



New York State
Partnership
for Patients
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Antibiotic Stewardship/MDRO/CDI Core Elements Gap Analysis

Source: NQF Antibiotic Stewardship in Acute Care

Facility Name: _____ Date: _____

Instructions: The following checklist is designed to complement the CDC core elements checklist. Once hospitals have identified the core elements they would like to work on, this checklist is to identify the strategies and interventions that correspond to the core element. This checklist should be used to systematically assess whether key strategies and interventions are present at your facility to ensure optimal antibiotic prescribing and limit overuse and misuse of antibiotics in hospitals. Facilities using this checklist should involve one or more knowledgeable staff to determine if the following principles and actions to improve antibiotic use are in place.

Upon completion, this document can become the basis for your facilities improvement plan.

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 1: LEADERSHIP			
Basic			
A. Issue formal board approved statement on the importance of ASP and include in annual report.			
B. Develop and distribute a newsletter column from the CEO/CMO and or chief of medical staff highlighting ASP and their commitment to improving antibiotic use.			
C. Dedicate specific salary support for ASP leaders based on size and population of the hospital.			
D. Include specific time commitment (%FTE or hours/week, hours/month) in the job description of ASP leaders, and articulate targets and goals.			
E. Support funding for remote consultation or telemedicine with experts in antibiotic stewardship (e.g., infectious diseases physicians and pharmacists) if local resources are not available.			
F. Communicate regularly the importance of improving antibiotic use and the hospital's commitment to antibiotic stewardship.			
G. Share stories, speakers, and other resources that highlight how ASPs can improve patient outcomes.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 1: LEADERSHIP (continued)			
Intermediate			
A. Designate or appoint a hospital executive to serve as a “champion” of the ASP.			
B. Include ASP outcome measures in the facility’s strategic dash-board and update leadership regularly on meeting those goals.			
C. Integrate ASP activities into quality improvement and/or patient safety initiatives and reports to medical executives.			
D. Include antibiotic stewardship in ongoing provider education programs and annual competencies.			
Advanced			
A. Ensure that ASP leaders have training in measuring and improving antibiotic use.			
B. Prioritize funding for information technology assistance to support ASP initiatives.			
C. Support access to and availability of microbiology data and laboratory resources for AS efforts.			
D. Develop and implement an antibiotic stewardship strategy and action plan that cascades from the C-suite through individual department policies to all leaders and prescribers.			
E. Create financial incentives for units or departments to improve antibiotic use.			
F. Ensure necessary support from other disciplines (e.g., quality improvement staff, laboratory staff, IT, and nurses) and specify their responsibilities to support the ASP. IT resources are often especially important and challenging, and should be made available by leadership.			
G. Support efforts and policies to hold providers accountable for improving antibiotic use.			
H. Engage patients or patient advocates in order to include the broader community in establishing accountability.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 2: ACCOUNTABILITY			
Basic			
A. Medical staff and C-suite identify a physician and pharmacy leader with expertise in antibiotic use and training in stewardship responsible for leading the ASP. Physicians and pharmacists trained in infectious diseases have been shown to be effective, especially in larger hospitals.			
B. Identify a nurse practitioner with expertise in antibiotic use if a physician and/or pharmacy leader is/are not available.			
C. Ensure a collaborative approach between physicians and pharmacists.			
Intermediate			
A. Ensure the ASP leader has specific training in antibiotic stewardship (e.g., certification program or training course).			
B. Hold the ASP leader accountable for specific stewardship outcome measures.			
C. Include documentation of ASP outcome measures in performance evaluations.			
D. Ensure the ASP leader actively engages other groups in stewardship efforts (e.g., emergency departments, hospitalists, surgeons, intensivists, and nurses).			
E. Ensure the ASP leader actively engages in any antibiotic use related improvement efforts (e.g., peri-operative antibiotic use and early recognition and treatment of sepsis).			
Advanced			
A. Tie established metrics to performance reviews and/or incentive payments for key leaders (e.g., appropriate antibiotic use and timing for surgical prophylaxis and sepsis).			
B. Consider hospital quality measures, such as Standardized Antibiotic Administration Ratio (SAAR) and C. difficile infection (CDI) rates as part of performance measures for ASP.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 3: DRUG EXPERTISE			
Basic			
A. Ensure there is a documented pharmacy leader with expertise in antibiotic stewardship; pharmacists with postgraduate training in infectious diseases have been shown to be effective, especially in larger hospitals.			
Intermediate			
A. Provide training opportunities in antibiotic stewardship for a pharmacy leader (e.g., certificate programs).			
Advanced			
A. Ensure the pharmacy leader engages and trains other pharmacy staff in antibiotic use so that there is a broad pharmacy stewardship workforce (e.g., emergency departments, intensive care, pharmacists, and medical and surgical specialty pharmacists).			
CORE ELEMENT 4: ACTIONS TO SUPPORT OPTIMAL ANTIBIOTIC USE			
Basic			
A. Implement a policy for review of antibiotic orders for specified drugs by a physician or pharmacist based on local needs (also known as “prior approval”).			
B. Require documentation of diagnosis/indication, drug, dose, and duration for all antibiotic orders			
C. Establish guidance for antibiotic allergy assessment (e.g., a penicillin allergy assessment protocol, including recommendations on which patients might benefit from skin testing).			
D. Develop facility-specific treatment recommendations based on national guidelines and local susceptibility data.			
E. Standardize order forms for common clinical syndromes based on facility guidelines.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 4: ACTIONS TO SUPPORT OPTIMAL ANTIBIOTIC USE (continued)			
Intermediate			
A. Establish a process to review antibiotics prescribed after 48-72 hours (“antibiotic time-out” or “post-prescription review”). This might be done by the treating team and/or the ASP.			
B. Establish guidance on automatic changes from IV to oral dosing in identified situations.			
C. Establish guidance on dose adjustment for cases of organ dysfunction.			
D. Develop dose optimization recommendations, especially for organisms with reduced susceptibility.			
E. Build in automatic alerts for potentially duplicative drug therapy.			
F. Implement time-sensitive automatic stop orders for specified antibiotics (e.g., use of agents for surgical prophylaxis or empiric therapy).			
G. Ensure that the stewardship program works with the ICU to develop optimized antibiotic treatment protocols for possible sepsis cases.			
H. Ensure discussions of patient care (e.g., rounds) include information on antibiotics.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 4: ACTIONS TO SUPPORT OPTIMAL ANTIBIOTIC USE (continued)			
Advanced			
A. Use real-time, rapid diagnostics such as rapid pathogen identification assays (e.g., influenza and MRSA) and biomarkers (e.g., procalcitonin) to improve appropriate antibiotic use.			
B. Assure timely and appropriate culture collection and transport.			
C. Realize important evidence-based opportunities and methods to improve antibiotic use for several infections and/or situations: <ul style="list-style-type: none"> • Community-acquired pneumonia • Urinary tract infections • Skin and soft tissue infections • Surgical prophylaxis • Surgical site infections • Empiric treatment of suspected MRSA infections • Critical evaluation of need for continued non-CDI antibiotic therapy in new cases of CDI • Culture-proven invasive infections (e.g., bloodstream) • Intra-abdominal infections • Sepsis • <i>S. aureus bacteremia</i> (including central line) • Inappropriate use of antibiotics with overlapping spectra • Inappropriate treatment of culture contaminants • Inappropriate treatment of colonization 			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 5: TRACKING AND MONITORING ANTIBIOTIC PRESCRIBING, USE, AND RESISTANCE			
Basic			
A. Adherence to documentation policies, e.g., requirement to document indications for antibiotic use and requirements to document performance of time-outs.			
B. Tracking of diagnosis, drug, dose, duration, and de-escalation with antibiotic time-out.			
C. Adherence to facility-specific treatment recommendations or guidelines.			
D. Adherence to specified interventions.			
E. Accurate antibiotic allergy and adverse reaction histories.			
Intermediate			
A. Sequential tracking of antibiotic resistance patterns (e.g., gram negative resistance).			
B. Tracking of <i>C. difficile</i> infection rates.			
C. 30-day readmission rates for pneumonia and <i>C. difficile</i> .			
Advanced			
A. Number of antibiotics administered to patients per day (i.e., days of therapy, or “DOT”). Hospitals can use the CDC National Healthcare Safety Network (NHSN) Antibiotic Use Option to track and benchmark days of therapy.			
B. Grams of antibiotics used (defined daily dose, or “DDD”) could be used if DOT not available.			
C. Standardized antibiotic administration ratio (SAAR), an NQF-endorsed quality benchmarking measure for antibiotic use, available to hospitals enrolled in the NHSN Antibiotic Use Option.			
D. Direct antibiotic expenditures (purchasing costs).			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 6: REPORTING INFORMATION ON IMPROVING ANTIBIOTIC USE AND RESISTANCE			
Basic			
A. Prepare regular reports on the measures being tracked related to antibiotic use.			
B. Include ASP report as a standing report to key stakeholders within the facility, e.g., pharmacy and therapeutics, patient safety/quality, medical staff committees, and the hospital board.			
C. Report to medical staff committee and health system board.			
D. Hold quarterly staff meetings with physicians, with a permanent place on the agenda to share ASP data.			
E. Post data on physician shared webpage and distribute through emails.			
F. Ensure ASP reports are available to leadership, staff, and patients.			
G. Prepare unit-specific reports to disseminate to individual hospital locations.			
H. Consider reports that might be relevant to specific provider groups (e.g., surgical prophylaxis data for surgeons, treatment of community acquired pneumonia, and urinary tract infections and skin infections for hospitalists).			
I. Report data to the C-suite at regular intervals, along with actionable items.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 6: REPORTING INFORMATION ON IMPROVING ANTIBIOTIC USE AND RESISTANCE (continued)			
Intermediate			
A. Include updates on progress towards meeting all hospital goals for antibiotic stewardship and recommendations for future improvement in reports			
B. Reports should include information on overall antibiotic use and trends, interventions accepted and actions taken, and measures of appropriate use and outcome measures such as <i>C. difficile</i> infection rates and resistance.			
C. Include concrete recommendations for improvement in reports.			
D. Encourage early adoption of reporting into NHSN AU Module to receive SAAR reports.			
E. Include antibiotic susceptibility and use topics in newsletters			
F. Present “what we are doing and why we need stewardship” to the governing board.			
G. Post unit-specific data in visible places to engage unit staff in stewardship.			
Advanced			
A. Distribute provider-level information on antibiotic use and suggestions for improvement at the prescriber level, if possible.			
B. Implement a real-time facility-specific dashboard for ASP metrics available for all staff to view.			

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 7: EDUCATION OF CLINICIANS AND PATIENTS AND FAMILIES			
Basic			
A. Integrate regular (e.g., monthly or at least quarterly) updates on antibiotic stewardship and resistance into communications tools (e.g., blogs, website, intranet, and employee newsletters).			
B. Highlight system goals for antibiotic stewardship in educational programs and materials.			
C. Integrate patient stories and/or narratives from doctors who altered prescribing habits after a patient suffered an adverse event.			
Intermediate			
A. Present antibiotic use and resistance data in grand rounds.			
B. Provide targeted in-person or web-based educational presentations and messages to key provider groups at least annually (e.g., staff meetings for sections, and surgical morbidity and mortality conferences).			
C. Develop clear, concise educational messages that include concrete suggestions for actions to improve use.			
D. Educate prescribers on antibiotic resistance data and interpretation of micro data.			

CORE ELEMENTS GAP ANALYSIS continued

CORE ELEMENTS	YES	NO	COMMENTS
CORE ELEMENT 7: EDUCATION OF CLINICIANS AND PATIENTS AND FAMILIES (continued)			
Advanced			
A. Participate in national stewardship efforts to raise awareness with employees and patients			
B. Focus educational content on quality and safety, rather than cost savings.			
C. Include information on antibiotic stewardship and resistance in required annual provider educational programs.			
D. Include information on antibiotics in patient education materials.			
E. Establish antibiotic stewardship curriculum in medical education and training.			
F. Incorporate antibiotic stewardship elements into orientation for new medical staff.			