

The impact of closed system and 7 days intravascular administration set replacement on catheter related infections in a general intensive care unit: a before-after study” Lucchini et al (2015).

Abstract:

INTRODUCTION: The incidence of catheter related Bloodstream infections (BSI) is high in intensive care units (ICU).

AIM: To evaluate the BSI rate in a population of patients admitted to a General ICU before and after the implementation of the 2011 CDC guidelines.

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METHODS: Retrospective observational study on patients admitted from January 2009 to December 2013. The infusion and monitoring lines were changed every 96 hours for the first 30 months, and every 7 days for the next 30. In all patients a closed infusion line with needlefree connectors pressure was used (Microclave). The following catheters were considered in the study: central venous catheter (CVC), arterial cannula (ART) and Swan Ganz catheter (SG).

RESULTS: During the period with change every 96 hours 15 BSI were observed over 13395 catheters/days (C/D), 1.12 per 1000 C/D, while when lines where changed every 7 days 11 BSI were observed over 13120 C/D, 0.83 per 1000 C/D. A statistically significant reduction of BSI was observed in SG catheters (4.17 vs. no BSI $p = 0.02$), while the CVCS (1.12 vs 1.45 - $p = 0.37$) and ART (0.35 vs 0.36 - $p = 0.61$) infection rates remained unchanged.

CONCLUSIONS: The replacement of infusion lines every 7 days in our sample did not increase the BSI, helping to reduce the costs.

Reference:

Lucchini, A., Angelini, S., Losurdo, L., Giuffrida, A., Vanini, S., Elli, S., Cannizzo, L., Gariboldi, R., Bambi, S. and Fumagalli, R. (2015) The impact of closed system and 7 days intravascular administration set replacement on catheter related infections in a general intensive care unit: a before-after study. *Assistenza Infermieristica e Ricerca*. 34(3),



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