NURS FPX 9100 Assessment 1

Topic Approval Form

LEARNER INSTRUCTIONS

This screening form is intended to help you and your faculty ensure the project topic and methods meet the requirements for the DNP final project. Include APA Citations were noted in this form. Please include an APA reference list at the end of the document. NURS FPX 9100 Assessment 1, Links to relevant resources have been provided throughout the document. The Faculty/Reviewer will provide feedback directly on this form along with recording the decision to endorse or defer the topic.

PROJECT DESCRIPTION

PICOT: For patients undergoing surgical procedures in a hospital (P), how does the integration of advanced sanitization protocols (I) in the operating room compared to standard sanitization measures (C) influence the occurrence of surgical site infections (O) within a two months period (T)?

Brief Summary for NURS FPX 9100 Assessment 1 Topic Approval Form

The project, "Reducing Hospital-acquired Infections with Advanced Sanitization Protocols," aims to enhance patient safety by implementing advanced sanitization measures in operating rooms, specifically focusing on reducing surgical site infections (SSIs). The PICOT question establishes a clear research framework, examining the impact of integrating advanced sanitization protocols compared to standard measures on the occurrence of SSIs within a two-months period for patients undergoing surgical procedures. Advanced sanitization protocols may include innovative technologies, stringent disinfection practices, and continuous monitoring of cleanliness in operating rooms (Bali, 2020). For instance, the introduction of UV-C light systems, antimicrobial coatings on surfaces, and rigorous staff training can contribute to a more comprehensive and effective sanitization approach. The benefits of this project are manifold. Firstly, a reduction in SSIs leads to improved patient outcomes, shorter hospital stays, and decreased healthcare costs (Hou et al., 2022). NURS FPX 9100 Assessment 1, Secondly, the implementation of advanced sanitization measures aligns with the broader goal of promoting infection control and preventing the spread of antimicrobial resistance. In the USA, various organizations are at the forefront of establishing standards and guidelines for

healthcare-associated infection prevention. The Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), and the Association for Professionals in Infection Control and Epidemiology (APIC) play pivotal roles in setting standards, providing education, and promoting best practices (Costabella et al.,2023).

Adhering to these standards ensures a systematic and evidence-based approach to reducing hospital-acquired infections, contributing to the overall enhancement of healthcare quality and patient safety.

Primary Objective

To reduce the occurrence of surgical site infections (SSI) in patients undergoing surgical procedures in the hospital by implementing advanced sanitization protocols in the operating room within a two-month period.

Secondary Objective

1. Implement and enforce advanced sanitization protocols to create a safer and more sterile environment in the operating room, aiming to significantly improve infection control measures.
2. Assess the effectiveness of the advanced sanitization protocols by comparing the incidence of surgical site infections in patients undergoing surgical procedures with those subjected to standard sanitization measures during the one-month period.
3. Identify and document best practices in advanced sanitization protocols based on the project's outcomes, creating a comprehensive guideline that can be used for future implementations and improvements in infection control across healthcare settings.

Proposed Evidence-based Intervention(s)

1. Implementation of Ultraviolet (UV) Light Disinfection: UV light has demonstrated effectiveness in eliminating a wide range of pathogens, including bacteria and viruses. Integrating UV light disinfection systems in the operating room can provide an additional layer of sanitization, targeting surfaces and air to reduce the risk of surgical site infections. NURS FPX 9100 Assessment 1, Numerous studies have shown the efficacy of UV light in reducing microbial contamination in healthcare settings, contributing to a decrease in hospital-acquired infections (Różańska et al., 2023).
2. Adoption of Antimicrobial Surface Coatings: Applying antimicrobial coatings on surfaces within the operating room can create a hostile environment for pathogens, limiting their ability to survive and proliferate. This intervention can complement regular cleaning procedures and contribute to sustained sanitization efforts. Research on antimicrobial

coatings has demonstrated their ability to inhibit the growth of bacteria on surfaces, leading to a reduction in the transmission of infections Birkett et al. (2022).

3. Utilization of Sterile Disposable Drapes and Equipment Covers: Using disposable, sterile drapes and covers for equipment can minimize the risk of contamination during surgical procedures. This intervention ensures a fresh and uncontaminated environment for each surgery, reducing the likelihood of pathogens causing surgical site infections. Studies have indicated that the use of sterile disposable drapes and covers is associated with a lower incidence of surgical site infections compared to reusable materials, emphasizing the importance of maintaining a sterile field during surgeries (Atay et al., 2021).

PROJECT DESIGN AND METHODS of NURS FPX 9100 Assessment 1 Topic Approval Form

Project Design: Formative Program Evaluation, Quantitative

Model For Improvement: PDSA cycle

Target Population Undergoing the Practice Change: The target population undergoing the practice change for the project includes healthcare providers involved in surgical procedures, such as nurses, ancillary staff and operating room staff.

Inclusion Criteria: All full time registered nurses are included in this project

Exclusion Criteria: The project excludes participation from physicians, Infection Control Practitioners (ICPs), pharmacy staff, social workers.

Estimated Project Length (weeks): The project is anticipated to span 8 weeks. This duration allows for a comprehensive implementation of advanced sanitization protocols and subsequent observation of their impact on reducing hospital-acquired infections within the defined context.

OUTCOME MEASURES AND ANALYSIS

Primary Outcome Measures

1. Incidence of Surgical Site Infections (SSI) within a one-month period post-surgery.

Secondary Outcome Measures

1. Compliance rate with advanced sanitization protocols in the operating room.
2. Comparative analysis of the occurrence of other hospital-acquired infections between the advanced sanitization and standard sanitization groups.
3. Patient satisfaction scores related to perceived cleanliness and infection control measures.
4. Rate of adherence to the comprehensive guideline for advanced sanitization protocols in the post-implementation phase.
5. Staff compliance and satisfaction with the implemented advanced sanitization protocols.
6. Cost-effectiveness analysis comparing the expenses associated with advanced sanitization protocols to the potential savings from reduced SSI cases.

Data Analysis and Results Reporting

MEASURE	MEASURE TYPE	TYPE OF DATA COLLECTED	ANALYSIS METHOD	RESULTS REPORTING – DATA TYPE
Occurrence of Surgical Site Infections	Outcome	Nominal (presence or absence)	Chi-square test or Fisher's exact test	Rate (occurrence per month)
Integration of Advanced Sanitization Protocols	Intervention	Nominal (yes or no)	Descriptive statistics or Logistic Regression	Rate (proportion of surgeries with advanced sanitization)

Type of Sanitization Measures	Covariate	Nominal (advanced vs. standard)	Descriptive statistics or Chi-square test	Proportion (distribution of sanitization types)
Surgical Procedures	Covariate	Nominal (various procedures)	Descriptive statistics or ANOVA	Proportion (distribution of surgical procedures)
Time	Covariate	Ratio (months)	Survival Analysis (if applicable)	Rate (occurrence per month)

Statistics are employed in the study on reducing hospital-acquired infections to rigorously analyze the effectiveness of advanced sanitization protocols. By collecting nominal data on the occurrence of surgical site infections and the integration of advanced protocols, statistical methods like Chi-square and logistic regression provide robust insights into the associations. NURS FPX 9100 Assessment 1, Analyzing nominal and ratio data, including the types of sanitization measures and surgical procedures, through techniques like ANOVA and survival analysis, offers a comprehensive understanding of the intervention's impact. These statistical approaches ensure a nuanced interpretation, enabling evidence-based conclusions for improving patient outcomes in surgical settings.