.gov/flu/antivirals/index.htm>.
 - Antiviral treatment should be considered for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at high risk for influenza-related complications. Antiviral treatment should not be delayed until lab test results become available and when indicated given regardless of a history of influenza vaccination.
 - Flu vaccination to prevent flu and prompt antiviral therapy to treat influenza illness are the two most important medical countermeasures against the influenza viruses. Their correct application by health care professionals can provide life-saving benefits to patients.

Flu Vaccine Coverage Estimates for Last Season (2014-2015)

Key Flu Vaccine Coverage Findings

Summary

Almost half of the U.S. population age 6 months and older was vaccinated against influenza during the 2014-15 season. Overall, while coverage has increased over the last several years, there continue to be opportunities for improvement. Coverage is highest among children younger than 5 years old and adults age 65 years and older. There was a 1.4 percentage point increase in coverage among adults, and coverage for pregnant women has remained above 50 percent, a substantial increase from the very low coverage observed prior to 2009. We are very pleased that coverage estimates continued to be high among pharmacists (95.3%), nurses (89.0%), and physicians (88.9%). However, we still have more to do, particularly in getting more young and middle-aged adults vaccinated, as well as HCPs working in long-term care facilities.

General Population Final Coverage Data Online Release - www.cdc.gov/flu/fluview

Summary and Main Points

- Among all people age 6 months and older, flu vaccination coverage during the 2014–15 flu season was 47.1%, which was 0.9 percentage points higher than the 2013–14 season (46.2%).
- State-specific flu vaccination coverage among all people age 6 months and older ranged from 39.2 (Florida) to 59.6% (South Dakota).
- For adults overall, flu vaccination coverage increased by 1.4 percentage points to 43.6% for the 2014-15 season compared to the 2013-14 season (42.2%)

Coverage by Age

Flu vaccine coverage varied by age, and is highest among the youngest children and oldest adults.

- Flu vaccination coverage among children 6 months–17 years was 59.3%, similar to the 2013–14 season.
 - More than 40% of children remain unvaccinated.
- Coverage for children decreased with increasing age:
 - 74.6% for children 6-23 months
 - 67.8% for children 2-4 years
 - 61.8% for children 5-12 years
 - 46.6% for children 13-17 years
- Flu vaccination coverage among all adults was 43.6% for the 2014-15 season.

- Coverage for adults increased with increasing age:
 - 33.5% for adults 18-49 years
 - 47.0% for adults 50-64 years
 - 66.7% for adults 65 years and older

Coverage by Race/Ethnicity

We continue to find differences in influenza vaccination coverage between racial and ethnic groups, although the patterns differ for children and adults.

- Among children, coverage was higher for Asian children (72.1%), Hispanic children (64.2%), and American Indian/Alaska Native children (67.0%), compared to white children (56.0%) and black children (58.3%).
- Among adults, coverage for non-Hispanic whites (46.7%) was higher than coverage for AI/AN (40.7%), non-Hispanic blacks (38.7%), Hispanics (35.0%), and adults of other or multiple races (37.4%); non-Hispanic whites had similar coverage to Asian (43.6%) adults.

Methods and Background

- CDC analyzed NIS-Flu and BRFSS data collected September (BRFSS) or October (NIS-Flu) 2014 through June 2015 from all 50 states and the District of Columbia to estimate national and state level flu vaccination coverage from July 2014 through May 2015 for the 2014-15 flu season. These findings were compared to 2013-14 flu season estimates.
- NIS-Flu data were used to estimate coverage for children 6 months through 17 years and BRFSS data were used to estimate coverage for adults ≥ 18 years.

MMWR: Influenza Vaccination Coverage Among Pregnant Women – United States, 2014-15 Influenza Season

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6436a2.htm?s_cid=mm6436a2_w

Summary and Main Points

Flu vaccination can protect pregnant women and their unborn babies, who are at high risk for flu-related severe illness, hospitalization, and death.

- Flu shots are a safe way to protect the mother and her unborn child from serious illness and complications of flu, regardless of trimester.
- Flu vaccination can even protect newborn babies younger than 6 months who are too young to be vaccinated themselves.
- A health care provider recommendation and offer for flu vaccination was associated with increased vaccination coverage in all demographic groups, including women with a negative perception about flu vaccination.

Flu vaccination coverage for pregnant women remains similar to the previous season.

- Coverage among women who were pregnant during the 2014-15 flu season was 50.3%, similar to coverage in 2013-14 (52.2%) and 2012-13 (50.5%) but higher than the estimate for the 2011-12 season (46.4%) and 2010-11 season (44.0%).
- While stable, it means that nearly half of all pregnant women and their babies were not protected from the flu.

Non-Hispanic black women were less likely to get vaccinated than other races/ethnicities.

- Non-Hispanic black women had vaccination coverage of 38.9%.
- Hispanic women had vaccination coverage of 56.5%.
- Non-Hispanic white women had vaccination coverage of 51.9%.
- Other non-Hispanic women had vaccination coverage of 49.8%.

Health care providers play a key role in increasing flu vaccination coverage among pregnant women.

- **A provider recommendation combined with an offer to administer the flu vaccine at the time of visit remains one of the best ways to increase flu vaccination among pregnant women.**
- **Among vaccinated women, 86.8% reported receiving a provider recommendation and offer of vaccination.**
- **Pregnant women who reported receiving a clinician recommendation and an offer of flu vaccination had higher vaccination coverage (67.9%) compared with pregnant women who reported receiving a recommendation but no offer (33.5%) or reported receiving no recommendation (8.5%).**
- **64.5% of pregnant women reported receiving both a recommendation and offer, and 20.3% received no clinician recommendation or offer.**
 - A clinician offer of vaccination was associated with higher vaccination coverage even among pregnant women with negative perceptions regarding the safety and efficacy of vaccination and pregnant women who were not concerned about flu infection.
- Systems supporting provider recommendation and offer, such as standing orders and provider reminder systems, can reduce missed opportunities for vaccination and improve vaccination coverage.
- Healthcare professionals not able to administer the flu vaccine at the time of the visit should still recommend flu vaccination and refer the pregnant patient to a place where vaccinations are provided.
- Each provider recommendation can be an important opportunity to improve vaccination coverage, especially where differences in coverage are seen among certain sub-groups based on education level and race/ethnicity.

Education messages from health care professionals to their pregnant patients should emphasize that vaccination can protect not only the pregnant woman, but also her unborn baby and her newborn up to 6 months after birth.

- Providers should offer information to pregnant patients on the safety and effectiveness of flu vaccination for both mother and baby.
- The top three reasons given for receiving a flu vaccination were 1) to protect their baby from flu (31.1%), 2) to protect themselves from flu (21.4%), and because their health care provider recommended it (15.0%).
- Tailored education for pregnant women, designed to increase their knowledge about flu risks, vaccine safety, and vaccine effectiveness in support of a strong recommendation may increase demand and vaccination coverage.

Methods and Background

- The results of this report were based on an Internet panel survey conducted in March and April 2015 among a total of 1,702 women who were pregnant at any time during October 2014 through January 2015.

MMWR: Influenza Vaccination Coverage Among Health Care Personnel – United States, 2014-15 Influenza Season

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6436a1.htm?s_cid=mm6436a1_w

Summary and Main Points

Health care personnel (HCP) should be vaccinated for flu every flu season to protect themselves, their patients, and their families from seasonal flu.

- The coverage rate for HCP was estimated at 77.3% for the 2014-15 season, similar to coverage of 75.2% in the 2013-14 season, but an overall increase of 13.8 percentage points since the 2010-11 season.
- Coverage was highest among HCP working in settings with flu vaccination requirements (96.0%).
- Among health care professionals, more pharmacists protected themselves, their families, and their patients by getting an annual flu vaccine.
 - Coverage increased 9.6 percentage points last season compared to 2013-14 among pharmacists (from 85.7% to 95.3%), 6.7 percentage points among assistants/aides (from 57.7% to 64.4%) and 6.6 percentage points among nonclinical personnel (75.2% versus 68.6%).

There were differences in coverage by occupation and occupational setting.

- Coverage estimates were highest among pharmacists (95.3%), nurses (89.0%), physicians (88.9%) during the 2014-2015 flu season.
- Coverage by occupation was lowest for nonclinical personnel (75.2%) and assistants and aides (64.4%).

- Non-clinical personnel include administrative support staff or managers, and non-clinical support staff (food service workers, housekeeping staff, maintenance staff, janitors, laundry workers, etc.).
- Coverage by occupational setting was highest for HCP working in hospitals (90.4%).
- Coverage by setting was lowest for those working in Long-Term Care (LTC) settings (63.9%).
 - Vaccination of HCP in LTC settings is extremely important because:
 - People 65 years and older are at greater risk of serious complications from the flu.
 - Flu vaccine effectiveness is generally lowest in the elderly, making vaccination of close contacts even more critical.
 - Multiple studies have demonstrated health benefits to patients, including reduced flu-related complications and reduced risk of death, with vaccination of HCP in LTC settings.

Flu vaccination coverage was highest in settings with employer flu vaccination requirements and promotion of flu vaccination.

- Overall, coverage among HCP reporting that their employer required them to receive flu vaccination was 96.0%.
- Comprehensive, work-site intervention strategies that include education, promotion, and easy access to vaccination at no cost for multiple days can increase HCP vaccination coverage.
- Cost and convenience of flu vaccine in the workplace affected vaccination coverage.
 - In the absence of an employer requirement for vaccination, coverage was higher (83.9%) among HCP who had access to free, on-site vaccinations over multiple days compared to HCP whose employers did not offer flu vaccination at no cost to employees but promoted it by other means (59.5%) or whose employers had no policies related to vaccination promotion (44.0%)

Methods and Background

- The results of this report were based on an Internet panel survey of a total of 1,914 HCP during March and April 2015.

Report from the National Healthcare Safety Network on Flu Vaccination of Hospital-based Healthcare Professionals

<http://www.cdc.gov/nhsn/datastat/index.htm>

Background

For the second year, we are reporting performance measurement data for acute care hospital-based healthcare professionals (HCPs). Public reporting of HCP vaccination data is an important strategy to increase vaccination. In addition to sampling surveys that provide estimates of vaccine coverage based on self-report of vaccinations, NHSN now allows CDC to

receive direct reporting of healthcare personnel flu vaccination from participating healthcare facilities. Thanks to a partnership between CDC and the Centers for Medicare and Medicaid Services (CMS), facility-level data from NHSN on the proportion of hospital-based healthcare professionals who are vaccinated for flu will be publicly available on the CMS Hospital Compare website.

Main Points and Summary

The data indicate 84.5% of hospital-based HCP were reported by their hospitals as vaccinated against flu in the 2014-15 season.

- Last year, NHSN data provided a starting point for monitoring flu vaccination among hospital-based healthcare professionals. This year there was a 2.7 percentage point increase in NHSN reported vaccination compared with the 2013-14 flu season (from 81.8% to 84.5%)
- The Centers for Medicare and Medicaid Services now requires acute care hospitals participating in its Hospital Inpatient and Hospital Outpatient Quality Reporting Programs to report HCP flu vaccination data through CDC's National Healthcare Safety Network (NHSN).
 - In addition to sampling surveys that provide estimates of vaccine coverage based on self-report of vaccinations, NHSN now allows CDC to receive direct reporting of healthcare personnel flu vaccination from participating healthcare facilities.

Among healthcare professionals working in hospitals, higher proportions of employees were reported vaccinated compared with licensed independent practitioners (LIPs) and adult students/trainees and volunteers.

- It is important that all healthcare personnel, regardless of specialty, job duties, or practice setting, receive annual seasonal flu vaccination to protect themselves and patients.
- LIPs and adult students/trainees and volunteers may also have substantial contact with patients. In the 2014-15 flu season:
 - Reported vaccination among hospital employees was 88.6%, up from 86.1% in the 2013-14 season.
 - Reported vaccination among adult students/trainees and volunteers was 83.8%, up from 79.9% in the 2013-14 season.
 - Reported vaccination among LIPs was 65.1%, up from 61.9% in the 2013-14 season.
- Reported flu vaccination among hospital based healthcare professionals varied by state.
 - In 2014-15, NHSN participants in 14 states reported that 90% or more of hospital-based HCP overall were vaccinated.
 - Reported vaccination for all hospital based healthcare professionals varied from 68.7% in New Jersey to 97.1% in Colorado.
 - Reported vaccination among hospital employees varied from 75.2% in Hawaii to 98.3% in Colorado.

- Reported vaccination among adult students/trainees and volunteers varied from 53.2% in Alaska to 97.2% in Rhode Island.
- Reported vaccination among LIPs varied from 33.5% in Nevada to 95.9% in Rhode Island.

Background, Methods, and Limitations

- Public reporting of HCP vaccination data is an important strategy to increase vaccination. A voluntary public reporting program among Iowa hospitals resulted in a 20 percentage-point increase in median employee flu vaccination coverage over four years.
- Thanks to a partnership between CDC and the Centers for Medicare and Medicaid Services, facility-level data from NHSN on the proportion of hospital-based healthcare professionals who are reported as vaccinated for flu will be publicly available on the CMS Hospital Compare website (<https://www.medicare.gov/hospitalcompare>).
 - These data allow healthcare consumers to see how their hospital is doing at vaccinating its workers against flu.
- The National Healthcare Safety Network (NHSN) is the nation's most widely used healthcare-associated infection tracking system. It is a secure, voluntary, web-based surveillance system managed by the Division of Healthcare Quality Promotion at CDC.
- In 2014-15, data were reported from 4,120 acute care hospitals, representing 83% of community hospitals in the United States.
 - In 2013-14, data were reported from 4,254 acute care hospitals (85% of community hospitals).
 - The number of hospitals required to report healthcare personnel influenza vaccination data to NHSN changes annually as hospitals open, close, or merge.
 - Although the number of reporting hospitals is lower, the number of HCP reported to NHSN in 2014-15 (n=8,078,194) was slightly higher than in 2013-14 (n=8,006,643).
 - For the first time in 2014-2015, participating hospitals reported data on personnel working in eligible hospital outpatient departments. Previously, only personnel working in inpatient departments were included in vaccination reports.
- This performance measurement can be used to measure changes in hospital-based reporting of HCP flu vaccination.
 - States and hospitals can use these data to evaluate the effectiveness of efforts to increase HCP flu vaccination.
- Tracking vaccination of LIPs was challenging.
 - Many LIPs are likely to receive flu vaccination outside of reporting facilities, so the true proportion of LIPs vaccinated is likely higher than reported.
 - LIPs had the lowest reported proportion vaccinated among those with a reported vaccination status and the highest proportion of unknown vaccination status nationally.

CDC Influenza Division Key Points
September 18, 2015

- LIPs are highly mobile, can work in multiple facilities, and may enter hospitals infrequently.
- Improvements in hospitals' ability to track LIPs will likely result in higher reported proportions vaccinated for future flu seasons.