Manitoba

Manitoba Interim Clinical Care Guidance for Pregnant and Post-partum Women Presenting with Symptoms of Acute Respiratory Illness During a Pandemic Influenza Period (H1N1)

http://www.gov.mb.ca/health/publichealth/sri/docs/interim_guidance_clinicians_pregnancy.pdf

This document has been developed to provide interim guidance to clinicians for patients presenting with influenza-like illness (ILI). **For up to date recommendations clinicians should refer to the Manitoba Health and Healthy Living (MHHL) website at:** http://www.gov.mb.ca/health/publichealth/sri/index.html.

All pregnant and post-partum women presenting to a health care provider should be provided with information on pandemic H1N1 influenza (available at: http://www.gov.mb.ca/flu/factsheets.html).

As a resource for staff to assist in telephone screening, patients contacting your office can be directed to Health Links–Info Santé at 788-8200 in Winnipeg or toll-free at 1-888-315-9257 for information and for assessment/triage of symptoms. Patients with mild non-ILI (e.g., common cold) should be assessed and provided with advice by telephone, encouraged to stay at home and self-observe for symptoms of ILI.

INFECTION PREVENTION AND CONTROL

Refer to Manitoba Health document *Infection Prevention and Control Guidelines Influenza-like illness including NOVEL A/H1N1 Influenza: All Health and Health-Care Settings* available at: http://www.gov.mb.ca/health/publichealth/sri/index.html .

Entry screening in ambulatory care settings for patients with symptoms of an acute respiratory illness:
All patients who present to a health care setting should be screened for a history of fever and respiratory symptoms. This could include:

- Visual alerts posted at the entrances to all health care institutions and/or
- On first contact, receptionist staff should ask about fever and cough as well as other respiratory symptoms (sneezing, sore throat, coryza, runny nose). Patients with shortness of breath or severe weakness should be triaged for immediate care.

If transfer to hospital is required, routine infection control practices, including droplet and contact precautions, should be followed.

Patients who report fever and respiratory symptoms should be instructed to:

- Clean their hands with 60-90% alcohol-based hand gel
- Don a surgical or procedure mask
- Be separated by at least one metre from others, and if feasible, a two metre separation may be preferred. Infection Prevention and Control signage should be placed on the door indicating precautions required.

Manitoba

CASE DEFINITIONS AND CLINICAL PRESENTATION

Mild Influenza-Like Illness (ILI)	**Current PHAC definition** Acute onset of respiratory illness with fever and cough and one or more of the following: sore throat, arthralgia, myalgia or prostration. **Note I:** The following symptoms have been observed during the first wave of pandemic H1N1 and should also be considered in the clinical diagnosis of ILI at this time: **<u>Almost always</u>: Cough and Fever** **<u>Common</u>: Fatigue, Muscle Aches, Sore Throat, Headache** **<u>Sometimes</u>: Nausea, Vomiting, Diarrhea** **Note II:** Young children and the elderly may not present with fever or a history of fever. Fever may be muted in patients undergoing cancer and blood disorder treatments, and with receipt of acetaminophen, ibuprofen, corticosteroids or immunosuppressive drugs.
Severe Influenza-Like Illness Warning signs and symptoms indicative of pending serious illness that warrant admission to hospital for observation for at least 24 hours, with appropriate medical and transportation provisions for intensive care admission if needed.	• Tachypnea RR> 30 • Dyspnea or shortness of breath • Cyanosis • Hypoxemia (Sa02 < 92%) • Purulent or bloodstained sputum • Chest pain or pleuritic chest pain • Persistent tachycardia HR > 100 • Dehydration and hypotension • Rigors • Altered mental status • High fever that persists beyond 3 days • Or any obstetric complication

REPORTING RESPONSIBILITIES

Clinicians are required to report within 24 hours any current or recent case(s) of ILI resulting in hospitalization. The “Hospitalized Influenza-Like Illness (ILI) Reporting Form” (available at: http://www.gov.mb.ca/health/publichealth/sri/index.html#forms) can be faxed to the Surveillance Unit, Public Health Division, Manitoba Health and Healthy Living at (204) 948-3044 or a verbal report can be made by leaving a message at (204) 788-6481 or other arrangements can be made as approved by the Regional Medical Officer of Health.

The previous case report form titled “Severe Respiratory Illness/Novel Influenza A H1N1 Case Report Form” has been revised and renamed the “Pandemic H1N1/Severe Respiratory Case Report Form (available at: http://www.gov.mb.ca/health/publichealth/sri/index.html#forms). This form should be completed for all patients admitted to hospital and diagnosed with either pandemic H1N1 or SRI or for any patient who dies in hospital and the death is suspected to be H1N1 or SRI related. Completed forms should be faxed to the Surveillance Unit, Public Health Division, Manitoba Health and Healthy Living at (204) 948-3044.

Manitoba

VIRAL TESTING

Recommendations for nasopharyngeal (NP) swabbing/sampling and policies for laboratory testing may change as the pandemic H1N1 outbreak progresses, and may vary depending upon prevalence, relative presence of antiviral resistance, laboratory and other resources, and other factors. The following guidelines refer to recommendations for obtaining test specimens in the clinical setting. Because clinical decision-making for non-severe cases should rarely, if ever, depend on the results of a test for influenza, laboratory testing will be performed on a priority basis and not necessarily on every specimen submitted, considering the information available on the requisition and other factors, including those described above.

Please note that testing is not required in order for treatment to be initiated.

Cadham Provincial Laboratory (CPL) will not process specimens for pandemic H1N1 testing unless one or more of the following indications are present on the CPL requisition for clients/patients with ILI:

- **a. hospitalized patients (for differential diagnosis and monitoring for severity);**
- **b. immunocompromised patients (monitoring for antiviral resistance);**
- **c. patients being observed in emergency departments, observation units, etc (for surveillance);**
- **d. patients seen at designated sentinel sites, as authorized by regional and provincial public health authorities (for surveillance).**

If the indication and other information are not recorded, specimen testing may be delayed. In exceptional circumstances, specimens may not be tested. Inadequately labeled and packaged specimens (e.g., leaking) may not be processed. For outbreak investigation, testing should only be performed in consultation with a public health professional. The laboratory will communicate positive test results for pandemic H1N1 influenza to those ordering the testing on a priority basis, based on information provided on the requisition.

If testing is indicated:

- A well taken nasopharyngeal swab is preferred but an oropharyngeal swab, tracheal aspirate or bronchial wash may be appropriate in some circumstances.
- A nasopharyngeal aspirate should be taken for children < 5 years of age. For all others, a nasopharyngeal swab is preferred. Pediatric swabs, if available, are preferred for use in the 5 to 15 year population.
- Excess mucous should be removed before specimen collection. In all cases, the specimen should be collected with a nasopharyngeal (wire) swab or flocked (microRheologics) swab and placed in viral transport medium (VTM). Only one specimen per patient is required. A fact sheet about these procedures for testing can be found at: http://www.gov.mb.ca/health/publichealth/sri/docs/nasopharyngeal_collection.pdf
- Ensure the correct viral flocked swab and transport medium is used and that it is not past its expiry date.
- An appropriately labeled Cadham Provincial Laboratory requisition MUST accompany the specimen. Ensure that both the specimen and the requisition are clearly labeled with the specimen date, patient's name and another unique identifier such as date of birth and health care number. If urgent reporting of test results is requested by the clinician (rarely required for clinical decision-making), the requisition should include a practitioner telephone number or information for other faster methods of reporting. Requisitions without clinical information will be prioritized last. Important information includes:
    - Underlying medical conditions;
    - Date of onset of symptoms;
    - Symptoms and signs;
    - Hospitalized or not;

Manitoba

- Prescription date and/or start date of antiviral medications.
- A number label should be removed from the requisition and attached to the specimen.

CLINICAL MANAGEMENT

Immunization

Immunization with pandemic H1N1 vaccine is strongly recommended for pregnant women. Seasonal vaccine is also recommended for pregnant women. (5,11). Recommendations for immunization with pandemic H1N1 influenza vaccine are as follows:

- **Unadjuvanted vaccine is the preferred option for pregnant women**. It may be administered at any stage of pregnancy. Rationale: There is extensive experience regarding the safety of unadjuvanted seasonal influenza vaccines in pregnant women and there are currently no data on the safety of the unadjuvanted pandemic H1N1 (pH1N1) vaccine in this group (16).

- **If unadjuvanted vaccine is not available and rates of pH1N1 activity is increasing or high in a particular region:**
  - **Pregnant women 20 + weeks gestation should be offered** adjuvanted vaccine. Rationale: The risk of severe pH1N1 disease increases in the latter half of pregnancy, particularly in the third trimester. Where pH1N1 activity is increasing or high, the potential benefits of the vaccine for the mother (and as a result, her unborn fetus) outweigh theoretical risks to the fetus (16).
  - **Pregnant women less than 20 weeks gestation** with chronic health conditions **may be considered** for vaccination with adjuvanted pH1N1 vaccine (refer to http://www.gov.mb.ca/health/publichealth/sri/docs/interim_guidance_clinicians_ambulatory.pdf for risk factors). Rationale: Pregnant women with chronic health conditions have two important risk factors for severe outcomes and thus are a high priority group for immunization. Although the effects of the adjuvanted vaccine in early pregnancy are not known, the potential for the development of severe pH1N1 disease in women with underlying health conditions is significant and outweighs any undefined theoretical risk from the vaccine (16).
  - **Healthy pregnant women less than 20 weeks gestation**: There is insufficient evidence to recommend for or against the use of adjuvanted vaccine. The risk of complications from pH1N1 infection is lower than it is in the second half of pregnancy. Women should not be denied vaccine if they want it, based on informed consent; however, they may elect to wait until unadjuvanted vaccine is available.
- It is recommended that women who are breastfeeding receive the adjuvanted pandemic H1N1 influenza vaccine (Refer to: http://www.phac-aspc.gc.ca/alert-alerte/h1n1/fs-fi-pregnancy-grossesse-eng.php .

Antiviral Treatment

The following recommendations apply to patients presenting with ILI with or without prior antiviral treatment and with or without previous immunization with seasonal or pandemic H1N1 vaccine.

Antiviral treatment should be strongly considered as soon as practical, preferably within 48 hours of onset of symptoms in all women who are pregnant or within 6 weeks post-partum who develop ILI, unless contraindicated. Clinicians may wish to provide pregnant women with a prescription for oseltamivir (dose provided below) during their antenatal visit, to be used only after further consultation, by phone, if appropriate, if symptoms of ILI occur (15).

Manitoba

- Treatment is most effective when initiated within 48 hours of symptom onset.
- Oseltamivir is the preferred treatment for pregnant women because there is more information about its safety during pregnancy (7). Zanamivir may be preferred in pregnant women when nausea or vomiting is present (3).
- Dosing for pregnant women is the same as for other adults: Oseltamivir (Tamiflu®): 75 mg orally twice daily for 5 days or Zanamivir (Relenza®): 2 inhalations twice daily for 5 days (3).
- Consultation with Pediatric Infectious Diseases (204) 787-2071 is recommended for the following hospitalized patients to inform decisions regarding the fetus/neonate:
  - Pregnant patients with impending delivery
  - Post-partum patients

Although this class of viruses is not considered to be teratogenic in humans (7), pregnant women are at increased risk (7-10) of influenza-related complications and morbidity.

Other considerations for the use of antivirals for treatment of H1N1 influenza:

Recommendations for use of antiviral medications may change as information on antiviral effectiveness, clinical spectrum of illness, adverse events from antiviral use, or resistance among circulating viruses become available. At this time, oseltamivir-resistant 2009 H1N1 viruses have rarely been identified and are typically found among persons who develop illness while receiving oseltamivir for chemoprophylaxis or among immunocompromised patients with influenza who are being treated. For more information on H1N1 antiviral resistant strains, refer to *WHO Pandemic (H1N1) 2009 briefing note 12- Antiviral use and the risk of drug resistance.* *http://www.who.int/csr/disease/swineflu/notes/h1n1_antiviral_use_20090925/en/index.html.*

More information on both of these antiviral medications (oseltamivir and zanamivir) including reconstitution guidelines/instructions can be found in the Product Monograph. For recent Health Canada drug advisories please refer to: http://www.hc-sc.gc.ca/dhp-mps/medeff/advisories-avis/new-neuf-advisories-avis-eng.php . Adverse reactions should be reported to the Marketed Health Products Directorate at Health Canada at: http://www.hc-sc.gc.ca/dhp-mps/pubs/medeff/_guide/2009-ar-ei_anti_guide-ldir/index-eng.php .
Otherwise, treatment is supportive, such as acetaminophen-containing medications to ease fever and myalgias.

Additional Management Considerations

- **Fever in pregnant women should be treated aggressively especially in the first trimester** even in women with mild illness, because of the risk that hyperthermia appears to pose to the fetus (4). Acetaminophen is considered to be the best option for treatment of fever during pregnancy (4) and should be given every 4 hours.
- If chest X-rays are clinically indicated in pregnant women with ILI, physicians are advised to proceed to have x-rays taken as appropriate.
- Postponement of elective caesarean or induction of labour in women with ILI unless obstetric reason to proceed (2).
- For hospitalized patients, follow closely to monitor for and promptly manage changes in condition. Outpatients should be provided with information to self-monitor (FAQ available at: http://www.gov.mb.ca/flu/factsheets.html) so that they know when a return visit is required.
- Appropriate infection control procedures if infant is delivered during the mother's period of communicability. The period of communicability is generally up to 7 days from onset of symptoms in uncomplicated cases (12). This may be longer (up to 10 days) in individuals with severe illness (12).

Manitoba

Breastfeeding Related to Post-partum Women

Breastfeeding should be encouraged due to the anti-infective benefits of human milk for infants (3) and to promote bonding with the infant. ILI in the mother and treatment with antiviral medications (oseltamivir or zanamivir) are not contraindications for breastfeeding.

Infant Considerations:

- Hospital infection prevention and control protocols should be followed for hospitalized mothers and newborns.
- If possible, women who are too ill to care for the infant themselves, but able to express their milk for bottle feedings, should do so (4). Healthy individuals should be providing care, including feeding, if the mother is unable to do so.
- Careful adherence to hand hygiene and cough etiquette, especially for ill women who do not have anyone to help with infant care while they are ill (4). Information on hand hygiene and cough etiquette is available at: http://www.gov.mb.ca/flu/factsheets.html.
- Having the mother wear a mask in the home setting is unlikely to be effective in preventing transmission of infection to the infant as the infant has already been exposed and continues to be exposed to others in the household who may develop ILI. It is difficult and unlikely to try to maintain consistency and best practices wearing masks in the home environment.
- Infant should be kept away from others who are ill and crowded areas (4).
- Items should be washed thoroughly with soap and water before and after being placed in infants mouths and should not be shared with others (4).
- No routine chemoprophylaxis of otherwise well infants is recommended (5); however, infants should be monitored for the development of ILI symptoms. If symptoms develop, please refer to MHHL pediatric guidelines at: http://www.gov.mb.ca/health/publichealth/sri/docs/algorithm_pediatric.pdf
- Consultation with Pediatric Infectious Diseases (204 – 787-2071) or other appropriate specialist is recommended (5) when infants are born to mothers with ILI.

Management of Contacts and Prevention

Close monitoring for ILI in exposed hospitalized pregnant women is recommended (4) so that treatment can be initiated early if symptoms develop. Non-hospitalized exposed pregnant women should be advised as to the symptoms of ILI (refer them to FAQ at: http://www.gov.mb.ca/flu/factsheets.html) and the need to present early to a health care provider should symptoms develop. Routine antiviral chemoprophylaxis is not being considered at the present time. These guidelines may change as more data becomes available.

Exclusion from or avoidance of work or school is generally not considered effective or appropriate for individuals who feel well and do not have symptoms of ILI, even if they have risk factors for complications of influenza. Pregnant women who have concerns about their workplace and its H1N1 preparedness should be advised to speak to their employer, contact Manitoba Workplace Health and Safety, discuss with their health care provider and/or visit www.manitoba.ca/flu for more information. The focus should be on preventive measures such as hand hygiene, cough etiquette, immunization, avoidance of crowds and early presentation to a health care provider if ILI symptoms develop.

REFERENCES

Manitoba

1. World Health Organization. Pandemic influenza in pregnant women, July 31, 2009, Available at: http://www.who.int/csr/disease/swineflu/notes/h1n1_pregnancy_20090731/en/index.html

2. Royal College of Obstetricians and Gynaecologists, Royal College of Midwives and Department of Health, United Kingdom. Algorithm for Management of Influenza in Pregnancy, July 29, 2009, available at: http://www.rcog.org.uk/news/swine-flu-alerts

3. Public Health Agency of Canada. Interim Clinical Guidance for Pregnant and Breastfeeding Women with Influenza-Like Illness in the context of the Pandemic H1N1 2009 Virus. Available at: http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance-orientation-07-09-eng.php

4. Centers for Disease Control and Prevention. Pregnant Women and Novel Influenza A (H1N1) Virus: Considerations for Clinicians. Available at: http://www.cdc.gov/h1n1flu/clinician_pregnant.htm

5. Government of Western Australia Department of Health. Guidelines for Obstetric and Neonatal Specialist Services for the Management of Influenza-Like Illnesses during the Influenza Pandemic Associated with the Influenza A (H1N1) 2009 Virus. Available at: http://www.public.health.wa.gov.au/3/952/3/human_swine_flu_health_providers.pm

6. Centers for Disease Control and Prevention. Press Release July 29, 2009, CDC Advisors Make Recommendations for Use of Vaccine Against Novel H1N1. Available at: http://www.cdc.gov/media/pressrel/2009/r090729b.htm

7. Tanaka Toshiro, Nakajima Ken, Murashima Atsuko *et al.* Safety of neuraminidase inhibitors against novel influenza A (H1N1) in pregnant and breastfeeding women.CMAJ 2009; 181 (1-2) 55-58.

8. Dodds Linda, McNeil Shelley A, Fell Deshayne B *et al* . Impact of influenza exposure on rates of hospital admissions and physician visits because of respiratory illness among pregnant women. CMAJ 2007; 176 (4): 463-468.

9. The city of New York Department of health and Mental Hygiene. 2009 New York City Department of Health and Mental Hygiene Health Alert #22; Novel H1N1 Influenza Update June 12, 2009. Available at: http://www.nyc.gov/html/doh/html/cd/cd-h1n1flu-hcp.shtml

10. Jamieson Denise J, Honein Margaret A, Rasmussen Sonja A *et al.* H1N1 2009 influenza virus infection during pregnancy in the USA. www.thelancet.com Published online July 29, 2009.

11. National Advisory Committee on Immunization (NACI). Statement on Influenza Vaccination for the 2008-2009 Season. Available at: http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08vol34/acs-3/index-eng.php

12. Public Health Agency of Canada. Public Health Guidance for Post Secondary and Boarding Schools regarding the Prevention and Management of Influenza-like-illness (ILI), Including the Pandemic (H1N1) 2009 Influenza Virus. Available at: http://www.phac-aspc.gc.ca/alert-alerte/h1n1/hp-ps/psili-eng.php

13. U.S. Centers for Disease Control and Prevention. Updated Interim Recommendations for the Use of Antiviral Medications in the Treatment and Prevention of Influenza for the 2009-2010, October 16, 2009 Available at: http://www.cdc.gov/h1n1flu/recommendations.htm

14. Public Health Agency of Canada Guidance on H1N1 Vaccine Sequencing. Date Modified: 2009–09-16. Available at: http://www.phac-aspc.gc.ca/alert-alerte/h1n1/vacc/vacc-eng.php.

15. The Society of Obstetricians and Gynaecologists of Canada. H1N1: Recommendations in Pregnancy. Available at: http://www.sogc.org/index_e.asp

16. Public Health Agency of Canada. Recommendations for pH1N1 Vaccine in Pregnancy. Available at: http://www.phac-aspc.gc.ca/alert-alerte/h1n1/vacc/pregvacc-grossvacc-eng.php .