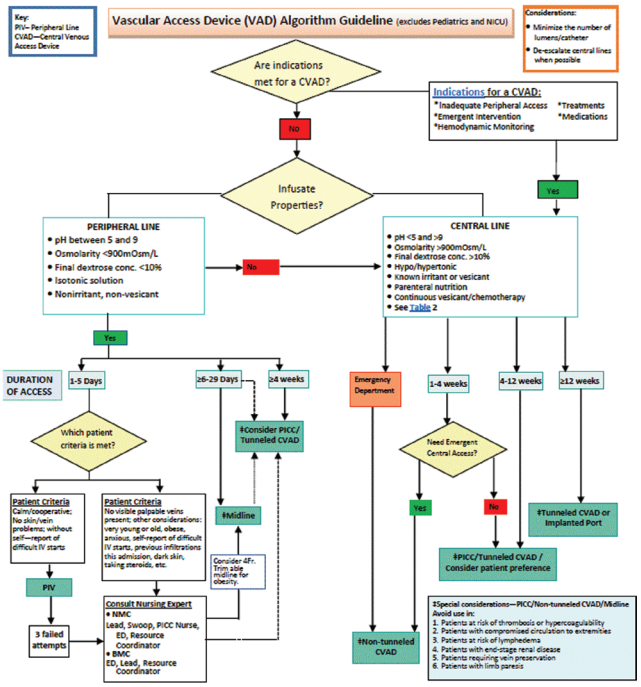
4,588 midline catheter days, with two midline infections, for a cumulative rate over those 6 months of 0.435 midline catheter infections per 1,000 midline days. This was compared with 26,575 CVC days, with 33 documented CLABSIs, for a rate of 1.242 per 1,000 CVC days. Since the vascular algorithm was implemented, the infection rate from the compilation of CVC and midline catheters is 1.12 per 1,000 catheter days.

Conclusion. The implementation of a vascular access algorithm including midlines may effectively reduce central line insertions and thereby decrease CLABSIs through appropriate utilization of a lower risk device (midline). Further research into comparing additional risks, benefits, complications and costs of midline catheters and all styles of central venous catheters is warranted.



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2097. Do Catheter-Associated Bloodstream Infections Affect Patients' Perception of Care?

Mariam Assi, MD[1]; Nargiza Kurbanova, RN, BSN, BA[2] and Rehan Qayyum, MD, MHS, FAHA[3]; [1]Internal Medicine, Virginia Commonwealth University Health System, Richmond, Virginia, [2]Virginia Commonwealth University Health System, Richmond, Virginia, [3]Internal Medicine, Virginia Commonwealth University Medical Center, Richmond, Virginia

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Background. Few cross-sectional studies have reported an association between patient satisfaction, a metric for performance-based hospital reimbursement, and catheter-associated bloodstream infections (CLABSI), but the persistence of this relationship over time has not been examined. Therefore, our aim in this study was to examine this relationship over a 4-year period using data from almost all hospitals in the United States.

Methods. We used the publicly accessible Hospital Compare website to extract data on hospital characteristics, hospital-level CLABSI and patient satisfaction scores (Hospital Compare Consumer Assessment of Healthcare Providers and Systems survey data) from 2011 to 2014. Mixed linear regression models were used to examine the relationship between the four domains of satisfaction scores (included in models separately) and observed to expected CLABSI ratio without and with adjustment for hospital ownership, availability of emergency services, nurse to bed ratio, resident to bed ratio, total number of beds, total number of physicians, and urban vs. rural status.

Results. Of the 3,528 hospitals (12,396 observations) with patient satisfaction data, CLABSI data were available for 2,129 hospitals. The mean (SD) CLABSI ratio was 0.54 (0.56), patient satisfaction with physician and nurse communication were 80.2% (4.4%) and 77.3% (4.9%), respectively; 70% (9.1%) of patients recommended a hospital and 68.8% (8.0%) rated a hospital 9 or 10 (on a 1–10 scale). Over 4 years, CLABSI scores decreased each year (−0.02, 95% CI = −0.03 to −0.01) while satisfaction scores increased (physicians: 0.16, 95% CI = 0.12–0.19; nurses: 0.56, 95% CI = 0.52–0.60; hospital recommendation:0.18, 95% CI = 0.12–0.23; hospital rating: 0.56, 95% CI = 0.50–0.62). In adjusted models, higher CLABSI ratios were associated with lower satisfaction with physician (−0.09, 95% CI = −0.17 to −0.01) and nurse (−0.12, 95% CI = −0.21 to −0.02) communication. In contrast, CLABSI ratios were not associated with hospital recommendation (−0.09, 95% CI = −0.22 to 0.04) or rating (−0.07, 95% CI = −0.21 to 0.06).

Conclusion. In this first longitudinal study of most hospitals in the United States, hospitals with higher CLABSI ratios had lower patient satisfaction with physician and nurse communication but not with hospital recommendation or rating.

Disclosures. **All authors:** No reported disclosures.

2098. Reduction of Central-Line-associated Bloodstream Infection Rates: Impact of Minimizing Blood Cultures from Central Lines

Nisreen Murad, MS, CIC[1]; Ana C. Bardossy, MD[2]; Ryan Shelters, BS[1]; Eman Chami, MHA, CIC[1]; Stephanie Schuldt, RN[1]; Meredith Van Harn, MS[1] and George Alangaden, MD, FIDSA[2]; [1]Henry Ford Health System, Detroit, Michigan, [2]Infectious Diseases, Henry Ford Health System, Detroit, Michigan

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Background. CLABSI surveillance at our institution indicated that a significant proportion of CLABSI had a positive blood culture drawn from central line (CL-BC) with corresponding negative BC done by venipuncture (VP-BC), suggesting possible CL contamination. The contribution of minimizing CL-BC on CLABSI rates remains unknown. This study evaluates the impact on CLABSI rates of reducing CL-BC in addition to standard CLABSI reduction strategies in adult intensive care units (ICUs).

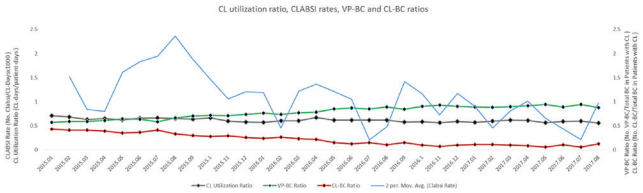
Methods. The study was done from January 1, 2015 to August 31, 2017 in adult ICUs at a hospital with 164 ICU beds, in urban Detroit. Education initiatives to minimize CL-BC were implemented in the ICU. Internal metrics VP-BC ratio (No. VP-BC/total BC in patients with CL) and CL-BC ratio (No. CL-BC/total BC in patients with CL) were used to monitor effectiveness. Compliance audits of CL maintenance were done, i.e., CL dressing intact, proper use of chlorhexidine dressing, site without redness or drainage. Monthly unit-specific CLABSI rates, CL utilization ratios (CL-UR), and VP-BC and CL-BC ratios were provided as feedback to the ICUs. CLABSI rates and number of contaminated BC were monitored. Trends of the various metrics were analyzed using Kendall Tau's correlation for continuous variables. The relationship between CLABSI rate, VP-BC ratios and CL-UR were examined using Spearman's correlation coefficient. Statistical significance was set at $P < 0.05$.

Results. During the study period in the ICU there were 148,762 patient-days and 82,153 CL days. Trends over time of the metrics are shown (figure). There was significant improvement noted in CLABSI rates, CL-UR and VP-BC rates (Table 1). There was a significant correlation between the CLABSI rates with VP-BC −0.395 (P value = 0.025) and a not significant correlation with CL-UR 0.278 (P value = 0.123). The number of contaminated blood cultures were 29, 3, and 0 in 2015, 2016 and 2017, respectively.

Conclusion. Minimizing BC obtained from CL can significantly contribute to reduction in CLABSI rates when used in combination with standard best care practices for CL insertion and maintenance.

Table 1: Correlation of Metrics Over Ttime

Variable	Correlation with Time	*P*-Value
CLABSI rate	−0.260	0.036
CL-UR	−0.520	<0.001
VP-BC ratio	0.806	<0.001
CL care bundle compliance	−0.048	0.805



Disclosures. **All authors:** No reported disclosures.

2099. Catheter-related *Staphylococcus aureus* Bacteremia and Septic Thrombosis: The Role of Anticoagulation and Duration of Intravenous Antibiotic Therapy

Rita Wilson Dib, MD[1]; Anne-Marie Chaftari, MD[2]; Ray Y. Hachem, MD[1]; Ying Jiang, MS[3]; Dima Dandachi, MD[4,5] and Issam Raad, MD[1]; [1]Department of Infectious Diseases, University of Texas MD Anderson Cancer Center, Houston, Texas, [2]University of Texas MD Anderson Cancer Center, Houston, Texas, [3]Department of Infectious Diseases, Infection Control and Employee Health, The University of Texas MD Anderson Cancer Center, Houston, Texas, [4]Medicine, Section of Infectious Diiseases, Baylor College of Medicine, Houston, Texas, [5]Infectious Diseases, The University of Texas MD Anderson Cancer Center, Houston, Texas

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Background. Catheter-related septic thrombosis is suspected in patients with persistent Central Line-associated Blood Stream Infection (CLABSI) after 72 hours of appropriate antimicrobial therapy. There are limited data outlining the characteristics of the disease and the adequate duration of antimicrobials. In addition, the role of anticoagulation in the management of septic thrombosis remains unclear. We herein