Abstract:

Introduction: The objective of this study was to determine the impact of an emergency nurse-led implanted port access algorithm for ED patients with implanted ports admitted to the hospital.

Methods: A feasibility study evaluated the implementation of a central line-associated bloodstream infection algorithm in the emergency department over a 1-month study period. Emergency nurses received central line-associated bloodstream infection education and training for port access algorithm implementation. Pre- and postimplementation surveys measured the nurses’ knowledge, attitudes, and behaviors regarding central line-associated bloodstream infections. The nurses’ perceptions of the algorithm were assessed pre- and postimplementation. ED patient port access and central line-associated bloodstream infection rates were compared with preimplementation rates.

Results: Emergency nurses (N = 32) received central line-associated bloodstream infection education and algorithm training. Pre- and postimplementation as well as knowledge, attitude, and behavior surveys were completed by 59% (n = 19) of the nursing staff. Knowledge regarding central line-associated bloodstream infections significantly improved, t(19) = -4.8, P < .001. The nurses’ pre- and postimplementation attitude and behavior scores did not differ significantly. They expressed no concerns regarding implementation of the algorithm; 89% (n = 17) reported that the algorithm “fit well” with the ED workflow, and 21% (n = 4) integrated the patient’s decision regarding venous access into their shift report. The ED port access incidence during the study period was 17.6% (n = 3), compared with 83.3% (n = 15) in the month before the study.

Discussion: The emergency nurse-led port access algorithm decreased ED port access rates. The nurses’ pre- and postimplementation knowledge of central line-associated bloodstream infections increased. The emergency nurse-led port access algorithm empowered emergency nurses to educate their patients on implanted port access and decreased central line use.

Reference: