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Preface

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The rise in infections caused by antimicrobial-resistant organisms continues to plague us. While resistance genes have been present for millions of years before the advent of modern antibiotics, frequent antibiotic exposure accelerates the emergence of resistance in almost all organisms that cause clinical infections. However, as most of the intuitive targets for antimicrobial agents have been exhausted and as antimicrobial development is not as lucrative as pharmaceutical manufacturers would desire, we are limited in our current antimicrobial treatment options now and in the foreseeable future. Thus, the most realistic, immediate approach is to improve our knowledge and use of existing antimicrobial agents.

Although implementation of antimicrobial stewardship programs across health care facilities is neither incentivized nor nationally mandated in the United States, there are on-going discussions about moving in this direction. Currently, the Centers for Disease Control and Prevention are supporting large studies to move the science of antimicrobial stewardship forward. They are also developing templates to highlight methods to start and expand stewardship programs in health care institutions with a focus on intervention strategies, measurement approaches, and education about resistance and optimal antibiotic use.

In the meantime, as we await policy changes, this issue of *Infectious Disease Clinics of North America* brings together leaders in the field to fill important gaps in knowledge in the world of antimicrobial stewardship, including improving antimicrobial knowledge of prescribers, changing prescriber behavior, utilizing sophisticated research methods and antimicrobial measurement approaches, incorporating novel diagnostic techniques into stewardship activities, and using advanced informatics to enhance stewardship programs. They venture into some nonhospital settings to discuss the role of antimicrobial stewardship, including long-term care facilities, community hospitals, neonatal intensive care units, and oncology and transplant wards. They also discuss innovative methods of improving antimicrobial prescribing practices, such as ward rounds, tackling antibiotic allergies, improving antimicrobial use during transitions of care and at the end of life, transferring some of the work of stewardship onto individual providers, and allocating stewardship resources when resources are limited.

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