

Novel H1N1 Flu
Updated Key Points
May 14, 2009: 11AM

Surveillance & Reporting

- Today CDC will begin reporting aggregate numbers of confirmed and probable cases of novel H1N1 infection by state.
- Probable cases occur in people who test positive for influenza A virus infection, but negative for human seasonal flu viruses at their state health department laboratory. These samples are considered “unsubtypable.”
- To date, 99 percent of unsubtypable or “probable” cases sent to CDC by state health departments have been laboratory confirmed as cases of novel H1N1 flu infection.
- Reporting aggregate probable and confirmed cases will better reflect the true impact of novel H1N1 flu on the United States.
- There are 4,298 confirmed and probably cases in 46 states and the District of Columbia.
- The list of states with the numbers of people who are confirmed and probable cases of novel H1N1 infection will be available online and updated Monday - Friday at approximately 11 a.m. at <http://www.cdc.gov/h1n1flu/>. (Most states do not report over the weekend.)
- Novel influenza A (H1N1) activity is now being detected in CDC’s routine [influenza surveillance systems](#) as reported in *FluView*.
- *FluView* is a weekly report that tracks U.S. influenza activity through multiple systems across five categories.
- The fact that novel H1N1 activity can now be monitored through seasonal surveillance systems is an indication that there are higher levels of influenza-like illness in the United States than is normal for this time of year.
- About half of all influenza viruses being detected are novel H1N1 viruses.
- CDC will report probable and confirmed case counts for as long as possible, and then will transition to using the seasonal surveillance system to track the progress of the novel H1N1 outbreak.
- Routine seasonal surveillance does not count individual cases, but instead monitors activity levels and virus characteristics through a nationwide surveillance system.

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- The Epidemiology and Prevention Branch in the Influenza Division at CDC collects, compiles and analyzes information on influenza activity year round in the United States and produces a weekly report published each Friday called "*FluView*" (normally from October through mid-May).
- In light of the current outbreak, weekly publication of *FluView* will continue over the spring and summer.
- The U.S. influenza surveillance system is a collaborative effort between CDC and its many partners in state and local health departments, public health and clinical laboratories, vital statistics offices, healthcare providers, clinics and emergency departments.
- Information in five categories is collected from nine different data sources that allow CDC to:
 - Find out when and where influenza activity is occurring
 - Track influenza-related illness
 - Determine what influenza viruses are circulating
 - Detect changes in influenza viruses
 - Measure the impact influenza is having on deaths in the United States
- More information about CDC's influenza surveillance systems can be found at <http://www.cdc.gov/flu/weekly/fluactivity.htm>

Outbreak Summary

- Novel influenza A (H1N1) is a new flu virus of swine origin that was first detected in April, 2009.
- The virus is infecting people and is spreading from person-to-person, and has sparked a growing outbreak of illness in the United States with an increasing number of cases being reported internationally as well.
- This virus is spreading from person-to-person without regard for borders, race or ethnicity.
- CDC anticipates that there will be more cases, more hospitalizations and more deaths associated with this new virus in the coming days and weeks because the population has little to no immunity against it.
- The number of countries reporting cases of this virus is growing.
- Refer to the WHO website at <http://www.who.int/en/> for updated country counts.

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- Sustained person-to-person transmission beyond two generations outside of North America would need to occur in order for WHO to raise the pandemic alert phase to level 6.
- Should WHO raise the pandemic alert level to phase 6, this would have little impact on the United States.
- The United States is already engaged in implementing its pandemic response plan.
- Influenza is always serious – each year in the United States, seasonal influenza results, on average, in an estimated 36,000 deaths and more than 200,000 hospitalizations from flu-related causes.
- It's uncertain at this time how severe this novel H1N1 outbreak will be in terms of illness and death compared with other influenza viruses.
- Because this is a new virus, most people will not have immunity to it, and illness may be more severe and widespread as a result.
- In addition, currently there is no vaccine to protect against this novel H1N1 virus as we have for seasonal influenza.
- This outbreak certainly poses the potential to be at least as serious as seasonal flu, if not more so, especially given the fact that there currently is no vaccine against this virus and there is no immunity against this virus in the population.
- The Southern Hemisphere is just going into their flu season and how this virus behaves in terms of illness severity, high risk groups and overall burden of disease might give us some clues about what we can expect for the Northern Hemisphere in the upcoming 2009-2010 flu season.

Response:

- The Federal Government is mounting an aggressive response to this outbreak.
- CDC's goals during this public health emergency are to reduce illness and death, and to provide information to assist health care providers, public health officials and the public in addressing the challenges posed by this newly identified influenza virus.
- CDC continues to update guidance continuously as more information becomes available.

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- Visit <http://www.cdc.gov/h1n1flu/guidance/> for the most updated guidance.
- Deployment of 25 percent of the SNS supplies has been completed to all 62 states or project areas.
- There are currently more than 100 CDC staff persons deployed in the field to support the outbreak response.
- CDC is taking early steps in the vaccine manufacturing process, working closely with manufacturing and the rest of the government. (More vaccine information below.)
- A CDC-developed PCR diagnostic test kits to detect this virus has been sent to all 50 states, the District of Columbia and Puerto Rico. Kits are being sent internationally too.
- This will increase testing capacity, which will provide a more accurate picture of the true scope of novel H1N1 disease in the United States.
- Much of CDC's guidance is informed by studies and past experience with seasonal (human) influenza and past influenza pandemics.
- Like seasonal flu, some people may be at greater risk of serious complications related to novel H1N1 infection and illness.
- People who are at high risk of serious seasonal flu-related complications include pregnant women, children younger than 5 years old, people with chronic medical conditions, and people 65 years and older.
- CDC believes this information from seasonal flu applies to the novel H1N1 (swine flu) viruses as well, but studies on this virus are ongoing to learn more about its characteristics and to learn what groups are at highest risk.
- This is a rapidly evolving situation and guidance should be considered interim and will be updated frequently as more information becomes available.
- 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.

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Novel H1N1 Flu Virus

- The hallmark of influenza viruses is their ability to undergo constant and dramatic change.
- Many different animals and, of course, humans get infected with influenza viruses, but the viruses generally stick with one species or another.
- However, sometimes flu viruses jump from one species to another, and sometimes, viruses from different species can infect the same host and result in a new combination of virus genes.
- This last scenario is what happened and resulted in the novel H1N1 flu virus.
- This is a very unusual virus. This particular genetic combination of influenza virus segments has not been recognized before in the U.S. or elsewhere.
- Testing of a number of the virus samples submitted to CDC show that they are very similar, which means that they likely originated from the same source.
- It's too soon to predict what will happen or how the virus might change.
- Regular seasonal influenza activity continues in the United States at this time.
- There are seasonal influenza A H1, influenza A H3 and type B viruses circulating and causing illness in the United States – these are viruses that regularly circulate among humans – in addition to the novel influenza A H1N1 virus.
- There is the possibility of reassortment (swapping virus genes) between this novel influenza A (H1N1) virus and circulating seasonal influenza viruses.
- Such a reassortant virus could be resistant to the antiviral drug oseltamivir because most of currently circulating seasonal H1 viruses are resistant to oseltamivir. (They are sensitive to zanamivir and the adamantane drugs amantadine and rimantidine.)
- That is one reason why it's important to continue to watch the novel H1N1 virus and human seasonal viruses carefully over the coming weeks and months and to continue to be prepared and proactive.

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- In addition, as always, we must continue to look for emergence of other flu viruses with pandemic potential.
- It is important that we continue to watch this virus carefully to look for changes that may occur.
- The Southern Hemisphere is just going into their flu season and how this virus behaves will give us some clues about what we can expect for the Northern Hemisphere.

Vaccine

- Vaccines are a very important part of a response to influenza, including novel influenza that may become pandemic.
- CDC has isolated the novel H1N1 flu virus and is working to make a candidate vaccine virus that can be provided to industry so that manufacturers can scale 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.
- If things go well, and we achieve full scale production, it will be several months until the vaccine will be available.
- So a vaccine is an important tool for the future.
- **Seasonal Flu Vaccine.** Production of the seasonal flu vaccine for next season is nearly complete and will be completed. Seasonal flu is responsible for causing an estimated 36,000 flu-related deaths and 200,000 flu-related hospitalizations in the U.S. each year. Seasonal flu vaccine is always a public health priority.

Public/Personal Responsibility:

- It's important that people continue to take steps to protect their health and the health of their family.
- Stay informed. Health officials will provide additional information as it becomes available. Visit www.cdc.gov
- Everyone should take everyday steps to protect your health and lessen the spread of this new virus:

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- 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.
 - Avoid touching your eyes, nose or mouth. Germs spread this way.
 - Try to avoid close contact with sick people.
 - **Stay home if you are sick 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.**
- Children, especially younger children, might potentially be contagious for longer periods. CDC is studying the virus and its capabilities to try to learn more and will provide more information as it becomes available.
 - We do have antiviral medications in our arsenal against flu.
 - The priority use for influenza antiviral drugs during this outbreak is to treat severe influenza illness (including those who are hospitalized or ill people who are considered at high risk of serious influenza-related complications).