POPINVITED: ID# 100998

Title:

Reduction of Surgical Site Infections Through Education

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ACCEPTED

Session Title:

Rising Stars of Research and Scholarship Invited Student Posters

Slot:

RS PST1: Sunday, 17 November 2019: 11:45 AM-12:15 PM

Applicable Category:

Clinical

Keywords:

Education, Evidence-Based Practice and Surgical Site Infections

References:

1. Centers for Disease Control and Prevention. Surgical site infection (SSI) event. https://www.cdc.gov/nhsn/pdfs/pscmanual/9pscssicurrent.pdf. Accessed April 10, 2019.
2. Sullivan E, Gupta A, Cook CH. Cost and consequences of surgical site infections: A call to arms. *Surgical Infections.* 2017;18(4):451-454.
3. Badia JM, Casey AL, Petrosillo N, et al. Impact of surgical site infection on healthcare costs and patient outcomes: A systematic review in six European countries. *Journal of Hospital Infection.* 2017;96(1):1-15.
4. Preas MA, O'Hara L, Thom K. 2017 HICPAC-CDC guideline for prevention of surgical site infection: What the infection preventionist needs to know. *Prevention Strategist*. 2017;69-72.
5. Ban KA, Minei JP, Laronga C, et al. American college of surgeons and surgical infection society: Surgical site infection guidelines, 2016 update. *Journal of the American College of Surgeons.* 2017;224(1):59-74.
6. Berrios-Torres SI, Umscheid CA, Bratzler DW, et al. Centers for disease control and prevention guideline for the prevention of surgical site infection, 2017. *JAMA Surgery.* 2017;152(8):784-791.

7. Association of periOperative Registered Nurses. Guidelines for Perioperative Practice. 2019 ed. Denver, CO: AORN, Inc; 2019:549-572.
8. Mullen A, Wieland HJ, Wieser ES, Spannhake EW, Marinos RS. Perioperative participation of orthopedic patients and surgical staff in a nasal decolonization intervention to reduce Staphylococcus spp surgical site infections. *American Journal of Infection Control*. 2017;45(5):554-556.

Abstract Summary:

The objective of this project was to assess nursing knowledge pertaining to implementation of evidence-based practice to reduce the risk of surgical site infections. Nursing knowledge was assessed prior to and following the delivery of education on monitoring OR traffic, covering the sterile field with sterile drapes, and nasal decolonization.

Content Outline:

Background and Goal

As one of the leading causes of healthcare-associated infections, surgical site infections (SSIs) are a major healthcare concern. The goal of this project was to increase nursing knowledge of the practices that may reduce the risk of SSIs.

Plan and Implementation

A pre/post test assessment will be conducted prior to and following the delivery of education on updated recommendations for reduction of SSIs. Targeted areas of education will include monitoring of operating room traffic, covering the sterile field with sterile drapes when there is a delay or increased activity, and nasal decolonization.

Outcome

The outcomes of the pre/post test assessment will be discussed.

Topic Selection:

Rising Stars of Research and Scholarship Invited Student Posters (25201)

Abstract Text:

Surgical site infections (SSIs) are a major health concern, recognized by the Centers for Disease Control and Prevention (CDC) as one of the leading causes of healthcare-associated infections (HAIs).[1] SSIs have significant direct and indirect impact on patients and the economy.[2] Direct impact includes prolonged hospital stays and re-admissions, as well as additional treatments, surgical procedures, testing, supplies, and labor. Indirect costs for the patients and family members include disability, decreased work productivity, and increased litigation. Finally, there are intangible costs associated with SSIs including psychological damage, pain and suffering, decreased social functioning, and impact on daily activities.[3] It

is estimated that approximately half of SSIs could be prevented with the implementation of evidence-based practice.[4]

Numerous strategies have been implemented for the reduction of SSIs. These tactics target patient-controlled factors such as smoking cessation, reduction in alcohol consumption, and maintenance of normal body mass index (BMI).[5] Other practices are physician-driven such as administration of prophylactic antibiotics, glycemic control during surgery, and maintenance of normal body temperature during surgery.[6] Finally, some elements of SSI reduction are influenced primarily by the practices of nursing staff within surgical services. These evidence-based practices include such actions as surgical hand antisepsis, patient skin antisepsis, and adherence to sterile technique.[7] Recent updates to AORN (Association of periOperative Registered Nurses) guidelines for principles and practices for sterile technique include monitoring traffic in the operating room and covering the sterile field with a drape during delays or times of increased activity. In addition, practice recommendations have been made regarding nasal decolonization of patients prior to orthopedic and spinal procedures.[8] The focus of this project is to provide education on new guidelines that have been recommended for nursing practice in the reduction of SSIs.

A pre/post test project has been developed in order to assess whether the level of knowledge and understanding among OR staff members is higher following the presentation of educational material, than what it had been prior to receiving the information. Following IRB approval, a pre-test will be administered to volunteer OR nurses and surgical technologists to assess their current knowledge regarding AORN recommendations. These recommendations include covering the sterile field with sterile drapes when there is a surgical delay or during periods of increased OR activity. In addition, the pre-test will contain questions pertaining to AORN recommendations for monitoring operating room traffic. Finally, knowledge of current practice guidelines for the use of povidone-iodine for nasal decolonization will be assessed. After the completion of the pre-test, an educational session will be provided to staff members. The educational session will include information on each of these three SSI reduction practices. Following the education session, staff members will be given a post-test in order to assess their level of knowledge on these three topics. The purpose of this project is to determine the effectiveness of the provided education in increasing OR staff knowledge of current recommended practices. The results of this pre/post test project will be displayed in this poster presentation.