American Society of Health-System Pharmacists

Interprofessional Institutional Impact Mentoring to Accelerate Successful Antimicrobial Stewardship

Introduction/Background/History: Please include any relevant information that may be helpful for others to understand this initiative.

The misuse and overuse of antimicrobial agents is evolving as one of the world’s most pressing public health challenges. According to a recent report by the Institute of Medicine, billions of dollars are wasted each year on unnecessary and inefficiently delivered services, prices that are too high, excess administrative costs, fraud, and missed prevention opportunities. It has been estimated that 30-50% of antibiotic use in hospitals is potentially unnecessary or inappropriate. A new initiative of the American Board of Internal Medicine (ABIM), called Choosing Wisely®, is targeting elements in medical practice that are unnecessary and wasteful. As of February 21, 2013, 17 participating medical specialties have compiled a list of 135 medical tests, treatments, and procedures deemed as being almost always unnecessary and potentially harmful to patients.

Inappropriate antimicrobial use not only diminishes the therapeutic benefit of essential medications, but it also facilitates and spreads the development of multidrug-resistant organisms. Nearly 2 million Americans acquire a nosocomial infection each year, resulting in approximately 100,000 deaths. That coupled with the current health care environment of increased transparency and accountability has led to recognition of the importance of the interdisciplinary team and antimicrobial stewardship programs (ASPs). Aggressive promotion of antimicrobial stewardship is among the interventions proposed by Bartlett et al. to preserve the miracle of antibiotics.

A newly released policy statement on antimicrobial stewardship by SHEA, IDSA, and the Pediatric Infectious Diseases Society support the creation of a interprofessional antimicrobial stewardship team that includes a physician, pharmacist, clinical microbiologist, and infection preventionist, with one or more members having training in antimicrobial stewardship. The position statement also includes recommendations for mandatory implementation of antimicrobial stewardship throughout health care, suggests process and measures to monitor such interventions, and addresses deficiencies in education in research in this area.

The American Society of Health-System Pharmacists (ASHP) continues to be a leader in promoting the principles of antimicrobial stewardship. The ASHP statement on the pharmacist’s role in antimicrobial stewardship and infection prevention and control provides strong support for the implementation of ASPs and the need to provide educational resources and tools for pharmacists and other health care practitioners to support such efforts.

**Initiative Goal:** Please describe the overall goal of this initiative, including the patient population or disease area that this initiative will address.

The goal of this initiative is to assist institutions in implementing antimicrobial stewardship programs that will directly improve patient care. At the conclusion of this initiative, participants will be able to:

- Use onsite ID physician-ID pharmacist mentoring to accelerate ASPs such that patient outcomes are improved and antimicrobial resistance is prevented or contained.
- Incorporate an interprofessional team-based approach to ASPs that involves analysis of current processes and procedures leading to the implementation of measurable changes that demonstrate success.
- Complete an ASP quality improvement project that results in outcomes such as reductions in antimicrobial resistance, health care costs, and/or drug-related adverse events along with improvements in clinical outcomes.

**Target Learners:** Please describe the intended participants of this educational initiative, as well as the estimated number of learners.

The target audience for the proposed initiative includes physicians, physician assistants, pharmacists, nurse practitioners, and nurses who practice in acute care hospitals (including both academic medical centers and community-based hospitals). We anticipate an estimated 9,405 learners will participate in this initiative.

**Collaborators:** Please include a brief description of the role of each collaborator in the initiative.

ASHP will engage the interprofessional core team members of the nine (9) selected institutional sites from across the U.S. as well as several internal departments within those sites.

**Educational Design:** Please describe how this initiative will be designed, as well as the approximate time span of this initiative.

ASHP will conduct nine (9) institutional impact activities (IIAs) for physicians, physician assistants, pharmacists, nurse practitioners, and nurses on the topic of, “Interprofessional Institutional Impact Mentoring to Accelerate Successful Antimicrobial Stewardship” (the “Initiative”).

**Initiative Steering Committee**

ASHP will assemble a steering committee (the “Committee”) to assist its staff with plans for the Initiative. Committee members will be qualified as experts in antimicrobial stewardship and will be interviewed to ascertain their willingness to assist with developing the concepts for the Initiative, including the educational content. Working together, the committee will provide guidance on the educational development and implementation of the institutional impact activities (IIAs), as well as participate in the selection of the IIA participants.

**Faculty-Mentored “Institutional Impact” Quality Improvement Activities**

ASHP will work with nine institutions to plan and conduct a consultative intervention activity designed specifically to facilitate participants’ implementation of antimicrobial stewardship programs or improvement of existing antimicrobial stewardship programs with the goal of improving the use of antimicrobials in their institutions. These activities encourage a team-based approach to antimicrobial stewardship. The nine institutions will be selected through a competitive online application process whereby the hospital will commit to the project and have committed support from members of their C-Suite to apply for one of the visits. Detail will be provided by each hospital about the current state of their antimicrobial stewardship programs to aid the Initiative steering committee in selecting the nine institutions.
The activity will be developed as a full-day “curbside consultation” during which a physician-pharmacist faculty team will provide a consultative service to the participating institution. The primary contact in the pharmacy department will be encouraged to serve as the leader for this consultative intervention within his or her institution, but the leader will also seek involvement of other key health team members, including physicians, risk managers, and quality improvement leadership. Each institution will be required to assemble an interprofessional “core team” to plan for and participate in this consultation, and this team may include a pharmacy manager, clinical pharmacist specializing in or with an interest in infectious diseases, and/or other interested pharmacy personnel; internist or hospitalist specializing in infectious diseases; a representative from the infection control committee, P&T committee, nursing, and laboratory services.

In advance of the IIA, each participating institution will complete a survey so the consult team can ascertain its current antimicrobial stewardship activities as well as challenges and barriers to improving current practices. The core team leader, who will serve as liaison to the consult team, will also provide other important pre-visit information (e.g., demographics). The consult team will analyze the survey information to identify areas for improvement in antimicrobial stewardship and will share their results with the core team leader prior to the impact visit. The lead faculty member and core team leader will be encouraged to communicate by phone before and after the site visit so that questions can be answered and feedback can be provided regarding potential barriers or challenges. On the day of the visit, the faculty team will meet with individuals within various departments, including those of the institution’s core team. The consultation will be individualized, taking into account the needs and structure of each institution.

The visiting faculty will present a one-hour educational activity, customized for each institution utilizing the pre-visit information that was collected, on the principles of antimicrobial stewardship for all interested health care professionals at the site. Continuing education credit will be available for physicians, physician assistants, pharmacists, nurse practitioners, and nurses. The goal of the presentation is to foster interprofessional awareness of and support for antimicrobial stewardship efforts within the institution. Physicians, physician assistants, pharmacists, nurse practitioners, nurses and other interested employees of the hospital (e.g., clinical微生物ologists and other laboratory personnel, infection control specialists, risk managers, hospital administrators) will be invited to participate.

The on-site consultation will conclude with a debrief meeting with the consult team and the institution’s core team. Following the visit, the consult team will create a formal report of its recommendations for improving antimicrobial stewardship programs in the institution. Approximately 12 months post-activity, a survey will be sent to core team leaders to measure the impact of their participation in the IIA as well as progress in implementation of the recommendations by the consult team.

Sharing of Institutional Impact Activity Outcomes – CE virtual poster session

Part of the application process is a commitment by the core team leaders to develop virtual posters to share the outcomes of the visits with health care practitioners on a national level. Working with the core team leaders, ASHP will develop posters that reflect the outcomes and experiences of each of the nine participating institutions with regard to the process of obtaining administration and multidisciplinary support, comparison of pre-activity and post-activity outcome measures, lessons learned, and next steps.

The virtual posters will be available on the Initiative Web portal for a period of 12 months. The archived poster presentation will be approximately 15 minutes in length and a PDF of the full poster will be available for participants to download. To view examples of virtual posters, visit http://www.leadstewardship.org/vp
Participants in the virtual poster session, who complete the necessary requirements, will be eligible to receive continuing professional education credit. Each poster presentation will be accredited for continuing education for physicians, physician assistants, pharmacists, nurse practitioners and nurses.

**Publication Strategy:** Please describe how educational outcomes results from this initiative will be disseminated.

ASHP will submit for publication the project design and educational outcomes to a peer-reviewed journal (e.g., *CE Measure: The Journal of Outcomes Measurement in Continuing Healthcare Education, American Journal of Health-System Pharmacy*). We will also develop a poster(s), and/or platform session(s) for presentation at a national meeting(s) (e.g., Alliance for CME Meeting, ASHP Midyear Clinical Meeting & Exposition).
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<thead>
<tr>
<th>Professional Practice Gaps</th>
<th>Strategies used to Identify Gaps</th>
<th>Learning Objectives</th>
<th>ABMS MOC Process (Part I-IV) and/or Core Competencies Addressed</th>
<th>Educational Outcomes/Measures (Please include Moore Level when appropriate)</th>
<th>Strategies used to Measure Outcomes</th>
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<tbody>
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<td>Many hospitals are struggling to implement ASPs effectively, particularly community hospitals where physicians and pharmacists trained in infectious diseases are often lacking.</td>
<td>Literature, interviews with clinical chairs/content experts, gaps identified in a similar educational initiative</td>
<td>To use onsite ID physician-ID pharmacist mentoring to accelerate ASPs such that patient outcomes are improved and antimicrobial resistance is prevented or contained.</td>
<td>ABMS/ACGME-Practiced-based learning and improvement IOM-Interdisciplinary teams, evidence-based practice, quality improvement Incorporation of Part II and IV elements during the visits, with the potential for developing elements that might not only fulfill ABMS requirements for MOC but also contribute to MOL. An important outcome of such activities would be reduction of redundancy.</td>
<td>Reduction in incidence of C. difficile infections (Moore Level 5, performance; Level 6, patient health) Reduction in antimicrobial resistance patterns (Moore Level 5, performance) Adoption and routine use of processes known to reduce the antimicrobial resistance (Moore Level 5, performance)</td>
<td>Chart audits, EHR data</td>
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<td>There is a tendency of health care professionals to think of antimicrobial therapy in terms of individual patients, but they need to view ASPs in the context of patient populations.</td>
<td>Literature, interviews with clinical chairs/content experts, gaps identified in a similar educational initiative</td>
<td>To incorporate an interprofessional team-based approach to ASPs that involves analysis of current processes and procedures leading to the implementation of measurable changes that demonstrate success (e.g., reducing use of medications that put patients at risk for C. difficile infections, flagging patients who receive more than 3 antimicrobial agents per day, documenting time to effective therapy, recording time from physician order to time nurse administers drug).</td>
<td>ABMS/ACGME-Practiced-based learning and improvement IOM-Interdisciplinary teams, evidence-based practice, quality improvement</td>
<td>Reduction in use of medications known to put patients at risk for developing C. difficile infections (Moore Level 5, performance) Reduction in number of patients receiving more than 3 antimicrobial agents per day (Moore Level 5, performance) Reduction in time to effective therapy (Moore Level 5, performance)</td>
<td>Chart audits, EHR data</td>
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<td>Health care professionals do not fully appreciate how the misuse and overuse of antimicrobial agents is evolving as a serious public health problem and that stewardship interventions can improve both clinical and institutional outcomes.</td>
<td>Literature, interviews with clinical chairs/content experts, gaps identified in a similar educational initiative</td>
<td>To complete an ASP quality improvement project that results in improvements such as reductions in antimicrobial resistance, health care costs, drug-related adverse events along with improvements in clinical outcomes.</td>
<td>ABMS/ACGME-Practiced-based learning and improvement IOM-Interdisciplinary teams, evidence-based practice, quality improvement</td>
<td>Quality improvement project results demonstrating use of the proper drug, at the correct dose, administered via the correct route, for the appropriate duration cured or prevented infection with minimal adverse events and emergence of resistance (Moore Level 5, performance)</td>
<td>Chart audits, EHR data</td>
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