

Management of suspected/confirmed Influenza (Adults)



In Canada seasonal influenza generally begins in October, peaks in December-January and ends in late April (Quebec surveillance data can be accessed at <https://www.inspq.gc.ca/influenza>).

Most cases of influenza result in mild illness, but viral pneumonias with/without bacterial superinfection as well as extrapulmonary complications (myositis, myocarditis, encephalitis) can occur in patients with high-risk conditions.

Based on observational studies, **early initiation** of antiviral therapy (ideally within 12 hours of onset of symptoms) may provide mortality benefit in hospitalized patients at high-risk of complications.

Suspected influenza: Fever and/or new onset/exacerbation of respiratory symptoms

Confirmed influenza: Laboratory detection of Influenza A or B in respiratory sample

PATIENTS AT HIGH RISK OF COMPLICATIONS:

- ≥ 65 years
- Pregnant or postpartum (within 2 weeks of delivery)
- Underlying comorbidities:
 - Pulmonary disease (COPD, asthma, cystic fibrosis)
 - Diabetes
 - Cardiovascular disease excluding isolated hypertension
 - Chronic kidney disease
 - Cirrhosis
- Immunocompromise: hematological malignancy, HSCT recipients, solid organ transplant, HIV with CD4 < 200, immunosuppressive medication (high dose corticosteroids, anti-TNF therapy, chemotherapy, etc.)
- Morbid obesity
- Nursing home residents

ADMISSION CRITERIA

- Respiratory criteria:
 - Dyspnea at rest or minimal activity
 - Respiratory rate > 22/min
 - PaO₂ < 65 mm Hg or O₂Sat < 90%
- Non-respiratory criteria
 - Altered mental status
 - Signs of sepsis/shock
 - Other considerations as per treating team

DIAGNOSTIC CONSIDERATIONS

- Nasopharyngeal swab or aspirate (NPS or NPA), or BAL for testing by RT-PCR
- If moderate-severe illness requiring admission:
 - Chest X-ray
 - Blood and sputum/BAL cultures before starting any antibiotics

PHARMACOLOGIC MANAGEMENT

<p>Mild disease (no supplemental O₂)</p>	<p><u>No risk factors for complicated disease:</u></p> <ul style="list-style-type: none"> • No antimicrobials <p><u>Pregnant:</u></p> <ul style="list-style-type: none"> • Oseltamivir¹ 75 mg PO BID x 5 days (regardless of when symptoms started) <p><u>Any risk factor for complicated disease and symptom onset < 48 h:</u></p> <ul style="list-style-type: none"> • Oseltamivir¹ 75 mg PO BID x 5 days
<p>Moderate disease (Supplemental O₂)</p>	<ul style="list-style-type: none"> • Oseltamivir¹ 75 mg PO BID x 5 days (regardless of when symptoms started)
<p>Severe disease (extensive pneumonia, respiratory failure, septic shock)</p>	<ul style="list-style-type: none"> • Oseltamivir¹ 75 mg PO BID x 5 days AND Ceftriaxone 2 g IV q24h + Azithromycin 500 mg IV/PO q24h <i>Reassess in 48 h based on culture results; max. duration 5 days</i>
<p>Clinical deterioration after initial improvement on antiviral</p>	<ul style="list-style-type: none"> • Ceftriaxone 2 g IV q24h <i>Reassess in 48 h based on culture results</i>
<p style="text-align: center;"><i>If MRSA colonized If hospital-associated pneumonia</i></p>	<ul style="list-style-type: none"> • Add vancomycin² 15-25 mg/kg IV q8h-12h • Piperacillin-tazobactam 4.5 g IV q8h (extended-infusion over 3-4 hours) instead of ceftriaxone

¹Adjustment for renal dysfunction

Creatinine clearance (use Cockcroft-Gault equation)	Dose oseltamivir
31-60 mL/min	30 mg PO/PT BID
≤ 30 mL/min	30 mg PO/PT daily
Intermittent hemodialysis	75 mg PO/PT after each HD session

²See Vancomycin Therapeutic Drug Monitoring guideline; consult pharmacy for dosing adjustments

ADDITIONAL CONSIDERATIONS

- Offer annual vaccination to patients at high-risk of complications

REFERENCES

- Uyeki TM, Bernstein HH, et al. Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza. *Clinical Infectious Diseases*. 2018;68(6):e1-e47.
- Aoki FY, et al. Use of antiviral drugs for seasonal influenza: Foundation document for practitioners—Update 2019. *Official Journal of the Association of Medical Microbiology and Infectious Disease Canada*. 2019;4(2):60-82.
- Ministry of Health and Social Services of Quebec.

Drafted by G. Moussa (Pharmacy Department), F. Bourdeau (Pharmacy Department) and Q. Li (Pharmacy Department)

Reviewed by M. Semret (ID)

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