Community-Acquired Pneumonia in Children (age >4 months) and Adolescents

**Key points**
- *S. pneumoniae* is the most common bacterial cause of pneumonia in childhood
- Viruses are common causes of CAP in younger children (<5 years)
- Atypical organisms (*M. pneumoniae, C. pneumoniae*) are common in older children (≥ 5 years)
- Microbiologic studies are not indicated for children with CAP treated as outpatients

**Signs and symptoms suggestive of CAP**
- **1st line:** Amoxicillin 50mg/kg/day divided BID (max 1gm/dose) for 7 days
- Alternatives for non-severe PCN allergy:
  - Cefpodoxime 10mg/kg/day divided BID (max 400mg BID) OR
  - Cefuroxime 30mg/kg/day divided BID (max 500mg BID)
- Immediate hypersensitivity PCN allergy:
  - Azithromycin 10mg/kg on day 1 (max 500mg), then 5mg/kg (max 250mg) days 2-5

**Hospital admission**

**Appropriate for outpatient therapy by clinician assessment?**

**Diagnosis of bacterial pneumonia supported?**

**Yes**
- 1st line: Amoxicillin 50mg/kg/day divided BID (max 1gm/dose) for **7 days**
- Alternatives for non-severe PCN allergy:
  - Cefpodoxime 10mg/kg/day divided BID (max 400mg BID) OR
  - Cefuroxime 30mg/kg/day divided BID (max 500mg BID)
- Immediate hypersensitivity PCN allergy:
  - Azithromycin 10mg/kg on day 1 (max 500mg), then 5mg/kg (max 250mg) days 2-5

**Re-evaluate in 48 hours**

**Clinically improved**
- Complete antibiotic course prescribed

**Failure to improve AND appropriate for ongoing outpatient therapy**
- Consider atypical organisms, resistant *S. pneumoniae*, complication of pneumonia, or alternative etiology of clinical syndrome

**Consider changing therapy to:**
- **Amoxicillin-clavulanate** 90/6.4 mg/kg divided BID (max 875mg BID) OR
- **If age ≥5 years, azithromycin** 10mg/kg on day 1 (max 500mg), then 5mg/kg (max 250mg) days 2-5

**No**
- Consider alternative etiologies (viral etiology common in children <5 years)

**Note:** This is intended only as a guide for evidence-based decision-making; it is not intended to replace clinical judgment. Assess for antibiotic allergies and use alternative agents as appropriate. Suggested antibiotic doses are for normal renal function; adjust for renal impairment when necessary.

**References:**