

“Disinfectant cap use was associated with an estimated savings of almost \$300,000 per year in the hospital studied” Merrill et al (2014).

Reference:

Merrill, K.C., Sumner, S., Linford, L., Taylor, C. and Macintosh, C. (2014) Impact of universal disinfectant cap implementation on central line-associated bloodstream infections. American Journal of Infection Control. 42(12), p.1274-1277.

Abstract:

**Background:** Central line-associated bloodstream infections (CLABSIs) result in increased length of stay, cost, and patient morbidity and mortality. One CLABSI prevention method is disinfection of intravenous access points. The literature suggests that placing disinfectant caps over needleless connectors decreases CLABSI risk.

**Methods:** A quasi-experimental intervention study was conducted in a >430-bed trauma I center. In addition to an existing standard central line bundle, a new intervention consisting of a luer-lock disinfectant cap with 70% alcohol was implemented in all intravenous (IV) needleless connectors on patients with peripheral and central lines. Compliance to the disinfectant cap was monitored weekly. A generalized linear model using a Poisson distribution was fit to determine if there were significant relationships between CLABSIs and disinfectant cap use. Impacts on costs were also examined.

**Results:** The rate of CLABSI decreased following implementation of the disinfectant cap. The incidence rate ratios (.577, P = .004) for implementing the disinfectant caps was statistically significant, indicating that the rate of patient infections decreased by >40%. Increased compliance rates were associated with lower infection rates. Disinfectant cap use was associated with an estimated savings of almost \$300,000 per year in the hospital studied.

**Conclusions:** Use of a disinfectant cap on IV needleless connectors in addition to an existing standard central line bundle was associated with decreased CLABSI and costs.

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