Influenza and Other Viral Respiratory Infections

Including Seasonal Influenza A and B, Parainfluenza 1/2/3, Respiratory Syncytial Virus (RSV), Adenovirus, and Human Metapneumovirus (hMPV)

Site Applicability

PHC Acute and Long-Term Care sites

Practice Level

Basic: Physicians, Nurse Practitioners, Nursing, Clinical Nurse Leader, Clinical Site Coordinator, Bed Placement Coordinator

Standards

In addition to Routine Practices, Droplet and Contact Precautions must be initiated on all patients/residents with acute respiratory symptoms consistent with a possible viral etiology (i.e., influenza-like illness or ILI). Precautions should be maintained until an infectious cause is ruled out or changed to the appropriate disease-specific precaution when an infectious cause is confirmed.

Influenza A or B and RSV: Droplet and Contact Precautions will be initiated for patients/residents with confirmed influenza A or B virus or RSV. Airborne Precautions should be added during aerosol-generating medical procedures (AGMPs) and for all intubated patients. For patients in critical care units (ICU, HAU, CICU, CSICU), or immunocompromised patients, contact IPAC before discontinuing precautions. All other patients will remain on Droplet and Contact Precautions for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer.

Parainfluenza 1/2/3, hMPV, and adenovirus: Droplet and Contact Precautions will be initiated for patients/residents with confirmed parainfluenza 1/2/3, hMPV, or respiratory adenovirus when not intubated. Airborne Precautions should be added during aerosol-generating medical procedures (AGMPs) and for all intubated patients. Precautions should be maintained until symptoms resolve.

If ordered, collect nasopharyngeal (NP) swabs for respiratory viruses (see Influenza-Like Illness Specimen Collection guideline). The same swab can be used to test for influenza, RSV, other respiratory viruses, and COVID-19.

Closely monitor other patients or residents, and staff for the development of new symptoms. If unit transmission or an outbreak is suspected, contact IPAC and refer to the Influenza Outbreak Protocol.

Description of the Disease

Influenza viruses include influenza A and influenza B, and both lead to the clinical presentation of "the flu". Flu activity follows a seasonal pattern, with cases increasing in the fall and peaking in the winter before declining again in the spring. While most people recover from the flu in 7-10 days, severe outcomes can occur, particularly among certain high risk groups like the very young and old, immunocompromised individuals, or those with other comorbidities including but not limited to chronic cardiovascular, pulmonary or renal disease. The influenza vaccine can help to lower the risk of severe outcomes. Surface proteins on the influenza virus change and shift over time, meaning previous infection may not fully protect against reinfection in future flu seasons. The influenza vaccine, therefore, is updated prior to each flu season to match and protect against the anticipated circulating strains.

In general, other common respiratory viruses, such as RSV, parainfluenza, hMPV, and adenovirus, cause acute upper respiratory tract infection in the normal host with few complications. Lower respiratory tract infections are more common in children under 1 year old and in the elderly with chronic pulmonary disease or functional disability and may be more severe. No vaccines are currently available for RSV, parainfluenza, hMPV, or adenovirus.

Signs & Symptoms

Influenza-like illness (ILI) should be considered as a diagnosis in any resident, patient, or staff with an **acute onset** of respiratory illness with **cough and fever (greater than 38˚C)***, and more of the following symptoms:

- Sore throat
- Extreme weakness/fatigue (prostration)
- Malaise/fatigue
- Muscle/joint aches (myalgia/arthralgia)
- Headache

*** Note**: In the elderly, fever may be reduced or not present.

Incubation Period

The incubation period for influenza is 2 days on average. For other respiratory viruses the incubation period can range between 1-10 days.

Period of Communicability

The infectious period for influenza begins 24 hours prior to symptom onset and lasts 3-5 days, but it may last longer in young infants and immunosuppressed people (may continue for 3 to 4 weeks). For other respiratory viruses, the period of communicability is just prior to and for the duration of symptoms.

Routes of Transmission

Respiratory viruses are transmitted via mucous membrane exposure (i.e., nose, mouth, and eyes) with virus-containing respiratory droplets or through inhalation of respiratory aerosols. Factors that

increase the likelihood of transmission include infectiousness of the source, prolonged duration of exposure, close proximity to the source, and poor ventilation.

Transmission can also occur through contact with materials, fomites, and environmental surfaces that have been contaminated with respiratory secretions, which in turn contaminate hands and then can expose mucous membranes (viruses may persist on environmental surfaces for hours).

Populations at Risk

Respiratory virus can affect patients of all age groups. Infections may be more severe in the very young, the elderly, or in individuals with immunocompromising conditions. Seasonal influenza vaccination can reduce the severity of illness in individuals infected with influenza viruses.

Assessment and Intervention

Infection Control Precautions

- **Additional Precautions:** In addition to Routine Practices, Droplet and Contact Precautions must be initiated on all patients/residents with acute respiratory symptoms consistent with ILI. Precautions should be maintained until an infectious cause is ruled out or changed to the appropriate disease-specific precaution when an infectious cause is confirmed.
    - **Influenza A or B and RSV:** Droplet and Contact Precautions will be initiated for patients/residents with confirmed influenza A or B virus or RSV. Airborne Precautions should be added during aerosol-generating medical procedures (AGMPs) and for all intubated patients. For patients in critical care units (ICU, HAU, CICU, CSICU), or immunocompromised patients, contact IPAC before discontinuing precautions. All other patients will remain on Droplet and Contact Precautions for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer.
    - **Parainfluenza 1/2/3, hMPV, and adenovirus:** Droplet and Contact Precautions will be initiated for patients/residents with confirmed parainfluenza 1/2/3, hMPV, or respiratory adenovirus when not intubated. Airborne Precautions should be added during aerosol-generating medical procedures (AGMPs) and for all intubated patients. Precautions should be maintained until symptoms resolve.

  The most responsible nurse will ensure Additional Precautions are ordered in Cerner and post the appropriate sign on the door (i.e., Droplet and Contact, Airborne).
- **Hand Hygiene:** Hands should be cleaned before and after every patient contact, as well as after touching potentially contaminated items in the environment. Using an alcohol based hand rub solution is preferred if hands are not visibly soiled. Encourage and assist the patient to perform hand hygiene.
- **Respiratory Etiquette:** Respiratory etiquette should be encouraged for all residents and patients who have signs and symptoms of an acute respiratory infection. This should include:
    - Using tissues to contain respiratory secretions and disposing used tissues promptly.
    - Coughing or sneezing into the upper sleeve/elbow if a tissue is not available.

- Wearing a mask when coughing or sneezing and when in common areas (e.g., in hallways during transport and in waiting areas).
- Turning away from others when coughing or sneezing.
- Maintaining a spatial distance of two metres from other patients/residents.

- **Patient Placement:** Preferred accommodation in acute care for patients with ILI is a private room. The door may remain open, unless an AGMP is being performed. If patients with ILI must be placed in shared rooms, ensure a two metre separation is maintained between patients and privacy curtains are drawn around the bed. Do not place patients who would be at risk for severe illness in a shared room with a patient who has ILI/respiratory viral infection. When Airborne Precautions are indicated, a negative pressure airborne-infection isolation room is recommended if available.
- **Equipment:** Dedicate equipment whenever possible. Clean and disinfect shared patient equipment routinely and between different patients.
- **Environment:** All high-touch surfaces in the patient's room must be cleaned and disinfected at least daily. Following discharge of the patient, the room should have a terminal clean carried out prior to the next patient being admitted.
- **Visitors:** Education should be provided regarding hand hygiene, and visitors must perform hand hygiene before entry and on leaving the room. Assist visitors to wear PPE, but gown and gloves are not required unless the visitor is providing direct care.
- **Patient Transport:** When the patient is required to leave the room for diagnostic or rehabilitative purposes:
  - Notify receiving department prior to transport of the precautions in place.
  - Encourage and/or assist patient to clean their hands.
  - If the patient's condition allows for it, assist the patient to wear a medical mask.
- **Influenza-Like Illness Outbreaks:** Suspected when two or more residents/patients and/or epidemiologically linked staff members with symptoms of ILI within a 7-day period, with at least one of the cases identified as a resident/patient.
  - Inform your CNL/Charge Nurse immediately if you suspect an outbreak and notify IPAC as soon as possible. Refer to the Influenza Outbreak Management Protocol.
  - Start a line list of affected residents/patients and collect NP swabs for respiratory virus PCR testing.
  - Provide care to affected individuals in private rooms or cohorted in multi-bed rooms on Droplet and Contact Precautions.
  - Symptomatic staff should consult Occupation Health and Safety.
  - If a respiratory virus is confirmed, the Medical Health Officer may declare an outbreak, and IPAC will provide assistance to manage outbreak.

Lab Testing

- Testing for ILI includes collection of an NP swab for PCR to detect respiratory viruses. Follow the ILI Specimen Collection guideline.

Prevention and Treatment

- Staff should follow the PHC Influenza Prevention Policy.
- Patients and residents should be offered influenza vaccination when eligible per the Influenza Immunization for Patients and Residents Policy.
- Antiviral medication (e.g., oseltamivir or Tamiflu) can be used to reduce the severity and duration of symptoms in patients/residents with confirmed influenza A or B, or to prevent infection in exposed patients/residents and during outbreaks. In long-term care (LTC), follow the Influenza Management Yearly Preparation guideline.

Transfer/Discharge Planning

- Notify the receiving facility, hospital, nursing home or community agency involved in the patient's care of their status.
- Patients and residents with ILI should wear a medical mask during transport.

Documentation

- Ensure the appropriate Additional Precaution (e.g., Droplet and Contact, Airborne, Airborne and Contact) appears in Cerner on the Banner Bar.
- Acute Care: Symptoms and temperature should be documented in I-View
- Long Term Care: When symptomatic residents are identified, complete and send line lists to IPAC (found in the Influenza Outbreak Management Protocol)

Patient and Family Education

HealthLinkBC Files:

- Facts about Influenza (the Flu)

Related Documents

- B-00-07-13028 - Airborne Precautions - Infection Control
- B-00-07-13079 - Droplet and Contact Precautions - Infection Control
- B-00-11-10195 - Influenza Immunization for Patients and Residents
- B-00-07-13017 - Influenza Like Illness Specimen Collection: Nasopharyngeal Swabs
- B-00-07-13007 - Influenza Management in Residential Care: Yearly Preparation
- B-00-13-13001 - Influenza Outbreak Management Protocol
- B-00-11-10186 - Influenza Prevention Policy
- Occupational Health and Safety guide for staff with influenza

References

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Definitions

"Direct Care" includes providing hands-on care, such as bathing, washing, turning the patient, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.

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