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## Increase in Local Pertussis Activity

**Attention:** Physicians, Hospitals, CNE, ER Manager, ER Physician, Infection Control Practitioners, Occupational Health Professionals, Community Health Centres, Walk-In Urgent Care Clinic, Nurse Practitioner, Ontario Health, Ontario Health Teams, Midwives, Family Health Team, Indigenous Healthcare & Community, Long-Term Care Homes, Retirement Homes, Neighbouring Health Units, Paramedic Services, Corrections

**Date:** August 2, 2024

**Updated:** August 7, 2024 (Addition of treatment and chemoprophylaxis recommendations)

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So far in 2024, there have been 17 lab confirmed cases of Pertussis in the Simcoe Muskoka area with ages ranging between 1 month and 75 years. This is a marked increase from the last three years (2021 to 2023), where between zero and three cases of Pertussis were reported locally. This increase is consistent with what is being seen across Ontario public health units, as well as other Canadian jurisdictions and abroad. It also aligns with periodic pertussis epidemics that seem to occur every 4 to 6 years.

Between January 1 and July 31, 2024, there were 567 confirmed and probable cases of Pertussis in Ontario, which is more than double the cases reported in the same time period in 2023. It is also the greatest number of cases seen in Ontario for the first seven months of the year over the last decade.

In the last three months in Simcoe Muskoka, two confirmed infant cases under the age of five months have been reported. This underlines the importance of immunizing not only infants, but children and adults to prevent transmission to infants who have not completed their primary immunization series and are most at risk for severe complications.

### **SMDHU recommends:**

- **Vaccinating patients for pertussis who are not up to date.**
- **Consider pertussis testing and treatment in patients with compatible symptoms.**

### **1. Ensure Pertussis Immunizations Are Up to Date**

Check vaccination records for all your patients to ensure they are up to date on pertussis vaccine.

- Infants received all doses (2, 4, 6, & 18 months) of DTaP-IPV-Hib
- Ensure children have received their 4-year booster of Tdap-IPV
- Ensure youth have received their 14-year booster of Tdap
- Ensure adults have received at least one dose of Tdap in adulthood (given in place of a Td booster recommended every 10 years). If patients are unsure if they have received a dose of Tdap in adulthood, they should receive a dose to ensure protection
- Pregnant individuals are recommended to receive a dose of Tdap vaccine in every pregnancy - ideally from 27 to 32 weeks gestation but it can be given anytime from 13 weeks until delivery.



Getting the vaccine while pregnant provides protection for the newborn during the first 2 months of life (when they are at highest risk).

## 2. Consider pertussis in your differential diagnosis and test

Clinically compatible signs or symptoms of pertussis include any of the following:

- paroxysmal cough of any duration (i.e., bursts or rapid coughing fits with little or no inspiratory effort)
- cough ending in vomiting or gagging, or associated with apnea
- cough with inspiratory “whoop” sound
- any cough illness lasting two weeks or longer
- In infants under age 12 months, clinical symptoms are frequently atypical, as the whoop or post-tussive vomiting may be absent. Infants may require hospitalization due to respiratory distress, pneumonia, apnea, seizures, encephalopathy, hypotension and shock. Often a close contact of an infant case will be found to have a history of prolonged cough and no fever. Adults, adolescents and individuals previously immunized may also present with atypical symptoms or mild respiratory disease.

While non-immunized or partially immunized individuals are most susceptible to pertussis, previously immunized adolescents and adults may also be susceptible due to waning immunity since last vaccine dose.

**The best diagnostic test for symptomatic patients with suspected pertussis is the collection of a nasopharyngeal (NP) swab that is sent for PCR testing.**

- Pertussis test kits are different than standard nasopharyngeal kits and are available from Public Health Ontario Laboratory.
- The transport media should be refrigerated.
- Check expiry dates on the culture medium container.
- Complete all required areas (includes physician office and contact information) on the requisition form to ensure prompt processing of the swab.

Do not collect NP swabs on patients who are asymptomatic contacts of pertussis cases as the interpretation of positive results in asymptomatic individuals is currently not well-described and may represent false positives.

## 3. Avoid contact with high-risk populations

Anyone with suspected or confirmed pertussis should be counseled to avoid contact with infants, young children, and pregnant individuals in their third trimester of pregnancy until they have completed 5 days of appropriate antibiotics or are 21 days post-cough onset, when they are no longer considered infectious. Symptomatic patients should remain at home until they are well.

## 4. Report

Report all suspect or confirmed cases of pertussis infection to SMDHU at 705-721-7520 Extension 8809 during work hours (8:30 am to 4:30 pm, Monday to Friday) or after hours 1-888-225-7851.

## Treatment and Chemoprophylaxis

For individuals with pertussis, appropriate antibiotics eradicate *B. pertussis* from the nasopharynx but have no effect on the clinical symptoms or course of pertussis unless given in the early stages (catarrhal stage).

They are therefore prescribed more for control of transmission than for individual benefit. The antibiotics should be started within 21 days of cough onset.

Household and vulnerable contacts (e.g. infants under the age of one year and pregnant women in their third trimester) of pertussis cases will be assessed by SMDHU and recommendations made for prophylactic antibiotic treatment if warranted.

**The preferred antibiotic to treat pertussis infection is a macrolide and the regimens are the same as the chemoprophylaxis table below**

**Table 1: Antimicrobials indicated for chemoprophylaxis among people without contraindications**

Age	Drug	Dosage
Infants (< 1 month)	Azithromycin	10 mg/kg once daily in a single dose for 5 days
	Erythromycin	Not preferred
	Clarithromycin	Not recommended
Infants (1 – 5 months)	Azithromycin	As per < 1 month
	Erythromycin	40 mg/kg po (maximum 1 gm) in 3 doses for 7 days
	Clarithromycin	15 mg/kg/day po (maximum 1 gm/day) in 2 divided doses for 7 days
Infants (≥ 6 months and children)	Azithromycin	10 mg/kg po (maximum 500 mg) once for 1 day, then 5 mg/kg po (maximum 250 mg) once daily for 4 days
	Erythromycin	As per 1 – 5 months
	Clarithromycin	As per 1 – 5 months
Adults	Azithromycin	500 mg po once for 1 day then 250 mg po once for 4 days
	Erythromycin	As per 1 – 5 months
	Clarithromycin	1 gm/day in 2 divided doses for 7 days <b>(Not recommended in pregnancy)</b>

([Ministry of Health Appendix 1: Case Definitions and Disease-Specific Information – Pertussis](#))

For more information on Pertussis please visit <https://www.simcoemuskokahealth.org/> or to report suspects or confirmed cases of Pertussis please contact the Simcoe Muskoka District Health Unit Infectious Diseases Team at 705-721-7520 or 1-877-721-7520 extension 8809.