“The use of an antimicrobial PICC in conjunction with current infection prevention practices resulted in a statistically significant decrease in infection rate, which supports the recommendation for continued use of antimicrobial catheters.” Rutkoff (2014).

Reference:

Rutkoff, G.S. (2014) The Influence of an Antimicrobial Peripherally Inserted Central Catheter on Central Line-Associated Bloodstream Infections in a Hospital Environment. The Journal of the Association for Vascular Access. 19(3), p.172-179.

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Abstract:

Background: Federal agencies such as the Centers for Disease Control and Prevention have mandated reduction of hospital-acquired infections and recommended the use of antimicrobial catheters in clinical settings where central line-associated bloodstream infection (CLABSI) rates have remained high. The Infusion Nurses Society also recommends antimicrobial catheters for specific patient populations. At a California hospital, evidence-based infection prevention strategies for CLABSI prevention had been in effect for several years, but the CLABSI rate remained at an unacceptable level. For this reason, the effect of an antimicrobial peripherally inserted central catheter (PICC) on the incidence of CLABSI was

studied.

Methods: A quasiexperimental design was used with concurrent data collection on patients in an intervention group who received an antimicrobial PICC. Retrospective data were collected for patients in a nonintervention group who received nonantimicrobial PICCs the previous year.

Results: The 257 patients in the nonintervention group experienced 8 CLABSIs with an infection rate of 4.18/1,000 line days. The 260 subjects in the intervention group experienced 1 CLABSI with an infection rate of 0.47/1,000 line days. The decrease in the number of infections per 1,000 line days for the intervention group was statistically significant.

Conclusions: The use of an antimicrobial PICC in conjunction with current infection prevention practices resulted in a statistically significant decrease in infection rate, which supports the recommendation for continued use of antimicrobial catheters. Treatment cost savings, which overcame the higher initial cost for the devices, were found to be an additional benefit of using antimicrobial catheters.

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