The Impact of NHSN Definition Changes on the Attribution of Secondary Blood Stream Infections

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BACKGROUND
The reduction of central line-associated blood stream infections (CLABSI) has been an area of focus for health care for almost a decade. Patients who develop a CLABSI are at increased risk for morbidity and mortality and often an experience extended length of stay. The Centers for Medicare and Medicaid Services utilize the National Healthcare Safety Network (NHSN) reported CLABSI metrics to rate hospitals performance. These ratings are shared publically and are also tied to reimbursement. In January 2015 NHSN updated the definitions utilized by acute care hospitals to conduct hospital acquired infection surveillance.

METHODS
The CLABSI and Surveillance Definitions for Specific Types of Infections chapters were among those updated. Changes made to these chapters made it more difficult to attribute CLABSI as secondary to another infection. Retrospective chart review was conducted on 100% of the secondary CLABSI events identified by our academic teaching facility during the 2014 calendar year. Events were resurveyed utilizing the current definition to determine if they would still be considered secondary infections.

RESULTS
27 of the 55 (49%) of the previously identified secondary CLABSI’s no longer met the current secondary BSI definitions. Two of the most significant changes in definitions are the elimination of a positive blood culture as site specific criteria, or the requirement of additional imaging to include a positive blood culture. 18/27 (66%) of the events which would now be considered primary CLABSI’s were due to these two changes alone. The other reasons included; the implementation of the infection window (15%), other changes in site specific criteria (11%), and elimination of the site definition altogether (7%).

CONCLUSIONS
An increase in CLABSI rates has been observed since the implementation of the 2015 NHSN definition revisions. As this is a closely monitored metric, with a significant impact on patient safety and hospital reimbursement, it is important to understand the cause of fluctuations in rates. Hospital administrators and regulating agencies should keep in mind that definition changes can have a significant impact on the metrics used to rate the performance of healthcare organizations.