

in CLABSIs ( $p=0.008$ ) and a 33.2% reduction in CAUTIs ( $p=0.018$ , Table 1); we also observed a 34.3% reduction in LabID MRSA, although this was not statistically significant ( $p=0.105$ ). **Conclusion:** System-wide implementation of CHG daily bathing in a large, decentralized, rural healthcare system was associated with a significant reduction in CLABSIs and CAUTIs.

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Observed vs predicted HAI rates over time

Black line solid is the predicted number of infections from NHSN

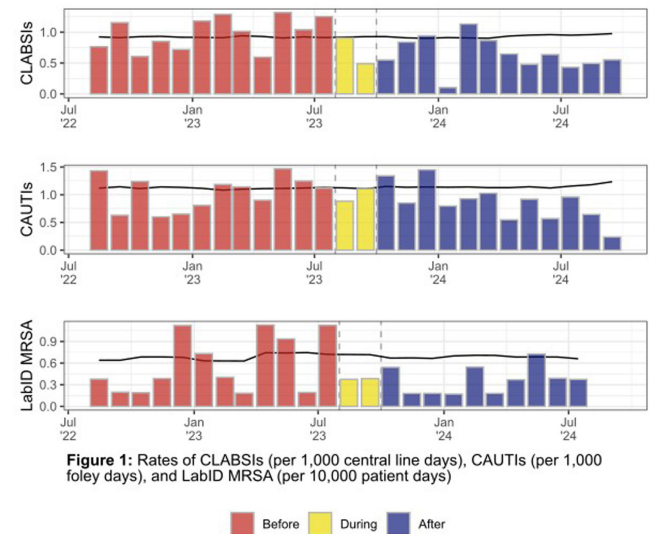


Figure 1: Rates of CLABSIs (per 1,000 central line days), CAUTIs (per 1,000 foley days), and LabID MRSA (per 10,000 patient days)

Before During After

Table 1: Rates of Select HAIs After CHG Implementation			
	Incident Rate Ratio	95% CI	P value
CLABSI	0.599	0.410–0.869	0.008
CAUTI	0.668	0.476–0.933	0.018
LabID MRSA	0.657	0.391–1.09	0.105

Presentation Type:

Poster Presentation

Subject Category: CLABSI

Demographic and Socioeconomic Factors as Predictors of Device-Associated Healthcare Infections Before and During the COVID-19 Pandemic

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**Background:** Social vulnerability factors have been associated with negative health outcomes. However, it remains unclear how they affect device-related infections in different population groups. **Methods:** This retrospective observational cohort study included Central-Line Associated Bloodstream Infections (CLABSI) and Catheter Associated Urinary Tract Infections (CAUTI) in an 850-bed, academic tertiary care facility. Information was collected on patient demographics, the CDC Social Vulnerability Index (SVI), hospitalization, comorbidities, and COVID-19 status. SVI analysis included overall vulnerability comprised of the four themes: socioeconomic status, household characteristics, racial/ethnicity minority status, and housing type/transportation. Chi-square and Wilcoxon rank-sum tests were used for categorical and continuous variable comparisons. GEE models compared pre- and pandemic periods by

interrupted time series analysis. **Results:** Between 1/1/2018 to 5/31/2022 98,791 patients were admitted 151,550 times. Of those, 17,796 patients received 29,483 central lines and 45,180 patients had 65,422 Foleys. 314 patients developed 338 CLABSI and 216 patients had 217 CAUTI. 1,552 patients tested positive for COVID-19 with 22 developing CLABSI and 14 CAUTI. The pre-pandemic downward trend in CLABSI and CAUTI was reversed during COVID-19 (p Throughout the study Black patients had higher device days (p In the SVI analysis the socioeconomic theme was associated with higher risk of device-related CLABSI across the entire study ( $p=0.03$ ). During COVID-19 overall SVI and the household characteristics theme were associated with higher device-related CLABSI rates ( $p=0.03$ ;  $p=0.03$ ). Adjusting for race or ethnicity dissolved those associations. For CAUTI race/ethnicity minority status was linked to an event throughout the study ( $p=0.03$ ). This held true after adjusting for individual race or ethnicity status. No associations were detected in the pre- and pandemic periods for CAUTI. **Conclusions:** Health outcome disparities affected Black (CLABSI and CAUTI) and Hispanic/Latino (CLABSI) patients. Of note, both groups had significantly higher device utilization rates. Per-patient infections increased during the pandemic without altering race/ethnicity differences. Higher race/ethnicity minority status SVI was linked to CAUTI. However, CLABSI were driven by the socioeconomic SVI. The findings can help clarify the relationships between race/ethnicity and other demographic and socioeconomic factors associated with device-related infections on the community and individual level.

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Multi-Center, Randomized Study To Evaluate The Efficacy And Safety of Mino-Lok for the management of CLABSI In Hemodialysis Patients

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**Background:** Catheter-related or central line-associated bloodstream infection (CRBSI/CLABSI) is a common and serious complication in patients undergoing hemodialysis (HD), often resulting in significant morbidity and mortality. Managing CRBSI/CLABSI often requires removing the central venous catheter (CVC) and placing a new one at a different vascular site. However, this approach is not always feasible for these patients that often have limited vascular access. No adjunct antimicrobial lock therapy has been FDA-approved for managing such infections and is urgently needed to salvage HD vascular access. Our study evaluated a novel triple combination antimicrobial catheter lock solution containing minocycline, EDTA, and ethanol (Mino Lok (MLT)). MLT has shown broad-spectrum in-vitro activity and positive results in a Phase 2 trial. Herein, we report the results of MLT CVC-salvage therapy in the subgroup of HD subjects from a phase 3 trial. **Methods:** This international, multicenter, superiority trial was conducted at 34 sites. HD, cancer, or other patients requiring a long-term CVC (LTCVC), aged  $\geq 12$  years, with CLABSI/CRBSI, were enrolled and randomized (1:1 ratio) to receive MLT or site-specific standard of care (SOC) antimicrobial lock therapy for 2 hours/day for 7 days. The primary endpoint was median time to catheter failure (i.e., mortality, catheter removal due to inability to administer lock or infectious-related reasons, worsening signs/symptoms, persistent or recurrent bloodstream infection, or deep-seated infection). **Results:** From February 2018 to February 2024, 54 HD patients were enrolled and randomized: 26 to MLT and 28 to SOC. Gram-negative bacteria accounted for 50% of CLABSI/CRBSIs, gram-positive bacteria 43%, and Candida species 7%. Highly virulent organisms (non-commensals) caused 69% of all cases. Patients in SOC had a significantly shorter time to catheter failure compared to MLT ( $p=0.03$ ) with 25% of CVCs failing by day 6 and 50% by day 22 in SOC compared to 25% failing by day 37 in MLT (Figure 1). Similarly, 16 subjects (57%) in SOC had a CVC failure event compared

to only 8 (31%) in MLT. Adverse events (AEs) and serious AEs (SAEs) were comparable between the two groups. There were no drug-related SAEs. **Conclusion:** This phase 3 pivotal study demonstrated MLT to be highly effective and superior to SOC antimicrobial lock therapy in salvaging LTCVCs associated with CRBSI/CLABSI in HD patients. MLT has broad-spectrum activity, was well-tolerated, and was not associated with drug-related SAEs. MLT may satisfy an urgent unmet need in salvaging HD catheters in patients with CRBSIs/CLABSIs.

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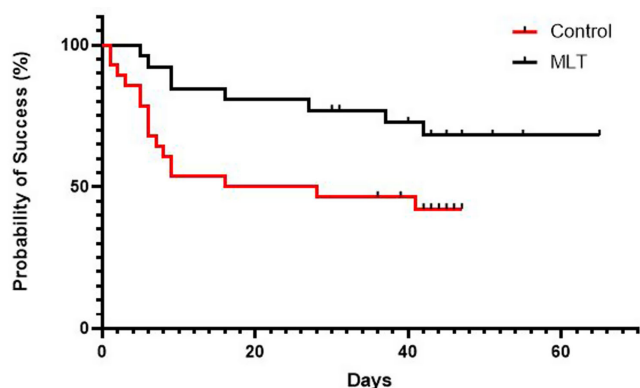


Figure 1. Kaplan-Meier Curve for the Probability of Success in MLT vs. Control Groups

#### Presentation Type:

Poster Presentation

#### Subject Category: CLABSI

#### Improving Compliance with Vascular Access Devices Management Standards Using a Multidisciplinary Approach

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**Background:** During the COVID-19 pandemic, the rate of central line-associated bloodstream infections (CLABSI) decreased at the Veteran Affairs North Texas Health Care System. From fiscal year (FY) 2022 Quarter (Q)4 to FY2023 Q2, the CLABSI rate increased from 0 to 0.79 per 1,000 device days. Breaches in evidence-based practices for the maintenance of vascular access devices (VAD) were hypothesized to have contributed to the increase in CLABSI rate. **Methods:** In March 2023, a multidisciplinary workgroup was created with the primary goal of improving compliance with VAD standards of care to  $\geq 95\%$  by FY2023 Q4 and a secondary goal of decreasing CLABSI rates. A baseline assessment of 12 VAD insertion and maintenance process measures was developed using an assessment tool to record nurses' observations and review documentation in the computerized patient record system. In addition, the facility VAD policy was updated, and nurses received competency training on VAD management. Baseline compliance data for the 12 VAD process measures was compared to data during the intervention period for acute and critical care areas. CLABSI rates (classified using the National Healthcare Safety Network surveillance criteria) were compared to the period before the creation of the workgroup, policy updates, and training. **Results:** Nurse observations in acute and critical care units during FY2023 were 19 (Q2),

1,284 (Q3), and 718 (Q4). From FY2023 Q2 to Q4, three of the 12 process measures met the  $\geq 95\%$  compliance goal by FY2023 Q4. The process measures that met the goal from Q2 to Q4 were clean peripheral IV catheter hub: 100% to 95.0%, unused tubing Y-sites capped with swap cap: 0% to 96.0%, and documentation of the last dressing change in CPRS: 0% to 99.0%. Notable increases were also seen for three other measures: appropriately dating of peripheral IV tubing: 78.9% to 88.0%, presence of Coban or kerlix occluding site: 0% to 46.0%, and documentation of device insertion: 0% to 89.0%. Persistent deficits were noted in the documentation of peripheral intravenous dressing dates and initials (compliance **Conclusions:** Enlisting a multidisciplinary team approach, including training, and updating VAD policy/procedures, led to a moderate improvement in VAD management compliance and a decline in CLABSI rates.

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#### Classifying pediatric central line-associated bloodstream infections: finding meaning by comparing surveillance to clinical definitions

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**Background:** Central line-associated bloodstream infections (CLABSIs) are monitored in U.S. hospitals using the National Healthcare Safety Network (NHSN) surveillance definitions. This standardization has enabled interfacility comparisons of CLABSI rates and established CLABSIs as a nationally recognized healthcare quality and patient safety indicator. Since CLABSI prevention efforts focus on infections meeting the NHSN definition, fewer resources are allocated to address other bacteremia sources, potentially missing opportunities for improvement. **Methods:** The review included hospitalized patients with an eligible central line and  $\geq 1$  positive blood culture on hospital day  $\geq 3$  in 2024. Trained infection preventionists (IPs) applied the NHSN surveillance definitions to classify positive blood cultures. IPs then gathered clinical information by reviewing the patients' medical history, interventions, imaging tests, antimicrobial treatments, and direct caregiver engagement, used it to determine the likely clinical sources for bacteremia, and classified them according to NHSN categories. The concordance in classifying positive blood cultures using the NHSN surveillance definition alone versus with clinical input were compared. **Results:** Of the 136 eligible cases that IPs reviewed in 2024, 92 (67%) had concordant classifications as CLABSI (24), mucosal barrier injury (MBI) (13), secondary bacteremia (28), contaminant (25), or other (2). Of the 29 CLABSIs that met only the NHSN surveillance definition, 15 were associated with a clinical secondary source, 8 with a clinical MBI episode, 5 as continuation of previous infection or present on admission, and 1 as clinical contaminant. The 83 non-CLABSI bacteremia included 38 infections at other sites and 27 contaminants. **Conclusion:** Our analysis suggests that using NHSN surveillance definitions results in significant overreporting of CLABSIs in pediatric patients. Overreporting may be due to factors unique to the pediatric population, such as the inability to communicate clinical symptoms and the normal physiologic lack of signs needed to meet NHSN definitions. A focus on all BSIs could provide a greater benefit towards hospital harm reduction activities by focusing on the likely true source of bacteremia. Compared to CLABSIs, patient harm from contaminated blood cultures and infections with secondary bacteremia may be more prevalent and require a greater focus on prevention.

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