

# CDC Influenza E-Brief

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## 2013–2014 Influenza Season E-brief

Influenza (the flu) is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. Routine annual influenza vaccination of all persons aged 6 months and older continues to be recommended and some people, such as older people, young children, and people with certain health conditions, are at high risk for serious flu complications. The best way to prevent the flu is by getting vaccinated each year. For further detail, access the CDC's website page for the [2013–2014 Influenza Season](#).

## Recap of the 2012–2013 Flu Season

Last flu season was a stark reminder of how unpredictable and severe influenza can be. There were high influenza hospitalization rates, especially in the elderly. CDC saw the highest proportion of persons 65 and older hospitalized for flu since tracking began during the 2005–06 season. During the 2012–2013 influenza season, more than 150 flu-related pediatric deaths were reported. More information about pediatric deaths since the 2004–2005 flu season is available in the interactive [pediatric death web application](#). U.S. public health officials are encouraging the public to prepare for the upcoming flu season by getting vaccinated. For more details, please visit [2012–2013 Flu Season Drawing to a Close](#) on the CDC website.

## Available Vaccine Products and Indications

CDC recommends that people get vaccinated against influenza as soon as the 2013–2014 flu season vaccine becomes available in their community. A variety of influenza vaccine products are available, including five newly approved vaccines. Where more than one type of vaccine is appropriate and available, there is no preference for the use of an influenza vaccine product over another. For a detailed summary of the Advisory Committee on Immunization Practices (ACIP) recommendations for the 2013–2014 flu season in the United States, please visit here. (Hyperlink here with: <http://www.cdc.gov/flu/professionals/acip/2013-summary-recommendations.htm>)

For the 2013–2014 influenza season, manufacturers have projected that they will produce between 135 million and 139 million doses of influenza vaccine for use in the United States. An estimated 30 million to 32 million of these doses will be the quadrivalent flu vaccine. The remainder will be the trivalent flu vaccine. Additional details about vaccine supply and distribution is available on CDC's Seasonal Influenza webpage under [Questions and Answers](#).

## Primary Changes and Updates in Vaccine Recommendations

2013–14 U.S. trivalent influenza vaccines will contain an A/California/7/2009 (H1N1)-like virus, an H3N2 virus antigenically like the cell-propagated prototype virus A/Victoria/361/2011, and a B/Massachusetts/2/2012-like virus. Quadrivalent vaccines will include an additional vaccine virus, a B/Brisbane/60/2008-like virus.

Several new, recently-licensed vaccines will be available for the 2013–14 season and are acceptable alternatives to other licensed vaccines indicated for their respective age groups when otherwise appropriate. For the table of vaccine options approved for the 2013–14 season, please see [Summary Recommendations](#).

National Influenza Vaccination Week (NIVW) is a national observance that was established to highlight the importance of continuing influenza vaccination.

NIVW is December 8–14, 2013.

**Subscribe to the Influenza E-Brief on CDC Washington's website:**

[www.cdc.gov/washington/flu\\_ebrief.html](http://www.cdc.gov/washington/flu_ebrief.html)

Centers for Disease Control and Prevention



## Access to new information on the CDC website

**Vaccine Information Statements (VISs):** Information sheets produced by the CDC that explain both the benefits and risks of a vaccine to vaccine recipients. Click [here](#) for latest information about VISs currently under development or newly released.

**Seasonal Influenza Vaccination Resources for Health Professionals:** Information for the 2013–2014 Influenza Season.

**FluView:** A Weekly Influenza Surveillance Report prepared by the Influenza Division (CDC). All data are preliminary and may change as more reports are received.

**Seasonal Influenza Vaccine & Total Doses Distributed:** This table reflects the cumulative weekly total number of seasonal influenza vaccine doses distributed in the US as reported to CDC by influenza vaccine manufacturers and selected distributors. Currently, manufacturers project 135–139 million doses of flu vaccine to be produced for the 2013–14 season.

**Seasonal Flu Vaccine Safety and Pregnant Women:** Questions and Answers

**Recent highlights** from the [Morbidity and Mortality Weekly Report \(MMWR\)](#)

**National Influenza Vaccination Disparities Partnership:** The National Influenza Vaccination Disparities Partnership (NIVDP) is comprised of multisector partners who work to promote vaccination among underserved populations including African Americans, Hispanics, and American Indians/Alaska Natives. The partnership and InFLUential News are supported by the Centers for Disease Control and Prevention (CDC). Monthly InFLUential partner newsletters and materials for grassroots outreach are available [here](#).

## Frequently Asked Questions about the 2013–2014 Influenza Season

**What sort of flu season is expected this year?** Flu seasons are unpredictable in a number of ways. Although epidemics of flu happen every year, the timing, severity, and the length of the season varies from one year to another.

**Who should get vaccinated this season?** Everyone who is at least 6 months of age should get the flu vaccination with rare exception and while everyone should get a flu vaccine each flu season, it is especially important that certain people get vaccinated either because they are at high risk of having serious flu-related complications or because they live with or care for people at high risk for developing flu-related complications.

High risk groups include:

- Pregnant Women
- Children younger than 5, but especially children younger than 2 years old
- People 50 years of age and older
- People of any age with chronic medical conditions
- People who live in nursing homes and other long-term care facilities
- People who live with or care for those at [high risk](#) for complications from flu including:
  - Health care workers
  - Household contacts of persons at high risk for complications from the flu
  - Household contacts and out of home caregivers of children less than 6 months of age as these children are too young to be vaccinated.

**When should I get vaccinated?** CDC recommends that people should begin getting vaccinated soon after vaccine becomes available, ideally by October, to ensure that as many people as possible are protected before flu season begins. However, as long as flu viruses are circulating, vaccination should continue to be offered throughout the flu season, even in January or later.

### At Your Fingertips

CDC provides you with [FREE](#) online print materials, resources including print, audio, video and digital tools, images and mobile content. Select print materials are available in hard copy, FREE to order.



**I**t takes about two weeks after vaccination for antibodies to develop in the body and provide protection against the flu.

**What about pregnant women?** Pregnant women are at high risk for serious complications from influenza. Getting a flu shot protects pregnant women from the flu and can decrease the baby's risk of getting the flu for up to 6 months after birth. However, the nasal spray vaccine is not recommended for use in pregnant women.

**Where can I get a flu vaccine?** Flu vaccines are offered in many locations, including doctor's offices, clinics, health departments, pharmacies and college health centers, as well as by many employers, and even in some schools. If you don't have a regular doctor or nurse, you can get a flu vaccine at a health department, pharmacy, urgent care clinic, and often your school, college health center, or workplace. Click [here](#) for a list of flu clinics in your area that offer the vaccine.

**Why do I need a flu vaccine every year?** Flu viruses are constantly changing and flu vaccines may be updated from one season to the next to protect against the viruses. In addition, an annual vaccination is needed for optimal protection as a person's immune protection declines over time.

**When will flu activity begin and when will it peak?** The timing of flu is very unpredictable and can vary from season to season. Flu activity most commonly peaks in the U.S. in January or February. However, seasonal flu activity can begin as early as October and continue to occur as late as May. During the 2012–2013 season, influenza activity started about 4 weeks early and was intense. Influenza-like-illness (ILI) rose quickly to well above the baseline of expected activity and remained elevated for 15 consecutive weeks, making the 2012–13 season slightly longer than average. For the past 10 seasons, ILI has remained above baseline an average of 12 consecutive weeks with a range of one week to 16 weeks. It is not possible to predict how mild or severe the Flu Season will be in 2013–2014.

**What should I do to prepare for this flu season?** It is good practice to get the flu vaccine soon after it is available, ideally by October, so that as many people as possible are vaccinated before influenza begins spreading in their community.

In addition, you can take [everyday preventive steps](#) like staying away from sick people and washing your hands to reduce the spread of germs. If you are sick with flu, stay home from work or school to prevent spreading influenza to others.

**Is there treatment for the flu?** Yes. If you get sick, there are drugs that can treat flu illness. They are called antiviral drugs and they can make your illness milder and make you feel better faster. They also can prevent serious flu-related complications, like pneumonia. For more information about antiviral drugs, visit [Treatment \(Antiviral Drugs\)](#).

## Influenza Vaccine

**What kind of vaccines will be available in the United States for 2013–2014?** A number of different manufacturers produce trivalent (three component) influenza vaccines for the U.S. market, including intramuscular (IM), intradermal, and nasal spray vaccines. See Key Facts About [Seasonal Flu Vaccine](#) for more information about the different types of vaccine available in the United States.

Most of the flu vaccine offered for the 2013–2014 season will be trivalent (three component). Some seasonal flu vaccines will be formulated to protect against four flu viruses (quadrivalent flu vaccines) and will be available as well according to manufacturers. All nasal spray vaccines are expected to be quadrivalent, however, this makes up only a small portion of total vaccine availability.

Where more than one type of vaccine is appropriate and available, no preferential recommendation is made for use of any influenza vaccine product over another. More information about influenza vaccines is available at [Preventing Seasonal Flu With Vaccination](#).

**How effective is the flu vaccine?** Recent studies show vaccine can reduce the risk of flu illness by about 60% among the overall population during seasons when most circulating flu viruses are like the viruses the flu vaccine is designed to protect against. Preliminary results for the 2012–2013 flu season are consistent with this Vaccine Effectiveness (VE). CDC's mid-season VE estimates were published on February 21, 2013, in a Morbidity and Mortality Weekly Report entitled: [Interim Adjusted Estimates of Seasonal Influenza Vaccine Effectiveness—United States, February 2013](#).

**How long does a flu vaccine protect me from getting the flu?** Multiple studies conducted over different seasons and across vaccine types and influenza virus subtypes have shown that the body's immunity to influenza viruses (acquired either through natural infection or vaccination) declines over time. The decline in antibodies is influenced by several factors, including the antigen used in the vaccine, age of the person being vaccinated, and the person's general health. When most healthy people with regular immune systems are vaccinated,



their bodies produce antibodies and they are protected throughout the flu season, even as antibody levels decline over time. People with weakened immune systems may not generate the same amount of antibodies after vaccination; further, their antibody levels may drop more quickly when compared to healthy people.

For everyone, getting vaccinated each year provides the best protection against influenza throughout flu season.

**Will this season's vaccine be a good match for circulating viruses?** It is not possible to predict with certainty which flu viruses will predominate during a given season. Flu viruses are constantly changing (called drift) – they can change from one season to the next or they can even change within the course of one flu season. Experts must pick which viruses to include in the vaccine many months in advance in order for vaccine to be produced and delivered on time. For more information about the vaccine virus selection process visit [Selecting the Viruses in the Influenza \(Flu\) Vaccine](#). Because of these factors, there is always the possibility of a less than optimal match between circulating viruses and the viruses in the vaccine.

**How do we know if there is a good match between the vaccine viruses and those causing illness?** Over the course of a flu season, CDC studies samples of flu viruses circulating during that season to evaluate how close a match there is between viruses used to make the vaccine and circulating viruses. Data are published in the weekly [FluView](#). In addition, CDC conducts studies each year to determine how well the vaccine protects against illness.

**Can the vaccine provide protection even if the vaccine is not a “good” match?** Yes, antibodies made in response to vaccination with one flu virus can sometimes provide protection against different but related viruses. A less than ideal match may result in reduced vaccine effectiveness against the virus that is different from what is in the vaccine, but it can still provide some protection against influenza illness.

In addition, it's important to remember that the flu vaccine protects against more than one flu virus, so even when there is a less than ideal match or lower effectiveness against one virus, the vaccine may protect against the other viruses.

For these reasons, even during seasons when there is a less than ideal match, CDC continues to recommend flu vaccination. This is particularly important [for people at high risk for serious flu complications](#), and their close contacts.

**What will CDC do to monitor vaccine effectiveness for the 2013–2014 season?** CDC carries out and collaborates with other partners within and outside CDC to assess how well flu vaccines work. During the 2013–2014 season, CDC is planning multiple studies on the [effectiveness of both the flu shot and](#)

[the nasal-spray flu vaccine](#). These studies will measure vaccine effectiveness in preventing laboratory confirmed influenza among persons aged 6 months and older. In addition, CDC and FDA are monitoring the safety of seasonal influenza and other vaccines licensed for use in the United States, in cooperation with state and local health departments, health care providers, and other partners. Monitoring the safety of seasonal flu vaccine in pregnant women is part of this effort.

Two main systems being used to monitor flu vaccine safety are [VAERS](#), which is jointly operated with FDA, and the [Vaccine Safety Datalink \(VSD\) Project](#), managed and coordinated by CDC's Immunization Safety Office. Other systems are also being used. Through vaccine safety monitoring, CDC and FDA are able to quickly identify any clinically significant adverse events following immunization that warrant further study or action to protect the health of the public.



**What is antiviral resistance?** [Antiviral resistance](#) means that a virus has changed in such a way that the antiviral drug is less effective in treating or preventing illness. Samples of viruses collected from around the United States and worldwide are studied to determine if they are resistant to any of the FDA-approved influenza antiviral drugs.

**What will CDC do to monitor antiviral resistance in the United States during the 2013–2014 season?** CDC routinely collects viruses through a domestic and global surveillance system to monitor for changes in influenza viruses. CDC will continue ongoing surveillance and testing of influenza viruses. Additionally, CDC is working with the state public health departments and the World Health Organization to collect additional information on antiviral resistance in the United States and worldwide. The information collected will assist in making informed public health policy recommendations.

## Situation Updates

**The Centers for Disease Control and Prevention (CDC)** is dedicated to protecting health and promoting quality of life through the prevention and control of disease, injury, and disability. CDC works collaboratively with states and local public health partners to safeguard communities from public health threats and by identifying and responding to outbreaks of infectious diseases. When states are prepared to detect or respond rapidly to threats, communities are better protected.

CDC provides technical assistance to states when it is requested by the state. State and health departments have the ability and authority to work with healthcare providers and facilities and with the public to develop, coordinate, and implement comprehensive local and regional disease prevention and control strategies in their state or area.

### Avian Influenza A (H7N9) Virus

Influenza viruses circulate among humans as the seasonal influenza sections describe in this e-brief; however, there are influenza viruses which circulate in animals such as birds and swine. These viruses can infect humans, and as happened in 2009, these viruses can adapt to transmit easily in humans. For that reason, CDC remains actively engaged in monitoring and responding to the threat posed by these novel animal-associated influenza viruses.

An outbreak of human infections with a new avian influenza A (H7N9) virus was first reported in China by the World Health Organization on April 1, 2013. The virus was detected in poultry in China as well. During the outbreak, more than 130 human infections with H7N9 were reported, the vast majority during the month of April. Many of the people infected with H7N9 reported contact with poultry. The working assumption is that human infections occurred after exposure to infected poultry or contaminated environments. While some mild illness in human cases was seen, most patients had severe respiratory illness and 44 people have died. Close contacts of confirmed H7N9 patients were followed to determine whether any human-to-human spread of H7N9 was occurring. No evidence of sustained person-to-person spread of the H7N9 virus was found. No cases of H7N9 outside of China have been reported and the new H7N9 virus has not been detected in people or birds in the United States.

Although the number of cases detected after April fell abruptly, studies indicate that avian influenza viruses have a seasonal pattern to them, much like human seasonal influenza viruses. If this is the case, H7N9 infections – in birds and people – may pick up again when the weather turns cooler in China. Based on this previous experience, some limited human-to-human spread of this H7N9 virus would not be surprising if the virus reemerges in the fall.

CDC is following this situation closely and coordinating with domestic and international partners. CDC takes routine preparedness actions whenever a new virus with pandemic potential is identified, including developing a candidate vaccine virus to make a vaccine if it were to be needed. CDC also has issued guidance to clinicians and public health authorities in the United States, as well as provided information for people traveling to China. CDC will provide updated information as it becomes available.

**How does one know if symptoms are seasonal influenza, H7N9 influenza, or MERS-CoV (Middle Eastern Respiratory Syndrome Coronavirus)?** Seasonal influenza, H7N9 influenza, or MERS-CoV infection can cause similar respiratory symptoms. However, of these viruses, your symptoms are most likely caused by seasonal influenza. H7N9 and MERS-CoV are less common and have not been reported in the United States. At this time, H7N9 has only been detected in China. All MERS-CoV cases have been linked to countries in or near the Arabian Peninsula.

If you are hospitalized for a severe respiratory illness of unknown causes within 10 days of traveling to a country where H7N9 has been detected, or you if you have come in contact with a patient who is confirmed to have H7N9 infection, you may be tested for this disease. If you have recently traveled to countries where MERS-CoV has been detected and developed a fever, cough or shortness of breath within 14 days after returning to the U.S., contact your doctor. It is not possible to determine whether a patient has seasonal influenza, H7N9 influenza, MERS-CoV infection or illness due to another pathogen based on symptoms alone. However, there are tests to detect seasonal influenza, H7N9 influenza, MERS-CoV infection. Your doctor will determine if you should be tested for any of these illnesses based on your symptoms, clinical presentation and recent travel history.

At this time, H7N9 has been detected only in China. All MERS-CoV cases have been linked to countries in or near the Arabian Peninsula.

Check the [CDC website](http://www.cdc.gov) for the latest guidance and situation updates on these viruses.

### CDC Says “Take 3” Actions to Fight the Flu

- 1) Take time to get a flu vaccine
- 2) Take every day preventative actions to stop the spread of germs
- 3) Take flu antiviral drugs if your doctor prescribes them

## **Influenza A (H3N2) Variant Viruses (“H3N2v”)**

Influenza viruses that normally circulate in pigs are called “variant” viruses when they are found in people. Influenza A H3N2 variant viruses (also known as “H3N2v” viruses) with the matrix (M) gene from the 2009 H1N1 pandemic virus were first detected in people in July 2011. The viruses were first identified in U.S. pigs in 2010. In 2011, 12 cases of H3N2v infection were detected in the United States ([Indiana](#), [Iowa](#), [Maine](#), [Pennsylvania](#), and [West Virginia](#)). In 2012, 309 cases of H3N2v infection across 12 states were detected. Reports of H3N2v infections in 2013 began in June with the state of [Indiana](#). CDC works closely with state and local health departments to detect and monitor animal origin influenza virus infection of humans.

These infections have mostly been associated with prolonged exposure to pigs at agricultural fairs. Limited human-to-human spread of this virus has been detected in the past as well ([Iowa](#), [West Virginia](#)) but no sustained or community spread of H3N2v has been identified at this time. The Centers for Disease Control and Prevention (CDC) continues to monitor this situation closely and will report cases of H3N2v and other variant influenza viruses weekly in [FluView](#) and on the [case count](#) tables on this website. CDC has developed [guidance for the public to protect against H3N2v](#), and [guidance for public health and health care workers](#).

### **Partners Play a Vital Role: Special Thanks to CDC’s Partners**

CDC acknowledges the significant contributions that partners make to promote and provide flu vaccinations and prevent influenza across the United States. The overall success of this vital public health service depends on the support of partners at all levels: public health professionals, advocates, medical providers, community stakeholders and concerned consumers from across the country.

At the Partner website, you can find resources and tools, such as coloring books, media toolkits, the [Flu Vaccine Pledge](#) widget and a Hispanic motion comic book in Spanish. [Un Amor Perdido](#) (A Lost Love) is a Spanish language motion comic book based on a true story of a Hispanic couple expecting their second child. **Find this and other valuable information at [Information for Flu Prevention Partners](#).**

For more information- **on *FREE materials, toolkits, mobile content and more*** - to address flu recommendations for Families, Schools and Businesses, Seniors and Young Adults, High Risk Populations and the General Public, please visit CDC’s Seasonal Influenza webpage under [Free Resources](#). Some content is available in [other languages](#).

