

Date: Monday, December 18, 2023

To: Calgary Zone PCNs – Calgary Rural, South Calgary , Mosaic, Highland, Calgary West Central, Calgary Foothills, Bow Valley

From: Medical Officers of Health – Calgary Zone

Subject: Increase in Pertussis Cases in Calgary Zone

Pertussis cases have increased in Alberta in 2023. Most cases have been in individuals residing in the South Zone, however, cases have been identified in all zones with recent cases in Calgary Zone.

We are requesting physician awareness, identification of cases, and early treatment to prevent further transmission. We are encouraging children to stay up to date with routine immunizations and all adults to receive dTap once every 10 years and for women in the third trimester of every pregnancy. Please maintain a high index of suspicion for pertussis infection especially in **unvaccinated** or **under-vaccinated** individuals.

Epidemiology and clinical course:

Pertussis (aka ‘whooping cough’) is a highly contagious respiratory infection, caused by *Bordetella pertussis* bacteria, that can cause severe and prolonged coughing that lasts for weeks. It can easily be spread from person to person via inhalation of respiratory droplets or direct contact with an infected person. The incubation period for pertussis ranges from five to 21 days.

The clinical course of pertussis typically involves three stages:

1. **Catarrhal stage:** characterized by common cold symptoms.
2. **Paroxysmal stage:** characteristic severe and prolonged coughing with inspiratory whoop and/or vomiting in infants. Very young infants may not cough but the infection can cause severe breathing difficulty.
3. **Convalescent stage:** the cough begins to wane over weeks to months with a gradual recovery. Pertussis is also known as the “100 Day Cough” because of the time it takes for the cough to fully resolve.

Pertussis is most infectious during the catarrhal stage and the first two weeks after the onset of cough, and if untreated, it can remain infectious for 21 days.

In Canada, one to four deaths are related to pertussis each year. These deaths are most often in infants who are too young to be immunized or children who are not fully immunized. Individuals of any age can be affected. Young children, especially unimmunized infants under one year of age, are at the highest risk of complications including hospitalization, pneumonia, seizures, encephalopathy, and even death. Although other individuals are at a lower risk for severe complications, they can easily spread pertussis to those who are at high risk of severe illness.

Testing:

For the laboratory diagnosis of pertussis, PCR testing is done by the Provincial Laboratory. A nasopharyngeal specimen (NP swab) should be collected during the first three weeks of symptoms. Use the **Regan-Lowe Transport media**, which is black and is stored in the refrigerator. After the swab is collected, DO NOT refrigerate the specimen. Keep the specimen at room temperature and forward to Provincial Laboratory for testing. Tests may be negative if taken beyond the three-week window. If you do not have access to Regan-Lowe media, viral UTM can be used. For further specimen collection information, please see instructions in the [PERTUSSIS KIT: for the Molecular Detection of Bordetella pertussis, B. holmesii and B. parapertussis \(albertahealthservices.ca\)](http://albertahealthservices.ca).

Case management:

If symptomatic individuals present and identify that they have been in direct contact with a pertussis case and/or their clinical history is strongly suggestive of pertussis, start appropriate antibiotic treatment while waiting for pertussis swab results.

Please see treatment recommendations in the [Alberta public health disease management guidelines: pertussis guideline](#). Treatment eradicates *Bordetella Pertussis* bacteria 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).

All cases should stay home and not expose new people **for five days** after the start of antibiotic therapy. If there is no treatment or treatment is incomplete, the infected person should be excluded from places where there are infants and/or pregnant women for 21 days from onset of paroxysmal coughing, or until the end of the cough, whichever comes first.

Contact management:

Public Health will follow up with all contacts of a pertussis case and recommend post-exposure prophylaxis where indicated. Post-exposure prophylaxis should be offered to household contacts of the case, as well as infants and pregnant persons with significant exposure. Please see prophylaxis recommendations in the [Alberta public health disease management guidelines: pertussis guideline](#).

Prevention:

- Vaccine that protects against pertussis is offered free of charge to all Albertans according to the Alberta Health [Immunization and routine immunization schedule | Alberta.ca](#).
- A booster dose of diphtheria, tetanus, pertussis (dTap) vaccine is recommended for all adults every 10 years.
- It is strongly recommended that pregnant women receive a dose of pertussis-containing vaccine (dTap) every time they are pregnant, even if it has been less than 10 years since their last dose, between 27 and 32 weeks of pregnancy. Learn more about [dTap immunization in pregnancy](#).
- Vaccines can be booked by calling local Public Health Community Health Centres or 811, or online at ahs.ca/immunize
- Encourage respiratory etiquette such as covering one's mouth when coughing and sneezing, regular hand washing, regular surface cleaning, and staying home when sick.

If you have questions or concerns, please e-mail MOHCONSULTYYC@ahs.ca

References: Alberta Notifiable Disease Guidelines at [Alberta public health disease management guidelines: pertussis guideline](#)