

# The Implementation of Antimicrobial Stewardship Using a Multidisciplinary Approach

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## Program Overview

Antimicrobial resistance is a worldwide health problem. Increases in morbidity, mortality, hospital length of stay, and healthcare costs are associated with antimicrobial resistance. Inappropriate antimicrobial use is strongly associated with the emergence of antimicrobial-resistant pathogens. An effective antimicrobial stewardship program, with appropriate drug product selection, dosing, route of administration, and duration of antimicrobial therapy, in conjunction with a comprehensive infection control program has been shown to limit the emergence and transmission of antimicrobial-resistant microorganisms. Implementing an antimicrobial stewardship program in the institutional setting can present a challenge. In early 2007, the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America published guidelines for developing an institutional program to enhance antimicrobial stewardship. These guidelines call for a multidisciplinary team approach to antimicrobial stewardship.

The 2006 Tax Relief & Health Care Act required a study of ways that Medicare payments to hospitals could be recouped for "never events", as defined by the National Quality Forum, including hospital infections. In August 2007, the Centers for Medicare and Medicaid Services (CMS) announced that it will stop payments to hospitals for several negative consequences of care that result in injury, illness or death. Pharmacists need to increase their knowledge of Medicare reimbursement as it relates to antimicrobial stewardship.

This program will describe the relationships between inappropriate antimicrobial use, antimicrobial resistance, and increased morbidity, mortality, and hospital length of stay. Pharmacy expenditures and factors affecting reimbursement will be addressed. The potential impact of antimicrobial stewardship programs on the emergence and transmission of antimicrobial-resistant microorganisms also will be discussed. Challenges associated with antimicrobial stewardship program implementation and examples of successful multidisciplinary team approaches to antimicrobial stewardship will be provided.