Impact of a Dedicated Outpatient Parenteral Antibiotic Therapy Clinic on Patient Outcomes

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Introduction: Outpatient parenteral antibiotic therapy (OPAT) can provide substantial benefits to both patients and the healthcare system. However, OPAT is also associated with risks that can end up harming patients, such as increasing the risk of rehospitalization and adverse events. We developed a predictive model of 30-day readmission among patients discharged on OPAT by using patient populations before and after the establishment of a dedicated OPAT clinic.

Methods: A retrospective cohort study was conducted by using medical records. Logistic regression was applied to determine the association between readmission and visit to OPAT clinics while also examining covariates including sex, comorbidities, pathogen, and planned length of therapy. We hypothesized that at least one visit to the OPAT clinic would reduce the risk for readmission within 30 days.

Results: Among 368 patients, 240 (65.2%) received outpatient follow-up care at the OPAT clinic. 88 (23.9%) were readmitted within 30 days. A multivariate logistic regression model indicated that an OPAT clinic visit was associated with a reduced risk of readmission compared to those that did not visit an OPAT clinic (odds ratio of 0.45 [95% confidence interval 0.27 – 0.78]) after adjusting for covariates that were selected using outcomes of univariate analyses.

Conclusion: The predictive model for readmission developed in this study can be utilized to establish interventions to prevent readmission for OPAT patients. Future studies will have to continue examining the association between OPAT clinic visits and readmission along with other predictors to further improve the outcomes of OPAT patients.