Cyclic Peaks in Pertussis Occur Every 3-5 Years

In 2012, Washington State pertussis activity was at epidemic levels with nearly 5,000 cases reported to the state. Pertussis is on the rise again. So far this year there have been 287 reported cases of pertussis compared to 45 during the same time last year; the burden is among school-aged children and teens. However, those most at risk for severe disease are infants, and the rates in babies is also increasing. There have been 21 cases of pertussis reported in infants so far this year.

It is not currently recommended for most people to get the adolescent/adult vaccine (Tdap) more than once. However, Tdap is recommended for pregnant women during the last trimester of each pregnancy. Vaccination during each pregnancy reduces the risk of a mother with pertussis infecting the baby, and it can also provide passive protection for the baby in the first few months of life when they’re the most vulnerable and too young to be vaccinated themselves. Infants that you consider to be at increased risk for exposure to pertussis can receive their first dose of DTaP as early as 6 weeks.

A weekly summary of pertussis activity for 2015 is available online. The preliminary 2014 annual summary of pertussis cases is also available online.

Tdap Vaccine Recommendations:

- The Advisory Committee on Immunization Practices recommends Tdap vaccination during each pregnancy, even for women who were previously vaccinated.
- Tdap vaccine can be administered to pregnant women between 27 and 36 weeks gestation.
- All other adults that have not already had a Tdap vaccination should receive one dose of Tdap.
- Adolescents should receive a dose of Tdap at 11-12 years of age.
- Consider stocking Tdap vaccine in your practice or refer patients to another provider, pharmacy, or other community resource.

Resources:

- DOH Pertussis Guidelines
- DOH Pertussis Web Pages

Vaccinations and good respiratory etiquette are the best tools we have for preventing pertussis. Vaccinated people who do get pertussis are much less likely to be hospitalized or die from the disease.

Studies have shown that protection from any of the available pertussis vaccines wears off over time. That makes it difficult to stop the spread of disease. Therefore, the focus must be on preventing severe disease, especially among infants.
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Testing
Pertussis should be considered in anyone with a severe or persistent cough. Testing is appropriate until three weeks after the onset of paroxysmal coughing. After three weeks of coughing, infectiousness and test accuracy decrease significantly. Testing is most critical for symptomatic persons who are either high-risk or who may expose someone who is high-risk (see high-risk definition below).

If one member of a household tests positive, it is not necessary to test other family members who present with similar symptoms. If multiple members of a household present at the same time with symptoms, it is sufficient to test one, preferably the person with the most recent onset of symptoms.

Persons considered “high risk” from pertussis:
- Infants <1 year-old
- Pregnant women (particularly those in their third trimester)
- Anyone who may expose infants <1 year-old or pregnant women (e.g., members of a household with infants or pregnant women, child care workers who take care of infants <1 year-old, health care workers with face-to-face contact with infants <1 year-old or pregnant women, childbirth educators)

Treatment & prophylaxis
If you strongly suspect pertussis:
1. Treat the patient whether or not you test. Do not wait for test results. Negative test results do not rule out pertussis.
2. Exclude the patient from work, school, or child care until the patient completes five full days of appropriate antibiotics. Consult the Chelan-Douglas Health District if you have questions about exclusion.
3. Give preventive antibiotics to the entire household and to any high-risk close contacts (see high-risk definition above).
   See Table 2 on next page for recommended antibiotic treatment and prophylaxis.

Reporting
Report to the Chelan-Douglas Health District within 24 hours all patients with lab-confirmed pertussis.
- For infant pertussis cases, include the mother’s Tdap vaccination status, including date vaccine was given or reason not vaccinated, in the infant’s medical record and in your report to the Chelan-douglas Health District. This information is imperative to monitor the impact of the maternal Tdap vaccine recommendation.

TO REPORT A NOTIFIABLE CONDITION:
Phone (509) 886-6400 M-Th 8-5:00
Fax (509) 886-6478
After hours call: (509) 886-6499
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Table 2. Recommended antimicrobial treatment and postexposure prophylaxis for pertussis, by age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Azithromycin</th>
<th>Primary agents</th>
<th>Clarithromycin</th>
<th>TMP-SMZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 month</td>
<td>Recommended agent, 10 mg/kg per day in a single dose for 5 days (only limited safety data available.)</td>
<td>Not preferred. Erythromycin is associated with infantile hypertrophic pyloric stenosis. Use if azithromycin is unavailable.</td>
<td>Not recommended (safety data unavailable)</td>
<td>Contraindicated for infants aged ≤2 months (risk for kernicterus)</td>
</tr>
<tr>
<td>1–5 months</td>
<td>10 mg/kg per day in a single dose for 5 days</td>
<td>40–50 mg/kg per day in 4 divided doses for 14 days</td>
<td>15 mg/kg per day in 2 divided doses for 7 days</td>
<td>Contraindicated at age &lt;2 months. For infants aged ≥2 months, TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days</td>
</tr>
<tr>
<td>Infants (aged ≥6 months) and children</td>
<td>10 mg/kg in a single dose on day 1 then 5 mg/kg per day (maximum: 500 mg) on days 2–5</td>
<td>40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days</td>
<td>15 mg/kg per day in 2 divided doses (maximum: 1 g per day) for 7 days</td>
<td>TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days</td>
</tr>
<tr>
<td>Adults</td>
<td>500 mg in a single dose on day 1 then 250 mg per day on days 2–6</td>
<td>2 g per day in 4 divided doses for 14 days</td>
<td>1 g per day in 2 divided doses for 7 days</td>
<td>TMP 320 mg per day, SMZ 1,600 mg in 2 divided doses for 14 days</td>
</tr>
</tbody>
</table>

*Trimethoprim sulfamethoxazole (TMP-SMZ) can be used as an alternative agent to macrolides in patients aged ≥2 months who are allergic to macrolides, who cannot tolerate macrolides, or who are infected with a rare macrolide-resistant strain of Bordetella pertussis.

(Table 2 reproduced from Recommended Antimicrobial Agents for the Treatment and Postexposure Prophylaxis of Pertussis: 2005 CDC Guidelines, available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5414a1.htm)