

## The Management of Respiratory Tract Infections: A Focus on Appropriate Antibiotic Utilization

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Community-acquired respiratory tract infections (CARTIs) account for more than 100 million office visits each year, and impart tremendous health and economic consequences to managed care organizations and their members. In addition to the typical and atypical pathogens that account for most CARTI cases, increases in the resistance of these pathogens to traditional empiric therapies continue to be reported throughout the world, including increases in multidrug-resistant *Streptococcus pneumoniae*. A new class of antibiotics, the ketolides, possesses many attributes that compare favorably to existing empiric CARTI therapies, and offers managed care decision makers and physicians a new choice for the management of CARTIs. This supplement to *The American Journal of Managed Care* will review emerging strategies for antibiotic selection and highlight the available clinical and economic data for the ketolide class.

The supplement begins with an article which reviews the epidemiology and causative pathogens associated with community-acquired pneumonia (CAP), acute exacerbation of chronic bronchitis (AECB), and acute rhinosinusitis (AS). The article introduces the concept of "collateral damage" caused by inappropriate antibiotic therapy and reviews the components of a useful framework for selecting antibiotic agents for the treatment of CARTIs.

An article by John A. Sbarbaro, MD, MPH, FCCP, follows with a review of the chemical structure and mechanism of action of the ketolide class of antibiotics. The article reviews the *in vitro* activity and the pharmacokinetic and pharmacodynamic properties of telithromycin, the first ketolide antibiotic available in the United States. A review of the safety and clinical efficacy of telithromycin in CAP, AECB, and AS trials is presented.

The supplement concludes with an article by Diana I. Brixner, RPh, PhD, which reviews the disease burden and economic landscape of CAP and AECB, including a review of CAP hospitalization costs among the elderly. The article presents several treatment guidelines for the management of CAP, and reviews the results of several trials that both support and contradict these recommendations. The article also presents the results of the 4 telithromycin studies that included a post-trial comparative analysis of health outcomes for telithromycin and the comparator therapy, including resource utilization, hospitalization rates, and economic costs.

Together, these articles provide valuable information that can be used by managed care decision makers and physicians as they evaluate and compare the clinical and economic attributes of various antibiotic therapies for the treatment of CARTIs.