The infection rates decreased with increased compatibility of the care bundle prepared from evidence-based guidelines" Yazici and Bulut (2017).

Abstract:

BACKGROUND: Healthcare-associated infections extend hospitalization time, increase treatment costs and increase morbidity-mortality rates.

OBJECTIVES: To evaluate the efficacy of a care bundle aimed at preventing three most frequent intensive care unit-acquired infections.

MATERIALS AND METHOD: This quasi-experimental study occurred in an 18-bed tertiary care intensive care unit at a university hospital in Turkey. The sample consisted of 120 patients older than 18years and receiving invasive mechanical ventilation therapy, or had a central venous catheter or urinary catheter. The study comprised three stages. In stage one, the intensive care unit nurses were trained in infection measures, VAP, CA-UTIs and CLABSIs sections of the care bundle. In stage two, the trained nurses applied the care bundle and received feedback on any problematic issues. In stage three, the nurses' compatibility and efficacy of the infection prevention care bundle on the infection rates of VAP, CA-UTIs and CLABSIs were evaluated over three 3-month periods.

RESULTS: Over 1000 ventilation days, ventilator-associated pneumonia infection rates were 23.4, 12.6, and 11.5, during January-March, April-June and July-September, respectively, with January-March and April-June showing a significant decrease ($\chi 2=6.934$, $p=0.031$). The central line-associated bloodstream infection rates were 8.9, 4.2, and 9.9 per 1000 catheter days, during January-March, April-June and July-September, respectively, but were not significantly different based on pair-wise comparisons ($p>0.05$). The catheter-associated urinary tract infection rates were higher during July-September (6.7/1000 catheter days) compared to January-March (5.7/1000 catheter days) and April-June (10.4/1000 catheter days) but the differences were not significant ($p>0.05$).

CONCLUSIONS: The infection rates decreased with increased compatibility of the care bundle prepared from evidence-based guidelines.

Reference:

Yazici, G. and Bulut, H. (2017) Efficacy of a care bundle to prevent multiple infections in the intensive care unit: A quasi-experimental pretest-posttest design study. Applied Nursing Research. 39, p.4-10.

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