

Registered Nurse Decision Support Tool (Clinical Practice Guidelines): Identification and Early Treatment of Influenza-Like Illness (ILI) Symptoms in the Absence of a Medical Practitioner or Nurse Practitioner

Purpose

This document provides registered nurses (RNs) with guidance in screening and early intervention for clients who appear to be experiencing influenza-like illness (ILI), under the following circumstances:

- 1) the local Medical Health Officer or the Provincial Health Officer has determined that H1N1 or other influenza is circulating in or around the client's community (this may be confirmed by the RN through official surveillance reports, such as from BCCDC or the BC Government H1N1 Pandemic H1N1 Influenza website for Medical Practitioners, and
- 2) a medical practitioner or nurse practitioner is not available to examine and diagnose the client.

The guidelines provide RNs with the decision-support tools required to screen and treat symptomatic clients with oseltamivir (Tamiflu®) antiviral medication, and refer clients to a medical practitioner (MP) or nurse practitioner (NP) when needed.

Through these efforts it is expected that RNs will assist in reducing the number of clients requiring hospitalization or treatment in an intensive care unit for influenza-related complications during an influenza pandemic.

The Nurses (Registered) and Nurse Practitioners Regulation under the *Health Professions Act* was amended by the Minister of Health Services, effective October 14, 2009. The regulatory amendment along with the College of Registered Nurses of British Columbia's (CRNBC) approval, constitute the authorization RNs require to dispense and administer oseltamivir for the purpose of treating conditions that are symptomatic of ILI, without an order from a MP or NP.

Background

In an influenza outbreak situation, laboratory diagnosis of ILI in an individual is not required to consider treatment. The presence of ILI in the home, community or neighbouring community, supported by laboratory diagnosis that pandemic influenza is occurring in the community or region is sufficient.

Potential Causes of ILI

Viral infection: Influenza A or B viruses, Adenovirus, Rhinovirus, Parainfluenza viruses, Human Coronaviruses, Respiratory Syncytial Virus (RSV) all cause many of the same symptoms. In an influenza outbreak situation, most cases of ILI are caused by infection due to influenza viruses.

Bacterial infection: Mycoplasma pneumonia, Chlamydia pneumonia, Bordetella pertussis, Streptococcus pneumonia, and Legionella may cause some symptoms similar to influenza virus infection. See the decision support tool for further guidance about how to respond to secondary complications such as respiratory bacterial infections.

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Epidemiology

The incubation period, period of communicability and method of transmission of H1N1 influenza is similar to other human Influenza strains;

- Incubation period: On average 3 to 4 days but can range from 1 to 7 days
- Period of communicability: 24 hours before to up to 7 days after onset of illness. Shedding of the virus may be prolonged in children or immuno-compromised persons of any age.
- Method of transmission: primarily droplet and direct and indirect contact
- Transmission by asymptomatic persons is possible but is more efficient when symptoms such as coughing, are present and viral shedding is high (i.e. early in the symptomatic period)

Symptoms of ILI

Symptoms of ILI include acute onset of respiratory illness with fever over 38⁰ C (80% of all cases) **and** cough with one or more of the following:

- Sore throat
- Fatigue
- Joint pain
- Runny nose
- Muscle aches
- weakness
- Headache
- Decreased appetite

Gastrointestinal symptoms (nausea, vomiting or diarrhea), may be present but are not diagnostic of influenza. Fever may be less common in infants under 1, seniors over 65, and those with chronic illnesses. Presentation may include exacerbation of chronic condition, confusion and/or disorientation.

Treatment with oseltamivir antiviral medication

Oseltamivir is effective in preventing progression of influenza to its most severe manifestations (such as pneumonitis, pneumonia or exacerbation of an underlying chronic medical condition) if administered within 24 - 48 hours after the onset of influenza symptoms. Oseltamivir may also be used after the 48 hour period, in persons who are already moderately or severely ill to reduce further progression.

Distribution of Oseltamivir

The BC Centre for Disease Control (BCCDC) has worked with Health Authorities and First Nations stakeholders to position oseltamivir in remote communities. RNs screening and dispensing oseltamivir from the provincial pandemic stockpile under these guidelines need to access medication through existing remote community distribution mechanisms.

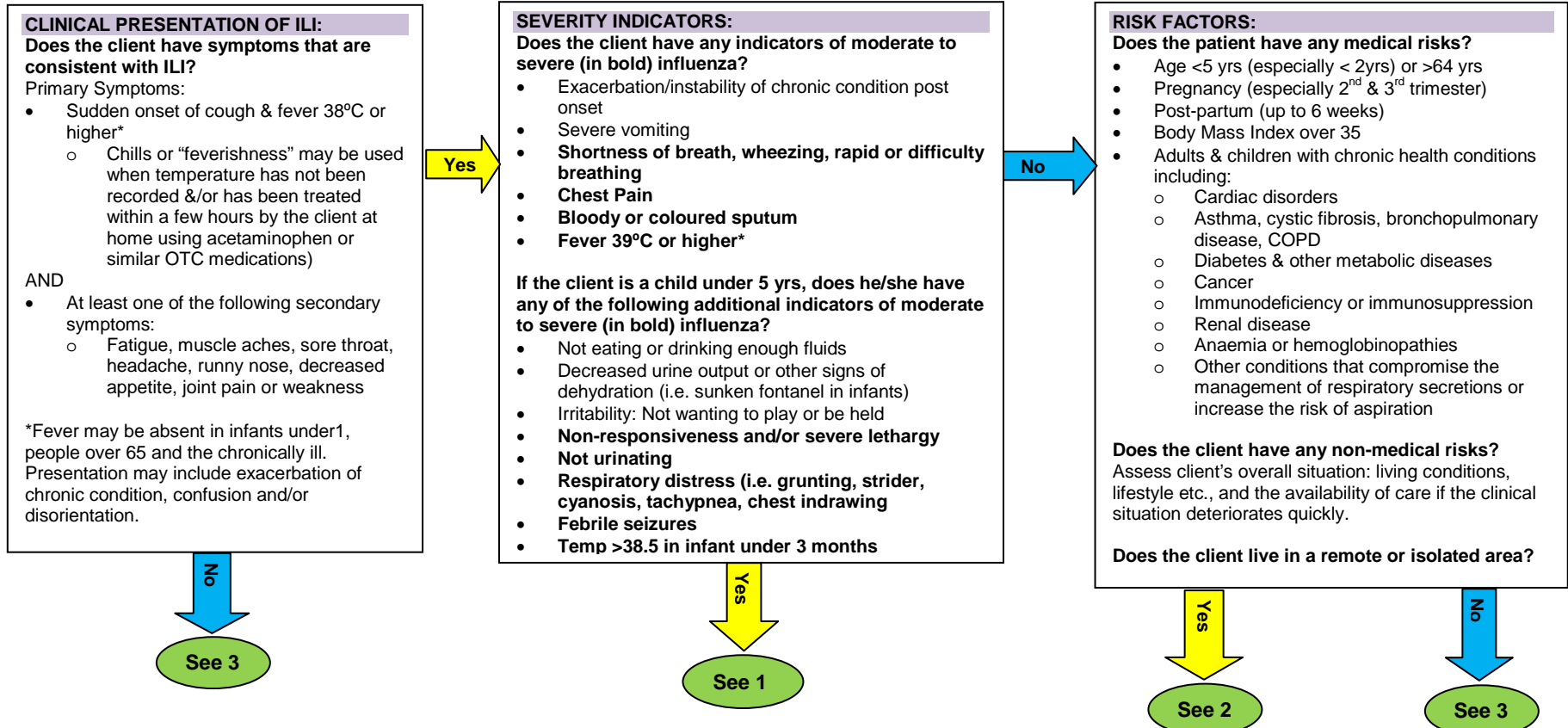
Monitoring and Recording Antiviral Administration

RNs will be accountable for recording and reporting on the provision of antiviral medication in accordance with BCCDC guidelines/procedures on the *BCCDC Antiviral Medication Recording Form*. RNs are responsible for returning unused supplies, and assisting their employer to resolve issues about tracking the use of antiviral supplies originating from the BC pandemic stockpile issued to the RN.

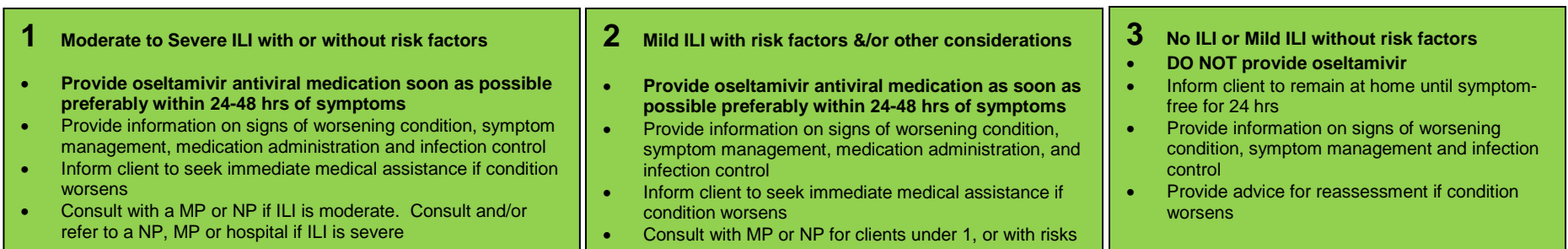
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Step 1: History of Present Illness & Review of Systems

Step 2: Assess Client's Condition



Step 3: Treatment Decisions



Follow-up to assess client's condition: For infants under one year phone parents within 24 hours, for clients with risk factors or moderate ILI contact within 24-48 hours.
Note: Infants and young children can experience rapid changes in their health condition; therefore it is extremely important to inform parents to watch for signs of deteriorating health status and to seek immediate medical assistance.

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Client Information

Provide client with information on managing illness, over the counter medications, infection control, signs of worsening condition and if applicable, medication administration.

Managing the illness

- Explain the diagnosis of ILI and that the expected course of illness is resolution of symptoms within one week
- Inform client to recuperate at home until they are feeling better (other than lingering dry cough which can occur in some cases) and client is able to resume all their usual activities
- Encourage client to increase bed rest away from others, if possible, until symptoms improve
- Reinforce the importance of maintaining adequate hydration and discuss the signs and symptoms of dehydration in infants, children and elderly
- Inform client on options for treating fever and symptoms with over the counter medications
- Explain the importance of creating a smoke-free environment
- Review and provide client with the following Health Files *H1N1 Influenza Virus (Human Swine Flu)* and *Self Care During an Influenza Pandemic* (see Other Sources of Information)
- Inform client to seek immediate medical assistance if condition worsens (see signs of worsening condition)
- Inform client to call the HealthLinkBC (call 811) if they have questions or need advice. This service provides nursing advice 24 hours a day 7 days a week

Infection control measures

- Explain the importance of reducing other people's exposure to respiratory secretions from coughing and sneezing
- Encourage clients who are actively sneezing or coughing to use tissues, or disposable surgical masks if available
- Inform client that masks are not normally recommended in the home setting, although clients who are very actively sneezing and coughing can use surgical masks when being attended by caregiver
- Demonstrate technique for coughing into elbow if tissues are not available
- Explain importance of disposing tissues in a garbage bag
- Provide education to client and caregiver on hand hygiene (e.g. before and after eating, after sneezing, coughing and toileting)
- Provide education on use of alcohol-based hand cleaners
- Recommend cleaning of commonly touched surfaces (e.g. doorknobs, counters) with household cleansers, after client use
- Recommend, where possible, that pregnant women, especially those in their late pregnancy, or those with chronic diseases NOT be caregivers

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Signs of worsening condition

- Inform client of signs of moderate to severe ILI and to seek immediate medical attention from a medical practitioner, nurse practitioner or hospital if they experience severe (in bold) ILI. Signs include:
 - Exacerbation/instability of chronic condition post onset
 - Severe vomiting
 - **Shortness of breath, wheezing, rapid or difficulty breathing**
 - **Chest Pain**
 - **Bloody or coloured sputum**
 - **Fever 39°C or higher**
- Persons 65 years and older do not always present with high fever; confusion &/or disorientation are more likely.
- Inform client of additional signs of moderate to severe (in bold) influenza in children, under 5, if appropriate. Signs include:
 - Not eating or drinking enough fluids
 - Decreased urine output or other signs of dehydration (i.e. sunken fontanel in infants)
 - Irritability: Not wanting to play or be held
 - **Non-responsiveness and/or severe lethargy**
 - **Not urinating**
 - **Respiratory distress (i.e. grunting, strider, tachypnea, chest indrawing)**
 - **Febrile seizures**
 - **Temperature greater than 38.5 in infants less than 3 months of age**
- Inform client to call the RN, 811, 911 or First Responders for assistance in obtaining emergency services if the client is unable to contact a medical practitioner, nurse practitioner or hospital and condition worsens.

Note: Potential complications of ILI include exacerbation of chronic conditions, viral pneumonitis, viral pneumonia, bacterial pneumonia or secondary infection and sepsis. In children bronchiolitis, croup and pneumonia are more common complications.

Over the counter medications

- Acetaminophen (Tylenol) and Ibuprofen (Motrin, Advil) can be used to reduce fever and relieve some symptoms. These products are recommended for children and most adults
- Acetylsalicylic Acid (ASA, Aspirin) and Ibuprofen (Motrin, Advil) are not recommended for pregnant women as they can affect fetal kidney function
- Acetylsalicylic Acid (ASA, Aspirin) is not recommended for children and youth <20 years as this product can lead to Reye's syndrome
- Over the counter cold medications are not recommended for infants and children <6 years

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- Instruct on safe usage of over the counter medications. Inform clients that dosage recommendations for children less than 12 are dependent on the child's weight and should not exceed adult recommended doses

Oseltamivir administration (for clients receiving oseltamivir only)

- Explain medication and side effects
- Inform client to complete the full course of oseltamivir. Clients should NOT stop treatment because they start to feel better. This may reduce the value of the treatment for others in their family or community by allowing the development of resistance to the treatment among the influenza viruses
- Inform client to call the HealthLinkBC (call 811) for advice regarding medication administration, side effects, etc before deciding to stop medication
- Inform client that the most common side effect of oseltamivir is mild stomach upset or nausea

Oseltamivir dosage

Dosage Forms	Client Population	Treatment Dosing
Pandemic Supply • 75mg capsule (majority) • 45mg capsule • 30mg capsule	<i>Adults and adolescent ≥ 13</i>	75 mg twice daily for 5 days
	<i>For children 1 to < 13 years</i>	
	>40kg	75 mg twice daily for 5 days
	>23 to 40 kg	60 mg twice daily for 5 days
	>15 to 23 kg	45 mg twice daily for 5 days
	≤ 15 kg	30 mg twice daily for 5 days
Commercial Supply • 75mg capsule (majority)	<i>For infants under 1 year</i>	
	6 to < 12 months	25 mg twice daily for 5 days
	3 to < 6 months	20 mg twice daily for 5 days
	0 to < 3 months	12 mg twice daily for 5 days
NOTE: The pandemic supply of oseltamivir will mainly consist of 75mg capsules.		

Note: Capsules can be opened by the patient/caregiver and mixed with a sweetened liquid (e.g. chocolate syrup) immediately prior to administration. If this is not an option, a 15 mg/mL suspension can be extemporaneously compounded using the 75 mg capsules. A 12 mg/mL commercial suspension is NOT available as part of the pandemic supply, but may be available in limited quantities in the commercial supply.

To compound a paediatric oral suspension from capsules refer to Antiviral Medications - Clinical Information for Pharmacists at: <http://www.hls.gov.bc.ca/pho/pharmh1n1.html>

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Consultation and/or referral

- Consult with a MP or a NP on clients under 1 year, clients with mild ILI and risk factors and clients with moderate ILI.
- Consult with and/or refer to a MP, NP or a hospital any client who is experiencing severe ILI.

Client Monitoring and Follow-up

Complete a follow-up phone call to assess changes in client's condition within:

- 24 hours for clients under 1 year of age
- 24-48 hours for clients with mild ILI and risk factors, and clients with moderate ILI

Documentation

Complete the *BCCDC Antiviral Medication Recording Form* and submit to BCCDC for each client who receives oseltamivir. Follow employer protocols and/or procedures for recording and reporting oseltamivir administration in keeping with CRNBC documentation guidelines.

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Other Sources of Information

Client information is available from:

BC H1N1 Pandemic Influenza <http://www.gov.bc.ca/h1n1/>

Public Health Agency of Canada: <http://www.FightFlu.ca>

HealthLinkBC <http://www.healthlinkbc.ca/kbaltindex.asp>

- H1N1 Influenza Virus (Human Swine Flu)
<http://www.healthlinkbc.ca/healthfiles/hfile108.stm>
- Self Care During an Influenza Pandemic
<http://www.healthlinkbc.ca/healthfiles/hfile94c.stm>

References

BC website for health care providers on pandemic H1N1 influenza:

<http://www.gov.bc.ca/h1n1/healthcareproviders/index.html>

Public Health Agency of Canada <http://www.FightFlu.ca>

College of Registered Nurses of BC <http://www.crnbc.ca/>