

**621. Reporting Behaviors and Perceptions Towards the National Healthcare Safety Network Antimicrobial Use (AU) and Antimicrobial Resistance (AR) Options**

Brian J. Werth, PharmD<sup>1</sup>; Brian J. Werth, PharmD<sup>1</sup>; Thomas J. Dilworth, PharmD<sup>2</sup>; Zahra Kassamali Escobar, PharmD<sup>3</sup>; Alan E. Gross, PharmD<sup>4</sup>; Katie Suda, PharmD, MS<sup>5</sup>; Jessina C. McGregor, PhD, FSHEA<sup>6</sup>; Andrew M. Morris, MD<sup>7</sup>; Kerry LaPlante, PharmD<sup>8</sup>; Kristi Kuper, PharmD, BCPS<sup>9</sup>; <sup>1</sup>University of Washington, Seattle (Washington), Washington; <sup>2</sup>AdvocateAuroraHealth, Aurora St. Luke's Medical Center, Milwaukee, Wisconsin; <sup>3</sup>UW Medicine Valley Medical Center, Renton, Washington; <sup>4</sup>University of Illinois, Chicago, IL; <sup>5</sup>University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania; <sup>6</sup>Oregon State University, Portland, Oregon; <sup>7</sup>University of Toronto, Toronto, Ontario, Canada; <sup>8</sup>Rhode Island Infectious Diseases Research Program, Kingston, RI; <sup>9</sup>DoseMeRx/Tabula Rasa HealthCare, Katy, Texas

**Session:** P-23. Clinical Practice Issues

**Background:** Antibiotic use (AU) and antibiotic resistance (AR; AUR) reporting to National Healthcare Safety Network (NHSN) is suboptimal by US hospitals. The Society of Infectious Diseases Pharmacists (SIDP) and the Society for Healthcare Epidemiology of America (SHEA) conducted a survey of their membership to 1) Identify characteristics of US health systems that report AUR data 2) Determine how NHSN AUR data are used by health systems and 3) Identify barriers to AUR reporting.

**Methods:** An anonymous survey was posted on SurveyMonkey from 1/21-2/21/2020 and links were emailed to SIDP and SHEA Research Network members. Data were analyzed in Excel and RStudio. Respondent and hospital data were reported as frequencies and percentages. Fisher's Exact test was used to compare survey responses from NHSN AUR reporters to non-reporters.

**Results:** A total of 238 individuals from 43 states responded to our survey. Respondents were primarily pharmacists (84%), from urban (45%), non-profit medical centers (80%) with >250 beds (65%). 62% of respondents reported to the AU option while 19% reported to the AR option. Respondents not using software for local AU or AR tracking were less likely than those using any software for local tracking to report to AU (19% vs 64%) and AR (2% vs 30%) options (P < 0.0001). Among AU and AR reporters 41% and 54% used clinical decision support software to aggregate compile data for upload while 54% and 38% used their electronic health record, and 5% and 8% used another method. Over half of AU (56%) and AR (51%) reporters upload data manually. Regular use of the NHSN data analysis tools was reported by 36% and 9% of those reporting AU and AR data respectively. The most common barriers to reporting were related to technical issues (software, IT support, data formatting) and time/salary support. Among non-reporters, increased expectations to report and better software solutions were most commonly identified as the best ways to increase reporting.

**Conclusion:** Efforts to improve AUR reporting should focus on software solutions and increasing the utility of AUR analytical tools. Increasing expectations to report may also help to improve reporting rates. The lower rate of AR vs AU reporting suggests that interventions should also target the AR option.

**Disclosures:** Brian J. Werth, PharmD, Shionogi Inc. (Grant/Research Support) Kerry LaPlante, PharmD, Merck (Advisor or Review Panel member, Research Grant or Support) Ocean Spray Cranberries, Inc. (Research Grant or Support) Pfizer Pharmaceuticals (Research Grant or Support) Shionogi, Inc. (Research Grant or Support)

**622. Risk Factors for 30-Day Unplanned Readmissions in Patients Discharged with Outpatient Parenteral Antimicrobial Therapy**

Megan Shah, PharmD, BCIDP<sup>1</sup>; Catherine Kidd, MSN, AG-ACNP<sup>1</sup>; Tania A. Thomas, MD, MPH<sup>1</sup>; Joshua Eby, MD<sup>1</sup>; <sup>1</sup>University of Virginia Health System, Charlottesville, Virginia

**Session:** P-23. Clinical Practice Issues

**Background:** Outpatient parenteral antimicrobial therapy (OPAT) programs have shown to reduce hospital readmissions; however, 20-25% of OPAT patients are readmitted. As 30-day readmissions is a healthcare quality measure, it is important to recognize predictors for readmissions in OPAT patients in an effort to minimize risk factors and optimize patient outcomes. The aim of this study was to identify modifiable and non-modifiable risk factors for 30-day unplanned readmission in patients discharged with OPAT.

**Methods:** This was a retrospective cohort study of patients admitted to University of Virginia (UVA) Health System between March 2019 and December 2019 who were discharged home with intravenous antimicrobials followed by the UVA OPAT program. Data collected included patient demographics, comorbidities, infection diagnosis, source control, and antimicrobial class. Variables were compared between patients with a 30-day unplanned readmission and those without a readmission. Mann-Whitney U, Pearson chi-squared, and Fisher's exact tests were utilized, as appropriate. A multiple logistic regression analysis was performed to determine predictors of 30-day unplanned readmission.

**Results:** There were 334 OPAT patients who met inclusion criteria. Median age was 58 years, 58% were male, and the most common infection diagnoses were bone/joint (49%), bloodstream (22%), and endovascular (13%). There were 64 (19%) patients who had an unplanned 30-day readmission. The most common reasons for readmission included non-infection related (45%), worsening infection (28%), and antimicrobial-related complication (17%). Readmitted patients were more likely to have a higher Charlson Comorbidity Index (CCI); prior admissions; bloodstream, endovascular, or pulmonary infection; no source control; and an infection caused by a multi-drug resistant organism. CCI was found to be an independent predictor of readmission (OR 1.096, 95% CI 1.001-1.200).

**Conclusion:** Unplanned readmissions were common in patients discharged with OPAT. There should be an emphasis on interventions to prevent readmissions in OPAT patients, particularly those with high-risk clinical characteristics.

**Disclosures:** All Authors: No reported disclosures

**623. Self-Administered Outpatient Parenteral Antimicrobial Therapy (S-OPAT) in Uninsured Patients**

Yasir Hamad, MD<sup>1</sup>; Jaspur Min, MD<sup>2</sup>; Yvonne Burnett, PharmD<sup>3</sup>; <sup>1</sup>Washington University, St. Louis, MO; <sup>2</sup>Washington University School of Medicine, Saint Louis, Missouri; <sup>3</sup>St. Louis College of Pharmacy, Saint Louis, Missouri

**Session:** P-23. Clinical Practice Issues

**Background:** Uninsured patients requiring long-term intravenous (IV) antimicrobials do not have access to outpatient parenteral antimicrobial therapy (OPAT) and often remain hospitalized for the duration of their treatment, transition to inferior oral antimicrobials, or leave against medical advice. A hospital-supported self-administered OPAT (S-OPAT) program was piloted in uninsured patients to decrease hospital length of stay and improve access to care.

**Methods:** Uninsured adult patients requiring IV antimicrobials were enrolled in an S-OPAT pilot study from July 2019 to April 2020. Patients with drug use history or documented non-adherence were excluded. S-OPAT patients attended weekly clinic visits for blood draws, dressing changes, and medication supply. The measured outcomes were hospital days saved, and potential income generated by earlier discharges. The latter was calculated by multiplying the number of hospital days saved by the daily charge for a hospital bed to insured patients.

**Results:** Seventeen patients were enrolled in S-OPAT, 14 (82%) were males, 8 (47%) were black, and the mean age was 39 years. The most common indication for OPAT was bone and joint infections in 12 (71%), and most commonly used antibiotic was ceftriaxone in 12 (71%) patients (Table). Early discontinuation occurred in 3 (17%) patients due to clinic visit non-adherence resulted in 2 (12%) and adverse drug events in 1 (6%). Only one (6%) patient had unplanned hospital readmission during OPAT. Transition to S-OPAT resulted in 533 hospital days avoided, and a net saving of approximately \$900,000.

**Conclusion:** S-OPAT model is safe and can enhance care for uninsured patients while optimizing health-system resources.

Table

**Table:** Characteristics of S-OPAT Patients

Patient Characteristics	N (%) or Median (Range)
Male	14 (82%)
Age (years)	42 (22-64)
<b>Race</b>	
White	8 (47%)
Black	8 (47%)
Hispanic	1 (6%)
<b>Diagnosis</b>	
Bloodstream infection	1 (6%)
Bone and joint infections	12 (71%)
Skin and soft tissue infections	3 (17%)
Intra-abdominal Infection	1 (6%)
<b>Antibiotics</b>	
Ceftriaxone	12 (71%)
Daptomycin	6 (35%)
Ertapenem	3 (17%)
<b>Duration of OPAT Therapy (days)</b>	37 (6-48)

**Disclosures:** All Authors: No reported disclosures

**624. Significant Institutional Cost Savings from OPAT-Facilitated Discharge for Patients with Challenging Situations**

Bryan Alexander, PharmD<sup>1</sup>; Scott Bergman, PharmD, FCCP, FIDSA, BCPS<sup>1</sup>; Trevor C. Van Schooneveld, MD, FACP<sup>2</sup>; Nicolas W. Cortes-Penfield, MD<sup>2</sup>; <sup>1</sup>Nebraska Medicine, Omaha, Nebraska; <sup>2</sup>University of Nebraska Medical Center, Omaha, Nebraska

**Session:** P-23. Clinical Practice Issues

**Background:** Outpatient parenteral antimicrobial therapy (OPAT) programs are becoming a standard of care, however, program cost justification remains a challenge. One area of focus for institutions is facilitating timely discharge from the inpatient setting, and difficult to discharge patients are a group with which OPAT teams can be particularly impactful.

**Methods:** This retrospective review identified patients intervened upon by the Nebraska Medicine OPAT team during the initial nine months after program implementation (4/1/19 - 12/31/19) for which routine efforts at discharge by primary teams

had failed. Patients were planned for extended inpatient stays to complete the full duration of parenteral antibiotic therapy due to discharge issues given the therapy plan initially recommended by infectious disease consult teams. Outcomes evaluated included inpatient days of therapy avoided, associated financial metrics, and 30-day readmission rates. A matched cohort of patients with similar lengths-of-stay, infectious disease indications, medication use, and lack of major complications was identified to calculate a cost per inpatient day avoided.

**Results:** A total of 17 difficult to discharge patients were intervened on by the OPAT team, leading to avoidance of 429 planned inpatient days. Based on calculation from internal matched cohort data, these OPAT interventions avoided an estimated \$943,000 in total inpatient costs. All-cause 30-day readmission was 24% (4 of 17 patients). Additionally, 15 of these therapy courses were shifted to hospital-associated outpatient infusion centers. Facilitation of enrollment for 11 of these patients in pharmaceutical manufacturer patient assistance programs resulted in replacement of outpatient medication totaling over \$28,000 in value. Reimbursements for two additional patients through either governmental or private insurance generated over \$11,000 in margin for the health system.

**Conclusion:** Attention to complex discharge facilitation by OPAT programs can be a significant contribution to program cost justification, while also transitioning patients to therapy plans that lead to similar clinical outcomes when compared to the overall OPAT population.

**Disclosures:** All Authors: No reported disclosures

### 625. Sustained Efforts Improve Adherence to Monitoring for Solid Tumor Patients Discharged on Outpatient Parenteral Antimicrobial Therapy (OPAT) at a Comprehensive Cancer Center

Alison Robins, MD<sup>1</sup>; Patrick McDaniel, PharmD<sup>2</sup>; Natalie J. Dailey Garnes, MD, MPH, MS<sup>3</sup>; Meagan Rowan, MPAS, PA-C<sup>2</sup>; Jalen Bartek, BS, RN<sup>2</sup>; <sup>1</sup>Baylor College of Medicine, Houston, Texas; <sup>2</sup>University of Texas MD Anderson Cancer Center, Houston, TX; <sup>3</sup>The University of Texas MD Anderson Cancer Center, Houston, Texas

**Session:** P-23. Clinical Practice Issues

**Background:** OPAT helps reduce hospital length of stay, but 1 in 4 patients is readmitted within 30 days of discharge. Follow up < 30 days after discharge and laboratory monitoring during therapy have been shown to reduce hospital readmissions. However, few OPAT studies have included patients with malignancies, who may not experience the same benefits due to increased risks for hospital admission and infection related to antineoplastic therapy. We started an OPAT program to increase laboratory monitoring and clinic follow up among patients with solid tumors, attempting to also decrease readmissions.

**Methods:** We obtained demographic data and baseline frequencies of laboratory monitoring, ID clinic follow up, 30-day OPAT-related readmissions, Emergency Center (EC) visits, and deaths by retrospective chart review. We conducted multiple interventions from June 2018-January 2020: clarifying physician recommendations for laboratory monitoring and follow up by using a standardized electronic medical record template, communicating recommendations to case management, and changing the lab ordering workflow. We compared frequencies after interventions to baseline by using Fisher's exact test.

**Results:** Most commonly observed malignancies in our patient cohort included genitourinary, breast, gastrointestinal, gynecologic, and head and neck. The most commonly treated infections included abscess, bacteremia, and skin and soft tissue. The percentage of patients without recommended lab monitoring decreased from 32.3% to 15.3% (p=0.03). We observed trends toward improved ID clinic follow up (54.8% to 71.8%; p=0.12) and decreased 30-day OPAT-related readmissions from 16.7% to 8.6% (p = 0.17). We observed no difference in mortality or EC visits.

**Conclusion:** OPAT-treated infections in our solid tumor patient cohort differed from those reported commonly. Through continued interventions, we improved lab monitoring rates among solid tumor patients with trends toward improved ID clinic follow up and decreased readmission rates. Our findings suggest that despite competing reasons for hospital readmission, OPAT may still benefit this population.

**Disclosures:** All Authors: No reported disclosures

### 626. Tackling the HIV Epidemic in South Florida: Patient Insights on Approaches for HIV Counseling, Testing, and Access to Prevention or Treatment

Stephen J. Fallon, PhD<sup>1</sup>; Kimberly Molnar, M.Acc.<sup>2</sup>; Ekaterina S. Taneva, PhD<sup>3</sup>; Laura Simone, PhD<sup>3</sup>; Jeffrey Carter, PhD<sup>3</sup>; Tamar Sapir, PhD<sup>3</sup>; <sup>1</sup>Latinos Salud, Wilton

Manors, Florida; <sup>2</sup>The AIDS Institute, Tampa, Florida; <sup>3</sup>PRIME Education, LLC, Fort Lauderdale, FL

**Session:** P-23. Clinical Practice Issues

**Background:** The South Florida Metropolitan Statistical Area has for several years recorded the highest HIV incidence in the nation, and prevalence in the top three of all counties. To address the alarming disparity in HIV impact, we developed a survey study to learn about the beliefs, attitudes, and perspectives of persons who accessed services at an HIV community-based organization in South Florida.

**Methods:** Surveys were administered in English and Spanish to 109 persons who visited a community-based HIV service provider (Latinos Salud) at any of its three South Florida sites in April 2019. The survey evaluated the participants' perspectives on different avenues for HIV counseling, screening, and accessing HIV medications for prevention or treatment.

**Results:** The majority of survey participants were male (90%), homosexual/gay/queer (75%), and Hispanic/Latino (56%; Table 1). Participants' self-reported their HIV status as negative (64%), positive (30%), or unknown (6%; Table 1). Of those not currently living with HIV, 77% reported having been tested within the past 6 months, and 81% reported recent engagement in high-risk activities (Table 1).

Most participants considered using social media to promote awareness of HIV and related services a good idea (Table 2). Large proportions of participants endorsed receiving HIV counseling through in-person conversations with clinicians (91%), staff at community-based organizations (83%), friends (83%), telehealth visits (69%), conversations with teachers (63%), or church members (56%; Table 2). Most participants endorsed a range of both clinical (e.g. local health clinic) and non-clinical (e.g. mobile van) locations as acceptable settings for HIV testing (Table 2). Large proportions of participants endorsed receiving medications to prevent or treat HIV immediately after testing (82%), by home delivery (78%), or through telehealth (60%; Table 2). Meaningful associations were found between certain patient demographics (race/ethnicity, testing history, or insurance status) and the participants' perspectives on specific strategies (Table 3).

Table 1. Participant Characteristics

Table 1. Participant Characteristics

	Survey responses (n=109)
<b>Demographic Characteristics</b>	
Mean years of age	37
Mean years living in the United States	25
Gender	
% Male	90
% Female	8
% Transgender	2
Sexual Orientation	
% Homosexual, gay, or queer	76
% Bisexual	12
% Heterosexual/straight	7
% Other	5
Race/Ethnicity	
% Hispanic or Latino (White)	56
% Non-Hispanic or Latino (White)	30
% Mixed or Other	11
% Black or African American	2
% Asian	1
Health Insurance Status	
% Yes	73
% No	22
% Not sure	5
<b>HIV-Related Characteristics</b>	
Currently Living with HIV	
% Yes	30
% No	64
% Not sure	6
Most Recent HIV Screening Test <sup>a</sup>	
% Within Past 6 Months	77
% Over 6 Months Ago	17
% Never	4
% Not sure	3
Participation in high-risk activities	
% Receptive anal sex without a condom	29
% Insertive anal sex without a condom	34
% Group sex	14
% Chemsex	3
% Injection drug use	1
% None of the above	19

<sup>a</sup>Time since last HIV screening test was assessed only among participants who were not currently living with HIV or did not know their HIV status.