



A leading Canadian hospital implements a soft surface inspection and repair process with CleanPatch (www.cleanpatch.ca) to enhance patient safety while saving money

A Case Study – July 2014

The Need

Surfaces play an important role in the transmission of healthcare acquired infections (HAI), and routine cleaning and preventative maintenance is crucial to patient safety (Creamer and Humphreys, 2008). Soft surfaces such as mattresses, stretchers, wheelchairs and examination tables must be intact to (1) be properly cleaned and (2) to prevent contamination from entering equipment. It is estimated that 20 - 40% of mattresses and other soft surfaces are damaged in healthcare institutions today as a result of physical abrasion, exposure to corrosive chemical disinfectants, and material disintegration from daily use (Bradbury *et al*, 2014). In April 2013, the FDA released a Safety Communication alerting healthcare providers that damaged mattress covers pose a serious risk of infection to patients by permitting blood and bodily fluids to penetrate the surface. In addition to the FDA release, there are more than 35 years of research on the connection between damaged mattresses and HAI.

In response to these patient safety risks, healthcare facilities have sought to replace their damaged equipment – a considerable expense for many organizations. Healthcare facilities have longed for a cost-effective and clinically proven solution to this problem that will also enhance patient safety. Surface Medical recently developed CleanPatch™ - the first medical surface repair product for damaged mattresses and other soft surfaces that restores the surface to an intact and hygienic state. CleanPatch is a Class 1 medical device and has been implemented by dozens of facilities around the world. This case study describes the experience of a leading Canadian hospital over the past 12 months with this product, and the process they developed to inspect and repair damaged soft surfaces in their facilities.

“Healthcare workers recognize the risks associated with leaving damaged surfaces unaddressed, and many notify us immediately when they find a damaged mattress,” comments the OR Maintenance Technician at this institution. “Prior to CleanPatch, most damaged equipment had to be thrown out even if the damage was minor; this cost us a lot of money.” He has often observed clinical equipment with surgical tape applied to the surface. “We, like many facilities departments around the country, have seen utility tape on all kinds of equipment which attracts lint, dust and bacteria.”

The OR Maintenance Technician and his colleagues searched for a safe and effective alternative to discarding damaged mattresses and equipment, while educating their staff on the risks of taping over damage or leaving the surface as is.

The Solution

When CleanPatch was launched in the Canadian market mid-2013, the staff at this hospital was among the first in the country to learn about this product and its benefits through an introductory webinar. After receiving a few samples of CleanPatch, the Portering and Facilities departments conducted trials on several different kinds of surfaces to gauge its efficacy and durability.

The Portering Supervisor conducted the first CleanPatch trial on a damaged geriatric chair. “Geriatric chairs are easily damaged and it is very expensive to find replacement parts for large sections, so they are often thrown out. I applied CleanPatch to the seat of a Geriatric chair in the Spring of 2013 and was impressed by how easy it was to apply. After several months of seeing the same chair return from sites with CleanPatch still attached, I became comfortable with this product. I saw this chair a few days ago, a full year after applying CleanPatch, and it looked brand new; I am just so impressed.” She has also tried CleanPatch on other surfaces including mattresses and a bariatric commode. “CleanPatch was used to repair a corner of the bariatric commode and it is holding up well after several months, even after being put through its paces in and out of the shower.”

The OR Maintenance Technician conducted his first CleanPatch trial on an Operating Room (OR) stretcher and had a great first experience.

“CleanPatch was simple to apply and adhered well immediately. We have had the product on several stretchers for over 7 months, and it is still working perfectly despite daily use and continual cleaning. The CleanPatch material is a similar material to the OR table; it has the same flexibility and a thin profile. I have not seen one peel off yet.”

Upon trialing CleanPatch in several settings for a two month period, the Portering Supervisor and OR Maintenance Technician presented a case for CleanPatch to their colleagues in Infection Prevention and Control (IP&C). “We work very closely with IP&C on a day to day basis and consult with them when we want to work with a new product. Once we were comfortable with its performance in trial, IP&C completed a full review of the company’s data and spoke to several references that have already implemented CleanPatch in their facilities,” comments the Portering Supervisor. “Anticipating approval from IP&C, I pulled aside damaged mattresses that could be repaired with CleanPatch. Once I received approval from IP&C, I was able to repair 20 mattresses and return them to service for a cost-savings of over \$6000!”

It took the hospital several months to trial and approve the use of CleanPatch. Once approval was granted, a series of activities were initiated to train staff to identify damaged soft surfaces and to familiarize them with the new solution. The Facilities and Maintenance team offered In-Service training for nursing staff. “My team will go into the Units and educate staff about CleanPatch and its benefits, and the risks of fluid contamination when leaving damaged surfaces in service. I have had absolutely no complaints from these sites after demonstrating the product; in fact, they want to start using it in their departments now.” The Portering team educates staff on the importance of inspection prior to repair. “When we receive damaged equipment in our Depot, I work with our Lead hands to conduct a full inspection of the surface to determine if the equipment can be repaired with CleanPatch. We make our decision by looking at the size of the damage and for evidence of staining and warping.”

The hospital is also encouraged by the tools offered by Surface Medical. The Portering Supervisor comments that “The User Flipchart is very handy and I keep one in each department to teach staff how to use CleanPatch. Tracking the date of the repair with

a Sharpie is also nice because we can look at the long-term cost-savings of using CleanPatch. The tools provided by Surface Medical will be important when I introduce this repair tool at another site in the near future.”

The Result

Surfaces in healthcare are prone to damage due to heavy use, and it is extremely expensive to replace equipment. A leading Canadian hospital was looking for a cost-effective and clinically validated approach to address soft surface damage, and made it a priority to educate their staff on the risks of taping or leaving damage untreated. Maintenance and Portering departments partnered with IP&C to evaluate CleanPatch, a novel medical surface repair product used to return damaged surfaces to an intact and cleanable state. Over the past 12 months, the hospital has saved thousands in equipment replacement costs while empowering their frontline staff to inspect and report damage when it occurs.

When asked what guidance they would provide to other facilities considering this approach, the hospital stresses the importance of dealing with damage proactively. “All tears, punctures, and abrasions are a risk to patient safety even if the damage is dime-sized; fluids and contamination get trapped inside the mattress and can infect the next patient. CleanPatch has a peel-and-stick application, so it can be used immediately to seal the surface and continue to care for your patient. In summary, the product and approach just makes good sense.”

If you are interested in speaking to Facilities, Portering or Infection Control at this Canadian hospital, please contact Tony Abboud at tony@surfacemedical.ca



Surface Medical Inc. is an Alberta-based medical device company focused on developing products to address an estimated 48 billion dollar problem that results in 100,000 deaths in North America each year: healthcare acquired infections. Founded in 2010, SMI is dedicated to creating innovative products that reduce the transfer of infection and facilitate the safe administration of healthcare for the benefit of practitioners and patients alike. For more information, please visit www.surfacemedical.ca