Responding to pH1N1 in a Primary Care Setting: Your Questions Answered.

The majority of Influenza-like Illness (ILI) during the fall and winter of 2009/10 will be related to pH1N1. Seasonal influenza is expected to circulate to a lesser degree, potentially later into the winter.

HOW DO I DIAGNOSE pH1N1?

Diagnosing pH1N1 depends on the following clinical criteria for Influenza-like Illness (ILI): Acute onset of respiratory illness with FEVER and COUGH plus one or more of the following:

- sore throat
- joint pain
- muscle pain
- extreme exhaustion

Fever may not be present in young children and the elderly. Some people report diarrhea and vomiting with pH1N1.

HOW DO I ASSESS PATIENTS WITH SUSPECTED pH1N1?

1. **Screen for underlying conditions** that put people at higher risk of complications from ILI. Most people who contract pH1N1 will have a typical course of influenza with a few days of self-limited illness. People with risk factors may experience more severe and complicated illness.

2. **Assess for abnormal vital signs**. Hypotension, tachycardia, and tachypnea are early indicators of serious illness.

3. **Assess for worsening clinical status** such as increasing shortness of breath, chest pain, and confusion.

Those at RISK of developing complications from pH1N1 are:

- **People with underlying health conditions**: cardiac disease, chronic pulmonary diseases, diabetes mellitus and other metabolic diseases, cancer, immunodeficiency, immunosuppression, renal disease, anemia or hemoglobinopathy, morbid obesity (BMI>40), conditions that compromise the management of respiratory secretions and are associated with an increased risk of aspiration.

- **People over age 65**.
- **Children under age 5** (risk greater for children under age 2).
- **Children under 18 years** of age on long-term ASA therapy.
- **Pregnant women** (especially those in 2nd and 3rd trimesters and up to 6 weeks postpartum).
- **People living in rural areas** remote from hospital care (e.g., remote First Nations communities).
- **People living in long-term care homes**.

This document is a summary of Guidance for the Management of Influenza-Like Illness in Ambulatory Care Settings during Pandemic (pH1N1) 2009, developed by the Ontario Ministry of Health and Long Term Care. These guidelines were updated on November 13 2009.

For further details, go to www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ambulatory_guidance.pdf
WHAT SPECIAL CONSIDERATIONS ARE THERE FOR PAEDIATRIC PATIENTS?

- Younger infants may progress rapidly to severe illness,
- Presentation of ILI in children may be atypical (gastrointestinal symptoms may be present and fever may not be prominent), and
- Viral load is usually high and shedding may be more prolonged in young children as compared to adults.

The likelihood that the infant/child with ILI may have pH1N1 is greater if he/she has been in contact with a symptomatic family member within the previous week.

In paediatric patients with the following health conditions, health care providers should consider a diagnosis of ILI even if fever is absent:

- Children with chronic pulmonary or airway disorders (e.g. asthmatics with exacerbations of symptoms, Cystic Fibrosis patients with exacerbations),
- Infants and neonates with apnea, unexplained respiratory distress, unexplained sepsis or unexplained lethargy and poor feeding,
- Immunocompromised children with respiratory symptoms in absence of fever or fever in the absence of respiratory symptoms,
- Neurologically impaired children,
- Patients presenting with sepsis and other catastrophic illnesses,
- Patients with presumed encephalitis.

Note that the above does not capture every potential manifestation of ILI in infants and children; clinical judgment must be used.

WHEN IS TESTING RECOMMENDED?

Nasopharyngeal (NP) swab tests are not generally recommended or helpful in primary care settings for the clinical management of patients with ILI.

WHAT ARE THE CURRENT TREATMENT GUIDELINES FOR ILI?

**Stable patients with no risk factors** ➔ supportive therapy.
Antiviral therapy not generally necessary but may be considered based on clinical judgement.

**Patients with risk factors** ➔ supportive therapy, antiviral therapy if within 48 hrs of symptom onset. After 48 hrs, use clinical judgement, follow closely.

**Patients with abnormal vital signs or worsening clinical status** ➔ antiviral therapy, refer to hospital if clinically warranted. Consider concomitant bacterial infection.

**SUPPORTIVE THERAPY**

- Rest
- Drink plenty of fluids
- Take steps to treat the fever:
  - Wear light clothing
  - Keep room temperature around 20ºC (68ºF)
  - Take ibuprofen or acetaminophen
- Practice proper hand hygiene
- Stay 2 meters away from others and/or wear a surgical mask
- Pay attention to signs of worsening illness

**WORSENING ILLNESS**

Symptoms of worsening illness include:

- Difficult or fast breathing or feeling short of breath
- Chest pain
- Purple or blue discolouration of the lips
- Vomiting and unable to keep liquids down
- Signs of dehydration
- Confusion, disorientation, seizures, difficulty waking
- Stiff neck or sensitive to light
- Fever that does not go away or comes back after four (4) to five (5) days

In children also watch for:

- Any fever in a baby less than 3 months of age
- Crankiness or irritability
ANTIVIRAL THERAPY

- Oseltamivir (Tamiflu®) is the first line antiviral agent.
- An alternative choice is zanamivir (Relenza®). Recommended dosage: 10mg q12h x 5 days for persons 7 yrs of age and older.
- Both oseltamivir and zanamivir are considered safe when breastfeeding.
- Antiviral treatment should be initiated within 48 hours of illness. If patients present more than 48 hours after illness onset, treatment is not generally recommended but may be initiated if clinically warranted.

OSELTAMIVIR (TAMIFLU®)
Dosage forms: 75 mg, 45mg, and 30mg capsules and 12 mg/mL suspension*

<table>
<thead>
<tr>
<th>Adults</th>
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<tbody>
<tr>
<td>Normal renal function</td>
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<tr>
<td>Creatinine clearance of 10 - 30mL/min</td>
<td>75 mg q12h for 5 days</td>
</tr>
<tr>
<td>Creatinine clearance &lt;10 mL / min</td>
<td>75 mg once daily for 5 days</td>
</tr>
<tr>
<td>Renal dialysis</td>
<td>Not recommended</td>
</tr>
<tr>
<td></td>
<td>No recommended dosing regimen available</td>
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<table>
<thead>
<tr>
<th>Children**</th>
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<tbody>
<tr>
<td>Children &gt;=12 months</td>
<td></td>
</tr>
<tr>
<td>&gt;40 kg</td>
<td>75 mg q12h for 5 days</td>
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<tr>
<td>&gt;24 kg to 40 kg</td>
<td>60 mg q12h for 5 days</td>
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<tr>
<td>&gt;15 kg to 23 kg</td>
<td>45 mg q12h for 5 days</td>
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<tr>
<td>&lt;15 kg</td>
<td>30 mg q12h for 5 days</td>
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<tr>
<td>Children &gt;9 months but &lt;12 months†</td>
<td>3.5 mg / kg q12h for 5 days</td>
</tr>
<tr>
<td>Children &lt;9 months†</td>
<td>3.0 mg / kg q12h for 5 days</td>
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*Suspension is currently in short supply. Pharmacies can compound the 30mg and 45mg capsules into a suspension using a special syrup.
† Consultation with an infectious disease specialist is recommended (if available) when prescribing Tamiflu to children <12 months due to limited safety data in this age group.
** If a child is receiving breast milk from a mother taking antivirals and the child needs treatment themselves, the recommended dose of Tamiflu or Relenza remains the same for the child and should still be given.

WHY NOT GIVE EVERY PATIENT ANTIVIRAL THERAPY?

Antiviral medications are generally not recommended for pre or post exposure prophylaxis. Similarly, they are not necessary for clinically stable patients with mild illness. Overuse of antivirals could mean that these drugs may become unavailable to people who really need them, either through shortage of supply or development of resistance.

WHEN CAN INFECTED PATIENTS RETURN TO WORK OR SCHOOL?

Patients with ILI should not resume normal activities (eg, return to school or work) until they have been afebrile for 24 hours (without fever medication) and are feeling generally well.
Healthcare providers with ILI should remain off work until 24 hours after all symptoms other than a mild cough have resolved, typically for a period of 5 to 8 days.

Those who have been treated with Tamiflu® for 72 hours are believed to be less infectious and may return to normal activities once they are feeling generally well other than a mild cough.

**HOW DO I PROTECT THE STAFF AND PATIENTS IN MY OFFICE?**

**Prepare your office:**
- Use the questions from the MOHTLC self-assessment tool (www.ontario.ca/flu) to:
  - Have patients screen themselves at home
  - Screen patients over the phone when making appointments
- Post signs at your office entrance reminding patients to self-screen for cough and fever.
- Ask all patients with cough or fever to wear a surgical mask.
- Have alcohol-based hand rub available at the entrance and throughout the office.
- If possible, space waiting room chairs apart and have ILI patients sit at least 2m away from others.
- Remove toys, books, and magazines from waiting room.
- Schedule ILI appointments together at the end of the morning and/or afternoon.
- Defer non-essential visits during peak flu season to accommodate increased ILI volumes.
- Consider doing more clinical assessments over the phone.

**Protect yourself:**
- Perform hand hygiene before and after every patient.
- Wear personal protective equipment (PPE) when assessing ILI patients: eye protection, fit-tested N95 respirator, and gloves (wear gown only when there is a risk of clothing or skin contamination).
- If N95 respirators are not available, use a surgical mask.

Have a minimum of 4 weeks supply of personal protective equipment. If you run out of supplies and cannot purchase them from private suppliers, your local health unit should be able to direct you on where to order a PPE kit.

**SAMPLE OFFICE SIGNAGE**

**STOP**

Clean Your Hands

Respiratory illnesses like the flu spread easily.

Read Carefully

1. Do you have a **NEW/ WORSE** cough or shortness of breath? OR
2. Are you feeling **FEVERISH**, or have you had shakes or chills in the last 24 hours?

If the answer to either of these questions is **YES**, please put on a mask and see the receptionist or nurse right away.

For more information, visit ontario.ca/flu
**WHO SHOULD GET VACCINATED?**

Encourage all patients over the age of 6 months to be vaccinated.

**ADJUVANTED* and NON-ADJUVANTED VACCINE**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>DOSING RECOMMENDATION</th>
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<tbody>
<tr>
<td>Age 0 – 5 months</td>
<td>pH1N1 vaccine not authorized for use</td>
</tr>
<tr>
<td>Age 6 months to 35 months</td>
<td>2 half-doses of adjuvanted vaccine</td>
</tr>
<tr>
<td>Age 3 to 9 years (Children with chronic medical conditions)</td>
<td>Interval between doses should be a minimum of 21 days</td>
</tr>
<tr>
<td>3 to 9 years (Healthy children)</td>
<td>1 half-dose of adjuvanted vaccine, for now**</td>
</tr>
<tr>
<td>Healthy people aged 10 to 64 years</td>
<td>1 dose either adjuvanted or non-adjuvanted vaccine</td>
</tr>
<tr>
<td>People aged 10 to 64 years with weakened immune systems</td>
<td>1 dose adjuvanted vaccine</td>
</tr>
<tr>
<td>People aged 65 years and over</td>
<td>1 dose adjuvanted vaccine</td>
</tr>
<tr>
<td>Pregnant women</td>
<td>1 dose non-adjuvanted vaccine</td>
</tr>
<tr>
<td>Pregnant women more than 20 weeks pregnant</td>
<td>If non-adjuvanted vaccine is not available and rates of H1N1 flu are high or increasing, women more than 20 weeks pregnant should be offered 1 dose of adjuvanted vaccine.</td>
</tr>
<tr>
<td>Pregnant women with severe chronic disease</td>
<td>If non-adjuvanted vaccine is not available and rates of H1N1 flu are high or increasing in the community, pregnant women with severe chronic disease should be offered 1 dose of adjuvanted* vaccine.</td>
</tr>
</tbody>
</table>

*An adjuvant is a substance that is added to a vaccine to boost the individual’s immune response. It includes naturally occurring oil (called squalene), water and vitamin E.

**This recommendation may be updated as more information becomes available.

**Co-administration**

- pH1N1 vaccine may be administered concurrently with seasonal flu vaccine and other vaccines. If co-administered, injections should be given in separate limbs.
- If not given concurrently, there is no minimum interval required between the pH1N1 vaccine and other vaccines.

**Priority groups for vaccination are unique to each province and are changing regularly. Check with your local health unit to determine who is eligible to receive the vaccination in your community**

**People who have not had laboratory confirmation of influenza A or pH1N1 should receive the vaccine even if they have had symptoms of influenza.**
Responding to 

pH1N1

in a Primary Care Setting:

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Funding for the development of this tool was provided by the Ontario Agency for Health Promotion and Protection.

Additional support provided by the Department of Family and Community Medicine, University of Toronto and the Nurse Practitioners’ Association of Ontario

At the Centre for Effective Practice, we strive to provide practical solutions for best practice in primary care. We welcome your comments at feedback@effectivepractice.org

The information contained in this brochure is subject to change as new information becomes available.

If you have additional questions, consult your local Public Health Unit.
Information related to pH1N1 is changing regularly. We recommend that you consult with your local Public Health Unit regularly for updated news on this issue.

Below are some links to helpful information related to the assessment, treatment and management of pH1N1. We will post new links and information here as things progress.

1 **Assessment**

   MOHLTC Self-Assessment Tools (pages 11-13)

2 **Treatment**

   MOHLTC Ambulatory Care Settings Clinical Management Algorithm (pages 14-15)

   Antiviral dosing
   www.healthunit.com/h1n1info - go to Treatment and Testing Guidelines

3 **Office Management**

   Checklist for physician offices
   www bcmj.org/pandemic-influenza-and-physician-offices-figure?size=_original

   Signage in different languages
   www.toronto.ca/health/cdc/h1n1/multilingual_resources.htm

   Office management and infection control (includes diagrams on waiting room configuration and proper use of PPE)
   http://www.health.gov.bc.ca/pandemic/response/clinical.html - go to Guidelines for Pandemic Influenza-related Office Management and Infection Control for Private Physicians
pHIN1 vaccine dosing
Printable chart of PHAC H1N1 vaccine dosing recommendations
www.phac-aspc.gc.ca/alert-alerte/h1n1/vacc/recommendation-recommandation-eng.php

General information
Public Health Agency of Canada - Guidance H1N1 Flu Virus
www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance_lignesdirectrices-eng.php#11

Pandemic H1N1: Fast facts for front-line clinicians
College of Family Physicians of Canada

Key provincial resources
Below is a list of provincial resources for health care professionals dealing with pHIN1. Where it is available we have included information on changes to billing schedules.

ALBERTA
Alberta Health Services H1N1 Information for Health Care Professionals
www.albertahealthservices.ca/660.asp

As of October 30, 2009, there is a new health service code – 03.01AD Telephone advice to patient or agent regarding HIN1 virus – under the Schedule of Medical Benefits. It can be used by any and all physicians. It is an excellent opportunity to provide optimal service by advising and assisting patients without unnecessarily exposing staff or other patients to infection. For further information visit: www.albertadoctors.org/PresLet/Index

A Coordination Centre has been established to assist in addressing H1N1 response issues in a timely manner. The Centre can be reached toll free at 1-877-228-3031, or by e-mail at racc.operations@albertahealthservices.ca.

BRITISH COLUMBIA
The volume of influenza-like-illness cases continues to rise in British Columbia and as a result the temporary fee PG13700-GP Office Visit for H1N1 has been declared effective by the Provincial Health Officer as of October 19, 2009. This fee is available to general practitioners to diagnose and treat patients with suspected or active H1N1 symptoms and is not subject to daily volume discount rules. PG13700 – GP Office Visit
for H1N1 complements the other temporary fee **PG13705 Telephone Advice Regarding H1N1**, available to both GP’s and Specialists, which became effective October 1, 2009. For more information, see the following website:

Provincial Health Officer’s H1N1 Site for the Physicians of B.C.  
www.hls.gov.bc.ca/pho/physh1n1.html

This website also offers a **subscription service** that provides email alerts regarding emerging issues and updates related to H1N1. Sign up to receive these as soon as they come out.

**MANITOBA**  
Manitoba Health – H1N1 Flu Resources for the Health Sector  
www.gov.mb.ca/health/publichealth/sri/index.html

**NEW BRUNSWICK**  
New Brunswick Ministry of Health – Information for healthcare clinicians and allied health professionals  
www.gnb.ca/0053/h1n1/audience_professionals-e.asp

**NEWFOUNDLAND AND LABRADOR**  
Government of Newfoundland and Labrador – Information on H1N1 for Health Professionals  
www.health.gov.nl.ca/health/hsi/healthpro_info.htm

**NORTHWEST TERRITORIES**  
NWT Health & Social Services - H1N1 Flu Resources for Health Professionals  
www.hlthss.gov.nt.ca/english/services/communicable_disease_control_program/h1n1/h1n1_resources_health_professionals.htm

**NOVA SCOTIA**  
Department of Health Promotion and Protection - H1N1 information for Health Care Professionals  
www.gov.ns.ca/hpp/h1n1/health-care-professionals.asp

The usual MSI billing codes for influenza immunization, including fee trays, will apply for both H1N1 and seasonal flu vaccines but physicians will need to provide their own supplies.
NUNAVUT
Department of Health – H1N1 Flu Virus Updates
www.gov.nu.ca/h1n1/

ONTARIO
Ministry of Health and Long-Term Care’s H1N1 site for Healthcare Professionals
www.health.gov.on.ca/en/ccom/flu/h1n1/pro

PEI
PEI Department of Health H1N1 Flu Virus Website – Information for Healthcare Professionals

QUEBEC
Public Health Branch of the Quebec Ministry of Health and Social Services
www.pandemiequebec.gouv.qc.ca

SASKATCHEWAN
Government of Saskatchewan – H1N1 Flu Virus Information for Health Providers
www.health.gov.sk.ca/influenza-update-health-providers

YUKON
Yukon Health & Social Services H1N1 Information for Healthcare Providers
www.hss.gov.yk.ca/programs/health_officer/h1n1_health_care_providers/