

ASHP-SIDP Joint Statement on the Pharmacist's Role in Antimicrobial Stewardship

Position

The American Society of Health-System Pharmacists (ASHP) and the Society of Infectious Diseases Pharmacists (SIDP) jointly believe that all pharmacists have a responsibility to promote antimicrobial stewardship (AMS) and optimize antimicrobial use. Pharmacists qualified through education, training, or experience in infectious diseases (ID) and/or AMS should be recognized as appropriate leaders, or ideally co-leaders, of AMS programs (ASPs). Training in ID and AMS through ID specialty training, a certificate program, or other AMS training is essential to equip ASP leaders with the necessary tools to successfully advocate for and direct appropriate antimicrobial use, educate the public, and empower other healthcare professionals to engage in AMS efforts.

Background

Pharmacists have long been at the forefront of the creation, development, and advancement of AMS by influencing antimicrobial prescribing to improve patient outcomes, reducing antimicrobial-related adverse events, encouraging cost-effective care, and minimizing the development of antimicrobial resistance.^{1,2} Over the past several years, U.S. accrediting bodies, regulatory agencies, and quality-assurance organizations recognized the importance of AMS by adopting ASP minimum standards into quality criteria.³⁻¹¹ Pharmacists' knowledge and importance in leading ASP implementation efforts were specifically recognized in 2019, when "drug expertise" was changed to "pharmacist expertise" as a Centers for Disease Control and Prevention (CDC) Core Element for Hospital Antimicrobial Stewardship Programs.¹² The CDC also emphasizes the importance of pharmacist expertise as a priority for Hospital Core Element Implementation and in expanded guidance for settings beyond acute care.¹³⁻¹⁷ Still, AMS is an interprofessional effort in every setting, and healthcare professionals should be guided by the

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knowledge and expertise of pharmacy leaders, ideally in co-leadership roles with ID physicians.¹⁸

ASHP and SIDP previously published separate statements on the pharmacist’s role in AMS.¹⁹⁻²¹ In general, ASHP statements express basic philosophy and are concise responses to specific therapeutic issues. Both organizations endorse evidence-based guidelines published by the Infectious Diseases Society of America (IDSA), the Pediatric Infectious Diseases Society (PIDS), and the Society for Healthcare Epidemiology of America (SHEA) for implementation and measurement of AMS interventions in inpatient populations.³

This current statement is a combined effort to incorporate and expand upon earlier ASHP and SIDP statements to address recent regulatory, scientific, policy, and practice-based advances. The following adaptable framework aligns with national AMS guidance and standards and provides an overview of the evolving roles and responsibilities of AMS/ID pharmacists as ASP leaders or co-leaders. The recommendations in this joint statement represent a consensus of professional judgment, expert opinion, and documented evidence. They are written to establish reasonable goals, to be progressive and challenging, yet attainable as best practices in applicable settings. Healthcare professionals are encouraged to exercise their professional judgment in assessing and adapting these recommendations to meet the specific needs of their healthcare organizations. Many recommendations in this document are based on U.S. published guidance; nevertheless, AMS advancement requires worldwide effort.

Leadership Responsibilities

Leadership support is critical to the success of ASPs.^{4-9,12-17} Pharmacy, executive, and operational leadership can facilitate the success of ASPs in a variety of ways, including but not limited to the following:

1. Establishing AMS as a site and organizational priority, as demonstrated through ASP implementation and sustained, quantifiable support, including identification of an ASP point-of-contact within the executive and operational leadership group(s) and public communication with employees.

2. Allocating dedicated resources required for a sustainable infrastructure that supports local and national ASP activities, including required participation in the National Healthcare Safety Network's Antimicrobial Use and Resistance (AUR) Module.²² If local resources are limited, funding of remote consultation or telemedicine with AMS experts should be considered.¹⁵
 - a. Resources can include but are not limited to adequate pharmacist and key support personnel full-time equivalents, salary support, protected time, support for initial training and education as well as continued professional development, information technology (IT) solutions, clinical decision support (CDS), and data analytics.^{7,23-25}
3. Appointing a pharmacist qualified through substantial education, training, or experience in ID and/or AMS, combined with strong communication and leadership skills, as the leader or co-leader of the ASP. If unavailable, executive and pharmacy leaders should provide resources to train current practitioners, including formal or informal mentorship programs.¹⁷
4. Including AMS responsibilities in employment contracts, job descriptions, and/or job titles.
5. Prioritizing and ensuring accountability by including AMS activities and outcomes in quality and patient safety metrics and incorporating or incentivizing AMS-related actions in performance reviews.²⁶
6. Facilitating integration and collaboration among all stakeholders responsible for AMS, as applicable, at each practice setting. This includes but is not limited to the infection prevention and control program, microbiology laboratory, IT, pharmacy services, quality improvement, medical staff, nursing services, and interprofessional committees.
7. Optimizing daily practice models to ensure a consistent, interprofessional team approach to AMS endeavors, including optimization of pharmacy practice models to facilitate and support AMS efforts with all pharmacists.
8. Acting on improvement opportunities identified by ASPs and facilitating appropriate follow-up to ensure continuous quality improvement and patient safety.

9. Endorsing and supporting policies or formal procedures that sustain local, sub-national, or national AMS action plans.
10. Promoting collaboration within the pharmacy and therapeutics committee (or equivalent structure) and/or quality department, which may include leading or co-leading an ID- or AMS-related subcommittee.¹²

Responsibilities of pharmacists

AMS/ID pharmacists' responsibilities include promoting the optimal use of antimicrobials; tracking, analyzing, and reporting antimicrobial data; and educating healthcare professionals, patients, and the public. Pharmacist leaders of ASPs should not only lead by example, but also empower other pharmacy colleagues to address AMS interventions within their daily workflows. A team approach to daily AMS activities can improve program efficiency and expand the reach of the ASP.

Promoting optimal use of antimicrobial agents

Actions. The implementation of specific actions promotes optimal antimicrobial use. Actions may vary based on the setting, patient population, and available resources. Several interventions have been associated with improved antimicrobial use and are considered priority interventions, particularly in the hospital setting.^{12,13} Examples of pharmacist-driven actions include, but are not limited to, the following:

1. Guidelines, protocols, policies, and collaborative practice agreements specific to the treatment facility and setting.
2. Prospective audit and feedback.
3. Preauthorization.
4. Implementation and optimization of IT solutions and CDS.
5. Microbiology laboratory integration and collaboration, including implementation of diagnostic stewardship.

6. Antimicrobial formulary management (e.g., mitigating shortages, agent selection).
7. Facilitating selection of antimicrobial regimens and monitoring plans for transitions of care and outpatient antimicrobial management.²⁷
8. Participation in antimicrobial awareness campaigns.

Tracking and reporting. Tracking and reporting antimicrobial use and resistance, the impact of interventions, and process and outcome measures are cornerstones of identifying opportunities for improvement and disseminating the impact of ASPs.^{5,12-16} ASHP and SIDP recommend pharmacist leaders of ASPs do the following:

1. Determine meaningful and required measures to track and work with leadership and dedicated data analysts to identify the necessary resources to obtain, analyze, and report data.²⁸
2. Guide the routine and accurate tracking and reporting of selected measures, programmatic strategies, achievements, and opportunities, which is crucial to evaluating and advancing an ASP. Routine feedback compiled and presented by the ASP leaders and/or provider self-assessment of antimicrobial prescribing practices is recommended.¹⁴
3. Collaborate with microbiology personnel for antibiogram development, reporting, and tracking. Antibiograms should follow current best practice recommendations and guide antimicrobial selection and protocol/guideline development and maintenance.^{29,30}

Education and training for pharmacists involved in AMS

Pharmacists qualified through education, training, or experience in ID or AMS have the knowledge, skills, and confidence to promote AMS in a variety of settings. In addition to having ID knowledge, training specific to AMS is crucial to the development of a robust and sustainable ASP. ASHP and SIDP recommend the following regarding education and training for pharmacists involved in AMS:

1. Pharmacy leaders of ASPs should have AMS-specific education or substantial experience in the field.

- a. Examples include a postgraduate year 2 (PGY2) ID residency, an ID fellowship with clinical AMS experience, or successful completion of an AMS certificate program appropriate to the practice setting. ASHP and SIDP recognize that factors in some settings may require pharmacists without such training to assume AMS responsibilities. Support for AMS-specific training, education, or mentoring should be provided.
 - b. Accrediting, regulatory, and quality assurance organizations should incorporate qualification standards and pharmacy expertise into their regulatory framework.
 - c. Federal support of PGY2 ID pharmacy residency training programs is needed to ensure a highly trained workforce and support the expansion of AMS across healthcare settings.
2. All pharmacists involved in AMS should seek continuing education related to AMS as part of regular credentialing maintenance, state licensure, or professional development.
 3. Pharmacist leaders of ASPs are encouraged to obtain Board of Pharmacy Specialties certification in ID (BCIDP) and maintain up-to-date knowledge with emerging AMS initiatives.
 4. General AMS education should be embedded within the curricula of colleges of pharmacy, including interprofessional AMS-related activities.

Pharmacists as AMS educators

Pharmacists involved in AMS have an obligation to provide accurate, up-to-date information about AMS to interprofessional healthcare teams, patients, caregivers, and the public, and can help meet standards related to education.^{5,6} Specific activities may include, but are not limited to, the following:

1. Tailoring AMS education to the target audience to optimize antimicrobial use through appropriate communication methods (e.g., case-based teaching, newsletters). Engaging other healthcare providers in providing AMS education to patients and caregivers can provide another avenue for dissemination of AMS principles.

2. Leading and collaborating on the development of local, regional, or national guidelines or guidance documents for antimicrobial monitoring and the management of infections to promote AMS principles.
3. Leading and collaborating on research or quality-improvement projects (e.g., analyzing and sharing results to advance the field, demonstrate value, and help determine how to optimize ASP implementation and effectiveness).
4. Participating in public health education, advocacy, and awareness programs aimed at promoting AMS, including topics such as prudent antimicrobial use, when antimicrobials have a role (e.g., viral vs. bacterial infections), and the negative consequences of antimicrobial overuse.

Conclusion

ASHP and SIDP jointly believe that while ID and/or AMS pharmacists have a responsibility to lead, or ideally, co-lead ASPs, all pharmacists have a responsibility to promote AMS efforts. The pharmacist’s leadership ability should be recognized in all settings where antimicrobials are prescribed. ASHP and SIDP jointly believe that pharmacists have the expertise and skills to optimize antimicrobial use at the patient level and to advance the field on a broad scale, including AMS education, guideline development, and research endeavors.

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Additional information

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