Community-Acquired Pneumonia Advice Updated

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New consensus guidelines could help primary care and emergency medicine physicians better manage community-acquired pneumonia in immunocompetent adults.

A joint committee of the Infectious Diseases Society of America and the American Thoracic Society developed the treatment guidelines, which emphasized that they should be modified according to local epidemiology and susceptibility data (Clin. Infect. Dis. 2007;44:S27-72).

The main differences between the consensus guidelines and earlier management guidelines "center on issues of etiology, the site of care decisions, and diagnosis," Dr. Lionel A. Mandell, professor of medicine at McMaster University, Hamilton, Ont., and the corresponding author of the guidelines publication, said in an interview.

"In terms of etiology, community-acquired MRSA [methicillin-resistant *Staphylococcus aureus*] has now become an issue. For the site of care decision, the CURB-65 [confusion, uremia, respiratory rate, low blood pressure, age 65 years or greater] criteria are now recommended as well as the PSI [Pneumonia Severity Index] criteria."

► **Site of care selection.** Assessment of disease severity is the most critical initial decision in management of community-acquired pneumonia (CAP), with an immediate effect on the site of care selection. The guidelines identify the site of care decision as one area in which CAP management could be improved. To assist clinicians in evaluating CAP disease severity and determining the most appropriate site of care, the guidelines recommend the use of severity of illness scores such as CURB-65 and PSI. The three site of care options are outpatient treatment, hospitalization in a medical ward, or admission to an ICU.

► **ICU admission.** The guidelines offer a new set of criteria for the ICU admission decision, while retaining the format of the earlier ATS guidelines. They distinguish between patients meeting major admission criteria (strong recommendation for ICU admission) and those meeting three or more minor admission criteria (moderate recommendation).

Direct admission to an ICU is strongly recommended for patients in septic shock requiring vasopressors or with acute respiratory failure requiring mechanical ventilation. Direct admission is moderately recommended for patients meeting at least three of the following criteria: respiratory rate of 30 breaths/min or higher, arterial oxygen pressure/fraction of inspired oxygen ratio (PaO_2/FiO_2) of 250 or lower, multilobar infiltrates, confusion/disorientation, BUN level of 20 mg/dL or higher, WBC count less than 4,000 cells/mcL, platelet count less than 100,000 cells/mcL, core temperature below 36° C, and hypotension requiring aggressive fluid resuscitation.

► **Antibiotics.** Empirical antibiotic recommendations do not differ substantially from those in previous guidelines. Additional evidence supports combination antibiotic therapy for severe CAP, and ertapenem is now included as a β-lactam alternative recommended in some circumstances.

► **Diagnosis and testing.** Diagnosis of pneumonia is made based on clinical symptoms and evidence of an infiltrate in the lungs, usually from a chest radiograph or other imaging technique. The issue of diagnostic testing to determine etiology remains controversial. "Blood cultures and Gram stain and culture of respiratory secretions are not recommended for all hospital admissions," Dr. Mandell said. If the clinician suspects infection with specific pathogens that would be covered more appropriately by a change in the empirical antibiotic regimen, then testing for CAP etiology is recommended. If sputum samples are collected, ideally the samples should be obtained before antibiotic therapy is initiated. Gram stains of sputum samples may offer the twofold benefit of guiding initial antimicrobial therapy and possibly validating later sputum culture results.

Severe CAP is an indication for blood cultures, because of the increased possibility that an unusual pathogen may be detected. Pretreatment blood and sputum cultures also are appropriate for hospitalized patients with risk factors such as asplenia, which would lead to an inability to clear bacteremia, or with comorbid conditions associated with increased likelihood of bacteremia with CAP. ■

The guidelines are available free at www.journals.uchicago.edu/ CID/journal/issues/v44nS2/41620/41620.html.