



This best practice guide is intended for healthcare professionals. It is provided as an indication and does not replace the judgment of the clinician who carries out the activities reserved by law or regulation. The recommendations in this guide have been developed using a systematic approach and are supported by the scientific literature as well as the knowledge and experience of Quebec clinicians and experts. INESSS remains on the lookout for any new data that may cause it to modify this guide. For more details, see [inesss.qc.ca](https://www.inesss.qc.ca).

GENERAL

► In the current context of the co-circulation of multiple respiratory viruses, including influenza and COVID-19, the goal is to quickly offer treatment options to people at risk of complications from COVID-19 or influenza who have flu-like syndrome.

1. These individuals would first need to be tested for COVID-19 in order to receive [COVID-19-specific treatment](#) that has been shown to reduce hospitalizations.
2. Faced with a negative COVID-19 rapid test result, these individuals should go to a local point of care for testing for COVID-19 and influenza. In the event of a positive result, targeted treatment could be offered.

This guide is for healthcare professionals who could offer people with influenza an antiviral that could mitigate, with modest effectiveness, the intensity and duration of symptoms.

FLU-LIKE SYNDROME (FLS)

All individuals with symptoms consistent with flu-like syndrome (FLS), gastroenteritis, or [COVID-19](#) should follow the [recommendations of public health authorities](#).

FLU-LIKE SYNDROME (FLS)	
TYPICAL SYMPTOMS	OTHER SYMPTOMS AND FEATURES
<p>Most common symptoms:</p> <p>Sudden onset of fever¹ ($\geq 38.5^{\circ}\text{C}$) OR cough (dry), AND at least one of the following symptoms:</p> <ul style="list-style-type: none"> ► Sore throat ► Arthralgia ► Myalgia ► Prostration² or extreme fatigue 	<p>In adults:</p> <ul style="list-style-type: none"> ► Headache <p>In children:</p> <ul style="list-style-type: none"> ► Gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea, and abdominal pain) <p><i>N.B.: In very young children, symptoms may be attenuated or non-specific, such as rhinorrhea, impairment of general condition, refusal to eat or drink, and decreased interest in activities.</i></p> <p>In the elderly:</p> <ul style="list-style-type: none"> ► Cough sometimes delayed ► Geriatric fever³ or sometimes absent

1. Rectal temperature measurement in young children. Fever in children is defined as $\geq 38.3^{\circ}\text{C}$.
2. Prostration: state of extreme physical and psychological exhaustion, weakness, and total inactivity.
3. Geriatric fever is defined by any of the following criteria:
 - a) single oral temperature measurement $> 37.8^{\circ}\text{C}$ or
 - b) repeated oral temperature $> 37.2^{\circ}\text{C}$ or rectal temperature $> 37.5^{\circ}\text{C}$ or
 - c) taking a single temperature (oral, tympanic, axillary, or rectal) $> 1.1^{\circ}\text{C}$ higher than the person's basal temperature (previously taken by the same route).

FLU LIKE SYNDROME (FLS) SEVERITY

NOT VERY SEVERE	MODERATELY SEVERE	SEVERE
Typical symptoms sometimes accompanied by diarrhea and vomiting	Typical symptoms AND more severe signs or symptoms: <ul style="list-style-type: none"> ▶ Chest pain ▶ Mild hypoxia ▶ Cardiopulmonary insufficiency (e.g., low arterial blood pressure) ▶ Mild central nervous system involvement (e.g., confusion, altered mental status) ▶ Severe dehydration ▶ Exacerbation of existing chronic diseases 	Signs and symptoms associated with the following conditions: <ul style="list-style-type: none"> ▶ Respiratory failure requiring oxygen therapy ▶ Central nervous system abnormalities (e.g., encephalitis, encephalopathy) ▶ Complications related to low arterial blood pressure (e.g., shock, organ failure) ▶ Myocarditis or rhabdomyolysis ▶ Invasive secondary bacterial infection (e.g., persistent high fever and other symptoms beyond 3 days)

RISK FACTORS FOR INFLUENZA COMPLICATIONS

COMPLICATION RISKS	HIGH RISK OF COMPLICATIONS
<ul style="list-style-type: none"> ▶ Child under 2 years of age¹⁻² ▶ Person aged 75 and over ▶ Resident of a residential and long-term care facility, seniors' residence, or intermediate resource, whether public or private ▶ Person who has a chronic disease or condition that requires regular medical follow-up (e.g., heart, lung, kidney, liver, hematological, neurological, cancer, immunosuppression, significant obesity) ▶ Child and adolescent (under 18 years of age) on prolonged treatment with acetylsalicylic acid (which may increase the risk of Reye's syndrome after influenza) ▶ Healthy pregnant woman in the 2nd or 3rd trimester (13 weeks and over) OR who has a chronic disease or condition, regardless of the stage of pregnancy 	<p>Some individuals may be considered to be at high risk of influenza complications based on clinical judgment, for example:</p> <ul style="list-style-type: none"> ▶ Immunosuppressed individuals (e.g., recipients of a recent allograft or solid organ transplant, people on chemotherapy) ▶ People with severe pneumopathy ▶ People with multiple comorbidities

1. Children under 6 months of age are most at risk of influenza complications, followed by children aged 6-23 months and then those aged 2-4 years.

2. In children with mild FLS, antiviral therapy is not recommended if age is the only risk factor for influenza complications.

BIOMEDICAL ANALYSES

COVID-19 Detection

- ▶ Individuals with FLS should undergo a COVID-19 Rapid Antigen Detection Test (RADT) according to the guidelines available [here](#) or a Nucleic Acid Amplification Test (NAAT) if they are among the populations targeted for access to this test at a local point of care.

Detection of influenza

- ▶ In the presence of [influenza activity](#), people at risk of influenza complications or people who live under the same roof as a person at risk of influenza complications or who care for them at home could also go to a local point of care to undergo an influenza detection test, but this **test is not mandatory if the conduct is not likely to be modified by the result**.
 - Recommendations regarding the relevant use of analyses associated with different respiratory viruses (SARS-CoV-2, influenza, and respiratory syncytial virus) during influenza season are presented [here](#).

PHARMACOLOGICAL TREATMENT

TREATMENT PRINCIPLE

- ! Treatment or prophylaxis for influenza should be considered, regardless of vaccination status, when:
 - ▶ [influenza activity index](#) demonstrates the presence of influenza A or B viruses, and
 - ▶ COVID-19 test result (RADT or NAAT) is negative OR
 - ▶ the result of the analysis reveals the presence of influenza A or B

- ▶ When indicated, initiate antiviral therapy as early as possible, upon clinical suspicion and ideally within 48 hours of onset of symptoms, **without waiting for confirmation of influenza virus infection.**

PROPHYLAXIS

Antiviral prophylaxis against influenza is **generally not recommended.**

- ▶ However, it could be considered as a control measure when [an outbreak is suspected or confirmed in a healthcare setting.](#)

PRESUMPTIVE TREATMENT

Presumptive antiviral treatment for influenza **is recommended:**

- ▶ for a person at high risk of influenza complications who has had close contact with a person infected with influenza or with a person who has FLS and who has tested negative for COVID-19.
 - close contact occurs when a person has been in the same room for 4 hours or more OR has been in contact with respiratory secretions after direct exposure without adequate protection.

SYNDROMIC TREATMENT

Antiviral treatment for influenza **is recommended** based on the severity of FLS and target populations:

FLS Severity	Target Populations	Therapeutic Approach
Not very severe	<ul style="list-style-type: none"> ▶ Child aged one year and older¹ who has a risk factor for influenza complications (in addition to age) ▶ Person under 75 years of age who has a risk factor for influenza complications ▶ Person who lives under the same roof as or cares for a person at risk of influenza complications at home 	<ul style="list-style-type: none"> ▶ Start the antiviral if symptoms have occurred for 48 hours or less
	<ul style="list-style-type: none"> ▶ Person aged 75 and over ▶ Person at high risk of influenza complications 	<ul style="list-style-type: none"> ▶ Start the antiviral even if symptoms have occurred for more than 48 hours
Moderately severe	<ul style="list-style-type: none"> ▶ Anyone 1 year of age or older¹ 	<ul style="list-style-type: none"> ▶ Start the antiviral even if symptoms have occurred for more than 48 hours
Severe		
Regardless of severity level	<ul style="list-style-type: none"> ▶ Resident of a residential and long-term care facility, seniors' residence or intermediate resource, whether public or private ▶ Inpatient with influenza 	<ul style="list-style-type: none"> ▶ For outpatients, consider hospitalization if symptoms are moderately severe or severe

1. If necessary and depending on the resources available in the environment, it is possible to consider, on a case-by-case basis, treatment in children < 1 year after discussion with a paediatric specialist or an experienced colleague.

CHOICE OF ANTIVIRAL

For people at risk of COVID-19 complications who test positive for COVID-19, please visit the [COVID-19 Specific Treatments](#) page on the INESSS website.

When influenza treatment or prophylaxis is indicated, choose the appropriate antiviral according to the following table:

GROUPS	OSELTAMIVIR 1 st choice	ZANAMIVIR 2 nd choice ¹
Children 1 year to < 7 years	✓	✗
Children ≥ 7 years	✓	✓
Adults	✓	✓
People ≥ 1 year with underlying lung disease	✓	✗
Pregnant or breastfeeding women	✓	✓

1. For confirmed or strongly suspected cases of influenza B in adults and if there are no contraindications, zanamivir should be selected. If oseltamivir treatment is already initiated externally, there is no need to switch to zanamivir.

Legende ✓ Recommended ✗ Not recommended

Note: For individuals with positive COVID-19 and influenza biomedical results, concomitant use of influenza antivirals and nirmatrelvir/ritonavir (Paxlovid™) is not contraindicated.

GENERAL ANTIVIRAL INFORMATION

	OSELTAMIVIR	ZANAMIVIR
Contraindications	<ul style="list-style-type: none"> ▶ History of allergic reaction to oseltamivir 	<ul style="list-style-type: none"> ▶ History of allergic reaction to zanamivir or milk proteins ▶ Underlying respiratory disease, in severe respiratory failure or coordination difficulty that does not allow the adequate administration of zanamivir in the form of Diskus®
Precautions	<ul style="list-style-type: none"> ▶ None 	<ul style="list-style-type: none"> ▶ Young children ▶ Geriatric population
Method of administration	<ul style="list-style-type: none"> ▶ Oral 	<ul style="list-style-type: none"> ▶ Inhalation (Diskus®)
Most common adverse drug reactions	<ul style="list-style-type: none"> ▶ Nausea ▶ Vomiting 	<ul style="list-style-type: none"> ▶ Bronchospasm
Most significant drug interactions	<ul style="list-style-type: none"> ▶ Live attenuated influenza vaccine: may decrease vaccine immunogenicity 	

DOSAGE

	OSELTAMIVIR				
	Adults	Adults with kidney failure (KF)		Children ≥ 1 year ¹	
	Dosage	Estimated creatinine clearance (CrCl)	Dosage	Weight	Dosage
			If recent CrCl (≤ 2 years) absent and without suspicion of advanced chronic KF, use adult dosing.		If KF, dose adjustments may be considered based on clinical judgment ² .
Prophylaxis	75 mg DIE x 10 days	CrCl 31 to 60 ml/min	30 mg DIE x 10 days	≤ 15 kg	30 mg DIE x 10 days
		CrCl 11-30 ml/min	30 mg q2j x 10 days	> 15 kg-23 kg	45 mg DIE x 10 days
		CrCl ≤ 10 ml/min	Consult an experienced colleague	> 23 kg-40 kg	60 mg DIE x 10 days
		Person on dialysis		> 40 kg	75 mg DIE x 10 days
Treatment or presumptive treatment	75 mg BID x 5 days	Person on dialysis	30 mg BID x 5 days	≤ 15 kg	30 mg BID x 5 days
		CrCl 11-30 ml/min	30 mg DIE x 5 days	> 15 kg-23 kg	45 mg BID x 5 days
		CrCl ≤ 10 ml/min	75 mg as a single dose in consultation with an experienced colleague	> 23 kg-40 kg	60 mg BID x 5 days
		Person on dialysis	Consult an experienced colleague	> 40 kg	75 mg BID x 5 days

1. The use of oseltamivir is not licensed by Health Canada for children under one year of age. Treatment could be considered on a case-by-case basis and depending on the severity of symptoms. If necessary and depending on the resources available in the environment, consult a paediatric specialist or an experienced colleague for dose adjustment.

2. If necessary and according to the resources available in the community, consult a paediatric specialist or an experienced colleague.

	ZANAMIVIR	
	Adults	Children ≥ 7 years
Prophylaxis	10 mg (2 inhalations of 5 mg) DIE x 10 days	
Treatment or presumptive treatment	10 mg (2 inhalations of 5 mg) BID x 5 days	

MONITORING

SITUATION	MONITORING
1. If an influenza test has been performed and is negative and there is another diagnosis	▶ Stop antiviral treatment
2. If an influenza test has been performed and is negative, but there is no other diagnosis	▶ Consider further investigation and discontinuation of antiviral therapy
3. If signs and symptoms persist or worsen after 48-72 hours of antiviral therapy	▶ Consider further investigations (e.g., in order to discover a co-infection bacterial) or consult an experienced colleague
4. If a person receiving oseltamivir prophylaxis develops FLS	▶ Stop prophylaxis ▶ Perform a COVID-19 test (RADT or NAAT) - If the test is negative, start treatment with oseltamivir OR zanamivir - If the test is positive, follow the instructions here .
5. If a person receiving oseltamivir prophylaxis develops confirmed influenza	▶ Discontinue prophylaxis and initiate treatment with oseltamivir OR zanamivir

REFERENCES

To view all references: see the report in support of the best practice guide.

To view COVID-19 symptoms: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/signs-symptoms-severity.html>

To view the recommendations of the public health authorities concerning COVID-19: <https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus>

For more details on people at risk of influenza complications: <https://www.msss.gouv.qc.ca/professionnels/vaccination/piq-vaccins/inf-injectable-vaccin-injectable-contre-l-influenza/>

To view the instructions for the use of a COVID-19 rapid antigenic detection test: <https://www.quebec.ca/en/health/advice-and-prevention/screening-and-carrier-testing-offer/testing-flu-like-symptoms/using-covid-19-rapid-tests>

To view the recommendations for the use of biomedical analyses: https://www.inesss.qc.ca/fileadmin/doc/INESSS/Rapports/Usage_optimal/COVID-19_INESSS_Taan-Multiplex.pdf

To view the influenza activity index: <https://www.msss.gouv.qc.ca/professionnels/maladies-infectieuses/grippe/>

For recommendations regarding outbreaks in healthcare settings: <https://www.inspq.qc.ca/publications/2836>

For information on COVID-19-specific treatments: <https://www.inesss.qc.ca/covid-19/traitements-specifiques-a-la-covid-19.html>