

CASE STUDY

SilvaClean® reduces microbial infection risk on privacy curtains



Background

Healthcare privacy curtains are fomites, which can become contaminated with pathogens and facilitate transfer to patients, staff, or other surfaces¹. Contamination increases on privacy curtains over time for high-touch points, even reaching 92% contamination after only one week^{2,3}. A study was conducted to evaluate the addition of SilvaClean residual antimicrobial technology to hospital privacy curtains. This study demonstrates that routinely handled privacy curtains show reduced microbial bioburden loads after four weeks when treated with a residual antimicrobial. Additionally, the curtains maintain a lower baseline microbial load throughout the laundry process, even before use.

1. Kok, Jen. Surfaces and fomites as a source of healthcare-associated infections. Microbiology of Australia. 2014.
2. Shek, K, et al. Rate of contamination of hospital privacy curtains in a burns/plastics ward: A longitudinal study. Am J. Infect. Control. 2018. 1019-21.
3. Ohl, Michael, et al. Hospital profacy curtains are frequently and rapidly contaminated with potentially pathogenic bacteria. Am J. Infect. Control. 2012. Vol. 40. (10) 904-906.

Methods

Study location: healthcare and associated commercial laundry facility

Study duration: 4 weeks

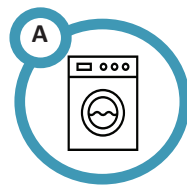
Sample fabric: hospital privacy curtains

Sample collection points: 4 (see graphic)

Sample frequency: 1/week

Colony Forming Units (CFUs) of *Staphylococcus aureus* were plated and counted for both treated and untreated samples. Data was normalized per cm² and averaged over time and across sampling points.

Sample Collection Points



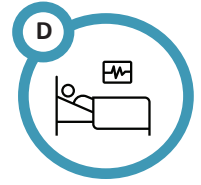
A
Immediately from dryer



B
Post-scale packaged



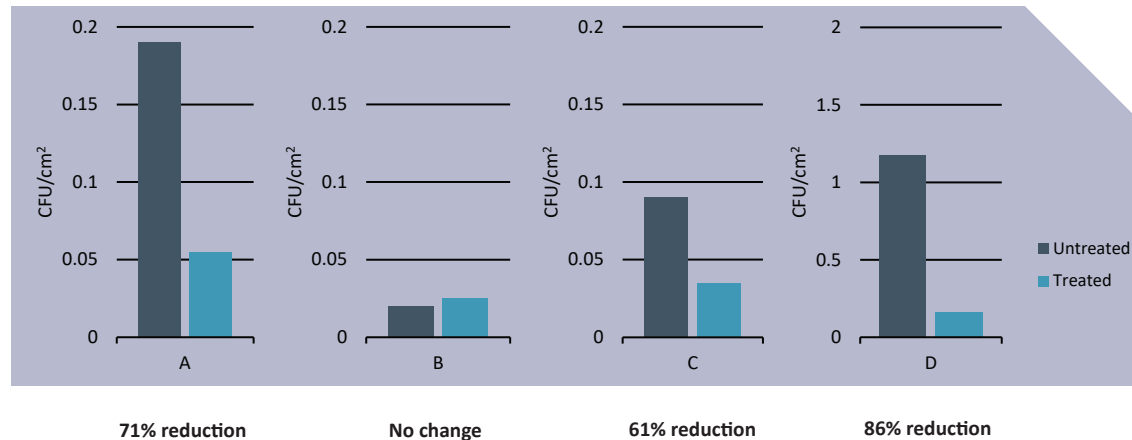
C
Pre-patient use



D
Post-patient use

Results

SilvaClean treatment of privacy curtains resulted in reduced contamination of microbial bioburden. Samples from collection point D showed the highest level of contamination, likely due to repeated handling during use. SilvaClean treatment of curtains reduced the microbial load by **86% in CFU/cm²** post-patient use. Collection points A-C have lower baseline microbial loads as expected of clean samples (pre-use), with additional reductions observed with inclusion of SilvaClean.



Conclusions

The study shows that SilvaClean provides the opportunity to enhance infection control programs. Treated curtains are cleaner when they come out of the dryer, and post-patient use data shows that SilvaClean's ionic silver remains on privacy curtains throughout the fabric use cycle. The cubical/privacy curtain infection control program with SilvaClean led to first-year cost savings of \$57,592, a **40% reduction** in program cost. (Customer identity is confidential.)