



# Drug Monitor

## A New Timeline for Pneumonia Antibiotics

How long should treatment for community-acquired pneumonia last? At present, it depends on who you ask, with most answers ranging from five to 14 days. But a recent meta-analysis indicates that the best answer might be seven days or less for adults with mild to moderate pneumonia.

This meta-analysis—conducted by researchers from San Francisco VA Medical Center, San Francisco, CA—considered 15 randomized, controlled trials in which a combined total of 2,796 adult patients received antibiotic monotherapy for the disease. All of the trials compared the results of short-course regimens, lasting seven days or less, to the results of extended-course regimens, lasting more than seven days. Four of the antibiotic classes most commonly used to treat community-acquired pneumonia were represented in the trials: macrolide, fluoroquinolone, beta-lactam, and ketolide.

The researchers found no significant differences between short-course and extended-course regimens with respect to clinical failure, mortality, bacteriologic eradication, and adverse events. These results were consistent across a wide range of analyses, including individual antibiotic classes.

These results have some very positive implications, according to the researchers. A reliance on short-course regimens might help to combat the growing problem of antimicrobial resistance in pneumonia causing bacteria, they say, while inspiring better patient adherence and reducing the risk of adverse treatment effects.

The researchers caution that, while their results can be generalized to most adult patients with mild to moderate

pneumonia, they can't be extrapolated to patients who are older or have severe cases of the disease. Most of the analyzed trials involved only mild to moderate cases (respiratory failure and septic shock were common exclusion criteria), and elderly patients generally were underrepresented.

Source: *Am J Med.* 2007;120(9):783–790.

## Older Patients and Inappropriate Medications in the ED

Many older patients may be leaving emergency departments (EDs) with new prescriptions for inappropriate medications—and even more already may be taking inappropriate medications when they enter EDs. Those were the conclusions of researchers from Cleveland Clinic and MetroHealth Medical Center, both in Cleveland, OH.

The researchers reviewed the charts of 352 consecutive patients over the age of 65 who visited the ED of an urban teaching hospital during a two-week period. They studied lists of all prescription medications that the patients were taking at the time of their ED visits, as well as lists of all medications prescribed by ED physicians to the patients who were discharged. The Beers criteria, which designate medications that are associated with increased morbidity and mortality in older patients, were used to identify the potentially inappropriate medications (PIMs) in these lists.

The results, the researchers say, suggest a high prevalence both of PIMs taken by older patients admitted to the ED and PIMs prescribed to these patients by ED physicians. The sampled patients were taking an average of 8.4 medications each at the time of

their ED visits, and for 111 (32%) of the patients, those medications included at least one PIM. Of the 101 patients who were discharged and prescribed new medications by an ED physician, 13 were prescribed a PIM.

The most common PIMs patients were taking at the time of the ED visits were a propoxyphene and acetaminophen combination, muscle relaxants, and antihistamines, while the most common PIMs prescribed to patients at discharge were propoxyphene-acetaminophen, diazepam, cyclobenzaprine, and diphenhydramine. These findings suggest that older patients with musculoskeletal problems or other painful conditions may be at particularly high risk for taking and being prescribed PIMs, according to the researchers.

The investigators point out that the study's small patient sample and single location may limit the extent to which its results can be generalized. In addition, use of the Beers criteria could have led to either an overestimation or an underestimation of potentially dangerous medications. The criteria can classify drugs that are justified due to clinical circumstances as PIMs, and they do not account for the possibility of adverse drug interactions.

Education to enhance awareness of medication risks in older patients is needed across health care groups, the researchers suggest. They also say that, although the task of reducing PIMs is a challenging one, ED physicians can make important contributions in this regard. They note that if ED physicians in this study had focused only on removing the three most common PIMs from the prescription lists of older patients, those patients' PIMs might have been reduced by almost 15%. ●

Source: *Am J Emerg Med.* 2007;25(7):804–807.