Community Acquired Pneumonia in the Emergency Department

Clinical Practice Guideline (CPG)

Protocol Approved by: Division of Pediatric Emergency Medicine
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Emergency Department Patient 3 mo – 18 yrs with suspected community-acquired pneumonia (CAP)
*See exclusions

**Patient well to mildly ill appearing**

- CXR (PA and lateral)

**NEED TO GET:**
- Immunization status
- Vital signs with SpO2

**Outpatient CAP Treatment:**
- **1st line:** PO amoxicillin 90 mg/kg/day divided BID
- **1st line (non-immunized):** PO 3rd generation cephalosporin
- **2nd line (allergy to 1st line):** PO 3rd generation cephalosporin OR clindamycin
- **Suspected atypical bacterial infection:** PO azithromycin 10 mg/kg/day on day 1, 5 mg/kg/day on days 2-5 (+/- amoxicillin)
- Treat for 10 days total

**Discharge Criteria:**
- SpO2 > 90% on RA
- Normal work of breathing
- Tolerating PO
- If not responding to initial therapy within 48-72 hours (persistent fever, continued tachypnea, worsening O2 needs) consider repeat imaging and further investigation

**Patient moderately to severely ill appearing**

- CXR (PA and lateral)

**NEED TO GET:**
- CBC with differential
- Blood culture

**Inpatient CAP Treatment:**
- **1st line:** IV ampicillin 150-200 mg/kg/day divided Q6
- **1st line (non-immunized):** IV 3rd generation cephalosporin
- **Alternative to 1st line (allergy):** IV 3rd generation cephalosporin OR clindamycin
- **Suspected atypical bacterial infection:** IV azithromycin 10 mg/kg/day (+/- ampicillin)
- **Toxic appearance:** IV vancomycin, 3rd generation cephalosporin, AND azithromycin
- Treat for 14 days total

**Inpatient Criteria:**
- Age < 6 months
- SpO2 < 90% on RA
- Increased work of breathing
- Not tolerating PO
- Complicated pneumonia

**PICU Criteria:**
Inpatient criteria, PLUS
- Altered mental status
- Need for invasive or noninvasive positive pressure ventilation
- Hemodynamic instability

*Exclusions: infants <3 months of age, immune compromised, home mechanical ventilation, underlying lung disease (CF), chronic conditions*
Inpatient Community-Acquired Pneumonia (ICAP) Guidelines

• Narrow spectrum antibiotic usage
  o Fully immunized patients with uncomplicated pneumonia should receive ampicillin (or penicillin G)
  o Third generation cephalosporin should be used only for unimmunized, S.pneumo resistance, or life-threatening infection/empyema
• Macrolide use only if atypical pneumonia is strongly suspected
  o Atypical CAP is less common in children < 5 years of age
• CBC usage
  o CBC should be obtained only for those with severe pneumonia
  o CBC results rarely change clinical management
• Imaging
  o CXR should be obtained in all children with suspected CAP, although repeat CXR is not routinely recommended
  o With complicated CAP, ultrasound should be considered over CT scan when evaluating for parapneumonic effusion
• Asthma concurrent treatment
  o Wheezing is uncommon among children with typical CAP
  o Corticosteroids may worsen pneumonia outcomes for those without acute wheezing
  o Overuse of CXR in children with asthma may lead to unnecessary antibiotic use (atelectasis vs. infiltrate)

References