

# ANMC Pediatric (≥3mo) Ambulatory Community Acquired Pneumonia (CAP) Treatment Guideline

Criteria for Respiratory Distress	Criteria For Outpatient Management	Testing/Imaging for Outpatient Management
<ul style="list-style-type: none"> <li>Tachypnea, in breaths/min:                             <ul style="list-style-type: none"> <li>Age 0-2mo: &gt;60</li> <li>Age 2-12mo: &gt;50</li> <li>Age 1-5yo: &gt;40</li> <li>Age &gt;5yo: &gt;20</li> </ul> </li> <li>Dyspnea</li> <li>Retractions</li> <li>Grunting</li> <li>Nasal flaring</li> <li>Apnea</li> <li>Altered mental status</li> <li>Pulse oximetry &lt;90% on room air</li> </ul>	<ul style="list-style-type: none"> <li>Mild CAP: no signs of respiratory distress</li> <li>Able to tolerate PO</li> <li>No concerns for pathogen with increased virulence (ex. CA-MRSA)</li> <li>Family able to carefully observe child at home, comply with therapy plan, and attend follow up appointments</li> </ul> <p><i>If patient does not meet outpatient management criteria refer to inpatient pneumonia guideline for initial workup and testing.</i></p>	<ul style="list-style-type: none"> <li>Vital Signs: Standard VS and Pulse Oximetry</li> <li>Labs: No routine labs indicated                             <ul style="list-style-type: none"> <li>Influenza PCR during influenza season</li> <li>Blood cultures if not fully immunized OR fails to improve/worsens after initiation of antibiotics</li> <li>Urinary antigen detection testing is not recommended in children; false-positive tests are common.</li> </ul> </li> <li>Radiography: No routine CXR indicated                             <ul style="list-style-type: none"> <li>AP and lateral CXR if fails initial antibiotic therapy</li> <li>AP and lateral CXR 4-6 weeks after diagnosis if recurrent pneumonia involving the same lobe</li> </ul> </li> </ul>

## Treatment Selection

### Suspected Viral Pneumonia

Most Common Pathogens: Influenza A & B, Adenovirus, Respiratory Syncytial Virus, Parainfluenza

Most common in <5yo	<p><b>No antimicrobial therapy is necessary.</b></p> <p>If influenza positive, see influenza guidelines for treatment algorithm.</p>
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### Suspected Bacterial Pneumonia

Most Common Pathogens: *Streptococcus pneumoniae*, *Haemophilus influenzae*

Demographics	Preferred Treatment	Treatment Alternatives for β-Lactam Allergy
Previously Healthy AND Appropriately Immunized for Age	<b>Amoxicillin</b> 45mg/kg PO BID (Max dose 4000mg/day) x 7 days	<p><u>Non-anaphylactic β-Lactam Allergy:</u></p> <p><b>Cefprozil suspension</b> 15mg/kg PO BID (max dose 500mg) x 10 days*</p> <p><b>Cefuroxime tablets</b> 15mg/kg PO BID (Max 1000mg/day) x 10 days*</p>
Not appropriately immunized with PCV13 + Hib OR Suspicion for <i>H. influenzae</i>	<p><b>Amoxicillin/clavulanate</b></p> <p>≤40kg: (<b>ES 600mg/42.5mg/5mL</b>) 45mg/kg PO BID or 15mg/kg PO TID (Max dose 4000mg/day) x 10 days*</p> <p>≥40kg: 875mg/125mg PO BID <b>PLUS Amoxicillin</b> 1g PO BIDx 7 days</p>	<p><u>Anaphylactic β-Lactam Allergy:</u></p> <p><b>Levofloxacin</b></p> <p>&lt;5 years: 10mg/kg PO BID (Max dose 750mg/day) x 10 days*</p> <p>&gt;5 years: 10mg/kg PO daily (Max dose 750mg/day) x 10 days*</p>

### Suspected Atypical Pneumonia

Most Common Pathogens: *Mycoplasma pneumoniae*, *Chlamydia pneumoniae*

Demographics	Preferred Treatment	Alternatives
Most common in ≥5yo In ≥5yo macrolide may be empirically added if there is no clinical evidence that distinguishes bacterial from atypical CAP	<b>Azithromycin</b> 10mg/kg PO daily (Max dose 500mg/day) x 3 days	<p>For children &gt;7yo:</p> <p><b>Doxycycline</b> 1-2 mg/kg PO BID (Max dose 200mg/day) x 10 days*</p>

## CONSIDERATIONS

- \*For bacterial CAP 10 day durations have been best studied, shorter courses may be considered for mild disease able to be managed as an outpatient
- Children should show clinical signs of improvement within 48-72 hours

*Antimicrobial Stewardship Program Approved 2018; Updated August 2020*

REFERENCES: Bradley IDSA CAP Infants & Children 2011; AAP endorsed. Ficar B, et al. Azithromycin: 3-Day Versus 5-Day Course in the Treatment of Respiratory Tract Infections in Children. *J Chemother.* 1997;9(1):38-43. Kogan R, et al. Comparative Randomized Trial of Azithromycin versus Erythromycin and Amoxicillin for Treatment of Community-acquired Pneumonia in Children. *Pediatr Pulmonol.* 2003; 35(2):91-8.