

March 16, 2023

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

Since December 2022, 62 cases of pertussis have been identified in Alberta, of which 4 children have been hospitalized. 95% of cases are linked to an outbreak in the South Zone which was declared at the end of January. Recently, 2 cases were identified in the Central Zone, with suspected indirect linkages to the South Zone. All cases are locally acquired. Of identified cases in Alberta this year:

- 75% are unimmunized, 23% are partially immunized, and fewer than 2% are fully immunized.

Acellular pertussis vaccine has 80–85% efficacy and some waning immunity, it is not uncommon to see clusters of illness and disease spreading to immunized children/adults in communities with low herd immunity. Although there is no confirmed pertussis circulating in the Edmonton Zone this year to date, we request physician awareness 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 the Edmonton Zone, 76.7% of children have received the 4 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 in their third trimester of pregnancy and
 - As a booster once every 10 years.

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:

- Collect nasopharyngeal swab (NP swab) for PCR testing. **Use the Regan-Lowe Transport media which is black and is stored in the refrigerator.** Please do not use expired media. 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 MOH 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.

Disease Transmission:

- Pertussis is a highly contagious bacterial infection that is spread through respiratory droplets, or direct contact with respiratory secretions.

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”.

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