Employee Guide to
Influenza Prevention in the Workplace

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1. Introduction

This document is designed to provide employees with some basic knowledge of influenza and current health recommendations to prevent the spread of disease. Local, state, and federal resources provide more information and can be accessed from the Environmental Health &Safety web site: www.ehs.uci.edu/ Flu Pandemic Plan at UCI.

Seasonal influenza occurs on an annual basis in the fall. Flu vaccines are developed to reduce the spread of the virus and reduce the symptoms of those who become ill. Periodically, a new, unique strain of virus is identified for which seasonal flu vaccinations are ineffective and to which the general population has no immunity. In recent years, two such viruses have threatened to become a wide scale public health emergency or pandemic. In each case, precautionary measures focus on educating the public regarding the practices of good hygiene and social distancing, and the use of respiratory protection as described herein. Each new virus is unique and general guidelines may be modified based on recommendations of federal, state and local public health officials.

The two most recent influenza strains of concern are the Avian Flu (H5N1) in 2006-07 and the Novel Influenza A (H1N1), originally known as Swine Flu in 2009.

Avian Flu (H5N1 virus)

Avian influenza, also known as bird flu, is a virus that affects wild birds and domestic poultry. Avian influenza (H5N1 virus) is currently circulating in other areas of the world such as Asia, Europe and Africa, but not in the United States. To date, this virus rarely causes disease in humans but when it does the case fatality rate is high (60%).

Currently, the risk is low for avian influenza in humans because the H5N1 virus is not easily transmitted to humans. However, concern remains that the virus may change (mutate) and become more transmissible by human-to-human contact. If the virus does mutate, a pandemic could ensue. A pandemic is defined as disease occurring over a wide geographic area affecting an exceptionally high proportion of the population.

At this time, no vaccine is available to the general public to prevent avian influenza H5N1. Scientists are working on the development of H5N1 vaccine as well as other potential pandemic vaccines.

Novel Influenza A (H1N1) virus

Novel Influenza A (H1N1) virus (also referred to as "pandemic (H1N1) 2009 virus" or "swine flu") is a type of influenza (flu) virus that causes respiratory disease that can spread between people. On June 11, 2009, the World Health Organization (WHO) raised the worldwide pandemic alert level to Phase 6 in response to the ongoing global spread of the novel influenza A (H1N1) virus. Since the WHO declaration of a pandemic, the new H1N1 virus has continued to spread, with the number of countries reporting cases of novel H1N1 nearly doubling. During the Southern Hemisphere's regular summer influenza season, countries there are reporting that the H1N1 virus is spreading and causing illness along with regular seasonal influenza viruses. In the United States, significant novel H1N1 illness has continued into the summer, with localized and in some cases intense outbreaks occurring. Novel influenza A (H1N1) generally causes a mild to moderate influenza illness that does not seem to make individuals more ill than the usual seasonal flu. The vast majority of people fully recover after they acquire this illness, unless they have other underlying medical problems.

Common Sense Tips: Prevent Respiratory Illness

- Wash hands frequently with soap and water, especially after coughing or sneezing. If water is unavailable, use an alcohol-based (60-95%) hand cleaner.
- Cover your mouth and nose with a tissue when you cough or sneeze. Properly dispose of used tissues in a waste basket.
- Cough or sneeze into your upper sleeve if you don't have a tissue.
- Avoid close contact with people who are sick. When you are sick, reduce social interaction to help prevent others from catching your illness.
- Avoid touching your eyes, nose, or mouth as germs are often spread this way.

2. Recommendations

General Health Promotion

Employees should see their personal health care provider for regular health check-ups and vaccinations. Vaccination against regular, seasonal influenza is recommended each year. People should see their health care provider if they develop symptoms of regular, seasonal influenza develop to receive antiviral medication, if appropriate.

Flu symptoms may include:

- Increase in temperature (100° or higher)
- Cough
- Body aches
- Sore throat
- Shortness of breath

Sick Leave

In the event of an influenza pandemic, employees should not come to work if they are experiencing any of the above-mentioned symptoms. In this event, employees must call in sick to their supervisor. Refer to updates of pandemic information at www.ehs.uci.edu.

People who have traveled in the last 7 – 10 days to countries where there have been flu outbreaks (animal, bird or human cases) should promptly contact their personal health care provider if they are experiencing flu-like symptoms. One stop access to U.S government H1N1, Avian and pandemic flu information is located at Flu.gov

Employees who have had direct contact with a person with confirmed or suspected influenza should be self-isolated (restriction of movement in the community). They should call their health care provider for consultation.
People with suspected or confirmed influenza should be self-isolated. Discuss isolation and quarantine measures with your health care provider.

3. Social Distancing Policy

A campus Social Distancing Policy has been developed in the event an influenza pandemic becomes a high level of threat to our community. This policy may call for cancellation of classroom instruction and most public gatherings, e.g., classes, sports and arts performances, and some meetings. The decision to implement the Social Distancing Policy will be made by the Chancellor.

In the event of a pandemic, the Social Distancing Policy calls for continuation of only those activities determined to be essential to maintain campus infrastructure. Instruction and research should be continued without meeting in groups. Campus plans cover the period of a pandemic through recovery to 'business as usual' which may be 4 – 12 weeks or longer. Some employees will be asked to continue working on campus for duties essential to maintaining campus infrastructure. Refer to your supervisor for guidance on your department's pandemic plan.

4. Infection Prevention

At this time, no vaccine is available to prevent avian (H5N1) or swine (H1N1) influenza. Vaccine development is underway and should be available in the upcoming months. In the event such a vaccine is offered, information on how to obtain the vaccine will become available on the EH&S web site www.ehs.uci.edu. Obtaining a seasonal influenza vaccine is highly recommended each year.

Personnel who work on campus while the Social Distancing Policy is in effect should follow these infection prevention measures to reduce direct exposure of nasal/oral droplets (cough, sneeze) from others and to prevent the spread of larger droplets on hands, skin, and other surfaces. Infection prevention includes:

- Social Distancing
- Hand Hygiene
- Respiratory Etiquette
- Respiratory Protection
- Other Personal Protective Equipment

a) Social Distancing

Social distancing is defined as maintaining a distance of 3 - 6 feet from others while in public places. The minimum 3 foot rule is based upon studies by infection control professionals[5]. Employee interactions should be minimized with meetings taking place via telephone when possible. Hand shaking should be curtailed.

b) Hand Hygiene

Wash hands after direct contact with people or after contact with objects such as doorknobs or other surfaces touched by others. Wet hands, apply soap, and rub hands vigorously for 15 seconds prior to rinsing. Waterless hand sanitizers are recommended as an alternative to hand washing according to the CDC's Guideline for Hand Hygiene in Healthcare Settings (Oct 2002).

c) Respiratory Etiquette

Good respiratory etiquette includes covering your mouth and nose with a tissue when you cough or sneeze. The next best practice is to cough or sneeze into your upper sleeve, not on your hands.

d) Respiratory Protection

General Public

Surgical masks can provide some benefit against the spread of large droplets only and should be worn by those who are coughing or sneezing while in public to prevent contamination of others. Masks should be replaced frequently (after 20 minutes) and

disposed of with minimal handling. Surgical masks do not require medical clearance or fit testing.

Presently, respirator use by the general public for pandemic influenza has not been recommended by the World Health Organization (WHO) or the US Center for Disease Control and Prevention (CDC). Many pandemic influenza plans currently focus on an aggressive public information campaign that emphasizes containment measures such as hand washing, respiratory (cough and sneeze) etiquette, social distancing (reduced social interaction), and guidelines written for those being cared for at home.

Employees Required to Wear N-95 Respirators

Respirators are designed to reduce employee exposure to airborne infectious agents. Some employees, such as health care workers who have a high level of risk to known or suspected sources of pandemic influenza virus, will be required to wear an N-95 respirator. It is important that employees required to wear an N-95 respirator be medically evaluated to assure work can be performed safely while wearing a respirator.

1. Health Care Workers

The health care worker's use of an N-95 respirator while providing direct care for patients with confirmed or suspected pandemic influenza is prudent. The decision to use an N-95 respirator by other workers who may come in contact with confirmed or suspected pandemic influenza patients should include consideration of the duration, frequency, proximity, and degree of contact with the patient. See Appendix A.

Recently published guidelines from the CDC discuss respiratory protection use in health care settings during an influenza pandemic[2]. The guidelines emphasize that respiratory protection is only part of a system of infection control practices to prevent the spread of infection. The document advises additional precautions such as minimizing the number of personnel who come in contact with patients.

2. Police, First Responders, and Other Emergency Workers

During the elevated stages of a pandemic, the duties of police, first responders, and other emergency workers may change requiring the use of respiratory protection. Prior to such an event, personnel should be identified, trained, and fit-tested to the appropriate respiratory protection.

3. Emergency Use of Respirators

During an emergency, it may be necessary to use an N-95 respirator without prior proper fit-testing by the staff in Environmental Health and Safety. Refer to the document, Guidance to the Use of N-95 Respirators, found in Appendix B.

Staff from Environmental Health and Safety on campus can help determine proper use of surgical masks and N-95 respirators in the course of employment. Determination for use of N-95 respirators is based upon occupational exposure and risk in accordance with OSHA guidance. See Appendix A.

e) Other Personal Protective Equipment

The types of personal protective equipment (PPE) recommended for protection from pandemic influenza will be based on the risk of contracting influenza while working and the availability of PPE. The Occupational Safety and Health Administration categorize occupational risk of pandemic influenza based upon exposure. See Appendix A.

Surgical masks placed on sick people while in public limit the spread of infectious respiratory secretions to others. They cannot be relied upon to protect employees against airborne infectious agents.

Gloves are worn to reduce the risk of acquiring infection and to prevent the spread of organisms to others. Gloves do not provide complete protection. Hands should be washed before and after glove use. Gloves should not be washed or reused.

Face shields are recommended to help protect the eyes of health care workers from contamination with organisms and to protect respirators from droplet contamination.

Important!

Surgical masks and respirators DO NOT take the place of social distancing, hand washing and good respiratory etiquette.

References

1. OSHA Guidance Update on Protecting Employees from Avian Flu (Avian Influenza) Viruses. U.S. Department of Labor. Occupational Safety and Health Administration. OSHA 3323-10N 2006.

2. OSHA Guidance on Preparing Workplaces for an Influenza Pandemic 2007. http://www.osha.gov/Publications/influenza_pandemic.html

3. Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States. Center for Disease Control and Prevention 2007. http://www.pandemicflu.gov/plan/community/community_mitigation.pdf

4. Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Health Care Settings during an Influenza Pandemic. www.pandemic flu.gov/plan/healthcare/maskguidancehs.html

5. Interim Recommendations for Facemask and Respirator Use to Reduce Novel Influenza A (H1N1) Virus Transmission August 5, 2009. http://www.cdc.gov/h1n1flu/masks.htm

6. Stopping the Spread of Germs at Home, Work & School www.cdc.gov/flu/protect/stopgerms.htm.

7. Hamburger M Jr., Robertson OH. Expulsion of Group A hemolytic streptococci in droplets and droplet nuclei by sneezing, coughing, and talking. Am J Med 1948; 4:690-701.

Appendix A

Occupational Risk Pyramid for Pandemic Influenza

Very High Exposure Risk:

- Healthcare employees (for example, doctors, nurses, dentists) performing aerosol-generating procedures on known or suspected pandemic patients (for example, cough induction procedures, bronchoscopies, some dental procedures, or invasive specimen collection).
- Healthcare or laboratory personnel collecting or handling specimens from known or suspected pandemic patients (for example, manipulating cultures from known or suspected pandemic influenza patients).

High Exposure Risk:

- Healthcare delivery and support staff exposed to known or suspected pandemic patients (for example, doctors, nurses, and other hospital staff that must enter patients' rooms).
- Medical transport of known or suspected pandemic patients in enclosed vehicles (for example, emergency medical technicians).
- Performing autopsies on known or suspected pandemic patients (for example, morgue and mortuary employees).

Medium Exposure Risk:

- Employees with high-frequency contact with the general population (such as schools, high population density work environments, and some high volume retail).

Lower Exposure Risk (Caution):

- Employees who have minimal occupational contact with the general public and other coworkers (for example, office employees).

Appendix B

Guidance to the Use of N-95 Respirators

General Public

Presently, respirator use by the general public for the influenza pandemic has not been recommended by the World Health Organization (WHO) or the US Center for Disease Control and Prevention (CDC). Many pandemic influenza plans currently focus on an aggressive public information campaign that emphasizes containment measures such as hand washing, cough and sneeze etiquette, social distancing and reduced social interaction, and guidelines for those being cared for at home.

Use of an N-95 respirator when not required is considered voluntary use. Voluntary use of an N-95 respirator does not require fit testing but does require medical clearance prior to use. If a respirator is used improperly or not kept clean, the respirator itself can become a hazard. Contact EH&S at 949-824-6200 for further information.

Voluntary use of N-95 respirators is discouraged as this could result in their unavailability for workers at high-risk who are required to wear them.

Employees Required to Wear N-95 Respirators

N-95 respirator use required in the course of employment must comply with regulatory requirements of the California Code of Regulations, Title 8. Regulations require employees who are potential wearers of N-95 respirators to complete a medical assessment questionnaire to help determine medical clearance. Employees are fit-tested and trained on the proper use of the N-95 respirator. Failure to obtain medical clearance or follow training on the proper use of an N-95 respirator can result in personal injury, serious illness, or even death. Contact EH&S at 949-824-6200 for further information.

N-95 Respirators:

- Have at least 95% filtration efficiency against solid and liquid aerosols that do not contain oil.
- Should not be worn with beards, other facial hair, or other conditions that prevent a good seal between the face and the edge of the filtering face piece.
- Should be replaced if it becomes damaged, soiled, or breathing becomes difficult or after each work shift.

Donning Instructions

1. Wash hands. Cup the respirator in your hand, with the nosepiece at your fingertips, allowing the headbands to hang freely below your hand.
2. Position the respirator under your chin with the nosepiece up. Pull the top strap over your head resting it high at the top back of your head. Pull the bottom strap over your head and position it around the neck and below the ears.

3. Place your fingertips from both hands at the top of the metal nosepiece. Using your two hands, mold the nose area to the shape of your nose by pushing inward while moving your fingertips down both sides of the nosepiece.

4. Perform a User Seal Check prior to wearing.

   User Seal Check:
   Place both hands completely over the respirator and inhale sharply. Be careful not to disturb the position of the respirator. A negative pressure should be felt inside the respirator. If air leaks around the nose, readjust the nosepiece as described in Step 3.

Doffing Instructions

1. See Step 2 of Donning Instructions and cup the respirator in your hand to maintain the position on your face. Pull bottom strap over your head. Still holding the respirator in position, pull the top strap over your head and remove the respirator. Wash hands.

FAILURE TO OBSERVE ALL WARNINGS MAY RESULT IN PERSONAL INJURY, SERIOUS ILLNESS, OR DEATH.

Reuse of Filtering Face-piece Respirators

An Institute of Medicine committee suggested that, if necessary, a disposable N-95 respirator can be reused with the following precautions:

1. A protective covering such as a medical mask or a clear plastic face shield should be worn over the respirator to protect it from surface contamination.
2. The respirator should be carefully stored between uses.
3. The wearer should wash his or her hands before and after handling the respirator and the device used to shield it.

These steps are intended for reuse of a respirator by a single person.