

Thoracic Society (ATS) and Infectious Diseases Society of America (IDSA) (1). It has been 12 years since the last ATS/IDSA CAP guidelines were updated, and clinicians have been anxiously waiting for more recent guidance to assist them in the management of patients presenting with this common and challenging infectious syndrome (2). The new CPG were produced by a multidisciplinary panel of 15 experts from Australia, Canada, and the United States, and incorporate new and relevant research published since 2007 (1). Although the new CPG were endorsed by the Society of Infectious Diseases Pharmacists, and the National Academy of Medicine recommended that guideline development committees should be composed of experts from a variety of disciplinary backgrounds, there was no pharmacist representation among the authors (1, 3). This is not the first time major CPGs that include numerous pharmacotherapy recommendations have been released without inclusion of a pharmacist on the authorship panel. In fact, the proportion of pharmacist authorship in national CPG published between 2010 and 2016 was 31% and the proportion of pharmacist authorship in current IDSA guidelines was 21% (4, 5). These numbers, albeit low, represent an improvement from the past, when the pharmacist authorship representation in retired IDSA guidelines was only 13% (5).

Calls to include pharmacists as authors on CPG are not new (6). Pharmacists are well trained in pharmacotherapy, pharmacokinetics, and pharmacodynamics (7). Many pharmacists complete accredited Postgraduate Year One general and Postgraduate Year Two infectious diseases specialty residencies and become board certified in infectious diseases pharmacy (8–10). Pharmacists offer a unique perspective on designing and monitoring antimicrobial regimens and play a leading role in antimicrobial stewardship (11). We call on the ATS and IDSA to further collaborate with pharmacy organizations and to demonstrate their commitment to inclusion by inviting a pharmacist to serve as an author on the next CAP guidelines. ■

**Author disclosures** are available with the text of this letter at [www.atsjournals.org](http://www.atsjournals.org).

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## Procalcitonin Is Useful for Evaluating Patients with Ambiguous Presentation and for Early Discontinuation of Antibiotics in Community-acquired Pneumonia



To the Editor:

The updated American Thoracic Society and Infectious Diseases Society of America guidelines for the diagnosis and treatment of adults with community-acquired pneumonia (CAP) conclude that procalcitonin (PCT) is not recommended to determine the need for initial antibacterial therapy in patients with clinically

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suspected and radiographically confirmed CAP (1). It seems rational that in a patient with a high pretest probability for pneumonia, any biomarker (including PCT) that is not 100% accurate should not have a strong influence on treatment decisions. The advantage of using PCT for the management of patients with CAP, however, has been demonstrated for patients in whom a CAP diagnosis is unclear (e.g., patients with no infiltrate in chest X-ray) and for monitoring patients with CAP to decide whether to stop treatment early. Most trials that evaluated PCT for the management of CAP did not rely on the initial PCT level and instead focused on the kinetics of this blood marker to indicate that antibiotic treatment should be stopped early. The initial PCT level was found to be helpful in patients with a bronchitis-like illness and possible CAP but an ambiguous clinical presentation (2, 3). A recent meta-analysis of individual patient data that focused specifically on patients with respiratory infection and CAP who had participated in randomized trials showed that PCT is highly effective in reducing the duration of antibiotic treatment (4, 5). Specifically, the analysis included 6,708 patients from 26 eligible trials in 12 countries and found a 2.4-day reduction in antibiotic exposure (5.7 vs. 8.1 d [95% confidence interval (CI), -2.71 to -2.15];  $P < 0.0001$ ) and a reduction in antibiotic-related side effects (16% vs. 22%, adjusted odds ratio, 0.68 [95% CI, 0.57 to 0.82];  $P < 0.0001$ ). Importantly, when PCT was used to guide discontinuation of treatment, patients had significantly improved clinical outcomes (odds ratio for mortality, 0.83 [95% CI, 0.70–0.99];  $P = 0.037$ ).

Thus, there is strong clinical evidence that PCT is useful for evaluating patients with lower respiratory infection and ambiguous presentation and for stopping antibiotics early in patients with confirmed CAP. It is unfortunate that the updated guideline (1) focused on a clinical situation in which no biomarker would be expected to have a strong influence on treatment (i.e., patients with clinically suspected and radiographically confirmed CAP) and unfortunate that it did not include recommendations for using PCT in ambiguous clinical situations and for guiding treatment duration, both of which have a strong impact on antibiotic overuse and associated health risks. ■

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## Viewing the Community-acquired Pneumonia Guidelines through an Antibiotic Stewardship Lens



To the Editor:

We read with interest the article titled “Diagnosis and Treatment of Adults with Community-acquired Pneumonia. An Official Clinical Practice Guideline of the American Thoracic Society and Infectious Diseases Society of America” (1). We congratulate the authors on their comprehensive review of the evidence. Although we understand that they are limited in their ability to establish recommendations based on the Grading of Recommendations Assessment, Development, and Evaluation system process, we believe it would be helpful for the practicing clinician to understand how to interpret the guidelines through an antibiotic stewardship (AS) lens. Below, we discuss three AS-guided recommendations that should be considered when interpreting the community-acquired pneumonia (CAP) guidelines.

### Fluoroquinolone Use

Fluoroquinolones (FQs) are recommended as a first-line option along with  $\beta$ -lactam plus macrolide combination therapy for ambulatory patients with CAP and comorbidities and for inpatients. The increased compliance issues regarding the use of two medications may drive clinicians to prescribe FQs, especially in the outpatient setting. The authors mention that adverse reactions to FQs are rare; however, FQ use is among the strongest risk factors for *Clostridioides difficile* infections (2), and the list of U.S. Food and Drug Administration black-box warnings associated with FQ use continues to grow.

### Inpatient Empiric Antimicrobial Therapy for Nonsevere CAP and No Risk Factors for Methicillin-Resistant *Staphylococcus aureus* or *Pseudomonas aeruginosa*

The guidelines recommend combination therapy with a  $\beta$ -lactam and a macrolide for all patients who receive a non-FQ regimen. Although one randomized trial failed to demonstrate noninferiority of  $\beta$ -lactam monotherapy versus  $\beta$ -lactam plus macrolide combination therapy in attainment of clinical stability

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