2081. Low 30-Day Hospital Readmission Rates in Medicare Patients Receiving Outpatient Parenteral Antimicrobial Therapy (OPAT) in Physician Office Infusion Centers

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Background. The Hospital Readmissions Reduction Program was established under the Affordable Care Act in 2012 to reduce payments to hospitals (hosp) with excess readmissions. Standardized readmission measures include all-cause unplanned readmissions within 30 days of hosp discharge, regardless of initial diagnosis. To avoid penalties, post-acute care, including OPAT, must have a neutral or favorable impact on 30-day hosp readmissions (30-dHR). We assessed 30-dHR for Medicare (MCR) patients receiving OPAT in ID physician office infusion centers (POICs).

Methods. All records of MCR patients were identified that were discharged from hosp to 15 national ID POICs. From those, 200 records were randomly selected and reviewed for unplanned 30-dHR. Additional data extracted were demographics, Charlson comorbidities index (CCI), infection diagnosis, therapy and reasons for re-admission. The 30-dHR was compared with national average estimates obtained from the Medical Expenditure Panel Survey (MEPS) database. Multivariate logistic regression was performed with $P < 0.05$ being statistically significant.

Results. Mean pt age was 73.5 years (range: 65–97) with 56% males. Infections included bone and joint (34%), genitourinary (16%), complicated skin and skin structure (15%), bacteremia (13%), respiratory (10%), intra-abdominal (7%), endocarditis (2.5%), and central nervous system (2.5%) with a mean OPAT duration of 21 ± 18 days. Overall, 30-day HR rate was 11% ($n = 22$). Median days from initial hosp discharge to readmission was 13 (range 2–28). Reasons for 30-day HR included disease exacerbation unrelated to infection ($n = 7$, 32%), worsening infection ($n = 6$, 27%), adverse drug reaction ($n = 5$, 23%), new infection ($n = 3$, 14%), and line complication ($n = 1$, 4%). A logistic regression model (Table 1) indicates that 30-day HR rates reported in MEPS are significantly higher than observed for patients treated with OPAT in POICs after adjustment for age, gender, CCI and initial diagnosis (OR = 3.16, 95% CI: 1.89–5.28, $P < 0.0001$).

Conclusion. Patients receiving OPAT in POICs had significantly lower 30-day HRs compared with a national average, and in a more comorbid population. Our data suggest that continuous oversight of patients by ID physicians and infusion center staff in the POIC setting may prevent hospital readmissions.

Table 1. Multivariate Logistic Regression of 30-Day Hospital Readmission Rates in Study Cohort (POIC) *vs.* National Average Estimates (Comparator).

Variable	POIC	Comparator*	Odds Ratio (OR)	95% Confidence Interval (CI)	p-Value
Comparator *vs.* POIC (30d-HR)	200 (11%)	902 (28.6%)	3.16	1.89 - 5.28	<0.0001
Age (mean years±SD)	73.5±6.5	76.3±2.1	0.99	0.97 - 1.02	0.866
Gender (male pts)	112	362	1.08	0.81 - 1.44	0.602
Charlson index (mean±SD)	2.8±0.7	2.1±1.7	1.09	1.01 - 1.18	0.037
Infection diagnosis, n (%)					
Respiratory	20 (10)	473 (53)	1.43	0.92 - 2.20	0.109
Bone and joint	67 (34)	38 (5)	0.79	0.42 - 1.48	0.466
Bacteremia	26 (13)	104 (11)	1.23	0.78 - 1.94	0.367
Central nervous system	5 (2.5)	n/a			
Genitourinary	32 (16)	114 (12)	0.93	0.58 - 1.50	0.789
Complicated skin/skin structure	31 (15)	119 (13)	0.87	0.52 - 1.44	0.593
Endocarditis	5 (2.5)	n/a			
Intra-abdominal	14 (7)	54 (6)	0.45	0.31 - 0.68	0.0001

*; obtained from Medical Expenditure Panel Survey (MEPS) database, n/a; not available in MEPS.

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2082. Evaluation of Outpatient Parenteral Antimicrobial Therapy (OPAT) Processes and Outcomes Among Patients Within an Integrated Health System

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Background. Successful management of outpatient parenteral antimicrobial therapy (OPAT) optimizes outcomes and reduces cost. We examined (i) local OPAT processes and outcomes, (ii) whether OPAT constraints favoring once daily antibiotics promoted suboptimal therapeutic choices, and (iii) whether these data could drive OPAT improvements.

Methods. Patients ≥ 18 years of age who received > 48 hours of OPAT at five infusion centers within a single health-system from January 1, 2018 to March 1, 2018 were eligible for review. The following patient- and treatment-level data were collected: age, gender, drug allergies, laboratory studies and frequency, OPAT indication, infection source, pathogen(s), antibiotic sensitivities, antibiotic therapy and duration, electronic order set used, prescriber specialty, evidence of failed prior oral or intravenous (IV) therapy and IV access type. The primary outcome was OPAT success: the clinical resolution of the infection without relapse within 30 days of antibiotic therapy completion. Secondary outcomes included change in antibiotic therapy due to lack of clinical improvement, adverse drug reactions and IV access complications. A sub-analysis of patients who received daptomycin and/or ertapenem was also performed. OPAT practice was compared with 2018 Infectious Diseases Society of America OPAT guidelines (Norris et al. *Clin Infect Dis.* 2019;68(1):e1-e35).

Results. A total of 108 patients were evaluated. Patient demographics, treatment and outcomes are shown in Table 1. The most common OPAT indications were bone/joint, bacteremia and skin infection. Third-generation cephalosporins, carbapenems and daptomycin were most commonly prescribed. In 34.3% and 24.2% of daptomycin and ertapenem cases, respectively, β-lactam therapy could have been utilized. Assessment of prior failed antibiotic therapy, patient allergies and pathogen-site pairing found 28.7% of patients were eligible for oral therapy upon OPAT initiation.

Conclusion. Several components of our local OPAT aligned with current guidelines. Initial OPAT patient selection may benefit from added scrutiny. Given the high volume of once daily antibiotics administered for convenience there is an internal opportunity to facilitate multi-daily infusions.

Table 1. Patient Demographics, Treatment and Outcomes

Demographics	
Male	54 (50.0)
Female gender	54 (50.0)
Mean Age	55
Age ≥ 65 years of age	51 (47.0)
Antibiotic allergy	50 (46.3)
Treatment	
Weekly laboratory studies ordered	85 (78.7)
Infectious Diseases Prescriber	87 (80.5)
Electronic OPAT order set used	108 (100.0)
>1 intravenous antibiotic used	19 (17.6)
Oral antibiotic therapy prescribed after OPAT	22 (20.3)
Peripherally inserted central venous catheter access	87 (82.1)
IV access removed after OPAT	104 (98.1)
Antibiotic Duration (days)	
≤7	21 (19.4)
8-14	29 (26.9)
15-28	25 (23.1)
29-42	19 (17.6)
>42	14 (13.0)
Primary Outcome	
OPAT Success	94 (87.0)
Secondary Outcomes	
Change in intravenous antibiotics during OPAT	13 (12.0)
Adverse drug reaction during OPAT	15 (13.8)
Intravenous access complications	3 (2.8)

All data are presented as no. (%) unless otherwise noted.
OPAT, outpatient parenteral antimicrobial therapy

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2083. A Targeted Remote Audit and Feedback Intervention Utilizing a Local Non-ID Trained Pharmacist

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Background. Tele Stewardship (tASP) is a developing model for hospitals without local ID expertise. We report results of a tASP initiative using a hospital's local non-ID trained pharmacist to conduct ertapenem (erta) audit and feedback (A&F).

Methods. Evaluation of erta use before and after implementation of a collaborative A&F process from October 2018 to March 2019. A central ID physician and ID pharmacist with EMR access reviewed charts of patients receiving erta Mon-Fri by phone with a local Critical Care trained pharmacist. Advice was given to the local pharmacist on when and how to intervene. The local pharmacist made all interventions. Acceptance rates and time involved were recorded. Usage was tracked as DOT/1,000 PD of inpatient usage. No other new local ASP interventions were undertaken during this time.

Results. 120 erta orders were reviewed. Figure 1 reveals usage before and after implementation. Median usage dropped 55%. Median purchasing cost decreased by 73%. 51 unique patients received erta in the month prior to intervention, and 35 patients per month on average received erta afterwards. 30 providers ordered erta in the month prior to intervention, and 17 providers per month on average ordered erta afterwards. The overall intervention acceptance rate was 88%, and Figure 2 shows the