Long Term Care Antimicrobial Stewardship Program Resources

The Core Elements of Antibiotic Stewardship for Nursing Homes adapts the CDC Core Elements of Hospital Antibiotic Stewardship into practical ways to initiate or expand antibiotic stewardship activities in nursing homes. Nursing homes are encouraged to work in a step-wise fashion, implementing one or two activities to start and gradually adding new strategies from each element over time. Any action taken to improve antibiotic use is expected to reduce adverse events, prevent emergence of resistance and lead to better outcomes for residents in this setting.

- **Checklist: Core Elements of Antibiotic Stewardship for Nursing Homes**
- **Appendix A: Policy and practice actions to improve antibiotic use**
- **Appendix B: Measures of antibiotic prescribing, use and outcomes**

**Fact Sheets**
Fact sheet are a quick and easy way of communicating information in a quick and efficient manner.

- **Informatics: Antibiotic Stewardship in Nursing Homes**
- **Leading Antibiotic Stewardship in Nursing Homes**
- **Creating a Culture to Improve Antibiotic Use in Nursing Homes**

**Toolkits**
The Agency for Healthcare Research and Quality (AHRQ) supported the development of four toolkits to assist nursing homes and help prescribing clinicians (physicians, nurse practitioners, and physician assistants) make evidence-based decisions about whether an antibiotic is appropriate to use and which antibiotic to use. The Nursing Home Antimicrobial Stewardship Modules include four tested, evidence-based toolkits to help optimize antibiotic use in nursing homes. The modules are intended to assist nursing homes develop antimicrobial programs.

- **Module 1: Improving Communication and Decisions about Antibiotic Use in Nursing Homes**
- **Module 2: Antibiogram: Choosing An Appropriate Antibiotic (Antibiogram Module)**

**Helpful Resources**
Advancing Excellence in America’s Nursing Homes has many resources available to create improvement including:

- **Assessment of Current CDI Prevention Activities: Antibiotic Stewardship**
- **AHRQ Improving Patient Safety in Long-term Care Facilities**

Deciding when to initiate antibiotics can be particularly challenging. The “Development of Minimum Criteria for the Initiation of Antibiotics in Residents of Long-Term-Care Facilities: Results of a Consensus Conference” is also known as the Loeb criteria.
In recognition of the differences between long-term care facilities and hospitals with regard to hosts and resources present, the Infectious Diseases Society of America first provided guidelines for evaluation of fever and infection in LTCF residents in 2000. “Clinical practice guideline for the evaluation of fever and infection in older adult residents of long-term care facilities: 2008 update by the Infectious Diseases Society of America” is a guideline in the second edition, updated by data generated over the intervening eight years.

The Centers for Disease Control and Prevention (CDC) released its March 2016 Vital Signs report focused on protecting patients from healthcare-associated infections (HAIs), including those caused by antibiotic resistant bacteria.

Many of the most urgent and serious antibiotic-resistant bacteria CDC warned of in the Antibiotic Resistant Threats in the United States, 2013 threaten patients while they are being treated in healthcare facilities for other conditions. Four Core Actions to Prevention antibiotic Resistance is found on page 31 in the link above.

Although national and state progress has been made in preventing HAIs, more work needs to be done. See page 130 in the document linked above for the overall Wisconsin Fact sheet.

Get Smart for Healthcare is a CDC campaign focused on improving prescribing practices in inpatient healthcare facilities. Print products are available for different audiences.

- This site includes Antimicrobial Management Program Gap Analysis Checklist.
  It also has access to assessment tools for appropriateness for antibiotics:
  - Urinary Tract Infections
  - Community-Acquired Pneumonia
  - Resistant Gram-Positive Infection

- Need to know how to collect cultures? Check out the Clinician Guide for Collecting Cultures.

The U.S. Department of Health and Human Services (HHS) has identified the reduction of HAIs as an Agency Priority Goal for the Department and is committed to reducing the national rate of HAIs by demonstrating significant, quantitative, and measurable reductions in hospital-acquired central line-associated bloodstream infections and catheter-associated urinary tract infections. National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination Health Care-Associated Infections (HAIs) provides specifics related to the plan. Phase three: LTC Facilities is referenced. Page eight includes specifics about antibiotic use and resistance in nursing homes. Page 18 lists:

- Priority Area 1: Enrollment in NHSN for Nursing Home Infection Surveillance Activity
- Priority Area 2: Clostridium difficile Infection
- Priority Area 3: Vaccination for Residents (Influenza, Pneumococcal)
- Priority Area 4: Health Care Personnel Influenza Vaccination
- Priority Area 5: Urinary Tract Infections, Catheter-Associated Urinary Tract Infections, and Catheter Care Processes
National Action Plan for Combating Antibiotic-resistant Bacteria was released in March of 2015. Although its primary purpose is to guide activities by the U.S. Government, the National Action Plan is also designed to guide action by public health, healthcare and veterinary partners in a common effort to address urgent and serious drug-resistant threats that affect people in the U.S. and around the world. Implementation of the National Action Plan will also support World Health Assembly resolution 67.25 (Antimicrobial Resistance), which urges countries to take urgent action at the national, regional and local levels to combat resistance.

- Slow the Emergence of Resistant Bacteria and Prevent the Spread of Resistant Infections – page 11
- Strengthen National One-Health Surveillance Efforts to Combat Resistance – page 24
- Advance Development and Use of Rapid and Innovative Diagnostic Tests for Identification and Characterization of Resistant Bacteria – page 36
- Accelerate Basic and Applied Research and Development for New Antibiotics, Other Therapeutics and Vaccines – page 40
- Improve International Collaboration and Capacities for Antibiotic-resistance Prevention, Surveillance, Control and Antibiotic Research and Development – page 49

CDC also releasing its new Antibiotic Resistance Patient Safety Atlas, an interactive web app on healthcare-associated infections caused by antibiotic-resistant bacteria. The tool uses data reported to CDC from more than 4,000 healthcare facilities to provide national, regional and state map views of superbug/drug combinations showing percent resistance over time.

“Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America Guidelines for Developing an Institutional Program to Enhance Antimicrobial Stewardship” presents guidelines for developing institutional programs to enhance antimicrobial stewardship, an activity that includes appropriate selection, dosing, route and duration of antimicrobial therapy. The multifaceted nature of antimicrobial stewardship has led to collaborative review and support of these recommendations by the following organizations: American Academy of Pediatrics, American Society of Health-System Pharmacists, Infectious Diseases Society for Obstetrics and Gynecology, Pediatric Infectious Diseases Society, Society for Hospital Medicine and Society of Infectious Diseases Pharmacists.

Infection preventionists and health care epidemiologists play key roles in promoting effective antimicrobial stewardship in collaboration with other health professionals, according to a joint position paper published by APIC and SHEA in their respective peer-review journals, the American Journal of Infection Control and Infection Control & Hospital Epidemiology. “Antimicrobial Stewardship: A Collaborative Partnership between Infection Preventionists and Health Care Epidemiologists”

The CDC and the Institute for Healthcare Improvement (IHI) partnered in an effort to develop this conceptual model of key drivers for reducing inappropriate antibiotic utilization. Content experts contributed to the development of this robust driver diagram and change package with a recognition and emphasis on practicality and ease of implementation in all hospitals.

- Antibiotic Stewardship Driver Diagram and Change Package
- Antibiotic Stewardship Driver Diagram
- Antibiotic Stewardship Measurement Framework
Antibiotic misuse is widespread and has dire patient and public health consequences. National organizations, including the CDC and the Joint Commission, advocate for a formal “Antibiotic Timeout” to reassess empiric antibiotics 48-72 hours after their initiation. This CME/CPE activity provides a practical approach to performing “Antibiotic Timeouts” in the inpatient setting. Using short, didactic sessions, they provide examples on how to reassess antibiotic therapy started empirically using clinical, laboratory and microbiological data. The majority of this CME/CPE is high-yield, interactive inpatient cases covering skin and soft tissue infections, pneumonia, catheter-associated urinary tract infections and neutropenic fever, that illustrate the timeout process and the principles of appropriate use of antimicrobials.

The Penn CDC Prevention Epicenter Site represents a broad collaboration across multiple institutions in southeastern Pennsylvania with a dual focus on adult and pediatric patient populations. Penn Epicenter investigators bring expertise in diverse fields including infectious diseases, internal medicine, pediatrics, geriatrics, critical care, pulmonary medicine, emergency medicine, epidemiology, biostatistics, bioinformatics, health economics and microbiology. It includes access to the Penn CDC Antimicrobial Stewardship Checklist (flowsheet) to document your review of an infection.

Stewardship-Education.org is a resource for antimicrobial stewardship training, policy and research.