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## Commentary: A step forward in the everyday management of adults with community acquired pneumonia

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Few topics cause such fierce discussion among doctors as does the antimicrobial treatment of lower respiratory tract infections. The meta-analysis by Mills et al is a valuable contribution to these debates.<sup>1</sup> Their study should reassure all health professionals who routinely manage non-severe community acquired pneumonia that therapy using oral  $\beta$  lactam antibiotics, macrolides, or fluoroquinolones is equally effective when judged by clinical cure and mortality. Although other relevant outcomes such as speed of response, subsequent relapse rates, and harmful antibiotic effects were not assessed, the findings and the different cost and side effect profile of these agents means that a  $\beta$  lactam antibiotic (with macrolides and tetracyclines as good alternatives in individuals who are hypersensitive to penicillin) should usually remain the preferred therapy for patients with non-severe community acquired pneumonia managed in the community or in hospital. This is supported by data from clinical practice (as opposed to clinical trials) in Sweden.<sup>2</sup> Furthermore, the similar outcome in conventional and atypical pathogens supports the view that distinction of these causes using microbiological tests is likely to be unhelpful in this patient group.<sup>3</sup>

Of course it remains possible that in special settings with a much higher atypical incidence or resistance rate (only 7% of cases included by Mills et al had confirmed infection by atypical organisms and bacterial resistance rates were not provided) these findings do not apply. That so many patients from over 30 different countries were included in the study, however, means that these findings are likely to be widely relevant. Elderly patients were poorly represented, but they usually have a lower rate of infection with atypical bacteria.<sup>4</sup> One situation where a  $\beta$  lactam antibiotic would not be first choice is when legionella infection is suspected. Such infection is, however, unusual in the community.<sup>4</sup>

One question that remains is which  $\beta$  lactam antibiotic to use. In 14 of the 18 studies either amoxicillin or amoxicillin-clavulanate was used as a comparator. As oral cephalosporins have poor pharmacokinetics it would seem that amoxicillin or amoxicillin-clavulanate should usually be the first choice for therapy. It should, however, be realised that

side effects are more common with amoxicillin-clavulanate and that penicillinase producing *Haemophilus influenzae* is an uncommon cause of mild community acquired pneumonia.

Most studies on antimicrobial treatment in community acquired pneumonia include only patients in whom the condition has been radiographically confirmed. In instances of lower respiratory tract infection in primary care, chest radiography is not carried out.<sup>5</sup> Detection of community acquired pneumonia by clinical methods is neither sensitive nor specific, but a benefit of chest radiography in selected patients with lower respiratory tract infections has not been shown either, or tested. It would seem reasonable to apply these research findings to patients with suspected (rather than confirmed) community acquired pneumonia on the basis of specific features such as focal chest signs, dyspnoea or tachypnoea, or prolonged fever. Use of a  $\beta$  lactam antibiotic in patients with suspected or definite community acquired pneumonia will pose only a limited—and thus acceptable—risk for the development of bacterial resistance.

In the absence of any single adequately powered comparative antibiotic study, Mills et al's meta-analysis provides strong evidence to support the everyday management of adults with community acquired pneumonia.

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