

Study Shows DuraPrep Solution May Be Superior to Chlorhexidine in Preventing Surgical-Site Infections

- UVA study published in leading infection control journal -

3M Health Care today announced the publication of a new independent study “Effects of Preoperative Skin Preparation on Postoperative Wound Infection Rates: A Prospective Study of 3 Skin Preparation Protocols,” that compared the effects of three different skin preparation solutions on surgical-site infections. The study found that Iodophor-based skin preparation solutions, such as 3M™ DuraPrep™ Surgical Solution (Iodine Povacrylex [0.7% available Iodine] and Isopropyl Alcohol, 74% w/w) Patient Preoperative Skin Prep, may be superior to chlorhexidine in preventing surgical-site infections. Authored by Brian R. Swenson, MD, Robert G. Sawyer, MD, and colleagues from the University of Virginia Health System in Charlottesville, VA, the study appears in the October 2009 issue of the journal *Infection Control and Hospital Epidemiology*.

The study, which examined more than 3,200 general surgery patients during an 18-month period, was performed in concert with ongoing data collection for the American College of Surgeons’ National Surgical Quality Improvement Project (NSQIP). This program, which employs a prospective, peer-controlled, validated database to quantify 30-day risk-adjusted surgical outcomes, is a tool to measure and report surgical quality and outcomes and is recognized by the Institutes of Medicine, the Joint Commission and the American Board of Surgery.

“The main findings of the study were somewhat unexpected. Based on data derived from central venous catheter insertions, we had thought that the infection rates would be lowest in the period where chlorhexidine was the preferred agent for skin preparation. This was not the case. If these findings are reproduced in a multicenter study, switching to iodine-based preparations on a broad basis could significantly reduce the huge morbidity and cost associated with surgical site infection in this country and abroad,” said Robert G. Sawyer, M.D., Professor of Surgery and Public Health Science, Co-director Surgical Trauma Intensive Care Unit and Director of Surgical Nutrition Services at the University of Virginia Health System and co-author on the study.

“To date, there have only been limited studies comparing the impact of various skin preparation solutions on surgical-site infections. Previous studies examined only specific surgical sites or relied on less impactful surrogate endpoints such as microbial counts. Dr. Sawyer’s study provided a broader assessment of general surgery patients and specifically examined means to reduce the risk of surgical-site infections,” said Debra Rectenwald, Vice President and General Manager 3M Infection Prevention Division, 3M Health Care. “We are pleased that DuraPrep solution has been proven effective in the fight against surgical-site infections, and that hospitals, like the University of Virginia Health System, are updating their protocols to include its use.”

This independent study was funded in part by an unrestricted educational grant from 3M Health Care.

About DuraPrep Solution

DuraPrep solution contains two active ingredients, isopropyl alcohol (74% w/w) for fast kill and iodine povacrylex (0.7% available iodine) for persistence. The performance of DuraPrep solution can be attributed to its unique film-forming properties which enable it to dry to a water-insoluble film. Under simulated surgical conditions, DuraPrep solution resisted removal by blood and saline compared to Betadine scrub and paint. DuraPrep solution keeps bacterial counts low for up to 48 hours and improves drape adhesion. Clinicians are provided with detailed information on how to use DuraPrep solution safely and effectively.

About 3M Health Care

3M Health Care, one of 3M's six major business segments, provides world-class innovative products and services to help health care professionals improve the practice, delivery and outcome of patient care in medical, oral care, drug delivery and health information markets.

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