

ANTIMICROBIAL STEWARDSHIP PROGRAMS (ASP)

- 1. REASON FOR ISSUE:** This Veterans Health Administration (VHA) Directive establishes a policy for the implementation and maintenance of Antimicrobial Stewardship Programs (ASP) at all VA medical facilities.
- 2. SUMMARY OF CONTENTS:** This is a new VHA Directive for VA medical facilities to implement or augment ASPs.
- 3. RELATED ISSUES:** None.
- 4. FOLLOW-UP RESPONSIBILITY:** The Office of Patient Care Services is responsible for the contents of this Directive. Questions relating to the clinical aspects of this Directive and to ASPs may be referred to Specialty Care Services (10P4E), National Infectious Diseases Service at 513-246-0270. Questions regarding the pharmacy aspects of this Directive may be referred to the Pharmacy and Benefits Management Service (10P4P) at 708-786-7862.
- 5. RESCISSIONS:** None.
- 6. RECERTIFICATION:** This VHA Directive is scheduled for recertification on or before the last working day of January 2019.

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ANTIMICROBIAL STEWARDSHIP PROGRAMS (ASP)

1. PURPOSE: This Veterans Health Administration (VHA) Directive establishes procedures for the implementation and maintenance of Antimicrobial Stewardship Programs (ASP) at all Department of Veterans Affairs (VA) medical facilities. **AUTHORITY:** 38 U.S.C. 7301(b).

2. BACKGROUND:

a. Over the past two decades, antimicrobial resistance in hospitals and communities has risen and continues to rise at an alarming rate, despite widespread efforts to control the spread. At the same time, antimicrobial drug development has slowed and the approval of new antibiotics is not keeping pace with the emergence of drug resistance. Many multidrug resistant organisms (MDRO) are resistant to all or nearly all available antimicrobials. Infection with resistant organisms is associated with increased mortality, excess hospital days, and increased health care costs. As a result, it is estimated that the cost to United States (U.S.) hospitals is eight million excess hospital days and \$21 to \$34 billion each year.

b. Infection due to *Clostridium difficile* (CDI) over the past decade has doubled in U.S. hospitals and associated mortality has quadrupled. The vast majority of this increased incidence and morbidity and mortality have occurred in elderly patients with comorbid conditions. This increased incidence has enormous significance for VA medical facilities where the rate of unique patients discharged with CDI has risen about three-fold between the years 2000 to 2011.

c. The proliferation of MDROs and CDI is largely believed to be driven by two major factors:

(1) Inappropriate use and overuse of antimicrobials resulting in predictable increases in bacterial resistance; and

(2) Transmission of MDROs from infected or colonized patients to others.

d. In recent years, VA has made vast strides in interrupting transmission of MDROs as evidenced by the success of the VA Methicillin-Resistant *Staphylococcus aureus* Prevention Initiative. However, it has been estimated that nearly 50 percent of antimicrobial use in hospitals is inappropriate. Without addressing inappropriate use of antimicrobials, it is unlikely that the exponential increase in resistance can be stemmed.

e. ASPs are thought to be one of the most effective ways to improve antimicrobial utilization. Their purpose is to optimize clinical outcomes, minimize unintended consequences, improve patient safety, and improve the cost-effectiveness of antimicrobial use through a multidisciplinary approach. To reach its full potential, this multidisciplinary approach requires institutional cultural changes, which necessitates support from both administrative and clinical leadership in addition to access to local data and clinical informatics resources.

f. In response to the overwhelming need to optimize antimicrobial use and improve patient care, VHA chartered a National Antimicrobial Stewardship Task Force in May 2011, comprised

of a multidisciplinary group including individuals from infectious disease, pharmacy, surgical care, internal medicine, primary care, nursing, pathology and laboratory medicine, infection prevention and control, public health, and operations among others. The Task Force's stated purpose was "to optimize the care of Veterans by developing, deploying, and monitoring a national-level strategic plan for improvements in antimicrobial therapy management." To achieve this purpose, the Task Force has developed guidance for the implementation and maintenance of ASPs at all VA medical facilities in addition to specific sample policies and reports for selected stewardship activities, which can be found at the VA ASP SharePoint site at: <https://vaww.cmopnational.va.gov/cmop/PBM/pre/default/AntimicrobialMainPage/default.aspx>.

NOTE: This is an internal site, not available to the public.

3. POLICY: It is VHA Policy that each facility must develop and implement an ASP with a written policy that includes an annual evaluation of the ASP's activities by July 31, 2014.

4. RESPONSIBILITIES:

a. **Deputy Under Secretary for Health for Operations and Management.** The Deputy Under Secretary for Health for Operations and Management is responsible for supporting the implementation of ASPs across VHA.

b. **Deputy Under Secretary for Health for Policy and Services.** The Deputy Under Secretary for Health for Policy and Services is responsible for supporting the implementation of ASPs across VHA.

c. **Assistant Deputy Under Secretary for Health for Patient Care Services.** The Assistant Deputy Under Secretary for Health for Patient Care Services (PCS) is responsible for supporting the development of ASPs across VHA including a national ASP with an Antimicrobial Stewardship Program Central Office Core Team (ASPCOCT) to assist VA medical facilities with ASP implementation.

d. **Director, National Infectious Diseases Service.** The Director, National Infectious Diseases Service (NIDS), is responsible for:

(1) Co-administering the national VHA ASP with the Chief Consultant, Pharmacy Benefits and Management (PBM); and

(2) Providing infectious diseases physician expertise for the ASPCOCT.

e. **Chief Consultant, Pharmacy Benefits Management.** The Chief Consultant, Pharmacy Benefits Management (PBM), is responsible for:

(1) Co-administering the national VHA ASP with the Director, NIDS; and

(2) Providing clinical pharmacy expertise in the area of infectious disease pharmacotherapy for the ASPCOCT.

f. **Antimicrobial Stewardship Program Central Office Core Team** The Antimicrobial Stewardship Program Central Office Core Team (ASPCOCT) consisting of, but not limited to, members representing Infectious Diseases providers and clinical pharmacists, is responsible for:

- (1) Overseeing the National Antimicrobial Stewardship Taskforce to support the national ASP in generating stewardship initiatives and supporting guidance documents;
- (2) Serving as an expert group for program evaluation and implementation;
- (3) Providing leadership, education, and consultative support to VA medical facilities' ASPs;
- (4) Collecting and analyzing information provided by local ASPs; and
- (5) Analyzing stewardship outcomes measures and other data provided by electronic resources and databases.

g. **Deputy Under Secretary for Health for Informatics and Analytics.** The Deputy Under Secretary for Health for Informatics and Analytics is responsible for:

- (1) Optimizing electronic resources and databases to improve or modify national stewardship strategies and implementation; and
- (2) Providing information technology assistance to the ASPCOCT.

h. **Veterans Integrated Service Network Director.** Each Veterans Integrated Service Network (VISN) Director is responsible for ensuring that all VA medical facilities in the VISN comply with this Directive.

i. **Medical Facility Director.** The medical facility Director is responsible for:

(1) Ensuring that adequate dedicated staffing and resources are allotted for ASP activities with clinical pharmacy, infectious diseases, nursing, program administration, and information technology support. For an ASP to be successful, active leadership and ongoing maintenance is required. ***NOTE: Careful consideration must be given for allotting designated full-time equivalent (FTE) to individuals for ASP activities, if an ASP is to be high functioning, successful, and sustainable;***

(2) Developing a VA medical facility ASP with a written policy by July 31, 2014. The local medical facility policy should define stewardship initiatives based on selected focus areas specific to the VA medical facility and the resources available. ***NOTE: Appendix A provides a comprehensive framework of stewardship initiatives to help define the selected areas a VA medical facility may wish to target. No single VA medical facility is likely to select all the initiatives listed in Appendix A; larger VA medical facilities with more resources may wish to implement more stewardship initiatives than smaller less complex VA medical facilities;***

(3) Performing an annual evaluation of the medical facility's ASP with the first evaluation by January 23, 2015.

(4) Ensuring that the ASP's evaluation is reported to the appropriate committees, such as the Pharmacy and Therapeutics Committee; facility Infection Control Committee (ICC); Medical Executive Committee, or equivalent; and other appropriate staff.

j. **Facility Chief of Staff or Associate Director for PCS.** The facility Chief of Staff or the Associate Director for PCS is responsible for:

(1) Ensuring that a clinical provider is identified as an antimicrobial stewardship champion or ASP Medical Director to be actively involved in defined components of the ASP at the facility level. This champion is a provider who can advocate for and support stewardship initiatives at the facility;

(2) Ensuring that clinical providers are educated on the principles of antimicrobial stewardship; and

(3) Ensuring that the nurses in the facility are educated on the importance of antimicrobial utilization and management, as well as the principles of antimicrobial stewardship.

k. **Facility Chief of Pharmacy.** The facility Chief of Pharmacy is responsible for:

(1) Ensuring that a Pharmacy Antimicrobial Stewardship Champion or ASP Pharmacy Director is identified from pharmacy personnel to be actively involved in defined components of the ASP at the facility level. This champion is to be a pharmacist who can advocate for and support stewardship initiatives at the facility; and

(2) Ensuring that clinical pharmacists at the facility are educated on the principles of ASP.

l. **Facility Chief of the Office of Information Technology.** The facility Chief of the Office of Information Technology is responsible for providing support for the ASP's activities.

m. **Facility Chief of Health Informatics.** The facility Chief of Health Informatics is responsible for providing support for the ASP's activities.

n. **Facility Infection Control Committee.** The facility ICC or equivalent is responsible for reviewing and providing input on the annual ASP evaluation.

o. **Facility Provider Antimicrobial Stewardship Champion or Antimicrobial Stewardship Programs Medical Director.** The facility Provider Antimicrobial Stewardship Champion or ASP Medical Director is responsible for:

(1) Serving as a leader or co-leader and subject matter expert in the design, implementation, and function of the ASP;

- (2) Leading or co-leading the ASP in reviewing and optimizing the facility's antimicrobial use;
- (3) Providing education to other health care professionals regarding stewardship ideologies and practices;
- (4) Interacting with the Infectious Disease Consult Service, or equivalent, for advice to health care providers on alternative antimicrobial therapy;
- (5) Serving in collaboration with the Facility Pharmacy Antimicrobial Stewardship Champion or ASP Pharmacy Director, as a facility antimicrobial formulary subject matter expert and advising providers on alternatives when a non-formulary antimicrobial agent is ordered; and
- (6) Performing or facilitating the day-to-day operations of the ASP.

p. **Facility Pharmacy Antimicrobial Stewardship Champion or Antimicrobial Stewardship Programs Pharmacy Director.** The facility Pharmacy Antimicrobial Stewardship Champion or ASP Pharmacy Director is responsible for:

- (1) Collaborating with the Provider Antimicrobial Stewardship Champion or ASP Medical Director in the development and maintenance of the ASP;
- (2) Leading or co-leading the ASP in reviewing and optimizing the facility's antimicrobial use;
- (3) Providing education to other health care professionals regarding stewardship ideologies and practices;
- (4) Serving, in collaboration with the facility Provider Antimicrobial Stewardship Champion or ASP Medical Director, as a facility antimicrobial formulary subject matter expert and advising providers on alternatives when a non-formulary antimicrobial agent is ordered; and
- (5) Performing and/or facilitating the day-to-day operations of the ASP.

5. REFERENCES:

- a. Combating Antimicrobial Resistance: Policy Recommendations to Save Lives. Clinical Infectious Diseases (Clin Infect Diseases), May 2011;52(Suppl5):S397-S423.
- b. Dellit T, Owens R, McGowan J, et al. Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America Guidelines for Developing an Institutional Program to Enhance Antimicrobial Stewardship. Clin Infect Diseases 2007;44:159-77.
- c. Jain R, Kralovic S, Evans M, et al. Veterans Affairs Initiative to Prevent Methicillin-resistant *Staphylococcus aureus* Infections. New England Journal of Medicine (New Engl J Med) 2011;364;15:1419-30.

d. McDonald L, Owings M, Jernigan D. *Clostridium difficile* Infection in Patients Discharged from US Short-stay Hospitals, 1996-2003; Emergency Infectious Diseases (Emerg Infect Dis) 2006;12:409-15.

e. Roberts R, Hota B, Ahmad I, et al. Hospital and Societal Costs of Antimicrobial-Resistant Infections in a Chicago Teaching Hospital. Clin Infect Diseases 2009;49:1175-84.

f. Redelings M, Sorvillo F, Mascola L. Increase in *Clostridium difficile*-related Mortality Rates, United States, 1999-2004. Emerg Infect Dis 2007;13:1417-19.

g. Other Resources

(1) American Society of Health-system Pharmacists (ASHP): [ASHP Statement on the Pharmacists Role in Antimicrobial Stewardship](#).

(2) VA Antimicrobial Stewardship Resources (ASP SharePoint site): <https://vaww.cmopnational.va.gov/cmop/PBM/pre/default/AntimicrobialMainPage/default.aspx>.
NOTE: This is a VA Internal website, not available to the public.

(3) Centers for Disease Control and Prevention (CDC): [CDC Get Smart for Healthcare](#).

(4) CDC Get Smart for Healthcare: Antimicrobial Stewardship Drivers and Change Package: <http://www.cdc.gov/getsmart/healthcare/improve-efforts/driver-diagram/index.html>.

(5) Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America (IDSA-SHEA) and Pediatric Infectious Diseases Society (PIDS): [IDSA / SHEA and PIDS Policy Statement on Antimicrobial Stewardship](#).

(6) Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America (IDSA-SHEA) Guidelines on Antimicrobial Stewardship: [IDSA / SHEA Guidelines on Antimicrobial Stewardship](#).

(7) Toolkit for Reduction of *Clostridium difficile* Infections through Antimicrobial Stewardship: The Evaluation and Research on Antimicrobial Stewardship's Effect on *Clostridium difficile* (ERASE *C. difficile*) Project: <http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/cdiff toolkit/index.html>.

(8) Office of the Inspector General (OIG). OIG Combined Assessment Program Summary Report for Management of Multidrug-Resistant Organisms in Veterans Health Administration Facilities: <http://www.va.gov/oig/pubs/VAOIG-11-02870-04.pdf>.

**SAMPLE OF AN ANNUAL ANTIMICROBIAL STEWARDSHIP PROGRAM (ASP)
EVALUATION CHECKLIST**

NOTE: This checklist may be modified and utilized to track the effectiveness and/or success of certain components of an ASP program over time to guide target areas for potential resource utilization and program improvement.

Element	Yes	No	Comments
Structure and personnel resources:			
Have a physician champion?	<input type="checkbox"/>	<input type="checkbox"/>	
Have a pharmacy champion?	<input type="checkbox"/>	<input type="checkbox"/>	
Have a nursing champion?	<input type="checkbox"/>	<input type="checkbox"/>	
Have a champion within administration?	<input type="checkbox"/>	<input type="checkbox"/>	
Institutional interactions:			
Report to the Pharmacy and Therapeutics Committee?	<input type="checkbox"/>	<input type="checkbox"/>	
Involve the Infection Control Committee?	<input type="checkbox"/>	<input type="checkbox"/>	
Report to the Clinical Executive Board or equivalent?	<input type="checkbox"/>	<input type="checkbox"/>	
Have meaningful support from the facility's administration?	<input type="checkbox"/>	<input type="checkbox"/>	
Involve the microbiology laboratory?	<input type="checkbox"/>	<input type="checkbox"/>	
Have support from the information technology support staff?	<input type="checkbox"/>	<input type="checkbox"/>	
Policies and interventions:			
Promote substitution of appropriate oral antimicrobials for parenteral agents?	<input type="checkbox"/>	<input type="checkbox"/>	
Restrict the use of selected or all antimicrobials?	<input type="checkbox"/>	<input type="checkbox"/>	
Utilize antimicrobial order forms or sets?	<input type="checkbox"/>	<input type="checkbox"/>	
Utilize clinical pathways or antimicrobial therapy guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	
Provide for dose optimization by pharmacokinetics or dynamics?	<input type="checkbox"/>	<input type="checkbox"/>	
Monitor patients on outpatient parenteral antimicrobial therapy?	<input type="checkbox"/>	<input type="checkbox"/>	
Address de-escalation of antimicrobials?	<input type="checkbox"/>	<input type="checkbox"/>	
Provide for an antimicrobial "time-out" after 48-96 hours of therapy?	<input type="checkbox"/>	<input type="checkbox"/>	
Provide for timely review of positive blood cultures to assure appropriate therapy?	<input type="checkbox"/>	<input type="checkbox"/>	
Require automatic Infectious Diseases consults for certain conditions?	<input type="checkbox"/>	<input type="checkbox"/>	
Establish guidelines for antimicrobial duration?	<input type="checkbox"/>	<input type="checkbox"/>	
Establish automatic stop orders for antimicrobials?	<input type="checkbox"/>	<input type="checkbox"/>	
Require a documented indication for antimicrobial use?	<input type="checkbox"/>	<input type="checkbox"/>	
Establish procedures limiting dual anaerobic bacterial coverage?	<input type="checkbox"/>	<input type="checkbox"/>	
Establish procedures limiting non- <i>C. difficile</i> directed antibiotic exposure for patients with <i>C. difficile</i> infection?	<input type="checkbox"/>	<input type="checkbox"/>	

(Continued)

	Yes	No	Comments
Education and reports:			
Provide for annually updated antibiograms available for all providers?	<input type="checkbox"/>	<input type="checkbox"/>	
Provide for prescriber education regarding appropriate antimicrobial use?	<input type="checkbox"/>	<input type="checkbox"/>	
Generate reports of clinical outcomes related to antimicrobial use?	<input type="checkbox"/>	<input type="checkbox"/>	
Require periodic measurement and reviews of antimicrobial utilization?	<input type="checkbox"/>	<input type="checkbox"/>	
Perform selective reporting of antimicrobial agents in the microbiology laboratory?	<input type="checkbox"/>	<input type="checkbox"/>	