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

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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.

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

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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.

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

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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)
Race	
White	8 (47%)
Black	8 (47%)
Hispanic	1 (6%)
Diagnosis	
Bloodstream infection	1 (6%)
Bone and joint infections	12 (71%)
Skin and soft tissue infections	3 (17%)
Intra-abdominal Infection	1 (6%)
Antibiotics	
Ceftriaxone	12 (71%)
Daptomycin	6 (35%)
Ertapenem	3 (17%)
Duration of OPAT Therapy (days)	37 (6-48)

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

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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