



Modified CVC bundles were implemented across all settings of our hospital” Karapanou et al (2020).

Abstract:

Background: Our hospital has several characteristics different from the settings in which the central venous catheter (CVC) care bundle has been implemented so far, that is, care bundles or protocols are not systematically used, and the prevalence of central line-associated bloodstream infections (CLABSI) is high, as is bed occupancy rate. We examined the effectiveness of CVC care bundles.

Methods: Modified CVC bundles were implemented across all settings of our hospital. During both phases of the study, we collected data on CLABSI, and we monitored CVC insertion and management practices with direct observation audits.

Results: We have studied 913 CVC insertions (454 in PRE and 459 in POST) for 11,871 catheter-days. The incidence of CLABSI was 8.3 per 1,000 catheter-days PRE, and 7.6 per 1,000 catheter-days POST (incidence rate ratio, 0.92; 95% confidence interval, 0.60-1.40). Compliance with the CVC insertion bundle increased from 8.4%-74.3% ($P < .0001$). The CVC management bundle compliance also increased from 11.4%-57.7% ($P < .0001$). Conclusions: Despite improved compliance after the intervention, implementation of a modified CVC bundle failed to decrease CLABSI incidence. Higher bundle compliance rates may be necessary for a significant decrease in the incidence of CLABSI, along with the appropriate

organizational culture and levels of staffing.

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Reference:

Karapanou, A., Vieru, A-M., Sampanis, M.A., Pantazatou, A., Deliolanis, I., Daikos, G.L. and Samarkos, M. (2020) Failure of central venous catheter insertion and care bundles in a high central line-associated bloodstream infection rate, high bed occupancy hospital. American Journal of Infection Control. January 5th. DOI: <https://doi.org/10.1016/j.ajic.2019.11.018> .

