

Decreasing Central Line-associated Bloodstream Infections Through Quality Improvement Initiative on a High Acuity Transplant Unit



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BACKGROUND

- Central line-associated blood stream infections (CLABSI) have a significant impact on mortality, morbidity and length of stay¹
- Data collected by the Infection Prevention Department revealed progressive increases in the rate of CLABSI on an Abdominal Transplant Unit.
- Recognizing a drift from best practice, front line staff, the IP team and vascular access specialists, collaborated to identify opportunities for improving care of patients with vascular access devices.

METHODS

- An increase in CLABSI rate was observed on the Abdominal Transplant Unit beginning in 2016.
- An initiative began in 2017 to evaluate whether CLABSI rate reduction was sustainable for at least 1 year and to identify key determinants of this sustainability.
- Interventions were aimed at infection prevention best practices, care standardization, and team-based monitoring. Interventions included (1) re-education on CLABSI reduction, (2) two RN dressing changes to validate practice during central line dressing change, (3) approval for blood draws from central lines (during non-emergent situations) provided by nurse manager, physician lead and transplant quality physician, (4) CLABSI prevention nurses are appointed as designated phlebotomists for patients with prior approval, (5) daily line assessment was performed to address line days, indication of line (remove latent lines) and plan of care (transition to permanent access) and this information was shared with the unit physician lead and transplant quality team.
- Assuring compliance with above practices through routine audits and timely feedback with clinician accountability were vital for compliance with best practices.

RESULTS

Year	Number of Infections	Infection Rate
2017 (Interventions implemented Q4)	11	4.825
2018	9	3.294
2019	4	1.533

CONCLUSIONS

- During the intervention, CLABSI infection rates dropped from 4.825 to 1.533 in 1,000 CVC days.
- The sustainability plan for this program is to continue line audits, assessing line necessity and review the effectiveness of the initiatives, review all new CLABSI data with staff and implement new changes as necessary.
- Ongoing multidisciplinary collaboration is essential to reduce CLABSIs and optimize quality in a challenging, high acuity patient population.

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REFERENCES

¹Russell TA , Fritschel E , Do J , et al. Minimizing central line-associated bloodstream infections in a high-acuity liver transplant intensive care unit. Am J Infect Control. 2019;47:305-12.