

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART



**STATE OF WISCONSIN
DEPARTMENT OF HEALTH SERVICES**

Division of Quality Assurance

P-00319 (03/12)

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
Annals of Long Term Care: Clinical Care and Aging. 2011;19(4):20-25	Antibiotic Stewardship Programs in Long-Term Care Facilities	<p>Antibiotic stewardship programs (ASPs) are relatively new in long-term care (LTC) facilities, but they are important to control antibiotic overuse and antibiotic resistance. A stepwise approach to ASPs is recommended.</p> <ul style="list-style-type: none"> • The primary goal of antibiotic stewardship is to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use. <p><i>Stepwise Approach for Implementing an ASP in LTC Facilities</i></p> <ul style="list-style-type: none"> • Assess institutional needs and available expertise • Develop an ASP team • Secure administrative support for the ASP • Get buy-in from the clinical staff • Develop laboratory interface with notification and cumulative reporting • Monitor Multi-drug Resistant Organisms • Monitor antibiotic usage • Provide education • Adapt national guidelines locally • Determine what strategies are to be employed • Obtain outside consultation as needed.
American Medical Directors Association (AMDA)	Common Infections in the Long-Term Care Setting, 2011	<p>This guideline is intended for the members of the interdisciplinary team in long-term care facilities, including the medical director, director of nursing, practitioners, nursing staff, consultant pharmacists, and other professionals such as therapists, social workers, dietitians, and nursing assistants who care for residents of long-term care facilities.</p> <ul style="list-style-type: none"> • LTC facilities should have clear policies and practices to ensure that patients are not started on antibiotics without a credible clinical picture. <p>(continued)</p>

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
		<ul style="list-style-type: none"> • Facilities should establish minimum criteria for initiating antibiotics, using the McGeer, Loeb, or modified Loeb criteria as a starting point. For example, the infection preventionist and the medical director should partner to monitor and report the proportion of courses of antibiotic treatment for presumed urinary infection that failed to meet specific criteria. In addition, they should review the antibiogram to detect trend in antibiotic resistance. • STEP 12 – Monitor antibiotic use in the facility. Inappropriate antibiotic use can affect the success or failure of an infection prevention program. It is important to develop specific indications for starting antibiotics rather than starting antibiotics for vague indications. Reviewing the culture and sensitivity results, when available, also encourages appropriate prescribing of those medications and may limit the development of antibiotic-resistant organisms within the facility. • Auditing Antibiotic Use – Because of increases in MDROs, review of the use of antibiotics (including comparing prescribed antibiotics with susceptibility reports) is a vital aspect of the prevention and control program. In some facilities, a more intense audit of antibiotic use may be warranted because of antibiotic resistance, or to improve the appropriateness of antibiotic prescribing. The purposes of such an audit include; <ul style="list-style-type: none"> ○ Measure the extent to which antibiotic use meets accepted practice standards ○ Identifying patterns of use that may adversely affect patient outcomes ○ Documenting the costs of care, and ○ Collecting information to link antibiotic use and antibiotic resistance patterns within the facility <p>An audit may include:</p> <ul style="list-style-type: none"> ○ A review of antibiotic prescribing practices ○ Evaluation of the appropriateness of prescriptions ○ Intense surveillance of antibiotic resistance on the basis of analysis of the bacteriology database and ○ Identification of the adverse effects of antibiotic therapy. <p>(continued)</p>

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
		<ul style="list-style-type: none"> • Report the results of the audit to the facility’s medical staff. When a high rate of inappropriate antibiotic use is identified, develop a plan for improvement. <ul style="list-style-type: none"> ○ Worsening mental function • For patients who have an indwelling catheter, at least two of the following criteria must be met: <ul style="list-style-type: none"> ○ Fever (>38°C) or chills ○ New flank or suprapubic pain or tenderness ○ Changes in character of urine ○ Worsening mental function <p>Continued bacteriuria without residual symptoms does not warrant repeat or continued antibiotic therapy. (p.9)</p> <p>Recurrent UTIs (two or more within 6 months) in a noncatherized patient may warrant additional evaluation (e.g., check for abnormal PVR urine volume, referral to a urologist, periurethral abscess, strictures, bladder calculi, polyps or tumors).</p>
Association for Professionals in Infection Control & Epidemiology (APIC)	Guide to the Elimination of Clostridium difficile in Healthcare Settings, 2008	<p>Since Clostridium difficile Infection (CDI) is seen almost exclusively as a complication of antibiotic use, the development of a healthcare facility program to ensure appropriate antibiotic use is considered an important intervention for the control of CDI.</p> <ul style="list-style-type: none"> • The most common inappropriate antibiotic use that will place a patient at a high level and prolonged duration of risk is the continuation of broad-spectrum antibiotics after the etiology of infection has been identified and the pathogen is susceptible to a narrow spectrum antibiotic. <p>(continued)</p>

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
		<p><i>Elements of an Antimicrobial Stewardship Program</i></p> <ul style="list-style-type: none"> • The goal of an antimicrobial stewardship program is to optimize the use of the right drug, for the right purpose, and for the right duration in an effort to promote judicious use of the antimicrobial agent. Discussion of what constitutes an effective stewardship program is beyond the scope of this document, but the basics include elements such as: <ul style="list-style-type: none"> ○ Written guidelines for use of specific antimicrobials that have been developed using evidence as a basis and involve input from clinicians ○ Accurate microbiologic results and prompt reporting of those results ○ Antibigrams compiled and disseminated in a manner that enables clinicians to select the appropriate agent(s) for empiric therapy ○ Systems that minimize opportunities for inappropriate duration of therapy ○ Processes that actively support de-escalation of therapy to a more narrow spectrum agent ○ Feedback on adherence to guidelines, and ○ Monitoring of systems that support the total program
Centers for Disease Control and Prevention (CDC)	CDC Campaign to Prevent Antimicrobial Resistance in Healthcare Settings	<p>12 Steps to Prevent Antimicrobial Resistance Among Long-term Care Residents http://www.kliinikum.ee/infektsioonikontrolliteenistus/doc/oppematerjalid/longterm.pdf</p> <p><i>Use Antimicrobials Wisely</i></p> <p>Step 5 – Use local resources.</p> <ul style="list-style-type: none"> • Consult infectious disease specialists for complicated infections and potential outbreaks • Know your local and regional data • Get previous microbiology data for transfer residents <p>(continued)</p>

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
		<p>Step 6 - Know when to say “no.”</p> <ul style="list-style-type: none"> • Minimize use of broad-spectrum antibiotics • Avoid chronic or long-term antimicrobial prophylaxis • Develop a system to monitor antimicrobial use and provide feedback to appropriate personnel <p>Step 7 – Treat infection, not colonization or contamination.</p> <ul style="list-style-type: none"> • Perform proper antisepsis with culture collection • Reevaluate the need for continued therapy after 48-72 hours • Do not treat asymptomatic Bacteriuria <p>Step 8 – Stop antimicrobial treatment.</p> <ul style="list-style-type: none"> • When cultures are negative and infection is unlikely • When infection is resolved
Centers for Disease Control and Prevention (CDC)	Management of Multi-drug – Resistant Organisms in Healthcare Settings, 2006	<p>The prevention and control of MDROs is a national priority --- one that requires that all healthcare facilities and agencies assume responsibility.</p> <p>The administration of healthcare organizations and institutions should ensure that appropriate strategies are fully implemented, regularly evaluated for effectiveness, and adjusted such that there is a consistent decrease in targeted MDROs.</p> <p><i>V.A. General recommendations for all healthcare settings independent of the prevalence of multidrug resistant (MDRO) infections of the population served</i></p> <ul style="list-style-type: none"> • Make MDRO prevention and control an organizational patient safety priority. <p><i>V.A. 3. Judicious use of antimicrobial agents</i></p> <p>The goal of the following recommendations is to ensure that systems are in place to promote optimal treatment of infections and appropriate antimicrobial use.</p> <p>(continued)</p>

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
		<ul style="list-style-type: none"> • In hospitals and LTCFs, ensure that a multidisciplinary process is in place to review antimicrobial utilization, local susceptibility patterns (antibiograms), and antimicrobial use. • Implement systems (e.g., computerized physician order entry, comment in microbiology susceptibility report, notification from a clinical pharmacist or unit director) to prompt clinicians to use the appropriate antimicrobial agent and regimen for the given clinical situation. • Provide clinicians with antimicrobial susceptibility reports and analysis of current trends, updated at least annually, to guide antimicrobial prescribing practices. • In settings that administer antimicrobial agents but have limited electronic communication system infrastructures to implement physician prompts (e.g., LTCFs), implement a process for appropriate review of prescribed antimicrobials. Prepare and distribute reports to prescribers that summarize findings and provide suggestions for improving antimicrobial use. <p><i>V.A.4. Surveillance</i></p> <p>In all healthcare organizations, establish systems to ensure that clinical microbiology laboratories (in-house and out-sourced) promptly notify infection control staff or a medical director /designee when a novel resistance pattern for that facility is detected</p>
CMS (Centers for Medicare and Medicaid Services) State Operations Manual (SOM) for Nursing Facilities	Appendix PP – Guidance to Surveyors for Long Term Care Facilities – §483.65 Infection Control (F441)	<p>Components of an Infection Prevention and Control Program</p> <p>An effective infection prevention and control program incorporates, but is not limited to, the following components:</p> <ul style="list-style-type: none"> • Policies, procedures, practices which promote consistent adherence to evidence-based infection control practices • Antibiotic review, including reviewing data to monitor the appropriate use of antibiotics in the resident population

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
Society for Healthcare Epidemiology of America (SHEA)	Antimicrobial Use in Long-Term Care Facilities, 1996	<p>This position paper outlines the concerns regarding and adverse consequences of inappropriate antimicrobial use in long-term-care facilities and recommends approaches to promote the rational use and to limit potential adverse effects of antimicrobials in this high-risk setting.</p> <ul style="list-style-type: none"> • The most important adverse outcome of inappropriate antimicrobial use in LTCFs is the promotion of antimicrobial resistance in this high-risk population and the increased opportunities for transmission of resistant organisms to other patients. <p><i>Recommendations</i></p> <ul style="list-style-type: none"> • Infection control programs in LTCFs should be encouraged to include a component of antimicrobial utilization review • The antimicrobial review program should monitor antibiotics that are prescribed in the LTCF. • The antimicrobial review program should develop and promote programs to optimize judicious antibiotic use. • Guidelines should be developed for the use of antimicrobials for patients for whom comfort measures only are being provided. • In selected LTCFs, a more intensive antimicrobial utilization review program may be developed, including review of antibiotic appropriateness.
Society for Healthcare Epidemiology of America (SHEA)	Development of Minimum Criteria for the Initiation of Antibiotics in Residents of Long-Term-Care Facilities: Results of A Consensus Conference, 2001	<p>This article describes the establishment of minimum criteria for the initiation of antibiotics in residents of LTCFs. Criteria for initiating antibiotics for skin and soft-tissue infections, respiratory infections, urinary infections, and fever where the focus of infection is unknown were developed.</p> <ul style="list-style-type: none"> • The potential for bacterial resistance and adverse side effects warrants that antibiotics are prescribed carefully to individuals in LTCFs. • Although bacterial infections are common in this population, between 22% and 89% of antibiotic prescriptions in this population have been described as inappropriate. • The fundamental problem is difficulty in establishing a diagnosis of infection. <p>(continued)</p>

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
		<ul style="list-style-type: none"> • The use of antibiotics is frequently empirical; that is, initiated in the absence of microbiology results or even in the absence of a definitive diagnosis of infection. • Establishing criteria that, at a minimum, should be present before initiating antibiotics is a potentially important strategy for optimizing antibiotic use.
<p>SHEA / APIC Society for Healthcare Epidemiology of America / Association for Professionals in Infection Control & Epidemiology</p>	<p>Infection Prevention and Control in the Long-term Care Facility, 2008</p>	<p><i>Scope of Guideline</i></p> <ul style="list-style-type: none"> • Recommendations are developed for long-term care (LTC) infection control programs based on interpretation of currently available evidence. • Antibiotic-resistant bacteria pose a significant hazard in the LTCF and this resistance has been strongly associated with antibiotic use. Antimicrobials are among the most frequently prescribed medications in the LTCF. <p><i>Recommendations</i></p> <p>A. Infection Control Program</p> <ul style="list-style-type: none"> • Comments: The elements of a program generally include the following... <ul style="list-style-type: none"> ○ h. Antibiotic stewardship – A system for antibiotic review and control <p><i>N. Antibiotic Stewardship</i></p> <ul style="list-style-type: none"> • Infection control programs in LTCF's should be encouraged to include a component of antimicrobial stewardship. Comment: The LTCF should encourage judicious use of antimicrobials with guidelines based, in part, on local susceptibility patterns. Antibiotic utilization and appropriateness may be monitored and these data used for interventions (e.g., education, antibiotic restrictions). • The ICP (Infection Control Professional) should monitor antibiotic susceptibility results from cultures to detect clinically significant antibiotic-resistant bacteria (such as MRSA or VRE) in the institution. Changes in antibiotic-susceptibility trends should be communicated to appropriate individuals and committees.

ANTIMICROBIAL STEWARDSHIP RESOURCE CHART

Source	Article, Guideline, or Position Paper	Overview / Criteria
<p>Wisconsin Division of Public Health, Bureau of Communicable Diseases and Emergency Preparedness</p>	<p>Guidelines for Prevention and Control of Antibiotic Resistant Organisms in Health Care Settings, 2005</p>	<p>General Strategies for Reduction of ARO in All Health Care Settings</p> <p><i>Administrative Measures</i></p> <p>Reduction of the burden of ARO should be an institutional goal that is supported by administrative and managerial leadership. Administration should ensure that all necessary resources are available to the infection control program, and management personnel should promote, support, and exemplify infection control practices among their staff.</p> <p><i>Prudent Use of Antibiotics</i></p> <p>Collaboration among infection control, pharmacy, administrative, laboratory, and medical staff is necessary to develop effective programs to ensure appropriate use of antibiotics. Such programs should aim to:</p> <ul style="list-style-type: none"> • Promote use of narrow spectrum antibiotics. Health care providers should be encouraged to culture infection sites whenever possible to facilitate replacement of empiric, broad spectrum treatment with more targeted, narrow spectrum therapy. • Develop institutional specific antibiograms for distribution to health care providers. • Limit the use of broad spectrum, new, or more potent antibiotics by implementing formulary restrictions, pre-approved indications, stop orders, and education. • Audit the use of targeted antibiotics in the institution. <p><i>Surveillance</i></p> <p>Surveillance activities include:</p> <ul style="list-style-type: none"> • Analyzing clinical culture data to monitor trends in the proportion of isolates that are ARO. • Maintaining of line lists of all known infected and colonized patients.