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>Alternate agent*</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; 40–50 mg/kg per day in 4 divided doses for 14 days</td>
<td>Contraindicated for infants aged &lt;2 months (risk for kernicterus)</td>
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<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>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>
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<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 on days 2–5 (maximum: 500 mg)</td>
<td>40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days</td>
<td>TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days</td>
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<tr>
<td>Adults</td>
<td>500 mg in a single dose on day 1 then 250 mg per day on days 2–5</td>
<td>2 g per day in 4 divided doses for 14 days</td>
<td>TMP 320 mg per day, SMZ 1,600 mg per day in 2 divided doses for 14 days</td>
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</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*.

ness of azithromycin and clarithromycin against pertussis as with older infants and children. If not treated, infants with pertussis remain culture-positive for longer periods than older children and adults (36,72). These limited data support the use of azithromycin and clarithromycin as first-line agents among infants aged 1–5 months, based on their in vitro effectiveness against *B. pertussis*, their demonstrated safety and effectiveness in older children and adults, and more convenient dosing schedule.

For treatment of pertussis among infants aged <1 month (neonates), no data are available on the effectiveness of azithromycin and clarithromycin. Abstracts and published case series describing use of azithromycin among infants aged <1 month report fewer adverse events compared with erythromycin (73); to date, use of azithromycin in infants aged <1 month has not been associated with infantile hypertrophic pyloric stenosis (IHPS). Therefore, for pertussis, azithromycin is the preferred macrolide for postexposure prophylaxis and treatment of infants aged <1 month. In this age group, the risk for acquiring severe pertussis and its life-threatening complications outweigh the potential risk for IHPS that has been associated with erythromycin (74). Infants aged <1 month who receive a macrolide should be monitored for IHPS and other serious adverse events.

D. Safety. A comprehensive description of the safety of the recommended antimicrobials is available in the package insert, or in the latest edition of the *Red Book: Pharmacy’s Fundamental Reference*. A macrolide is contraindicated if there is history of hypersensitivity to any macrolide agent (Table 5). Neither erythromycin nor clarithromycin should be administered concomitantly with astemizole, cisapride, pimazole, or terfenadine. The most commonly reported side effects of oral macrolides are gastrointestinal (e.g., nausea, vomiting, abdominal pain and cramps, diarrhea, and anorexia) and rashes; side effects are more frequent and severe with erythromycin use.

II. Specific Antimicrobial Agents

1. **Azithromycin.** Azithromycin is available in the United States for oral administration as azithromycin dihydrate (suspension, tablets, and capsules). It is administered as a single daily dose.

Recommended regimen:
- Infants aged <6 months: 10 mg/kg per day for 5 days.
- Infants and children aged ≥6 months: 10 mg/kg (maximum: 500 mg) on day 1, followed by 5 mg/kg per day (maximum: 250 mg) on days 2–5.
- Adults: 500 mg on day 1, followed by 250 mg per day on days 2–5.
- Side effects include abdominal discomfort or pain, diarrhea, nausea, vomiting, headache, and dizziness. Azithromycin should be prescribed with caution to patients with impaired hepatic function. All patients should be cautioned not to take azithromycin and aluminum- or magnesium-containing antacids simultaneously because