

CLINICAL EVIDENCE

Achieving Near-Zero and Zero: Who Said Interventions and Controls Don't Matter?

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Abstract

Background: Implementation of the Institute for Healthcare Improvement's Central Line Bundle in 2005 did not result in attainment of 0 central line-associated bloodstream infections (CLABSIs).

Purpose: To establish process improvements to eliminate CLABSIs.

Methods: Infection Prevention and Intravenous Therapy Departments at our institution formed a collaborative partnership in 2008 to eliminate CLABSIs. Staff education, daily surveillance, and implementing evidence-based practice into policies, protocols, and product selection were utilized. A study designed to capture and track multiple interventions from the beginning versus time was implemented.

Results: There were a total of 7 CLABSIs over 5 years, which trended down by year from 3 to 2 to 1 to 1 to 0. The average annual CLABSI rate of infections per 1,000 catheter line days declined from 1.068 to 0.849 to 0.508 to 0.449 to 0.000. The full 3-year simple average from 2009 to 2011, after all of the key interventions were phased-in, was 0.3048.

Conclusions: Collaboration and commitment played a role in implementing changes. Empowering staff through education that increases knowledge, understanding, and skills improves patient safety and patient outcomes. Process changes and practice protocols supported by evidence-based practice along with efficacious products played a crucial part in getting to 0 CLABSIs. Layered kits with products placed in the correct order of use can increase aseptic technique compliance. Prompt identification of individual CLABSI episodes with prompt intervention to the specific individuals involved has been shown to be cost-effective and can be implemented in most hospitals.