

COMMON CLINICAL DIAGNOSES AND CONDITIONS**PNEUMONIA****INTRODUCTION**

Lower respiratory tract infections cause substantial morbidity and mortality in the pediatric population. Worldwide, an estimated 4 million children die from pneumonia each year, with higher mortality rates seen in developing countries. In the United States, pneumonia accounts for up to 1 in 5 pediatric hospitalizations. Pneumonia is commonly caused by a viral infection, especially in children less than 2 years of age. Despite high rates of viral disease in young children, bacterial co-infection is common. Non-viral etiologies for pneumonia differ based upon age and underlying risk factors resulting in the need to tailor antimicrobials appropriately. Surgical intervention may be required when pneumonia is complicated by pleural effusion or abscess. Pediatric hospitalists are the attending of record, coordinate subspecialty care when necessary, and are often in the best position to lead quality improvement initiatives to optimize pneumonia care.

KNOWLEDGE

Pediatric hospitalists should be able to:

- Describe the key features of the history and physical examination that support or refute the diagnosis of pneumonia.
- Discuss the variations in clinical presentation that may accompany chronic health conditions of childhood, such as cystic fibrosis, chronic lung disease, congenital heart disease, immunodeficiency, and others.
- Review alternate diagnoses which may mimic the presentation of pneumonia including anatomic defects, systemic diseases, heart failure, and others.
- Provide indications for hospital admission and determine the appropriate level of care.
- List common bacterial, atypical bacterial, and viral organisms causing pneumonia and state how these differ based on age.
- Name other causes of infectious and non-infectious pneumonias such as lipoid, inhalation pneumonitis, aspiration, and others.
- Discuss the influence of national immunization practices and antimicrobial use on predominant organisms and resistance patterns.
- Describe local resistance patterns for predominant infectious organisms.
- Discuss the benefits and limitations of radiography and laboratory evaluation in the diagnosis of pneumonia.
- Describe common complications seen with pneumonia and list co-morbidities or infectious etiologies associated with higher risk for each.
- Describe the indications and options for surgical intervention in patients with complicated pneumonia.
- Summarize goals for hospital discharge attending to symptoms, oxygenation saturation, hydration, and family/caregiver needs, and outpatient management plans.

SKILLS

Pediatric hospitalists should be able to:

- Correctly diagnose pneumonia by efficiently performing an accurate history and physical examination, determining if key features of the disease are present.
- Order appropriate laboratory and radiographic tests to guide treatment and ensure proper isolation.
- Direct an evidence-based treatment plan, including cardio-respiratory monitoring, oxygen supplementation, and appropriately selected antibiotic therapy as indicated.
- Accurately interpret chest radiographs and distinguishing between consolidation, effusion, mass, and other presentations.
- Perform careful reassessments daily and as needed, note changes in clinical status, and respond with appropriate actions.
- Correctly determine when consultation with a surgeon or other subspecialist or a transfer to a higher level of care is indicated.
- Identify patients requiring extended evaluation for underlying anatomic or systemic disease.

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- Coordinate discharge efficiently and effectively with patients, family/caregiver, subspecialists, and the primary care provider including home care needs and follow-up as appropriate.
- Create a comprehensive discharge plan including home care as appropriate.

ATTITUDES

Pediatric hospitalists should be able to:

- Role model and advocate for strict adherence to infection control practices and educate the family/caregiver regarding measures such as handwashing to reduce the spread of infection.
- Communicate effectively with patients, the family/caregiver and healthcare providers regarding findings and care plans.
- Collaborate with subspecialists to render safe and efficient treatment.
- Realize the importance of antimicrobial stewardship and consistently modify prescribing practice to reflect best practices attending to local resistance patterns.

SYSTEMS ORGANIZATION AND IMPROVEMENT

In order to improve efficiency and quality within their organizations, pediatric hospitalists should:

- Work with hospital, community, and infectious disease experts to develop and sustain local communications regarding resistance pattern changes.
- Lead, coordinate or participate in the development and implementation of cost-effective, safe, evidence-based care pathways to standardize the evaluation and management of hospitalized children with pneumonia.