

This paper describes the use of our electronic tool to monitor and feedback process compliance in conjunction of introducing bespoke central line insertion packs to tackle catheter-related bloodstream infections in our intensive care unit in a medium-sized district general hospital” Hermon et al (2015).

Reference:

Hermon, A., Pain, T., Beckett, P., Jerrett, H., Llewellyn, N., Lawrence, P. and Szakmany, T. (2015) Improving compliance with central venous catheter care bundles using electronic records. Nursing in Critical Care. May 13th. .

Improving compliance with central venous catheter care bundles [#ivteam](http://ctt.ec/w2fGP+@ivteam)

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Abstract:

Background: Health care associated infections are a major contributor to avoidable harm experienced by patients in modern health care settings. Recent reports suggest that electronic checklists for the documentation of a central line bundle may significantly enhance documented process compliance and help to reduce catheter-related bloodstream infection rates.

Aims: This paper describes the use of our electronic tool to monitor and feedback process compliance in conjunction of introducing bespoke central line insertion packs to tackle catheter-related bloodstream infections in our intensive care unit in a medium-sized district general hospital.

Design and methods: Continuous quality improvement programme with ‘Plan-Do-Study-Act’ cycles was implemented. The central venous catheter insertion and maintenance bundle was rolled out in 2007. To monitor compliance with the bundle elements, an electronic tool was designed as part of our bedside Clinical Information System. From 2009, regular quarterly feedback was provided on the number of central venous catheter lines inserted, compliance with the insertion and maintenance bundle and catheter-related bloodstream infection rate using the data collected through the Clinical Information System. We have also introduced dedicated line insertion trolleys and factory-prepared insertion packs. We used segmented regression analysis to assess the changes in the catheter-related bloodstream infection rate before and after implementation of the central venous catheter bundle.

Results: Bundle compliance increased during the implementation period and reached over 95% within 6 months. We observed a significant reduction in the catheter-related bloodstream infection rate from 15.6/1000 days to 0.4/1000 days. Regression analysis showed that only the compliance had significant effect on the number and prevalence of catheter-related bloodstream infections.

Conclusion/Implications: Implementation of evidence-based care bundles reinforced by real-time feedback on the performance of caregivers can significantly reduce the rate of catheter-related bloodstream infection in the intensive care unit. Ensuring that change processes are seamlessly integrated in the workflow with minimal administrative burden is crucial to the quality improvement process.

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