

For more information about this topic, call the Risk Management Division:

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 - 1-800-453-3860, ext. 2-4049 (toll free in the United States and Canada)
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This fact sheet provides information on how health-care workers, such as missionary area medical advisors, physicians, nurses, respiratory therapists, etc. who may staff clinics and hospitals can prepare themselves for a possible flu pandemic.

Background

A severe pandemic (defined as a world-wide epidemic) in a vulnerable population, such as the 1918 flu pandemic, represents a worst-case scenario for pandemic planning and preparedness. Communities, individuals, employers, schools, and other organizations are being asked to plan for the use of interventions that will help limit the spread of disease. At this time, there is concern because of continued spread of a highly pathogenic avian influenza (H5N1) virus among animals in Asia, Africa, the Middle East, and Europe which has the potential to significantly threaten human health. If a virus such as H5N1 mutates and spreads easily from one person to another, avian influenza may break out globally. While there are no reports of *sustained* human-to-human transmission of avian influenza, governments and international health agencies are preparing for a possible pandemic. A pandemic can originate from any “unknown” source, such as the H5N1 virus.

When in contact with possible avian influenza patients, health-care providers should follow standard respiratory droplet precautions. At present, the transmission of flu virus is considered to be via droplet. If avian flu becomes easily transmissible via human-to-human contact, it will likely be via droplet or possible aerosol transmission.

General precautions

Wash hands carefully for 20 seconds before and after all patient contact, or contact with surfaces potentially contaminated with respiratory secretions.

Droplet Precautions:

- Use personal protective equipment (PPE) such as a surgical mask or preferably an N95 respirator, gloves and gown for all patient contact. Following established guidelines for the proper use of and the removal sequence for PPE is very important.
- Use disposable equipment if available, or other equipment such as blood pressure cuffs, thermometers, etc. that can be disinfected before use on another patient.
- Wear safety goggles or a face shield within 3 feet of the patient.

If there is concern of aerosol transmission, the patient should be placed in a negative-pressure, airborne infection isolation room. If such a room is unavailable, portable HEPA filters should be used if available. Workers should use at least a disposable N95 respirator when in the isolation room or other room containing the patient.

To help prevent transmission between patients:

- Group infected patients in the same room if private rooms are not available.
- Minimize transportation of patients outside the room.

- Limit the number of people caring for patients.
- Limit the numbers of visitors to the patient.

Proper Use and Removal of PPE

Proper surgical mask or respirator use and removal include the following:

- Prior to putting on PPE, wash hands thoroughly with soap and water or use a hand sanitizer to reduce the possibility of inadvertent contact between contaminated hands and mucous membranes.
- Follow the surgical mask or respirator manufacturer's fitting instructions to ensure proper fit and usage.
- If worn in the presence of infectious persons, a surgical mask or respirator may become contaminated with infectious material; therefore, avoid touching the outside of the device to help prevent contamination of hands.
- Once worn in the presence of a patient with an infectious disease, the surgical mask or disposable N95 respirator should be removed and appropriately discarded.

Remove PPE in the proper sequence to avoid contamination.

1. Because the gloves are considered the most contaminated piece of PPE, remove them first. Do not touch the outside of gloves with your bare hands during removal. If you contaminate your hands during the removal process, wash them before continuing.
2. The eye protection should be removed next because it is more cumbersome and might interfere with removal of the mask. Remember that it may be contaminated because droplets may have landed on it or you may have touched it by mistake while wearing your PPE. Remove eye protection by touching only the ear pieces or head band at the side of your head to lift away from your face. Discard it or deposit it into the soap and water container for washing later.
3. The gown is next; remember that the front is contaminated. Untie the back, then slip your hands under the gown at the neck and shoulders and peel it away from your body. Grasp cuffs one at a time by slipping your fingers underneath and then pull each arm out of the gown. Holding the gown at the shoulders, fold the outside contaminated part so that it is inside and then discard the gown. Then wash your hands or use hand sanitizer.
4. Surgical masks or N95 respirators may be contaminated because droplets may have landed on them or you may have touched your face by mistake while wearing your PPE. Touch only the ties or straps at the back of your head. Slowly remove the straps, taking care that the respirator does not contaminate your bare skin or clothing.
5. Dispose of used PPE in a plastic lined trash can or a plastic bag. Seal the plastic bag for later disposal. Hold the bag by the outside and avoid any rush of air as you seal it.
6. Always wash your hands thoroughly with soap and water or a hand sanitizer immediately after PPE removal.

References

www.cdc.gov: Interim pre-pandemic planning guidance, including individual planning, workplace planning, community planning, school planning, health-care planning, and community strategy for pandemic influenza mitigation

www.osha.gov: Guidance on Preparing Workplaces for an Influenza Pandemic

www.who.org: Avian Flu fact sheet, pandemic preparedness plan, guidelines, WHO pandemic influenza draft protocol for rapid response and containment