CLABSI occurs more frequently among high-risk pediatric patients, such as those with intestinal failure (IF) who are parenteral nutrition (PN) dependent. Following an increase in CLABSI rates, a quality improvement (QI) initiative was implemented” Ormsby et al (2018).

Abstract:

Background: Central line–associated bloodstream infections (CLABSIs) cause substantial morbidity and increase antimicrobial use and length of stay among hospitalized children in the United States. CLABSI occurs more frequently among high-risk pediatric patients, such as those with intestinal failure (IF) who are parenteral nutrition (PN) dependent. Following an increase in CLABSI rates, a quality improvement (QI) initiative was implemented.

Methods: Using QI methodology, an enhanced central venous catheter (CVC) maintenance bundle was developed and implemented on 2 units for pediatric PN-dependent patients with IF. CLABSI rates were prospectively monitored pre- and postimplementation, and bundle element adherence was monitored. Enhanced bundle elements included chlorhexidine-impregnated patch, daily bathing, ethanol locks, 2 nurses for CVC care in a distraction-free zone, peripheral laboratory draws, bundling routine laboratory tests, and PN administration set changes every 24 hours.

Results: Adherence to enhanced bundle elements increased to >90% over 3 months. CLABSI rates averaged 1.41 per 1,000 central line days preimplementation compared with 0.40 per 1,000 device days postimplementation (P = .003), an 85% absolute reduction in CLABSI rates over 12 months.

Conclusions: Patients with IF are at an increased risk for CLABSI. Enhanced CVC maintenance bundles that specifically target prevention practices in this population may be beneficial.

Reference:

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