



# Surgical Attire: Guideline Update (2025)






These slides are adapted from the webinar Surgical Attire: Guideline Update 2025 presented on January 31, 2024. To listen to the webinar, visit https://www.aorn.org/events/-in-category/categories/aorn-guideline/surgical-attire

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# Developed and originally presented by Karen deKay, MSN, RN, CNOR, CIC

Karen deKay is a senior perioperative practice specialist at AORN and is certified in perioperative nursing and infection control. She has been the lead author for revision of the AORN Guidelines for Environmental Cleaning, Preoperative Patient Skin Antisepsis, Hand Hygiene, and Surgical Attire. Karen serves as the AORN representative for the Healthcare Infection Control Practices Advisory Committee (HICPAC) and has authored “Clinical Issues” columns in the *AORN Journal.* She has more than 25 years of experience developing education, including on-line modules, and utilizing quality improvement processes to standardize patient care.



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# Outcome

Seventy-five percent of learners will report an increase in or support of their nursing knowledge or skills, or a change in or support of attitude related to surgical attire in the perioperative setting.

# Objectives

Discuss changes to guideline recommendations.
Describe examples of guideline key takeaways in practice.
Discuss implementation strategies for guideline updates.



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# The 10 Sections of the Surgical Attire Guideline



1. Laundering
2. Fabric
3. Long-Sleeved Scrub Apparel
4. Lab Coats
5. Head Coverings
6. Shoes
7. Stethoscopes
8. ID Badges, Access Cards, Personal Items
9. Visitor Attire



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# Glossary Terms

## Noncritical Patient Care Items

*New*

Medical equipment that encounters intact skin but not mucous membranes. Examples include bedpans, blood pressure cuffs, and stethoscopes.



Boulee et al, 2019

## Tightly Woven

*New*

Material that is so dense that it is difficult for microorganism-carrying skin scales to exit or reach air. Synonym: *Low permeable*



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# Glossary Terms

## Scrub Apparel

*New Name & Revised*

Nonsterile garments that can include two-piece pantsuits, scrub dresses, and long-sleeved jackets.



## Surgical Attire

*Revised*

Scrub apparel *and head coverings* worn in the semi-restricted and restricted areas of the perioperative and procedural practice setting.



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# Laundering

- Parameters
- Changing surgical attire
  - Leaving the procedural area NEW
  - End of the day - *Revised*

1.2, 1.6, 1.6.1, 1.6.2, 1.7

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# Home Washing Machine

- What is the temperature of the water?
- What is the length of the cycle?
- Is bleach or a disinfectant added?
  - How much is added (ie, concentration)?
- Any maintenance/quality checks performed?

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# Fun Info: Health Care Laundry

- Annually in the United States, what is the volume of items laundered in health care settings?

- **~ 5 billion pounds**

Sehulster et al, 2004



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# Launder scrub apparel after each daily use at:

- a health care-accredited laundry facility
  - https://hlacnet.org/standards

  ***or***
- the health care organization according to state regulatory requirements
  - state specific

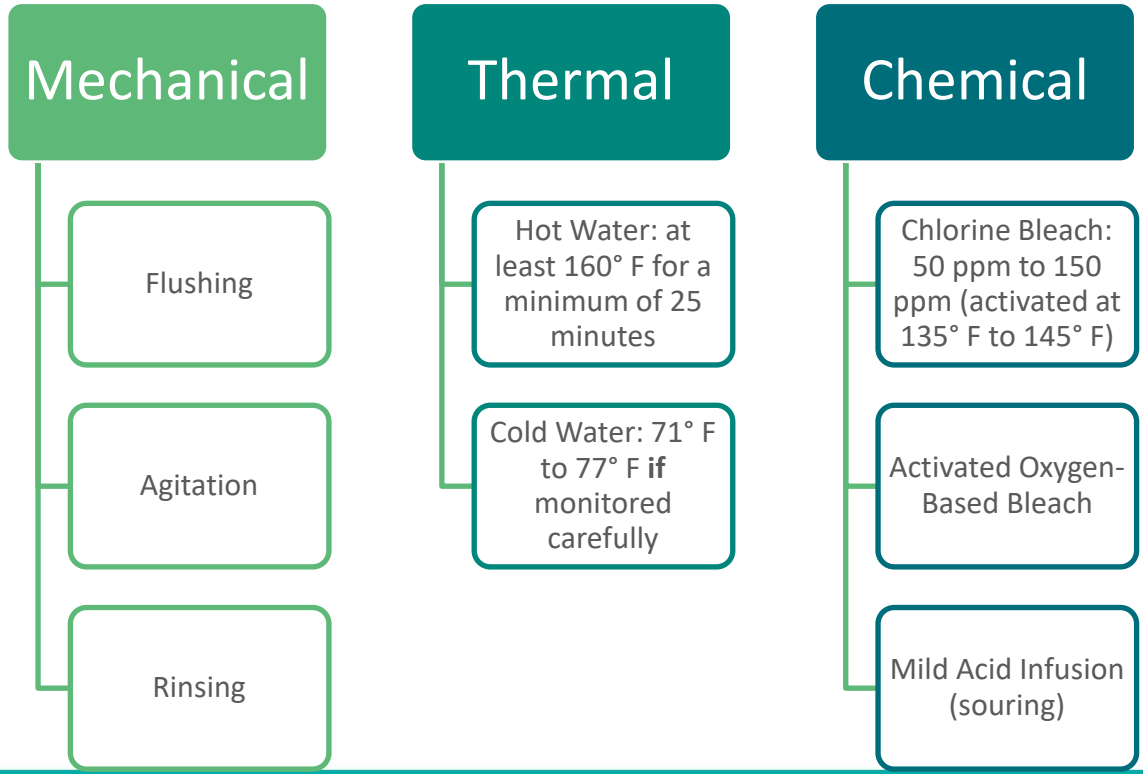
  ***or***
- the health care organization according to Centers for Disease Control and Prevention recommendations for laundering in the absence of state requirements
  - https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html



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# CDC Laundry Process Parameters

https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html

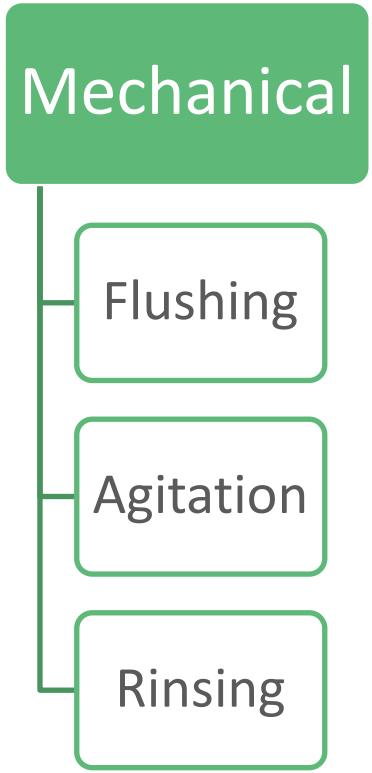



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# CDC Laundry Process Parameters

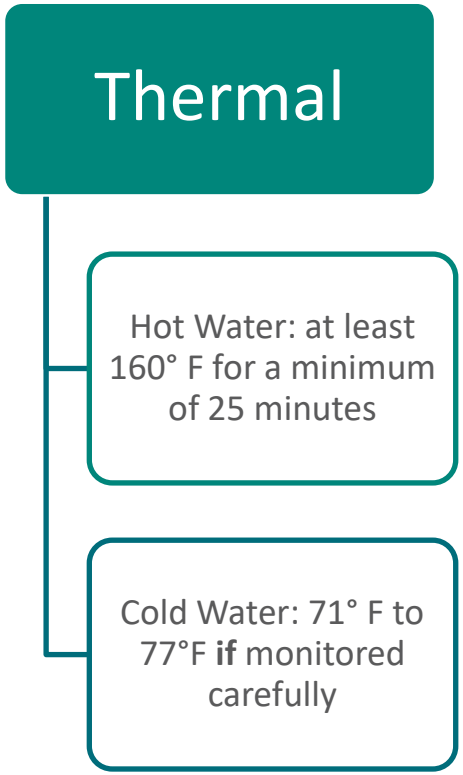



https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html



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# CDC Laundry Process Parameters

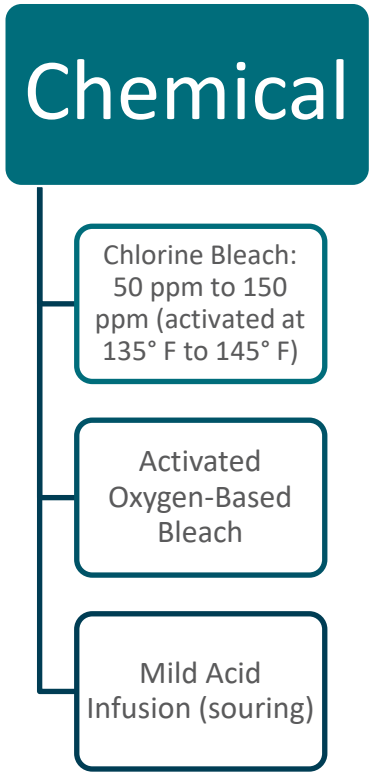



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# CDC Laundry Process Parameters




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# Changing Attire



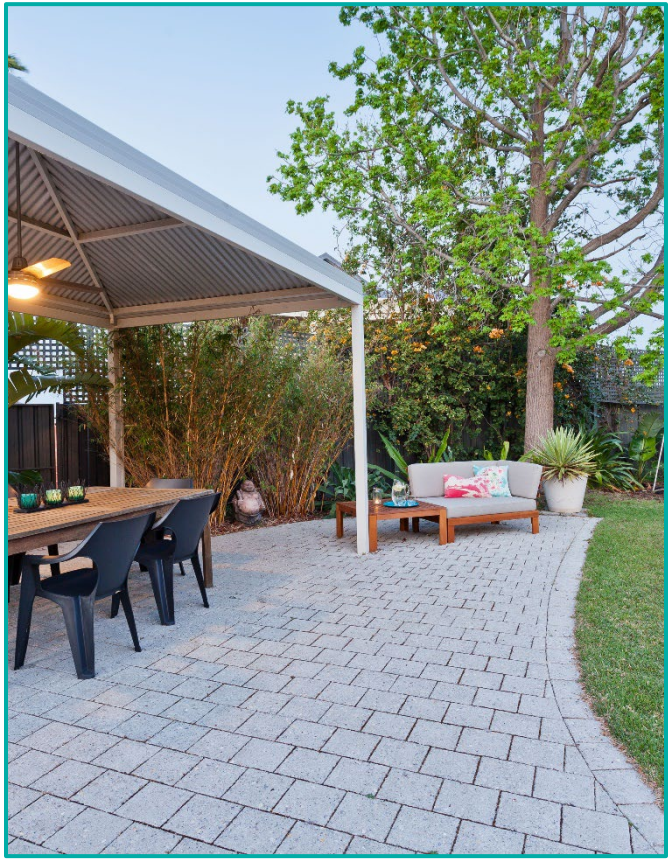


39 vs 3 colony-forming units (CFU)

Ilibman et al, 2020



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# Changing Attire: Recommendations

1.6 No recommendation can be made for changing surgical attire when returning to the OR or procedural area after being in other areas in the building.

1.6.1 An interdisciplinary team should determine the circumstances that require changing of surgical attire when an individual has been in other areas of the building or outside the building. NEW

1.7 Remove scrub apparel before leaving the health care facility at the end of the day. *Revised*



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# Fabric

- Low linting and tightly woven
- Other evaluation criteria NEW

https://www.asahq.org/standards-and-practice-parameters/statement-on-surgical-attire

2.1, 2.4

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# Fun Survey: Scrub Color



What scrub color is perceived by patients as most indicative of competence and kindness?

- **Green**
- **Black**
- **Blue**
- **Navy**

Hriber, CA et al, 2023



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# Lanyards

- Literature NEW
  - Murphy et al
  - Patterson et al

8.2, 8.2.1

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# Lanyard: Recommendations

8.2: An interdisciplinary team should determine if lanyards can be used in the perioperative setting. NEW

- 8.2.1 If lanyards are used, establish and implement a process and schedule for routine disinfection (eg, daily, weekly) *Revised*

Murphy et al, 2020; Patterson et al, 2017



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# Communication Devices

- Studies specific to the OR
- Adjunct technology NEW
- Promoting cleaning and disinfection NEW

8.4, 8.5, 8.5.1, 8.6

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# Fun Fact: Cell Phones and Hands

- How many times do you think the average person touches their phone in a day?
- **200 times**

Cha SS & Seo Bk., 2018; Simmonds & Hayhurst, 2020



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# Cell Phone Growth from 3 Orthopedic ORs

| Gram-Positive Organisms | Gram-Negative Organisms |
|---|---|
| *Staphylococcus aureus* | *Acinetobacter species* |
| Methicillin-resistant *S aureus* | *Enterococcus species* |
| Methicillin-sensitive *S aureus* | *Pseudomonas species* |
| *Streptococcus species* | |



8.4: …perform frequent hand hygiene when handling these devices throughout the workday. *Revised*

Chang et al, 2017; Murgier et al, 2016; Shakir et al, 2015



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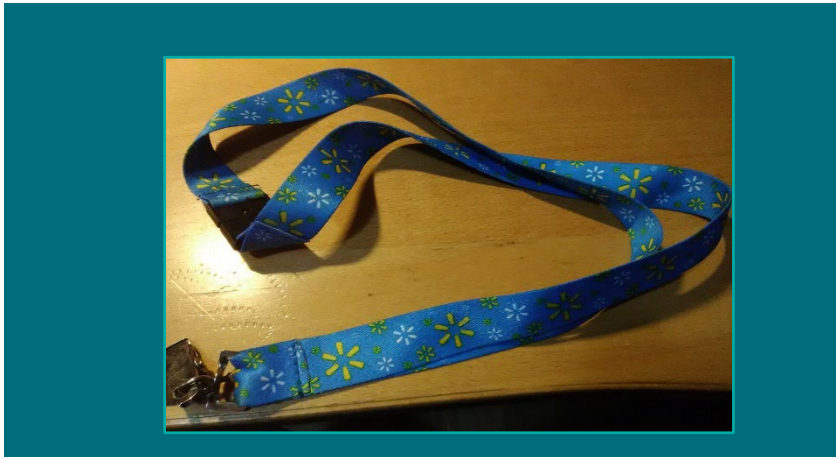
# Adjunct Technology

NEW




## Ultraviolet (UV-C)

(Christie et al; Huffman, Webb, Spina; Kaiki et al, Malhotra et al)



## Steam Disinfector with Dryer

(Millar and Moore)





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# Promoting Cleaning and Disinfection NEW

Convenient standardized processes

Providing resources in convenient locations

Education to include cross-contamination risk





Posting visual reminders with instructions

*May* include real-time feedback

(ATP, cultures)

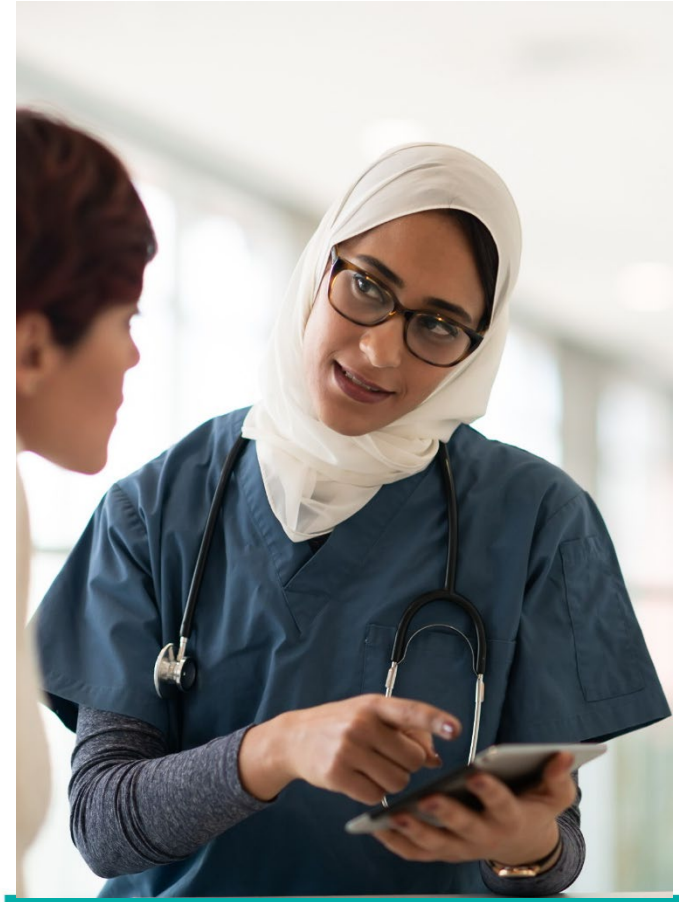


7.2, 7.2.1, 8.5, 8.5.1

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# Religious Head Coverings

- Tightly-woven, low linting
- Without adornments
- Secure fit
- Loose ends tucked in scrub top
- If only cover portion of hair *(eg, kippahs, yarmulkes)*
    - May be worn under another head covering
- Establish laundering frequency and method

5.3.1, 5.3.2, 5.3.3

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