Value-based incentive programmes and CAUTI rates

Value-based incentive programmes (VBIPs) aim to drive improvements in quality and reduce costs by linking financial incentives or penalties to hospital performance. A new study evaluated the association of two U.S. federal VBIPs – the Hospital Value-Based Purchasing (VBP) Program and the Hospital-Acquired Condition Reduction Program (HACRP) – and catheter-associated urinary tract infections (CAUTIs) in the critical care setting.

Heather E. Hsu, MD, MPH, Department of Pediatrics, Boston University School of Medicine and co-researchers found the two VBIPs were not associated with reductions in device-associated CAUTI rates, the outcome incorporated into the VBIP scoring on which hospitals are graded.

The researchers also noted that value-based incentive programme implementation was not associated with changes in already declining population-based CAUTI rates or device use, measures that may more directly reflect CAUTI prevention efforts to decrease indwelling urinary catheter use.

For this study, an interrupted time series design was used to examine the association between VBIPs and three CAUTI-related quality measures: device-associated infection rates (CAUTIs per 1,000 indwelling urinary catheter-days), population-based infection rates (CAUTIs per 1,000 patient-days), and indwelling urinary catheter device use (catheter-days per patient-days). The researchers used National Healthcare Safety Network data from 2013 to 2017 for adults in nonfederal acute care hospitals that were subject to the inpatient prospective payment system and therefore eligible for HACRP and Hospital VBP Program incentives and penalties.

According to the researchers, their study focused on intensive care units (ICUs) because CAUTI surveillance was not mandated for non-ICUs until 2015 and VBIPs did not target non-ICU CAUTIs until fiscal year 2018. Using patient-level case reports, Dr. Hsu's team calculated unit-level CAUTI rates that included only cases associated with urine cultures growing at least 100,000 colony-forming units of bacteria per millilitre, and excluded cases associated with nonbacterial organisms or lower-growth bacteria, per the January 2015 National Healthcare Safety Network surveillance case definition revision. Hospital characteristics were collected from the 2015 American Hospital Association (AHA) annual survey.

The research team used generalised estimating equations with robust sandwich variance estimators to fit negative binomial models for infection rates and logistic regression models for device use to assess for changes in level and trend after VBIP implementation, accounting for hospital-level and unit-level clustering.

The study sample included 592 hospitals from 49 states and the District of Columbia, contributing 22,572,494 patient days and 13,607,240 indwelling urinary catheter-days from 1,185 ICUs. Data analyses showed VBIP implementation was not significantly associated with immediate changes or changes in trend for any outcome.

The study's negative findings may reflect the priority placed on CAUTI prevention in the decade preceding VBIP implementation. Nonetheless, the findings call into question the effectiveness of VBIPs for catalysing improvements in care quality and underscore the importance of ongoing rigorous policy evaluations, the researchers point out.

Source: JAMA

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