

Outpatient Parenteral Antimicrobial Therapy Readmissions from Post-Acute Care Facilities due to Coronavirus Disease 2019

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Introduction

- Risk factors for morbidity and mortality in coronavirus disease 2019 (COVID-19) include older age, diabetes, immunocompromised hosts, and cardiac and pulmonary comorbidities. Nursing home residency has also been recognized as an independent risk factor with high mortality rate.
- Outpatient Parenteral Antimicrobial Therapy (OPAT) is a convenient way for patients to complete a course of IV antimicrobials outside the hospital setting, leading to shorter duration of hospitalization and reduced healthcare expenditure.
- However, due to insurance reasons, patients requiring may be discharged to a post-acute care facility (PACF) instead of to home for the sole purpose of receiving intravenous antibiotics, placing these patients at higher risk of COVID-19 infection.
- Study Objective:** Evaluate hospital readmissions due to COVID-19 in OPAT patients

Methods

Study population:

- Retrospective review of adult OPAT patients between March 16, 2020 – May 31, 2020.
- Patients were identified via query to the REDCap OPAT database maintained by the OPAT program.
- OPAT and readmission related demographic, clinical, and laboratory data was reviewed via the electronic medical record.
- Patients with ongoing courses of OPAT as of May 31, 2020 were excluded

Statistical Analysis:

Descriptive analysis of patient demographics, baseline characteristics, care-related measures, and OPAT readmissions.

Results

Figure 1: Study Population

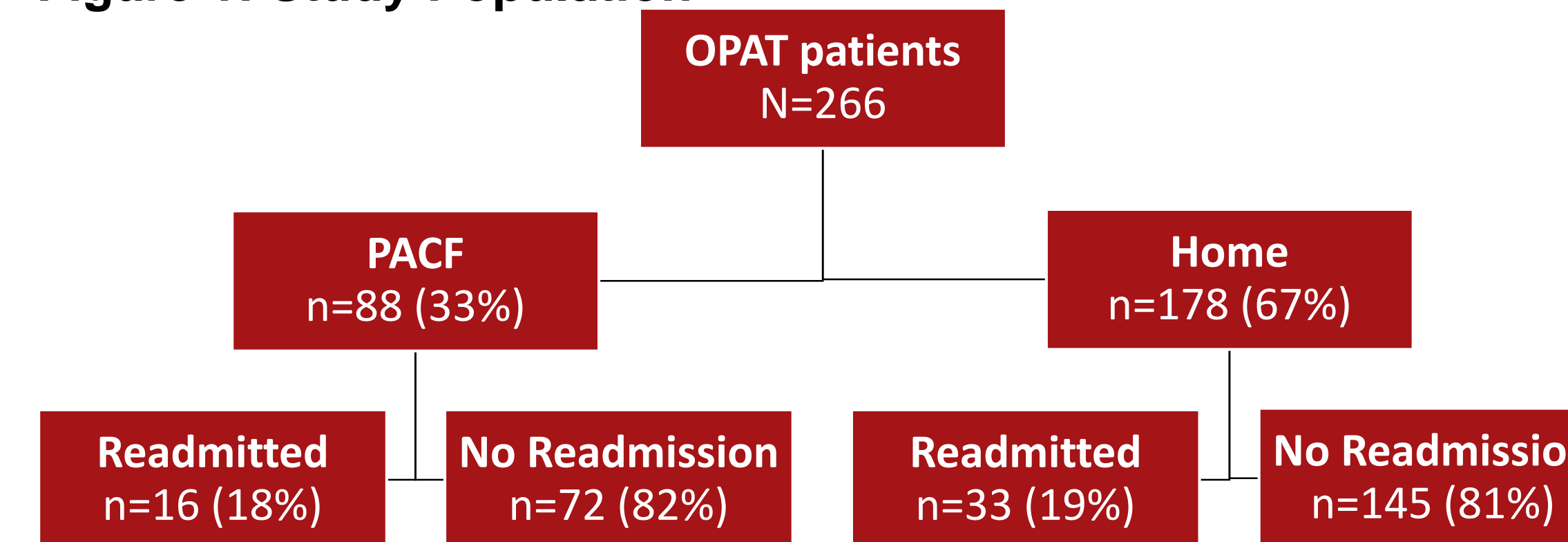


Table 1: Baseline Characteristics

	PACF OPAT n = 16	Home OPAT N = 33
Male, n (%)		
Age, median (range)	69 (28-81)	59 (22-80)
Comorbidities, n (%)		
Cardiac disease	11 (69%)	20 (61%)
Diabetes	8 (50%)	14 (42%)
Renal disease	8 (50%)	8 (24%)
Chronic pulmonary disease	2 (13%)	8 (24%)
Immune compromised	1 (6%)	6 (18%)
Infection, n (%)		
Bloodstream/endocarditis/cardiac device	10 (63%)	9 (27%)
Bone and joint	7 (44%)	13 (39%)
Pneumonia/pulmonary	0	3 (9%)
Skin or skin structure	2 (13%)	4 (12%)
Antimicrobials, n (%)		
Beta-lactam	13 (81%)	21 (64%)
Vancomycin	3 (6%)	10 (30%)

Table 2: Readmission Outcomes

	PACF OPAT N = 16	Home OPAT N = 33
COVID-19 readmission, n (%)	3 (19%)**	0
Reason for readmission, n (%)		
New infection	5 (31%)	2 (6%)
Worsening infection	4 (25%)	11 (33%)
Non-infection related	5 (31%)	14 (42%)
Planned readmission	0	2 (6%)
Other/unknown	2 (13%)	4 (12%)
Days to readmission, median (range)	27 (5-48)	21 (7-137)

**Each readmission was from a unique PACF

Conclusion

- Patients discharged to post-acute care facilities are at increased risk of COVID-19 infection.
- Efforts should be made to increase availability of home OPAT services for patients who have no need for skilled care other than for intravenous antibiotics.

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