



Oral Abstracts

Quality Assurance and Performance Improvement

QAPI 19

Bridging Communication Gaps to Reduce Dialysis Catheter Related Central Line Associated Blood Stream Infections in an Academic Hospital

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Background: Central Line Associated Blood Stream Infections (CLABSIs) are serious but often preventable infections that result in an increased mortality risk for patients, extended hospital stays, and financial burden for organizations. Dialysis patients are at greater risk of poor outcomes from CLABSIs than other hospital populations. In 2022, an increase of dialysis line related CLABSIs (DLR-CLABSIs) in the Adult Progressive Care Units (PCUs) was identified; to improve patient safety and cost burden the hospital sought to reduce DLR-CLABSIs by 50% over the 2023 calendar year.

Methods: A review of 2021–2022 CLABSI apparent cause analyses data was completed and rates of DLR-CLABSIs were calculated. Using the Plan-Do-Study-Act (PDSA) cycle, Unit Directors (UDs) were notified of increasing rates and adherence to bundle practices and communication standards was reviewed. A communication tip sheet was developed and a dialysis line dashboard was created in collaboration with Nursing Informatics.

Results: Despite a decrease in overall CLABSIs rates, data showed an increase in DLR-CLABSIs in the Adult PCUs (2021–17%, 2022–50%). Interviews revealed that no reliable communication system for notifying the dialysis team of dialysis lines existed, PCU staff did not provide care for dialysis lines, and dialysis staff were only aware of lines being actively utilized for intermittent hemodialysis. This gap in an established communication process resulted in dialysis lines not receiving care. With UD cooperation and implementation of tip sheets and dashboards, CLABSIs rates in the Adult PCUs rapidly declined. From January to October 2023 no DLR-CLABSIs were identified, maintaining the 50% reduction goal.

Conclusions: Maintaining decreased CLABSI rates is dependent on nursing and dialysis team commitment to communication and dashboard usage. Communication regarding line care to the correct care team was a major driver for this patient safety issue. Reviews of processes that rely heavily on verbal communication should be completed by staff and monitored by leadership regularly.

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Bundled Approach to Reduce Blood stream infections in Patients Requiring use of Extracorporeal Membrane Oxygenation

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Background: There is a high prevalence of blood stream infections (BSI) associated with Extracorporeal Membrane Oxygenation (ECMO) in adults. The increasing use of ECMO coupled with the patient risk factors places patient at high risk for BSIs. An increase in hospital associated BSI was identified in Cardiothoracic Intensive Care Unit (CTICU) ECMO patients between July 2021 to November 2021. The CTICU ECMO BSI rate peaked to 44% in October 2021.

Methods: Our facility is a 1040 bed tertiary care academic medical center in Florida. Between January to March 2022 a multidisciplinary ECMO task force was created and a collaborative practice review was performed. Multiple environmental factors and clinical practices around ECMO cannula care potentially contributing to ECMO line BSIs were identified. The ECMO cannula site care bundle was designed as set of evidence-based interventions focused on best practices around environmental factors, cannula securement, use of end caps, dressing integrity, use of antimicrobial discs and baths, and suture markings. In addition, a highly dedicated ECMO specialist team was created within the CTICU. An education tipsheet was created for standardized ECMO disinfection and priming practices and an education block was performed. Also, practices were revised around changing ECMO filters and aseptic line interventions during circuit changes.

Results: The BSIs in CTICU ECMO patients decreased from a high of 44% in during pre-intervention in October 2021 to 0% in June 2022 post-intervention and has been sustained for last 7 months.

Conclusions: Our multidisciplinary task force was successful at identifying many environmental and clinical risk factors for ECMO BSIs and implementing care bundles with evidence-based practices in reducing ECMO BSIs.