The Role of the Staff Pharmacist in Antimicrobial Stewardship

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Conflict of Interest

• Gillian M. Kuszewski, PharmD, BCPS
  – Nothing to disclose
Objectives

• Provide examples of antimicrobial stewardship interventions for institutional pharmacists.
• Outline resources and tools available to support pharmacists with antimicrobial stewardship initiatives.

“The American Society of Health-System Pharmacists (ASHP) believes that pharmacists have a responsibility to take prominent roles in antimicrobial stewardship programs… This responsibility arises, in part, from pharmacists’ understanding of and influence over antimicrobial use within the health system.”
KEEP CALM
YOU'VE GOT THE POWER
Daily Practice – Order Verification

• Gatekeeper for Restricted Therapy
  • Approval for first 24 - 72 hours
  • Ensure follow up
  • Prevent work arounds

• Ensure indication for antibiotic present

Daily Practice - Dosing

- Pharmacokinetic Dosing (e.g. vancomycin, aminoglycosides)
- Renal Dose Adjustments
Daily Practice – IV to PO

- Reduced risk of IV site infections (reducing the need for additional antibiotics cost and harm to the patient)
- Reduced risk of thrombophlebitis
- Earlier patient step down or discharge
- Cost savings
  - Majority of iv medications are more expensive than oral alternatives
  - Reduction in indirect costs (cost of supplies and staff time)

Daily Practice – Patient Interaction

• Allergy and Medication History Collection
• Patient Education
  • Emergency department patients and hospitalized patients discharged on antimicrobials
  • Outpatient areas of institution

Image: http://www.quickmeme.com/meme/3rxl02
Daily Practice - De-escalation

- Antibiotic timeouts or automatic stops (post-op prophylaxis or empiric therapies)
- Objective follow up from lab testing
  - MRSA nasal swabs
  - Procalcitonin levels
Daily Practice… AND BEYOND!

- Guideline, order set, or policy development
- Data collection for tracking and reporting
- Drug shortage management
- Intra- and inter- departmental peer teaching
- WITH ALL YOU DO…DOCUMENT, DOCUMENT, DOCUMENT!!!
  - Document your daily interventions
  - Let your institutional committee know about any related activities
Practice Support and Development

Provide/Expect Staff Support
• Standardize documentation
• Protocol or collaborative practice
• Electronic clinical decision support
• Order sets in conjunction with clinical guidelines
• Identify antimicrobial stewardship champions
• Training and education
Tools of the Trade
Studies indicate that 30-50% of antibiotics prescribed in hospitals are unnecessary or inappropriate. There is no doubt that overprescribing and misprescribing is contributing to the growing challenges posed by *Clostridium difficile* and antibiotic-resistant bacteria. Studies demonstrate that improving prescribing practices in hospitals can not only help reduce rates of *Clostridium difficile* infection and antibiotic resistance, but can also improve individual patient outcomes, all while reducing healthcare costs. Get Smart for Healthcare is a CDC campaign focused on improving prescribing practices in inpatient healthcare facilities.
WARNING: Antibiotics don’t work for viruses like colds and the flu. Using them for viruses will NOT make you feel better or get back to work faster.

Antibiotics are strong medicines. Keep them that way. Prevent antibiotic resistance. Antibiotics don’t fight viruses—they fight bacteria. Using antibiotics for viruses can put you at risk of getting a bacterial infection that is resistant to antibiotic treatment. Talk to your healthcare provider about antibiotics, visit www.cdc.gov/getsingart, or call 1-800-CDC-INFO to learn more.

Taking antibiotics for viral infections such as a cold, a cough, or the flu will NOT:
- Cure the infection
- Keep other people from catching it
- Help you feel better

You’ve Been Prescribed an Antibiotic
Now What?

Your healthcare team thinks that you or your loved one might have an infection. Some infections can be treated with antibiotics, which are powerful, life-saving drugs. Like all medications, antibiotics have side effects and should only be used when necessary. There are some important things you should know about your antibiotic treatment.

◊ Your healthcare team may run tests before you start taking an antibiotic.
  • Your team may take samples (e.g., from your blood, urine or other areas) to run tests to look for bacteria. These tests can be important to determine if you need an antibiotic at all and, if you do, which antibiotic will work best.

◊ Within a few days, your healthcare team might change or even stop your antibiotic.
  • Your team may start you on an antibiotic while they are working to find out what is making you sick.
  • Your team might change your antibiotic because test results show that a different antibiotic would be better to treat your infection.
  • In some cases, once your team has more information, they learn that you do not need an antibiotic at all. They may find out that you don’t have an infection, or that the antibiotic you’re taking won’t work against your infection. For example, an infection caused by a virus can’t be treated with antibiotics. Staying on an antibiotic when you don’t need it is more likely to be harmful than helpful.

◊ You may experience side effects from your antibiotic.
  • Like all medications, antibiotics have side effects. Some of these can be serious.
  • Let your healthcare team know if you have any known allergies when you are admitted to the hospital.
  • Some significant side effects for your health are listed at the end of this page.

www.cdc.gov/getsmt
The *Playbook* provides a flexible structure with real-world examples for hospitals to use as they create high-quality antibiotic stewardship programs that meet the needs of their communities.

- **ARJUN SRINIVASAN, MD** (CAPT, USPHS), Associate Director for Healthcare Associated Infection Prevention Programs, Division of Healthcare Quality Promotion, CDC, and Co-Chair of NQP’s Antibiotic Stewardship Action Team

The *Playbook* provides a comprehensive and practical plan for hospitals to implement stewardship programs that can help improve patient outcomes and reduce antibiotic resistance.

- **EDWARD SEPTIMUS, MD**, Medical Director, Infection Prevention and Epidemiology, HCA, and Co-Chair of NQP’s Antibiotic Stewardship Action Team

• Collection of resources for each core element
• Implementation ideas
  • potential barriers and suggested solutions
Additional Training

- Making a Difference in Infectious Diseases Pharmacotherapy (MAD-ID) Antimicrobial Stewardship Training
- Society for Healthcare Epidemiology of America (SHEA) Training Course
- Society of Infectious Disease Pharmacists (SIDP) Antimicrobial Stewardship Certificate Program for Pharmacists
- Conferences and Workshops
You had the power all along.
References