

Presentation Type:

Poster Presentation

Association Between Federal Value-Based Incentive Program Implementation and Hospital-Onset *C. difficile* Infection Rates

Mohammad Alrawashdeh, Harvard Medical School; Chanu Rhee, Harvard Medical School and Harvard Pilgrim Health; Heather Hsu, Boston Medical Center; Rui Wang; Kelly Horan; Grace Lee, Stanford Children's Health

Background: The Hospital-Acquired Conditions Reduction Program (HACRP) and Hospital Value-Based Purchasing (HVBP) are federal value-based incentive programs that financially reward or penalize hospitals based on quality metrics. Hospital-onset *C. difficile* infection (HO-CDI) rates reported to the CDC NHSN became a target quality metric for both HACRP and HVBP in October 2016, but the impact of these programs on HO-CDI rates is unknown. **Methods:** We used an interrupted time-series design to examine the association between HACRP/HVBP implementation in October 2016 and quarterly rates of HO-CDI per 10,000 patient days among incentive-eligible acute-care hospitals conducting facility-wide HO-CDI NHSN surveillance between January 2013 and March 2019. Generalized estimating equations were used to fit negative binomial regression models to assess for immediate program impact (ie, level change) and changes in the slope of HO-CDI rates, controlling for each hospital's predominant method for CDI testing (nucleic acid amplification including PCR (NAAT), enzyme immunoassay for toxin (EIA), or other testing method including cell cytotoxicity neutralization assay and toxigenic culture). **Results:** Of the 265 study hospitals studied, most were medium-sized (100–399 beds, 55%), not-for-profit (77%), teaching hospitals (70%), and were located in a metropolitan area (87%). Compared to EIA, rates of HO-CDI were higher when detected by NAAT (incidence rate ratio [IRR], 1.55; 95% CI, 1.41–1.70) or other testing methods (IRR, 1.47; 95% CI, 1.26–1.71). Controlling for CDI testing methods, HACRP/HVBP implementation was associated with an immediate 6% decline in HO-CDI rates (IRR, 0.94; 95% CI, 0.89–0.99) and a 4% decline in slope per year-quarter thereafter (IRR, 0.96; 95% CI, 0.95–0.97) (Fig. 1). **Conclusions:** HACRP/

HVBP implementation was associated with both immediate and gradual improvements in HO-CDI rates, independent of CDI testing methods of differing sensitivity. Future research may evaluate the precise mechanisms underlying this improvement and if this impact is sustained in the long term.

Funding: None**Disclosures:** None

Doi:10.1017/ice.2020.645

Presentation Type:

Poster Presentation

Association Between Infection Control Resource Use and the Number of Penalties Under Medicare's Hospital-Acquired Condition Reduction Program

Robert Scott, Centers for Disease Control and Prevention; James Baggs, Centers for Disease Control and Prevention; Steven Culler, Rollins School of Public Health; Emory University; John Jernigan, Centers for Disease Control and Prevention

Background: The Hospital-Acquired Condition Reduction Program (HACRP) is a pay-for-performance Medicare program that promotes reducing patient harm, particularly healthcare-associated infections (HAIs). We examined the association between infection-control-related activities and the number of penalties a hospital received between fiscal years 2015 and 2018. **Methods:** We used logistic regression with ordered categories to assess infection control resource use and the number of penalties, an ordered categorical dependent variable with 5 categories ranging from 0 to 4, as of 2018. Data sources included National Healthcare Safety Network, American Hospital Association Annual Survey, Medicare Impact and Cost Report files, and [Data.Medicare.gov](https://data.medicare.gov). We excluded hospitals lacking data to calculate any HACRP score or component score for HAI and hospitals missing observations for model variables (301 hospitals). We assessed the following model variables: teaching hospital status, infection preventionists (IP) per 1,000 beds, surveillance hours per week per bed, other infection control activities per week per bed, nurse-to-bed ratio, housekeeping expenditure per 10,000 beds, nursing position vacancies per bed, bed size, electronic health

Figure 1: Association of HACRP/HVBP implementation with observed and predicted HO-CDI rates over time.

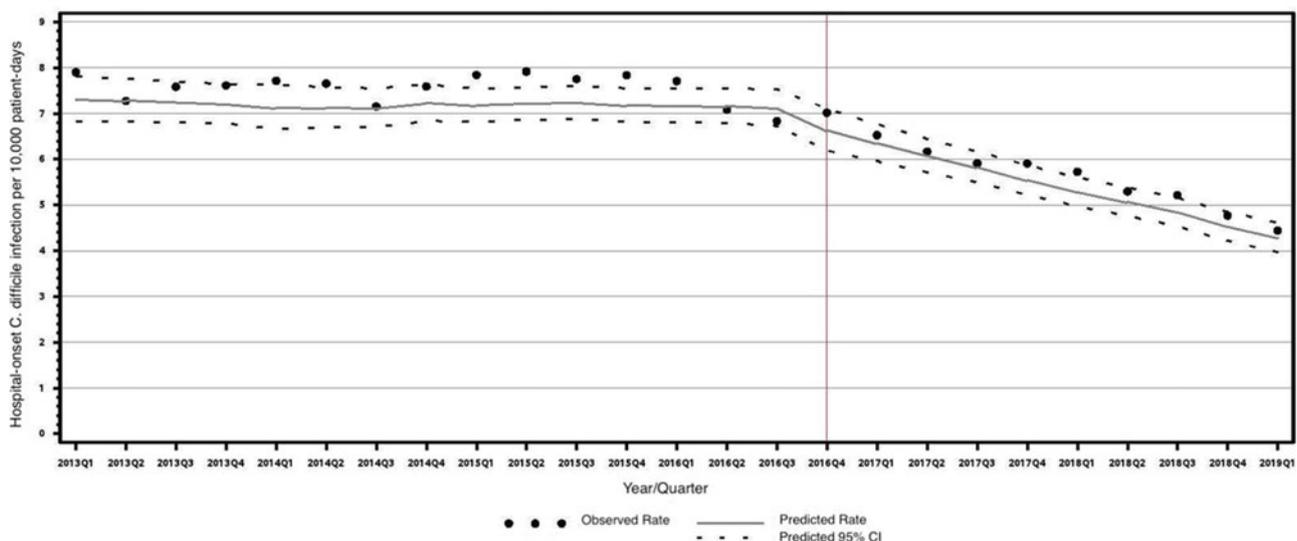


Fig. 1.