1881. The Agency for Healthcare Research and Quality (AHRQ) Safety Program for Improving Antibiotic Use: Results From a National Antibiotic Stewardship Intervention of 402 United States (US) Hospitals

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Session: 197. Stewardship Success Stories
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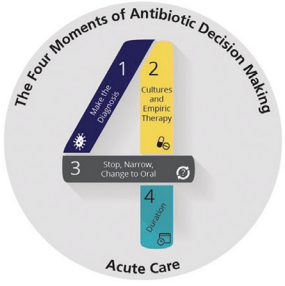
Background. The AHRQ Safety Program for Improving Antibiotic Use aims to improve antibiotic (abx) use in acute, long-term, and outpatient care settings by enhancing abx stewardship programs (ASP) and engaging frontline providers to incorporate stewardship into daily abx decision-making, with an emphasis on viewing appropriate prescribing as a patient safety issue. We report on the impact of implementation of the Acute Care Safety Program on abx use and *Clostridioides difficile* in a cohort of US hospitals.

Methods. The Acute Care Safety Program was implemented from December 2017 to November 2018. At least one unit from each hospital participated. The Safety Program trained local ASP leaders and assisted ASPs and frontline staff to: (a) address attitudes and culture that pose challenges to judicious abx use and (b) incorporate best practices for the management of common infections into daily practice using the Four Moments of Antibiotic Decision Making framework (Figure 1). Education occurred via 17 live Webinars and an online toolkit that included recorded Webinars, narrated presentations, and other tools to assist with the development and dissemination of syndrome-specific local guidelines (Table 1). Units submitted days of abx therapy (DOT) per 1,000 patient-days (PD), *C. difficile* LabID events per 10,000 PD, and 10 review forms per month documenting structured discussions between the ASP and frontline staff about patients on abx. Linear and generalized linear mixed-effects models were employed to calculate pre-post intervention changes in abx use and *C. difficile* LabID events, respectively.

Results. 402 hospitals completed the Safety Program, including 28 (7%) academic medical centers (AMC), 289 (72%) community hospitals, and 85 (21%) critical access hospitals. 476 participating units consisted of 165 (35%) ICUs, 300 (63%) medical-surgical floors, and 11 (2%) other units. Both abx use and *C. difficile* LabID events decreased when comparing pre-post data (−41 DOT per 1,000 PD, [from 886.56, Figure 2], $P = 0.001$ and −1.2 LabID events per 10,000 PD [from 6.3], $P = 0.027$), respectively.

Conclusion. By targeting both improving abx prescribing culture and knowledge of best practices, the AHRQ Safety Program led to reductions in abx use across a diverse cohort of hospitals.



1. Does my patient have an infection that requires antibiotics?

2. Have I ordered appropriate cultures before starting antibiotics? What empiric therapy should I initiate?

3. A day or more has passed. Can I stop antibiotics? Can I narrow therapy or change from IV to oral therapy?

4. What duration of antibiotic therapy is needed for my patient's diagnosis?

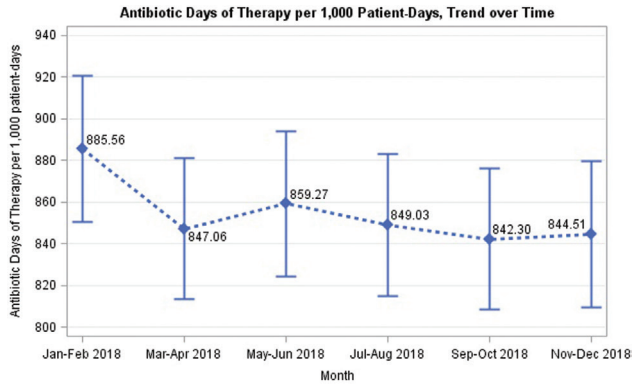


Table 1: Educational toolkit content for the AHRQ Safety Program for Improving Antibiotic Use

Webinars*
Antibiotic Stewardship Program Development (Part 1)
Antibiotic Stewardship Program Development (Part 2)
Making Effective Behavior Changes around Antibiotic Prescribing
Making the Case that Improving Antibiotic Use Is a Patient Safety Issue
Improving Communication & Teamwork around Antibiotic Decision Making
Identifying Targets for Improvement in Antibiotic Decision Making
Making Effective Changes in Antibiotic Decision Making
Best Practices in the Diagnosis and Treatment of Asymptomatic Bacteriuria & Urinary Tract Infections
Best Practices in the Diagnosis and Treatment of Community-Associated Lower Respiratory Tract Conditions
Best Practices in the Diagnosis and Treatment of Cellulitis and Skin and Soft Tissue Abscesses
Best Practices in the Diagnosis and Treatment of Hospital-acquired and Ventilator-associated Pneumonia
Best Practices in the Diagnosis and Treatment of Diverticulitis and Biliary Tract Infections
Best Practices in the Diagnosis and Treatment of *Clostridioides difficile* Infections
Best Practices in the Diagnosis and Treatment of Sepsis
Best Practices in the Diagnosis and Treatment of Bacteremia
Sustaining Stewardship Activities
Narrated Presentations
Approach to Patient Reporting Penicillin Allergies
How Can Your Antibiotic Stewardship Program Collaborate With the Clinical Microbiology Laboratory?
Role of the Bedside Nurse in Antibiotic Stewardship Interventions
Implementation Resources
Antibiotic Time Out Tool
Acute Care Antibiotic Commitment Poster
Four Moments of Antibiotic Decision Making Poster
Team Antibiotic Review Form
One Page Reviews and User Guides
Instruction for Using One Page Documents to Develop Local Guidelines
Asymptomatic Bacteriuria & Urinary Tract Infections One Page Documents and User Guide
Community-Acquired Pneumonia One Page Document and User Guide
Aspiration Pneumonitis One Page Document and User Guide
Chronic Obstructive Pulmonary Disease One Page Document and User Guide
Cellulitis One Page Document and User Guide
Hospital-Acquired Pneumonia One Page Document and User Guide
Ventilator-Associated Pneumonia One Page Document and User Guide
Biliary Tract Infection One Page Document and User Guide
Diverticulitis One Page Document and User Guide
Clostridioides difficile Infection One Page Document
Data Collection Information
Data Collection Templates and Instructions

*Each Webinar had an associated recording, slide set, and script

Disclosures. Sara E. Cosgrove, MD, MS, Basilea: Consultant; Theravance: Consultant.

1882. Tuberculosis in the Department of Veterans Affairs: Missed Opportunities for Prevention

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Session: 198. Tuberculosis: Stigma, Diagnosis, and Treatment
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Background. US and global elimination of tuberculosis (TB) is an important goal. Despite decreased incidence, CDC predicts elimination of TB in the US will not occur in the 21st century without improved detection and treatment of latent TB infection (LTBI). We describe the current burden of active TB infection and LTBI testing and treatment among patients within the Department of Veterans Affairs (VA).

Methods. Using the 2009 CDC case definition for laboratory-confirmed TB, we queried VA data sources from January 2010 to December 2018 for Mycobacterium tuberculosis detected via culture or nucleic acid amplification test (NAAT) from specimens from all body sites. For all TB patients, we extracted demographic, ICD-9 and ICD-10 risk factor, and LTBI testing and treatment data.

Results. Between 2010 and 2018, the average annual incidence of TB was 1.7 cases per 100,000 unique users of VA care (ranging from a high of 2.8 in 2010 to low of 0.8 in 2018). For 899 identified cases, demographic factors associated with highest TB rates were age between 45 and 64, Asian race, and residence in District of Columbia (Table 1). The most frequently occurring risk factors were substance abuse, diabetes, and homelessness. Of 90 patients with susceptibility documentation, 14 (15%) had resistance to 1 or more anti-TB drug (1 with multi-drug-resistant TB). Fifteen patients (1.7%) died within 7 days of their TB diagnosis; in all but 2 cases, TB was the primary cause of death (Table 2). Figure 1 depicts screening and treatment for LTBI among patients with TB. Only 228/899 (25.4%) TB patients had LTBI screening ≥ 3 months prior to diagnosis. Of the 347 TB patients never screened for LTBI, 264 (76%) had ≥ 1 documented TB risk factor. Among 228 patients screened for LTBI >3 months prior to active disease, 69 (30%) screened positive; however, only 24 (35%) had LTBI treatment initiated.

Conclusion. Although rates of TB infection are decreasing, VHA providers would benefit from education on recognizing patients with risk factors which place them at high risk for TB who should be screened for LTBI. CDC recommends preventive treatment of patients who screen positive for LTBI, and provider collaboration with local public health departments to provide directly observed therapy in cases where adherence may be in question.