The Reduction of Surgical Site Infections by Bundling Active Surveillance for Methicillin-Resistant Staphylococcus Aureus and Preoperative 2% Chlorhexidine Gluconate in Obstetrics and Elective Surgery

Virginia Lipke, RN, BS, ACRN CIC and Tony Hyott, MHSA

ABSTRACT

The incidence of surgical site infections (SSIs) due to methicillin-resistant Staphylococcus aureus (MRSA) is on the rise. Most SSIs are caused by methicillin-sensitive Staphylococcus aureus (MSSA), making patients with MRSA very vulnerable to postoperative infections. In 2007, SSIs due to MRSA were the highest they have been in 2 years. The goal of this project was to reduce the SSIs due to MRSA at our hospitals by using a bundled protocol that included: (1) active surveillance, (2) preoperative skin antisepsis, and (3) nasal colonization. A prospective, bundled protocol was implemented in 2006, and the results showed a significant reduction in SSIs due to MRSA. The protocol was then implemented in Obstetrics. The reduction in SSIs was maintained for 3 years, demonstrating the effectiveness of this protocol.

BACKGROUND

SSIs are postoperative infections that may occur as a result of a surgical procedure. They are the most common healthcare-associated infections in the United States.

SSIs are acquired in the operating room or within 30 days of surgery.

SSIs can be classified as early or late postoperative infections.

The risk factors for SSIs include: lack of surveillance, lack of skin antisepsis, and lack of nasal colonization.

Methods

Patients scheduled for the following surgical procedures were monitored for SSIs: cesarean delivery, knee replacement, bone bypass surgery, and bunion fixation.

RESULTS

The reduction in SSIs due to MRSA was maintained for 3 years, demonstrating the effectiveness of this protocol.

CONCLUSIONS

The implementation of a protocol that included screening for and treatment of nasal carriage of MRSA, combined with preoperative skin antisepsis with 2% CHG cloths led to a reduction in SSI rates and in SSIs due to MRSA.

Lessons Learned:

1. SSIs can be reduced with a protocol that screens for and treats nasal MRSA and uses 2% CHG no-rinse cloths for preoperative skin antisepsis.

2. A reduction in the rate of SSI may reduce medical costs to the hospital.

3. Patients in the program reported that the CHG no-rinse cloths were easy to use.

4. Patient education was provided (along with MRSA from the Washington State Health Department) and was well-received.