

# Influenza Fact Sheet

Seasonal influenza, a respiratory infection caused by the influenza virus is a significant cause of morbidity and mortality, especially in individuals who are at the extremes of age, pregnant, immune compromised, or have chronic underlying disease.

## General Information

### *Virology*

Influenza, or flu, is a highly contagious respiratory illness caused by RNA viruses of the family Orthomyxoviridae (the influenza viruses), which affects birds and mammals. There are three main types of influenza virus that cause infection in humans - types A, B and C. Type A influenza viruses are further typed into subtypes according to different kinds and combinations of virus surface proteins. Among many subtypes of influenza A viruses, currently influenza A (H1N1) and A (H3N2) subtypes are circulating among humans. Influenza can occur throughout the year but influenza activity usually peaks in winter. Influenza is a vaccine-preventable illness but a new vaccine needs to be given each year because influenza viruses change (mutate) constantly. A new influenza vaccine is prepared each year to best match the strains predicted for the coming influenza season.

### *Epidemiology of transmission*

Influenza can be spread in three main ways: by direct transmission (when an infected person sneezes mucus directly into the eyes, nose or mouth of another person); the airborne route (when someone inhales the aerosols produced by an infected person coughing, sneezing or spitting) and through hand-to-eye, hand-to-nose, or hand-to-mouth transmission, either from contaminated surfaces or from direct personal contact such as a hand-shake.

Influenza is highly communicable. Infected persons can shed detectable amounts of influenza virus the day before symptoms begin. Adults usually shed the virus for 3 to 5 days, and up to 7 days in young children.

### *Clinical manifestations*

Seasonal influenza is characterized by a sudden onset of high fever ranging from 38-39 °C (approx. 100-103 °F), cough (usually dry), headache, muscle and joint pain, severe malaise (feeling unwell), sore throat and runny nose. Most people recover from fever and other symptoms within a week without requiring medical attention. But influenza can cause severe illness or death in people at high risk. Yearly influenza epidemics can seriously affect all age groups, but the highest risk of complications occur among children younger than age two, adults age 65 or older, and people of any age with certain medical conditions, such as chronic heart, lung, kidney, liver, blood or metabolic diseases (such as diabetes), or weakened immune systems. It can be difficult to distinguish between the common cold and influenza in the early stages of these infections, but the flu can be identified by a high fever with a sudden onset and extreme fatigue.

### *Basic Prevention*

The most effective way to prevent the disease or severe outcomes from influenza illness is vaccination. Safe and effective vaccines have been available and used for more than 60 years. Among healthy adults, influenza vaccine can prevent 70% to 90% of influenza-specific illness. Among the elderly, the vaccine reduces severe illnesses and complications by up to 60%, and deaths by 80%. Influenza viruses can be inactivated by sunlight, disinfectants and detergents. As the virus can be inactivated by soap, frequent hand washing reduces the risk of infection.

Alcohol-based hand sanitizers (≥62% ethanol) may be helpful as an adjunct method of hand hygiene, but should not replace washing with soap and water.



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## Infection Prevention and Control Measures

### Healthcare Prevention Measures

In addition to Routine / Standard Precautions, Droplet and Contact Precautions should be implemented with patients who are suspected or confirmed to have Influenza.

- Patients with suspected or confirmed influenza may be placed in private rooms or cohort with other patients with the same infection.
- Follow hand-hygiene guidelines by either carefully washing hands with soap and water or using Alcohol-Based Hand Sanitizers (ABHS) after contact with patients with influenza infection
- Use gowns, gloves, surgical mask and eye protection when in contact with, or caring for patients who are symptomatic with influenza for all interactions that may involve contact with the patient or potentially contaminated areas in the patients environment
- Healthcare workers who have symptoms consistent with influenza should be excluded from work until at least 24 hours after they no longer have a fever

### Environmental control measures

As the influenza virus can persist outside of the body, it can also be transmitted by contaminated surfaces such as doorknobs, light switches and other high touch surfaces or items. The length of time the virus will persist on a surface varies, with the virus surviving for one to two days on hard, non-porous surfaces such as plastic or metal, and approximately 8 to 12 hours on cloth, paper and tissues.

Hospital-grade cleaning and disinfecting agents are sufficient for environmental cleaning in the context of influenza. All horizontal and frequently touched surfaces should be cleaned at least twice daily and when soiled. The healthcare organization's terminal cleaning protocol for cleaning of the patient's room following discharge, transfer or discontinuation of Droplet and Contact Precautions should be followed. All patient care equipment (e.g., thermometers, blood pressure cuff, pulse oximeter, etc.) should be dedicated to the use of one patient. All patient care equipment should be cleaned and disinfected as per Routine / Standard Practices before reuse with another patient or a single use device should be used and discarded in a waste receptacle after use. Toys, electronic games or personal effects should not be shared by patients.

## References:

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3. Best Practices for Cleaning, Disinfection and Sterilization in All Health Care Settings, Provincial Infectious Diseases Advisory Committee (PIDAC), February 2010
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5. Guidelines and Recommendations Prevention Strategies for Seasonal Influenza in Healthcare Settings, CDC <http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm>
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