Reply to Zimmerman et al

To the Editor—We agree with Zimmerman and colleagues [1] about the threat of antibiotic resistance to public health. In fact, an important intent of the
Pediatric Infectious Diseases Society/Infectious Diseases Society of America guideline on management of community-acquired pneumonia (CAP) in infants and children was to discourage unnecessary antibiotic use and, when antibiotics are necessary, to encourage narrow-spectrum prescribing. This intent is reflected in recommendation 41, which states that “[a]ntimicrobial therapy is not routinely required for preschool-aged children with CAP because viral pathogens are responsible for the great majority of clinical disease (strong recommendation, high-quality evidence)” and in subsequent recommendations that identify amoxicillin as appropriate first-line treatment for healthy, immunized children with CAP [2].

Zimmerman et al express concern regarding the recommendation that chest radiography is not routinely required for children with CAP who will be managed in the outpatient setting. There are several reasons for this recommendation against routine chest radiography. First, chest radiography cannot reliably distinguish viral from bacterial CAP and does not reliably distinguish among the various possible bacterial pathogens. Therefore, routine chest radiography does not have a substantial impact on improving clinical outcomes, particularly in the outpatient setting [3–6]. Second, in the United States, obtaining chest radiographs in the office setting may be impractical. Systems-level issues, including the frequent requirement for an outpatient to travel to another facility to have the chest radiograph performed and barriers to prompt transfer of those results to the ordering physician, may inadvertently interfere with the providing of high-quality care. Finally, studies have documented that the use of chest radiography in children with suspected acute bacterial lower respiratory tract infections occasionally leads to changes in the diagnosis or the use of antibiotics in a clinic or emergency department setting but rarely impacts decisions regarding hospitalization [7, 8]. Chest radiography in these studies was least useful when information from history and clinical examination was consistent with the diagnosis of bacterial pneumonia, suggesting that chest radiography is not necessary in outpatients in whom the diagnosis of CAP is strongly suspected on the basis of clinical findings. Data from a developing country also suggest that the changes in management resulting from chest radiography in the outpatient setting are not typically associated with improved clinical outcomes [4, 9]. Importantly, the guideline does provide guidance on when chest radiography ought to be considered (recommendation 32), including for patients with “suspected or documented hypoxemia or significant respiratory distress and in patients with failed initial antibiotic therapy to verify the presence or absence of complications of pneumonia” [2].

Although we have not had the opportunity to review the authors’ studies, we look forward to seeing their research when published, potentially incorporating these new data into the next version of the guidelines.

Note

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Samir S. Shah1,2,3 Carrie L. Byington,4 and John S. Bradley5,6

Divisions of 1Hospital Medicine, 2Infectious Diseases, Cincinnati Children’s Hospital Medical Center, and 3Department of Pediatrics, University of Cincinnati College of Medicine, Ohio; 4Department of Pediatrics, University of Utah School of Medicine, Salt Lake City; 5Department of Pediatrics, University of California, San Diego School of Medicine, and 6Rady Children’s Hospital San Diego, California

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