

O F F I C I A L P U B L I C A T I O N

S T A T E M E N T

# **Antimicrobial Stewardship: Statement on the Role of the Pharmacist**

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## Antimicrobial Stewardship: Statement on the Role of the Pharmacist

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## Statement

Antimicrobial stewardship is the practice of ensuring that patients receive optimal antimicrobial therapy when indicated.

CSHP endorses the pharmacist's integral role in interprofessional antimicrobial stewardship activities. To optimize patient outcomes, every pharmacist should incorporate antimicrobial stewardship principles as part of routine practice. Where a formal antimicrobial stewardship program exists, a pharmacist should be included in the leadership team.

## Background

Suboptimal antimicrobial use is common,<sup>1</sup> threatening patient safety by increasing the frequency of antimicrobial resistant<sup>2</sup> infections that are difficult to treat (e.g., extended spectrum beta lactamase-producing *E. coli*), by increasing the risk of antibiotic-related complications, (e.g., *Clostridium difficile* infection,<sup>3,4</sup>) adverse reactions, hospital lengths of stay, and mortality rates.<sup>5</sup> The problem is exacerbated by the paucity of new antimicrobials to combat drug-resistant organisms.<sup>6</sup>

Core principles of antimicrobial stewardship include timely initiation and discontinuation, appropriate selection, optimal dosing, route, and duration of antimicrobial therapy.<sup>7,8</sup> Antimicrobial selection also includes consideration of local epidemiology and intrinsic antimicrobial resistance patterns and culture results, where available.<sup>7</sup>

The core principles of antimicrobial stewardship are applied to optimize clinical outcomes while minimizing the adverse effects on microbiological ecology. Recognized antimicrobial stewardship interventions include formulary management, prospective audit and feedback, use of decision support tools, education, and expert consultations. Data on antimicrobial use, resistance patterns, and associated patient outcomes should be collected, analyzed, and communicated to stakeholders.<sup>8,9</sup>

Pharmacists are well positioned to be key participants in advocating for, developing, and implementing antimicrobial stewardship strategies, regardless of whether a formal antimicrobial stewardship program has been established within the practice setting. They are recognized for having an integral role in interprofessional antimicrobial stewardship activities.<sup>11,12</sup> Pharmacists are ideally suited to bridge between the clinical and operational aspects of antimicrobial stewardship, and are regarded as educators<sup>10</sup> within the healthcare team. Pharmacists bring their unique knowledge of the medication use system and of pharmacodynamic, pharmacokinetic, and pharmacoeconomic principles to antimicrobial therapy; their interventions positively affect patient and system outcomes.<sup>11,13,14</sup>

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