

Infection Control to Prevent the Spread of Swine Flu in Health Care Settings

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With the current news about swine flu, health care workers and health care facilities need to take immediate steps to determine if their workplace is ready to manage a swine flu outbreak.

Flu spreads from person to person through the air and by contact with infected surfaces such as telephones and doorknobs. There are three well-established methods for managing an outbreak of the flu virus:

- 1) Vaccines to prevent catching the flu or to reduce its symptoms;
- 2) Antiviral medications to treat symptoms of flu, and
- 3) Implementation of standard infection control procedures to prevent spread of infection.

Frequently Asked Questions

Q. Do vaccines really work?

A. There currently are good vaccines available to prevent the spread and/or reduce the severity of seasonal flu symptoms. However, with swine flu, there is no magic bullet yet. Scientists plan to try to develop a vaccine, but such a process will take months. Therefore strict infection control is the best protection now.

Q. Is there a treatment for flu?

A. The Food and Drug Administration has approved antiviral medications to treat seasonal flu. Patients with swine flu appear to be responding favorably to at least two of these drugs. However for these drugs to work, they need to be administered within 48 hours after symptoms appear.

Q. Will the swine flu become a pandemic?

A. This is the fear that we all have. Currently countries around the world are mobilizing to identify, quarantine and treat patients suspected of having swine flu. Laboratories are confirming the cases. A pandemic could infect millions of people, spreading quickly from person to person, travel quickly around the globe, and take months or years to run its course.

Q. Why is infection control so important?

A. From the first moment that a flu outbreak strikes, infection control is our best tool for controlling the spread of the virus and is the cornerstone of any early prevention effort. It is critical to limiting the spread of any potential flu pandemic that we now implement comprehensive infection control procedures, especially in healthcare settings.

Q. How would a swine flu outbreak affect the average health care setting?

A. If cases of swine flu can not be contained and it becomes a pandemic, large numbers of people with illness could severely affect the health care community's ability to respond. First responders and health care workers would be doubly exposed to the virus, both through their normal, everyday community activities and in the health care environment where sick patients come for care.

In a pandemic, hospitals may be unprepared for the huge surge in numbers of patients needing care. To protect patients and other workers, hospitals will need policies that encourage sick workers to stay home without fear of losing their job, pay or benefits. At the same time, they would need access to additional staff, perhaps even volunteers, to substitute for the health care workers who become ill. This is why strict infection control is so crucial.

Because of the serious threat posed by a pandemic flu, hospitals and other health care facilities have been encouraged to plan and prepare for the past five years for how they would manage an outbreak of pandemic flu. Now is the time to check to see if this planning and preparation has been effective.

Q. What are the current infection control precautions for swine flu from CDC ?

A. Standard, Droplet, Contact and Airborne precautions should be used for all patient care activities, and maintained for 7 days after illness onset or until symptoms have resolved. Maintain adherence to hand hygiene by washing with soap and water or using hand sanitizer immediately after removing gloves and other equipment and after any contact with respiratory secretions. Personnel providing care to or collecting clinical specimens from suspected or confirmed cases should wear disposable non-sterile gloves, gowns, and eye protection (e.g., goggles) to prevent conjunctival exposure.

Because of a concern for the airborne transmission of flu, CDC recommends that all personnel providing direct patient care for suspected or confirmed swine influenza A (H1N1) cases should wear a fit-tested disposable N95 respirator when entering the patient room.

Surgical or procedure masks do not protect against airborne transmission and should not be used instead of proper respiratory protection

Personnel engaged in aerosol generating activities (e.g., collection of clinical specimens, endotracheal intubation, nebulizer treatment, bronchoscopy, and resuscitation involving emergency intubation or cardiac pulmonary resuscitation) for suspected or confirmed swine influenza A (H1N1) cases should wear a fit-tested disposable N95 respirator or more protective respirator, such as a PAPR (powered air-purifying respirator)

Respirator use should be in the context of a complete respiratory protection program in accordance with Occupational Safety and Health Administration (OSHA) regulations. Information on respiratory protection programs and fit test procedures can be found at www.osha.gov/SLTC/etools/respiratory. Staff should be medically cleared, currently fit-tested, and trained for respirator use, including: proper fit-testing and use of respirators, safe removal and disposal, and medical contraindications to respirator use. A proper fit test will take at least 15 minutes per person.

Patients with suspected or confirmed case-status should be placed in a single-patient room with the door kept closed. If available, an airborne infection isolation room (AIIR) with negative pressure air handling with 6 to 12 air changes per hour can be used. Air can be exhausted directly outside or be recirculated after filtration by a high efficiency particulate air (HEPA) filter. For suctioning, bronchoscopy, or intubation, use a procedure room with negative pressure air handling.

The ill person should wear a surgical mask when outside of the patient room, and should be encouraged to wash hands frequently and follow respiratory hygiene practices. Cups and other utensils used by the ill person should be washed with soap and water before use by other persons. Routine cleaning and disinfection strategies used during influenza seasons can be applied to the environmental management of swine influenza¹.

Q. What are standard infection control precautions?

A. Standard infection control precautions include hand hygiene, use of PPE and good respiratory hygiene/cough etiquette for patients.

Q. What is considered good hand hygiene?

A. Hand washing is the foundation of any infection control program. Employers need to create a positive work place environment that encourages workers to thoroughly clean hands with soap and water, antimicrobial soap and water, or alcohol-based hand-rub products between patient contacts, immediately after removing gloves, and after touching blood, body fluids, secretions, excretions, or contaminated items.

Instead of workplace culture that rewards workers for working faster, employers should support workers who work more safely. This may require the employer to address staff shortages that cause workers to cut corners—and not wash their hands as thoroughly as they should as they rush from one patient to the next.

Q. What types of PPE are available?

A. PPE is specialized clothing or equipment that protects against infectious materials. PPE includes particulate respirators (not surgical or procedure masks); eye protection, face shields, surgical masks, gowns, and gloves. Appropriate PPE should be used during procedures and patient-care activities that are likely to generate coughing, splashes or sprays of blood, body fluids, or secretions.

Q. What is the difference between a particulate respirator and a surgical mask?

A. Respiratory protection (at a minimum, N95 respirators or better) helps you avoid inhaling airborne infection. Unfortunately, some government agencies and some healthcare employers incorrectly recommend surgical masks to use against airborne infections. Surgical masks are not designed to protect against inhaling airborne infection and should not be used by healthcare workers.

Therefore, at a minimum, we need to ensure that all health care workers are provided with and use NIOSH-certified particulate respirators during this swine flu outbreak. A respirator helps prevent you from breathing in airborne particles because it has filtering materials that are superior to surgical masks. Respirators form a tight seal around the nose, mouth, and chin and are secured by elastic bands on the head, preventing leakage where the respirator touches the face.



A worker puts on his N95 particulate respirator.



A particulate respirator displaying the NIOSH certification notation.

Keep in mind that facial hair can compromise the effect of a seal and may require a different type of respirator. In that case, your union health and safety representative can help you determine the type of mask that works best for you.

Q. How do other types of PPE help control infection?

A. There are several other types of equipment that help protect workers from infection including:

- **Goggles** protect eyes by fitting snugly over and around eyes. . Goggles with antifog features improve clarity. Personal glasses are not a substitute for goggles
- **Face shields** protect the face, nose, mouth, and eyes. They should cover the forehead and extend below the chin, wrapping around the side of the face.
- **Gowns** are for use during procedures and patient-care activities when contact of clothing/exposed skin with blood/body fluids, secretions, and excretions is anticipated.
- **Gloves** are for use when touching blood, body fluids, secretions, excretions, contaminated items, mucous membranes, and nonintact skin. Nonlatex gloves should be made available for workers who are allergic to latex.

Q. What steps should patients take for proper respiratory hygiene/cough etiquette?

A. In one instance, it is appropriate to advocate the use of surgical masks: patients should wear them when symptomatic. For the protection of all health care workers and their patients, hospitals need strong policies requiring that patients who are coughing wear surgical masks. This may require facilities to change the way they interact with patients. It is essential to educate patients about wearing surgical masks to reduce the likelihood of infecting health care workers and to prevent spread of infection to other patients. Large posters stating this policy should be placed in the emergency room and in other patient waiting areas. Managers should implement and support a policy that identifies waiting patients who are coughing and enforces the use of these masks.

Symptomatic patients should be required to follow these standard precautions:

- Wear surgical masks when symptomatic—including coughing;
- Use a tissue to cover the mouth and nose when sneezing;
- Dispose of used tissues in no-touch receptacles; and
- Observe hand hygiene after soiling hands with respiratory secretion (for example, after coughing or sneezing into hands).

Q. What steps can I take to protect myself against airborne infection?

A. You can be a key player in protecting yourself, your patients, and your coworkers by following the infection control procedures set up by your health care facility in accordance with the CDC guidelines, especially the airborne precautions, since they will be new to some healthcare workers.

- 1) Encourage coworkers to also implement these steps. The sooner these steps become a part of your regular routine, the better prepared you'll be should possible swine flu patients show up at your facility.
- 2) Each employer should have a pandemic flu plan in place that includes standard precautions against infection. (See Employer Checklist on last page of this FAQ.) If standard precautions outlined above are not already a part of your workplace operations, educate your coworkers and bring this factsheet to the attention of your

supervisor. Your union representative can work with your management team to ensure that good infection control policy is in place, that everyone is trained in prevention control procedures, and that everyone in your facility has as much protection as needed against airborne infection.

Q. How can I get more information about flu and protecting myself, my coworkers, and patients from becoming infected?

A. For more details about flu and infection control:

- See SEIU's 1199's FAQ, "*Seasonal, Swine, and Pandemic Flu: What's the same, what's different?*"
- More information can be found at http://www.cdc.gov/ncidod/dhqp/gl_environinfection.html.
- For additional information about respirators, visit these web sites on the Internet:
 - <http://www.cdc.gov/niosh/npptl/respirators/respasars.html>
 - <http://www.cdc.gov/niosh/99-143.html>
 - <http://www.cdc.gov/niosh/topics/respirators>
- For additional information on respiratory etiquette visit: www.health.state.mn.us
- For additional information about your union's response to influenza prevention and infection control, visit: www.seiu.org and www.1199seiu.org

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* specific information is available regarding the behavior of this swine influenza A (H1N1), the guidance in the October 2006 "Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings during an Influenza Pandemic" <http://www.pandemicflu.gov/plan/healthcare/maskguidancehc.html> should be used.

Additional information on N95 respirators and other types of respirators may be found at: <http://www.cdc.gov/niosh/npptl/topics/respirators/factsheets/respfact.html>, and at www.fda.gov/cdrh/ppe/masksrespirators.html

