

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"> 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><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"> Vital Signs: Standard VS and Pulse Oximetry Labs: No routine labs indicated <ul style="list-style-type: none"> Influenza PCR during influenza season 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 in <5yo	<p>No antimicrobial therapy is necessary. If influenza or COVID positive, see appropriate 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, ≥6 months of age AND Appropriately Immunized for Age	Amoxicillin 45mg/kg/dose PO BID (Max dose 4000mg/day) x 5 days*	<u>Non-anaphylactic β-Lactam Allergy:</u> Cefprozil suspension 15mg/kg/dose PO BID (Max 1000mg/day) x 5 days* Cefuroxime tablets 15mg/kg/dose PO BID (Max 1000mg/day) x 5 days*
<6 months of age OR Not up to date with PCV + Hib OR Suspicion for <i>H. influenzae</i>	Amoxicillin/clavulanate <40kg: (ES 600mg/42.5mg/5mL) 45mg/kg/dose PO BID or 15mg/kg/dose PO TID (Max dose 4000mg/day) x 5 days* >40kg: 875mg/125mg PO BID PLUS Amoxicillin 1g PO BID x 5 days*	<u>Anaphylactic β-Lactam Allergy:</u> Levofloxacin <5 years: 10mg/kg/dose PO BID (Max dose 750mg/day) x 5 days* >5 years: 10mg/kg PO daily (Max dose 750mg/day) x 5 days*

Suspected Atypical Pneumonia

Most Common Pathogens: *Mycoplasma pneumoniae*, *Chlamydophila 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) x 3 days	For children >7yo: Doxycycline 1-2 mg/kg/dose PO BID (Max dose 200mg/day) x 10 days

CONSIDERATIONS

- Children should show clinical signs of improvement within 48-72 hours
- *Exclusion criteria for short course therapy includes: 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. If any of the criteria are met, then standard-course treatment of 7-10 days is recommended.

ANMC Associated Powerplan: AMB Pediatric Community Acquired Pneumonia (CAP)

Antimicrobial Stewardship Program Approved 2018; Updated June 2023

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.