

**Pandemic H1N1 Influenza
Updated Key Points
June 19, 2009**

Updated H1N1 Novel Influenza A Key Points: June 19, 2009

FluView Influenza Activity Update

- Influenza illness, including illness associated with the pandemic influenza A (H1N1) virus, is ongoing in the United States.
- As of June 19, 2009, 21,449 confirmed and probable infections with pandemic influenza A (H1N1) virus have been identified by CDC and state and local public health departments with 87 deaths.
- During week 23 (June 7 – 13, 2009), the June 19 *FluView* Report shows that influenza activity overall decreased in the United States; however, there are still higher levels of influenza-like illness than is normal for this time of year and pandemic H1N1 outbreaks are ongoing in parts of the United States, in some cases with intense activity.
- 11 states in the U.S. are reporting widespread influenza activity (Arizona, Connecticut, Delaware, Hawaii, Maine, New Jersey, New York, Pennsylvania, Rhode Island, Utah, and Virginia); 6 states and Puerto Rico are reporting regional influenza activity; 13 states and the District of Columbia are reporting local influenza activity; and 20 states are reporting sporadic activity.
- It is very unusual for this time of year to still be having so many states reporting regional and widespread activity.
- Pandemic H1N1 viruses now make up approximately 98% of all subtyped influenza A viruses analyzed by the U.S. WHO/NREVSS collaborating laboratories.
- Overall, the nationwide level of outpatient visits to providers for influenza-like-illness is below the national baseline, but one of the 10 surveillance regions reported an influenza-like illness percentage above its region-specific baseline (Region II).
 - This was in Region II, which includes New Jersey, New York, Puerto Rico, and the U.S. Virgin Islands.
 - Increases in ILI in region II likely represent an increase in influenza activity in large cities in that region, such as New York City, which is experiencing community outbreaks of pandemic H1N1.
- Influenza-like illness decreased during week 23 in six of 10 regions compared to week 22.

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- The proportion of deaths attributed to pneumonia and influenza (P&I) was slightly above the epidemic threshold.
- One influenza-associated pediatric death was reported and was associated with pandemic influenza A (H1N1) virus infection during Week 23.
- Since September 28, 2008, CDC has received 71 reports of laboratory confirmed influenza-associated pediatric deaths that occurred during the 2008-09 influenza season, six of which were due to pandemic influenza A (H1N1) virus infections.
- It's uncertain at this time how severe this H1N1 pandemic will be in terms of how many people infected will have severe complications or death from pandemic H1N1-related illness.
- It is likely that localized outbreaks will continue to occur over the summer and that we will see pandemic H1N1 virus, illness and death during the upcoming U.S. flu season in the fall and winter.
- The real uncertainty is how widespread and severe the pandemic H1N1 virus will be during the 2009-2010 influenza season in the United States.
- We are still learning about the severity and other epidemiological characteristics of the pandemic H1N1 virus and are watching the Southern Hemisphere very carefully to see how pandemic H1N1 affects their influenza season, which is just beginning.
- This information is important and will be taken into account when making recommendations with regard to vaccine and other preventive measures in the fall.

Enhanced Influenza Surveillance in the Southern Hemisphere

- The Centers for Disease Control and Prevention (CDC) is working closely with countries in the Southern Hemisphere to enhance surveillance for influenza viruses circulating in the Southern Hemisphere, including pandemic H1N1 flu.
- The Southern Hemisphere is just going into its flu season now and how this virus behaves will give us some clues about what we can expect for the Northern Hemisphere.
- CDC is providing real-time, reverse transcriptase polymerase chain reaction (rRT-PCR) reagents to all national influenza centers (NICs) in the Southern Hemisphere region and is working with the Pan American

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Health Organization (PAHO)* to increase laboratory testing capacities in South/Central America by supplying resources and training.

* PAHO is a regional office of the World Health Organization (WHO).

- In addition, CDC is providing to all NICs in the PAHO region a supplemental WHO Influenza kit containing reagents for identification of pandemic H1N1 influenza virus in the Hemagglutination Inhibition (HI) assay.
- CDC's Influenza Division has provided the necessary documents and forms with instructions for sending influenza virus isolates and specimens to CDC to 28 NICs in PAHO.
- As part of CDC's efforts to enhance surveillance in the Southern Hemisphere, CDC has developed guidance for national laboratories within PAHO to send their most recent and representative influenza virus isolates to CDC more frequently: as often as every two weeks, if possible.
- The World Health Organization has offered to help countries ship influenza virus isolates and specimens to CDC for testing by supplying financial and logistical support.
- In addition to laboratory assistance, CDC has deployed two epidemiologists, one to Peru and one to Chile, to assist with planning enhanced surveillance activities.
- A recent mission to Chile, Argentina, and Bolivia has met with the ministries of health in each of those countries to map out a strategy for enhancing surveillance.
- CDC has provided \$200,000 (U.S. Dollars) to the Central America Project in Guatemala to enhance surveillance for severe acute respiratory illness in five countries of Central America.

Summer Camp Guidance

- CDC has heard reports of pandemic H1N1 outbreaks in summer camps in the U.S.
- This is not surprising given the fact that children and young adults have been the most affected by the outbreak of pandemic H1N1 flu so far.

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- CDC has developed guidance for day and residential camps in response to human infections with pandemic H1N1 influenza and posted this information on our website.
- It is important that camp staff members, parents and others are aware of, and use measures to protect themselves and also the public's health by making plans for how to prevent and control outbreaks in camps and other places that children and young adults gather.
- CDC is recommending that the primary way to reduce spread of influenza in camps is to focus on identifying ill campers and staff as soon as possible, moving ill persons away from well campers, treating ill campers, educating campers and staff about good cough and hand hygiene etiquette, and educating camp facilitators and administrators about environmental controls that should be in place to encourage use of these practices.
- CDC is recommending that people who currently have or have had influenza-like symptoms in the previous seven days should not attend, work or volunteer in a camp until at least seven days AFTER their symptoms began or until they have been symptom-free for 24 hours, whichever is longer.
- Camp staff, volunteers, and campers should be aware of the symptoms of pandemic H1N1 flu and rapidly report to camp staff if they recognize any of them in campers or themselves.
- CDC is encouraging camp administrators and facilitators to work with parents to plan ahead for what to do in the event that their child becomes ill while at camp.
- Camps should work with local public health authorities to develop plans for addressing potential camp outbreaks and establish an open line of communication.
- Hand washing facilities, including running water and soap, should be available to all campers and staff. Everyone should be reminded to use good hand hygiene (hand washing and appropriate use of alcohol-based gels) and good cough etiquette (covering coughs and sneezes).
- Aspirin or aspirin-containing products should not be given to any person 18 years old or younger with a confirmed or suspected case of influenza, due to the risk of Reye's syndrome.

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MMWR: Novel H1N1 virus infections among healthcare personnel

- On June 19, 2009 the *Morbidity and Mortality Weekly Report (MMWR)* published a report entitled "Novel Influenza A (H1N1) Virus Infections Among Healthcare Personnel – United States, April – May 2009"
- As of May 13, 2009, CDC had received information on 48 confirmed or probable pandemic H1N1 infections reported to have occurred in people who worked in the healthcare profession; 26 with detailed information.
- Of the 26 cases, CDC found that:
 - 13 healthcare personnel (HCP) (50%) were deemed to have acquired infection in a healthcare setting which could have been from provider-to-provider (1) contact or patient-to-provider (12) contact.
 - 11 healthcare workers (42%) were deemed to have been infected in the community.
 - 2 HCP (8%) had no reported exposures in either healthcare or community settings.
- Two infected HCP were hospitalized, one of whom reported underlying medical conditions. Neither hospitalized HCP was admitted to the intensive care unit; neither died.
- None of the HCP with potential patient-to-provider transmission of pandemic H1N1 influenza reported adhering to all recommended infection control practices for all contacts with possible source patients.
- These findings cannot definitely establish whether these instances of patient-to-provider transmission were related to non-adherence to certain parts of personal protection equipment.
- Whatever the risk of infection to HCP, this report suggests that much of it exists in the outpatient setting, such as outpatient clinics and emergency rooms.
- Current CDC infection control recommendations for the care of patients with pandemic H1N1 infections include:
 - Administrative actions such as exclusion of ill HCP from work
 - The use of fit-tested N-95 respirators
 - Eye protection

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- Use of gloves and gowns
- Aerosol-generating procedures should be performed in an airborne infection isolation room with negative pressure air handling
- HCP were defined as employees, students, contractors, clinicians or volunteers whose activities involved contact with patients in a healthcare or laboratory setting.
- These case reports do not contain enough information to determine effectiveness of specific types of personal protection equipment to protect against infection of pandemic H1N1 infection.

WHO Declaration Phase 6

- On June 11, 2009, the World Health Organization (WHO) raised the worldwide pandemic alert level to Phase 6.
- Designation of this phase indicates that a global pandemic is underway.
- There are now community level outbreaks ongoing in other parts of the world.
- While U.S. influenza surveillance systems indicate that overall flu activity is decreasing in the United States, pandemic H1N1 outbreaks are ongoing in different parts of the U.S., in some cases with intense activity.
- In the United States, this virus has been spreading efficiently from person-to-person since April and, as we have been saying for some time, we do expect that we will see more cases, more hospitalizations and more deaths from this virus.
- Because there is already widespread pandemic H1N1 disease in the United States, the WHO Phase 6 declaration does not change what the United States is currently doing to keep people healthy and protected from the virus.
- Thus, there is no change to CDC's recommendations for individuals and communities.
- WHO's decision to raise the pandemic alert level to Phase 6 is a reflection of epidemiological changes **in other parts of the world** and **not** a reflection of any change in the pandemic H1N1 virus or associated illness.

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- At this time, most of the people who have become ill with pandemic H1N1 in the United States have not become seriously ill and have recovered without hospitalization.
- In the United States, we have been preparing for this for some time.
- And we are actively and aggressively implementing our pandemic response plan.
- Phase 6 is an indicator of spread and not of severity.
- It's uncertain at this time how serious or severe this pandemic H1N1 pandemic will be in terms of how many people infected have severe complications or death related to pandemic H1N1 infection.
- There were three influenza pandemics in the last century and they varied widely in severity.
- The 1918 pandemic killed tens of millions of people.
- The 1957 pandemic is thought to have resulted in at least 70,000 deaths in the United States.
- Deaths from the 1968-69 pandemic were about the same as for seasonal influenza.
- This pandemic certainly poses the potential to be at least as serious as seasonal flu, if not more so.
- Because this is a new virus, many people will not have immunity to it and illness may be more severe and widespread as a result.
- We are still learning about this virus and expect that, like all influenza viruses, it will continue to change.

We are taking action:

- The Federal Government is mounting an aggressive response to this newly declared pandemic.
- CDC's goals during this public health emergency are to reduce transmission and illness severity, and provide information to assist health care providers, public health officials and the public in addressing the challenges posed by this newly identified influenza virus.
- To this end, CDC continues to update guidance.

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- Visit the CDC website at <http://www.cdc.gov/h1n1flu/> for more information or call 1-800-CDC-INFO.
- Everyday, we learn more about this virus and what we learn will continue to inform the actions that we take in response.
- We are aggressively taking early steps in the vaccine manufacturing process, working closely with manufacturing and the rest of the government.
- Vaccines are a very important part of a response to pandemic influenza.
- CDC isolated the pandemic H1N1 virus, made a candidate vaccine virus, and has provided this virus to industry so they can begin scaling up for production of a vaccine, if necessary.
- There are many steps involved with producing a vaccine and we are committed to going forward with the NIH, and FDA, BARDA, and the manufacturers of influenza vaccines, to see about developing full scale vaccine production.
- Where possible, we are taking parallel steps to speed up the vaccine process.
- If things go well, and we develop a full scale production, it would be several months until the vaccine were available.
- So vaccine is an important tool for the future.

Pandemic Severity

- Influenza pandemics can range in severity, mainly in terms of the number of people that have severe illness and die.
- Pandemic severity may also change over time and will differ across regions of the world, in different countries and even within different communities within a country.
- Pandemic disease severity will vary depending on several factors: a nation's ability to provide health care to their people, the availability of antiviral medications to treat those who are sick, differences in how the disease affects people in different age groups, and the effectiveness of efforts to reduce person-to-person transmission of influenza.

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- An evaluation of pandemic severity should be based on local circumstances for this reason.
- A pandemic severity index helps public health officials to match the timing of the spread and severity of the outbreak with the appropriate use of public health and community resources to minimize the number of people who get sick and the number of people who die.
- WHO has a three point scale to determine pandemic severity: mild, moderate and severe.
- At this time, WHO has indicated this seems to be a moderately severe pandemic.

U.S. Pandemic Severity Index (PSI)

- CDC developed the U.S. Pandemic Severity Index (PSI) to describe the severity of a pandemic in terms of illness and death.
- The U.S. PSI scale is based on the case-fatality ratio; the likelihood of people dying from the disease.
- The PSI scale ranges from Category 1 to Category 5 and is comparable to the U.S. hurricane severity index.
- Category 1 is the least severe and Category 5 is the most severe.
- At the current time, CDC estimates that the pandemic situation in the U.S. would be equivalent to a pandemic severity index of 2. (This would be most similar to the 1957 influenza pandemic, however, it's uncertain how the current situation will evolve over the coming months so it's not possible to make a predication about deaths at this time.)
- CDC will re-evaluate the classification of the Pandemic Severity Index should there be evidence that the pandemic has become more severe.
- The PSI will be adjusted based on that evaluation and appropriate guidelines and recommendations provided.
- CDC emphasizes that unnecessary weight not be given to the numeric categorization of the pandemic.
- According to the U.S. PSI:
 - A category 1 pandemic has the following:
 - Case fatality ratio of less than 0.1 percent

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- Excess death rate of less than 30 per 100,000 people
- Illness rate of 20-40% of the population
- Less than 90,000 potential deaths (based on 2006 U.S. population)
- Similar to a more severe seasonal flu year in the United States
- A category 2 pandemic has the following:
 - Case fatality ratio of 0.1 percent to less than 0.5 percent.
 - Between 90,000 and 450,000 deaths in the U.S. (based on 2006 U.S. population)
 - Excess death rate of between 30 to less than 150 per 100,000 people
 - Illness rate of between 20 and 40 percent.
 - Similar to 1957 pandemic.
- A category 5 pandemic has the following:
 - Case fatality ratio of greater or equal to 2 percent
 - Excess death rate of more than 600 per 100,000 people
 - Illness rate of 20-40% of the population
 - Greater than or equal to 1.8 million potential deaths (based on 2006 U.S. population)
 - Similar to the 1918 pandemic
- The importance of identifying a category of severity is only to help guide the public health interventions recommended for individuals and communities.
- The PSI scale helps public health officials match the range of public health intervention efforts to the severity of a pandemic.

For a Category 1 to 3 pandemic:

- Ill adults and children are asked to stay home voluntarily.
- If someone in the household is sick, well adults and children do **not** need to stay at home.
- School and child care dismissal is not generally recommended, but may be considered depending on the local impact of the disease.

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- Workplace and Community adult social distancing efforts (e.g., encouraging teleconferences instead of meetings, reducing density, meaning the number of people crowded into an enclosed space, in public transit and the workplace, postponing or canceling selected public gatherings, encouraging people to telework, or take staggered shifts) are generally not recommended.
- For a Category 4 to 5 pandemic
 - Ill adults and children are asked to stay home voluntarily.
 - If someone in the household is sick, well adults and children should stay at home too.
 - School and child care dismissal is recommended for up to 12 weeks.
 - Workplace and Community adult social distancing efforts (e.g., encouraging teleconferences instead of meetings, reducing density, meaning the number of people crowded into an enclosed space, in public transit and the workplace, postponing or canceling selected public gatherings, encouraging people to telework, or take staggered shifts) are recommended

Declaration of Phase 6 and Travel

- At this time, CDC does not recommend against travel to any country.
- CDC will continue to monitor the pandemic H1N1 situation around the world and will provide recommendations to U.S. travelers based on the changing situation.
- Travelers should check the CDC travelers' health website (www.cdc.gov/travel) for information related to this outbreak, as well as for health information on the prevention and management of flu.
- Travelers should also check the website of the embassy of the country to which they are traveling for the latest updates on entry or exit screening procedures which may impact their travel.
- CDC recommends that ill persons postpone travel both for their protection and that of other travelers.

Public:

- So far, most people who have been ill with this virus have recovered.

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- We are monitoring hospitalization and death rates.
- At this point, whether you are tested and actually diagnosed with pandemic H1N1 is less important than what you do if you become sick.
- It's possible that this summer, people around you may get sick and you may get sick.
- Certainly in the fall, with our flu season, people around you will be getting sick and you may get sick.
- Be prepared to stay home for a week or so if you are ill.
- Most people infected with this virus so far have experienced the regular symptoms of flu (fever, cough, body aches, and a significant number of people have reported vomiting and diarrhea).
- For people who are critically ill, we do have antiviral medications in our arsenal against flu.
- The priority use for influenza antiviral drugs at this time is to treat severe influenza illness.
- Influenza antiviral drugs are prescription medicines (pills, liquid or an inhaler) with activity against influenza viruses, including swine influenza viruses.
- There are two influenza antiviral medications that are recommended for use against swine influenza. These are oseltamivir (trade name Tamiflu ®) and zanamivir (Relenza ®).
- Influenza antiviral drugs work best when started soon after illness onset (within two 2 days), but treatment with antiviral drugs should *still be considered after 48 hours of symptom onset, particularly for hospitalized patients or people at high risk for influenza-related complications.*
- You have a role in protecting yourself and your family.
- Stay informed. Health officials will provide additional information as it becomes available. Visit www.cdc.gov
- Everyone should take these everyday steps to protect your health and lessen the spread of this new virus:
 - Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
 - Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.

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- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Try to avoid close contact with sick people.
- If you are sick with a flu-like illness, stay home for 7 days after your symptoms begin or until you have been symptom-free for 24 hours, whichever is longer. This is to keep from infecting others and spreading the virus further.
- Follow public health advice regarding school closures, avoiding crowds and other social distancing measures.
- If you don't have one yet, consider developing a family emergency plan as a precaution.