HEALTH UPDATE: PERTUSSIS CASES IN LANE COUNTY
May 8, 2018: INFORMATION AND GUIDELINES FOR CLINICIANS
Lane County Public Health Department
24/7/365 REPORTING: 541-682-4041

New cases of pertussis (i.e., Whooping Cough) continue to occur in Lane County among both children and adults. Due to the highly contagious nature of the pertussis bacterium and Oregon’s less than optimal vaccination rate, it is likely this outbreak will linger and perhaps grow. Lane County Public Health (LCPH) wishes to provide updated recommendations regarding prevention, testing, treatment, and antibiotic prophylaxis.

Prevention
1. Vaccination: Please assess all patients for DTaP and Tdap. Vaccinate as per ACIP guidelines. This includes Tdap vaccination of pregnant women in the third trimester. [https://www.cdc.gov/vaccines/schedules/hcp/index.html](https://www.cdc.gov/vaccines/schedules/hcp/index.html)
2. Isolation: Please continue to isolate confirmed and suspect pertussis cases at home until 5 days of appropriate antibiotic treatment has occurred. Doing so will limit further transmission in our community.
3. Respiratory etiquette: Pertussis is spread via the respiratory route. Please promote the following: Covering of coughs and sneezes; appropriate disposal of soiled tissues; and frequent hand washing or use of hand sanitizers

Pertussis Testing:
At present the ideal testing paradigm would be a nasopharyngeal swab collected within 2 weeks of cough onset and submitted for both PCR and culture. If only PCR is being ordered, it is generally reliable up to 3 weeks after cough onset.

- Culture is the gold standard by which other methods are compared, but generally does not provide rapid test results. PCR provides rapid results with a good mix of sensitivity and specificity, but occasionally false negatives and false positives occur. Serologic tests are not standardized and have an unknown correlation with disease. They are of little use in an outbreak setting.
- **Whom to Test?**
  - Anyone with an unexplained cough of at least two weeks duration
  - Close contacts of a confirmed pertussis case with an acute cough of any duration, including persons who report exposure in an outbreak setting such as an affected school
  - Anyone in whom pertussis is highly suspected (e.g., lymphocytosis in an infant in the setting of a respiratory tract infection or apnea)

Please continue to report laboratory confirmed and presumptive cases to Lane County Public Health to ensure rapid contact investigation: 541-682-4041

Treatment of Pertussis Cases:
Early treatment, within 2 weeks of paroxysmal cough onset, is most effective in preventing secondary spread. Initiating treatment more than 3 weeks after onset of paroxysmal cough is unlikely to be beneficial and should be limited to situations in which there is on-going contact with an infant or a pregnant woman in her third trimester. A reasonable guideline is to treat persons aged >1 year within 3 weeks of cough onset; and treat infants aged <1 year & pregnant women (especially those near term) within 6 weeks of cough onset. See table of treatment options below.

Antibiotic Prophylaxis of Pertussis Exposed Persons:
Pertussis is now becoming widespread in Lane County. Once pertussis is widespread in a community, antibiotic prophylaxis does not control transmission. However, there is clear benefit in preventing
infection for persons at greatest risk, namely infants. LCPH recommends prompt antibiotic prophylaxis (see table below) within 21 days of pertussis exposure for close contacts who are:

- Infants.
- Pregnant women in the 3rd trimester (since they will soon have contact with an infant).
- All household contacts of a case if there is an infant or a pregnant woman in the 3rd trimester in the household, even if the infant in the household is the case.
- All those attending or working in a childcare setting (i.e. working in the same room) of a case if there is an infant or one of those same third trimester women in the setting.
- Other contacts at the discretion of the local health department.

Close contacts include immediate family members and/or those who spend many hours together or sleep under the same roof, and anyone who had direct contact with respiratory secretions. Although obviously these are somewhat arbitrary distinctions, “close contacts” should also include those who shared confined space (within ~6 feet) for >1 hour during the communicable period.

**TABLE. Recommended antimicrobial treatment and postexposure prophylaxis for pertussis**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Children</th>
<th>Adults</th>
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<tbody>
<tr>
<td>Azithromycin</td>
<td>Minimum age: all ages*</td>
<td>500 mg p.o. in a single dose day 1; then 250 mg p.o. as single daily dose on days 2–5</td>
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<td>Age 0-5 months: 10 mg/kg p.o. x 5 days</td>
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<td></td>
<td>Age ≥6 mo: 10 mg/kg (maximum 500 mg/dose) on day 1, then 5 mg/kg on days 2–5 (maximum 250 mg/dose)</td>
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<td>Clarithromycin</td>
<td>Minimum age: 1 months*</td>
<td>500 mg p.o. twice daily x 7 days</td>
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<td>20 mg/kg/day p.o. in 2 divided doses x 7 days (maximum 1 g/day)</td>
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<tr>
<td>Erythromycin**</td>
<td>Minimum age: not recommended for neonates (&lt;1 month old)</td>
<td>1 g per day in 3 divided doses x 7 days</td>
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<td>40–50 mg/kg/day p.o. in 3 divided doses x 7 days (maximum 1 g/day)</td>
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<tr>
<td>Trimethoprim-Sulfamethoxazole (TMP-SMX)</td>
<td>Minimum age: 2 months</td>
<td>One double strength tablet (160 mg TMP component) p.o. twice daily x 14 days</td>
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<td>4 mg/kg (TMP component) p.o. twice daily x 14 days (maximum 320 mg/day TMP component)</td>
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* Use for kids < 6 months old is not FDA approved.
** When prescribing erythromycin to infants < 3 months of age, providers should inform parents about possible risks for infantile hypertrophic pyloric stenosis (IHP) and counsel them about signs of developing IHP

Other resources:
- Centers for Disease Control & Prevention: [https://www.cdc.gov/pertussis/index.html](https://www.cdc.gov/pertussis/index.html)
- Oregon Health Authority, Public Health division: [http://www.oregon.gov/oha/PH/DISEASECONDITIONS/DISEASESAZ/Pages/pertussis.aspx](http://www.oregon.gov/oha/PH/DISEASECONDITIONS/DISEASESAZ/Pages/pertussis.aspx)

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