We therefore undertook a multidisciplinary collaborative among clinical epidemiology, nursing, transplant surgery, and critical care to eliminate CLABSI events” Russell et al (2018).

Abstract:

Background: Increases in liver transplant patient perioperative acuity have resulted in frail immunosuppressed patients at elevated risk for nosocomial infections. Avoiding central line-associated bloodstream infections (CLABSIs) is paramount to facilitate transplantation and post-transplant recovery. In 2015, our liver transplant intensive care unit (ICU) CLABSIs accounted for more than 25% of all CLABSI at our institution. We therefore undertook a multidisciplinary collaborative among clinical epidemiology, nursing, transplant surgery, and critical care to eliminate CLABSI events.

Methods: From 2014-2016, using Lean methodology and plan-do-study-act (PDSA) cycles, 14 interventions were implemented in the liver transplant ICU. Interventions were aimed at infection prevention, care standardization, and team-based monitoring. Implementation used quality improvement methodology including audit and feedback, education, standardization, multidisciplinary stakeholder involvement, and PDSA cycles. Process measures were monitored and audited. CLABSI rates per 1,000 central venous catheter (CVC) days were tracked by clinical epidemiology.

Results: During the intervention, 901 CVC catheter audits were completed. Improvements were seen on all process measures, and complete compliance increased from 25%-67%. CLABSI infection rates dropped from 4.2 to 1.8 in 1,000 CVC days, with an average of less than 1 CLABSI per month. This marked a 61.2% annual reduction, which correlated with an estimated $935,000 annual savings.

Conclusion: Concerted ongoing multidisciplinary collaboratives are essential to minimize CLABSI and optimize value and quality in a challenging, high-acuity patient population.

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DOI: https://doi.org/10.1016/j.ajic.2018.08.006.