

INFECTION CONTROL AND CLINICAL MICROBIOLOGY

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Implementation of a novel antimicrobial silver-based laundry treatment for hospital textiles and impact on Hospital Acquired Infection (HAI) Rates

Priya Balachandran¹, Bill Morris¹ and John J. Openshaw²

¹Applied Silver, Inc., Hayward, CA

²Stanford University, USA

Statement of the Problem: Environmentally transmitted HAI continues to be a problem resulting in patient suffering and adding significant cost to healthcare. Hospital textiles such as privacy curtains, bed linens and patient gowns have been found to be contaminated after processing or during transport and storage (1,2) and textiles have been implicated in outbreaks of fungal and bacterial pathogens (3,4). We have previously demonstrated that treating hospital textiles with an innovative new ionic silver laundry treatment after each washing cycle results in a significant decrease in microbial contamination (5). The purpose of this study was to demonstrate the impact of antimicrobial silver treatment of textiles on HAI rates.

Methodology: The study was conducted at three hospitals with a total of 400 beds that share a common laundry provider. Silver ion treatment was implemented for flats, pillowcases and gowns. HAI data for CAUTI, CLABSI, SSI and Clostridium difficile were collected 45 months prior to and 18 months following silver ion textile treatment as part of the normal HAI reporting procedure for the hospitals. Statistical significance of the pre-post test data was determined using a t-test or Fisher exact test.

Findings: An overall reduction of 43% in HAI rates was observed following the silver ion treatment of textiles across all three hospitals and infection types. Downward trends were observed with each individual infection type and each individual hospital, with statistical significance achieved for CAUTIs and C. difficile infection types with associated cost savings.

Conclusion & Significance: Treatment of hospital linens with silver ion laundry treatment contributed to a clinically relevant reduction in HAI rates in the three hospitals studied and provides benefit by improving both patient experience and consequently cost savings. Additional data will further corroborate the findings and the benefits of this approach.

Biography

Priya Balachandran is the VP, Marketing at Applied Silver with expertise in microbiology and infectious disease. She has spent a number of years in the academic and industry setting developing and managing products for microbial monitoring in the healthcare, food safety and pharmaceutical manufacturing space.

priya@appliedsilver.com

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