



This article describes changes in central line-associated bloodstream infection (CLABSI) rates among common causative organisms over an 11-year period on a pediatric inpatient unit prior to and following CLABSI reduction strategies” Linder et al (2018).

Abstract:

This article describes changes in central line-associated bloodstream infection (CLABSI) rates among common causative organisms over an 11-year period on a pediatric inpatient unit prior to and following CLABSI reduction strategies. The setting for this descriptive cohort design study was a 32-bed inpatient unit in a tertiary pediatric hospital serving children with immune compromised conditions, including cancer and recipients of hematopoietic stem cell and solid organ transplants. Between January 2006 and December 2016, 265 CLABSIs involving 189 patients were reported. Data were organized into three time periods: 5-year preintervention baseline (2006-2010), implementation of maintenance care bundles (2011-2012), and addition of formalized supportive care practices to the maintenance care bundles (2013-2016). Organisms were categorized into four groups based on the National Health Safety Network organism list. Time-by-class Poisson regression models evaluated changes in CLABSI rates. Characteristics of patients who developed CLABSIs were unchanged. Infections occurred most frequently among patients with hematologic malignancies and neutropenia. Significant log rate decreases in CLABSI rates were observed with the implementation of maintenance care bundles plus enhanced supportive cares

compared to preintervention baseline for the following organisms: (1) common commensal organisms (-1.05 , $p = .005$), (2) mucosal barrier injury (MBI) organisms common to the mouth ($-.708$, $p = .007$), and (3) other noncommensal/non-MBI pathogens ($-.77$, $p = .005$). Rates were unchanged for MBI organisms common to the lower gastrointestinal tract. Central line maintenance care bundles and formalized supportive care practices resulted in sustained decreased CLABSI rates. Additional interventions are needed to reduce CLABSIs involving MBI-associated organisms common to the lower gastrointestinal tract.

Reference:

Linder, L.A., Gerdy, C., Jo, Y. and Wilson, A. (2018) Changes in Central Line-Associated Bloodstream Infection Rates Among Children With Immune Compromised Conditions: An 11-Year Review. *Journal of Pediatric Oncology Nursing*. April 1st. .

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