SSM Health Cardinal Glennon Children's Hospital

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

Patient moderately to severely ill appearing

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

- CXR (PA and lateral)

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- CBC with differential
- Blood culture

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

Inpatient CAP Treatment:

- **1st line**: IV ampicillin 150-200 mg/kg/day divided Q6
- **1st line (non-immunized)**: IV 3rd generation cephalosporin
- **Alterative 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

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

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

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN

Value in Inpatient Pediatrics Network
from the Quality Improvement Innovation Networks of the American Academy of Pediatrics

Inpatient Community-Acquired Pneumonia (ICAP) Guidelines

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

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