

**Date:** 10 October 2019  
**To:** ALL South Zone Physicians  
**From:** Medical Officers of Health – South Zone  
**RE:** PERTUSSIS circulating in the South West

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As of this morning, there have been 13 confirmed Pertussis cases in South Zone in the past two weeks, in the communities of Lethbridge, the County of Lethbridge and Raymond last week. It is expected that there is more Pertussis circulating in the community, as many people with the disease may not seek medical attention. Therefore, we are requesting physician awareness, identification of cases and early treatment to prevent further transmission.

**Disease Transmission:**

- Pertussis is highly contagious through respiratory droplets.
- Due to low herd immunity rates in Southern Alberta, and the fact that the acellular Pertussis vaccine has 85 – 95% efficacy, it is not uncommon to see clusters of illness with disease even spreading to immunized children/adults

**Clinical Presentation:** Typically 3 stages:

- *Catarrhal Stage* –insidious onset of coryza, sneezing, low-grade fever and mild cough.
- *Paroxysmal Stage* – cough becomes more severe over 1 – 2 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.***

**Lab confirmation:** Consider PCR testing of a nasopharyngeal swab using the Regan-Lowe transport media which is black and is stored in the refrigerator.

- If your patient has had contact with a confirmed case.
- If your patient has repetitive coughing spells beyond 6 days of symptom onset.
- Up to a maximum of 21 days after symptom onset to minimize false negatives.
- There is no need to swab multiple cases within a single family unit, as they all likely have the same infection.

**Management of Case:**

- Antibiotics for confirmed cases (see page 3)
  - ❖ 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).
- All cases are required to stay home and not expose new people **for 5 days** after start of antibiotic therapy.

- If there is no treatment or treatment is incomplete, the case should be excluded:
  - ❖ for 21 days from onset of paroxysmal, or
  - ❖ until the end of the cough, whichever comes first, and
  - ❖ negative results from culture or PCR have been received.

**Management of Contacts:**

- Public Health will follow up all contacts of a confirmed Pertussis case to offer post exposure prophylaxis) to protect “vulnerable contacts” (women in third trimester of pregnancy and infants <1 year of age)
- The updated Alberta Health guidelines recommend for all household contacts of a confirmed case to obtain antibiotics.
- Please note that in unimmunized families and communities, individuals may have recurrent exposure to Pertussis over. Immunization is the only true preventive measure.

**Infection Prevention and Control for Hospitalized Patients:**

- Please ensure droplet precautions are in place until 5 days after appropriate antibiotic treatment.

**Prevention:**

- Immunization as per Alberta immunization schedule for children and adults.
  - All adults 18 years of age and up are eligible to receive one dose of dTap.
  - One dose of pertussis containing vaccine for pregnant women in third trimester in every pregnancy
    - Clients can contact Health Link Alberta or their local Public Health office to determine if their immunizations are up-to-date.
  - We also stress the importance of vaccination for yourselves and your staff. Please make sure your staff is up-to-date on their pertussis vaccinations.
- Take the opportunity to review dTap eligibility when tetanus immunization indicated
- Early diagnosis and treatment to prevent spread to others

**Reference:**

Alberta Notifiable Disease Guidelines at <https://open.alberta.ca/publications/pertussis>

## Appendix 1: Recommended Antibiotics for Treatment and PEP

Antibiotic	Dosage	Comments
<b>Azithromycin</b>	<p><b>Infants &lt; 6 months:</b> 10 mg/kg/day as a single dose orally daily for 5 days</p> <p><b>Infants ≥ 6 months to Children &lt; 12 years:</b> Day 1: 10 mg/kg/day as a single dose orally (maximum 500 mg/day) Day 2–5: 5 mg/kg/day as a single dose orally (maximum 250 mg/day)</p> <p><b>Children ≥ 12 years and adults:</b> Day 1: 500 mg/day as a single dose orally Day 2-5: 250 mg/day as a single dose orally</p>	<b>First Line</b>
<b>Clarithromycin</b>	<p><b>Infant ≥ 1 month to Children &lt; 12 years:</b> 15 mg/kg/day in 2 divided doses orally for 7 days (maximum 1g/day)</p> <p><b>Children ≥ 12 years and adults:</b> 500 mg BID orally/day for 7 days</p>	<b>Second Line</b> Not recommended for infants aged < 1 month and in pregnancy
<b>Erythromycin</b>	<p><b>Adults:</b> 2000 mg/day divided into 4 doses orally for 7 days</p>	<b>Third Line</b> For adult use ONLY. <i>* Erythromycin estolate (liquid/oral suspension) for pediatric population is not available in Canada as of spring 2017.</i>
<b>Trimethoprim-Sulfamethoxazole (TMP-SMX)</b>	<p><b>Infants ≥ 2 months to Children &lt;12 years:</b> 8 mg/kg/day (TMP) and 40 mg/kg/day (SMX) divided into 2 doses orally for 14 days</p> <p><b>Children ≥ 12 years and adults:</b> 320 mg/day (TMP) and 1600 mg/day (SMX) divided into 2 doses orally for 14 days</p>	<b>Alternate</b> – used only if above drugs are contraindicated.  Cannot be used for children under the age of 2 months, in pregnancy or during lactation.