Before and after the survey, participants rated how likely they were to request antibiotics for a URI.

**Results.** Of 1150 adult patients in clinic over the 6 days of the survey, 250 completed the survey. Statements about potential harm to the individual decreased patient likelihood to request antibiotics more than statements about societal impacts of antibiotic misuse (P < 0.001). Statements about potential harm to contacts of the patient also decreased patient likelihood to request antibiotics more than statements about resistance or societal impacts of antibiotic misuse (P < 0.001). Statements discussing antibiotic resistance were less likely to impact patient likelihood to request antibiotics than statements not mentioning antibiotic resistance (P < 0.001). All statements decreased patient likelihood to request antibiotics. Overall likelihood to request antibiotics decreased after the survey (from 5.3 pre- to 3.1 post-survey, P < 0.001).

**Conclusion.** Statements about how potential harm of antibiotics to the individual had a greater impact than statements about resistance or societal impact of antibiotics for a URI.

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1979. Five-Year Impact of an Antibiotic Stewardship Program on Nosocomial Candidemia: An Interrupted Time-Series Analysis Study

Andrea Bedini, MD1; Marianna Meschiari, PhD2; Erica Franceschini, MD1; Cristina Musini, Prof3; 1University Hospital of Modena, Modena, Emilia-Romagna, Italy; 2Infectious Disease Clinic, Azienda Ospedaliero-Universitaria di Modena; University of Modena and Reggio Emilia, Modena, Emilia-Romagna, Italy; 3University of Modena, Modena, Emilia-Romagna, Italy

Session: 233. Antibiotic Stewardship: Antifungals
Saturday, October 5, 2019: 12:15 PM

**Background.** Antimicrobial stewardship programs allow a reduction in antibiotic prescription and, consequently, in the incidence of multidrug-resistance infections. However, the impact on nosocomial candidemia is still unclear.

**Methods.** The present study is an interrupted time-series (ITS) before-after study, based on an ecological time-trend analysis. Since 2014, an antimicrobial stewardship program (ASP) has been implemented at an Italian tertiary-care hospital. The first objective of the program was to reduce carbapenem consumption, through an active and computerized surveillance of all carbapenem prescriptions, each of which was checked and validated by ID specialists always after audit of the cases with treating physicians. We retrospectively evaluated the changing in the consumption of antimicrobials, carbapenems, and in the incidence of candidemia, during two study periods: before (2007–2013) and after (2014–2018) the implementation of the ASP.

**Results.** The implementation of ASP was followed by a significant decrease in antibiotic consumption, which was consistent through the following 5 years. At the end of the study, total antibiotic consumption has decreased by 38,476 DDDs per 100 patient-days per quarter (95% CI: −21,784 to −55,168; P < 0.001) and carbapenems decreased by 4,452 DDD per 100 PDDs per quarter (95% CI: −3,658 to −5,246; P = 0.001). After 5 years of ASP, incidence of candidemia decreased by 2,034 episodes per 1,000 PDDs per quarter (95% CI: −0.738 to −3.336; P = 0.003), decreasing, at the end of 2018, by 53% compared with the expected value if the program had not been implemented.

**Conclusion.** At our Institution, the ASP had a positive impact on the consumption of carbapenems, and an antimicrobial stewardship program was implemented.

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1980. Variability in Antifungal Stewardship Strategies Among Society for Healthcare Epidemiology of America (SHEA) Research Network Facilities

Margaret A. Fitzpatrick, MD, MS1; Fritzie S. Albarillo, MD2; Aaron Ochoa, MD3; Katie J. Suda, PharmD, MS1; Charlesnka T. Evans, PhD, MPH1; 1Loyola University Chicago Stritch School of Medicine, Chicago, Illinois; Loyola University Medical Center, Maywood, Illinois; 2Center of Innovation for Complex Chronic Healthcare (CINCHHC), Hines VA Hospital and University of Illinois at Chicago College of Pharmacy, Hines, Illinois; 3Northwestern University and VA, Hines, Illinois

Session: 233. Antibiotic Stewardship: Antifungals
Saturday, October 5, 2019: 12:15 PM

**Background.** The incidence of invasive fungal infections (IFI) and antifungal utilization is increasing in many healthcare settings. Little is known regarding antifungal stewardship strategies within broader antimicrobial stewardship programs (ASPs). This survey aimed to identify the use of antifungal stewardship at a diverse range of hospital facilities.

**Methods.** A cross-sectional electronic survey of the SHEA Research Network (SRN) was completed August–September 2018 by a physician or pharmacist ASP leader. The SRN is a consortium of >100 hospitals participating in multi-center health-care epidemiology research projects. Survey questions pertained to various aspects of antifungal stewardship, including audit and feedback, laboratory testing, and surveillance. Chi-square tested associations between ASP and hospital characteristics and use of antifungal stewardship strategies.
Results. 45/111 (41%) facilities responded, including 10 international sites. Most facilities are academic medical centers (64.6%) and care for stem cell (73.3%) and solid-organ transplant (80.0%) patients. Most facilities have large, well-established ASPs (60.0% > 5 members; 68.9% duration 26 years). 43 (95.6%) facilities use antifungal stewardship strategies in their ASP; most commonly prospective audit and feedback (33/43, 73.3%) performed by a pharmacist (23/33, 71.4%). Only half of ASPs (51.3%) create guidelines for IPI management. Most (71.1%) facilities perform rapid laboratory tests to diagnose IPI, but availability of PCR for fungal speciation and antifungal susceptibility testing varies (Figure 1). 29 ASPs (64.4%) perform surveillance of antifungal utilization, but only 9 (31.0%) report data to CDC's National Healthcare Safety Network (NHSN). ASP size, ASP duration, and presence of transplant populations were not associated with a higher likelihood of using antifungal stewardship strategies (P > 0.05 for all).

Conclusion. Use of antifungal stewardship strategies is high at SRN hospitals, but many ASPs do not relate audit and feedback data to disseminate guidelines for IPI management, to promote access to laboratory-based tests for rapid and accurate IPI diagnosis, and to perform surveillance for antifungal utilization with data reporting to NHSN.

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1981. Implementation of an Antifungal Stewardship Bundle Focused on Candidemia in an Indian Hospital
Mohini Moni, MD;2 Santika Sudhir, PharmD;1,3 Dipu T.S., MD;1 Jyesth Philip, PharmD;1 Jini James, PharmD;1 Sanjeev Singh, MD;1,3 Shweta Zhou, MD;1
Twisha S. Patel, PharmD, BCPS, BCDIP;1 Keith S. Kaye, MD, MPH;1,2 Piyal K. Patel, MD, MPH;1,2 Anmita Institute of Medical Sciences, Kochi, Kerala, India;1 NYC Health and Hospitals, New York, New York;1 University of Michigan Medical School, Ann Arbor, Michigan;2 Michigan Medicine, Ann Arbor, Michigan;2 University of Michigan and VA Ann Arbor Healthcare System, Ann Arbor, Michigan

Session: 233. Antibiotic Stewardship: Antifungals Saturday, October 5, 2019: 12:15 PM

Background. In India, Candida bloodstream infections have a reported incidence of 1–12 per 1,000 admissions and a mortality rate of up to 60%. Antimicrobial stewardship programs (ASP) can improve quality of care and clinical outcomes. This study evaluates the impact of a comprehensive candidemia ASP bundle in a hospital in southern India with an established stewardship program.

Methods. A single-center, pre-post quasi-experimental study was conducted at a tertiary-care center in southern India to analyze the impact of an ASP care bundle for the management of adults with candidemia. During the intervention period (October 2017–December 2018), the ASP provided recommendations to providers in accordance with the 2016 IDSA Guidelines for the Management of Candidemia, which included the following bundle: (1) appropriate selection and dosing of antifungal therapy; (2) repeat blood cultures every 48 hours until clearance; (3) removal of central venous catheters and other potential removable foci of infection; (4) echocardiogram; (5) ophthalmologic evaluation; and (6) appropriate duration of therapy. The primary outcome was initiation of appropriate antifungal therapy. Additional clinical outcomes were also compared with a historical cohort.

Results. One hundred and four patients with candidemia were included: 52 in the pre-intervention and 52 in the post-intervention group. Overall, baseline demographics and outcomes were similar between the two groups (Table 1). Candida tropicalis (26.9%) and Candida parapsilosis (29.8%) were the most common causes of candidemia in the cohort. Following intervention, administration of appropriate antifungal therapy improved by 40.4% (28.8% pre vs. 69.2% post, P < 0.01). Average time to effective treatment initiation following culture positivity decreased from 57.6 hours to 12 hours in the post-intervention group (P < 0.01). Thirty-day all-cause mortality was similar between the two groups (34.6% 38.4%, P = 0.84).

Conclusion. Implementation of a comprehensive candidemia care bundle by the ASP significantly improved the use and timing of initiation of appropriate antifungal therapy.

1982. A Diagnostic Stewardship Intervention for Clostridioides difficile: Impact of Stool Toxic Testing on Treatment of Adult Inpatients
Jason Moss, MD;1 Derek W. Forster, MD;1 Vaneet Arora, MD, MPH;1 David Burgess, PharmD, FCCP, FIDP;1 Katie Wallace, PharmD, BCPS, AQ-ID;1 Sarah Cotner, PharmD, BCPS;1 Donna R. Burgess, RP1; Julie Chandra, MD, MPH, FIDSA;1 Tiger Cai, MD, PhD, BCIDP;1 Thnej Myint, MBBS;1 Jeremy VanHoose, PharmD, BCPS;1 Randy Jones, MD;2,3 UK HealthCare, Lexington, Kentucky;2 University of Kentucky, Lexington, Kentucky;1 University of Kentucky HealthCare, Lexington, Kentucky

Session: 234. Antibiotic Stewardship: C. difficile Saturday, October 5, 2019: 12:15 PM

Background. Testing for Clostridioides difficile infection has been shown to be a critical component of guideline-based Infectious Diseases Society of America care. Our facility supports the addition of a stool toxic test to a positive nucleic acid amplification test (NAAT) as part of a multi-step testing algorithm. In November 2017, the University of Kentucky HealthCare system added stool toxic testing to any specimen positive for C. difficile by NAAT. This change was accompanied by face to face education with providers and clinical decision support in the form of interpretive verbiage added to the results that are reported into the electronic record. The objective of this study was to assess whether this diagnostic stewardship intervention made an impact on C. difficile treatment.

Methods. We performed a retrospective review of adult patients admitted to UK HealthCare from November 1, 2017 through October 31, 2018 who tested positive by NAAT but negative by stool toxic test to determine whether or not they were treated. We also assessed treatment by service line to see whether there were treatment differences among these groups. A cost analysis was also performed.

Results. A total of 300 adult inpatients were positive for C. difficile by NAAT during the study period with 71% (213 patients) having a negative stool toxic test. Of those, 58% (123) were never started on C. difficile therapy and an additional 14% (42) had their therapy stopped after 48 hours. Only 28% (60) of these patients received a full course of therapy. Hospital medicine had the highest rate of non-treatment at 82%. Conversely, our solid-organ and bone marrow transplant services had the lowest rate of non-treatment at 31%. Overall, this approach was associated with an estimated 479 oral vancomycin days avoided (5,880 doses) and a cost savings of $6,278.

Conclusion. The addition of stool toxic testing to NAAT combined with education and clinical decision support lead to a dramatic reduction of treatment for NAAT positive but toxin-negative patients. This form of diagnostic stewardship had a significant impact on therapy decisions and can be a powerful antimicrobial stewardship approach to decrease unnecessary treatment of C. difficile colonization.

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1983. Adherence vs. Non-adherence: Clinical Outcomes of an Antimicrobial Stewardship Directed Treatment Protocol for Clostridioides difficile Infection
Brendan Begnoche, PharmD;1 Victor Chen, PharmD, BCPS, BCDIP;1 Nidhi Sarayia, PharmD, BCPS, AHAHPY;1 Yi Guo, PharmD, BCIDP;2 Montefiore Medical Center, Bronx, New York;2 Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, New York

Session: 234. Antibiotic Stewardship: C. difficile Saturday, October 5, 2019: 12:15 PM

Background. The 2018 Infectious Diseases Society of America (IDSA) C. difficile infection (CDI) longer course of therapy guidelines recommend first-line therapy in adults, instead recommending vancomycin or fidaxomicin. At our 1500-bed academic medical center, a new CDI treatment protocol was initiated by the antimicrobial stewardship program (ASP) to guide treatment based on disease severity and risk factors for recurrence. In this study, we compared the clinical cure rate and 30-day recurrence rate in patients who are adherent and non-adherent to our institutional CDI treatment protocol.

Methods. Patients with CDI between September-December 2018 were identified using electronic health record (EHR) reports. A retrospective chart review was conducted to collect the following information: baseline demographics, white blood cell count, C. difficile severity, and risk factors, etc. Outcome measures included clinical cure rate, 30-day recurrence rate, and global cure rate, stratified by whether treatment was adherent or non-adherent to institutional protocol. Student’s t-test was used for continuous variables. Fisher exact test or Chi-square test was used for categorical variables.

Results. A total of 188 patients (adherent group n = 100; non-adherent group n = 88) were included. Patient demographics and baseline risk factors did not differ between groups. Clinical cure rate performed by pharmacist (23/33, 71.4%), only 9 (31.0%) report data to CDC’s National Healthcare Safety Network (NHSN). ASP size, ASP duration, and presence of transplant populations were not associated with a higher likelihood of using antifungal stewardship strategies (P > 0.05 for all).

Conclusion. Use of antifungal stewardship strategies is high at SRN hospitals, but many ASPs do not relate audit and feedback data to disseminate guidelines for IPI management, to promote access to laboratory-based tests for rapid and accurate IPI diagnosis, and to perform surveillance for antifungal utilization with data reporting to NHSN.