

Pneumonia (CAP) Algorithm

Ongoing Management



Inclusion Criteria:

Suspected communityacquired pneumonia (CAP) in patients ≥3 months of age

Exclusion Criteria:

- ✓ Age<3 months
- √ Immunodeficiency or immunosuppressive medication
- ✓ Known or suspected aspiration
- ✓ Known lung disease (e.g., cystic fibrosis, chronic lung disease, structural anomalies) excluding asthma
- ✓ Preexisting tracheostomy or mechanical ventilation
- √ Symptomatic and/or unrepaired cyanotic congenital, heart disease or cardiomyopathy
- √ Neuromuscular disease

Severe allergy definition:

- ✓ Urticaria
- ✓ Angioedema
- ✓ Anaphylaxis

Antibiotic duration:

- ✓ Uncomplicated CAP: 7 days
- ✓ Complicated CAP: 2-4 weeks, recommend call to ID

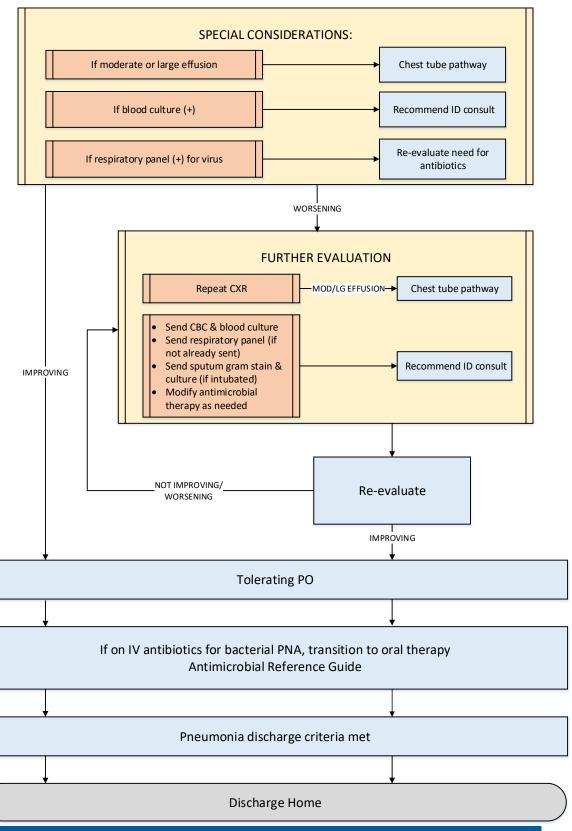
Antibacterial therapy is NOT routinely recommended for children with Influenza, parainfluenza human metapneumovirus or RSV infection, in the absence of clinical, laboratory, and radiographic findings suggestive of bacterial coinfection.

Pleural fluid studies:

Send at least 2 cc

- √ Gram stain & culture
- ✓ Cell count

Please see Antimicrobial Reference Guide on Weblinks Floor Patients on Targeted Therapy & PICU Patients on Empiric Antibiotics







Evidence

Ambroggio L, et al. Quality Improvement Methods Increase Appropriate Antibiotic Prescribing for Childhood Pneumonia. *Pediatrics*. 2013;131:e1623-e1631.

Bradley, J.S., et al. The Management of Community-Acquired Pneumonia in Infants and Children Older Than 3 Months of Age: Clinical Practice Guidelines by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America. Clinical Infectious Diseases. 2011; 53(7):617-30.

Brogan TV, et al. Variability in Processes of Care and Outcomes among Children Hospitalized with Community-Acquired Pneumonia. *Pediatric Infectious Diseases Journal*. 2012 Oct; 31(10):1036-1041.

Jain, S, et al. for the CDC EPIC Study Team. Community-Acquired Pneumonia Requiring Hospitalization among U.S. Children. N Engl J Med 2015;372:835-45.

Lee GE, et al. National Trends in Hospitalizations for Pediatric Community-Acquired Pneumonia and Associated Complications. *Pediatrics* 2010 Aug;126(2):204-213

Murtagh-Kurowski E, et al. Improvement Methodology Increases Guideline Recommended Blood Cultures in Children with Pneumonia. *Pediatrics*. 2105;135:e1052-e1059.

Newman, RE, et al. Impact of Guidelines on Management of Children Hospitalized with Community-Acquired Pneumonia. *Pediatrics*. 2102;129:e597-e604.

Rhedin, S, et al. Clinical utility of PCR for common viruses in acute respiratory illness. *Pediatrics*. 2014; 133(3): e538-45.

Ross, RK, et al. Impact of Infectious Diseases Society of America/Pediatric Infectious Diseases Society Guidelines on Treatment of Community-Acquired Pneumonia in Hospitalized Children. *Clinical Infectious Diseases*. 2013;58:834-838

Shah S, et al. Comparative Effectiveness of Intravenous vs. Oral Antibiotics for Post-Discharge Treatment of Complicated Pneumonia in Children. PowerPoint presentation provided by co-author Waheeda Samady, MD.

Thomson J, et al. Hospital outcomes associated with guideline-recommended antibiotic therapy for pediatric pneumonia. *Journal of Hospital Pediatrics*. 2105;10:13-18.

Williams DJ, et al. Narrow vs broad-spectrum antimicrobial therapy for children hospitalized with pneumonia. *Pediatrics*.2013;132:e1141-1148.

Contributors:

Cynthia Castiglioni, MD, MS Eric Jones

Desty Kamm, RN, BSN, MS Manisha Patel, RN, BSN, MSHI Sameer Patel, MD