

**2009 H1N1 Influenza
Updated Key Points
October 2, 2009**

What's New and Updated

- Activity Update
- International Situation Update
- Medical Supplies, Including Antivirals
- 2009 H1N1 Influenza Vaccine
- 2009 H1N1 Influenza Vaccine Safety
- Seasonal Influenza Vaccine

A Summary of CDC Key Public Health Messages this Season

- Flu activity remained elevated in the United States with more than half of all states reporting widespread influenza activity.
- CDC recommends a three-step approach to fighting the flu: vaccination, everyday preventive actions, including covering coughs, frequent hand washing, and staying home when sick, and the correct use of antiviral drugs if your doctor recommends them.

Activity Update

- Each week CDC analyzes information about influenza disease activity in the United States and publishes findings of key flu indicators in a report called [FluView](#).
- Information collected during the week of September 20-26, 2009 is reported in FluView on October 2, 2009.
- A review of the key indicators from the most recent week's data found that influenza activity remained elevated in the United States.
- Visits to doctors for influenza-like illness (ILI) continued to increase in some areas of the country, but decreased in other areas compared to the previous week. This level of ILI activity is very unusual for this time of year.
- Total influenza hospitalization rates for laboratory-confirmed influenza are higher than expected for this time of year for adults and children. And for children 5-17 and adults 18-49 years of age, hospitalization rates from April – September 2009 exceed average flu season rates (for October through April).
- The proportion of deaths attributed to pneumonia and influenza (P&I) based on the 122 Cities report was low and within the bounds of what is expected at this time of year. However, 60 pediatric deaths related to

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2009 H1N1 have been reported to CDC since April 2009, including 11 deaths reported this week.

- Twenty-seven states (Alabama, Alaska, Arizona, Arkansas, California, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, Texas, Tennessee, Virginia, Washington, and Wyoming) are reporting widespread influenza activity at this time.
- Any reports of widespread influenza activity in September are very unusual.
- Almost all of the influenza viruses identified so far are 2009 H1N1 influenza A viruses.
- These 2009 H1N1 viruses remain similar to the virus chosen for the 2009 H1N1 vaccine, and remain susceptible to the antiviral drugs oseltamivir and zanamivir with rare exception.
- Information on how hospitalizations and deaths are being reported this season is available at <http://www.cdc.gov/h1n1flu/reportingqa.htm>
- During Week 38 (the week ending September 26, 2009), 11 influenza-associated pediatric deaths were reported to CDC.
 - These deaths occurred in Arkansas, Colorado [3], Georgia, Kansas, South Carolina [2], Tennessee, and Texas [2], and all were associated with 2009 H1N1 virus infection.
 - These deaths occurred between August 23 and September 26, 2009.
- Since September 28, 2008, CDC has received 128 reports of laboratory confirmed influenza-associated pediatric deaths that occurred during the 2008-09 influenza season, 60 of these deaths were due to 2009 H1N1 influenza virus infections.
- The timing, spread and severity of 2009 H1N1 virus – in addition to our regular seasonal influenza viruses – are uncertain.

International Situation Update

- The 2009 H1N1 influenza virus is the predominant influenza virus in circulation in most countries worldwide.
- The epidemiology of disease caused by 2009 H1N1 influenza in the Southern Hemisphere is very similar to that described in the United States in the spring of 2009.

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- There have been no significant changes detected in the 2009 H1N1 influenza viruses isolated from persons in the Southern Hemisphere as compared to viruses isolated from persons in the Northern Hemisphere.
- As of October 2, 2009, WHO reported that more than 10,000 2009 H1N1 influenza isolates worldwide were tested and found to be sensitive to oseltamivir, an antiviral medicine used to treat influenza. Only 28 2009 H1N1 isolates tested have been found to be resistant to oseltamivir – 11 of these isolates were detected in the United States.
- As of October 2, 2009, the World Health Organization (WHO) regions have reported more than 343,298 laboratory-confirmed cases of 2009 H1N1 with at least 4,108 deaths, which is an increase of at least 24,373 cases and 191 deaths since September 20. The laboratory-confirmed cases represent a substantial underestimation of total cases in the world, as many countries focus surveillance and laboratory testing only on people with severe illness.
- From April 19 to September 19, 2009, 59.8% of influenza specimens reported to WHO were 2009 H1N1 viruses. In temperate regions of the Southern Hemisphere, disease due to 2009 H1N1 is declining or has returned to baseline. In tropical regions of the Americas and Asia, influenza activity due to 2009 H1N1 remains variable. In temperate regions of the Northern Hemisphere, there is increased influenza-like illness (ILI) activity due to 2009 H1N1 in many areas, including in most of the United States, parts of Mexico and Canada, some countries in Europe, and parts of Central and Western Asia.
- On September 18, 2009, the United States, together with Australia, Brazil, France, Italy, New Zealand, Norway, Switzerland and the United Kingdom, announced plans to donate 2009 H1N1 vaccine to the developing world.

Medical Supplies, Including Antivirals

- Over the course of this pandemic, it is possible that in areas experiencing widespread flu activity there may be temporary limited commercial availability of some medical supplies, including antiviral medications.
- CDC is coordinating with manufacturers, distributors and retailers to gather information on available quantities of certain medical supplies, including antiviral drugs.
- CDC is using this information to get a national picture of commercial availability of certain medical supplies, including antiviral drugs.

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- The goal of this is to improve information about the commercial supply of certain medical supplies to help inform decision-making about when the Strategic National Stockpile (SNS) should be released.
- At this time, discussions with the antiviral supply chain (manufacturers, distributors and retailers) indicate that supplies of adult formulation (75 mg) oseltamivir (Tamiflu®) and zanamivir (Relenza®) are meeting current demand for this product.
- However, the Food and Drug Administration (FDA) and Roche (maker of Tamiflu®) have acknowledged that commercial supplies of Tamiflu® oral suspension (pediatric liquid formulation) are in short supply and pediatric capsules (30mg and 45mg) may be limited in some locations.
- In addition, ingredients needed to compound Tamiflu® 75mg capsules into an oral suspension may be in short supply in some locations if there is an increased use in compounding. This includes Cherry Syrup (Humco®) or Ora-Sweet® SF (sugar-free) (Paddock Laboratories).
- CDC will provide additional information and updates as needed.

SNS Deployment of Pediatric Oral Suspension Approved

- HHS has approved deployment of 300,000 bottles of Tamiflu® oral suspension from the Strategic National Stockpile (SNS) to all states based on population for use in pediatric populations to ensure available supply.
- Three-hundred thousand bottles equals approximately 300,000 treatment courses of pediatric suspension depending on the child's weight.
- CDC will coordinate with state counterparts over the next several days to confirm interest in receiving suspension and arrange the delivery of material.
- Colorado and Texas have requested and already received their allotment of pediatric oral suspension.
- All states who request suspension are expected to receive this materiel in approximately the next seven days.
- Tamiflu® oral suspension that is being deployed by the CDC will include lot numbers that have an expiration date that has been extended based on scientific testing done by FDA.

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- The medicine has passed FDA's tests, and the expiration date of the medicine has been extended beyond the date originally printed on the bottle.
- This product can be dispensed under the current emergency use authorization (EUA) for Tamiflu® , and a fact sheet for patients and parents also will be provided. To check on a specific bottle's expiration date to determine if the lot has been extended and for how long, please see <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm154962.htm>

Other Actions to Address Supply of Pediatric Antivirals

- As described in the Tamiflu® manufacturer package insert, for children who may not be able to swallow capsules, Tamiflu® capsules may be opened and mixed with sweetened liquids, such as regular or sugar-free chocolate syrup, if oral suspension is not available.
- Another option is compounding a pediatric oral suspension from Tamiflu® 75 mg capsules.
- FDA has posted a statement on their website at <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm> to remind health care providers and pharmacists of the FDA-approved instructions for the emergency compounding of an oral suspension from Tamiflu® 75mg capsules as described in the FDA approved manufacturer package insert for oseltamivir (Tamiflu®).
- Compounding is the mixing of drugs by a health care professional to fit the unique needs of a patient.
- CDC is working to inform pharmacists and clinicians about these issues and has provided [updates for pharmacists on its website](http://www.cdc.gov/h1n1flu/HAN/092509.htm) and issued a [Health Alert Network Info Service on Updated Pediatric Antiviral Dosing Syringe and Compounding Information for 2009 H1N1 and Seasonal Flu](http://www.cdc.gov/h1n1flu/HAN/092509.htm) (<http://www.cdc.gov/h1n1flu/HAN/092509.htm>)

Supply of Ingredients Needed to Compound Tamiflu

- Tamiflu® capsules 75 mg may be compounded using either of two vehicles: Cherry Syrup (Humco®) or Ora-Sweet® SF (sugar-free) (Paddock Laboratories).
- As of September 29, 2009, these products may be in short supply in some locations if there is increased use in compounding of an oral suspension from Tamiflu 75mg capsules.

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- The FDA has posted additional information regarding supply of these products at <http://www.fda.gov/Drugs/NewsEvents/ucm130958.htm>.
- Paddock Laboratories reports that they have increased production of Ora-Sweet® SF and they are releasing new production daily to customers.
- Humco® reports that they have increased production of Cherry Syrup and that they are releasing new production weekly to wholesalers. If pharmacists are having difficulty obtaining Humco® Cherry Syrup, they may contact Humco® directly to locate supplies at 1-800-662-3435.

Antiviral Drugs, General

- Antiviral drugs are prescription medicines (pills, liquid or an inhaled powder) that fight against the flu by keeping flu viruses from reproducing in your body.
- Antiviral drugs can make illness milder and shorten the time you are sick. They can also prevent serious flu complications.
- For treatment, antiviral drugs work best if started within the first 2 days of symptoms.
- It's important for the public to remember that most people sick with 2009 H1N1 influenza have recovered without medical care or antiviral drugs, and the same is true of seasonal flu.
- The priority use for antiviral drugs this season is to treat people who are very sick (hospitalized) or people who are sick with flu-like symptoms and who are at increased risk of serious flu complications, such as pregnant women, very young children, people 65 and older and people with chronic health conditions. Other people may also be treated based on the clinical judgment of the clinician.

2009 H1N1 Influenza Vaccine

- **(NEW)** States and cities began placing orders for the 2009 H1N1 vaccine on Wednesday, September 30, 2009.
- **(NEW)** 47 states placed orders on Wednesday September 30th, and more states are placing orders daily.
- **(NEW)** By October 2, 2009, CDC expects up to 3 million doses of live attenuated influenza vaccine (LAIV) to be available for ordering.

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- **(NEW)** The limited number of first doses of vaccine from orders placed on September 30th are expected to be in provider settings by Monday, October 5th or Tuesday, October 6th.
- **(NEW)** We ask members of the public who want to receive this vaccine to be patient as this program begins.
- **(NEW)** We had to choose between waiting to distribute vaccine until we had large quantities ready to be shipped versus distributing limited quantities of the vaccine sooner. We chose the later knowing that it would create some challenges and frustrations (for our public health partners in the states, providers, and the public), but also knowing that it would allow us to start protecting people against this disease as soon as possible.
- **(NEW)** Thus, we only have small amounts of vaccine for states to order at the moment, and all of it is LAIV, or the nasal spray vaccine. Given this situation, states will initially be conducting very targeted vaccination efforts that take into consideration: 1) those people who can receive LAIV (healthy, non-pregnant people between the ages of 2 and 49 years, including healthy, non-pregnant health care workers who do not work with severely immune compromised persons, and 2) their local situation with H1N1 disease.
- **(NEW)** It is important to also keep in mind that there will be lag times between states placing orders and vaccine actually being distributed (we are not cutting corners in terms of steps like quality control checks) - and any number of things can create lag times between time of distribution to states and when vaccine actually arrives in provider offices or clinics.
- **(NEW)** This vaccine program is a massive and challenging undertaking and is being carried out at a time when state and local health departments have experienced severe budget cuts. There will likely be bumps along the way, but we are optimistic that we will achieve our goal of making the 2009 H1N1 vaccine available to all of those who need and want it.
- The U.S. Food and Drug Administration has approved 2009 H1N1 influenza vaccines made by four different manufacturers.
- The four manufacturers and their approved vaccines include:

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Manufacturer: Sanofi Pasteur, Inc.

Product: Inactivated vaccines (both 0.25 ml dose for children 6-35 months and 0.5 ml dose for persons 3 years and older)

Indication: Vaccination of persons 6 months of age and older against influenza disease caused by 2009 H1N1 virus.

Manufacturer: Novartis Vaccines and Diagnostics Limited

Product: Inactivated vaccine (0.5 ml dose)

Indication: Vaccination of persons 4 years of age and older against influenza disease caused by 2009 H1N1 virus.

Manufacturer: MedImmune LLC

Product: Live attenuated vaccine (e.g., nasal spray vaccine)

Indication: Vaccination of healthy individuals 2-49 years of age who are not pregnant against influenza disease caused by 2009 H1N1 virus.

Manufacturer: CSL Limited

Product: Inactivated vaccine (0.5 ml dose)

Indication: Vaccination of persons ages 18 years of age and older against influenza disease caused by 2009 H1N1 virus.

- All four manufacturers of the 2009 H1N1 vaccines are using the same processes that they use for making the seasonal flu vaccines, which have a long record of producing safe seasonal influenza vaccines.
- This vaccine program is a massive and challenging undertaking and is being carried out at a time when state and local health departments have experienced severe budget cuts. There will likely be bumps along the way, but we are optimistic that we will achieve our goal of making the 2009 H1N1 vaccine available to all of those who need and want it.
- It is important to keep in mind that while some doses of vaccine will be distributed beginning the first week of October, initial supplies are small and it will take several days for those doses to reach clinics and doctors offices.
- On September 21, 2009, The National Institute of Health (NIH) announced that early results from a trial testing a 2009 H1N1 influenza vaccine in children look promising. Preliminary analysis of blood samples from a small group of trial participants shows that a single 15-microgram dose of a non-adjuvanted 2009 H1N1 influenza vaccine – the same dose that is in the seasonal flu vaccine – generates an immune response that is expected to be protective against 2009 H1N1 influenza virus in the majority of 10- to 17- year-olds within eight to 10 days following vaccination. These results are similar to those recently reported in clinical

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trials of healthy adults. Younger children generally had a less robust early response to just one dose of the vaccine.

- Children younger than 10 years should receive two doses of 2009 H1N1 flu vaccine. This is slightly different from CDC's recommendations for seasonal influenza vaccination which state that children younger than 9 who are being vaccinated against influenza for the first time need to receive two doses. Infants younger than 6 months of age are too young to get the 2009 H1N1 and seasonal flu vaccines.
- CDC recommends that the two doses of 2009 H1N1 vaccine be separated by 4 weeks. However, if the second dose is separated from the first dose by at least 21 days, the second dose can be considered valid.
- The national vaccine program will be voluntary. Those interested in vaccination for themselves or their children will receive accurate information about 2009 H1N1 influenza vaccine and the vaccine's benefits and risks so they can make an informed decision.
- A report in the August 21, 2009, Morbidity and Mortality Weekly Report (MMWR) provides official recommendations by CDC's Advisory Committee on Immunization Practices (ACIP) regarding the use of vaccine against 2009 H1N1 influenza.
- The guiding principle of these recommendations is to vaccinate as many persons as possible as quickly as possible. Vaccination efforts should begin as soon as vaccine is available.
- Highlights of these recommendations include 1) the identification of five initial target groups for vaccination efforts comprising an estimated 159 million persons (pregnant women, persons who live with or provide care for infants aged <6 months, health care and emergency medical services personnel, children and young adults aged 6 months through 24 years, and persons aged 25 through 64 years who have medical conditions that put them at higher risk for influenza-related complications), 2) establishment of priority for a subset of persons within the initial target groups in the event that initial vaccine availability is unable to meet demand, and 3) guidance on use of vaccine in other adult population groups as vaccine availability increases.
- The recommendations are broad and allow for flexibility to accommodate local variability in vaccine needs and demands. Providers should be aware of and follow any additional guidance provided by their state or local health departments. If no additional guidance is provided at the state or local level, providers should vaccinate among the initial target group populations on a first come, first serve basis.

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- Simultaneous administration of inactivated vaccines against seasonal and the 2009 H1N1 influenza viruses is permissible if different anatomic sites are used.
- Further guidance regarding time of administration of live, attenuated vaccines against both seasonal and 2009 H1N1 influenza viruses in the same individual are pending. Very little data is available.
- If tested for the flu after receiving the live attenuated influenza vaccine (LAIV), a person could test positive on a rapid influenza diagnostic test because the tests are designed to detect influenza viruses and cannot differentiate between live attenuated viruses that could be recovered following administration of LAIV and wild-type flu viruses.
- Because vaccine availability is expected to increase over time, vaccine should not be held in reserve for patients who received one dose and might require a second dose.

2009 H1N1 Flu Vaccine & People age 65 and over

- Younger people are more likely to get infected with the 2009 H1N1 influenza virus than those 65 years and older. Therefore, younger persons are recommended to receive the first available doses of 2009 H1N1 influenza vaccine before persons 65 years and older.
- CDC's priority for people 65 and older is to have them get their seasonal influenza vaccine as soon as it is available.
- While people 65 and older aren't included in the high risk groups to be prioritized for 2009 H1N1 influenza vaccination, they can get the 2009 H1N1 influenza vaccine as soon as the high-risk groups have had the opportunity to be vaccinated and should not delay in seeking medical treatment if they develop symptoms of influenza.

2009 H1N1 Influenza Vaccine Safety

General H1N1 Vaccine Safety

- We expect the 2009 H1N1 influenza vaccine to have a similar safety profile as seasonal flu vaccines, which have very good safety track records.
- CDC expects that any serious side effects following vaccination with the 2009 H1N1 influenza vaccine would be rare.

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- The types and frequencies of side effects from the 2009 H1N1 vaccine will likely be similar to those experienced following seasonal influenza vaccines which are mild, localized reactions.

Syncope

- **(NEW)** Syncope, or fainting, has been reported after vaccination with any vaccine, and is common among adolescent patients. Falls, as a result of fainting after vaccination, can sometimes result in serious injuries.
- **(NEW)** Such injuries can be prevented by assuring that the vaccinated person is sitting in a chair or lying down and is observed for 15 minutes following vaccination.

Vaccine Safety Monitoring

- The CDC and FDA closely monitors the safety of all vaccines licensed for use in the United States including seasonal influenza vaccines in cooperation with state and local health departments, healthcare providers, and other partners. Additional special monitoring is occurring to assure that any rare side effects of the 2009 H1N1 vaccine detected as soon as possible.
- Vaccine safety monitoring is a complex process that uses both active and passive surveillance.
- Vaccine safety monitoring includes reviewing adverse events reported by providers, manufacturers, people who were vaccinated or their caregivers, and comparing the rate of these adverse events to the background rates (the rates at which they normally occur in the population).
 - An adverse event following immunization is a medical incident that occurs after someone receives an immunization.
 - Adverse events may be coincidental (meaning occurring around the same time but not related to vaccination) or caused by vaccination.
 - Adverse events can be reported by providers, manufacturers, people who were vaccinated or their caregivers.
- The purpose of vaccine safety monitoring is timely identification of any clinically significant adverse events following immunization, as well as to provide timely information to the public, vaccine providers, public health officials, and policy makers.

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- CDC and its partners will use several systems to monitor the safety of 2009 H1N1 influenza vaccine. Two primary systems that will be used are the Vaccine Adverse Event Reporting System (VAERS), which is jointly operated with FDA, and the Vaccine Safety Datalink (VSD) Project.
- Additionally, CDC will conduct surveillance of adverse events through partnerships with other federal agencies, professional organizations, and academic institutions.

Adjuvants

- Some vaccines contain “adjuvants,” which are ingredients that help boost the vaccine’s potency. As a result, a smaller amount of vaccine is needed per person, and therefore, the vaccine supply can be used to reach more people.
- Only unadjuvanted vaccines will be used in the United States during the 2009-10 flu season.
- This includes all of the 2009 H1N1 and seasonal influenza vaccines that will be available for children and adults in both the injectable and nasal spray formulations. None of these influenza vaccines that will be used in the U.S. during the 2009-10 season will contain adjuvants.
- Studies of 2009 H1N1 influenza vaccines with adjuvants are being conducted to determine if 2009 H1N1 influenza vaccines with adjuvants meet safety and efficacy requirements for use in the United States.

Thimerosal

- Thimerosal is a mercury-based preservative that is used in some influenza vaccines to keep them free from contamination of microorganisms.
- The 2009 H1N1 influenza vaccine is being manufactured in several formulations.
 - Several vaccine manufacturers will be producing some of the 2009 H1N1 influenza vaccine in single-dose units, which will not require the use of thimerosal as a preservative.
 - The live-attenuated version of the vaccine, which is administered intranasally (through the nose), is produced in single-units and will not contain thimerosal.

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- Some vaccine will come in multi-dose vials and will contain thimerosal as a preservative, as is the case with seasonal influenza vaccines in multi-dose vials.
- Multi-dose vials of seasonal influenza vaccine contain thimerosal to prevent potential contamination after the vial is opened. Seasonal flu vaccines that do not contain thimerosal are available.

Guillain-Barré syndrome (GBS)

- Guillain-Barré syndrome (GBS) is a medical condition in which the body damages its own nerve cells, causing muscle weakness and sometimes paralysis. Most people who develop GBS fully recover, but in some cases, death can result, usually from difficulty breathing.
- It is not fully understood why some people develop GBS, but it often occurs following infection. It is believed that stimulation of the body's immune system may play a role in its development.
- The infection that most commonly precedes GBS is caused by a bacterium called *Campylobacter jejuni*. Influenza virus infection has also been associated with GBS.
- In 1976, there was a small risk of GBS following influenza (swine flu) vaccination (approximately 1 additional case per 100,000 people who received the swine flu vaccine). That number of GBS cases was slightly higher than the background rate for GBS. Since then, numerous studies have been done to evaluate if other flu vaccines were associated with GBS. In most studies, no association was found, but two studies suggested that approximately 1 additional person out of 1 million vaccinated people may be at risk for GBS associated with the seasonal influenza vaccine.
- FDA and CDC and several partners will be closely monitoring reports of serious vaccine adverse events, including GBS, following the 2009 H1N1 influenza vaccination.

Seasonal Influenza Vaccine

- **(NEW)** October is the traditional time when seasonal flu vaccine clinics open; this season vaccination started unusually early.
- It has been reported in the Canadian media that research conducted in Canada suggests that getting a seasonal flu vaccine may increase a person's risk for getting 2009 H1N1 influenza. The research has not been

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published but we are taking a close look at the data as it becomes available.

- The Centers for Disease Control and Prevention have not seen this effect in systems we have reviewed in the United States. Data collected in Australia and published in Eurosurveillance journal also does not suggest that receipt of seasonal influenza vaccine influences the risk of 2009 H1N1 infection.
- CDC continues to recommend seasonal flu vaccination. Currently the vast majority of influenza being reported to CDC is 2009 H1N1. However, influenza is very unpredictable and an increasing amount seasonal flu may circulate at any point in the season.
- The new 2009 H1N1 influenza virus is a reminder of the unpredictable nature of influenza, and the importance of prevention.
- While the 2009 H1N1 influenza virus has been the focus of attention since the spring, it is important that we do not forget the risks posed by seasonal influenza viruses. We expect that seasonal flu viruses will circulate some time this season; however, the timing or intensity of seasonal flu circulation relative to circulation of 2009 H1N1 cannot be predicted in advance.
- We hope that people, especially those at high risk for serious complications and their close contacts, will seek seasonal flu vaccines now or as soon as vaccine is available in their communities.
- More seasonal influenza vaccine will be available earlier than the 2009 H1N1 influenza vaccine. Seasonal influenza viruses are still expected to cause illness this fall and winter along with 2009 H1N1 virus.
- Seasonal flu vaccine is now available in many locations. Individuals are encouraged to get their seasonal flu vaccine as soon as it becomes available in their community.

Seasonal Flu Vaccine & People age 65 and over

- People age 65 years and over are at increased risk for complications from seasonal influenza and are recommended for annual seasonal flu vaccines. This year is no exception.
- CDC's priority for people 65 and older is to have them get their seasonal flu vaccine first, before the 2009 H1N1 flu vaccine is available.

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Supply and Distribution

- **(New)** The largest supplier of seasonal flu vaccine, Sanofi Pasteur is experiencing a delay in their shipments. Currently, the company has shipped more than half of the 50.5 million doses of Sanofi Pasteur seasonal flu vaccine ordered by U.S. healthcare providers. It could be November before customers receive their complete orders.
- **(Updated)** Approximately 70 million doses of seasonal flu vaccine have been distributed, as of September 25, 2009. This is approximately 61% of the doses that are expected to be distributed for this season.
- At the current time, five influenza vaccine manufacturers are projecting as many as 114 to 115 million doses of seasonal influenza vaccine will be available from currently licensed manufacturers in the United States for use during the 2009-10 influenza season.
- Manufacturers project producing approximately 50 million doses of thimerosal-free, or preservative-free, seasonal influenza vaccine.
- Manufacturer projections indicate that the vast majority of vaccine will be distributed by the end of October. However, some vaccine distribution may continue into November, including doses that are ordered during the fall.
- 2009 H1N1 vaccine production efforts currently underway are being carried out in such a way to minimize any impact upon the total amount of seasonal vaccine available. In fact, the timing of 2009 H1N1 vaccine production, as directed by the federal government, was designed to allow sufficient time for manufacturers to be able to carry out their planned production of seasonal influenza vaccine.
- Despite vaccine production estimates that exceed past usage, providers seeking to order vaccine currently and during the past several weeks have experienced challenges in doing so. There are several reasons for these challenges. First, in early June, one of the manufacturers adjusted down their seasonal flu vaccine estimates, which resulted in some customers switching prebooks to other products. These switches reserved unprebooked vaccines that were still available for order, making doses that are normally available for order during the summer and early fall months no longer available. Second, there may be more providers seeking to purchase vaccine at this time of year than normally occurs due to (1) recent 2009 H1N1 disease and related coverage in the media that may have increased the demand for seasonal flu vaccination, and (2) a desire to complete seasonal flu vaccination efforts in advance of 2009 H1N1 vaccination efforts to the extent possible.

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- As in past seasons, availability of seasonal vaccine may change as the season progresses because some prebooks do not materialize into purchases. Providers looking to order additional vaccine should be encouraged to use the supplies that they have now and continue to look for additional flu vaccine for purchase in the coming weeks.
- To assist providers in finding flu vaccine available for purchase, the National Influenza Vaccine Summit supports IVATS, the Influenza Vaccine Availability Tracking System, which provides information about vaccine manufacturers and distributors with vaccine available for purchase. IVATS can be found at: <http://www.preventinfluenza.org/ivats/>. The information in IVATS is updated throughout the influenza vaccination season.
- CDC's seasonal influenza web site is now live at <http://www.cdc.gov/flu> with a new design, the latest information updates, and free resources.

MMWR – secondary bacterial pneumonia after H1N1

- **(NEW)** This week, a report will be published in CDC's *Morbidity and Mortality Weekly Report (MMWR)* on bacterial coinfections in fatal cases of 2009 H1N1 virus infection
- **(NEW)** In previous influenza pandemics, bacterial pneumonia was an important cause of influenza-related deaths.
- **(NEW)** This report summarizes the role bacteria have been playing in deaths during the current 2009 H1N1 pandemic.
- **(NEW)** Autopsy specimens from 77 patients who died after 2009 influenza A (H1N1) infection were evaluated using special diagnostic tests.
- **(NEW)** The study found 22 (29%) of the 77 patients had evidence of bacterial infections in addition to 2009 H1N1 infection in their autopsy specimens.
- **(NEW)** These findings show that bacterial infections are contributing to fatalities in persons with 2009 influenza A (H1N1), similar to previous pandemics.
- **(NEW)** The bacteria causing these infections included *Streptococcus pneumoniae* (pneumococcus), group A *Streptococcus*, and *Staphylococcus aureus*, several of the leading causes of community-acquired pneumonia and other severe bacterial infections.
- **(NEW)** For the prevention of pneumococcal disease, two vaccines are currently available in the U.S.

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- All children less than 5 years of age should receive pneumococcal conjugate vaccine according to current recommendations (<http://www.cdc.gov/vaccines/vpd-vac/pneumo/default.htm>).
- In addition, the 23-valent pneumococcal polysaccharide vaccine (PPSV23) should be administered to all persons 2-64 years of age with high risk conditions and everyone 65 years and older (http://www.cdc.gov/h1n1flu/guidance/ppsv_h1n1.htm).
- **(NEW)** During this influenza season, it is especially important for adults with chronic medical problems to get PPSV23.
- **(NEW)** In communities where 2009 H1N1 is circulating, empiric treatment of patients with community acquired pneumonia should include both influenza antiviral agents (<http://www.cdc.gov/h1n1flu/recommendations.htm>) and appropriate antibiotic therapy.