

of UA results before ordering cultures, this intervention successfully optimized diagnostic stewardship. The pilot program will be integrated into the electronic medical record and expanded to other units.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s69–s71

doi:10.1017/ash.2025.282

Presentation Type:

Poster Presentation

Subject Category: CAUTI

Descriptive Epidemiology of Catheter-Associated Urinary Tract Infections at University of Iowa Health Care Medical Center

Lauren Kloft¹, Takaaki Kobayashi², Alexandra Trannel³, Karen Brust⁴, Alexandre Marra⁵, Oluchi Abosi⁶, Nicole Wiltfang⁷, Beth Hanna⁸, Jaime Murphy⁹ and Daniel Diekema¹⁰

¹State Hygienic Laboratory at the University of Iowa; ²University of Kentucky;

³University of Iowa Hospitals & Clinics; ⁴University of Iowa Health Care;

⁵University of Iowa Hospitals & Clinics/ Hospital Israelita Albert Einstein;

Mariana Kim Hsieh, University of Iowa Health Care; ⁶University of Iowa

Hospital and Clinics; ⁷University of Iowa Health Care; ⁸The University of Iowa

Hospitals and Clinics; ⁹University of Iowa Hospitals and Clinics and

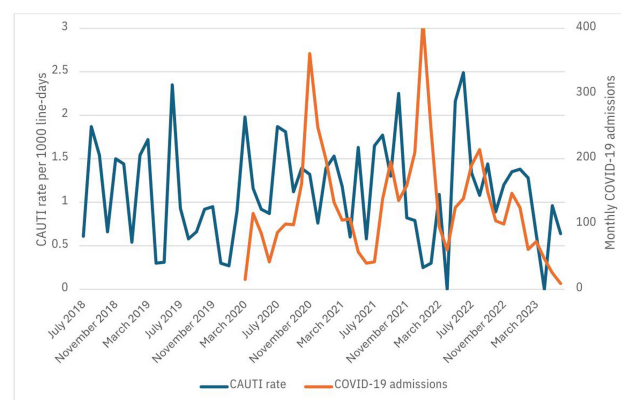
¹⁰University of Iowa Carver College of Medicine

Background: Catheter-associated urinary tract infections (CAUTIs) are among the most common healthcare-associated infections (HAIs), often resulting in prolonged hospital stays, increased healthcare costs, and additional clinical interventions. The COVID-19 pandemic introduced new challenges to infection prevention, with global reports indicating increased rates of certain HAIs, such as ventilator-associated pneumonia and bloodstream infections, due to healthcare strain and the intensified use of invasive devices. However, trends in CAUTI rates during the pandemic varied across healthcare settings. **Methods:** This retrospective study was conducted at the University of Iowa Health Care Medical Center, an 866-bed academic hospital, from 2018 to 2023. Manual chart reviews of CAUTI cases reported to the National Healthcare Safety Network (NHSN) were performed to collect data on patient demographics, medical histories, catheter usage, and infection prevention practices. CAUTI incidence was analyzed over time and compared with monthly COVID-19 admission rates. **Results:** A total of 226 CAUTI cases were identified during the study period. The average CAUTI rate per 1,000 catheter line-days declined from 1.23 in 2019 to 0.85 in 2020, but increased to 1.28 in 2021, coinciding with COVID-19 surges (Figure 1). The median patient age was 61 years, with females accounting for 56% of cases. Foley catheters were already in place upon admission in 24% of cases. Non-intensive care unit (ICU) inpatient settings accounted for 24% of catheter placements, while ICUs accounted for 18%. Additionally, 16% of cases originated from the operating room, and 7% from the emergency department. Neurologic disease was the most common admission diagnosis (27%), followed by cardiovascular disease (13%) and Hematologic/Oncologic disease (13%). Twenty six percent of cases were incontinent of urine and 24% of stool. Comorbidities included immunocompromised status (20%) and diabetes (36%). The primary indication for Foley catheter use was monitoring intake and output (42%). Of the 226 cases, 61% of patients were clinically considered to have a UTI. In-hospital mortality was 22%. **Conclusion:** The findings from this study provide insights into factors contributing to CAUTI at our institution. Fluctuations in CAUTI incidence, particularly during the COVID-19 pandemic, underscore the need for robust infection prevention strategies. The finding that only 61% of cases required treatment suggests urine cultures were often obtained inappropriately or positive results were not used in selected situations. This highlights an opportunity for diagnostic stewardship to improve urine culture practices. Addressing identified risk factors and enhancing catheter management are critical to reducing CAUTI incidence and improving patient outcomes.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s71

doi:10.1017/ash.2025.283

Figure 1: CAUTI incidence rate per 1000 line-days in adult units and monthly COVID-19 admissions, University of Iowa Health Care Medical Center, 2018–2023



Presentation Type:

Poster Presentation

Subject Category: CLABSI

Infection on the Sidelines: Evaluating Bacteremia Rates in Device-Dependent Cardiology Patients

Jessica Seidelman¹, Heather Pena², Alexandria Hunt², Brittain Wood³, Polly Padgett⁴, Erin Gettler⁵, Jeffrey Keenan⁶, Deverick Anderson⁶ and Becky Smith⁷

¹Duke University; ²Duke University Hospital; ³Duke University; ⁴Duke; ⁵Duke

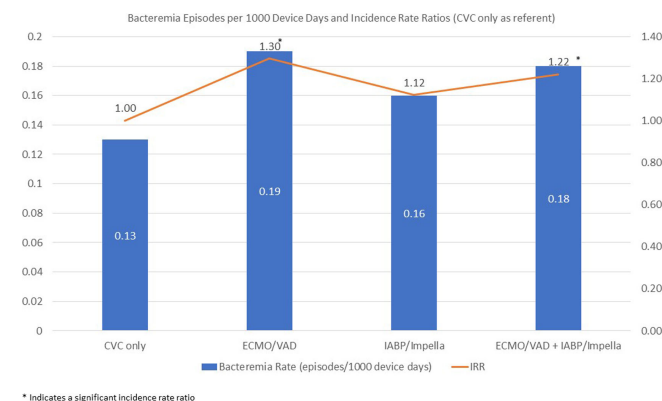
University Medical Center; ⁶Duke Center for Antimicrobial Stewardship and

Infection Prevention and ⁷Duke University Medical Center

Introduction: Patients with mechanical circulatory support (MCS) devices, such as ventricular assist devices (VAD) and extracorporeal membrane oxygenation (ECMO), are excluded from the National Healthcare Safety Network (NHSN) central line-associated bloodstream infection (CLABSI) criteria, whereas patients with intra-aortic balloon pumps (IABP) and Impella devices remain included. Since both MCS and Impella/IABP devices are associated with bloodstream infection risks, this study compares bacteremia rates among patients with VAD/ECMO, IABP/Impella, and central venous catheters (CVCs) to inform more accurate infection reporting. **Methods:** Using a surveillance database, we retrospectively reviewed bloodstream infections among patients with a CVC, ECMO/VAD, or IABP/Impella admitted to Duke University Hospital Cardiology units from January 2019 to July 2024. Bacteremia episodes were calculated per 1000 device days, with de-identified data pooled for final analysis. **Results:** A total of 849 bacteremia episodes were observed in patients with only a CVC (0.14 episodes/1000 device days), 98 in patients with ECMO/VAD (0.19/1000 device days), and 64 in patients with IABP/Impella (0.16/1000 device days). (Figure 1) Bacteremia incidence rate ratio (IRR) in patients with ECMO/VAD compared to patients with only a CVC was 1.30 (95% CI 1.05, 1.60, p-value 0.01). Bacteremia IRR in patients with Impella/IABP compared to patients with only a CVC was 1.12 (95% CI 0.87, 1.45, p-value 0.37). However, when we combined both ECMO/VAD and IABP/Impella bacteremia episodes and compared the bacteremia rate to patients with only a CVC, the incidence rate ratio was 1.22 (95% CI 1.03, 1.44, p-value 0.02). **Discussion:** The significantly different combined bacteremia rates among ECMO/VAD and IABP/Impella suggest that both device categories have significantly higher rates of bacteremia compared to CVC-only patients. Thus, NHSN should reconsider NHSN exclusion criteria for Impella/IABP patients similar to that for ECMO/VAD patients. Further collaboration with institutions, could strengthen findings and refine infection control protocols in high-risk, device-dependent patients.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s71

doi:10.1017/ash.2025.284



Presentation Type:

Poster Presentation

Subject Category: CLABSI

Development of a CLABSI Preventability Index to Target Improvement Efforts

Karen Brust¹, Angie Dains², Holly Meacham³, Mary Beth Hovda-Davis⁴, Elizabeth Krigbaum⁵, Kristin Varzavand⁶ and Olivia Wulf⁷

¹University of Iowa Health Care; ²University of Iowa Hospital and Clinics;

³University of Iowa Hospital and Clinics; ⁴University of Iowa Healthcare;

⁵University of Iowa Healthcare; ⁶University of Iowa Health Care and

⁷University of Iowa Health Care

Background: Central Line-Associated Bloodstream Infections (CLABSI) are multifactorial, making trends difficult to identify. CLABSI can occur from the time of insertion to delayed removals beyond the time central access was indicated. The objective of creating a CLABSI Preventability Index tool was to enable strategic quality improvement work. **Methods:** A preventability index tool was created with stakeholder input and was categorized into four categories (see Table 1): Indication for Line, Care and Maintenance and Line Access, Diagnostic Stewardship, and Specimen Collection. Each category had one or more questions prompting users to assign points for each preventable action. Scores range from 0 through 15, with the higher score indicating more prevention opportunities. (See table 2). **Results:** During the 2024 calendar year, there were 25 Adult CMS CLABSIs. The preventability index was applied to each case. There was 1 'extremely preventable' case, 2 'very preventable' cases, 6 'preventable' cases and 16 'not preventable' cases. In the 3 cases scoring very preventable or extremely preventable, the category "indication for line" was consistently scored high. Two of the 3 cases had preventable actions from a care and maintenance standpoint, 2 cases scored for diagnostic stewardship category and all 3 cases scored in the specimen collection category. In the 22 cases scoring 6 or lower, 0 scored in the indication for line category, 16 scored in the care and maintenance category, 11 scored in diagnostic stewardship and 4 scored in specimen collection. **Conclusion:** The preventability index objectively identifies the highly preventable CLABSIs in order to target high-priority actions to prevent future cases. Based on this tool, the use of central lines when not indicated causes the highest preventability scores, but care and maintenance activities score the most frequently.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s72

doi:10.1017/ash.2025.285

Table 1: Preventability Index Scoring Criteria

Category	Question	Point Attribution
Indication for Line	Was the line appropriate at the time of the CLABSI? If no, was the line high risk?	0 pts - (Yes, line needed) 5 pts - (No, line not needed) 7 pts - (No, high risk line not needed)
	CHG Treatment: Was this completed every day for the last 3 days prior to the event?	0 pts - (Yes, completed 3/3 days) 1 pt - (No, not completed 3/3 days)
Care and Maintenance and Line Access	Tubing Changes: Was the tubing change overdue?	0 pts - (No, tubing changes up to date) 1 pt - (Yes, tubing changes needed)
	Dressing Changes: Was the dressing change overdue?	0 pts - (No, dressing changes up to date) 1 pt - (Yes, dressing changes needed)
	Line Access: Was there concern that the line was accessed too frequently based on post-CLABSI survey?	0 pts - (No concerns with line access) 1 pt - (Yes, line was accessed too frequently)
	Were cultures drawn for low-risk bacteremia?	0 pts - (No) 2 pts - (Yes)
Diagnostic Stewardship	Were blood cultures repeated without indication?	0 pts - (No) 2 pts - (Yes)
	Does the blood culture order match blood culture collection technique?	0 pts - (Yes, blood culture order and collection technique match) 1 pt - (No, blood culture order and collection technique do not match)
Specimen Collection	Are there concerns related to collection technique? (i.e. potential contaminant, one site used for multiple cultures, etc)	0 pts - (No collection technique concerns) 1 pt - (Yes, there was collection technique concerns)
Total Score		15

Table 2: Preventability Index Total Score Ranking

Category	PI Total Score
Not preventable	0-3
Preventable	4-6
Very preventable	7-10
Extremely preventable	11-15

Presentation Type:

Poster Presentation

Subject Category: CLABSI

The Impact of CHG Bathing on Healthcare Associated Infections Across a Rural Hospital System

Hunter Ratliff¹, Matthew Lokant², Janina-Marie Huss³, Michael Edmond⁴ and Michael Stevens⁵

¹West Virginia University Health System; ²West Virginia University; ³WVU

Medicine; ⁴WVU Medicine and ⁵West Virginia University

Background: We aimed to examine the impact of daily bathing with chlorhexidine gluconate (CHG) on central line associated bloodstream infections (CLABSIs), catheter associated urinary tract infections (CAUTIs), and bloodstream infections with methicillin-resistant *Staphylococcus aureus* (LabID MRSA) across a large, rural healthcare system. This healthcare system encompasses 8 large community hospitals, one academic hospital, and 11 hospitals with 50 or fewer beds. Starting in August 2023, all facilities were required to adopt daily CHG bathing for patients with central lines and/or in intensive care units. Some facilities also chose to adopt CHG daily bathing for patients with foley catheters. **Methods:** We analyzed the hospital-wide monthly incidence of select healthcare associated infections (HAIs) in the year before and after implementation of CHG bathing across a large, decentralized, rural healthcare system. We conducted negative binomial regressions to examine the difference in HAIs before/after implementation of CHG bathing, and we used the National Healthcare Safety Network's (NHSN) predicted numbers of HAIs to adjust for confounding among hospitals. **Results:** After adjusting for each hospital's predicted number of infections, we saw a 40.1% decrease