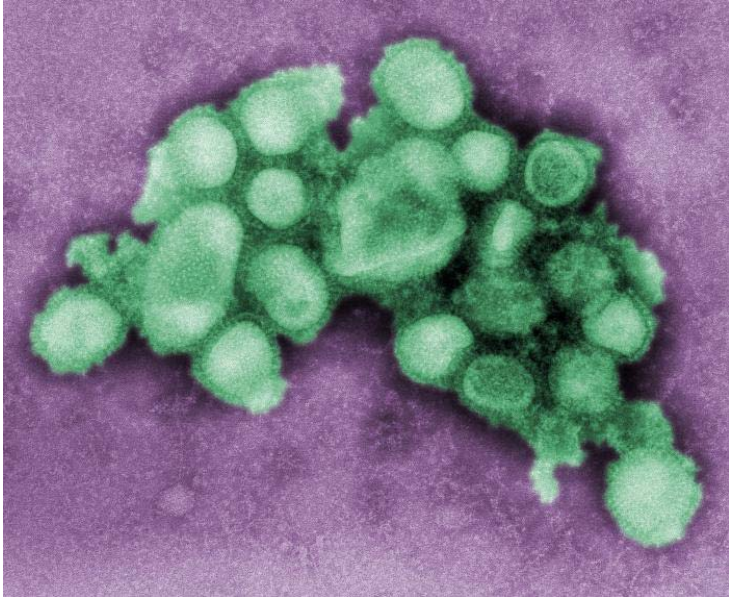


WHAT CAN I DO TO MANAGE THE FLU (H1N1)?



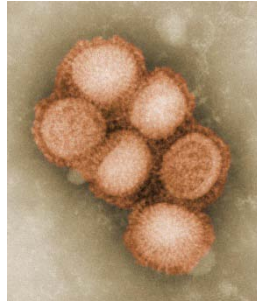
**Brought to you by the South Central Center for Public Health
Preparedness**

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The following excerpts were extracted from the guidance posted by the CDC, FDA, ACIP, and US Department of Health & Human Services current as of 24 September 2009.

WHAT CAN I DO TO MANAGE THE FLU (H1N1)? SCCPHP



WHAT IS IT?

H1N1 (referred to as “swine flu” early on) is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009. Other countries, including Mexico and Canada, have reported people sick with this new virus. This virus is spreading from person-to-person, probably in much the same way that regular seasonal influenza viruses spread. (1. <http://pandemicflu.gov/faq/swineflu/>)

SIGNS & SYMPTOMS

The symptoms of H1N1 (swine) flu in people are similar to the symptoms of regular human flu and include fever, cough, sore throat, body aches, headache, chills and fatigue. Some people have reported diarrhea and vomiting associated with H1N1 (swine) flu. In the past, severe illness (pneumonia and respiratory failure) and deaths have been reported with H1N1 (swine) flu infection in people. Like seasonal flu, H1N1 (swine) flu may cause a

worsening of underlying chronic medical conditions. (1. <http://pandemicflu.gov/faq/swineflu/>)

PREPARING MY HOME

Influenza virus can survive on environmental surfaces and can infect a person for 2 to 8 hours after being deposited on the surface.

Influenza virus is destroyed by heat (167-212°F [75-100°C]). In addition, several chemical germicides, including chlorine, hydrogen peroxide, detergents (soap), iodophors (iodine-based antiseptics), and alcohols are effective against human influenza viruses if used in proper concentration for a sufficient length of time. For example, wipes or gels with alcohol in them can be used to clean hands. The gels should be rubbed into hands until they are dry. To prevent the spread of influenza virus it is important to keep surfaces (especially bedside tables, surfaces in the bathroom, kitchen counters and toys for children) clean by wiping them down with a household disinfectant according to directions on the product label. (3. <http://www.cdc.gov/h1n1flu/recommendations.htm>)



PERSONAL HYGIENE

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 hands cleaners are also effective. Avoid touching your eyes, nose or mouth. Germs spread that way.

(3. <http://www.cdc.gov/h1n1flu/recommendations.htm>)

INFECTION CONTROL

Whenever possible, rather than relying on the use of masks or respirators, close contact and crowded conditions should be avoided during an influenza pandemic.

- Facemasks should be considered for use by individuals who enter crowded settings, both to protect their nose and mouth from other people's coughs and to reduce the wearers' likelihood of coughing on others; the time spent in crowded settings should be as short as possible.
- Respirators should be considered for use by individuals for whom close contact with an infectious person is unavoidable. This can include selected individuals who must care for a sick person (e.g., family member with a respiratory infection) at home. (1. <http://pandemicflu.gov/faq/swineflu/>)

PERSONAL PROTECTIVE EQUIPMENT

While caring for a sick person at home, CDC recommends the following about facemasks or respirators:

- Avoid close contact (less than about 6 feet away) with the sick person as much as possible.
- If you must have close contact with the sick person (for example, hold a sick infant), spend the least amount of time possible in close contact and try to wear a facemask (for example, surgical mask) or N95 disposable respirator.
- An N95 respirator that fits snugly on your face can filter out small particles that can be inhaled around the edges of a facemask, but compared with a facemask it is harder to breathe through an N95 mask for long periods of time.
- Facemasks and respirators may be purchased at a pharmacy, building supply or hardware store.
- Wear an N95 respirator if you help a sick person with respiratory treatments using a nebulizer or inhaler, as directed

by their doctor. Respiratory treatments should be performed in a separate room away from common areas of the house when at all possible.

- Used facemasks and N95 respirators should be taken off and placed immediately in the regular trash so they don't touch anything else.
 - Avoid re-using disposable facemasks and N95 respirators if possible. If a reusable fabric facemask is used, it should be laundered with normal laundry detergent and tumble-dried in a hot dryer.
 - After you take off a facemask or N95 respirator, clean your hands with soap and water or an alcohol-based hand sanitizer.
- (1. <http://pandemicflu.gov/faq/swineflu/>)

SOCIAL DISTANCING

People infected with seasonal and 2009 H1N1 flu shed virus and may be able to infect others from 1 day before getting sick to 5 to 7 days after. This can be longer in some people, especially children and people with weakened immune systems and in people infected with the new H1N1 virus. (3.

<http://www.cdc.gov/h1n1flu/recommendations.htm>)

- Follow public health advice regarding school closures, avoiding crowds and other social distancing measures.
- Be prepared in case you get sick and need to stay home for a week or so; a supply of over-the-counter medicines, alcohol-based hand rubs, tissues and other related items might could be useful and help avoid the need to make trips out in public while you are sick and contagious (3. <http://www.cdc.gov/h1n1flu/recommendations.htm>)

WHAT IF I GET SICK?

If you live in areas where people have been identified with new H1N1 flu and become ill with influenza-like symptoms, including fever, body aches, runny or stuffy nose, sore throat, nausea, or vomiting or diarrhea, you should stay home and avoid contact with other people, except to seek medical care. If you have severe illness or you are at high risk for flu complications, contact your health care provider or seek medical care. Your health care provider will determine whether flu testing or treatment is needed.

(1. <http://pandemicflu.gov/faq/swineflu/>)

PROPHYLACTIC MEDICATION

Use of antiviral drugs for treatment and chemoprophylaxis of influenza has been a cornerstone for the control of seasonal influenza outbreaks in nursing homes and other long term care facilities. (4.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr57e717a1.htm>)

In addition to use in nursing homes, antiviral chemoprophylaxis also can be considered for controlling influenza outbreaks in other closed or semi-closed settings (e.g., correctional facilities, or other settings in which persons live in close proximity). (3.

<http://www.cdc.gov/h1n1flu/recommendations.htm>)

WHO SHOULD RECEIVE MEDICATION

Antiviral medications can sometimes help lessen influenza symptoms, but require a prescription. Most people do not need these antiviral drugs to fully recover from the flu. However, persons at higher risk for severe flu complications, or those with severe flu illness who require hospitalization, might benefit from antiviral medications. Antiviral medications are available for persons 1 year of age and older. Ask your health care provider whether you need antiviral medication.

Influenza infections can lead to or occur with bacterial infections. Therefore, some people will also need to take antibiotics. More severe or prolonged illness or illness that seems to get better, but then gets worse again may be an indication that a person has a bacterial infection. Check with your health care provider if you have concerns (3).

<http://www.cdc.gov/h1n1flu/recommendations.htm>)

Antiviral treatment is recommended for

1. All hospitalized patients with confirmed, probable or suspected novel influenza (H1N1).
2. Patients who are at higher risk for seasonal influenza complications. (3).

<http://www.cdc.gov/h1n1flu/recommendations.htm>)

MEDICATIONS FOR H1N1

FDA Approved Drugs for Influenza

Tamiflu (oseltamivir phosphate) and **Relenza** (zanamivir) are the two FDA-approved influenza antiviral drugs that are recommended by CDC for use against the 2009 H1N1 influenza virus. (2).

<http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm>)

Who should not take Zanamivir?

Do not take Zanamivir if you have ever had a severe allergic reaction to Zanamivir or lactose. Zanamivir is not recommended for people with chronic lung disease such as asthma or COPD. Zanamivir should only be used for treatment of persons aged 7 years and older, and for prevention in persons aged 5 years and older. It should not be used for prevention of flu in nursing home patients.

Medications for H1N1

Agent, group		Treatment	Chemoprophylaxis
Oseltamivir			
Adults		75-mg capsule twice per day for 5 days	75-mg capsule once per day
Children ≥ 12 months	15 kg or less	60 mg per day divided into 2 doses	30 mg once per day
	16-23 kg	90 mg per day divided into 2 doses	45 mg once per day
	24-40 kg	120 mg per day divided into 2 doses	60 mg once per day
	>40 kg	150 mg per day divided into 2 doses	75 mg once per day
Zanamivir			
Adults		Two 5-mg inhalations (10 mg total) twice per day	Two 5-mg inhalations (10 mg total) once per day
Children		Two 5-mg inhalations (10 mg total) twice per day (age, 7 years or older)	Two 5-mg inhalations (10 mg total) once per day (age, 5 years or older)

(3. <http://www.cdc.gov/h1n1flu/recommendations.htm>)

How much TAMIFLU® should my child or I take if my child or I have been exposed to novel H1N1 flu?

Doses for prevention of novel H1N1 flu are the same as those used for treatment as described in the above section, but are given only once a day rather than twice a day. Also, you should continue the medication for 10 days instead of 5 days. (1.

<http://pandemicflu.gov/faq/swineflu/>)

Fevers and aches can be treated with acetaminophen (Tylenol®) or ibuprofen (Advil®, Motrin®, Nuprin®) or nonsteroidal anti-inflammatory drugs (NSAIDS). (3.

<http://www.cdc.gov/h1n1flu/recommendations.htm>)

VACCINE

Vaccination is one of the most effective ways to minimize suffering and death from influenza. Every state is developing a vaccine delivery plan. Vaccine will be available in a combination of settings such as vaccination clinics organized by local health departments, healthcare provider offices, schools, and other private settings, such as pharmacies and workplaces. (1.

<http://pandemicflu.gov/faq/swineflu/>)

Currently there are 4 novel H1N1 vaccines that have been approved by the FDA, as of 15 September 2009. They are manufactured by CSL Limited, MedImmune LLC, Novartis Vaccines and Diagnostics Limited, and Sanofi Pasteur, Inc. All four firms manufacture the vaccine using the same processes, which have a long record of producing safe seasonal vaccines. From preliminary data from adults participating in multiple clinical studies, the 2009 H1N1 vaccines induce a strong immune response in most healthy adults 8 to 10 days after a single dose, similar to the results seen in the seasonal influenza vaccines.

How many doses of the vaccine will individuals need to receive?

Currently available data suggest that children 6 months to 9 years of age have little or no evidence of protective antibodies to the pandemic (H1N1) 2009 virus (MMWR 2009; 58(19) 521-524). Based on these data, children 9 years of age and younger should be administered 2 doses of the monovalent pandemic (H1N1) 2009 virus vaccine. Adults should be administered 1 dose, as should children and adolescents 10 years of age and older, as we expect that they will respond similarly to adults. Clinical studies are underway and will provide additional information about the optimal number of doses. (9.

<http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm181950.htm>)

What will be the recommended interval between the first and second dose for children 9 years of age and under?

This will not be known until clinical trials are complete. For planning purposes, planners should assume 21-28 days between the first and second vaccination.

Can the seasonal vaccine and the novel H1N1 vaccine be administered at the same time?

The inactivated 2009 H1N1 vaccine can be administered at the same visit as any other vaccine, including pneumococcal polysaccharide vaccine. Live 2009 H1N1 vaccine can be administered at the same visit as any other live or inactivated vaccine EXCEPT seasonal live attenuated influenza vaccine. (8.

http://www.cdc.gov/h1n1flu/vaccination/public/vaccination_qa_public.htm)

WHO SHOULD BE VACCINATED?

On July 29, 2009, the Advisory Committee on Immunization Practices (ACIP)—an advisory committee to CDC—recommended that novel H1N1 flu vaccine be made available first to the following five groups:

- Pregnant women
- Health care workers and emergency medical responders
- People caring for infants under 6 months of age
- Children and young adults from 6 months to 24 years
- People aged 25 to 64 years with underlying medical conditions (e.g. asthma, diabetes) (1.<http://pandemicflu.gov/faq/swineflu/>)

TAKING CARE OF SOMEONE AT HOME

People with novel H1N1 flu who are cared for at home should:

- Check with their health care provider about any special care they might need if they are pregnant or have a health condition such as diabetes, heart disease, asthma, or emphysema
- Check with their health care provider about whether they should take antiviral medications
- Keep away from others as much as possible. This is to keep from making others sick. Do not go to work or school while ill
- Stay home for at least 24 hours after fever is gone, except to seek medical care or for other necessities. (Fever should be gone without the use of a fever-reducing medicine.)
- Get plenty of rest
- Drink clear fluids (such as water, broth, sports drinks, electrolyte beverages for infants) to keep from being dehydrated
- Cover coughs and sneezes. Clean hands with soap and water or an alcohol-based hand rub often and especially after using tissues and after coughing or sneezing into hands

- Wear a facemask – if available and tolerable – when sharing common spaces with other household members to help prevent spreading the virus to others. This is especially important if other household members are at high risk for complications from influenza.
- Be watchful for emergency warning signs (see below) that might indicate you need to seek medical attention. (6. http://www.cdc.gov/h1n1flu/guidance_homecare.htm)

SHOULD I STAY HOME IF A FAMILY MEMBER IS SICK?

Employees who are well but who have an ill family member at home with 2009 H1N1 flu can go to work as usual. These employees should monitor their health every day, and take everyday precautions including washing their hands often with soap and water, especially after they cough or sneeze. Alcohol-based hand cleaners are also effective. If they become ill, they should notify their supervisor and stay home. (3. <http://www.cdc.gov/h1n1flu/recommendations.htm>)

GETTING PROFESSIONAL MEDICAL HELP

In adults, emergency warning signs that need urgent medical attention include:

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting
- Flu-like symptoms improve but then return with fever and worse cough (1. <http://pandemicflu.gov/faq/swineflu/>)

TAKING CARE OF CHILDREN

Special Considerations for Children

Aspirin or aspirin-containing products (e.g. bismuth subsalicylate – Pepto Bismol) should not be administered to any confirmed or suspected ill case of novel influenza H1N1 virus infection aged 18 years old and younger due to the risk of Reye syndrome. For relief of fever, other anti-pyretic medications such as acetaminophen or non-steroidal anti-inflammatory drugs are recommended

- Children 5 years of age and older and teenagers with the flu can take medicines **without** aspirin, such as acetaminophen (Tylenol®) and ibuprofen (Advil®, Motrin®, Nuprin®), to relieve symptoms.
- Children younger than 4 years of age should **NOT** be given over-the-counter cold medications without first speaking with a health care provider.
- The safest care for flu symptoms in children younger than 2 years of age is using a cool-mist humidifier and a suction bulb to help clear away mucus. (3.
<http://www.cdc.gov/h1n1flu/recommendations.htm>)

In children emergency warning signs that need urgent medical attention include:

- Fast breathing or trouble breathing
- Bluish or gray skin color
- Not drinking enough fluids
- Severe or persistent vomiting
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Flu-like symptoms improve but then return with fever and worse cough (1. <http://pandemicflu.gov/faq/swineflu/>)

WHO IS REALLY AT RISK?

Previously recognized high risk medical conditions from seasonal influenza appear to be associated with increased risk of complications from this 2009 H1N1. These underlying conditions include asthma, diabetes, suppressed immune systems, heart disease, kidney disease, neurocognitive and neuromuscular disorders and pregnancy. (3).

<http://www.cdc.gov/h1n1flu/recommendations.htm>)

WHAT ABOUT TOMORROW?

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](#) (7).

<http://www.cdc.gov/flu/weekly/>)

FOR MORE INFORMATION

Want to learn more about pandemic flu and related emergencies? The South Central Public Health Partnership has put together a list of course, webinars, and other information. The courses are free, self-paced, and designed specifically for this reason. For more information or to see the list of appropriate courses concerning pandemic influenza please visit our website at www.southcentralpartnership.org.



SOURCES

1. US Department of Health and Human Services' Flu.gov FAQ's
<http://pandemicflu.gov/faq/swineflu/>
2. FDA's Influenza (flu) Antiviral Drugs and Related Information
<http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm>
3. CDC's Updated Interim Recommendations for the Use of Antiviral Medications in the Treatment and Prevention of Influenza for the 2009-2010 Season
<http://www.cdc.gov/h1n1flu/recommendations.htm>
4. MMWR: Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2008
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr57e717a1.htm>
5. MMWR: Use of Influenza A (H1N1) 2009 Monovalent Vaccine, Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr58e0821a1.htm>
6. CDC's Interim Guidance for Novel H1N1 Flu (Swine Flu): Taking Care of a Sick Person in Your Home
http://www.cdc.gov/h1n1flu/guidance_homecare.htm
7. CDC's Weekly Flu Update <http://www.cdc.gov/flu/weekly/>
8. CDC's Questions and Answers on the 2009 H1N1 Influenza Vaccine
http://www.cdc.gov/h1n1flu/vaccination/public/vaccination_qa_pub.htm
9. FDA Influenza A (H1N1) 2009 Monovalent
<http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm181950.htm>