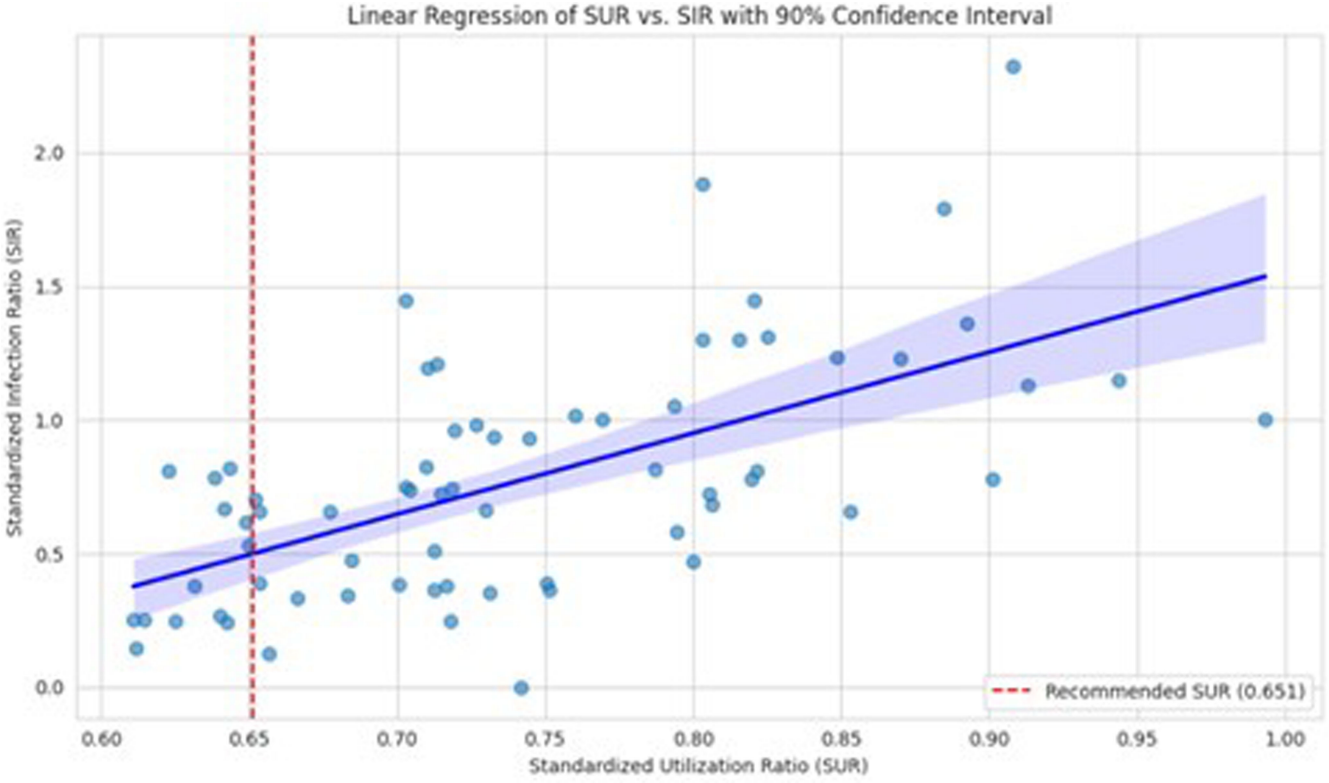
Presentation Type:
Poster Presentation
Subject Category: CLABSI
Effect of CLABSI care bundle on reducing catheter line associated bloodstream infection in Cho Ray hospital in Vietnam‡
Thang Phung Manh[1], Duy Nguyen Xuan Nhat, An Nguyen Thai, Nhieu Nguyen Van[1] and Sy Hoang Van
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Background: Central line-associated bloodstream infection (CLABSI) is one of the four most common healthcare-associated infections worldwide and often results in serious consequences, including prolonged treatment duration, increased antibiotic usage costs, and higher mortality risk. In Vietnam, the CLABSI rate in intensive care units (ICUs) remains high, ranging from 5 to 10 episodes per 1,000 central venous catheter (CVC)-days. Therefore, implementing a CLABSI prevention bundle in ICUs is urgently necessary to ensure patient safety. **Methods:** A CLABSI prevention bundle was developed, consisting of an insertion bundle and a maintenance care bundle. Training and implementation were conducted in three ICU units: Neurosurgical ICU Dept. (NsICU), Internal Cardiology Dept. (IC), and Cardiac surgery resuscitation Dept. (CSR) from February to September 2025. External audits were conducted on all CVC insertion cases and 5% of CVC maintenance care opportunities in the three departments. **Results:** The total number of insertion bundle observation opportunities in NsICU, IC, and CSR were 67, 35, and 43 respectively, with average compliance rates increasing over time as follows: 96.76% (range 91.67–100%), 89.46% (range 79.63–95.83%), and 97.18% (range 85–100%). The total number of maintenance care observation opportunities in NsICU, IC, and CSR were 86, 63, and 53 respectively, with average compliance rates over time increasing as follows: 78.07% (range 70–87.5%), 87.75% (range 75–100%), and 82.41% (range 72.73–100%). Despite this, there were certain periods with low compliance rates for both the insertion and maintenance care bundles, particularly in areas such as proper hand hygiene procedures, insufficient antiseptic contact time, and non-compliance with drying time requirements. The average CLABSI rates post-intervention compared to pre-intervention in NsICU, IC, and CSR decreased from 2.38 to 1.6 (P=0.54), from 3.15 to 2.57 (P=0.68), and from 2.4 to 2.02 (P=0.75), respectively. **Conclusion:** The initial implementation of the CLABSI prevention bundle in three clinical departments led to progressively improved compliance with both CVC insertion and maintenance care practices, contributing to a reduction in CLABSI rates compared to the pre-intervention period.

Antimicrobial Stewardship & Healthcare Epidemiology 2026;6(Suppl. S1):s83
doi:10.1017/ash.2026.10556

Presentation Type:
Poster Presentation
Subject Category: CLABSI
How Low is Low Enough? Determining a Goal Central Line Standardized Utilization Ratio Necessary to Decrease Infections‡
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[1]Mercy

Background: One intervention to decrease central line associated bloodstream infections (CLABSI) standardized utilization ratios (SIR) is to decrease use of central lines. Central line use can be measured using the standardized utilization ratio (SUR), calculated by the National Healthcare Safety Network (NHSN). Unlike the SIR, decreasing the SUR all the way to zero is not an achievable goal; some patients need to have a central line for their treatment. The objective of this project was to identify a target SUR value to help reach SIR goals. **Methods:** A midwestern healthcare system set their CLABSI SIR goal at 0.5. Using paired SUR and SIR data from 6 large hospitals from July 2019 through February 2025, six machine learning methods (4 parametric, 2 non-parametric) were



‡The abstract titles in this supplement have been corrected since original publication. A notice detailing the changes has been published at https://doi.org/10.1017/ash.2026.10802.

https://doi.org/10.1017/ash.2026.10557 Published online by Cambridge University Press

applied to determine the SUR required to achieve the goal SIR. The six individual model–recommended SUR values were combined using bootstrap resampling: drawing 1,000 samples (with replacement) from the six SUR estimates, computing the mean each time to produce an ensemble recommendation, and then taking the 5th and 95th percentiles of those means as a 90% confidence interval. **Results:** Over the study timeframe, the aggregated system SUR was 0.742 and aggregated SIR was 0.774 . The comprehensive analysis recommended that the system adopt an SUR target of 0.650 (90% Confidence Interval: 0.645–0.655) to achieve the central line SIR goal (Figure 1). **Conclusion:** The analysis allowed the healthcare system to set a personalized goal, using data from the member hospitals, for SUR performance. This allowed identification of hospitals that needed to focus on further interventions to decrease central line use, versus those that should pivot their CLABSI prevention interventions to other focuses.

Antimicrobial Stewardship & Healthcare Epidemiology 2026;6(Suppl. S1):s83–s84
doi:10.1017/ash.2026.10557

Presentation Type:
Poster Presentation
Subject Category: CLABSI
CLABSI designation following hepato-pancreato-biliary surgery‡

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Background: Patients undergoing hepato-pancreato-biliary (HPB) surgery routinely need central venous access for chemotherapy or parenteral nutrition. Common postoperative complications of HPB surgeries include cholangitis and transient bacteremia from biliary tract manipulation. Previous studies have suggested that the National Healthcare Safety Network (NHSN) criteria that designate bacteremia secondary to infections such as cholangitis, may be too strict to account for these situations, resulting in central line associated bloodstream infection (CLABSI) misattribution. **Methods:** This retrospective study evaluated bacteremia events within 30 days of an HPB surgical procedure among patients ≥ 18 years old at a large academic medical center in the United States. The study period included January 1, 2024 through October 31, 2025. HPB procedures were identified using operative codes mapped to HPB surgeries by NHSN with bacteremia cases identified electronically. CLABSI cases, as established by NHSN criteria, underwent manual chart review to understand the clinical context. **Results:** There were 1,143 HPB surgeries within the study period. Bacteremia was detected in 35 of them (3.1%). Five of these were ruled in as CLABSI. CLABSIs occurred at an average of 9.6 days postoperatively and 7.6 days after central line placement or access. CLABSIs were due to Enterococcus faecalis, Candida krusei, Prevotella species, Klebsiella oxytoca, and Staphylococcus aureus. Three of the CLABSIs had clinical evidence of cholangitis, but imaging findings were insufficient to meet NHSN criteria for an intraabdominal infection. These cases included transient bacteremia within 24 hours of biliary manipulation (drain placement for a portobiliary fistula, n=1, and drain capping, n=2). The other two CLABSI cases did not undergo biliary manipulation during their hospitalization and had no clear evidence of secondary infection. **Conclusion:** A substantial number of CLABSIs in HPB surgical patients may represent misattribution. Consideration to the unique infection risks of HPB surgical patients such as transient bacteremia related to drain placement and exchange could minimize CLABSI misattribution in this patient population. Ellsworth, M. G., Ausborn, V., Patel, B., Chang, P., & Ostrosky-Zeichner, L. (2023). 2419. Increasing Misattribution of Bacteremia as CLABSIs by NHSN Definitions: A Tertiary Care Center Perspective. Open Forum Infectious Diseases, 10(Suppl 2), ofad500.2039. https://doi.org/10.1093/ofid/ofad500.2039

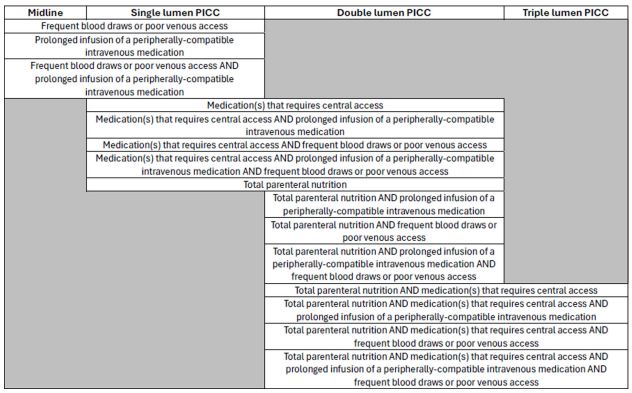
Antimicrobial Stewardship & Healthcare Epidemiology 2026;6(Suppl. S1):s84
doi:10.1017/ash.2026.10558

Presentation Type:
Poster Presentation
Subject Category: CLABSI
PICC and Midlines: Evaluating Lumen Selection Appropriateness and Associated Complications‡

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Background: Midlines and peripherally-inserted central catheters (PICC) have increased in use due to their ease of insertion, low insertion risk to patients, and relatively low cost. Three common complications are central line-associated bloodstream infection (CLABSI), upper extremity deep venous thrombosis (DVT), and lumen occlusion. The literature reports PICC-associated CLABSI rates of 0.5-2.1 per 1000 catheter days, DVT rates of 1.4 to 9.5%, and lumen occlusion 5 to 16.1%. Both CLABSI and lumen occlusion are more common in multi-lumen than in single lumen (SL) PICC. Our objective is to evaluate the appropriateness of midline and PICC lumen selection, to assess for rates of complication, and to identify targets for clinical decision support intervention. **Methods:** Setting. This is a retrospective cohort study of adult patients ≥18 y.o. with a midline or PICC placed by the Vascular Access Team (VAT) between 1/1/24 and 6/30/25 at a 500-bed academic safety net and teaching hospital. Data abstraction. Indication for line placement was determined by VAT consultation order or manual chart review. Upper extremity DVT was screened by ICD10 codes and confirmed through manual chart review. CLABSI was determined through cross-reference to National Healthcare Safety Network data. Alteplase administration was used as a surrogate for lumen occlusion. Appropriateness criteria. Appropriateness of midline and PICC lumen selection was determined by adapting the Michigan Appropriateness Guide for Intravenous Catheters and Michigan Multi-Lumen Appropriateness Criteria (Figure 1). **Results:** Six hundred twelve midline (n=97, all SL) or PICCs (n=515) were placed into 524 patients in the study period (SL PICC, n=213; double lumen [DL] PICC, n=243; triple lumen [TL] PICC, n=59). The indication for line differed based on the line type (Table 1). The majority of midlines (95.9%) and SL PICCs (99.5%) were deemed appropriate; in contrast, 74.1% of DL PICC and 3.4% of TL PICC were considered appropriate. Complications of midline and PICC were rare (CLABSI: 0.19 per 1000 line days; DVT: 1.1%; lumen occlusion: 11.8%). Any complication occurred in 12.9% of cases and was more common in multi-lumen as compared to SL devices (i.e. midline or SL PICC) (19.9% vs 6.1%, P). **Conclusion:** Opportunities exist to reduce multi-lumen PICC insertion. This may decrease device-related complications. Optimizing lumen selection

Figure 1. Criteria used to assess appropriateness of midline and peripherally-inserted central catheter lumen selection.



‡The abstract titles in this supplement have been corrected since original publication. A notice detailing the changes has been published at https://doi.org/10.1017/ash.2026.10802.

https://doi.org/10.1017/ash.2026.10557 Published online by Cambridge University Press