

Unintended consequences of the Hospital Readmission Reduction Program following targeted and non-targeted surgery

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BACKGROUND AND OBJECTIVES

- Recognizing the burden posed by unplanned hospital readmissions, the Affordable Care Act established the Hospital Readmission Reduction Program (HRRP) in 2013, whereby hospitals were penalized for higher than expected 30-day readmissions following hospitalization for targeted medical conditions.
- In 2015, this policy was extended to a set of targeted surgical procedures. While early data suggest that the HRRP has reduced rates of unplanned medical and surgical readmissions, little is known about potential unintended consequences of the HRRP.
- We used all-payer claims data to assess the impact of the HRRP on various perioperative outcomes not explicitly targeted by the HRRP: 1) 30-day revisit rates, 2) 31 to 90-day readmission rates, and 3) 30 versus 90-day costs.

METHODS

- All-payer data from the 2008-2015 Healthcare Cost and Utilization Project (HCUP) State Databases from Florida (FL) and New York (NY) were used to identify 571,404 patients undergoing a targeted or non-targeted surgical procedure via ICD-9-CM or CPT codes.
- Patient demographics, regional data, 30-day revisit rates, and total charges (converted to costs) associated with the index procedure were determined.
- An interrupted time-series analysis was utilized to assess the risk-adjusted rate of change in revisit/readmission rates and costs before the HRRP was announced, while the program was being implemented, and after penalties were initiated.
- Covariates:
 - Age, Charlson Comorbidity Index score (CCI), insurance status (private, Medicare, Medicaid, uninsured), race, county-level median household income quartiles, and community setting (Metro, urban, rural)

RESULTS

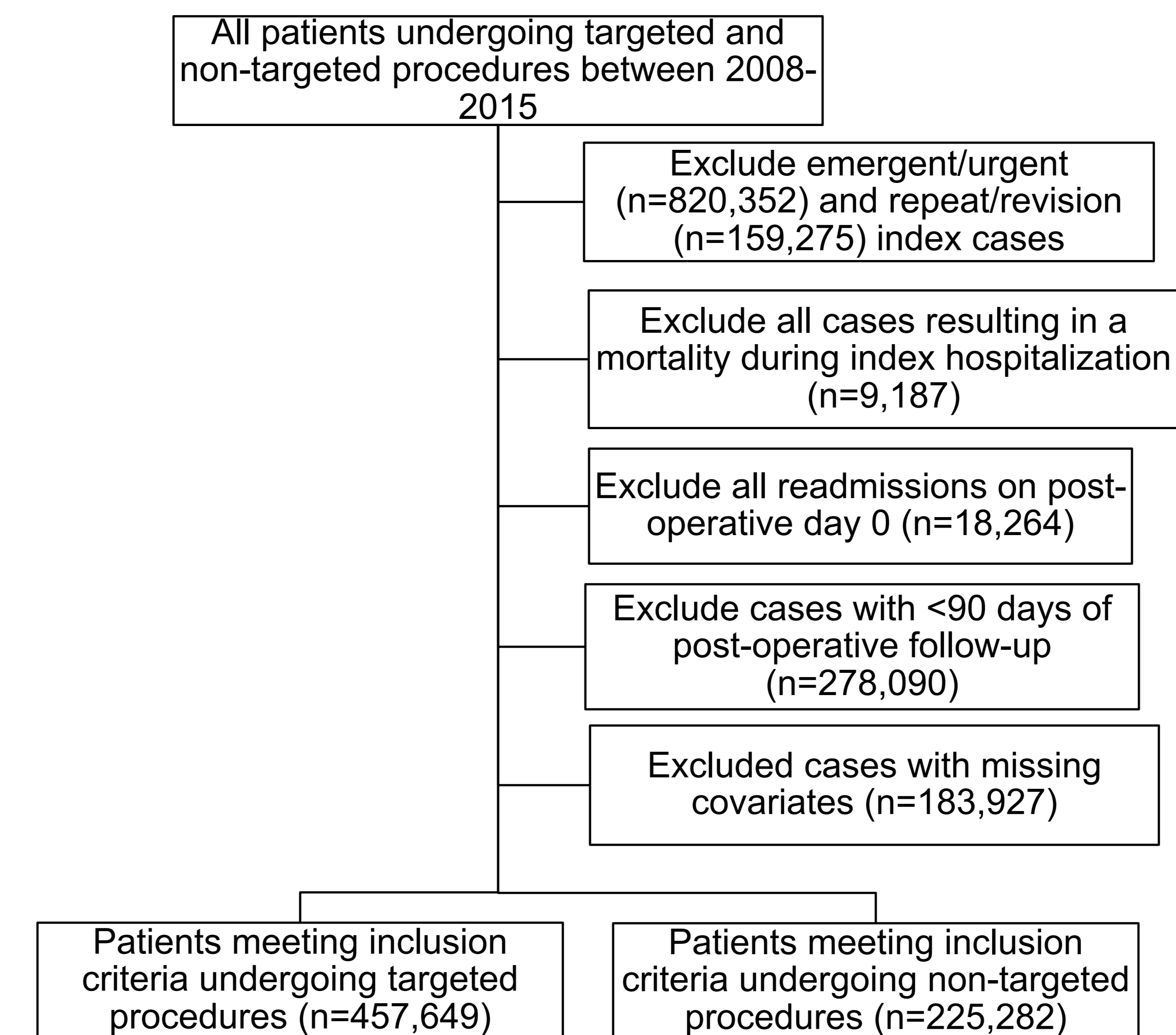


Figure 1. Cohort selection process.

Key findings:

- HRRP implementation was associated with a decrease in readmission rates following the penalty period (-1.1%, 95% CI: -0.3 to -1.9%), but higher 30-day revisit rates (+1.0%, 95% CI: 0.8 to 1.2%) among targeted procedures (P<0.001).
- A similar trend was noted among non-targeted procedures (P<0.001).
- HRRP implementation was not associated with higher rates of 30-day revisit, 31 to 90-day readmission, nor higher readmission costs (P>0.05 for all) (Figure 2).

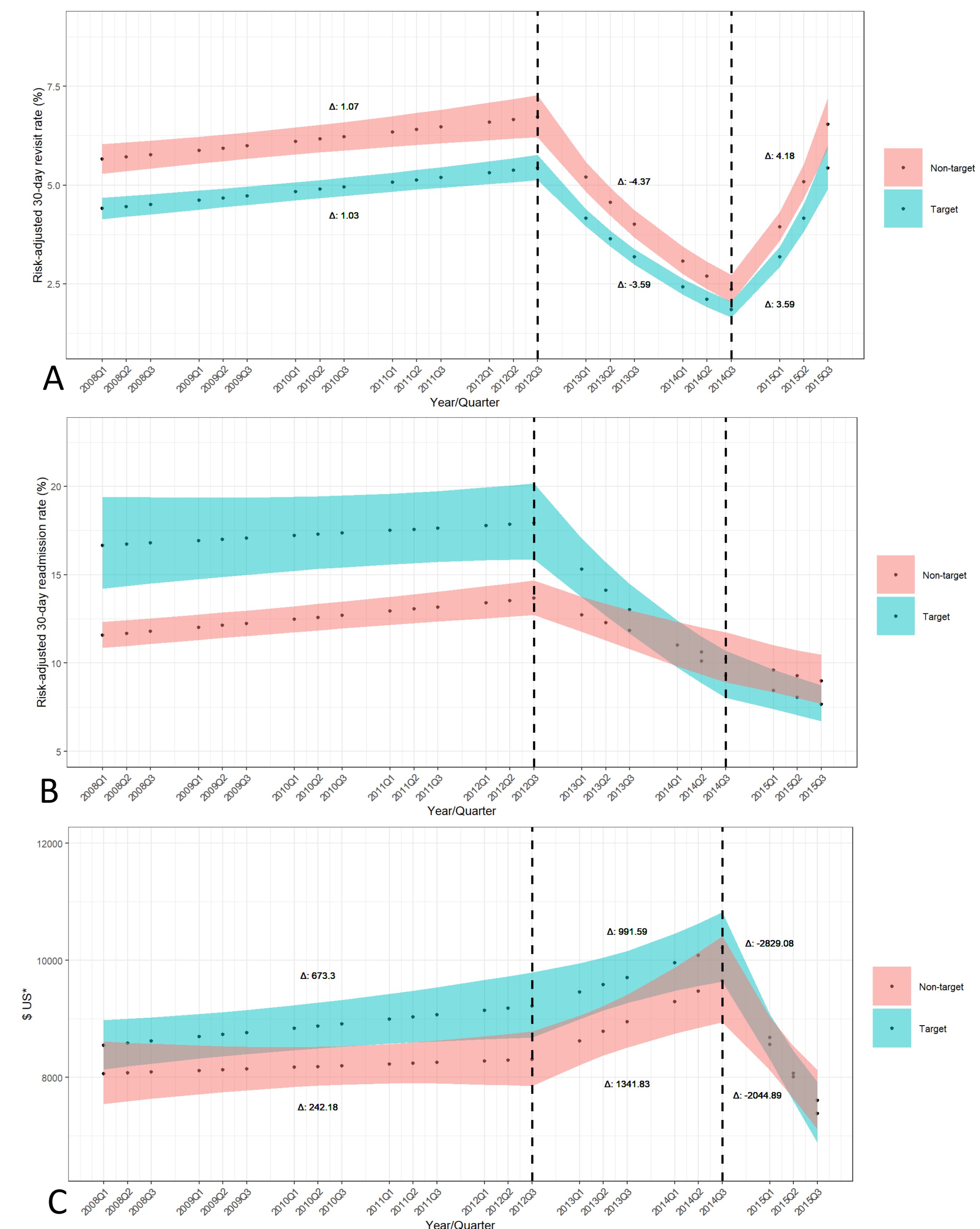


Figure 2. Adjusted predicted probability of **A)** 30-day revisit, **B)** 30-day readmission, and **C)** 30-day acute care costs for targeted and non-targeted procedures from 2008 to 2015.

CONCLUSIONS

- The HRRP successfully reduced 30-day postoperative readmission rates largely without compromising other measures of post-discharge quality, although this success has come at the expense of more costly readmissions.
- Our findings suggest that patients may be delaying necessary care that ultimately results in higher acuity/more costly readmissions.