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Decrease Dislodgements

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The graphic features the SecurAcath logo at the top. Below it, the text 'Reduce Infections' and 'Decrease Dislodgements' is displayed in large, bold, white font against a dark orange background. A 'Learn More' link with a right-pointing arrow is positioned below the text. On the right side, there is a close-up image of the SecurAcath device, which is a yellow, ergonomic handle with a central needle. The handle has 'LIFT' and 'HOLD' labels and the SecurAcath logo. The background of the graphic is a gradient of orange and yellow, with a white diagonal line separating the top section from the bottom section.



A human factors engineering-based intervention aimed at the modification of task behavior to increase adherence to best practices and the reduction of central line-associated bloodstream infections (CLABSI)” Drews et al (2017).

Abstract:

Objective: A human factors engineering-based intervention aimed at the modification of task behavior to increase adherence to best practices and the reduction of central line-associated bloodstream infections (CLABSI). The hypothesis was tested that a central line maintenance kit would improve adherence and reduce CLABSI compared with a standard, nonkit-based

method of performing central line maintenance.

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Design: The study design was a 29-month prospective, interventional, nonrandomized, observational, and clinical research study using a pre-post implementation assessment.

Setting: The study was conducted at a tertiary hospital in the southwestern United States, with participants recruited from a total of 6 patient units (including intensive care units and general wards).

Participants: A total of 95 nurses and 151 patients volunteered to participate in the study.

Intervention: A central line maintenance kit was developed that incorporated human factors engineering design principles. This kit was implemented hospitalwide during the clinical study to assess the intervention's influence on protocol adherence and clinical outcomes compared with a preimplementation control condition (no kit use).

Results: The results of this clinical observations study suggest that a human factors engineering-based kit improved adherence to best practices during central line maintenance. In addition, the number of CLABSIs was significantly reduced during the postimplementation period.

Conclusions: The application of human factors engineering design principles in the development of medical kits can improve protocol adherence and clinical outcomes.

Reference:

Drews, F.A., Bakdash, J.Z. and Gleed, J.R. (2017) Improving central line maintenance to reduce central line-associated bloodstream infections. *American Journal of Infection Control*. July 3rd. .

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