

Guidelines for the Management of Community Acquired Pneumonia

Samir S. Shah, MD, MSCE, director, Division of Hospital Medicine at Cincinnati Children's, is the co-author of the Infectious Disease Societies of America (IDSA) guideline for the management of community acquired pneumonia (CAP).¹

In 2006, 525 infants and children younger than 15 died in the United States as a result of pneumonia and other lower respiratory tract infections. Vaccines against *H. influenzae* type b and *S. pneumoniae* have helped protect the young population in the U.S. against most of the bacterial causes of pneumonia, but pneumonia remains the single greatest cause of death in children worldwide. Additionally, over 3 million children are treated for CAP each year in the U.S. and over 150,000 require hospitalization; pneumonia-associated complications such as empyema are present in up to 15% of children hospitalized for management of CAP.

Viruses are the predominant cause of CAP in children less than 2 years of age, documented in up to 80% of cases. *S. pneumoniae* is the predominant bacterial pathogen identified in CAP, occurring in 4%-44% of all children investigated before the widespread use of PCV and HiB vaccines. Atypical pneumonias caused by *Mycoplasma* and *Chlamydia* account for 3%-23 % of cases.

The first-line treatment for CAP in **immunized children ≥ 3 months old, with no complex chronic medical conditions²** is as follows:

- Amoxicillin or ampicillin
- **If the child is allergic to penicillin, give**
 - A third-generation cephalosporin, *or*
 - Clindamycin, *or*
 - Levofloxacin
- If there is a **STRONG** suspicion of atypical pneumonia, **ADD** to first-line therapy
 - Azithromycin

If the child is **unimmunized or critically ill**, give ceftriaxone or augmentin.

The IDSA guidelines for CAP are worth reading for all who care for children, as they give many other recommendations about diagnosis, evaluation, testing, and treatment of CAP. Dr. Samir Shah and Dr. Christine White, Division of Hospital Medicine, will give Grand Rounds on Tuesday, July 3rd, to discuss the guidelines, as well as strategies for implementing the guideline throughout the community.

¹ Bradley, J; Byington, C; Shah, S; et. al., *Clinical Infectious Diseases*, 53(7), 2011

¹ Complex medical conditions include underlying risk factors (home mechanical ventilation, intensive care, recent hospitalization with exposure to nosocomial flora); likely aspiration of a foreign body or stomach contents; underlying medical conditions that predispose to recurrent or severe pneumonia, such as chronic immunosuppressive therapy, cystic fibrosis, sickle cell disease, or immunodeficiency.