Decreasing Surgical Site Infections Through Methicillin-Resistant Staphylococcus Aureus Pre-screening

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Abstract

Surgical site infections (SSIs) are a known and preventable adverse event for the surgical population. The project site noted an increase in SSI rates, specifically, methicillin-resistant staphylococcus aureus (MRSA) and determined the need to use an evidencebased preoperative screening tool. The purpose of this quantitative quasi-experimental quality improvement project was to determine if or to what degree the translation of Saraswat et al.'s research on a methicillin-resistant staphylococcus aureus prescreening would impact surgical site infection rates among adult elective surgical patients. The project was implemented in an acute care hospital in California over four weeks. Marilyn Ann Ray's bureaucratic caring theory and Deming's plan-do-study-act change theory were the theoretical underpinnings of the project. The total sample size was 108, n = 23 in the comparative group and n = 85 in the implementation group. Data were extrapolated from the facility's electronic health record. To analyze the comparison and implementation group data, a chi-square test was used, and showed no statistically significant decrease in MRSA X 2 (1, N= 108) = 3.79, p =.052. Despite the lack of statistical significance, there is clinical significance as SSIs reduced from 8.7% in the comparative group to 1.2% in the implementation group. Therefore, the implementation of an MRSA prescreening may prevent SSIs in this population. Recommendations are to sustain the MRSA prescreening and further data analysis is conducted over six months. Keywords: methicillin-resistant staphylococcus aureus screening, surgical site infections, bureaucratic caring theory, evidence-based practice, SSI, prevention of SSI, the plan-do-study-act change theory (PDSA).

Keywords

Methicillin-resistant Staphylococcus Aureus Screening, Surgical Site Infections, Bureaucratic Caring Theory, Evidence-based Practice, SSI, Prevention of SSI, the Plan-do-study-act Change Theory (PDSA)