

Association of Measured Quality and Financial Performance Among U.S. Hospitals Performing Cardiac Surgery

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Background

Cardiac surgery has been a target of quality assessment and public reporting for decades. Satisfying reporting requirements and establishing quality improvement programs imposes significant financial burden, but the association between measured hospital quality of care and hospital financial performance is not well understood.

Objective

To determine if there is an association between measured hospital quality and financial performance.

Methods

Design: Observational cohort study

Setting: U.S. hospitals performing cardiac surgery

Data: Hospital Compare and the American Hospital Association Annual Survey, 2014 to 2018.

Approach: Mixed effects linear and logistic regression

Dep. Var(s): financial margin and financial distress

Independent Var(s): Previous year's 30-day CABG mortality, 30-day CABG Readmission rate, Patient Safety Indicator-90.

Co-variates: rurality, teaching status, bed size, system membership, ownership, CABG surgical volume, Medicare payor mix, and Herfindahl-Hirschman Index (market competition).

Results

Figure 1: Adjusted change in operating margin across quality quartiles

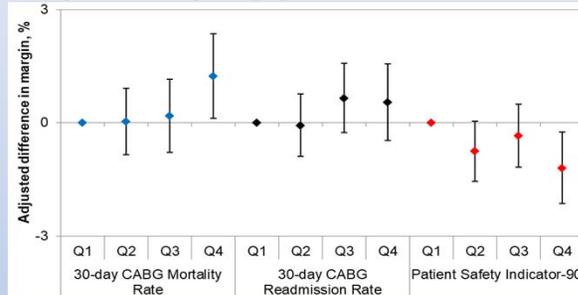
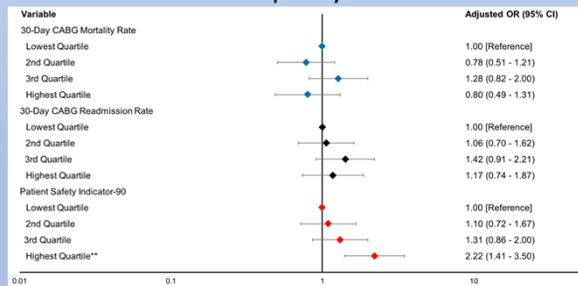


Figure 2: Forest plot of odd ratios for the association between quality and financial distress



Conclusion

Hospitals with poor safety practices experienced worse future financial performance than hospitals with the best safety practices. Hospital leaders should consider investing in overall hospital quality as it may be financially and clinically beneficial.

Key Points

4,189 hospital-years
1,010 unique hospitals

-Hospitals within the highest (worst) quartile of PSI-90 score had a lower operating margin (-1.0%, 95% CI [-1.8 to -0.2], P = .01) and lower total margin (-0.9%, 95% CI [-1.7 to -0.2], P = .01) in the following year, as compared to hospitals in the lowest (best) quartile (Figure 1).

-Hospitals within the highest (worst) quartile of PSI-90 scores had a higher odds of financial distress in the following year as compared to hospitals within the lowest (best) quartile (adjusted OR 2.22, 95% CI [1.41 - 3.50], P = .001, Figure 2).