



**Indian Health Service**  
**National Pharmacy and Therapeutics Committee**  
**Formulary Brief: Antibiotic Stewardship**  
**-May 2015-**



Antibiotic resistance has been increasing in the recent decades. Moreover, antibiotic drug development has stagnated, limiting our antibiotic armamentarium to combat bacteria. There is an urgent need for efforts that promote appropriate antibiotic use to minimize the development of microbial resistance and improve patient outcomes, known as Antibiotic Stewardship Programs (ASP). Antibiotic stewardship is defined as coordinated activities to optimize antibiotic selection, dosing, route, and duration of therapy. Antibiotic stewardship programs have been demonstrated to improve antibiotic utilization and are a key prevention strategy to limit the spread of antibiotic resistance.

The goals of ASPs are to optimize clinical outcomes, minimize unintended consequences, improve patient safety and improve the cost-effectiveness of antibiotic use through a multidisciplinary approach. Simply put, antibiotic stewardship is ensuring optimal prescribing when antibiotic therapy is necessary (e.g., the right dose, for the right duration, via the right route) as well as recognizing when antibiotics are not needed. To accomplish this goal nationally, the Center for Disease Control and Prevention (CDC) recommends that all hospitals implement an ASP. In September 2014, President Obama issued the *National Strategy for Combating Antibiotic-Resistant Bacteria* which identified priorities and coordinated investments to prevent, detect and control outbreaks of resistant pathogens. The *National Strategy* outlines goals for the United States government, one of which involves strengthening antibiotic stewardship in inpatient, outpatient and long-term care settings. In March 2015, the *National Action Plan for Combating Antibiotic-Resistant Bacteria* was issued in response to the executive order released in September 2014.

**Findings:**

The Indian Health Service ASP Workgroup developed specific implementation strategies that include utilizing CDC Stewardship assessment tool, identifying ASP champions within each service unit, the creation of site-specific guidelines for antibiotic selection that integrates local antibiogram information with evidence based guidelines to optimize provider selection of antibiotic therapy.

**Resources and Tools currently available to the IHS:**

Arizona Healthcare-Associated Infections (HAI) Program - <a href="http://azdhs.gov/phs/oids/hai/">http://azdhs.gov/phs/oids/hai/</a>
Association of State and Territorial Health Officials (supported by the CDC) – pages 9-12 - <a href="http://www.astho.org/Infectious-Disease/Policies-To-Promote-Antimicrobial-Stewardship-Programs/">http://www.astho.org/Infectious-Disease/Policies-To-Promote-Antimicrobial-Stewardship-Programs/</a>
CDC: Core Elements of Hospital ASP - <a href="http://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html">http://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html</a>
CDC – Get Smart (outreach materials) - <a href="http://www.cdc.gov/getsmart/index.html">http://www.cdc.gov/getsmart/index.html</a>
Executive Order 137676 – National Plan for Combating Antibiotic Resistance - <a href="https://www.whitehouse.gov/the-press-office/2014/09/18/executive-order-combating-antibiotic-resistant-bacteria">https://www.whitehouse.gov/the-press-office/2014/09/18/executive-order-combating-antibiotic-resistant-bacteria</a>
Great Plains Area & Winnebago Service Unit Guidebook - Available upon request: <a href="mailto:IHSNPTC1@ihs.gov">IHSNPTC1@ihs.gov</a>
National Pharmacy Council Antibiotic Stewardship Program Guidebook (Inpatient & Ambulatory Care) - Available upon request: <a href="mailto:IHSNPTC1@ihs.gov">IHSNPTC1@ihs.gov</a>
VA Directive 1031 – Antibiotic Stewardship Programs - <a href="http://va.gov/vhapublications/ViewPublication.asp?pub_ID=2964">http://va.gov/vhapublications/ViewPublication.asp?pub_ID=2964</a>

## Conclusions:

In response to the National Plan for Combating Antibiotic-Resistant Bacteria, the Indian Health Service (IHS) will implement a robust ASP. The success of each facility's ASP is dependent on defined leadership providing prescribers with optimal recommendations based on local susceptibility for treatment of infections and identifying conditions when antibiotic use may be inappropriate. Shared information including the system of change processes will allow service units to implement their ASP in a meaningful and sustainable manner.

1. IHS will follow Executive Order 13767 and will be primarily affected by Goals 1 and 2 from the National Action Plan for Combating Antibiotic-Resistant Bacteria:
  - a. Goal 1: Slow the emergence of resistant bacteria and prevent the spread of resistant infections
  - b. Goal 2: Strengthen national one-health surveillance efforts to combat resistance objectives
2. The primary goal of the IHS ASP Workgroup is to be a resource and a point of contact for all IHS sites during the implementation and maintenance of ASP. This includes providing a current updated repository of educational information, implementation tools and clinical guideline located on the NPTC website.

## Clinician Training resources:

- Gauthier TP, Lantz E, Heyliger A, Francis SM, Smith L. Internet-Based Institutional Antibiotic Stewardship Program Resources in Leading US Academic Medical Centers. Clin Infect Dis. 2014; 58(3):445-446. Available at: <http://cid.oxfordjournals.org/content/58/3/445.full.pdf>
- MAD-ID Antibiotic Stewardship Training Programs (Basic and Advanced) <http://mad-id.org/Antibiotic-stewardship-programs/>
- Society of Infectious Diseases Pharmacists. Antibiotic Stewardship: A Certificate Program for Pharmacists. <http://www.sidp.org/Default.aspx?pagelid=1442823>
- CDC Checklist for Core Elements of Hospital ASPs: <http://www.cdc.gov/getsmart/healthcare/implementation/checklist.html>
- American Hospital Association: Antibiotic stewardship toolkit for hospitals: <http://www.ahaphysicianforum.org/resources/appropriate-use/Antibiotic/index.shtml>
- Joint Commission Resources: Antibiotic Stewardship Toolkit: <http://www.jcrinc.com/Antibiotic-stewardship-toolkit/>

*For questions about this document, please contact the NPTC at [IHSNPTC1@ihs.gov](mailto:IHSNPTC1@ihs.gov). For more information about the NPTC, please visit the [NPTC website](#).*

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