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.

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: