

## Centers for Disease Control

### Key Points for the New H1N1 Flu as of August 7, 2009

#### What's New and Updated Today

- Activity Update
- International Update
- Exclusion Period
- School Guidance
- MMWR-Evaluation of Influenza Rapid Diagnostic Tests

#### Activity Update

- Influenza illness, including illness associated with the novel influenza A (H1N1) virus, is ongoing in the United States.
  - 1 As of August 7, 2009, 6,506 total novel influenza A (H1N1) hospitalizations, and 436 total deaths have been reported to CDC by state and local public health departments.
  - 2 CDC estimates that between April and June 2009, more than 1 million cases of novel H1N1 flu occurred in the United States.
  - 3 The August 7 *FluView* Report shows that influenza activity decreased in the United States during July 26 – August 1, 2009, compared to the previous week; however, there are still higher levels of influenza-like illness than is normal for this time of year. Novel H1N1 flu outbreaks are ongoing in parts of the United States, in some cases with intense activity.
  - 4 Fourteen (14) states and Puerto Rico are reporting widespread or regional influenza activity:
    - This includes three (3) states in the United States that are reporting widespread influenza activity (Alaska, California and Hawaii) and Puerto Rico;
      - 1 11 states that are reporting regional influenza activity;
      - 2 11 states and the District of Columbia that are reporting local influenza activity; and
      - 3 22 states that are reporting sporadic activity; and
      - 4 3 states that did not report.

- It is very unusual for this time of year to still be having so many states reporting regional and widespread activity.

- 1 Novel H1N1 viruses now make up more than 98% of all sub-typed influenza A viruses analyzed by the U.S. WHO/NREVSS collaborating laboratories.

- 2 During Week 30 (the week ending August 1, 2009), 1 influenza-associated pediatric death was reported to CDC.

- This death occurred in New York City and was associated with novel H1N1 flu.

- 1 This death occurred during week 27 (the week ending July 11, 2009).

- Since September 28, 2008, CDC has received 98 reports of laboratory confirmed influenza-associated pediatric deaths that occurred during the 2008-09 influenza season, 30 of which were due to novel influenza A (H1N1) virus infections.

- 1 CDC anticipates that novel H1N1 viruses will co-circulate with regular seasonal influenza viruses over our influenza season.

- 2 The timing, spread and severity of novel H1N1 virus – in addition to our regular seasonal influenza viruses - are uncertain.

### **International Situation Update as of August 4, 2009**

- Novel influenza A (H1N1) continues to circulate widely.
- Descriptive epidemiology of cases remains similar across countries.
- Isolates sequenced at WHO and CDC suggest that circulating novel influenza A (H1N1) viruses look similar to A/California/07/2009 (the reference virus selected by WHO as a potential candidate for novel influenza A (H1N1) vaccine).
- World Health Organization (WHO) regions have reported 162,380 laboratory-confirmed cases of novel influenza A (H1N1) and 1,154 deaths.

- The laboratory-confirmed cases represent an underestimation of total cases in the world as many countries have shifted to strategies of clinical confirmation and prioritization of laboratory testing for only persons with severe illness and/or high risk conditions.
- The novel influenza A (H1N1) virus is the dominant influenza virus in circulation in the United States, England, South Africa, New Zealand, Australia, Chile, Argentina and Brazil. South Africa has had a notable increase in the proportion of influenza that is novel influenza A (H1N1), and now it represents the majority of influenza in the country.
- Many seasonal influenza viruses from these countries have not been subtyped. Of those that have been subtyped in Australia, South Africa, and Argentina, the most common seasonal influenza virus is influenza A (H3N2).

### **Exclusion Period**

- On August 5, CDC revised its recommendation about how long people with flu-like illness should stay home and away from other people to prevent spreading the flu.
- CDC now recommends that those with flu-like illness stay home until at least 24 hours after their fever is gone, without using fever-reducing medicines like acetaminophen or ibuprofen.
- Previously, CDC had recommended that people stay home for seven days after they became ill or 24 hours after they had no symptoms, whichever was longer.
- The change in recommendation is based on what we learned about the new H1N1 virus during spring 2009 and is designed to decrease the risk of spreading the flu while also reducing the disruption to society caused by people staying home for long periods.
- During spring 2009, most people infected with the new H1N1 flu had fevers for 2-4 days.
- By tailoring the recommendation to how long someone with flu has a fever, people with less severe illnesses will

- The new recommendation applies to camps, schools, businesses and other community settings where most people are not at high risk for flu complications.
- It does not apply to healthcare settings. The recommendations for healthcare remain at 7 days after symptoms began or until all symptoms are gone, whichever is longer.
- The guidance applies to all people who have the flu or flu-like illness, even if they are taking antiviral drugs.
- It's important that those with flu-like illness stay home while sick, except to seek medical care, and avoid contact with other people.
- People give off more flu virus when they have a fever. So staying home during this time will be especially important to not spread the flu to friends, co-workers and fellow students.
- Even when fever has subsided, people can continue giving off the flu virus. They should take steps to protect others, like avoiding close contact with people they know are at high risk of flu complications, frequently washing hands and covering their mouths and noses when coughing or sneezing.
- Because not everyone ill with the new H1N1 flu will have a fever, it is important for everyone to wash their hands frequently and follow good hand hygiene and respiratory etiquette so they don't unknowingly infect others.
- State and local health departments may decide to lengthen the time period that people should stay home. This will be especially important for those who are returning to a place where there are many people at high risk for flu complications, such as a camp for children with asthma or a childcare facility for children less than 5 years old.

- CDC will update the guidance as more information becomes available.

### **School Guidance**

- On August 7, CDC released new guidance to help schools promote a safer environment for their students and staff and reduce exposure to influenza during the 2009-10 school year.
- The new guidance is designed to decrease the spread of regular seasonal flu and the new H1N1 flu while limiting the disruption of day-to-day activities and the vital learning that goes on in schools.
- About 55 million students and 7 million staff attend the more than 130,000 public and private schools in the United States each day. By implementing these recommendations, schools and health officials can help protect a fifth of the country's population from flu.
- This guidance provides a menu of tools to fight flu that school officials can enact, in coordination with local health officials, based on conditions in their area and what CDC and other public health organizations are learning about the virus.
- We know far more about the new H1N1 flu virus than we did when it was first detected in April. We know that closing schools is not the best option in most cases.
- With this guidance, we're providing a set of strategies that schools can use to stay open while doing what they can to protect students and staff, particularly those at high-risk of complications.
- The options schools use should match the severity of the illness that's being reported and local flu activity.
- For an outbreak similar to the spring H1N1 outbreak, CDC recommends stepping up basic good hygiene practices like hand washing, keeping sick students and staff away from school and helping families identify their children who are at high-risk for flu complications and would benefit from

- If outbreaks become more severe, CDC recommends extending the time that sick people are away from school, allowing people at high risk for flu to stay home, actively watching for signs of illness in students and staff and considering preemptive school dismissal.
- The recommendations will be most effective when implemented together as a package that combines good hygiene and practices to keep those who are ill separated from those who are well, with more active interventions based on the severity of the flu outbreak.
- We do anticipate more illness from the new H1N1 influenza than this past spring and more school-based outbreaks because influenza is typically transmitted more easily in fall and winter. By taking planning steps now schools can help ensure they're prepared for any future flu activity.
- CDC and its partners will be continually monitoring the spread of flu, the severity of the illness it's causing (including hospitalizations and deaths) and whether the virus characteristics are changing. We will provide updated assessment of severity and revise guidance as indicated.

### **Recommendations for outbreak similar to spring 2009**

#### Hand Hygiene/Respiratory etiquette

- First and foremost, the new guidelines emphasize the importance of promoting basic foundations of preventing flu: getting vaccinated, frequent hand washing with soap and water when possible, covering noses and mouths with a tissue when coughing or sneezing and staying home when sick.

· CDC recommends that all children aged 6 months up to their 19<sup>th</sup> birthday get a **seasonal flu vaccine**.

· CDC recommends that all children from 6 months through 18 years of age receive the **new H1N1 flu vaccine** when it becomes available.

- Alcohol-based hand sanitizers can be used if soap and water are not available.
- In places where alcohol-based sanitizers are not allowed, other sanitizers can be substituted but may not work as well.
- If tissues are not available, coughing or sneezing into the arm or sleeve is recommended.
- Schools should provide time for students to wash their hands whenever necessary and make tissues readily available to students and staff.

#### Exclusion period

- Those with flu-like illness should stay home for at least 24 hours after they no longer have a fever, without use of fever-reducing medicines and regardless of whether or not they are using antiviral drugs.
- Those who are sick should stay in the home during this period, except to seek necessary medical care and should avoid contact with others.

#### Routine cleaning

- People can sometimes get flu if they touch droplets left on hard surfaces and objects by those who are ill and then touch their eyes, nose or mouth.
- Studies have shown that influenza virus can survive on environmental surfaces and can infect a person for up to 2-8 hours after being deposited on the surface.
- School staff should routinely clean areas that students and staff touch often with the cleaners they typically use. Special cleaning with bleach and other special cleaners is not necessary.
- Environmental cleaning should not be the primary focus of influenza prevention activities.

#### Separate ill students and staff

- Students and staff who appear to have flu-like illness should be sent to a room separate from other students

- Space is often a challenge in schools, so it's essential that schools begin to identify this area now. It should not be an area that's used for other purposes like a lunchroom.
- Schools should limit the number of staff who care for ill students before they can be sent home.
- Those caring for students should wear protective gear, such as a mask.

Consider selectively dismissing students and staff

- Schools that serve pregnant students or medically fragile students\* may consider dismissing schools if they cannot protect students from flu with classes in session.

\* For this guidance, a medically fragile child is a child who needs intensive, life sustaining medical assistance or therapy, and needs assistance with daily living (for example, a child who uses an oxygen tank, has trouble moving, is fed through a tube, needs suctioning, or is on a ventilator). Many of these children need skilled nursing care and special medical equipment. These medically fragile children may have chronic lung disease, severe cerebral palsy, muscular dystrophy, immunodeficiency, or problems with their metabolism.

- Decisions should be based on the severity of disease in the community and should be made in collaboration with local and state public health officials.

**Recommendations for outbreaks of INCREASED SEVERITY**

- If the influenza viruses circulating during the 2009-10 school year cause higher rates of severe illness, hospitalizations and deaths, communities should consider adding interventions like permitting high-risk students, such as those who are pregnant or have chronic medical conditions, to stay home and dismissing school.

- Except for school dismissals, these strategies have not been scientifically proven. But we want school and health officials to have tools in their toolbox that they can use if it seems like the right measure for their community and the circumstances.
- Decisions about what measures to implement should be made jointly by school and local health officials.

#### Extended exclusion period (Increased Severity Scenario)

- Under this scenario, people with flu-like illness should stay home for at least 7 days after illness onset, even if they have no more symptoms. People who are still sick after 7 days should stay home for at least 24 hours after all their symptoms are gone.

#### Let high-risk students and staff members stay home (Increased Severity Scenario)

- Those at high risk of flu complications and their families may want to talk to their doctor about staying home from school when a lot of flu is circulating in the community.
- Schools should plan now for ways to continue educating students who stay home, through instructional phone calls, homework packets, internet lessons, and other approaches.
- Schools also must develop contingency plans to fill important positions like school nurses if regular staff members are ill or home with ill family members. Schools should identify healthcare workers in the community who would be willing to volunteer at the school.
- It will be important for those people who stay home to avoid becoming ill also avoid other places where they might catch the flu, like large public gatherings.

#### Active screening (Increased Severity Scenario)

- Parents should check their children each morning for illness and should keep children home if they have a fever.

- Medications that decrease fevers like acetaminophen don't prevent the spread of flu virus, so it's important to stay home when sick with flu, even if taking medicine.
- Schools should also check students and staff for fever and other symptoms of flu when they get to school in the morning, separate those who are ill, and send them home as soon as possible.

#### Keep siblings home (Increased Severity Scenario)

- Students who have an ill family member should stay home for 5 days from the day that their family member got sick. This is the time period that they're most likely to get sick themselves.

#### Increase distance at schools (Increased Severity Scenario)

- By keeping the same children together throughout the day, schools can help reduce spread of the flu.
- We encourage schools to try innovative ways of separating students. These can be something as simple as moving desks farther apart to more drastic changes such as rotating teachers between classrooms with the same students, and canceling classes that bring together children from different classrooms.

#### School dismissals (Increased Severity Scenario)

- School officials should balance the risks of flu in their community with the disruption dismissals will cause in both education and the wider community.
- Decisions should be made locally and can include dismissing when absenteeism is excessive, and proactively closing schools to decrease the spread of flu.
- Schools that dismiss students should do so for at least 5-7 calendar days and should reassess whether or not to resume classes.
- Based on the reason for dismissing school (in reaction to outbreaks vs. preemptively), the amount of time schools are dismissed may be longer.

- Parents should start thinking now about how they might handle a school dismissal, as these decisions may be made very quickly.

## **Background**

### High-Risk Groups

- When seasonal influenza or the new H1N1 flu is widespread in the community, action should be taken to protect the most vulnerable students and staff.
- High-risk groups for influenza complications include:
  - Children younger than 5 years old;
  - Pregnant women;
  - Children and adolescents (younger than 18 years) who are receiving long-term aspirin therapy and who might be at risk for experiencing Reye's syndrome after influenza virus infection;
  - Adults and children who have chronic pulmonary disease (such as asthma); cardiovascular, hepatic, hematological, neurologic, neuromuscular, or metabolic disorders, such as diabetes; adults and children who are immunosuppressed;
  - Residents of nursing homes and other chronic-care facilities;
  - And those who are 65 or older.

### For more information

- Visit [www.cdc.gov/cleanhands](http://www.cdc.gov/cleanhands) for more information on hand hygiene.
- Visit <http://www.cdc.gov/flu/protect/covercough.htm> for more information on respiratory etiquette.
- Visit [http://www.cdc.gov/h1n1flu/guidance\\_homecare.htm](http://www.cdc.gov/h1n1flu/guidance_homecare.htm) for more information on caring for sick persons in the home.

- The EPA provides a list of EPA-registered products effective against flu: <http://www.epa.gov/oppad001/influenza-disinfectants.html>
- Visit <http://www.epa.gov> for more information on cleaning

### **MMWR-Evaluation of Rapid Influenza Diagnostic Tests**

- The August 7, 2009 *Morbidity and Mortality Weekly Report* article, "Evaluation of Rapid Influenza Diagnostic Tests for Detection of Novel Influenza A (H1N1) Virus—United States, 2009" evaluates three commercially available rapid influenza diagnostic tests (RIDTs) for their ability to detect novel influenza A (H1N1).
  - Rapid Influenza Diagnostic tests (RIDTs) are tests that detect influenza A or B antigens and can provide results within 15 minutes.
  - RIDTs from three companies were evaluated and results indicate that these tests can detect novel influenza A (H1N1) in respiratory specimens, but the overall sensitivities range from 40-69% meaning that many novel influenza A (H1N1) infections will be missed.
  - Given the lower sensitivities found with RIDTs compared to reverse transcriptase-polymerase chain reaction (rt-PCR), decisions regarding treatment and further testing among patients with negative results from RIDT testing should be based upon clinician suspicion, underlying medical conditions, severity of illness, and risk for complications in those persons suspected of having novel H1N1 virus infection.
- Early treatment with influenza antiviral medications of persons infected with influenza who are at increased risk of influenza complications and those people hospitalized with suspected influenza is important to maximize benefit of treatment and to lessen the severity of illness. Antiviral treatment should not be withheld pending the results of diagnostic testing if the suspicion for novel H1N1 virus infection is high.
- On Wednesday, July 29<sup>th</sup>, CDC issued "Interim Guidance for the Detection of Novel Influenza A Virus Using Rapid Influenza Diagnostic Tests." This guidance updates

previous guidance on this topic and is available at [http://www.cdc.gov/h1n1flu/guidance/rapid\\_testing.htm](http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm).

### **Novel H1N1 Influenza Vaccine**

- CDC's Advisory Committee on Immunization Practices (ACIP), a panel made up of medical and public health experts, met July 29, 2009, to make recommendations on who should receive the new H1N1 vaccine when it becomes available, and to determine which groups of the population should be prioritized if the vaccine is initially available in limited quantities.
  
- The Committee recommended that initial vaccination efforts focus on five key populations:
  - all people 6 months through 24 years of age
    - 1 people who live with or care for children younger than 6 months of age
    - 2 all pregnant women
    - 3 healthcare and emergency services personnel, and
    - 4 people aged 25 through 64 years who have health conditions associated with higher risk of medical complications from influenza.
  - Together, these key populations equal 159 million.
  - By vaccinating these priority groups we hope to reduce the impact of H1N1. People in these groups are at higher risk of disease or serious complications, likely to come in contact with novel H1N1, or who could infect young infants.
  - Vaccinating persons who live with or care for children <6 months is the best way to help protect these children since those there is no influenza vaccine for children <6 months.
  
- Once the demand for vaccine for these prioritized groups has been met at the local level, programs and providers should begin vaccinating everyone from the ages of 25 through 64 years.
  - 1 Current studies indicate that the risk for infection among persons age 65 or older is less than the risk for younger age groups. Many older adults seem to already have some existing immunity to the novel H1N1 virus. However, as vaccine supply

and demand for vaccine among younger age groups is being met, programs and providers should also offer vaccination to people 65 years and older.

2 Availability and demand for vaccine can be unpredictable. It is possible that initial amounts of vaccine will not be enough to meet demands.

3 If vaccine is available in insufficient amounts for the initial priority groups, the following groups would be prioritized:

- pregnant women,

- 1 people who live with or care for children younger than 6 months of age,

- 2 healthcare and emergency services personnel with direct patient contact,

- 3 children 6 months through 4 years of age, and

- 4 children 5 through 18 years of age who have chronic medical conditions.

- Novel H1N1 vaccine supply and availability is projected to increase quickly over time, and vaccine should not be kept in reserve for later administration of the second dose.

- 1 The novel H1N1 vaccine is not intended to replace the seasonal flu vaccine – it is intended to be use along-side seasonal flu vaccine to protect people.

- 2 It is anticipated that seasonal flu and novel H1N1 vaccines may be administered on the same day.

- 3 The ACIP recommendations are one important step in a broader plan related to novel H1N1 vaccine production and implementation of a national voluntary vaccination program.

- 4 We are aggressively taking early steps in the vaccine manufacturing process, working closely with manufacturing and the rest of the government.

- 5 CDC isolated the novel H1N1 virus, made candidate vaccine virus strains that can be used to create vaccine, and has provided this virus to industry so they can begin scaling up for production of a vaccine.

- 6 Scientists in a network of medical research institutions across the United States will soon begin an initial set of five

clinical trials of candidate novel H1N1 influenza vaccines. The research will be under the direction of the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health. More information about these clinical trials can be found at

<http://www3.niaid.nih.gov/news/QA/vteuH1N1qa.htm>

7 The five manufacturers who already produce U.S.-licensed seasonal vaccine are also conducting their own novel H1N1 influenza vaccine trials under contract with HHS.

8 There are many steps involved with producing a vaccine and we are committed to going forward with the NIH, FDA, BARDA, and the manufacturers of influenza vaccines, to see about developing full scale vaccine production.

· If things progress to full scale production, vaccine may be available as early as mid-October.

1 The novel H1N1 influenza vaccine will be made using the same processes and facilities that are used to make the currently licensed seasonal influenza vaccines.

· We will provide the public with transparent information about what we know and do not know about the safety and efficacy of novel H1N1 vaccines to help them make informed decisions.

1 A mass vaccination program of even a modest scale will involve extraordinary efforts at the federal, state and local levels.

### **Novel H1N1 Influenza Vaccine Safety**

- As medical and public health professionals, parents, and grandparents, ensuring the health and safety of our children is a top priority.
- We are concerned with protecting our nation's children from vaccine-preventable diseases like influenza and preventing any possible adverse events from vaccines.
- The potential for more severe illness and many more deaths or disability caused by this new strain of influenza weighs heavily on our minds – as does the unfortunate outcome of the 1976 swine flu vaccination program.

- The novel H1N1 flu vaccines will be very much like seasonal flu vaccines, which have a very good safety profile. However, no vaccine is 100% safe. This vaccine will be no exception.
- Those who choose vaccination for themselves or their children will be screened for contraindications (such as egg allergy) and will receive information sheets describing the vaccine's risks and benefits, signs and symptoms of adverse events to look for following vaccination, and how to report adverse events.
- We expect that H1N1 vaccines will be available in multiple formulations, including a formulation that does not contain the preservative thimerosal.
- CDC is working to enhance our safety monitoring systems and will actively encourage providers and vaccine recipients to report to us adverse events following vaccination (whether or not they believe the vaccine caused the event). We will be monitoring very closely for any signs that the vaccine is causing unexpected adverse events and we will work with state and local health officials to investigate any unusual events rapidly.

### **Seasonal Influenza Vaccine**

- The new H1N1 influenza virus is a reminder of the unpredictable nature of influenza, and the importance of prevention.
- While the novel 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.
- Every year in the United States, on average 5% to 20% of the population gets the flu; more than 200,000 people are hospitalized from flu complications, and; about 36,000 people die from flu-related causes. Some people, such as older people, young children, and people with certain health conditions, are at high risk for serious complications from seasonal influenza.
- The single best way to protect yourself and your loved ones against the flu is to get vaccinated each year.
- We hope that people, especially those at high risk for serious complications and their close contacts, will start to

- It is not too early to get a flu vaccine as soon as it is available in August or September. The protection you get from the vaccine will not wear off before the flu season is over.
- While we hope that people who want to avoid getting seasonal influenza will not delay getting vaccinated, we know that some will. We will be encouraging them to get vaccinated throughout the influenza season, into December, January, and beyond.
- Annual flu vaccines contain three viruses: one A (H1N1) virus, one A (H3N2) virus and one B virus. The viruses in the vaccine change each year based on international surveillance and scientists' estimations about which types and strains of viruses will circulate in a given year.
- We recognize the fact that annual flu vaccines contain an A (H1N1) virus may cause some confusion. The novel H1N1 influenza virus that has caused the current pandemic is not the same as the H1N1 virus in the seasonal flu vaccine.
- We want to make sure that we communicate clearly to the public that the seasonal flu vaccine is not expected to protect against the novel H1N1 influenza virus. There are efforts underway to develop a safe and effective novel H1N1 vaccine.
- As always, it's not possible for us to predict at this time of year whether this year's seasonal vaccine will be a good match with circulating viruses.
- Influenza viruses are constantly changing – they can change from one season to the next or they can even change within the course of the same 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.
- Because of these factors, there is always the possibility of a sub-optimal match between circulating viruses and the viruses in the vaccine.
- While a less than ideal virus match can reduce the vaccine's effectiveness against the variant virus, the vaccine can still offer cross-protection against related influenza viruses and prevent many illnesses and flu-related complications.