Abstract

The issue of peripheral intravenous catheter bloodstream infections (PIVC-BSIs) in hospitalized patients continues to impact the health of adults, causing negative outcomes of care and potentially leading to death. PIVC-BSIs have resulted in prolonged hospitalizations; increased costs, patient pain, and nursing workload. Current literature shows hospital-acquired PIVC-BSIs can be prevented by replacing PIVCs when clinically indicated. The purpose of this project was to determine in adult hospitalized patients, how effective would implementation of an evidence-based protocol on PIVC clinically-indicated-only replacements versus PIVC replacements every 96 hours, routinely be in reducing PIVC-BSIs. A protocol for replacing PIVCs when clinically-indicated-only was implemented over a 4-week period on a 40-bed internal medicine unit. The Visual Infusion Phlebitis (VIP) scale was used to assess when PIVCs needed replacement. Adult patients admitted to the unit with a peripheral intravenous catheter inserted were included in the project. Analytical measurements utilizing the statistical *t*-test showed a PIVC-BSI rate reduction from 0.42 to 0.34 per 1,000 patient days in this project. The result of the independent samples *t*-test indicated that there were not significant differences in PIVC-BSI rates before and after implementation; however, there was a noteworthy clinically significant 8% decrease in infections per 1,000 patient days. Implications for future projects include conducting similar projects to further verify the effectiveness of the intervention.

Keywords: peripheral intravenous catheter, bloodstream infection, hospitalized adults, catheter-related bloodstream infection, clinically indicated, bloodstream infection rate