Challenges and Experience with Implementing Patient Preoperative Skin Preparation in a Veterans Administration (VA) Health System to Prevent Surgical Site Infections

Barbara Livingston, RN, BSN, MPH, CIC, Infection Control Practitioner, VA Central Iowa Health Care System, Des Moines, IA

OVERVIEW
Surgical site infections (SSIs) occur in 2.6%-5% of all surgeries and are the third most common hospital-acquired infections.1 Studies have found SSIs represent a significant economic burden on the American Health Care system, although the impact is wide ranging, from $1.783 to $134.602.2 Inappropriate surgical antisepsis plays a role in the pathogenesis of an SSI.3 The CDC states a patient should only be prepped with soap before surgery with an antibiotic agent at least the night prior to the operative day and should use an appropriate skin antiseptic agent for skin preparation.4

The issue addressed by the Veteran’s Administration (VA) Central Iowa Health Care System was the internal finding that appropriate preoperative skin antisepsis was not taking place due to a flawed protocol. The flow in the process involved the use of a prescription-only liquid chlorhexidine gluconate (CHG) soap formulation which was not available on the nursing floor, but available only through the pharmacy.

Thus, patients received cursory instruction on how to use the product from pharmacy staff and not the nursing staff, which led to inconsistency in patient skin antisepsis. The VA Central Iowa demographics also present a challenge in achieving proper preoperative skin antisepsis.

VA Central Iowa demographics:
Age > 60 yrs of age . . . .20,524
Living in poverty . . . .9,558
and qualifying for free health care.
Housebound . . . . . . . . . . . . . . . . . . . . . . . . . . .1,421
*Internal communications VA Central Iowa Health Care System.

METHODS
The 2% CHG Cloths were selected as the antiseptic skin preparation agent because:
1) it is proven to effectively remove dirt and debris from the patient’s skin and kill harmful bacteria, while uniformly releasing a layer of CHG on the skin
2) it stays on the patient’s skin and is not rinsed off,
3) it is a nonviable product which allows patients in lower socioeconomic brackets, possibly homeless or without access to showers, to prep their skin effectively,
4) it is considered easy for the patient to use, and
5) it is FDA approved.

The 2% CHG Cloths were made available to the nursing staff in central supply, eliminating the prescription-only skin antiseptic. All patient education was easily available to every nurse via central supply.

A patient education sheet was developed to assist the nursing staff in effectively communicating how to have the patient prep their own skin prior to surgery.

RESULTS
The results of the performance improvement initiative were as follows:
1) The non-rinse FDA-approved 2% CHG Cloths were made easily available to every nurse via central supply.

2) The process improvement initiative ensured the nursing staff were able to properly preoperative patient education, appropriate skin antisepsis. All patient education was provided by the nursing staff utilizing verbal and visual instructions and information.

3) Target zero for SSIs is the goal. The 2% CHG Cloths played a critical role.

CONCLUSIONS
The following lessons were learned as a result of the successful implementation of this performance improvement initiative:

low SSIs are not enough - the vision is target zero

4) A final report on the process improvement initiative concluded use of the 2% CHG cloths constituted a “best practice” in the VA Central Iowa system.

5) Compliance with appropriate preoperative skin antisepsis increased. SSIs rates have improved due to the process improvement initiative, as well as the recently implemented care bundle

6) By patient report and nursing staff report, patients without access to showers or who were homeless found the non-rinse preoperative skin preparation easy to use and were more likely to comply with preoperative skin preparation than prior to the process improvement initiative.

REFERENCES