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Strength in Numbers: Utilization of an Innovative Electronic Audit to Enhance the Completion of Central Line Maintenance Audits

Abstract:

Health care systems use audit and feedback processes to monitor compliance with evidence-based prevention bundles that target patient harm, such as central line-associated bloodstream infections (CLABSIs). The purpose of this project was to implement a revised audit and feedback data collection process of central line maintenance audits used to prevent CLABSIs. Project aims were to evaluate the number of completed audits and bundle compliance rates before and after implementing a new process.

This quality improvement project utilized a pre- and post-implementation design. The project was implemented across all pediatric inpatient units. An innovative, electronic audit process was developed to allow data entry in real-time as CLABSI prevention champions conducted audits. Data were fed into a robust electronic dashboard, allowing units to readily visualize performance. Champion education on tool utilization, feedback, and data interpretation occurred. Data was analyzed over a 52- month period (26 months pre- and post-implementation).

The number of central line maintenance bundle audits significantly increased post-implementation from an average of 36 to 64 per month, $p=.0001$. Central line maintenance bundle compliance scores increased from an average compliance score of 76.3% to 89.3%, $p=.0001$

This project demonstrated the effectiveness of using an electronic audit tool and intense champion education to promote optimal outcomes related to central line maintenance bundle compliance.

Key Words: CLABSI, audit, healthcare acquired infections

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