



Surgical Management Professionals (SMP), a leading surgery center management company, validates the durability and cost saving potential of CleanPatch® in ambulatory surgical centers.

A Case Study – February 2016

Background

Surfaces play an important role in the transmission of healthcare acquired infections (HAI), and thorough cleaning of the surgical environment is crucial to patient safety.¹ Damaged soft surfaces, including operating tables and stretcher mattresses, cannot be properly cleaned and may harbor pathogens that pose a risk for cross contamination.² CleanPatch is the first Health Canada and FDA registered Class 1 medical device specifically designed to restore damaged mattresses to an intact and hygienic state. CleanPatch has been extensively tested, and test results have shown that it is (1) impervious to fluids, and (2) cleanable with hospital disinfectants.³

Surgical Management Professionals (SMP) is a surgery center and physician owned hospital acquisition, management, and development company; now operating in the United States and Canada. In 2015, a six month trial was conducted to validate the efficacy and durability of CleanPatch in an ambulatory surgery setting. Three sites, with a combined 10 OR theaters, participated in the trial. One center specializes in orthopedics, while the other two provide additional services including ophthalmology, pain management, urology and plastic surgery.

Method

Participating ASCs were trained to perform bedside inspections of beds, stretchers and OR tables, and to assess and record any visible signs of damage to the mattress surface. CleanPatch product was provided for application in accordance with CleanPatch Mattress Inspection and Repair Guidelines⁴, and all CleanPatch were numbered and labelled for tracking purposes.

In May 2015, CleanPatch was applied to nine damaged mattress pads (five stretchers, four OR tables). An additional two CleanPatch were applied to undamaged

mattress pads as a control at one of the sites, for a total of 20 CleanPatch. Checklists were completed to record details of all damaged mattress pads, including ‘before’ photographs of the damage and ‘after’ photographs of each repair with CleanPatch.

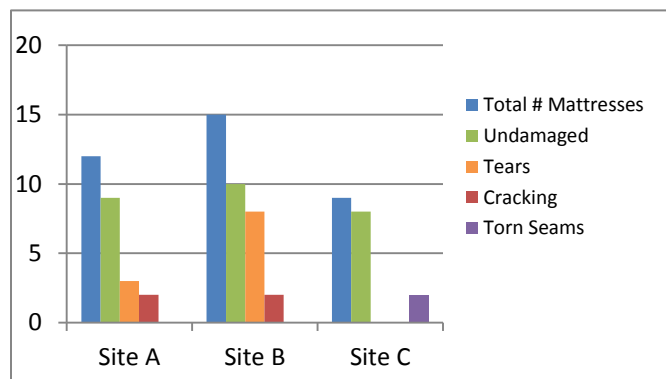
Follow-up inspections were performed after one month, three months and six months: the results of these inspections were recorded and photographs were taken when possible.

Mattress Damage

Mattress pads are often damaged from frequent use, mechanical injury from sharps and equipment, and the use of harsh chemical disinfectants. This trial confirms that ASCs have similar rates of damage to acute care hospitals. The overall mattress damage rate in this study was 25%, with damage rates at each site ranging from 11% to 33%.

The types of damage noted included rips or tears, torn seams, and cracking of the mattress cover. Over 77% (7/9) of the damaged mattresses had more than one area of damage and therefore required more than one repair.

Table 1: Frequency of Mattress Damage

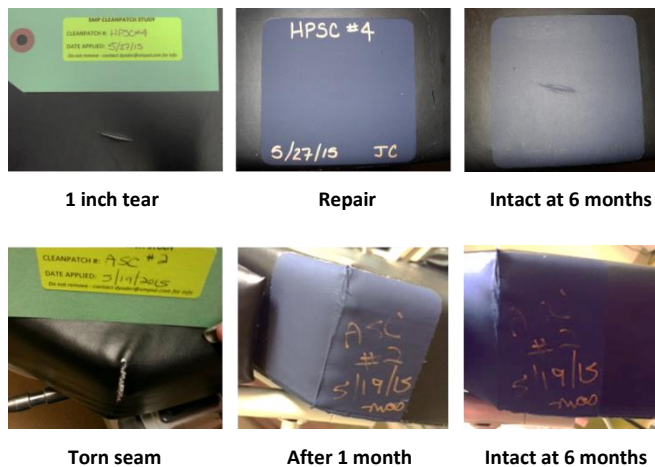


Results

One month into the trial the mattresses were inspected: all CleanPatch remained intact and fully adhered. One mattress (estimated to be 10 years of age) with two repair sites was replaced during the first month due to extensive cracking; it was subsequently eliminated from further study.

In January 2016, after six months of rigorous clinical use, all 18 remaining CleanPatch were found to be intact and fully adhered to the mattress surface. The staff also confirmed CleanPatch was easy to apply.

Figure 1:
Damaged Mattresses Repaired with CleanPatch



Financial Savings

Significant savings may be realized from repairing minor damage rather than replacing the entire mattress. During the six month trial, eight mattresses were repaired with CleanPatch instead of being replaced. A total of 16 CleanPatch were used to repair four surgical tables and four stretchers. The average cost of repair was \$39. The total cost to replace these mattress pads would have been approximately \$4,500.

Table 2:
Savings Realized During the Six Month Trial

Cost of Mattress Replacement Avoided		
OR Table (average \$725)	4	\$2,900
Stretchers (average \$400)	4	\$1,600
Total Cost of Replacement Avoided		\$4,500
Cost of Mattress Repair		
Total Mattresses Repaired	8	
Total Cost of Repairs with CleanPatch		\$312
Total Savings from Repair vs Replacement		\$4,188

Even with a small scale trial at three sites, SMP achieved savings of approximately \$4,188 over a six month period. An expansion of the mattress inspection and repair program to all 20 SMP surgical centers would provide estimated savings of \$55,840 per year.

Conclusion

The appropriate repair of damaged mattresses helps to ensure they are intact, fully cleanable, and safe for clinical use. A three site trial of CleanPatch revealed that the rates of damage in ambulatory surgical centers are similar to those of acute care hospitals.

CleanPatch was easy to apply and shown to be durable in an ambulatory surgical center setting for a minimum of six months. Based on the study results, SMP affiliate ASC's could save over \$55,000 per year from the appropriate use of CleanPatch.

About SMP

Surgical Management Professionals (SMP) is a surgery center and physician owned hospital acquisition, management and development company. SMP also provides an array of revenue cycle solutions including coding, billing services, and collections that can be customized to fit customer needs. SMP has been serving physicians, surgery centers and hospitals for over 25 years with an impressive record of success.

"The team at CleanPatch is not only attentive to our needs; they understand the dynamics of working in an organization striving to provide both best practice standards and financial integrity. Their product allowed our affiliate ASC's to maintain cost effective and evidence based methods on both transport carts and OR bed mattresses. CleanPatch is easy to apply and remains adhered to the mattress if applied as per directions – even with frequent use and cleaning the patch remained intact – a plus for those surgery centers and hospitals attempting to avoid costly replacements and still maintain a safe patient care surface. Our sites saved both money and time with the use of this product"

Deb Yoder MHA, RN, CNOR – VP Clinical Services, SMP

For more information on this case study please contact Brenda Marks, Product Manager. brenda@surfacemedical.ca

References:

1. Otter, J.A., Yezli, S., French, G. The Role Played by Contaminated Surfaces in the Transmission of Nosocomial Pathogens. *Infection Control and Hospital Epidemiology*. July 2011. Vol. 32, No.7, pp. 687-99
2. FDA Safety Communication: Damaged or worn covers for medical bed mattresses pose risk of contamination and patient infection. April 19, 2013
3. Wong, et al. University of Calgary. Comparison of terminal cleaning of a medical surface repair patch on hospital mattresses. *Canadian Journal of Infection Control*. Fall 2015. 30(3). 165-170
4. Surface Medical Inc. CleanPatch Mattress Repair Implementation Guide. www.cleanpatch.ca