

Guidelines and Recommendations for the Use of Masks to Control Influenza Transmission

This document was developed in response to questions about the role of masks for controlling influenza when suboptimal immunization of the public could increase the frequency of influenza infection. South Central Public Health District recommends the following infection control measures:

- Annual influenza vaccination of health care personnel and those at high risk for complications per current national recommendations.
- Surveillance to identify early outbreaks enabling prompt initiation of infection control measures to avoid spread of the disease in the facility.
- Educating personnel in the signs and symptoms of influenza, control measures, and the indicators for receiving influenza testing.
- Respiratory hygiene/cough etiquette including hand washing and use of masks and other personal protective equipment.

Background

Human influenza is transmitted from person to person primarily via virus-laden large droplets (particles >5 µm in diameter) that are generated when infected persons cough, sneeze, or talk; these large droplets can then be directly deposited onto the mucosal surfaces of the upper respiratory tract of susceptible persons who are near (i.e., within 3 to 6 feet) the droplet source. Transmission also may occur through direct and indirect contact with infectious respiratory secretions.

Human influenza is a disease of the respiratory tract; there is no evidence that human seasonal influenza virus infection of the gastrointestinal tract can occur. Additionally, the pattern of disease spread for seasonal influenza does not suggest transmission across long distances (i.e., through ventilation systems); therefore, negative pressure rooms are not needed. It is recommended to reinforce thorough and frequent hand washing, which is known to reduce the likelihood of contamination and to reduce transmission of respiratory infections. Surgical mask use may provide an additional benefit by discouraging facial contact of contaminants.

A combination of infection control strategies is recommended to decrease transmission of influenza in health-care settings. These include placing influenza patients in private rooms when possible and having health-care personnel wear masks for close patient contact (i.e., within 3 to 6 feet) and gowns and gloves if contact with respiratory secretions is likely. The use of surgical or procedure masks by infectious patients may help contain their respiratory secretions and limit exposure to others. Likewise, when a patient is not wearing a mask, as when in an isolation room, having health-care personnel mask for close contact with the patient may prevent nose and mouth contact with respiratory droplets. However, no studies have definitively shown that mask use by either infectious patients or health-care personnel prevents influenza transmission. In the United States, disposable surgical and procedure masks have been used widely in health-care settings to prevent exposure to respiratory infections, but they have not been used commonly in community settings (i.e., schools, businesses, public gatherings).

The following recommendations focus on the appropriate use of masks as part of a group of influenza control strategies in health-care settings. Masks are not usually recommended in non-health-care settings; however, this guidance provides other strategies for limiting the spread of influenza in the community.

January, 2007

Guidelines and Recommendations for the Use of Masks to Control Influenza Transmission.

The information in this document was derived from the Centers for Disease Control and Prevention

Health-care Settings

Symptomatic or Infected Patients

During periods of increased respiratory infection activity in the community, masks should be offered as part of a respiratory hygiene/cough etiquette strategy to patients who are coughing or have other symptoms of a respiratory infection when they present for health-care services. Masks should be worn by these patients until:

1. It is determined that the cause of symptoms is not an infectious agent that requires isolation precautions to respiratory droplet transmission, or
2. The patient has been appropriately isolated, either by placement in a private room or by placement in a room with other patients with the same infection. Once isolated, the patient does not need to wear a mask unless transport outside the room is necessary.

Health-care Personnel

A surgical or procedure mask should be worn by health-care personnel who are in close contact (i.e., within 3 to 6 feet) with a patient who has symptoms of a respiratory infection, particularly if fever is present, as recommended for standard and droplet precautions. These precautions should be maintained until the patient has been determined to be noninfectious or for the duration recommended for the specific infectious agent.

Non-Health-care Settings

Symptomatic Persons

Adults can shed influenza virus 1 day **before** symptoms appear and up to 5 days **after** onset of illness; thus, the selective use of masks (i.e., in proximity to a known symptomatic person) may not effectively limit transmission in the community. Instead, emphasis should be placed on cough etiquette for persons with respiratory symptoms whenever they are in the presence of another person, including at home, school, work, and other public settings. Important components of this strategy include encouraging symptomatic persons to:

- Cover their nose and mouth when coughing or sneezing.
- Use tissues to contain respiratory secretions and, after use, to dispose of them in the nearest waste receptacle.
- Perform hand hygiene (i.e., hand washing with nonantimicrobial soap and water, alcohol-based hand rub, or antiseptic hand wash) after having contact with respiratory secretions and contaminated objects/materials.

Persons who are diagnosed with influenza by a physician or who have a febrile respiratory illness during a period of increased influenza activity in the community should remain at home until the fever is resolved and the cough is resolving to avoid exposing other members of the public. If such symptomatic persons cannot stay home during the acute phase of their illness, consideration should be given to having them wear a mask in public places when they may have close contact with other persons. In addition, masks are recommended for use by symptomatic, post-partum women while caring for and nursing their infant.

Unvaccinated Asymptomatic Persons, Including Those at High Risk for Influenza Complications

No recommendation can be made at this time for mask use in the community by asymptomatic persons, including those at high risk for complications, to prevent exposure to influenza. If unvaccinated high-risk persons decide to wear masks during periods of increased respiratory illness activity in the community, it is likely they will need to wear them any time they are in a public place and when they are around other household members.

Vaccination is the primary method for preventing influenza in persons at high risk for complications secondary to influenza infection. Because of the influenza vaccine shortage this flu season, the number of high-risk persons receiving vaccine may be less than the number vaccinated in prior years. Administration of antiviral medications, either for the early treatment of influenza infection or for prophylaxis against infection, is a useful adjunct in the control of influenza in these persons.