



The aim of this study was to evaluate the cost-effectiveness of antimicrobial locks for the prevention of CLABSI” Pliakos et al (2018).

Abstract:

**BACKGROUND:** Antimicrobial lock solutions are a low-cost strategy that can reduce the incidence of Central Line-Associated Bloodstream Infections (CLABSI). The aim of this study was to evaluate the cost-effectiveness of antimicrobial locks for the prevention of CLABSI.

**METHODS:** We constructed a decision-analytic model comparing antimicrobial lock solutions to heparin locks for the prevention of CLABSI in three settings: hemodialysis, cancer treatment and home parenteral nutrition. Cost-effectiveness was determined by calculating CLABSI prevented and incremental cost-effectiveness ratios (ICER). Uncertainty was addressed by plotting cost-effectiveness planes and acceptability curves for various willingness-to-pay thresholds.

**RESULTS:** In probabilistic analysis, at a willingness-to-pay of \$50,000, antimicrobial lock solutions had a 96.24% chance of being cost-effective compared to heparin locks in the hemodialysis setting, an 88.00% chance in the cancer treatment setting, and a 92.73% chance in the home parenteral nutrition setting. In base-case analysis, antimicrobial lock solutions resulted in savings of \$68,721.03 for the hemodialysis setting, \$85,061.41 for the cancer setting, and \$78,513.83 for the home parenteral nutrition setting per CLABSI episode

prevented.

**CONCLUSIONS:** In three distinct and clinically important settings (hemodialysis, cancer treatment patients and home parenteral nutrition), antimicrobial lock solutions are an effective strategy for the prevention of CLABSI and their use can result in significant health-care savings.

Reference:

Pliakos, E.E., Andreatos, N., Ziakas, P.D. and Mylonakis, E. (2018) The Cost-effectiveness of Antimicrobial Lock Solutions for the Prevention of Central Line-Associated Bloodstream Infections. *Clinical Infectious Diseases*. June 26th. .

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