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Staff Education to Peri Operative Registered Nurses

Shahida p. Meghani
Walden University

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Walden University

College of Nursing

This is to certify that the doctoral study by

Shahida Meghani

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Barbara Gross, Committee Chairperson, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2025

Executive Summary: Staff Education Project
Staff Education to Peri Operative Registered Nurses
by
Shahida Meghani

Executive Summary Submitted in Partial Fulfillment
of the Requirements for the Degree of
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Summary

This doctoral project was a staff education initiative focused on perioperative nursing education for the prevention of surgical site infections (SSIs). SSIs affect approximately 2% to 5% of surgical patients and account for nearly 20% of all healthcare-associated infections, resulting in extended hospital stays, higher costs, and preventable morbidity. The practice-focused question guiding this project was: In adult surgical patients, how does the implementation of a perioperative nursing education program on SSI prevention, compared to standard practice, affect SSI incidence rates over a 2-to-4-month period?

The purpose of this project was to improve adherence to evidence-based SSI prevention protocols and reduce SSI incidence through structured education for perioperative nurses. Analytical strategies included a comprehensive literature review guided by the Johns Hopkins Evidence-Based Practice (JHNEBP) model, strengths, weaknesses, opportunities, and threats (SWOT) analysis, stakeholder engagement, and development of an education program using the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model.

Following analysis and implementation, perioperative nurses demonstrated significant improvements across all evaluation measures. Knowledge scores rose by 25 percentage points, competency validation increased by 40%, and staff confidence in SSI prevention improved by 40%. The incidence of SSIs decreased by 50% within the 2- to 4-month evaluation period. These findings indicate that structured staff education can meaningfully improve adherence to infection-control protocols and enhance patient safety. The implications extend beyond the project site, as similar educational interventions can standardize SSI prevention practices and promote quality improvement across surgical departments

Background

The gap in practice identified at the project site was inconsistent adherence to SSI prevention protocols and variations in staff knowledge. These inconsistencies placed patients at risk for preventable complications. Supporting evidence for practice change included the Centers for Disease Control and Prevention (CDC) guideline for SSI prevention (Berríos-Torres et al., 2017) and the World Health Organization (2023) infection prevention and control guidelines. Systematic reviews confirmed that structured staff education and audit feedback reduce infection rates and improve compliance with evidence-based protocols (Ban et al., 2020; Freeman et al., 2023). The strength of the evidence was high, consisting of Level I systematic reviews and Level II quasi-experimental studies, which provided a strong foundation for the intervention.

The practice-focused question that guided this project was: In adult surgical patients, how does the implementation of a perioperative nursing education program on SSI prevention, compared to standard practice, affect SSI incidence rates over a 2- to 4-month period? The purpose of this project was to improve perioperative nurses' adherence to evidence-based SSI prevention protocols through structured education, competency validation, and ongoing audit feedback. Addressing this gap supports institutional goals for patient safety, accreditation compliance, and quality improvement.

Staff Education Project Development

Participants and Procedures: A total of 10 perioperative registered nurses participated in the educational intervention. I collaborated with perioperative managers and the education department at the project site to deliver educational sessions. The primary tool used to obtain results was the pre- and post-knowledge assessment, a validated 10-item multiple-choice test aligned with CDC and WHO guidelines.

Implementation Process: The education program was implemented over a 4-week period in the perioperative unit. Education was delivered through in-person PowerPoint sessions during staff huddles and reinforced with posters in staff areas. Perioperative nurses completed an SSI prevention checklist during their training. Competency validation was conducted through direct observation and a return demonstration of aseptic technique. Participants' attendance and completion were tracked using Meditrek logs.

Validation Tools: Results were obtained from the following data sources:

1. Pre/Post Knowledge Assessments: A 10-item multiple-choice test mapped to CDC and WHO guidelines, validated by infection-prevention experts.

2. Competency Validation Checklist: A structured observational tool to assess aseptic technique, hand hygiene, and antibiotic prophylaxis timing.
3. Audit and Compliance Monitoring: Weekly audits and direct observations documented by infection-prevention staff.
4. Staff Feedback Surveys: A Likert-scale survey evaluating confidence and applicability of SSI prevention strategies.

Results

The post-implementation evaluation demonstrated clear improvements in nurses' knowledge, competency, and confidence regarding surgical site infection (SSI) prevention. Data was collected from pre- and post-education knowledge assessments, competency validation checklists, and infection-control audit reports. Descriptive analysis revealed consistent improvement across all measured outcomes, confirming the effectiveness of the structured education program.

Table 1

Pre- and Post-Education Outcomes for Perioperative Nurses (N = 10)

Measure	Pre education	Post education	% change
Mean knowledge score	65 %	90 %	↑ 38.5%
Competency validation pass rate	60% (6/10)	100% (10/10)	↑ 66.7%
SSI incidence (per 100 cases)	2.0	1.0	↓ 50%
Staff confidence in SSI prevention	50%	90%	↑ 80%

Following the staff education program, perioperative nurses demonstrated marked improvements in knowledge, skills, and confidence related to surgical site infection (SSI)

prevention. The mean knowledge score increased by 25 percentage points from pre- to post-education, while competency validation rose from 60% to 100%. Additionally, the SSI incidence rate decreased by 50%, demonstrating the effectiveness of structured education in improving patient outcomes. Overall, the intervention led to higher knowledge scores, improved competency validation passes rates, better compliance with SSI prevention protocols, and a measurable reduction in SSI rates. Results may have been influenced by staff participation levels, variability in clinical practice, and the relatively short project period of two to four months. Nonetheless, the project's success has implications that extend beyond the local setting, as SSI prevention is a global concern. Standardizing staff education and compliance strategies can foster broader improvements in surgical outcomes, contributing to national and international quality and safety efforts.

Conclusions

Impact to Organization

This project improved compliance with evidence-based SSI prevention practices, enhanced accreditation readiness, and reduced preventable harm. The observed outcomes align with national quality and safety goals and demonstrate the effectiveness of nurse-led education in improving clinical outcomes.

Recommendations

Following implementation, it is recommended that the project site expand the program to additional perioperative units, integrate the content into annual competencies and orientation, and sustain outcomes through real-time audit tools, visual reminders, and information-technology-supported compliance tracking.

Implications for Nursing Practice and Social Change

This initiative demonstrated nursing leadership in translating evidence into practice, fostered interprofessional collaboration, and promoted equitable outcomes by standardizing infection prevention across diverse populations. By reducing preventable harm, the project contributed to positive social change and advanced the role of nurses in quality and safety. Standardized staff education ensures equitable delivery of evidence-based care, supports professional growth, and strengthens organizational culture centered on safety and continuous improvement.

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