

Reducing CRBSIs in Pediatric Oncology: A Nursing Quality Initiative

Deana Deeter, CRNP; Michelle Hess, RN; Donna Kandsberger, MSN, CNS; Brandy Souders, RN
Penn State Hershey Children's Hospital

Introduction

Our Pediatric Oncology unit identified hospital-acquired catheter-related bloodstream infections (CRBSIs) as a problem in 2008, when we averaged 12.2 CRBSIs per 1000 line days, which is above the infection rates reported in the literature for this patient population. This is a significant issue due to the morbidity and mortality from septicemia in immunocompromised patients.

Methods

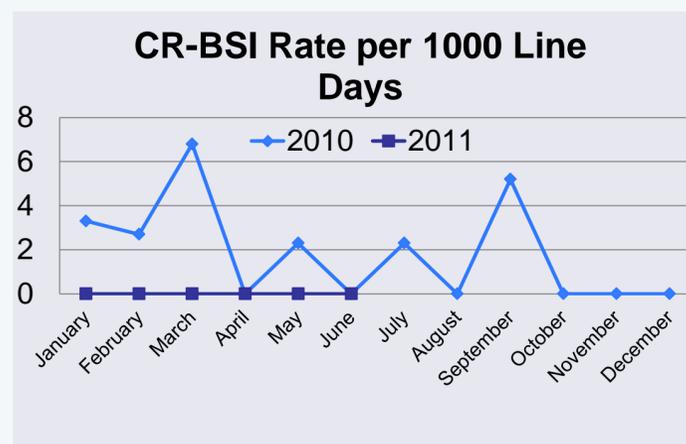
This quality improvement initiative used a multifaceted nurse-driven approach to reduce hospital-acquired CRBSIs on our Pediatric Oncology unit. Nurses used four main strategies to address hospital-acquired CRBSIs on their unit: education, increased staff awareness, policy development, and documentation. These strategies are described above.

Intervention Strategies

- Education & Practice Councils and the Data Analysis Team used clinical expertise & literature review to formulate a unit action plan, which included holding staff members accountable for their knowledge of central line care policy and procedure through direct observation of central line care by a Council member.
- Staff awareness was increased by posting our CRBSI rates & the number of days since last hospital-acquired CRBSI in a prominent location on the unit.
- Policies establishing Standardized Laboratory Collection Times and Collecting Blood Cultures from a Central Venous Catheter were developed because frequent line access & culturing technique were identified as sources of infection & false positive cultures.
- Clear documentation helped to identify sources of infection other than the central line or hospital environment during real-time analysis of positive blood cultures.

Results

Retrospective chart review of all pediatric oncology inpatients & real-time analysis of positive blood cultures revealed 9 consecutive months of zero CRBSIs on our unit. Additionally, nurses collected central line access data to assess the impact of the Standardized Laboratory Collection Times policy, which showed that this policy & other QI measures helped to reduce our frequency of line access from an average of 11.7 times per day to an average of 6.8 times per day.



Discussion

Nurses were an integral part of all of the interventions described, which helped to achieve a reduction in hospital-acquired CRBSIs on our unit to zero for 9 consecutive months, as well as a 42% reduction in frequency of line access per day.

Conclusions

This project has shown that engaging nurses in quality improvement initiatives helps them to take ownership of a problem and holds them accountable for their clinical practice. This has resulted in a change in nursing culture on our Pediatric Oncology unit and has improved patient care. Not only did our unit experience a decrease in our hospital-acquired CRBSIs, but nursing staff embraced this endeavor as an opportunity for professional growth. Nurses also noted improved relationships with the interdisciplinary team.

References

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