

Investigators

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Background

The spread of healthcare associated infections, also referred to as nosocomial infections, is of serious concern. Annually in Canada, there are an estimated 220,000 infections acquired in health care facilities, with 8,000 deaths attributable to these infections¹. Several investigations of nosocomial outbreaks have found that contaminated hospital mattresses contribute to the spread of nosocomial infections².

CleanPatch

To address this issue Surface Medical developed CleanPatch, a 3.5"x3.5" medical surface repair patch that can restore a damaged mattress surface to an intact and hygienic state.

Research

The Ward of the 21st Century (W21C) has been working closely with Surface Medical since 2011 on a three-phase project to support the commercialization of CleanPatch.

The first and second phase of this project involved an assessment of the current extent of damage to mattresses within the hospital along with a multiple focus groups to examine user interaction with CleanPatch and assess its potential utility.

In the third phase of the project, W21C partnered with Infection Prevention and Control staff within Alberta Health Services to conduct a clinical assessment of CleanPatch. In October 2012, a total of 120 CleanPatch were applied to 60 mattresses across two units. The results showed CleanPatch did not harbor any more organisms than the mattress it was placed on and could be cleaned as effectively. CleanPatch presents an innovative and cost effective way to repair damaged hospital mattresses and surfaces.

Durability Update

Since being applied, W21C has kept CleanPatch on the mattresses and a sub-set of them are qualitatively evaluated on bi-weekly basis for any appearance of physical damage or wear. As of October 2013, a total of 72 CleanPatch have been evaluated since the end of the study in late January 2013, and all of them remained adhered the mattress surface, showing no visible signs of physical damage or tear (See Figures A to F as examples). Overall, CleanPatch continues to perform well in the hospital setting.

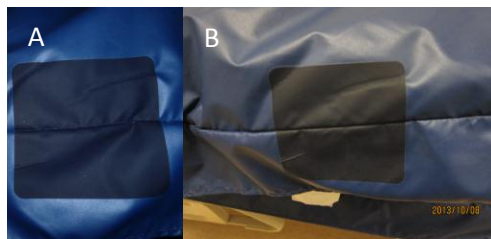


Figure A: CleanPatch applied in October 2012.

Figure B: Same CleanPatch in October 2013.

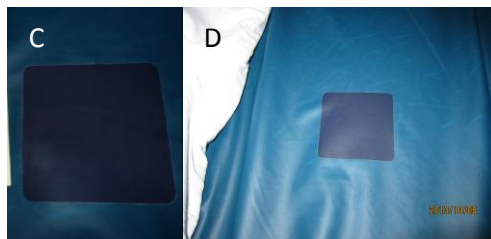


Figure C: CleanPatch applied in October 2012.

Figure D: Same CleanPatch in October 2013.

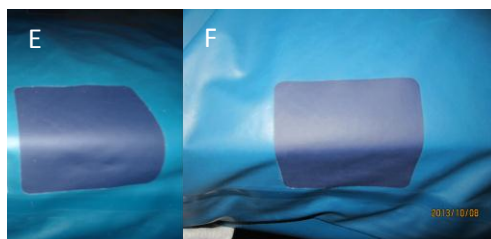


Figure E: CleanPatch applied in October 2012.

Figure F: Same CleanPatch in October 2013.

Questions

For more information please contact Jill de Grood at jill.degroot@ucalgary.ca.

References

1. Zoutman DE, Ford BD, Bryce E, Gourdeau M, Herbert G, Henderson E, et al. The state of infection surveillance and control in Canadian acute care hospitals. *Am J Infect Control* 2003; 31:266-72.
2. Creamer E, Humphreys H. The contribution of beds to healthcare-associated infection: The importance of adequate decontamination. *J Hosp Infect* 2008; 69:8-23