

Alaska Antimicrobial Stewardship Collaborative (A2SC)

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

Treatment Selection

Suspected Viral Pneumonia

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

Most common in <5yo	<p>No antimicrobial therapy is necessary.</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	Amoxicillin 45mg/kg PO BID (Max dose 4000mg/day) x5 days*	<p><u>Non-anaphylactic β-Lactam Allergy:</u></p> <p>Cefprozil suspension 15mg/kg PO BID (max 1000mg/day) x5 days*</p> <p>Cefuroxime tablets 15mg/kg PO BID (Max 1000mg/day) x5 days*</p>
Not appropriately immunized with PCV13 + Hib OR Suspicion for <i>H. influenzae</i>	<p>Amoxicillin/clavulanate</p> <p><40kg: (ES 600mg/42.5mg/5mL) 45mg/kg PO BID or 15mg/kg PO TID (Max dose 4000mg/day) x5 days*</p> <p>>40kg: 875mg/125mg PO BID PLUS Amoxicillin 1g PO BID x5 days*</p>	<p><u>Anaphylactic β-Lactam Allergy:</u></p> <p>Levofloxacin</p> <p><5 years: 10mg/kg PO BID (Max dose 750mg/day) x5 days*</p> <p>>5 years: 10mg/kg PO daily (Max dose 750mg/day) x5 days*</p>

Suspected Atypical Pneumonia

Most Common Pathogens: *Mycoplasma pneumoniae*, *Chlamydomphila 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	Azithromycin 10mg/kg PO daily (Max dose 500mg/day) x3 days	<p>For children >7yo:</p> <p>Doxycycline 1-2 mg/kg PO BID (Max dose 200mg/day) x10 days</p>

CONSIDERATIONS

- *Exclusion criteria for short course therapy includes: pneumonia with atypical pathogens, hospital acquired pneumonia (admission for >48 hours in previous 2 months, CAP in previous month, or lung abscess in previous 6 months), empyema or necrotizing pneumonia, preexisting pulmonary disease, congenital heart disease, history of aspiration, malignant neoplasm, immunodeficiency, or kidney dysfunction.
- Children should show clinical signs of improvement within 48-72 hours

Approved A2SC Advisory April 2021

REFERENCES: Bradley IDSA CAP Infants & Children 2011; AAP endorsed. Ficnar 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. Pernica JM et al. Short-Course Antimicrobial Therapy for Community-Acquired Pneumonia: The SAFER Randomized Clinical Trial. *JAMA Pediatrics.* 2021; Published online March 08, 2021.