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Letter in Response to "Questionable validity of the catheter-associated urinary tract infection metric used for value-based purchasing"

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To the Editor:

Calderon et al. compares the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) catheter-associated urinary tract infection (CAUTI) metric and the Agency for Healthcare Research and Quality (AHRQ) CAUTI metric. CAUTIs are a major source of morbidity among US hospital patients, leading to unnecessary antibiotic use, secondary bacteremia, and increased length of stay. Many private and public sector organizations have led and continue to lead efforts aimed at preventing CAUTIs, including initiatives spearheaded by Federal agencies: AHRQ, CDC, and the Centers for Medicare & Medicaid Services. To monitor progress in CAUTI prevention, several metrics have been developed. While the CDC metric relies on self-reports of CAUTI events and urinary catheter use by facilities, the NHSN protocol specifies criteria and reporting rules for the purposes of objectivity and standardization. Further, the changes to the definition made in 2015 (Allen-Bridson, Pollock, *et al.*) likely will improve objectivity and comparability across facilities and enhance the clinical credibility of the CAUTIs reported (e.g., by excluding yeast). In addition, the potential for underreporting will be minimized over time through ongoing and expanding validation efforts and eventual transition to electronic reporting.

CDC acknowledges stakeholder concerns about the use of the catheter-day denominator for calculation of the CAUTI rate (Meddings, Rogers *et al.*, 2010; Wright, Kharasch *et al.*, 2011; Fakih, Greene *et al.*, 2012). Although the authors point out that discrepancies between the AHRQ and CDC definitions and metrics could be due, in part, to the denominator selected for each metric, preliminary analysis of indwelling urinary catheter use during 2009–2013 showed that the urinary catheter device utilization ratio (DUR) in non-ICU settings has not changed over time; in intensive care units a statistically significant decrease in catheter utilization was observed, but the decrease was only 11%. Thus, although in the national metrics the denominator likely did not impact observed trends, it is possible that a facility's efforts to improve patient care by decreasing indwelling catheter use may be restricted by the current catheter-day rate metric.

Given this, CDC is working to develop and pilot a risk-adjusted indwelling urinary catheter utilization metric (standardized utilization ratio, SUR) as part of efforts to help identify and

close performance gaps in appropriate urinary catheter use. Used in conjunction with the CAUTI standardized infection ratio (SIR), the CAUTI SUR would enable facilities to evaluate the performance of specific patient care units compared to data for each type of unit that are aggregated from multiple facilities on the national level. A major methodological challenge with such a process metric is determining the target SUR for a particular unit type or patient population that reflects optimal appropriate catheter use; these targets have yet to be defined and limit the potential utility of the SUR as a quality indicator. We agree that expansion of surveillance to include more process measures could broaden our understanding and ability to prevent patient harm. Regardless of the metrics used, the common goal is to eliminate healthcare-associated infections and save lives.

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