
Abstract:
Objectives: Although central venous catheter (CVC) dwell time is a major risk factor for catheter-related bloodstream infections (CR-BSIs), few studies reveal how often CVCs are retained when not needed (“idle”). We describe use patterns for temporary CVCs, including peripherally inserted central catheters (PICCs), on non-ICU wards.

Design: A retrospective observational study.

Setting: A 579-bed acute care, academic tertiary care facility.

Methods: A retrospective observational study of a random sample of patients on hospital wards who have a temporary, nonimplanted CVC, with a focus on on daily ward CVC justification. A uniform definition of idle CVC-days was used.

Results: We analyzed 89 patients with 146 CVCs (56% of which were PICCs); of 1,433 ward CVC-days, 361 (25.2%) were idle. At least 1 idle day was observed for 63% of patients. Patients had a mean of 4.1 idle days and a mean of 3.4 days with both a CVC and a peripheral intravenous catheter (PIV). After adjusting for ward length of stay, mean CVC dwell
time was 14.4 days for patients with PICCs versus 9.0 days for patients with non-PICC temporary CVCs (other CVCs; ). Patients with a PICC had 5.4 days in which they also had a PIV, compared with 10 days in other CVC patients (). Patients with PICCs had more days in which the only justification for the CVC was intravenous administration of antimicrobial agents (8.5 vs 1.6 days; ).

Conclusions: Significant proportions of ward CVC-days were unjustified. Reducing “idle CVC-days” and facilitating the appropriate use of PIVs may reduce CVC-days and CR-BSI risk.