

# 36<sup>TH</sup> CARDIOVASCULAR NURSING & NURSE PRACTITIONERS MEETING

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## Reduction of postoperative infections through routine preoperative decolonization of advanced heart failure patients with chlorhexidine and mupirocin prior to left ventricular assist device implantation: A quality improvement project

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**Background:** Left ventricular assist devices (LVAD) are increasingly being used in patients with advanced heart failure as bridge to transplant or as destination therapy. Infections are a major complication associated with LVADs. Staphylococcus aureus is one of the common causative organisms associated with LVAD infections. Methicillin-resistant staphylococcus aureus (MRSA) colonized patients are at increased risk for developing MRSA associated infections. Various studies have demonstrated decolonization of skin with topical chlorhexidine and nares with 2% intranasal ointment is effective in reducing MRSA associated infections.

**Objective:** The main objective of this quality improvement (QI) project was to examine the impact of a universal decolonization with topical chlorhexidine and intranasal mupirocin ointment for five days prior to LVAD implantation on postoperative infections, length of stay, and infection related rehospitalization.

**Methods:** A preoperative universal decolonization with 4% chlorhexidine daily whole body bath and 2% intranasal ointment twice daily for five days was implemented for patients undergoing elective LVAD implantation. This project was conducted using pretest-posttest non-experimental design. We included a total of 20 subjects, 10 in the standard protocol group, and 10 in the revised protocol group.

**Results:** In the standard protocol group there were two SSIs within 30 days ( $\chi^2=2.22$ ,  $p=0.068$ ) and one SSI within 90 days ( $\chi^2=0.640$ ,  $p=0.212$ ). In the decolonization group one SSI within 60 days ( $\chi^2=1.173$ ,  $p=0.139$ ). Even though there was absolute reduction in the number SSIs in the intervention group, it was not statistically significant due to very small sample size. Rehospitalization rate differences between the groups were not statistically significant ( $\chi^2=0.392$ ,  $p=0.265$ ).

**Conclusion:** A preoperative universal decolonization might be effective in reducing postoperative infections in LVAD patients.

### Biography

Susan George has been working as a Heart Failure Nurse Practitioner since 2007. She is passionate about improving health and wellbeing of heart failure patients. Many of the end stage heart failure patients require advanced heart failure therapy such as left ventricular assist device (LVAD) implantation.

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