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Evaluation of a Coronary Artery Bypass Graft Care Steps Program

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INTRODUCTION

- In the United States (U.S.), 20% of post-cardiothoracic surgery patients experience unplanned hospital readmission within 30 days of discharge
- Postsurgical hospital readmissions lead to poor patient outcomes and increased healthcare costs
- Pre and post-surgery education may reduce post-surgical readmissions within 30 days of discharge
- In June 2016, an outpatient cardiothoracic clinic implemented an educational program called “CABG Care Steps” to support decreased post-cardiothoracic surgery hospital readmissions

OBJECTIVES

A program evaluation was conducted to :

1. Evaluate observed and forecasted 30-day readmissions among patients treated in the clinic
2. Explore the association between comorbidities and hospital readmission among adults
3. Compare readmission rates of the clinic to national average for post-cardiothoracic surgery

MATERIALS AND METHODS

- Retrospective, de-identified data were provided on patients treated at the large medical center post-cardiothoracic surgery between the years 2014 -2020
- Data included demographics, patient pre or post-surgical treatment at the clinic, and readmission to the medical center within 30 days of hospital surgery discharge date
- Data were analyzed using descriptive statistics, binary logistic regression, and a time-series analysis in SPSS version 26

RESULTS

- N=9,454 cases met inclusion criteria and were analyzed for this project
- Aim 1: Time-series analysis revealed significant downward trend ($p < 0.001$) of observed (Figure 1) and forecasted (Figure 2) hospital re-admissions post-program implementation
- Aim 2: Patients with more versus less comorbidities were twice as likely to readmit to hospital within 30 days (odds ratio=1.9, $p < 0.001$)
- Aim 3: Hospital readmission rates among patients treated at the clinic between 2017 – 2019 (post CABG Care Steps) were 1.3%; readmission rates for post-cardiothoracic patients at the medical center overall were 11.7% while national readmission rates were 15%

Figure 1. Observed Quarterly Readmission Rates

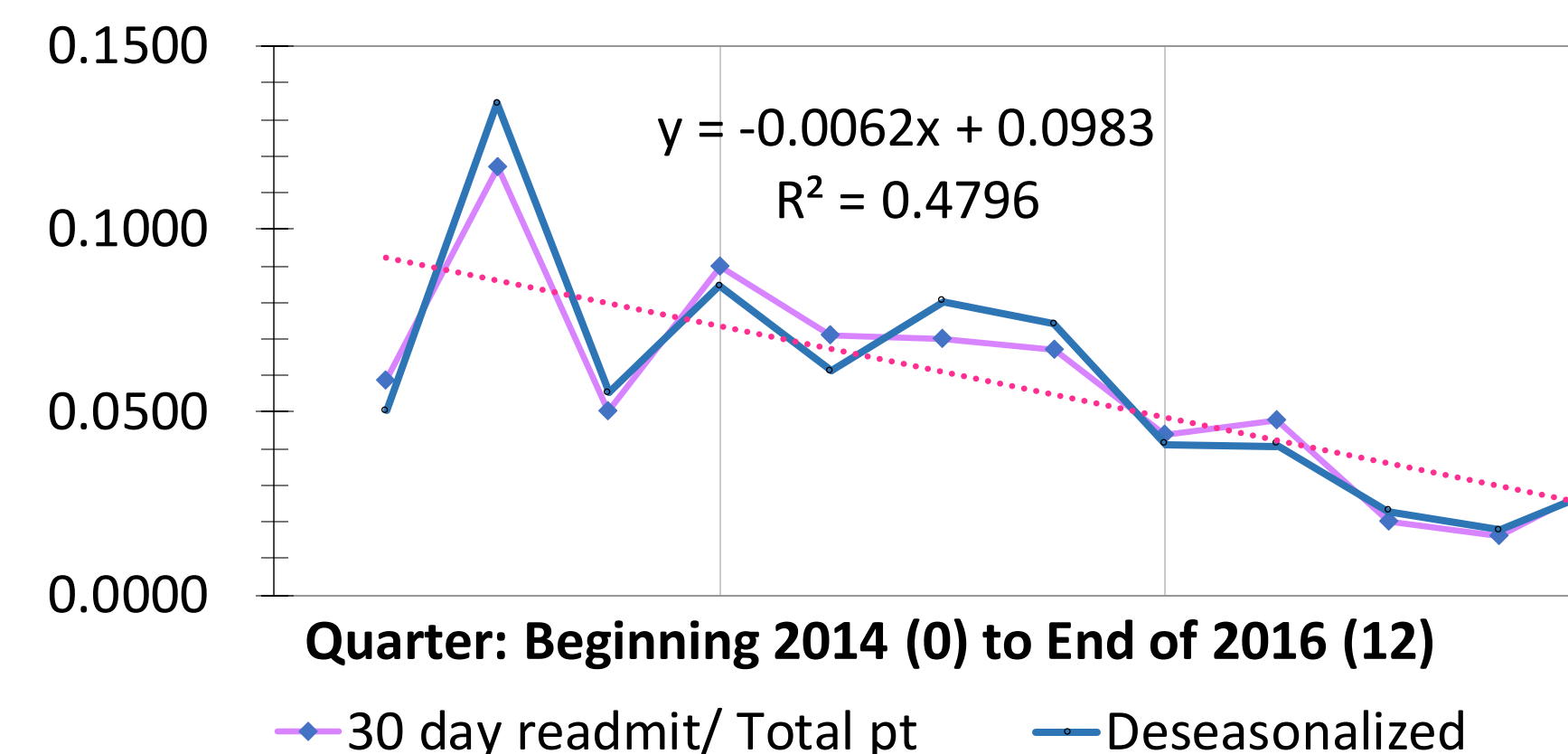
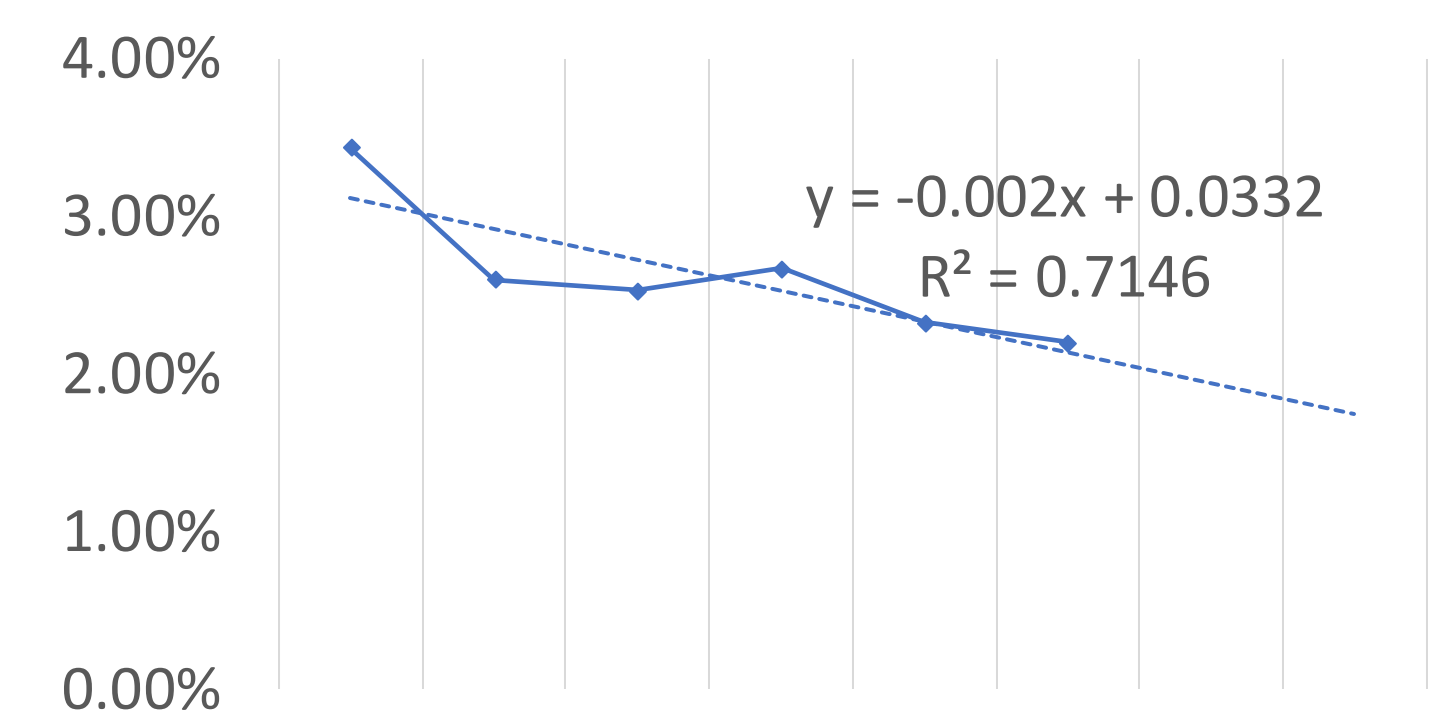


Figure 2. Forecasted Yearly Readmission Rates (2017 – 2022)



CONCLUSIONS

- Targeted pre and post cardiothoracic surgery education may reduce unplanned hospital readmissions
- For references and information: shavel@zagmail.gonzaga.edu

