The discipline of infectious diseases is one of the most rapidly changing fields in medicine. In most specialties of medicine, diseases remain relatively stable, and diagnostic and therapeutic approaches change slowly. In infectious diseases, the syndromes change with the emergence of new organisms, development of resistant pathogens, and resurgence of infections that have virtually disappeared. Clearly, the diagnostic and therapeutic approaches must change rapidly. In no area of medicine does the knowledge and art of clinical practice change as rapidly as in the use of antimicrobial agents.

In this issue of *Infectious Disease Clinics of North America*, we deal with antibacterial agents and their use, with concentration on newer agents and recent changes in the use of some older antibacterial agents. Pneumococci, enterococci, and gram-negative bacilli have continued to become increasingly resistant to existing antimicrobial agents, and in addition, community-acquired methicillin-resistant *Staphylococcus aureus* has spread dramatically. Criteria for susceptibility of pneumococci and enterococci to various antibacterial agents have changed. New β-lactam, antistaphylococcal, and glycyclcline antibiotics have been developed or are in development.

This issue reviews various aspects of in vitro testing of antibacterial agents, their pharmacodynamics and pharmacokinetics, and their clinical use and management. Problems with resistant bacteria as well as specific use of antibacterial agents in pediatrics, the elderly, and renal insufficiency are covered. The current status of important older antibiotics is summarized. Newer antibiotics are described, as well as the use of topical agents.

In choosing authors to address the different topics, an effort was made to select individuals who are experts in the areas assigned. The end result of their efforts is
a state-of-the-art review on the subject of the use of antibacterial agents and their interactions with bacteria.

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