

December 14, 2023

**From the office of the Edmonton Zone Medical Officers of Health
Communicable Disease Advisory: Pertussis**

Between December 2022 and December 13, 2023, 841 confirmed and probable cases of pertussis have been identified in Alberta. Most cases are linked to outbreaks in the North and South Zones. However, several cases were recently identified in the Edmonton Zone. As is the case with any infectious disease, there is the possibility there are more cases circulating in the community that we are not aware of. Of identified cases in Alberta this year, 88.7% are unimmunized or partially immunized.

Pertussis is a highly contagious bacterial infection that is spread through respiratory droplets, or direct contact with respiratory secretions. Acellular pertussis vaccine has 80–85% efficacy and some waning immunity, and it is not uncommon to see clusters of illness and disease spreading to immunized children/adults in communities with low herd immunity. Since there has been pertussis recently circulating in the Edmonton Zone, please maintain a high index of suspicion for pertussis infection especially in partially immunized or unimmunized individuals. We are continuing to request physician collaboration for prevention and early identification and treatment of disease.

Prevention:

- Please encourage both children and adults to stay up to date with the [Alberta immunization schedule](#). In 2022, 74.0% of children in Edmonton Zone received the four recommended doses of pertussis-containing vaccine by age 2. Please discuss the importance of completing immunizations with parents.
- Take the opportunity to review dTap eligibility when tetanus immunization is indicated.
- For adults, pertussis containing vaccine should be offered:
 - To women between 27 and 32 weeks of pregnancy
 - As a booster once every 10 years
- Encourage respiratory etiquette such as covering one's mouth when coughing and sneezing, regular hand washing, regular surface cleaning, and staying home when sick.

Clinical Presentation:

- Typically, three stages:
 - **Catarrhal stage** –insidious onset of coryza, sneezing, low-grade fever and mild cough.
 - **Paroxysmal stage** – cough becomes more severe over one to two weeks with repetitive coughing spells followed by an inspiratory whoop or post tussive vomiting, or both.
 - **Convalescent stage** – symptoms gradually wane over weeks to months.
- Older children and adults can have atypical manifestations with prolonged cough, with or without paroxysms and no whoop. Babies may not cough at all. They may struggle to breathe or have apnea.

Diagnosis/Testing:

- Collect nasopharyngeal swab (NP swab) for testing.
 - **Regan-Lowe Transport media (RLTM)**, which is black and is stored in the refrigerator, is the preferred media. **Please do not use expired media.**
 - Physician offices and clinics are requested to keep a stock of RLTM (at least 2 to 3 swabs) for pertussis testing. RLTM can be ordered through the [DynaLife Supply Ordering Portal](#).
 - As per September 20th 2023 APL update: If RLTM is not available at your collection site, Universal Transport Media (UTM) may be substituted at this time. UTM may support PCR assays but would not allow for culture (which provides antimicrobial susceptibilities).
- Tests may be negative if taken beyond the first three-weeks of disease.

Management of a Case:

- Recommended antibiotics for treatment can be found on the [Alberta Public Health Disease Management Guidelines for Pertussis](#).
- Treatment eradicates *B. pertussis* from the nasopharynx but has minimal effect on clinical symptoms or course of pertussis illness unless given in the early stages of infection (incubation period, catarrhal or early paroxysmal stages)
- Cases are no longer infectious after 5 days of appropriate antibiotic therapy and should avoid exposing others while infectious. The Medical Officer of Health may exclude cases from high-risk settings where there are **vulnerable persons** (women in third trimester of pregnancy and infants under one year of age).
- Hospitalized cases should be placed under droplet precautions in addition to Routine Practices.
- Community clinics may want to consider additional Infection Prevention and Control practices when a suspected case presents such as masking of the patient, patient booking and patient flow to minimize potential exposure to others in this setting.

Management of Contacts:

- Public Health will follow up with all contacts of a confirmed pertussis case to offer post exposure prophylaxis to protect **vulnerable persons**.

Reporting Requirements for Physicians, Health Practitioners and Others:

- Please report all confirmed or probable cases of pertussis to public health (see Appendix 1 for case definitions):
 - Daily from 08:30 to 16:00, please contact the Provincial Communicable Disease Control (Notifiable Diseases) via:
 - email provincialcdcintake@ahs.ca or
 - phone 1-855-444-2324.
 - All other times: please contact the Medical Officer of Health on call at 780-433-3940.

If you have any questions, or require further information, please contact the **Medical Officer of Health on-call at 780-433-3940**.

Appendix 1: Case Definition

Confirmed Case

Laboratory confirmation of infection:

- Isolation of *Bordetella pertussis* from an appropriate clinical specimen (e.g., nasopharyngeal swab)^(A)

OR

- Detection of *Bordetella pertussis* nucleic acid by nucleic acid testing (e.g. polymerase chain reaction [PCR]) from an appropriate clinical specimen (nasopharyngeal swab) AND one or more of the following:
 - cough lasting two weeks or longer,
 - paroxysmal cough of any duration,
 - cough with inspiratory “whoop”, and/or
 - cough ending in vomiting or gagging, or associated with apnea

OR

A person who is epidemiologically linked to a laboratory-confirmed case AND has one or more of the following for which there is no other known cause:

- cough lasting two weeks or longer,
- paroxysmal cough of any duration,
- cough ending in vomiting, or associated with apnea, and/or
- cough with inspiratory “whoop”.

Probable Case (Outbreaks Only)

Cough lasting two weeks or longer in the absence of appropriate laboratory tests, and not epidemiologically linked to a laboratory-confirmed case, **AND** has one or more of the following, with no other known cause:

- paroxysmal cough of any duration,
- cough with inspiratory “whoop”, and/or
- cough ending in vomiting or gagging, or associated with apnea.

(A) Refer to the Public Health Laboratory’s Guide to Services for current specimen collection and submission information.