

**695. Physician Perceptions and Attitudes Towards an Antimicrobial Stewardship Program and Computerized Decision-making Systems: A Focus Group Study**  
Alvin Qijia Chua, BSc (Pharm) (Hons)<sup>1</sup>; Sing Teang Kong, PhD<sup>1</sup>; Lai Wei Lee, BSc (Pharm) (Hons)<sup>2</sup>; Daphne Yah Chieh Yui, BPharm<sup>1</sup>; Sarah Si Lin Tang, BSc (Pharm) (Hons)<sup>1</sup>; Winnie Lee, BPharm (Hons), MSc (Epi)<sup>1</sup>; Andrea L. Kwa, PharmD<sup>1,2,3</sup> and Desiree Lie, MD, MSED<sup>2</sup>; <sup>1</sup>Pharmacy, Singapore General Hospital, Singapore, Singapore, <sup>2</sup>Duke-National University of Singapore Medical School, Singapore, Singapore, <sup>3</sup>Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore, Singapore

**Session:** 74. Stewardship: Data and Program Planning  
*Thursday, October 5, 2017: 12:30 PM*

**Background.** Antimicrobial stewardship programs (ASPs) often employ multi-pronged strategies, including Computerized Decision Support Systems (CDSSs), to promote appropriate hospital antibiotic prescribing. Physicians are key determinants of the program's effectiveness; yet little is known about their attitudes towards these interventions. We aimed to examine hospital physicians' attitudes toward ASPs and their delivery via computerized systems, and their potential influence on physician antibiotic prescribing habits.

**Methods.** The focus group study was conducted in a large acute tertiary care teaching hospital in Singapore. We recruited physicians by purposive sampling and snowballing. Focus group discussions (FGDs) for junior and senior physicians were conducted separately. They were audio-recorded and transcripts were independently coded with subsequent adjudication. Major themes on facilitators and barriers to the adoption of ASPs were extracted. FGDs and coding occurred concurrently, consistent with the grounded theory approach.

**Results.** Twenty-nine junior physicians and eight senior physicians participated in six and two FGDs respectively. Theme saturation was achieved. Two motivators for adoption of ASPs were: (1) helpfulness of ASP initiatives/strategies; and (2) ASP team members' proactive contact, both of which guide antibiotic prescription. Four barriers were identified: (1) the primary team's clinical judgment is deemed of utmost importance; (2) the attending physician makes the final decision; (3) lack of awareness of ASP initiatives/strategies; and (4) complexity of the CDSS.

**Conclusion.** Themes extracted from the FGDs revealed that communication and education has a major influence on the adoption of ASP. The authors proposed a set of solutions for enhanced uptake of ASP initiatives through inter-professional collaboration. Future work is needed to identify the best and most effective methods to enhance collaboration between the physicians and the ASP team to improve antibiotic prescribing habits.

**Disclosures.** All authors: No reported disclosures.

**696. Variability in Emergency Medicine (EM) Provider Decisions on Hospital Admission and Antibiotic (ABX) Treatment for Acute Bacterial Skin and Skin Structure Infections (ABSSSI)**

Safa Almarzoky Abuhussain, PharmD<sup>1,2</sup>; Michelle Krawczynski, PharmD<sup>3</sup>; Serina Tart, PharmD<sup>3</sup>; Gabrielle Jacknin, PharmD<sup>3</sup>; Kelsey Kohman, PharmD<sup>6</sup>; Athena L. Hobbs, PharmD<sup>7</sup>; Michael D. Nailor, PharmD, BCPS (AQ-ID)<sup>8</sup>; Katelyn R. Keyloun, PharmD, MS<sup>9</sup>; David P. Nicolau, PharmD, FCCP, FIDSA<sup>1</sup> and Joseph L. Kuti, PharmD<sup>1</sup>; <sup>1</sup>Center for Anti-Infective Research and Development, Hartford Hospital, Hartford, Connecticut, <sup>2</sup>Department of Pharmacy, Um-alQura university, Makkah, Saudi Arabia, <sup>3</sup>Hartford Hospital, Hartford, Connecticut, <sup>4</sup>Department of Pharmacy, Cape Fear Valley Health, Fayetteville, North Carolina, <sup>5</sup>Department of Pharmacy, University of Colorado, Aurora, Colorado, <sup>6</sup>Department of Pharmacy, Baylor University Medical Center, Dallas, Texas, <sup>7</sup>Department of Pharmacy, Baptist Memorial Hospital, Memphis, Tennessee, <sup>8</sup>University of Connecticut School of Pharmacy, Storrs, Connecticut, <sup>9</sup>Allergan, plc, Irvine, California

**Session:** 74. Stewardship: Data and Program Planning  
*Thursday, October 5, 2017: 12:30 PM*

**Background.** ABSSSI are a frequent cause of emergency room visits. Physicians (PHY) and Advanced Practice Providers (APP) have many decisions to make during the initial treatment of ABSSSI, including intravenous (IV) vs. oral (PO) ABX, and hospital admission vs. discharge home. There are limited data, however, on factors that influence the provider's decision for the treatment of ABSSSI.

**Methods.** An anonymous survey was offered to EM providers at 5 hospitals across the US. The survey presented patient cases with ABSSSI  $\geq 75\text{cm}^2$  and escalating clinical scenarios including relapse, controlled diabetes (DM), and SIRS. For each case, participants were queried on their decision for admission vs. discharge, ABX therapy (IV, PO, or both), and to rank factors that influenced their ABX decision. Descriptive and inferential statistics were used for analyses.

**Results.** Across the 5 hospitals, 104 providers completed the survey; 59 (56.7%) were PHY and 45 (43.3%) were APP. Experience was evenly represented with 50 (48.1%) providers practicing for  $\geq 5$  years and 54 (51.9%) less than 5 years. For the first case with no relapse, DM, or SIRS, most providers selected PO ABX [95 (91.4%)] and discharge [100 (96.2%)]. In case 2, the presence of relapse resulted in PO ABX for 50 (48.1%) and discharge in 54 (51.9%) of responses. In case 3, the presence of controlled DM resulted in PO ABX for 55 (53.4%) and discharge home in 65 (63.1%) of responses. Four (3.8%) and 13 (12.5%) providers chose to give 1-2 IV doses followed by PO and discharge the relapsed and DM cases, respectively. Compared with APP, PHY more frequently prescribed PO ABX for the DM case (62.7% vs. 40.9%,  $P = 0.046$ ) and incorporated PO ABX into the treatment of the SIRS case (48.3% vs. 22.7%,  $P = 0.015$ ). The addition of SIRS criteria in case 4 resulted in initiation with IV ABX [97

(95.1%)] and admission [100 (96.2%)]. The highest ranked factors influencing ABX selection were infection severity and co-morbidities; the lowest were patient convenience, adverse events, and cost.

**Conclusion.** These data highlight factors influencing EM provider decisions in the treatment of ABSSSI. Variability in responses to patient cases suggests opportunities for education and the development of an ABSSSI clinical pathway to guide treatment.

**Disclosures.** K. R. Keyloun, Allergan: Employee, Salary. D. P. Nicolau, Allergan: Grant Investigator, Scientific Advisor and Speaker's Bureau, Consulting fee, Research grant and Speaker honorarium. J. L. Kuti, Allergan: Grant Investigator, Investigator, Scientific Advisor and Speaker's Bureau, Consulting fee, Research grant and Speaker honorarium

**697. Effects of Policy and Resources on Antimicrobial Stewardship Interventions in the VA: Applying a Transaction Cost Economics Framework**

Ann Chou, PhD, MPH<sup>1</sup>; Yue Zhang, PhD<sup>2</sup>; Makoto Jones, MD, MS<sup>3</sup>; Christopher J. Graber, MD, MPH, FIDSA<sup>4</sup>; Matthew Goetz, MD<sup>5</sup>; Karl Madaras-Kelly, PharmD, M.P.H.<sup>6</sup>; Matthew Samore, MD, FSHEA<sup>7</sup>; Allison Kelly, MD, MSOH<sup>8</sup> and Peter Glassman, MBBS, MSc<sup>9</sup>; <sup>1</sup>Family and Preventive Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, OK, <sup>2</sup>Division of Epidemiology, Department of Medicine, University of Utah, Salt Lake City, UT, <sup>3</sup>Internal Medicine, VA Salt Lake City Health Care System, Salt Lake City, UT, <sup>4</sup>Infectious Diseases Section, VA Greater Los Angeles Healthcare System, Los Angeles, California, <sup>5</sup>Infectious Diseases, VA Greater Los Angeles Healthcare System, Los Angeles, California, <sup>6</sup>Clinical Pharmacy, College of Pharmacy, Idaho State University and VA Medical Center, Boise, ID, <sup>7</sup>University of Utah School of Medicine, Division of Epidemiology, Salt Lake City, UT, <sup>8</sup>Internal Medicine/Infectious Diseases, University of Cincinnati College of Medicine, Cincinnati, Ohio, <sup>9</sup>David Geffen School of Medicine, University of California at Los Angeles, Los Angeles, California

**Session:** 74. Stewardship: Data and Program Planning  
*Thursday, October 5, 2017: 12:30 PM*

**Background.** Inappropriate antimicrobial use poses a serious threat to patient safety. Various antimicrobial stewardship interventions (ASI) have been proposed to optimize antimicrobial use and improve patient outcomes, but ASI implementation remains an organizational challenge. This study examines associations between policy and resources and ASI implementation/uptake in VA facilities.

**Methods.** Implementing new practices requires changes in organizational structure, culture, and work. As ASIs require coordination among staff and activities, the transaction cost economics (TCE) perspective is used to examine ASI uptake. TCE dimensions describe: (1) uncertainty; (2) frequency of interactions; and (3) asset specificity. Using a cross-sectional design, surveying 140 VA facilities in 2015, outcomes examined were: (1) facility tracking 3 or more ASIs; and (2) barriers to optimal antimicrobial use. Independent variables include those describing site specificity, resources, and various AS policies as proxies for uncertainty. Multivariable logistic regressions with Least Absolute Shrinkage and Selection Operator approach was used to identify the subset of variables and generate odds ratios across TCE dimensions associated with ASI uptake.

**Results.** Infectious disease attendings in medical wards, clinical pharmacists assigned to teams, documentation of indication in medical record/order entry, policies on intravenous to oral conversion, electronic tools were associated with greater ASI uptake. Similar variables also decreased the likelihood of facilities experiencing barriers to optimal antibiotic use.

**Conclusion.** Overall, site specificity, human resources, physical assets, and policies facilitated ASI uptake and ameliorated barriers to optimal antimicrobial use. These variables represent mechanisms that improved efficiencies of coordination and provided resources to achieve stewardship goals. ASI uptake represents a complex change, requiring a system-wide response. The TCE framework is useful to inform facilities in their strategies to adopt new ways of organizing in order to manage emerging demands of changing clinician work, coordinate across units/departments, and develop tools to optimize antimicrobial use.

**Disclosures.** All authors: No reported disclosures.

**698. Antimicrobial Stewardship Curriculum and Training among Health Professional Schools and Residency Training Programs in California**

Sean O'Malley, MPH; Lynn Janssen, MS, CIC, CPHQ and Erin Epton, MD; Healthcare-Associated Infections Program, Center for Healthcare Quality, California Department of Public Health, Richmond, California

**Session:** 74. Stewardship: Data and Program Planning  
*Thursday, October 5, 2017: 12:30 PM*

**Background.** Improving antimicrobial use is the single most important action to slow development and spread of antimicrobial resistance. Antimicrobial prescribing habits are likely developed early in education or clinical training, but information about curricula is lacking.

**Methods.** In November 2016, the California Department of Public Health Healthcare-Associated Infections Program distributed a 19-item survey to 65 health professional schools (dentistry, medicine, nurse practitioner, pharmacy, physician assistant) and 287 residency and fellowship training programs (dentistry, emergency medicine, family medicine, internal medicine, pediatrics, pharmacy, infectious disease). The survey assessed knowledge, attitudes, and practices related to antimicrobial stewardship (AS) and antimicrobial resistance (AR) as well as antimicrobial stewardship curriculum and training activities.