



Laundry & Linen: Science Still Stands with Schulster

EIP LLC

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ESOP ©
ENVIRONMENTAL SERVICES OPTIMIZATION PLAYBOOK

NE APIC Fall Conference
10/11/2024

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Agenda

- Introduction to EvSOP and its Mission
- Laundry Services are Essential for Successful Patient Care
- Important Scientific Principles Re: Spread of Infection
 - Spaulding Classification
 - Chain of Infection
- Laundry Processes, Laundry Chemicals, Laundry Equipment
 - Noteworthy Articles (ICHE, AJIC)
- Standards, Processes, Recommendations
 - Accreditation vs. Certification vs. Recommendations
 - Overview – HLAC, TRSA, Hohenstein US, ANSI/AAMI
 - Microbiologic Testing of Laundered Healthcare Textiles (HCTs)
- Useful Information/Guidance and Checklists
 - URLs for obtaining the documents on line
- Summary

Scientific Peer Reviewed, Global Evidence Based Outcomes



EvSOP
ENVIRONMENTAL SERVICES OPTIMIZATION PLAYBOOK

The mission of the Environmental Services Optimization Playbook (EvSOP©) Project is multi-faceted. It provides programs designed to support reliable standardization of evidence-based practices for environmental cleaning and disinfection of health care, hospitality, and other industries to improve the lives and work environments of people.

EvSOP© playbook is provided at no cost, internet-available, self-directed, multi-disciplinary program, and does not endorse products by brand name, but will recommend product types based upon independent scientific testing outcomes.

EvSOP© recommends the training and leadership guidelines of many forward-thinking healthcare-focused organizations and allied organizations.

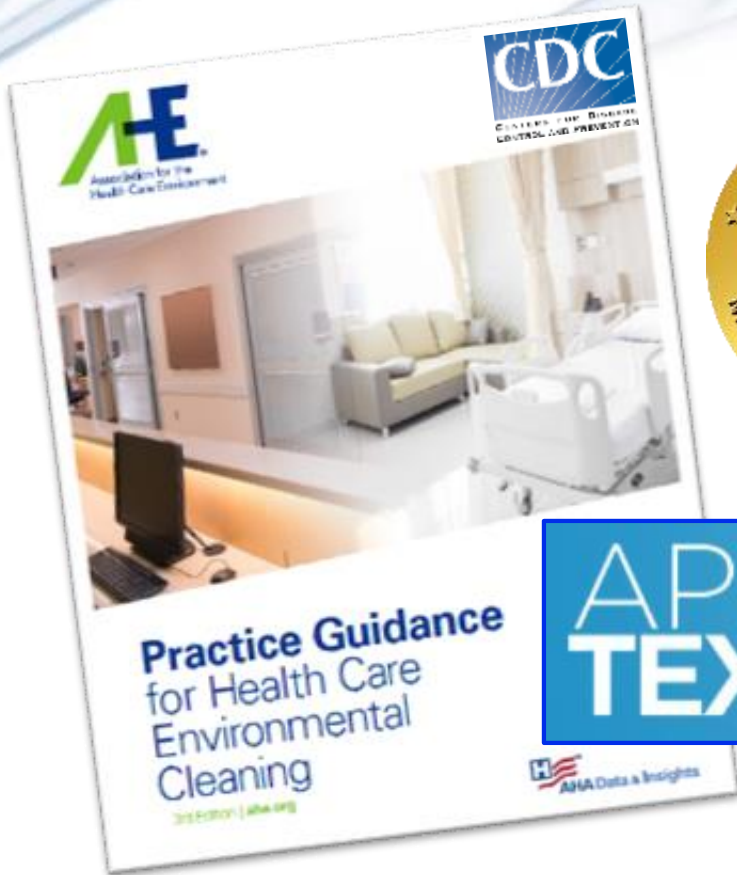
EvSOP© recommendation of the expertise of such organizations is not an implied or expressed endorsement or affiliation with any organization.

The vision of EvSOP© is to assist in the collaborative improvement of healthcare delivery. Improvements in Environmental Services and Infection Prevention department operations, patient environments, and patient outcomes based upon the healthcare industry best practices, results from scientific research and endeavor. Implementation of Environmental Services and Infection Prevention practices, to the greatest extent possible, in other non-healthcare sectors will have a direct benefit to them. EvSOP© promotes the development of a professional mindset for continuous readiness and adaptations to meet management, staff, and customer needs and expectations. EvSOP© will accomplish its mission and fulfill its vision by providing practical, employee-centered, and outcomes-based information and training that emanates from scientific research.

For more information, please email jetta@evsop.org

Practice Guidance – AHE, AORN, CDC APIC Text, JCR

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Spaulding Classification System

Table 12.3

Spaulding Classification			
Category	Description	Examples	Treatment
Critical devices	Substantial risk of infection due to instruments coming in direct contact with normally sterile body areas	Needles, scalpels, forceps, cardiac catheters, implants, internal components of dialyzers, and extracorporeal blood flow devices	Must be sterilized by heat, ethylene oxide, hydrogen peroxide gas plasma, other low-temperature sterilization methods, and/or liquid sterilants
Semicritical devices	Lower risk of infection transmission due to items in contact with mucosa but usually do not penetrate sterile body areas	Fiber-optic endoscopes, endotracheal tubes, bronchoscopes, laryngoscopes, cystoscopes, vaginal specula, and urinary catheters	Sterilization with heat, or cleaning followed by use of germicide with high-level disinfection
Noncritical devices	Lower risk of infection as items usually contact only unbroken skin	Face masks, blood pressure cuffs, neurologic or cardiac electrodes, and surfaces of X-ray machines	Simple washing and cleaning with detergent; germicide using quaternary ammonium and phenolic chemical classes; proper handwashing techniques
Environmental surfaces	Lowest risk of infection transmission as items have indirect contact with unbroken skin	Medical equipment such as knobs or handles; Housekeeping surfaces	Simple washing and cleaning with detergent; use of germicide using quaternary ammonium and phenolic chemical classes; proper handwashing techniques

- The Spaulding Classification system is a rational approach to disinfecting and sterilizing medical devices and equipment
- Introduced in 1939; modified version is still used today
- Uses 2 basic principles to assess device-related infection risk
 - How the device is used
 - Body parts it has contact with



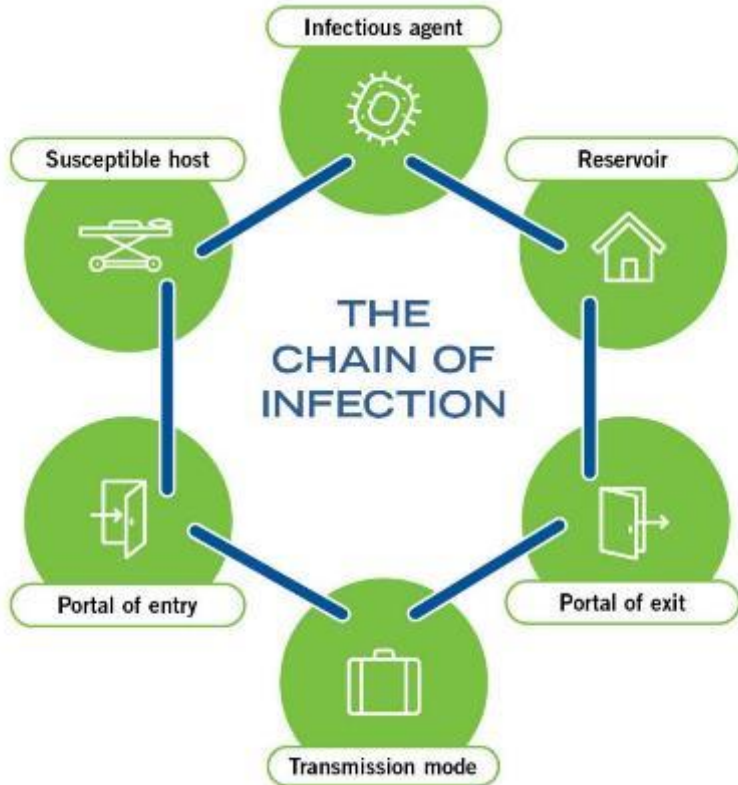
Dr Earle H. Spaulding
Photo courtesy of the US National Library of Medicine.

Rutala WA, Weber DJ. *Am J Infect Control.* 2016;44(5 Suppl):e1-e6.

Modified from Spaulding EH. Chemical disinfection of medical and surgical disinfection of medical and surgical materials. In: Lawrence CA, Block SS, eds. *Disinfection, sterilization and preservation.* Philadelphia, Lea & Febiger, 1968:517-531. Acemoglu J, Favero M. Disinfectants and antiseptics: modes of action, mechanism of action, and toxicity. In: Tenover FC, ed. *Antibiotics in laboratory medicine.* 5th ed. Philadelphia: Lippincott Williams & Wilkins, 2005:615-653.

quote: You can clean without disinfecting, but you can't disinfect without cleaning

INFECTION CONTROL – CHAIN OF INFECTION



Actions that can be taken include

- Frequent hand hygiene,
- Covering coughs and sneezes,
- Adhering to quarantine / isolation precautions,
- Proper donning and doffing of personal protective equipment (PPE),
- Frequent cleaning and disinfection of environmental surfaces.
- **Following CDC EIC Laundry guidelines**

INFECTION CONTROL – BE A CHAIN BREAKER!

LINK	DESCRIPTION	ACTIONS TO BREAK EACH LINK
INFECTIOUS AGENT	This is a disease-causing microorganism present in a sufficient “dose” in order to cause disease	<ul style="list-style-type: none">• Seek treatment if ill• Use correct disinfectant for the targeted pathogen
RESERVOIR	This is where pathogens can thrive and reproduce such as in people or on environmental surfaces or medical equipment	<ul style="list-style-type: none">• Perform frequent hand hygiene• Keep a clean environment, hygienically clean linens• Disinfect surfaces
PORTAL OF EXIT	This is how the pathogen leaves the reservoir. Examples include coughing or sneezing	<ul style="list-style-type: none">• Covering coughs and sneezes• Perform frequent hand hygiene• Wear appropriate PPE• Proper and timely disposal of waste
MODE OF TRANSMISSION	This is how the pathogen is carried from one place to another.	<ul style="list-style-type: none">• Perform frequent hand hygiene• Cleaning and disinfection of surfaces, hygienically clean linens
PORTAL OF ENTRY	This is how the pathogen enters the host	<ul style="list-style-type: none">• Perform frequent hand hygiene• Wear a face mask, don’t touch your face with dirty hands!
SUSCEPTIBLE HOST	This is a person who cannot defend against pathogens such as non-immune persons, elderly persons, or those with chronic health conditions.	<ul style="list-style-type: none">• Identify those at high risk of acquiring the infection and take preventative actions!

During CoVID, “Should we throw away our linens from CoVID patients?”

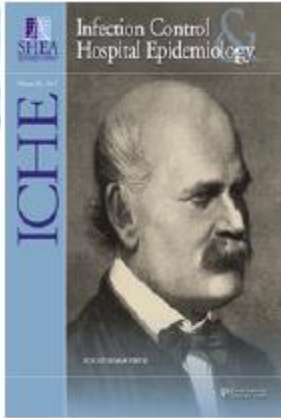
Thanks for sharing the question!

Launderable textiles should be handled and laundered according to normal healthcare facility procedures, and in accordance with local regulations. No special treatment or chemicals are indicated for laundering linens after use by a COVID-19 patient. As always, handling should be done to minimize agitation of soiled textiles, they should be contained in appropriate laundry bags and hand hygiene should be performed promptly after handling.

Hope this helps!

Best,

~Mike Bell CDC



Healthcare Laundry and Textiles in the United States: Review and Commentary on Contemporary Infection Prevention Issues

Lynne M. Sehulster

Infection Control & Hospital Epidemiology / Volume 36 / Issue 09 / September 2015, pp 1073 - 1088

DOI: 10.1017/ice.2015.135, Published online: 18 June 2015

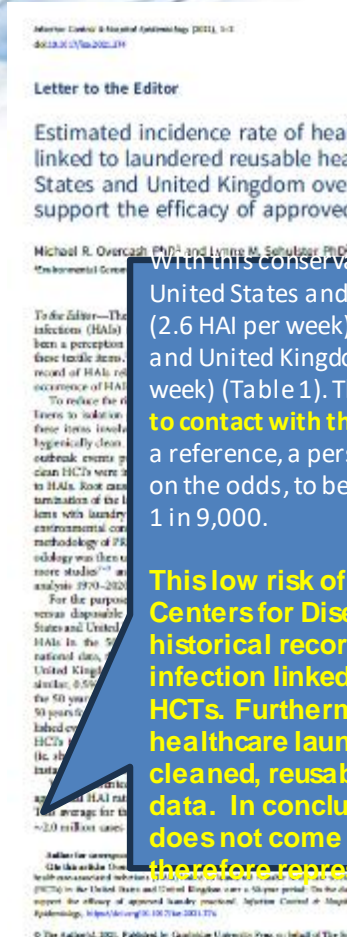
Link to this article:

http://journals.cambridge.org/abstract_S0899823X1500135X

How to cite this article:

Lynne M. Sehulster (2015). Healthcare Laundry and Textiles in the United States: Review and Commentary on Contemporary Infection Prevention Issues. Infection Control & Hospital Epidemiology, 36, pp 1073-1088 doi:10.1017/ice.2015.135

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With this conservative estimate, the laundry implicated HAIs in 6,900 patients for the United States and the United Kingdom over the past 50 years is ~0.37 HAI case per day (2.6 HAI per week). The estimated total healthcare HAI for the United States and United Kingdom over this same period is 5,500 cases per day (38,000 cases per week) (Table 1). Thus, in probability terms, **the chance of a patient having an HAI linked to contact with the laundered, reusable textile is ~1 in 14,900** (5,500/0.37 = 14,900). As a reference, a person in the United States and the United Kingdom is more likely, based on the odds, to be struck by a meteor in any given year over a 78.5-year lifespan, which is 1 in 9,000.

This low risk of infection attributed to reusable HCTs is the basis for the Centers for Disease Control and Prevention's (CDC) acknowledgment of the historical record of patient safety and extremely infrequent episodes of infection linked to these clean HCTs. Furthermore, the CDC concluded that the need to establish a healthcare laundry certification program based on microbiologic testing of cleaned, reusable HCTs does not appear to be supported by epidemiologic data. In conclusion, the annual cost savings from selecting reusable HCTs does not come with any measurable increased risk of HAI to patients and therefore represents a prudent healthcare facility decision.



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The efficacy of a simulated tunnel washer process on removal and destruction of *Clostridioides difficile* spores from health care textiles

Kevin McLaren, BS*, Edward McCauley, MBA, BS*, Brendan O'Neill, BA*, Steven Tinker, BS*, Nancy Jenkins, MA*, Lynne Sehulster, PhD, MS*,*✉

Open Access ✖ PlumX Metrics

DOI: <https://doi.org/10.1016/j.ajic.2019.04.180>



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Conclusions: Sodium hypochlorite as a laundry additive is sporicidal. The cumulative effects of a TW process, coupled with a PAA bleach agent at neutral pH, may render textiles essentially free of *C difficile* spore contamination.



Certification vs. Accreditation

Certification: to confirm formally that something is true, accurate, or genuine

Accreditation: to confirm as meeting a proscribed standard

Hohenstein Hygienically Clean for Healthcare Textile Laundry Management

Edition January 2022

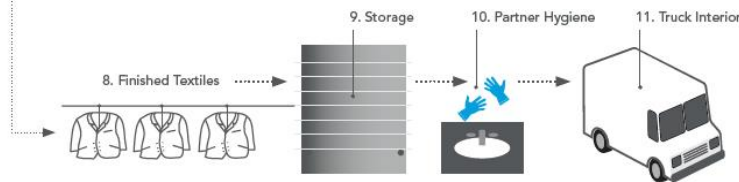
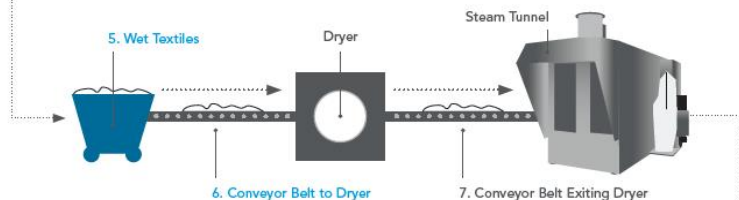
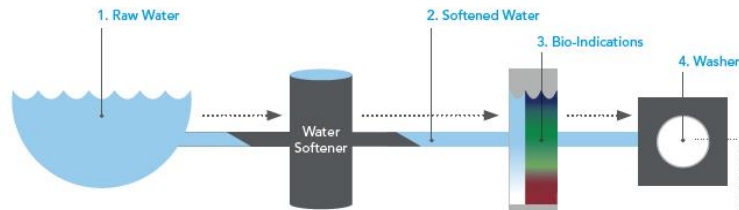


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- 11 Truck Interior



Sample collection and procedure review checked year round using standards far higher than other certifications

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STANDARD

FOR PRODUCING HYGIENICALLY CLEAN
REUSABLE TEXTILES FOR USE IN THE
HEALTHCARE INDUSTRY



Laundry Tour Planner for Healthcare Professionals

Checklist and Guide



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Guidelines for Environmental Infection Control in Health-Care Facilities

Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC)

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention (CDC)
Atlanta, GA 30329

2003
Updated: July 2019

- ⚠️ Ebola Virus Disease Update (August 2014):** The recommendations in this guideline for Ebola has been superseded by these CDC documents:

 - [Infection Prevention and Control Recommendations for Hospitalized Patients with Suspected Ebola Virus Disease in U.S. Hospitals](#) (<https://www.cdc.gov/od/ohrt/ohrtguidelines/infection-prevention-and-control-recommendations.html>)
 - [General Guidance for Recommended Infection Control in Hospitals for Ebola Virus](#) (<https://www.cdc.gov/od/ohrt/ohrtguidelines/infection-control-in-hospitals.html>)

See CDC's [Ebola Virus Disease website](#) (<https://www.cdc.gov/od/ohrt/ohrtguidelines.html>) for current information on how Ebola virus is transmitted.
- ⚠️ New Categorization Scheme for Recommendations (November 2018)**
In November 2018, HICPAC voted to approve an updated recommendation scheme. The category Recommendation means that we are confident that the benefits of the recommended approach clearly exceed the harms (or, in the case of a supportive recommendation, that the harms clearly exceed the benefits). In general, Recommendations should be supported by high- to moderate-quality evidence. In some circumstances, however, Recommendations may be made based on lower evidence or even expert opinion when high-quality evidence is impossible to obtain and the additional benefits strongly outweigh the harms or when the Recommendation is required by federal law. For more information, see [HICPAC 2018 HICPAC Meeting Minutes 252F - 125 2018](#) (<http://www.cdc.gov/od/ohrt/2018-HICPAC-Meeting-Minutes-252F-125-2018.pdf>).
- ⚠️ C. difficile Update (April 2019):** Recommendations E.VLG. and E.VLM. and the supporting text were updated to reflect changes in Federal regulatory approvals. [LIVE, EPA's Executive Administrative Order: Reductions against Clostridium difficile Spores](#) (<https://www.epa.gov/pacific-vegetation-and-4-rsps-regulation/updates-to-the-2016-order-reducing-clostridium>).
- ⚠️ Interim Mucous Membrane Control (July 2019)**
See [Infection Prevention and Control Recommendations for Mucous in Healthcare Settings](#) (<https://www.cdc.gov/infectioncontrol/guidelines/mucous/>).

www.cdc.gov/infectioncontrol/guidelines/environmental/index.html



What does that mean in relation to laundering healthcare textiles (HCTs)?




HYGIENICALLY CLEAN

Product Test Results

***Hygienically clean is defined by the American National standards Institute (ANSI) / Association for the Advancement of Medical Instrumentation (AAMI) as being “free of pathogens in sufficient numbers to cause human illness”³⁶⁰**

HYGIENICALLY CLEAN* TEST





MICROBIOLOGICAL TESTING REPORT

Date Reported: 2/10/20
Date Received: 2/7/20
Analyst: Adam Stein

Control No: 1334-20

Items Submitted:
Scrub top

Test Method:
The Replicate Organism Detection & Counting (RODAC) contact plate method is a microbial enumeration test of non-sterile items. The sample item was tested in duplicate. Testing was performed under standard laboratory environmental conditions. Handling of all test material was done with sterilized laboratory equipment within a biosafety cabinet.

Sample Preparation:
The submitted sample was laundered on 2/5/20.

Testing start date: 2/7/20

Test Results:
The results apply to samples as received and relate only to the items tested under conditions specified above.

RODAC Contact Plate method	Results			
	Replicate #1		Replicate #2	
	CFU/Plate*	Pass/Fail†	CFU/Plate*	Pass/Fail†
Scrub top	Aerobic plate count	15 Pass	15 Pass	Pass

* Each plate sampled a 1.0 square decimeter area
† Passing item must have ≤ 20 microbial colony forming units (CFU's) healthcare classifications

Microbial Testing in Healthcare Laundries

- Testing swatches of defined size (e.g., square decimeter) for presence of select microbes (e.g., *E. coli*, *S. aureus*, *P.aeruginosa*, *Candida albicans*) on laundered fabric items
 - CFUs lower than the set count = pass (e.g., < 20 CFU/square decimeter)
- Testing environmental surfaces for presence of microbes (e.g., building surfaces, equipment surfaces, etc.)
 - ATP fluorescence testing used, detects markers of microbial presence but does not identify specific microbes.

Resources for Useful Information on Laundering Healthcare Textiles

LAUNDRY PRACTICES INFECTION CONTROL ASSESSMENT CHECKLIST



The Joint Commission Big Book of Checklists

LAUNDRY PRACTICES INFECTION CONTROL ASSESSMENT CHECKLIST



The Joint Commission Big Book of Checklists

This resource was excerpted from [The Joint Commission Big Book of Checklists](#), available for pre-order now.
Release date: August 29, 2016.

This checklist includes questions to ask to assess the infection control risks in your laundry practices and how you can use this tool to review your laundry practices and minimize laundry-related infection control risks. Answers to all questions should ideally be Y for Yes (unless they aren't applicable).

Organization: _____ Department/Unit: _____

Date of Review: _____

Reviewer: _____

* Generally, OME application of this checklist would occur within a licensed healthcare facility, such as an inpatient hospice, with laundry services.



Is dirty laundry receiving area kept at negative air pressure compared to the clean laundry areas? [N/A for home care]			
Are laundry washing facilities and appropriate personal protective equipment (PPE) available for workers?			
Is laundry equipment properly maintained?			
Is laundry removed from machines in a timely manner?			

Transportation [AHC, BHC, CAH, HAP, NCC, OBS, OME]	Y	N	N/A	If N (No), Note Changes Needed
Is clean laundry separated from dirty laundry during transport in some physical way?				
Is clean linen properly covered or sealed to prevent contamination during transport?				
Is all dirty laundry put into a laundry bag before putting it into a laundry chute, if a chute is used?				
Are laundry bags closed tightly before being put into a laundry chute, if a chute is used?				
Storage [AHC, BHC, CAH, HAP, NCC, OBS, OME]	Y	N	N/A	If N (No), Note Changes Needed
Is clean linen stored in a room or space dedicated to that purpose?				
Are linen storage areas free of dirt and debris?				
Are linen storage shelves easily accessible for cleaning?				
Is linen stored in a way that allows ventilation, lighting, and fire sprinklers to operate normally?				
If there is a door to the clean linen area, is it kept closed when not in use?				
Is the clean linen area a low-traffic area?				
Laundry Facility and Equipment [AHC, BHC, CAH, HAP, NCC, OBS, OME]	Y	N	N/A	If N (No), Note Changes Needed

Laundry Handling [AHC, BHC, CAH, HAP, NCC, OBS, OME]	Y	N	N/A	If N (No), Note Changes Needed
Is dirty laundry handled in a way to minimize agitation (to avoid contamination of air, surfaces, and people)?				
Is sorting of dirty laundry handled away from patient care areas?				
Are leak-resistant containers used to hold laundry contaminated with blood and other body substances?				
Is the labeling system for dirty laundry clear and easily understood?				
Are laundry chutes, if used, properly designed, maintained, and used?				
Laundry Process [AHC, BHC, CAH, HAP, NCC, OBS, OME]	Y	N	N/A	If N (No), Note Changes Needed
Are hot-water laundry cycles run with detergent at $\geq 160^{\circ}\text{F}$ ($\geq 71^{\circ}\text{C}$) for ≥ 25 minutes?				
Are low-temperature laundry cycles ($< 160^{\circ}$) run with appropriate chemicals at appropriate concentration?				
Are special laundering instructions followed for items requiring sterility in patient care?				
Are manufacturers' recommendations followed when cleaning fabrics with coated or laminated surfaces?				
Is dry cleaning avoided for routine laundering?				
Are any antimicrobial fabrics used and cleaned properly?				



LAUNDRY PRACTICES INFECTION CONTROL ASSESSMENT CHECKLIST



[The Joint Commission Big Book of Checklists](#)

Are damp textiles and fabrics not left overnight in machines?				
Staff [AHC, BHC, CAH, HAP, NCC, OBS]	Y	N	N/A	If N (No), Note Changes Needed
Is laundry staff trained in infection control efforts as they relate to their job tasks?				
Is laundry staff using appropriate PPE?				
Is laundry staff using appropriate hand hygiene methods?				
Is other organization staff aware of laundry procedures as they relate to overall infection control efforts?				

Based on Hygienically Clean Healthcare laundry certification standards, this checklist and guide plot a sequence for a laundry tour highlighting control points in workflow important to ensuring cleanliness of healthcare textiles (HCTs). A tour typically begins in the area where soiled HCTs are received for sorting and finishes in the space where clean items are loaded for delivery. As many as three types of inquiry are suggested upon arrival in the floor space dedicated to each step:

- **SEE:** Obtain visual evidence of equipment, function or documentation
- **INTERVIEW:** Talk with laundry staff about their individual or team performance related to a function
- **ASK:** Get details regarding functions or request documentation; “ask” inquiries often need not take place during the visit itself. Questions should be welcomed and encouraged before, during and after the tour. However, if an interview is warranted at a step and no qualified individual is available to interview, it’s best to ask the tour host about the interview issue(s) and any corresponding “ask” matters on the spot. This is particularly important when drivers may be unavailable to interview.

STEP 1: SORTING

SEE:

- Functional separation on unloading/loading dock/ area
- Functional separation in soil processing
- Sign designating soil processing area
- Sharps container
- Containment and handling of regulated medical waste
- Washload-building
- Proper use of PPE

INTERVIEW:

- Drivers (if available)
- Employees for personal safety awareness
- Employees for universal precaution compliance

ASK:

- How trucks are cleaned
- How soil is contained on the route
- How functional separation takes place on the route
- How washload-building scales are calibrated

STEP 2: WASHING

SEE:

- Walls or fans ensuring physical and functional separation
- Proof of airflow from clean side to soil side
- Location of chemical safety data sheets, container labels
- Cart washing equipment/ system

ASK:

- How washer/extractor loads are timed between machines
- When washer/extractor loading/unloading doors are cleaned
- When wash formula testing occurs
- How carts and slings are cleaned

STEP 3: DRYING/ FINISHING

SEE:

- Lint collection equipment
- Employees sweeping or vacuuming and other janitorial duties
- Quality standards posted
- Tables dedicated to assessing quality
- Containers for items rejected for quality issues

INTERVIEW:

- Personnel enacting quality controls
- Employees about their cleaning practices

ASK:

- When, how lint is removed
- How quality is monitored and recorded

STEP 4: PACKOUT

SEE:

- Staging and wrapping areas
- Cart cleanliness
- Storage shelves
- Your healthcare textile inventory (if customer-owned)
- How inventory levels are monitored

STEP 5: DELIVERY/ ROUTES

SEE:

- Trucks backed into dock (if available)
- Hand hygiene stations near dock

INTERVIEW:

- Drivers (if available)

ASK:

- Whether spill kits are provided on trucks
- Whether drivers wear gloves
- What hand hygiene protocols drivers follow

IN EVERY STEP

SEE:

- Equipment condition
- Equipment safety controls
- Eyewash equipment
- Housekeeping checklists (wall- or door-mounted)
- Employee diligence
- Employee competence

ASK HOW:

- Preventative maintenance is recorded
- Surfaces are cleaned
- Employees are trained to clean

COMPLETING THE TOUR

ASK:

- Any remaining questions
- If items are tested for microbiological content
- How pests are controlled
- How service will be continued in business interruption



Laundry Tour Planner for Healthcare Professionals

Touring a laundry can build your confidence in its capability to deliver clean healthcare textiles (HCTs). Maximizing the benefit of a tour requires viewing and hearing as much evidence as possible from demonstrations that the laundry implements best management practices (BMPs).

A number of Hygienically Clean Healthcare certified laundries have collaborated to develop this guide and accompanying checklist to assist health professionals in identifying:

- What to look for
- Who to interview
- What to ask about

This guide and checklist facilitate efficient laundry tours by highlighting opportunities to witness BMPs critical to proving the laundry’s cleanliness—if a tour takes place when all laundry systems are operating.

Extra Tip: Morning is usually best for tours.

Questions should be welcomed and encouraged before, during and after the tour. Ask the tour host for enough

time to allow for physical inspection of the laundry and discussion afterwards.

Typical Workflow Pattern

*Laundry Operations and Management*¹, a primer published by TRSA, the linen, uniform and facility services industry’s leading association, defines laundry workflow as these consecutive functions:

1. Sorting
2. Washing
3. Drying/Finishing
4. Packout
5. Delivery/Routes

A tour often consists of walking through the laundry in workflow order. The walk starts on the dock or designated area where soiled HCTs are unloaded (first task in sorting), moves onto areas dedicated to subsequent steps, and concludes on the dock or designated area where clean items are loaded onto trucks for delivery. As the tour proceeds, compliance with each function’s hygiene requirements, as well as measures to ensure cleanliness as items move between functions, can be checked.



HLAC Accreditation Standards

2023

Inspection Process Guide

This guide is pertinent information for Laundry Organizations seeking accreditation from the Healthcare Laundry Accreditation Council (HLAC). All the rules and requirements in this guide are effective January 1, 2023.



Healthcare Laundry Accreditation Council

Accreditation Standards
2023 Edition

CHECKLIST

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How can I compare the standards?



Adobe Acrobat Document

Author:
Lynne Schulster et al

Healthcare Laundry Standards: Compare and Contrast Table of Existing Standards

Note: Superscript numbers in **red** boldface type refer to Notes following this table.

General Comparisons					
Author	Hohenstein Institute Germany ¹ (Laboratory Testing)	Textile Rental and Service Association (TRSA)	Healthcare Laundry Accreditation Council (HLAC)	UK Department of Health	Joint Technical Committee TX/16, Laundry Practice
Standard	RAL Quality Certification Mark 992/2 German Certification Association for Professional Textile Services	Standard for Producing Hygienically Clean Reusable Textiles for Use in the Healthcare Industry	Accreditation Standards for Processing Reusable Textiles for Use in Healthcare Facilities	Health Technical Memorandum HTM 01-04 Decontamination of Linen for Health and Social Care	Australian/New Zealand Standard Laundry Practice AS/NZS 4146-2000
Available version for review	2011 (preview document brochure) ²	2016 ³	2016 ⁴	2016 ⁵	2000 (preview document – table of contents) ⁶
Full document available free of charge	No	Yes	Yes	Yes	No
Regulatory document issued by a AHJ (authority having jurisdiction)	No	No	No	Yes	Yes
Status conferred	Certification “Hygienically Clean”	Certification “Hygienically Clean”	Accreditation “Hygienically Clean”	(Pass) ⁷ Refers to Certification as per BS EN 14065	(Pass)
Major sections	includes, but may not be limited to: <ul style="list-style-type: none"> Textile processing Quality requirements for textiles 	<ul style="list-style-type: none"> Documenting laundry Best Management Practices (BMP) Facility inspections 	including, but not limited to: <ul style="list-style-type: none"> Basic Elements Textile quality control procedures, 	including, but not limited to: <ul style="list-style-type: none"> Essential Quality Requirements (EQR): 	including, but may not be limited to: <ul style="list-style-type: none"> General Requirements & Recommendations:

Diverse Benefits from Reusable

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7572274/pdf/main.pdf>

Diverse benefits now occur when decisions are made to select reusable options.

Healthcare products range from ultrafine microfibers to comfort in surgical gowns to complex structured incontinence underpads. When these products are available in reusable or disposable alternatives, the well-structured, peer-reviewed data show substantial environmental savings with reusable. Across five personal protection equipment (PPE) and related health care products (surgical gowns, isolation gowns, surgical drapes, cleanroom coveralls, and incontinence underpads) the reusable choice savings are 27% - 66% savings for carbon footprint (climate change benefit), 23% - 64% energy savings, and 80% - 96% solid waste (landfill) reduction at the facility. Further, a peer-reviewed published report on twenty other products shows in all cases the disposables products create a higher impact on our environment.

An added benefit in decisions to select reusables is these have a lower annual cost, another significant healthcare objective. In one recent PPE study of cleanroom garments, this economic savings was about 47% regardless of facility size or regional location. At the national level in the next decade these economic savings would be about \$1 billion, directly to the cleanroom bottom line. **Finally, a recent study by Sehulster and Overcash on the 50 years healthcare acquired infections (HAI) safety record for reusables (1970-2020), showed the decision to select reusables had an inconsequential impact on HAI rates. In fact, the risk of HAI from laundered reusables versus all other HAI causative factors was 1 in 14,900 compared to 1 in 9,000 chances in your life of being hit by a meteor. For these reasons, the CDC concluded the need to establish a healthcare laundry certification program based on microbiologic testing of cleaned, reusable healthcare textiles (HCT) does not appear to be supported by epidemiologic data.**

The combined environmental improvement, economic savings, and safety record of reusables healthcare textiles continues to grow in documentation. The better understanding of these benefits should now be more transparent and used in decision-making. In the Covid-19 pandemic, the confidence in reusable HCTs based on these results is important as the demand for reusable HCTs is increasing substantially.

URLs for Laundry Standards

- TRSA: <https://hygienicallyclean.org/wp-content>
- Joint Commission: https://info.jcrinc.com/rs/494-MTZ-066/images/Laundry_Checklist31.pdf
- HLAC: <https://hlacnet.org/standards>
- Hohenstein USA:
https://www.helenstein.us/fileadmin/user_upload/Downloads_US/HO/Hohenstein_Hygienically_Clean_Standard_for_Healthcare_Textiles_Laundry_Management.pdf
- AAMI: <https://www.aami.org>



Thank You



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ESOP[®]
ENVIRONMENTAL SERVICES OPTIMIZATION PLAYBOOK