Antimicrobial Stewardship in Community Hospitals

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KEYWORDS

- Antibiotic stewardship • Antimicrobial stewardship • Community hospitals
- Critical access hospitals • Small hospitals • Rural hospitals
- Antibiotic stewardship core elements

KEY POINTS

- Antibiotic stewardship programs are needed in all health care facilities, regardless of size and location.
- Antibiotic stewardship team leaders require dedicated administrative support to actively engage local prescribers.
- Antibiotic stewardship metrics that are actionable should be tracked and reported.
- Available resources and leadership priorities should be considered when selecting antibiotic stewardship goals and projects.

INTRODUCTION

In an era of health care when pressures to improve safety and quality and reduce waste are increasing, antimicrobial stewardship programs (ASPs) provide value by optimizing antimicrobial prescribing, improving clinical outcomes, and decreasing cost. In hospitals, one-third of antimicrobial prescribing is thought to be either unnecessary or inappropriate.[1] Formal ASPs can successfully respond to these health care pressures and reduce inappropriate antimicrobial use.

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Since 1997, the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA) have recommended that every hospital regardless of size have an ASP.[2] More recently, the regulatory landscape has changed significantly to support the expansion of antimicrobial stewardship. In 2013, Accreditation Canada expanded the list of Required Organizational Practices to include development and implementation of a program to optimize antimicrobial use and provide good stewardship. In 2014 and 2015, respectively, the Canadian and US governments released national action plans to address antimicrobial resistance.[3,4] In the United States, this led The Joint Commission to implement a new medication management standard on January 1, 2017, requiring active ASPs at all accredited hospitals.[5] Critical access hospitals will need to comply with the Centers for Disease Control and Prevention (CDC) Core Elements[6] of Antibiotic Stewardship by 2021 to receive flexibility (flex) grant funding from the Federal Office of Rural Health Policy via the Medicare Beneficiary Quality Improvement Project (MBQIP).[7] The Centers for Medicaid and Medicare Services (CMS) drafted a proposal to require ASPs as a condition of participation.[8] Individual states, to include California and Missouri, have their own stewardship requirements.[1] Importantly, all guidelines, regulatory recommendations, and accreditation standards require the implementation of an ASP regardless of hospital size, academic affiliation, or location.

The impact of ASPs has largely been studied in academic medical centers.[9] However, academic medical centers account for only 400 of the more than 4800 nonfederal, acute care hospitals in the United States.[10,11] The remaining 4400 are community hospitals, and most of these are small community hospitals with fewer than 200 beds. These smaller facilities represent 72% of US nonfederal hospitals and are least likely to have an ASP that meets all of the CDC's Core Elements.[12,13] Compared with academic medical centers, community hospitals face unique challenges that require different and creative approaches to antimicrobial stewardship. The purpose of this article is to compare and contrast these challenges and to propose strategies for community hospitals to meet the CDC Core Elements.

Agreeing on one definition of a community hospital is challenging.[14] For the purposes of this review, community hospitals are defined as nonfederal, short-term general hospitals that are not academic medical centers or major teaching hospitals. Community hospitals represent a diverse group ranging from a 20-bed, rural, critical access hospital, to a 600-bed, urban, multispecialty hospital. Because of the significant heterogeneity among community hospitals, this review article at times separates the discussion of stewardship approaches based on the hospital categories defined in **Table 1**. Even within these categories, there can be significant variability due to hospitals being private or public, for-profit or nonprofit, or part of a network or system. There may be differences between hospitals in terms of rounding structures, presence of students and/or residents, research activities, access to journal articles, patient acuity level, likelihood to transfer patients, capabilities of on-site microbiology laboratories, and presence of intensive care units, on-site subspecialists, and transplant services. It is important to keep this heterogeneity in mind as we compare and contrast stewardship in community and academic settings. The recommendations in this article are largely based on the authors' collective experience working with community hospitals in the mountain west region.

LEADERSHIP COMMITMENT

Similarities

Regardless of hospital size, leadership support is critical to the development and sustainability of an ASP. Hospital leadership must understand the importance of the ASP