Overview

Flu is unpredictable. Even healthy children and adults can get flu and it can be serious. Protect yourself and those around you by getting your flu vaccine this season. Flu vaccination is the best protection available against flu.

- Everyone 6 months and older should get a flu vaccine every year to reduce the risk of flu illness, hospitalization, and even death.
  - The 2013-14 flu season is a reminder of the unpredictability and severity of flu. Nearly 60% of the flu-associated hospitalizations reported to CDC’s flu surveillance system were in people 18 to 64 years old.
- We can’t predict what virus will predominate or how severe the flu season will be, but flu always has serious consequences and last year’s flu season is a reminder of that.
  - Last season the 2009 H1N1 virus predominated for the first season since the 2009 H1N1 pandemic.
- Now is a great time to get your flu vaccine.
  - To fully benefit from flu vaccination, it is important to get vaccinated before you are exposed to flu viruses. Fortunately, this season there are many vaccine options, there is flu vaccine available already in many communities. We have seen little flu in the U.S. so far this season, so get vaccinated as soon as the flu vaccine is available in your community.

Key Flu Vaccine Coverage Findings

Summary

Almost half of the U.S. population age 6 months and older was vaccinated during the 2013-14 season. Coverage was highest in children younger than 5 years old and adults age 65 years and older. There was an increase in coverage among school-aged children and coverage estimates for pregnant women have increased substantially since the very low coverage we saw prior to the 2009 influenza pandemic. We are also very pleased that 90% or more doctors and nurses were vaccinated last season. 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/fluvcview](http://www.cdc.gov/flu/fluvcview)

Summary and Main Points

- Among all people ≥6 months, flu vaccination coverage during the 2013–14 flu season was 46.2%, which was 1.2 percentage points higher than the 2012–13 season (45.0%).
- State-specific flu vaccination coverage among all people ≥6 months ranged from 36.4% (Nevada) to 57.4% (South Dakota).
- For adults overall, flu vaccination coverage increased less than 1 percentage point for the 2013-14 season (42.2%) compared to the 2012-13 season;
- Among children 6 months through 17 years, there was an increase of 2.3 percentage points to 58.9%.
Coverage by Age

- Last season, more children were vaccinated than ever before.
  - Flu vaccination coverage among children 6 months–17 years increased to 58.9% for the 2013–14 season, a 2.3 percentage point increase compared to the 2012–13 season (56.6%).
    - It’s critical to continue this progress. There were more than 100 deaths among U.S. children last flu season.
- Flu vaccination coverage among all adults was 42.2% for the 2013-14 season.
- Coverage for children decreased with age:
  - 74.3% for children 6-23 months
  - 68.1% for children 2-4 years
  - 61.0% for children 5-12 years
  - 46.4% for children 13-17 years
- Coverage for adults increased with increasing age:
  - 32.3% for adults 18-49 years
  - 45.3% for adults 50-64 years
  - 65.0% for adults 65 years and older

Coverage by Race/Ethnicity

Flu vaccine coverage increased for children in some race/ethnic groups in the 2013-14 season.

- Coverage for non-Hispanic Asian children (70.6%), Hispanic children (66.0%), non-Hispanic American Indian/Alaska Native children (65.5%), and non-Hispanic children of other or multiple races (59.2%) was significantly higher than for non-Hispanic white children (55.2%). Coverage of non-Hispanic black children was similar at 57.2%.

Coverage among adults aged 18 years and older only increased slightly compared to the 2012–13 season among non-Hispanic whites; there were no statistically significant increases in the other racial/ethnic groups.

- Among adults, coverage for non-Hispanic whites (45.4%) was higher than coverage for non-Hispanic blacks (35.6%), Hispanics (33.1%), and adults of other or multiple races (34.9%); non-Hispanic whites had similar coverage to Asian (43.6%) and AI/AN (44.1%) adults.

Methods and Background

- CDC analyzed NIS-Flu and BRFSS data collected September (BRFSS) or October (NIS-Flu) 2013 through June 2014 from all 50 states and the District of Columbia to estimate national and state level flu vaccination coverage from July 2013 through May 2014 for the 2013–14 flu season. These findings were compared to 2012–13 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.

Coverage among Pregnant Women - [http://www.cdc.gov/mmwr](http://www.cdc.gov/mmwr)

Summary and Main Points

Pregnant women are at high risk for flu-related severe illness, hospitalization, and death.

- Flu vaccination can protect pregnant women and their unborn babies, and even protect their newborn babies younger than 6 months old who are too young to be vaccinated themselves.
Flu shots are a safe way to protect the mother and her unborn child from serious illness and complications of flu, regardless of trimester.

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 last season.

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

There were differences in coverage among pregnant women based on age.

- Younger women (18-24 years of age) had lower vaccination coverage (45.6%) compared to older women (35-49 years of age), who had vaccination coverage of 53.0%.
- Coverage was highest among women age 25-34 years of age at 56.5%, a 6.0 percentage point increase from the 2012-13 flu season.

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

- Non-Hispanic black women had vaccination coverage of 42.7%.
- Hispanic women had vaccination coverage of 56.7%, a 6.0 percentage point increase from the 2012-13 flu season.
- Non-Hispanic white women had vaccination coverage of 52.0%.
- Other non-Hispanic women had vaccination coverage of 61.9%, an 8.8 percentage point increase from the 2012-13 flu season.

Women with higher education levels reported vaccination more frequently than other women.

- Women with education level beyond a college degree had higher coverage (65.9%) compared to women with less than a college education (44.6%).

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.
- Pregnant women who reported receiving a clinician recommendation and an offer of flu vaccination had higher vaccination coverage (70.5%) compared with women who reported receiving a recommendation but no offer (32.0%) or reported receiving no recommendation (9.7%).
- 81.2% of pregnant women reported that they received a provider recommendation for vaccination. However, only 65.1% received both a recommendation and offer.
  - A clinician offer of vaccination was associated with higher vaccination coverage even among women with negative perceptions regarding the safety and efficacy of vaccination and 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 such as education 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 baby 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 an flu vaccination were 1) to protect their baby from flu (31.1%), 2) to protect themselves from flu (23.3%), and because their health care provider recommended it (14.8%).

• Tailored education of 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 2014 among a total of 1,619 women who were pregnant at any time during October 2013 through January 2014.

Coverage among All Health Care Providers (Internet Panel Survey) - www.cdc.gov/mmwr

Main Points and Summary

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 75.2% for the 2013-14 season, similar to coverage of 72.0% in the 2012-13 season.

• Coverage was highest among HCP working in settings with flu vaccination requirements (97.8%).

• Among health care professionals, last season more nurses led by example and protected themselves, their families, and their patients by getting an annual flu vaccine.

  o Coverage increased 5.7 percentage points last season compared to 2012-13 among nurses (from 84.8% to 90.5%) and increased 5.5 percentage points for other clinical personnel (from 81.9% to 87.4%).

There were differences in coverage by occupation and occupational setting.

• Coverage was highest among physicians (92.2%) and nurses (90.5%), followed by nurse practitioners/physicians assistants (89.6%), other clinical personnel (87.4), and pharmacists (85.7%).

• Coverage by occupation was lowest for assistants/aides (57.7%) and non-clinical personnel (68.6%).
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 (89.6%), a 6.5 percentage point increase from the 2012-13 season (81.9%).
- Coverage by setting was lowest for those working in LTC settings (63.0%).
  - 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 97.8%, with coverage above 96% in all occupational health care settings requiring vaccination, including LTC settings.
- Coverage was 72.4% among HCP whose employers promoted but did not require flu vaccination.
- Coverage was lowest (47.9%) among HCP working in facilities where employers did not require or promote flu vaccination.
- 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 (80.4%) 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 (49.0%).

**Methods and Background**

- The results of this report were based on an Internet panel survey of a total of 1,944 HCP from April 2014.
Key Flu Vaccination Reports

Report from a new reporting system of flu vaccination of Vaccination of Hospital-based Healthcare Providers NHSN – www.cdc.gov/mmwr

Background

For the first time, 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, in December, facility-level data from CDC on the proportion of hospital-based healthcare workers who are vaccinated for flu will be publicly available on the CMS Hospital Compare website.

Main Points and Summary

The data indicate 82% of hospital-based HCP were reported by their hospitals as vaccinated against flu in 2013-14.

- This is exciting news. It provides a starting point for monitoring flu vaccination among hospital-based healthcare professionals. New measures are important because, what gets measured gets done.
- The Centers for Medicare and Medicaid Services now requires acute care hospitals participating in its Hospital Inpatient Quality Reporting Program 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.

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.

- Overall, US hospitals reported that 81.8% of their hospital-based healthcare professionals had were reported by their facilities as vaccinated against flu during the 2013-14 flu season.
- 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.
- LIPs and adult students/trainees and volunteers may also have substantial contact with patients.
  - Reported vaccination among hospital employees was 86.1%
  - Reported vaccination among adult students/trainees and volunteers was 79.9%
  - Reported vaccination among LIPs was 61.9%
- Reported flu vaccination among hospital based healthcare professionals varied by state.
  - Reported vaccination for all hospital based healthcare professionals varied from 62.4% in New Jersey to 96.4% in Maryland
  - Reported vaccination among hospital employees varied from 69.0% in Hawaii to 97.6% in Utah
  - Reported vaccination among adult students/trainees and volunteers varied from 50.3% in New Jersey to 96.3% in Rhode Island
  - Reported vaccination among LIPs varied from 33.8% in Florida to 93.6% in Maryland
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, in December, facility-level data from CDC on the proportion of hospital-based healthcare workers who are vaccinated for flu will be publicly available on the CMS Hospital Compare website.
  - This will be the first time that healthcare consumers can 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.
  - Data were reported from 4,254 acute care hospitals, which represent 85% of community hospitals in the United States. This is the most complete accounting available of hospital-based HCP flu vaccination measurement.

- This performance measurement provides a baseline for measuring changes in hospital-based reporting of HCP flu vaccination in the future.
  - States and hospitals can use these data to evaluate the effectiveness of efforts to increase HCP flu vaccination.

- Tracking vaccination of LIPs was challenging. LIPs had the lowest reported proportion vaccinated and the highest proportion of unknown vaccination status nationally.
  - Improvements in hospitals’ ability to track LIPs will likely result in higher reported proportions vaccinated for future flu seasons.
  - LIPs are highly mobile, can work in multiple facilities, and may enter hospitals infrequently.
  - Many LIPs are likely to receive flu vaccination outside of reporting facilities, so the true proportion of LIPs vaccinated is likely higher than reported.