

314. Pre- and Post-Operative Participation of Orthopedic Patients and Surgical Staff in a Novel Intervention to Reduce *Staphylococcus aureus* infection.

•**Session:** Poster Abstract Session: HAI: MSSA, MRSA, and other Gram-Positives

Thursday, October 27, 2016

Room: Poster Hall

Background:

Overall reduction of potentially infectious bacteria in the immediate patient environment is critical to effective infection control (IC) during both pre- and post-surgical periods. This study was designed to determine if *Staphylococcus aureus* surgical site infection rates (SSIR) could be reduced by the inclusion of patients and their most proximal healthcare personnel in nasal carriage reduction using an alcohol-based nasal antiseptic along with pre-existing IC protocols.

Methods:

During the three prior quarters that served as the study baseline, surgical IC protocols included pre-operative chlorhexidine gluconate bathing that was sometimes combined with patient-applied nasal mupirocin ointment prior to admission. During the three consecutive quarters of the study period in our spine surgery group, the IC protocol was amended to include nasal patient decolonization using an alcohol-based antiseptic by nursing staff during pre-operative preparation, while in the post-anesthesia care unit (PACU) and on a daily basis until discharge. To foster carriage reduction post-discharge, patients were instructed to continue applications for 5-7 days using the remaining antiseptic. In addition, surgeons and surgical staff agreed to self-decolonize prior to each surgery, as did corresponding PACU staff. Nasal antiseptic use by floor nursing personnel was strongly encouraged and facilitated.

Results: In the 3 quarters that served as the baseline for the change in IC protocol, SSIR were 1.36, 2.38 and 1.55/100 surgeries, respectively. During the immediately subsequent three quarters that extended through March, 2016 in which nasal antiseptic use was implemented, SSIR were 0.83, 0.00 and 0.81/100 surgeries, respectively. This constituted a 69% decrease in average SSIR during the 9-month study period compared to the 9-month baseline.

Conclusion: The inclusion of alcohol-based nasal antiseptic use by both surgical patients and staff in IC protocols during the peri-operative period resulted in a marked decrease in SSIR. The capability to selectively incorporate non-antibiotic nasal decolonization into this type of comprehensive approach to reducing infections in high-risk environments may warrant further consideration.

Anildaliz Mullen, RN/BSN, Quality, Baylor Orthopedic & Spine Hospital, Arlington, TX, Ernst Spannhake, PhD, Bloomberg School of Public Health, Bloomberg School of Public Health, John Hopkins University, Baltimore, MD, Rebecca Marinos, PhD, Nursing, Baylor Orthopedic & Spine Hospital, Arlington, VA and Helen Wieland, RN, Or, Baylor Orthopedic & Spine Hospital, Arlington, TX

•**Disclosures:**

A. Mullen, None

E. Spannhake, None

R. Marinos, None

H. Wieland, None

