SOFT SURFACE FABRICS:
ESTABLISHING A NEW STANDARD OF CARE

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AGENDA

Review clinical evidence supporting a new standard of care for soft surface fabrics

Discuss what we can do today to incorporate soft surfaces into **your** infection prevention protocols

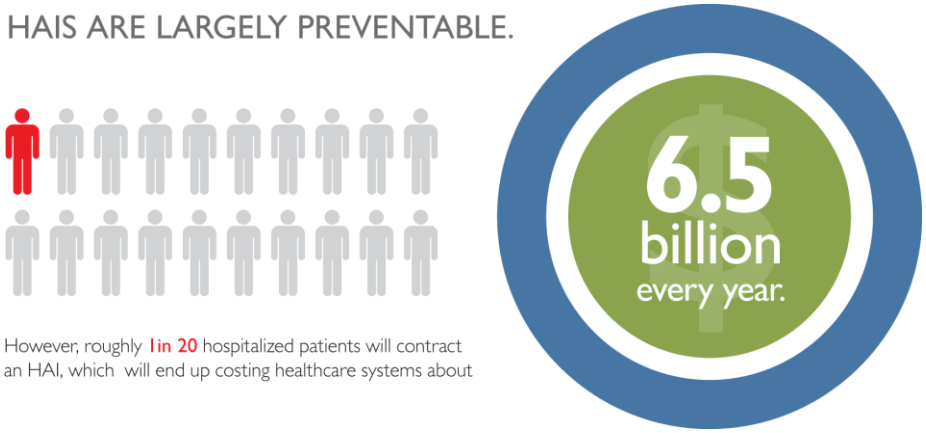
Show how one facility made the case for addressing soft surface fabrics

Present the business case for antimicrobial fabrics and the differences among technologies

THE ISSUE

Healthcare Associated Infections (HAIs)

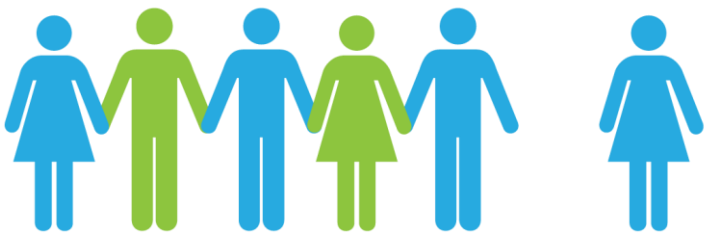
The reduction of HAIs is widely acknowledged as one of the world's leading healthcare challenges. Despite the measures taken and improvements made to manage the issue, the current costs associated with HAIs, both human and financial, are staggering.



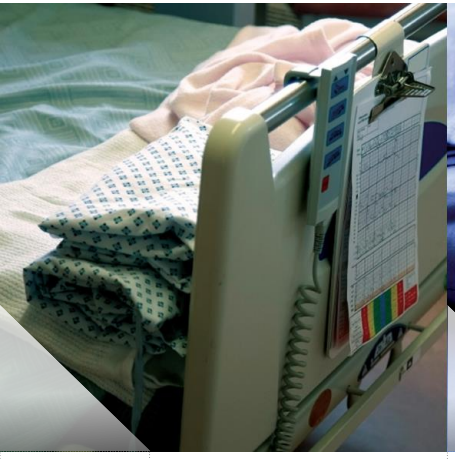
WHAT IS MISSING TODAY? - SOFT SURFACE BACTERIAL MANAGEMENT

Lack of guidelines for soft surface fabrics have created a “gap” in practice where these high-touch surfaces are largely ignored.

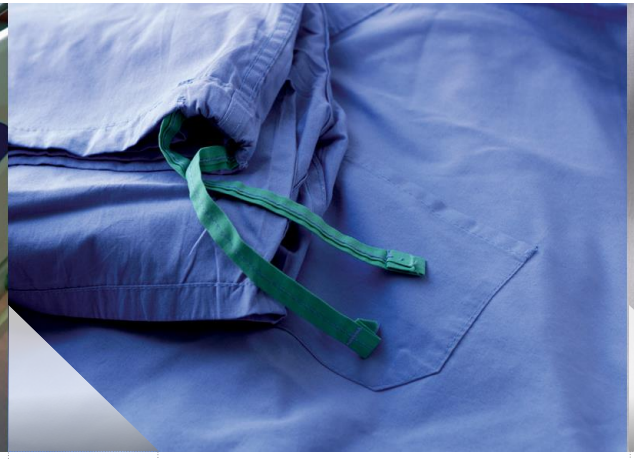
- ✓ SURVEILLANCE
- ✓ HAND HYGIENE
- ✓ STANDARD PRECAUTIONS
- ✓ CONTACT PRECAUTIONS
- ✓ HARD SURFACES
- ✗ SOFT SURFACE FABRICS



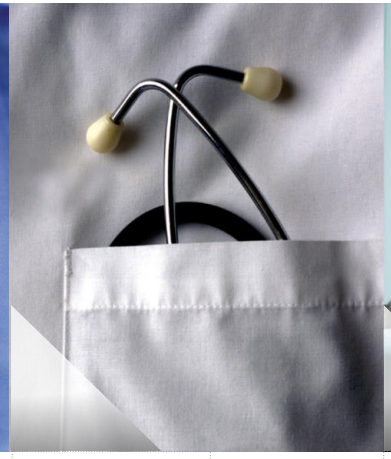
WHAT ARE SOFT SURFACE FABRICS IN THE PATIENT ENVIRONMENT?



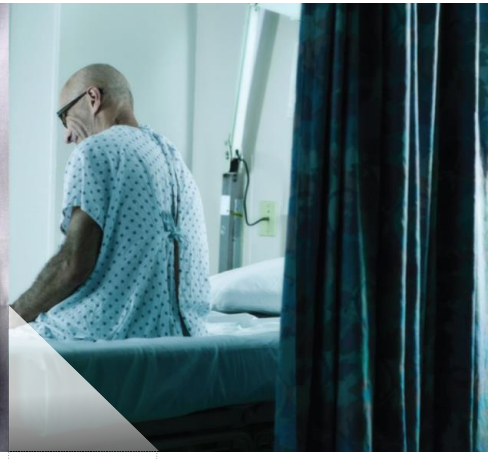
LINENS



SCRUBS



LAB COATS/
WHITE COATS



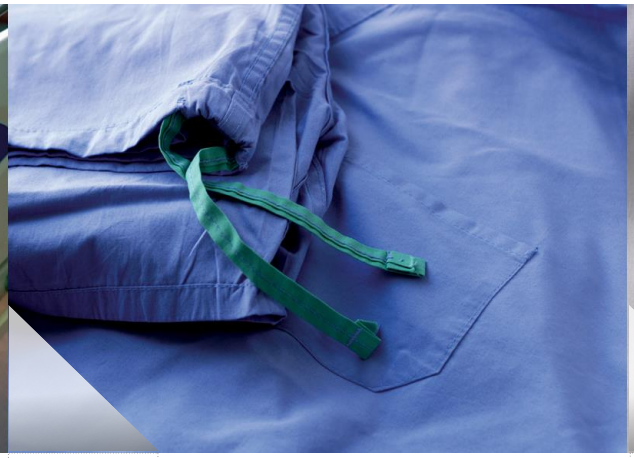
PRIVACY
CURTAINS

STUDIES ASSESSING CONTAMINATION OF HCW CLOTHING

LINENS

Hospital linens were identified as a vehicle that carried R. delemar into contact with susceptible patients. Rhizopus species were recovered from **26 (42%)** of 62 environmental samples from clean linens and associated areas.

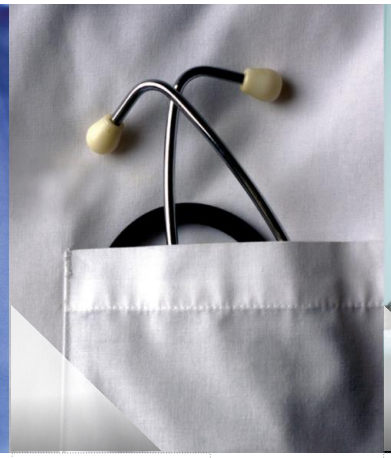
Duffy et al. Mucormycosis Outbreak Associated With Hospital Linens Pediatr Infect Dis J 2014;33:472–476).



SCRUBS

79% of OR Scrubs were positive for some type of gram-positive cocci. Home-laundered scrubs had a significantly higher total bacteria count than hospital-laundered scrubs.

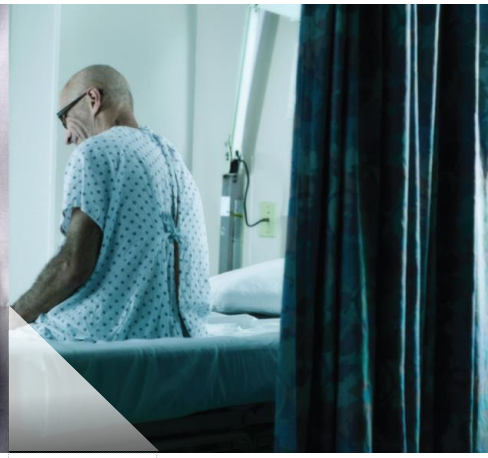
Nordstrom Jeanne M. et al. Comparison of bacteria on new, disposable, laundered, and unlaundered hospital scrubs. American Journal of Infection Control; 40 (2012) 539-43.



LAB COATS/ WHITE COATS

79% of white coats are contaminated with MRSA.

Osawa K et al. Significance of methicillin-resistant Staphylococcus aureus (MRSA) survey in a university teaching hospital J Infect Chemother 2003 June; 9 (2) 172-7

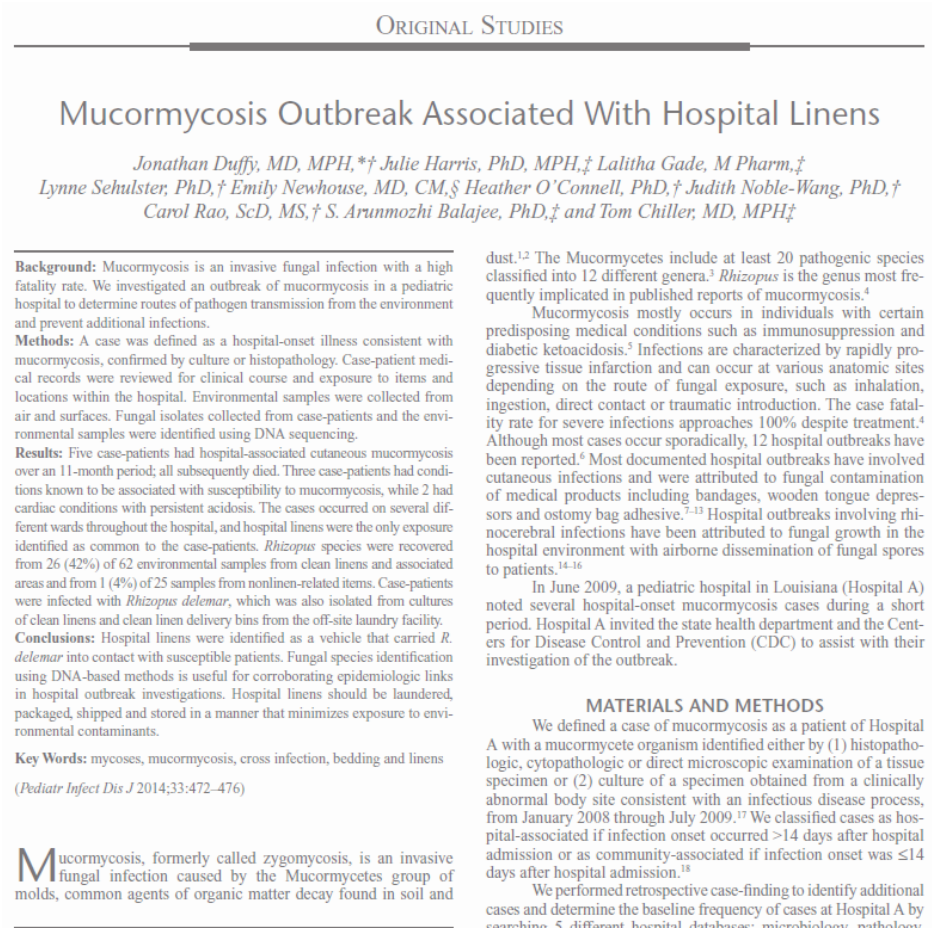


PRIVACY CURTAINS

92% of privacy curtains showed contamination within 1 week of being installed.

Ohl, et al Hospital privacy curtains are frequently and rapidly contaminated with potentially pathogenic bacteria American Journal of Infection Control; Dec, 2012; 40; 10; p904-p906.

CDC OUTBREAK INVESTIGATION



ORIGINAL STUDIES

Mucormycosis Outbreak Associated With Hospital Linens

Jonathan Duffy, MD, MPH,† Julie Harris, PhD, MPH,‡ Lalitha Gade, M Pharm,‡ Lynne Sehulster, PhD,† Emily Newhouse, MD, CM,§ Heather O'Connell, PhD,† Judith Noble-Wang, PhD,† Carol Rao, ScD, MS,† S. Arunmozhi Balajee, PhD,‡ and Tom Chiller, MD, MPH‡*

Background: Mucormycosis is an invasive fungal infection with a high fatality rate. We investigated an outbreak of mucormycosis in a pediatric hospital to determine routes of pathogen transmission from the environment and prevent additional infections.

Methods: A case was defined as a hospital-onset illness consistent with mucormycosis, confirmed by culture or histopathology. Case-patient medical records were reviewed for clinical course and exposure to items and locations within the hospital. Environmental samples were collected from air and surfaces. Fungal isolates collected from case-patients and the environmental samples were identified using DNA sequencing.

Results: Five case-patients had hospital-associated cutaneous mucormycosis over an 11-month period; all subsequently died. Three case-patients had conditions known to be associated with susceptibility to mucormycosis, while 2 had cardiac conditions with persistent acidosis. The cases occurred on several different wards throughout the hospital, and hospital linens were the only exposure identified as common to the case-patients. *Rhizopus* species were recovered from 26 (42%) of 62 environmental samples from clean linens and associated areas and from 1 (4%) of 25 samples from nonlinen-related items. Case-patients were infected with *Rhizopus delemar*, which was also isolated from cultures of clean linens and clean linen delivery bins from the off-site laundry facility.

Conclusions: Hospital linens were identified as a vehicle that carried *R. delemar* into contact with susceptible patients. Fungal species identification using DNA-based methods is useful for corroborating epidemiologic links in hospital outbreak investigations. Hospital linens should be laundered, packaged, shipped and stored in a manner that minimizes exposure to environmental contaminants.

Key Words: mycoses, mucormycosis, cross infection, bedding and linens

(*Pediatr Infect Dis J* 2014;33:472–476)

Mucormycosis, formerly called zygomycosis, is an invasive fungal infection caused by the Mucormycetes group of molds, common agents of organic matter decay found in soil and dust.[1,2] The Mucormycetes include at least 20 pathogenic species classified into 12 different genera.[3] *Rhizopus* is the genus most frequently implicated in published reports of mucormycosis.[4]

Mucormycosis mostly occurs in individuals with certain predisposing medical conditions such as immunosuppression and diabetic ketoacidosis.[5] Infections are characterized by rapidly progressive tissue infarction and can occur at various anatomic sites depending on the route of fungal exposure, such as inhalation, ingestion, direct contact or traumatic introduction. The case fatality rate for severe infections approaches 100% despite treatment.[4] Although most cases occur sporadically, 12 hospital outbreaks have been reported.[6] Most documented hospital outbreaks have involved cutaneous infections and were attributed to fungal contamination of medical products including bandages, wooden tongue depressors and ostomy bag adhesive.[7–13] Hospital outbreaks involving rhinocerebral infections have been attributed to fungal growth in the hospital environment with airborne dissemination of fungal spores to patients.[14–16]

In June 2009, a pediatric hospital in Louisiana (Hospital A) noted several hospital-onset mucormycosis cases during a short period. Hospital A invited the state health department and the Centers for Disease Control and Prevention (CDC) to assist with their investigation of the outbreak.

MATERIALS AND METHODS

We defined a case of mucormycosis as a patient of Hospital A with a mucormycete organism identified either by (1) histopathologic, cytopathologic or direct microscopic examination of a tissue specimen or (2) culture of a specimen obtained from a clinically abnormal body site consistent with an infectious disease process, from January 2008 through July 2009.[17] We classified cases as hospital-associated if infection onset occurred >14 days after hospital admission or as community-associated if infection onset was ≤14 days after hospital admission.[18]

We performed retrospective case-finding to identify additional cases and determine the baseline frequency of cases at Hospital A by

DISCUSSION:

…investigation identified hospital linens as the only item the case-patients had in common.

…cultures identified the same species, *R. delemar,* on clean linens…which **supports the hypothesis that linens were the vehicle transmitting *Rhizopus*.**

Duffy et al. Mucormycosis Outbreak Associated With Hospital Linens Pediatr Infect Dis J. 2014;33:472–476.

SURVIVAL OF PATHOGENS ON FABRIC

Length of survival (days)

	COTTON	POLYESTER
S. aureus (methicillin S)	4, 5, 19	10, 12, 56
S. aureus (methicillin R)	4, 5, 21	1, 16, 40
E. faecalis (vancomycin S)	11, 33	<90, >90
E. faecalis (vancomycin R)	18, 22	73, 80
E. faecium (vancomycin S)	22, 90	43, >90
E. faecium (vancomycin R)	62, >90	>80, >80
C. albicans	1, 3	1, 1
C. parapsilosis	9, 27	27, -30
A. fumigatus	1, 10, >30	1, 7, 30

MRSA

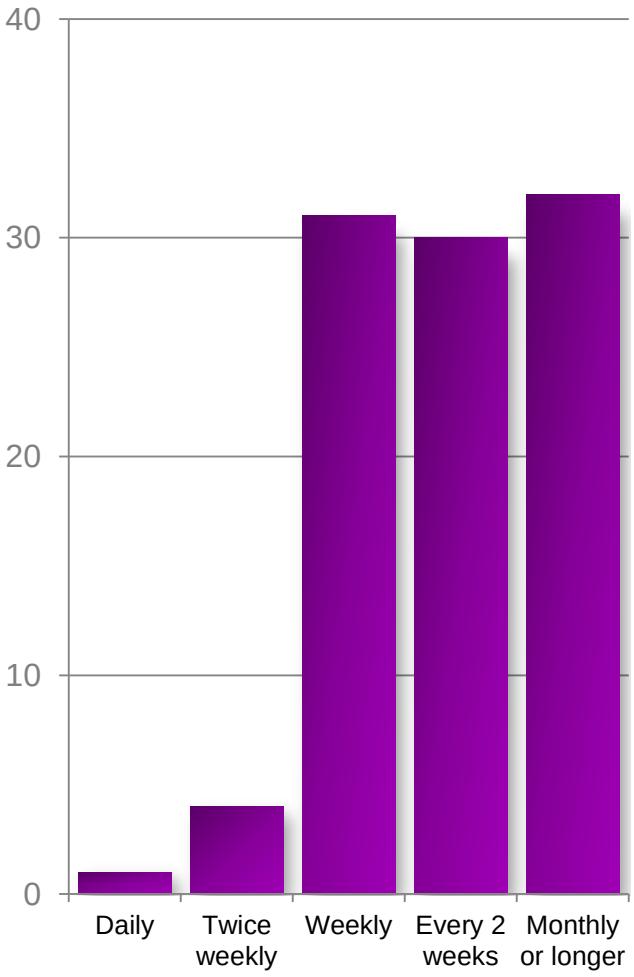
VRE

Bacteria have been shown to live for weeks and even months on cotton and polyester fabrics.

Neely AN, Orloff MM. J Clin Microbiol 2001; 39, 3360-3361.
Neely AN, Maley MP. J Clin Microbiol 2000; 38:724-726.

LAUNDERING ALONE IS INEFFECTIVE

White Coat:
Frequency of Laundering



Laundering is **infrequent** and **protocols** are not standardized

UK STUDY CAUTIONS ON HOME SCRUB LAUNDERING

The debate about home laundering of scrubs always gets attention, and a recent study shows that the newer energy-saver washing machines may not be able to stand up to take-home pathogens found on scrubs such as MRSA and Acinetobacter, at least not in Great Britain.

Here is an excerpt from an October 4 HealthLeaders Media that nicely explains the situation:

Home Laundry No Match for Pathogen-Infected Scrubs

Halloween is four weeks away, but infectious disease researchers already have a scary story to tell. They say healthcare workers who wash their uniforms in domestic washing machines might not kill MRSA and other infectious organisms.

After washing their scrubs with detergent, they also may need to iron them to avoid carrying bugs such as Acinetobacter back to their patients.

Effectiveness of low-temperature domestic laundry on the decontamination of healthcare workers' uniforms. Lakdawala N, Pham J, Shah M, Holton J. Infect Control Hosp Epidemiol. 2011 Nov; 32(11):1103-8. Epub 2011 Sep 20

RECONTAMINATION OCCURS QUICKLY
CONTINUOUS TECHNOLOGY REQUIRED

J Hosp Med. 2011 Apr;6(4):177-82. doi: 10.1002/jhm.864. Epub 2011 Feb 10.

Newly cleaned physician uniforms and infrequently washed white coats have similar rates of bacterial contamination after an 8-hour workday: a randomized controlled trial.

Burden M, Cervantes L, Weed D, Keniston A, Price CS, Albert RK.

Department of Internal Medicine, Denver Health, Denver, Colorado, USA. Marisha.burden@dhha.org

Abstract

BACKGROUND: Governmental agencies in the United Kingdom and Scotland have recently instituted guidelines banning physicians' white coats and the wearing of long-sleeved garments to decrease nosocomial transmission of bacteria.

OBJECTIVE: Our aim was to compare the degree of bacterial and methicillin-resistant Staphylococcus aureus contamination of physicians' white coats with that of newly laundered, standardized short-sleeved uniforms after an 8-hour workday and to determine the rate at which bacterial contamination of the uniform ensued.

DESIGN: The design was a prospective, randomized controlled trial.

SETTING: The setting was a university-affiliated public safety-net hospital.

PARTICIPANTS: One hundred residents and hospitalists on an internal medicine service participated.

INTERVENTION: Subjects wore either a physician's white coat or a newly laundered short-sleeved uniform.

MEASUREMENTS: Bacterial colony count and the frequency with which methicillin-resistant Staphylococcus aureus was cultured from both garments over time were measured.

RESULTS: No statistically significant differences were found in bacterial or methicillin-resistant Staphylococcus aureus contamination of physicians' white coats compared with newly laundered short-sleeved uniforms or in contamination of the skin at the wrists of physicians wearing either garment. Colony counts of newly laundered uniforms were essentially zero, but after 3 hours of wear they were nearly 50% of those counted at 8 hours.

CONCLUSIONS: Bacterial contamination occurs within hours after donning newly laundered short-sleeved uniforms. After 8 hours of wear, no difference was observed in the degree of contamination of uniforms versus infrequently laundered white coats. Our data do not support discarding long-sleeved white coats for short-sleeved uniforms that are changed on a daily basis.

CONCLUSION:

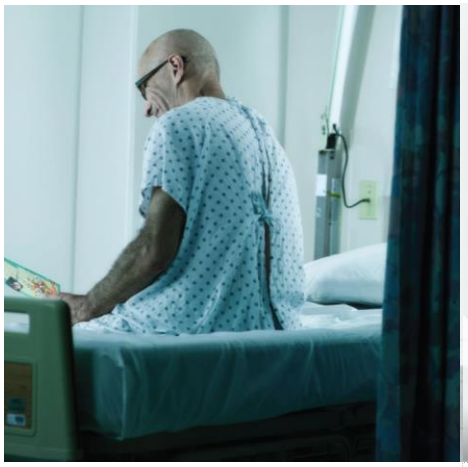
> “Colony counts of newly laundered uniforms were essentially zero, but after 3 hours of wear they were nearly 50% of those counted at 8 hours.”

CROSS CONTAMINATION

Patients' skin & environment are contaminated with pathogens

White coat becomes contaminated via contact with patient or environment + infrequent laundering

Pathogens are transmitted from the white coat to a subsequent patient



CROSS CONTAMINATION

42% of hospital privacy curtains were contaminated with VRE. **22%** with MRSA. Hand imprint cultures demonstrated that these pathogens were easily acquired on hands.

Trillis F 3rd et al. Contamination of hospital curtains with healthcare–associated pathogens. Infection Control and Hospital Epidemiology 2008, 29:1074-6

During an outbreak of **22** sternal surgical site infections following cardiac surgery, Operating Room environmental contamination and suboptimal infection control practices regarding scrub attire may have contributed to the outbreak.

Nguyen, Duc et al. A polymicrobial outbreak of surgical site infections following cardiac surgery at a community hospital in Florida, 2011-2012. American Journal of Infection Control. April 2014. Vol. 42, Issue 4; p 432-435.

" ...A study of home-laundered uniforms involved taking surveillance cultures from five patients. Results showed that three of the patients were colonized with the same strain of microorganisms as that cultured from the healthcare providers uniforms."

2013 Perioperative Standards and Recommended Practices (p. 64)

X-static®

CURRENT PRACTICES

Currently a lack of standard protocol and accepted best practices

SCRUBS:

HOW OFTEN DOES YOUR STAFF WASH THEIR UNIFORM?

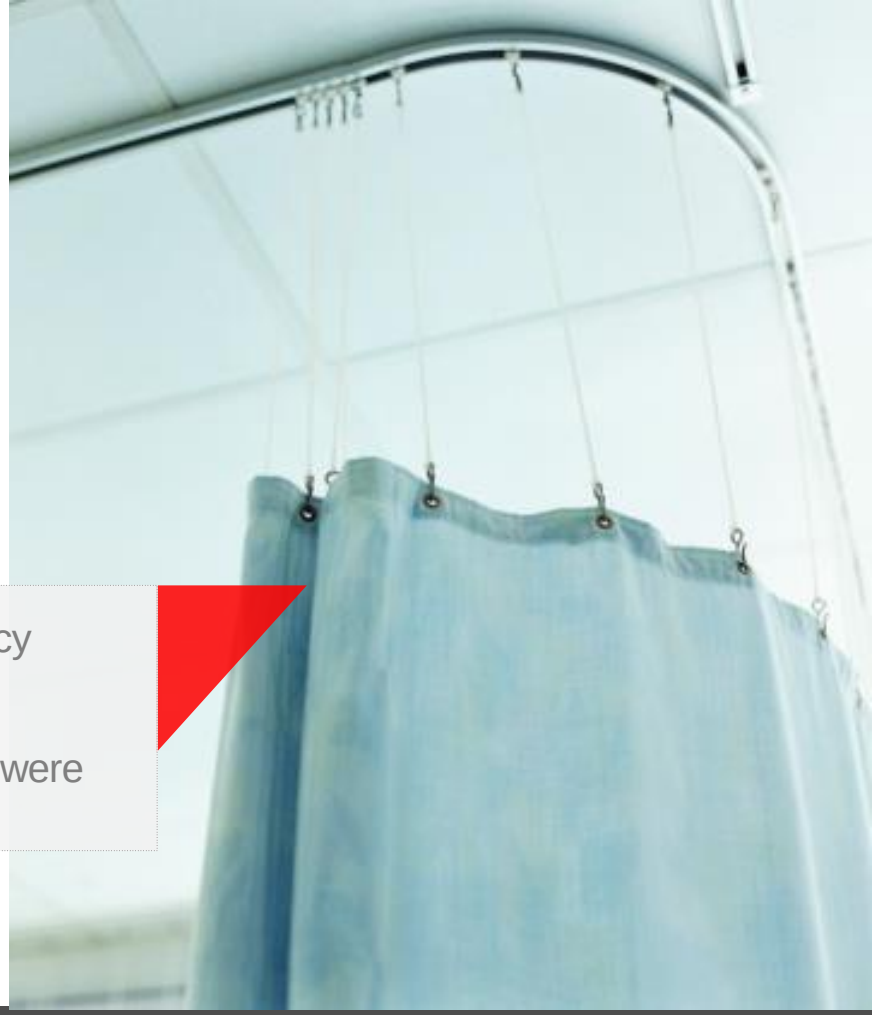
In a survey of 160 providers, white coats were washed every **12.4 ± 1.1 days and scrubs every 1.7 ± 0.1 days** (mean ± standard error; P < .001).

Munoz-Price, L et al. (2013). Brief report: Differential laundering practices of white coats and scrubs among health care professionals. American Journal Of Infection Control, 41; 565-567.

CURRENT PRACTICES

Frequency of washing/changing varies and frequently does not meet minimum standards

PRIVACY CURTAINS:



Think about your facilities privacy curtain laundering practices.

Do you know the last time they were changed or washed?

37% of hospital facilities launder privacy curtains only when they are visibly soiled.

DeAngelis , Dianne L. et al. Hospital Privacy Curtains: Cleaning and Changing Policies - Are We Doing Enough? American Journal of Infection Control. Volume 41, Issue 6, Supplement. Page S33, June 2013

REGULATORY GUIDELINES – OUTDATED AND SPARSE

AORN

2013 PERIOPERATIVE STANDARDS AND RECOMMENDED PRACTICES

"Wear freshly laundered surgical attire that is laundered at a health care accredited laundry…"

"…changing contaminated, soiled, or wet attire reduces the potential for contamination and protects personnel from prolonged exposure to potentially harmful bacteria"

CDC: GUIDELINE FOR ISOLATION PRECAUTIONS:

PREVENTING TRANSMISSION OF INFECTIOUS AGENTS IN HEALTHCARE SETTINGS 2007

Institutions are required to launder garments used as personal protective equipment and uniforms visibly soiled with blood or infective material[739]. There are few data to determine the safety of home laundering of HCW uniforms, but no increase in infection rates was observed in the one published study[858] and no pathogens were recovered from home- or hospital-laundered scrubs in another study In the home, textiles and laundry from patients with potentially transmissible infectious pathogens do not require special handling or separate laundering, and may be washed with warm water and detergent [11, 858, 859].

REGULATORY GUIDELINES – LIGHT AT THE END OF THE TUNNEL

SHEA EXPERT GUIDANCE

HEALTHCARE PERSONNEL ATTIRE IN NON-OPERATING-ROOM SETTINGS - 2014

"The paucity of evidence has stymied efforts to produce generalizable, evidence-based recommendations, resulting in widely disparate practices and requirements that vary by country, region, culture, facility, and discipline."

"White coats: Facilities that mandate or strongly recommend use of a white coat for professional appearance should institute one or more of the following measures:

HCP engaged in direct patient care (including house staff and students) should possess 2 or more white coats and have access to a convenient and economical means to launder white coats (eg, institution-provided on-site laundering at no cost or low cost)."

http://www.jstor.org/stable/10.1086/675066

INTERNAL GUIDELINES – HOW ARE WE ADDRESSING ATTIRE?

For attire, it's not uncommon **the only** written policy is found in Human Resources

"Health care workers should wear hygienically clean clothing……."

"At all times, clothing should be neat and clean; in good repair; moderate in style and color; and should fit properly with nothing detracting from the intention of the work setting."

What does "hygienically clean" mean?

"Laundering that reduces the presence of pathogens to levels that pose no threat to human health."

Patients who contract
an HAI have a **higher risk of death,** *
a **longer stay,** and an **increased cost.**

WHAT CAN YOU DO NOW?

* Data on file at Noble Biomaterials

CONDUCT SOFT SURFACE FABRIC RISK ASSESSMENT

“SWIFT” Risk Assessment –“Structured What If Technique”

- Gaining acceptance over more formal assessments such as Failure Mode and Effects Analysis (FMEAs)
- Identify the risks, consequences and controls that can be effective in minimizing exposure to pathogenic bacteria.

Method:
A team of involved staff evaluate a “normal operation” and subject the system to “What If” situations to identify failures and risks

SOFT SURFACE FABRIC RISK ASSESSMENT

What if	Causes	Consequences	Controls	Recommendations
While bathing patient, CNA splashes bloody basin water on uniform	CNA in a hurry Patient moves unexpectedly Basin too full of water Not wearing proper PPE's Wound care not timely enough to avoid contact with bloody skin	Uniform contaminated with pathogen Uniform acts as a fomite to transmit pathogen to CNA's hands, other people , hard surfaces and other fabrics (i.e bed linen, privacy curtains)	Use basin-less bathing Wear antimicrobial fabrics which reduces 99.9% of bacteria on the surface of the fabric within one hour; providing ongoing, permanent protection Wear PPEs while doing every bath Stop work after contamination to change into clean clothes – clothing cleaned by facility per OSHA BBP Standard Remove gloves/wash hands if touched dirty uniform	Educate employees to techniques to avoid splashes while bathing Investigate use of antimicrobial fabrics to act as an engineering control thereby not depending upon employee to follow proper procedure Evaluate soft surface products incorporating antimicrobial technology currently on the market

BETTER INTERNAL POLICIES

I. DIRECT PATIENT CARE APPAREL

a) Any apparel that comes into contact with the patient or patient environment should be laundered after daily use.

b) If laundered at home, a hot-water wash cycle (ideally with bleach) followed by a cycle in the dryer is recommended to minimize bioburden of pathogens.

II. WHITE COATS

a) White coats worn during patient care should be laundered no less frequently than once a week and when visibly soiled.

b) White coats shall be removed prior to providing direct patient care. Hooks for hanging white coats will be available in patient care areas.

III. APPAREL ACCESSORIES

a) Only approved warm up jackets shall be worn by employees involved in direct patient care. These jackets shall be laundered after daily use.

b) Direct patient care staff shall not wear lanyards for ID badges while care for staff.
Clip on will be available for ID badges

c) ID badges worn by direct patient care staff should be wiped down daily with an approved disinfectant.

d) Ties will be discouraged. If necessary, the ties should not come in contact with the patient or the patient's environment.

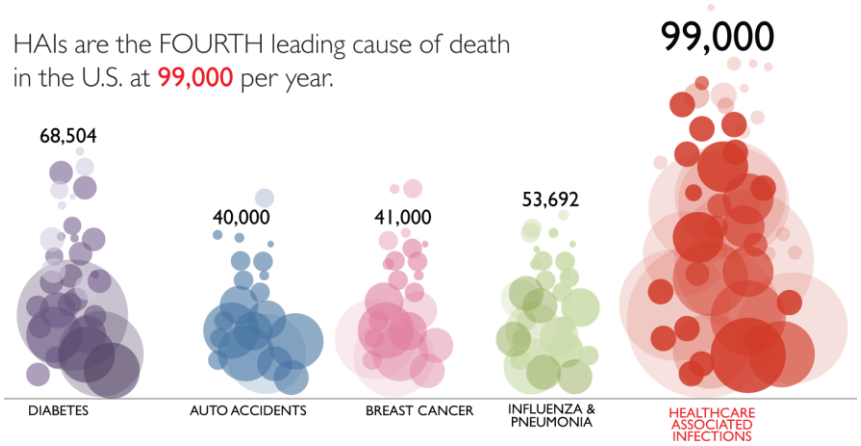
ADDRESS RESEARCH NEEDS

2014 SHEA Expert Guidance on apparel:

- “Determine the role played by HCP attire in the horizontal transmission of nosocomial pathogens and its impact on the burden of HAIs.”

- “Evaluate the impact of antimicrobial fabrics on the bacterial burden of HCP attire, horizontal transmission of pathogens, and HAIs. Concomitantly, a cost-benefit analysis should be conducted to determine the financial merit of this approach.”

MAKE THE BUSINESS CASE



* CDC Dataa

BUSINESS CASE: PRIVACY CURTAINS

Setting:	**Large University Hospital**
Privacy curtains in use:	**1,100**
Cleaning protocol:	**After each MDRO isolation patient visit** **Quarterly routine cleaning**
Cleaning cost:	**Time to take down/replace – 1 hr. @ $12/hr.** **Cleaning (in house) estimate – $13.00** **Total cost per curtain – $25.00**

BUSINESS CASE: PRIVACY CURTAINS

Task	Cost
Tracking and scheduling of curtain cleaning	5hrs./month @$25.00/hr. = $125.00
Cleaning After MDRO Isolation	Average 300 curtains/month @$25/per curtain = $7500.00
Routine cleaning of curtain	Average 100 curtains/month@$25/per curtain = $2500.00
Monthly Total	**$10,125.00/month**
Annual Total	**$121,500.00/year**

CASE STUDY: NEBRASKA FACILITY ADDRESSES SOFT SURFACE FABRICS

Mid-size health system in Nebraska leveraged construction on a new surgery center to initiate the conversation about antimicrobial privacy curtains.

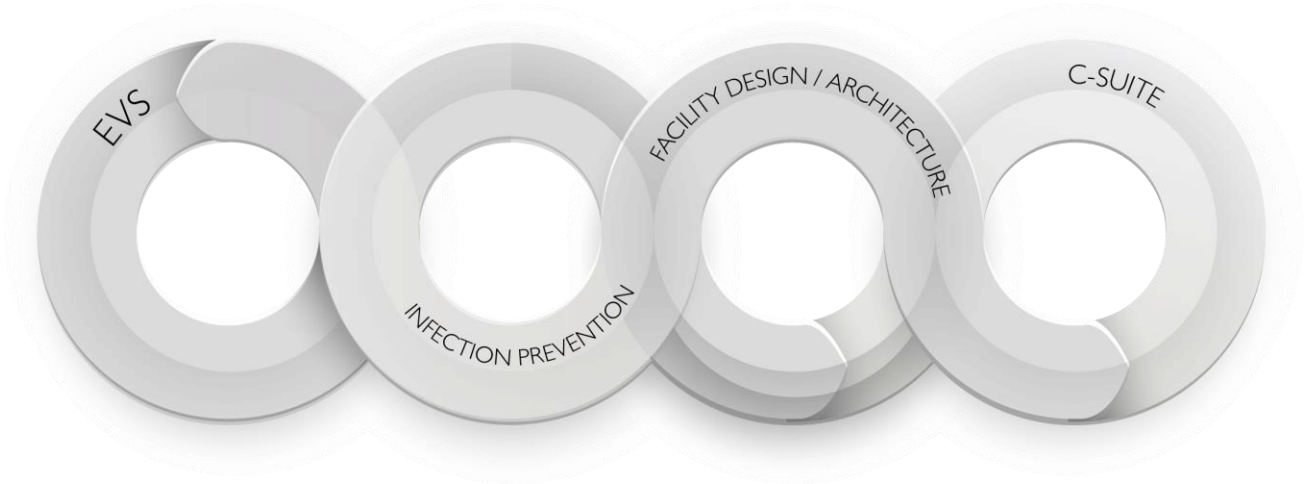
CURRENT PRACTICES:

- Minimized the use of drapes on windows
- Moved to majority single rooms
- Annual on-site with linen laundering service
- Instituted hand protectors that go over the curtain grab area

"A better solution was needed for the new Post-Anesthesia Care Unit (PACU) which would contain a number of cubicle curtains for patient privacy needs."
Service Leader of Epidemiology Department

CASE STUDY: NEBRASKA

SOLUTION:

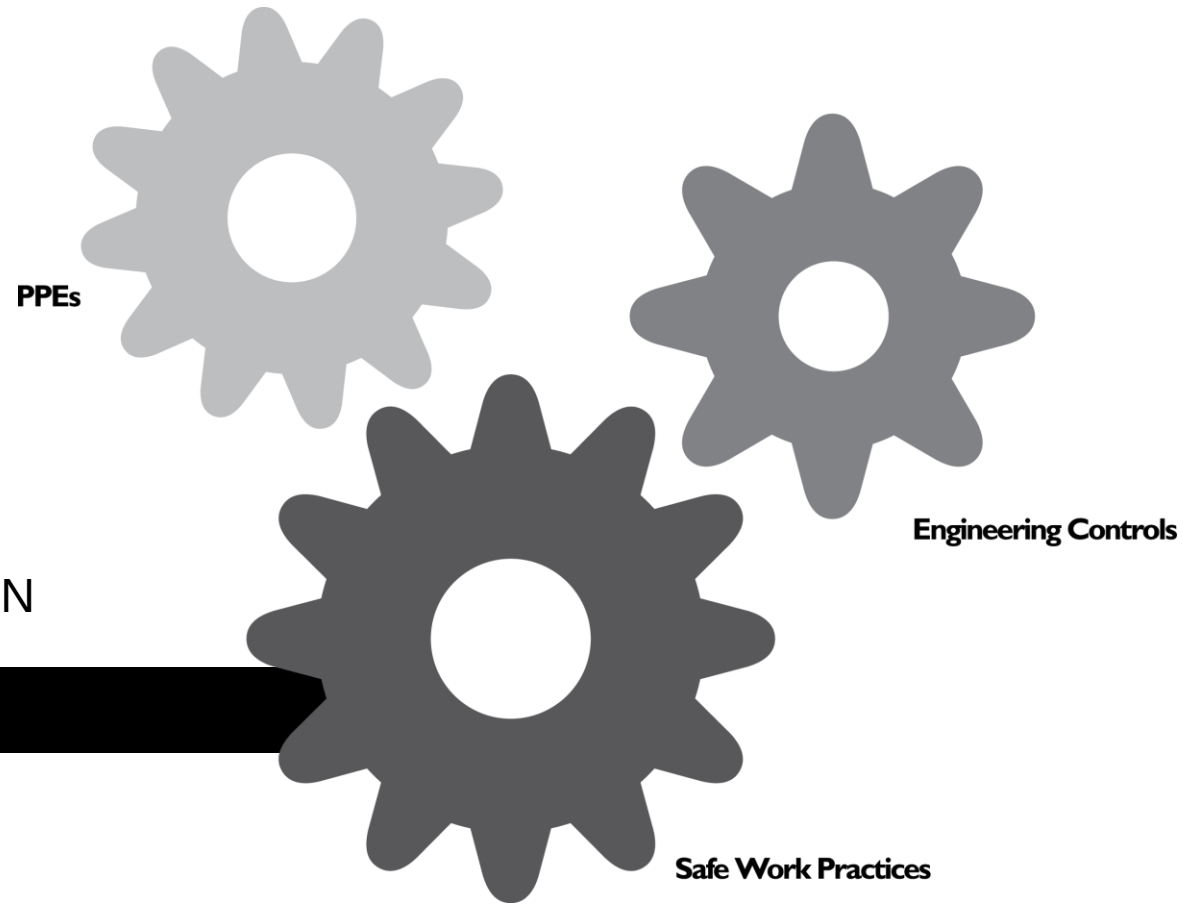


- Worked collaboratively with the construction manager and architect engineer
- Reviewed several product solutions for cubical curtains
- Important considerations leading to a decision:
  - Permanent: Effectiveness over time (40 washings vs. 200+)
  - Integration of technology into the product with no behavior modification

ANTIMICROBIAL SOLUTIONS

IMPLEMENTATION OF ENGINEERING CONTROLS

OSHA'S
HIERARCHY OF PROTECTION

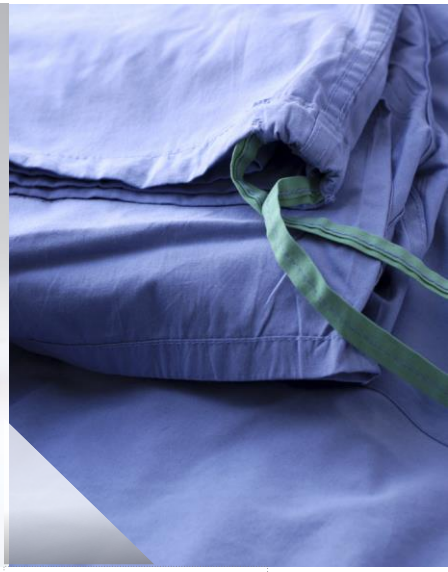


CURRENT HEALTHCARE APPLICATIONS

Baby Eye Drops

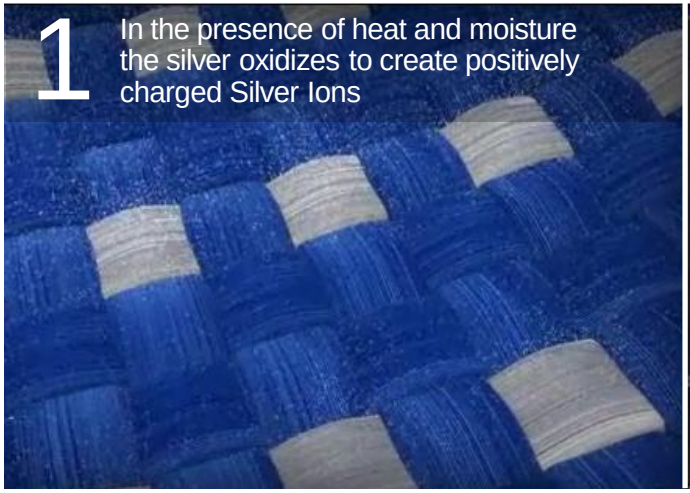
Urinary Catheters
IV Catheters

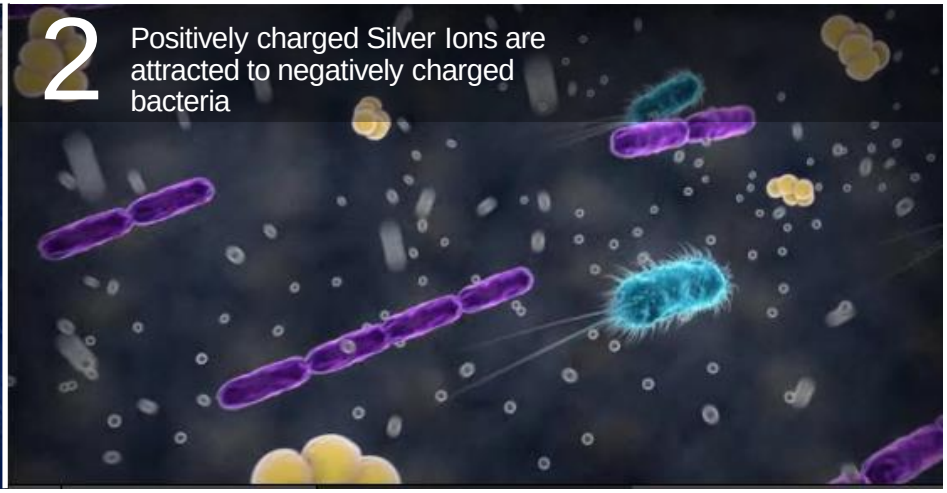
Wound Care Products

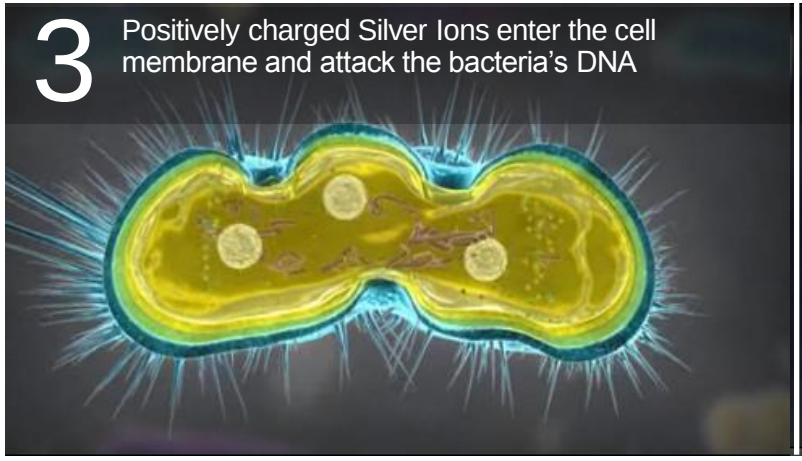


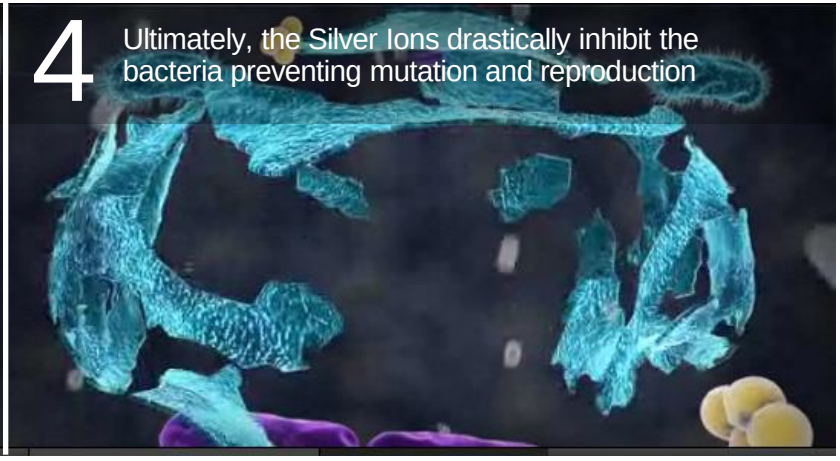
Soft surface fabrics

X-STATIC® MECHANISM OF ACTION









X-STATIC® REGULATORY APPROVALS

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EUROPEAN COMMUNITY CERTIFICATION
Class 1, 2 & 3 Medical Device Approvals

US ENVIRONMENTAL PROTECTION AGENCY
Antimicrobial and Conformance Registrations

OEKO-TEX
Standard 100 Certification

BLUESIGN – (PENDING)


KCI
The Clinical Advantage


Guaranteed
To Keep You Dry
GORE-TEX
fabrics


3M


BROOKS


Systagenix


lululemon
athletica


Ansell


BELL


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DEPARTMENT OF THE NAVY
UNITED STATES MARINE CORPS


OAKLEY


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DEPARTMENT OF THE ARMY
UNITED STATES OF AMERICA
1775


UNITED STATES
SPECIAL OPERATIONS COMMAND


select comfort


new balance
X-static

X-STATIC® HEALTHCARE FABRICS THE EVIDENCE-BASED SOLUTION

SAFE
99.999% pure, natural silver
EPA/FDA approved products powered by X-STATIC® on the market today

CLINICALLY PROVEN
99.9% reduction of pathogens on fabric in 1 hour*

PERMANENT
Does not wash out at >200 industrial launderings *, Safe for the environment

ANTI-ODOR
Naturally eliminates odor and keeps your apparel smelling fresher

TEMPERATURE REGULATION
Keeps you cooler in the summer and warmer in the winter

ANTI-STATIC
Minimizes static

NO BEHAVIOR MODIFICATION BY STAFF OR PATIENTS IS REQUIRED
Mechanism of action is inherent in the fabric

CLINICAL HERITAGE
Proven by United States special forces, NASA, and Olympic athletes

*EPA regulated products containing X-STATIC® solely protect the finished product itself from microbial growth and odor. Any public health claims related to X-STATIC® products are expressly limited to products regulated by the FDA and do not apply to products regulated by the EPA.

X-STATIC® – PRODUCT CERTIFICATION

EXTENSIVE 3RD PARTY ANTIMICROBIAL TESTING TO THE INDUSTRY'S MOST STRINGENT STANDARDS

- Minimum 3-log reduction in 1 hour for Certification
- Sustained, continuous performance- after 200 industrial launderings
- Noble tests and certifies 100% of the ***end use*** applications for it's technologies.

SUMMARY OF SELECT KEY CLINICAL STUDIES

Study Site / Date	Product Studied	Subject	Key Conclusions
QMC Hospital; 2008	**PRIVACY CURTAINS**	Test the antimicrobial efficacy of curtains impregnated with Silver Fiber	• MRSA contamination found in **63% fewer Silver impregnated curtains** than the control.
Dr. Zastrow (Physician, Environmental Medicine); 2009	**NURSES UNIFORMS**	Antimicrobial efficacy of uniforms made with Silver Fabric	• The total germination number on the antimicrobial silver textiles was **reduced by 72.2%.** • The total number of all nosocomial infection pathogens was **reduced by an average of 93.6% within 1 hour**.
Henry Ford Hospital; 2013 ("Study of Silver-Embedded White Coats" *Infectious Diseases in Clinical Practice)*	**LAB COATS**	Contamination of HCW Lab coats by VRE.	• Three silver coats grew VRE after culturing immediately after removing coat • **No VRE grew after culturing 3 hours later** • **"Self Cleaning Effect"**

WHAT IS A TRUE SOFT SURFACE ANTIMICROBIAL SOLUTION?

There are quite a few claims from organizations citing “silver” usage with antimicrobial solutions for soft surfaces

Not all “antimicrobial” products are the same: pure metallic silver filaments, silver compounds, Nano technologies and chemical topical treatments- all yielding very different levels of safety and protection.

It is important to educate on the differences of “antimicrobial” products available – Ask the right questions!

For more than 2,000 years, silver has been used for it’s antimicrobial properties in everything from drinking vessels to military field dressings. Now, with our superior technology we deliver the benefits of pure, natural silver to textiles by combining best in class antimicrobial protection to the fabrics surrounding you and your patients.

ANTIMICROBIALS
WHAT ARE THE RIGHT QUESTIONS?

Need	Key Question(s)
Awareness/Status	What antimicrobial technology are you currently using to protect you curtains?
Rate of Reduction	What % of bacteria does it reduces?
Spectrum of Activity	Will it reduce the right kind of bacteria? Is it a broad spectrum?
Speed of Action	How quickly will it reduce bacteria?
Durability	How many launderings will it last for?
Regulatory	Is it approved by the EPA?
Safety	Is it safe for human contact? Is it safe for the environment?

ALL ANTIMICROBIAL SOLUTIONS ARE NOT CREATED EQUAL

To ensure safety, your technology of choice should be registered as an antimicrobial with the US EPA.

Truly effective antimicrobial solutions are not promoted with fluid repellency as a primary benefit and bacterial management secondarily.

Silicone-based treatments do not allow fabrics to breathe and cause discomfort to the wearer, especially when working long shifts. Comfort is a must!

Proven by United States special forces, NASA, and Olympic athletes X-STATIC® has a rich heritage of delivering superior performance. The benefits have been validated by studies at prestigious institutions throughout the world for more than a decade.

RECAP

FABRICS ARE FOMITES

- Soft Surface Fabrics are contaminated with pathogenic bacteria.
- Bacteria can survive weeks and even months on soft surface fabrics.
- Healthcare worker apparel and linens have been implicated as sources in infection outbreak situations.
- Lack of regulatory guidelines have created a “gap” in practice where these high touch surfaces are largely ignored.
- Close the gap to Break the Chain of Infection with a more complete infection prevention bundle including soft surface fabrics!

I will …

- ☐ NOT wear fabrics that may be contaminated.
- ☐ Continue my mission of creating a safer world through targeting zero HAIs.
- ☐ Educate my staff about the risk of cross contamination from soft surface fabrics.
- ☐ Inventory what soft surface items are found in my facility and how we currently maintain “hygienically clean” standards.
- ☐ Collaborate with Environmental Services to determine what our current written policies for soft surface fabrics are, if any.
- ☐ Consult with our laundry and uniform provider regarding their soft surface infection prevention strategies and antimicrobial solutions.
- ☐ Identify the priority area/departments to begin addressing soft surface fabrics in my facility, and conduct the appropriate risk assessment (SWIFT).
- ☐ Add soft surface fabrics to my outbreak evaluation procedures during outbreak investigations.
- ☐ Collect and present the body of evidence for contamination of soft surface fabrics to my leadership.
- ☐ Incorporate soft surface fabrics in my HAI-reduction campaigns.
- ☐ Protect the surfaces surrounding me and my family!

X-static®

Q&A

www.InfectionPreventionTextiles.com