

Date: Thursday, April 27, 2023

To: South Zone Physicians and Midwives

From: Medical Officers of Health – South Zone

**Subject: PERTUSSIS outbreak spreading across South Zone**

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Since Dec. 2022, 146 cases of pertussis have been identified in South Zone, including four children hospitalized. All cases are locally acquired. During the first three months of the outbreak, cases were reported in various small communities in South Zone of Fort Macleod, County of Lethbridge, Coaldale, Taber, Vauxhaul, and Bow Island: the communities with extremely low childhood immunization rates.

The last week we have seen increased cases that are locally acquired in Medicine Hat and Lethbridge. Cases have been identified at schools and other community locations such as churches and sites where children gather to take lessons. Public Health is unable to identify linkages between most of the recent cases, indicating there is likely more disease circulating in communities that is not being reported.

Of identified cases in this outbreak:

- 75% are unimmunized, 21% are partially immunized
- 79% are children under 10 years of age (85% of these young children have no immunizations)

### Testing of patients:

- PCR testing of a nasopharyngeal specimen (**NP swab**) obtained during the **first 3 weeks** of disease. Use the Regan-Lowe Transport media which is black and is stored in the refrigerator. Tests may be negative if taken beyond the 3 weeks window. If you do not have access to Regan-Lowe media, viral UTM is another option supported by lab.

### 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 five days** after start of antibiotic therapy.
- If there is no treatment or treatment is incomplete, the case should be excluded from places where there are vulnerable persons:
  - for 21 days from onset of paroxysmal, or until the end of the cough, whichever comes first.

**Management of Contacts:**

- Public Health will follow up all contacts of a confirmed pertussis case to offer post exposure prophylaxis) to protect “vulnerable persons” (women in third trimester of pregnancy and infants under one year of age).
- Postexposure prophylaxis is recommended for all vulnerable persons with significant exposure to a pertussis case and household contacts, regardless if vulnerable persons are in the household.

**Prevention:**

- Immunization as per Alberta Immunization Schedule for children and adults.
- Take the opportunity to review dTap eligibility when tetanus immunization indicated.
- One dose of pertussis containing vaccine for pregnant women in third trimester.
- Early diagnosis and treatment to prevent spread to others.

**References:**

Alberta Notifiable Disease Guidelines at <https://open.alberta.ca/dataset/28b7c03a-f2e1-4b61-b1cc-e2cad282522a/resource/5c3ba9ad-c039-489d-b9d7-8b270a22cde1/download/health-phdmg-pertussis-2021-09.pdf>

<b>Recommended Antibiotics</b>		
<b>Antibiotic</b>	<b>Dosage</b>	<b>Comments</b>
Azithromycin	<p><b>Infants &lt; 6months:</b> 10 mg/kg/day as a single dose orally daily for 5 days</p> <p><b>Infants &gt; 6mo to Children &lt; 12years:</b> Day 1: 10 mg/kg/day once daily po to a maximum of 500 mg/day. Day 2-5: 5mg/kg/day one daily po to a maximum of 250 mg/day. Total: 5 days</p> <p><b>Children &gt; 12years and Adults:</b> Day 1: 500 mg once daily po Day 2-5: 250 mg once daily po Total: 5 days</p>	First line
Clarithromycin	<p><b>Infants &gt; 6mo to Children &lt; 12years:</b> 15 mg/kg/day divided in 2 doses po x 7 days (maximum of 1000 mg/day)</p> <p><b>Children &gt; 12years and Adults:</b> 500 mg bid po x 7 days</p>	Second Line Not recommended for infants aged < 1 month and in pregnancy
Erythromycin	<p><b>Adults:</b> 500 mg po QID x 7 days</p>	Third Line for adults ONLY

Trimethoprim-Sulfamethoxazole (TMP-SMX)	<b>Infants &gt; 2mo to Children &lt; 12years:</b> 8 mg/kg/day (TMP) and 40 mg/kg/day (SMX) divided into 2 doses po x 14 days  <b>Children &gt; 12years and Adults:</b> 320 mg/day (TMP) and 1600 mg/day (SMX) divided into 2 doses x 14 days	Alternate – used only if above drugs are contraindicated. Cannot be used for children under the age of 2 months, in pregnancy or during lactation
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**If you have any questions, or require further information, please contact the Medical Officer of Health on call at 403-388-6111.**