

LET THEM SEE YOUR SPD

USING ENVIRONMENTAL CLEANING TO MAINTAIN A SAFE AND SPARKLING SPD

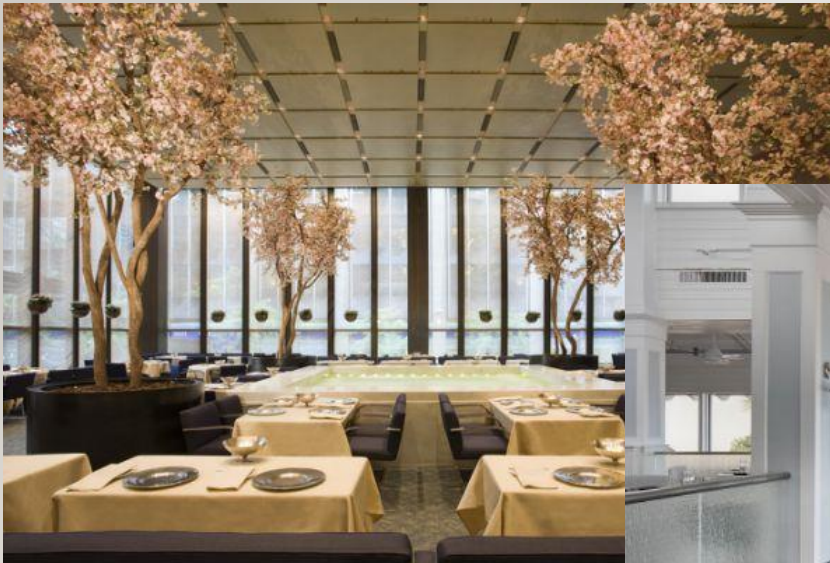
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LEARNING OBJECTIVES

- Understand the importance of environmental cleaning.
- Apply the standards/regulations for environmental cleaning.
- Identify some common personnel safety issues.
- Create checklists for all personnel responsible for the upkeep of SPD.
- Implement some quick, immediate steps for creating a showcase SPD.

BEAUTY....



...IS IT ALWAYS MORE THAN SKIN DEEP?



THE JOB OF SPD

- Central service department: Department within a health care facility that processes, issues, and controls medical supplies, devices, and equipment, both sterile and nonsterile, for some or all patient care areas of the facility. Also known as sterile processing department. ANSI/AAMI ST79 2.13

THE JOB OF SPD

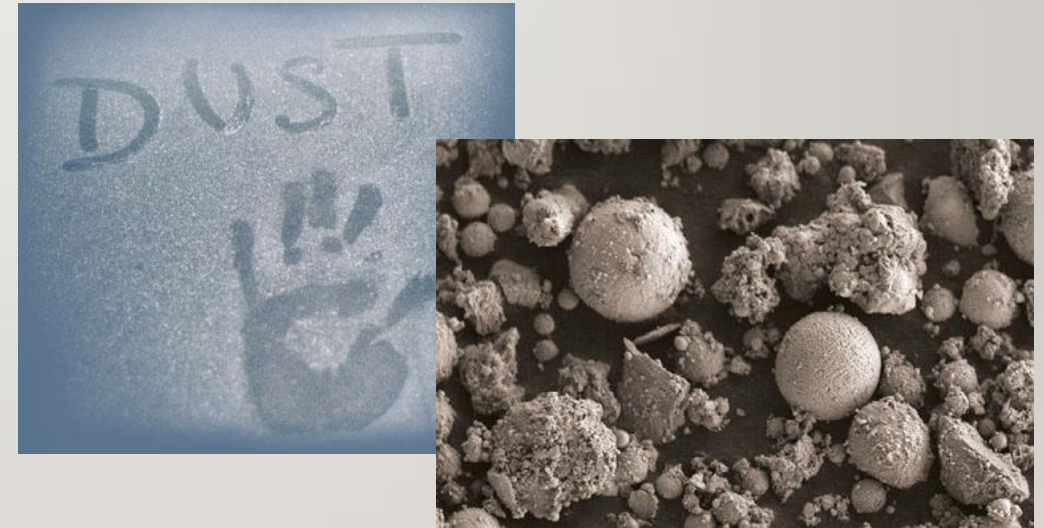
- AAMI outlines basic SPD housekeeping standards in ANSI/AAMI ST79 3.4
- 2014 AORN “Perioperative Standards and Recommended Practices” consider all perioperative areas to be:
 - Pre and Post OP areas
 - Operating suites and procedural rooms
 - Semi-restricted areas
 - **Sterile Processing areas**

THE JOB OF SPD



THE IMPORTANCE OF ENVIRONMENTAL CLEANING

- Highest risk of exposure to bloodborne pathogens and microorganisms are in decontamination. All body fluids are considered potentially infectious.



- Dust contains human skin and hair, fibers from paper and fabric, pollen and different types of fungi and mold as well as possible dust mites.

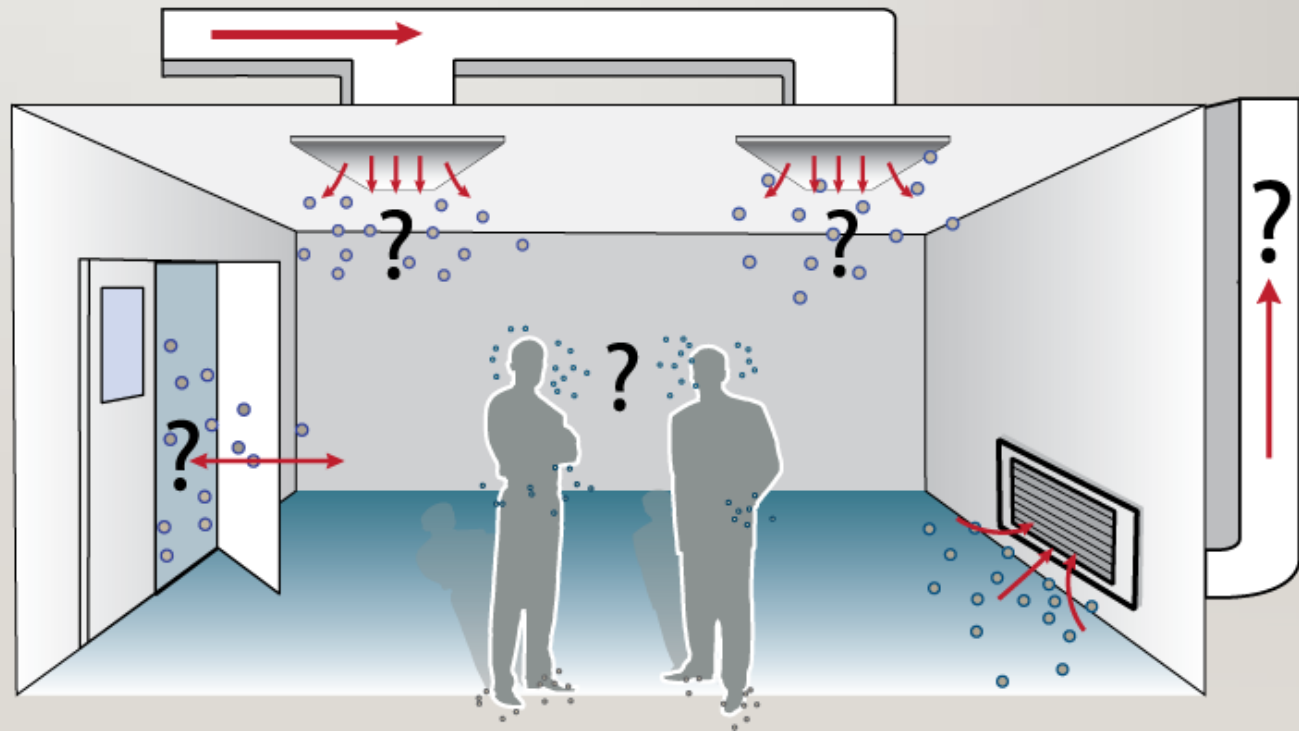
THE IMPORTANCE OF ENVIRONMENTAL CLEANING

- Standing water can harbor pathogens and can also be the origination of fungus.



TRANSMISSION OF MICROORGANISMS

Airborne microbial contamination is likely to be high in the decontamination area because of the type of work done there. AAMI 3.3.7.1



TRANSMISSION OF MICROORGANISMS



Contamination can also be spread by personnel who indiscriminately touch environmental surfaces, other devices, or other personnel with contaminated hands. AAMI 3.3.7.1

WHY THE NEED FOR ENVIRONMENTAL CLEANING

SURVIVAL OF THE STRONGEST

- Methicillin-Resistant *Staphylococcus aureus* (MRSA) – skin or contaminated item to skin (bacteria)
 - 7 months in dust
 - 6 plus months on fabric
- Norovirus – fecal to oral contact (virus)
 - 28 days on hard surfaces
 - 12 days on fabric
 - 2 plus months in still water
- *Candida auris* – still learning about transmission (fungal)
 - 2 plus months on healthcare surfaces



CREATE STANDARDS FOR ENVIRONMENTAL CLEANING

- AORN standards call for a multidisciplinary team to create an environmental cleaning plan for all perioperative areas. Team members should include:
 - Perioperative nursing
 - Environmental services
 - Infection Prevention
 - Sterile processing

ENVIRONMENTAL CLEANING DECISIONS

- Team members for perioperative environmental cleaning standards should make decisions to implement standards for all departments affected for guidelines encompassing:
 - Cleaning tools and equipment
 - Cleaning chemicals
 - Cleaning responsibilities
 - Cleaning frequencies
 - Cleaning procedures

PERSONAL PROTECTIVE EQUIPMENT

- GLOVES protect hands



- FACE SHIELD protect face



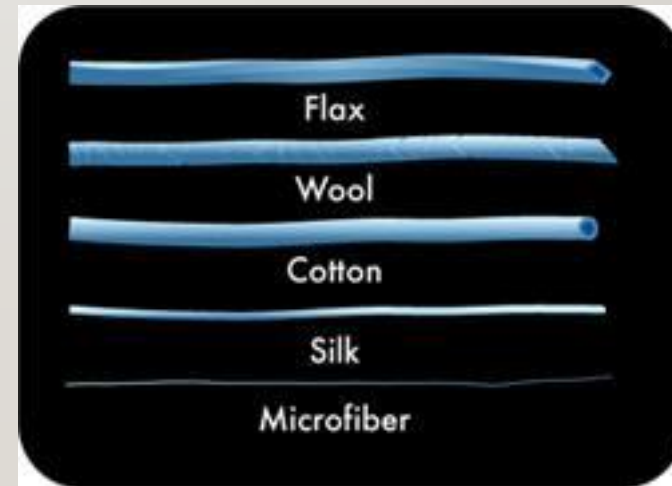
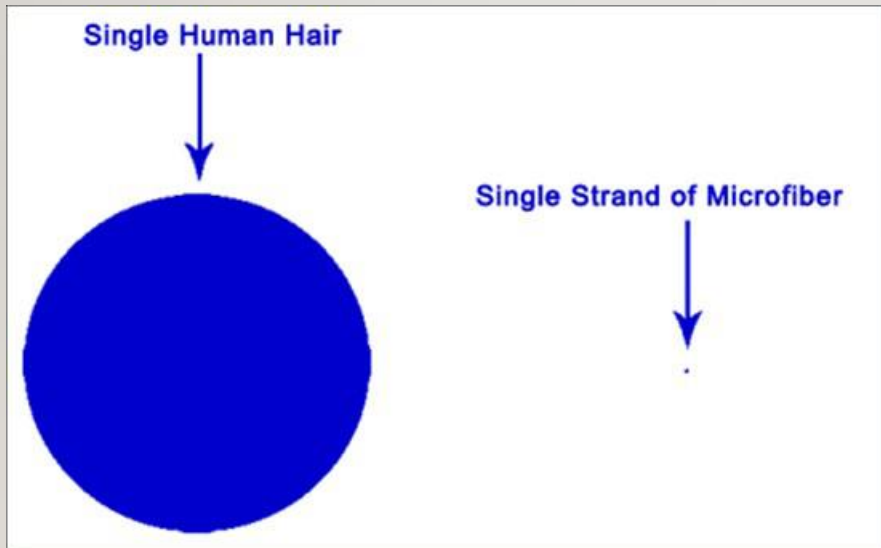
- GOGGLES protect eyes
- MASK protect mouth & nose

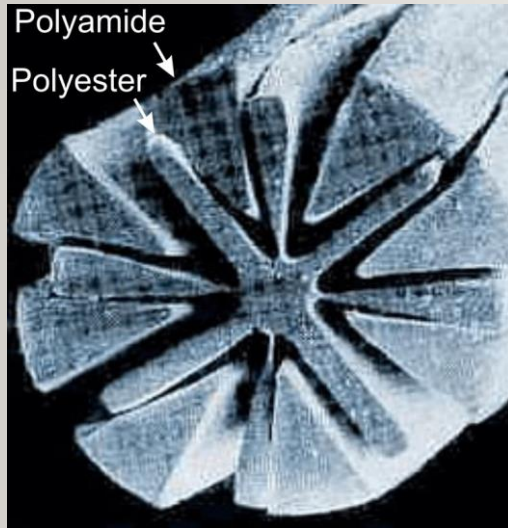


- WASH YOUR HANDS immediately after removing PPE

MICROFIBER CLOTHS – SURFACE CLEANING

- Microfiber: a synthetic material usually made from polyester and polyamides and roughly 1/5th the diameter of a human hair.

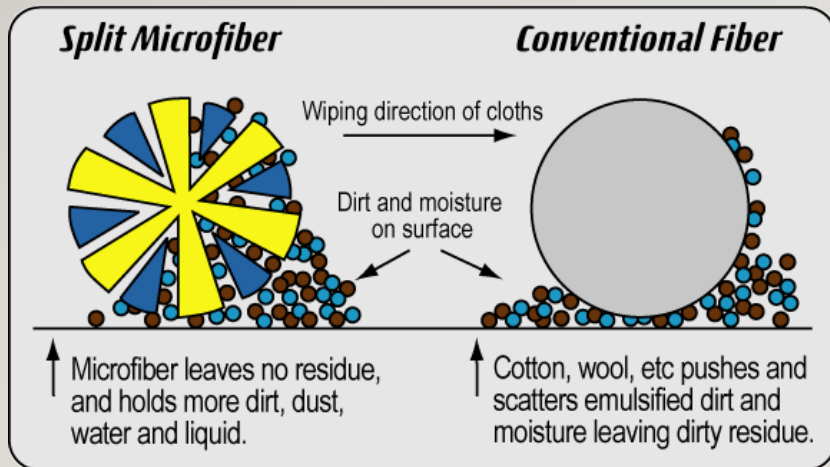




MICROFIBER VS COTTON CLOTHS

- Dust and dirt
 - MICROFIBER traps and holds
 - COTTON pushes around
- Microbes (bacteria, fungi, viruses)
 - MICROFIBER absorbs and dries quickly
 - COTTON doesn't absorb and doesn't dry
- Chemicals
 - MICROFIBER uses
 - COTTON absorbs

Microfiber Cleans Better



SURFACE CLEANING AND DISINFECTION



- Prevent cross contamination by using a microfiber color code system.
- Spray or charging system for chemical application
 - **Spray:** onto cloth not onto surface
 - **Charging system:** do not reintroduce cloth in solution once used

FLOOR CLEANING AND DISINFECTION

- Wet vacuum **or**
- Single-use mop
 - Microfiber pad
 - Frame and handle
 - Delivery system (bucket)
- 2002 University of CA Davis study – microfiber mopping
 - Microfiber cleans better and uses less chemical
 - 99% bacterial reduction compared to 30% with string mop heads.
 - 20% labor savings (8-12 lbs vs 2-4 lbs)



CHEMICALS FOR CLEANING AND DISINFECTING

- OSHA Bloodborne Pathogens; final rule [29 CFR Part 1910.1030]
 - EPA registered hospital disinfectant for decontaminating work surfaces.
- ANSI/AAMI ST79, Annex E

Spaulding & Chemical Disinfectants

- FDA (US Food & Drug Administration) regulated products
 - For high-level disinfectants for critical and semi-critical patient care devices

CHEMICALS FOR CLEANING AND DISINFECTING

- EPA (US Environmental Protection Agency) regulated products
 - FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act of 1947 amended in 1996)
 - EPA-registered hospital disinfectant

AOAC testing

Mycobacterium tuberculosis

Salmonella Choleraesuis
(gram-negative bacteria)

Staphylococcus aureus
(gram-positive bacteria)

Pseudomonas aeruginosa
(nosocomial pathogens)



CHEMICALS FOR CLEANING AND DISINFECTING

- Environmental cleaning team decisions regarding cleaning chemicals should consider:
 - EPA-registered cleaning/disinfection chemistries
 - Mixing of products
 - Targeted microorganisms
 - Dwell times
 - EPA registered products state on their labels, “It is a violation of federal law to use this product in a manner inconsistent with its labeling.”
 - Compatibility with surfaces

WHO'S RESPONSIBLE

- Environmental cleaning is a trained team effort comprised of:
 - EVS – Environmental Services staff
 - Suggested housekeeping surfaces
 - Floors
 - Doors
 - Walls
 - SPD – Sterile Processing staff
 - Suggested medical equipment surfaces
 - Shelving
 - Equipment

BASIC ENVIRONMENTAL CLEANING DEFINITIONS

- Cleaning
 - Removal of visible soils from objects and surfaces
- Disinfecting
 - Process of killing microorganisms on inanimate objects and surfaces
- Terminal cleaning
 - Cleaning and disinfecting all exposed surfaces, including wheels and casters, of all equipment
 - Cleaning and disinfecting the floor with a wet vacuum or single-use mop
 - Moving equipment around the room to clean the floor underneath



BASIC ENVIRONMENTAL CLEANING DEFINITIONS

- Damp dusting
 - Use a clean, low-linting cloth moistened with disinfectant
 - removes dust from horizontal surfaces
- High touch (hot spots)
 - Certain surfaces that are more frequently touched or handled
- Low touch
 - Surfaces that have minimal contact with hands



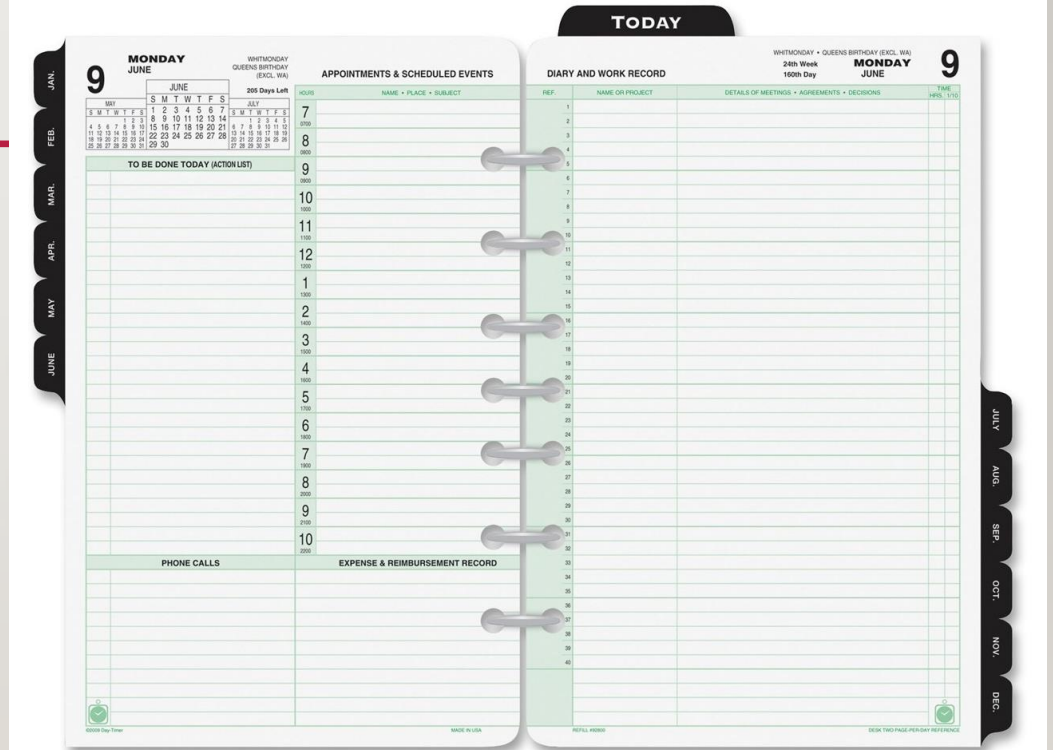
TERMINAL CLEANING

- Both AAMI and AORN recommend that SPD should be terminally cleaned at the same time as the OR and procedure rooms.
- When the areas are being used.
- Should not be performed when the department is actively being used.



SCHEDULED CLEANING

- Both AAMI and AORN recommend scheduled cleaning for predetermined areas and equipment.
- Some surfaces should be cleaned more regularly than others.



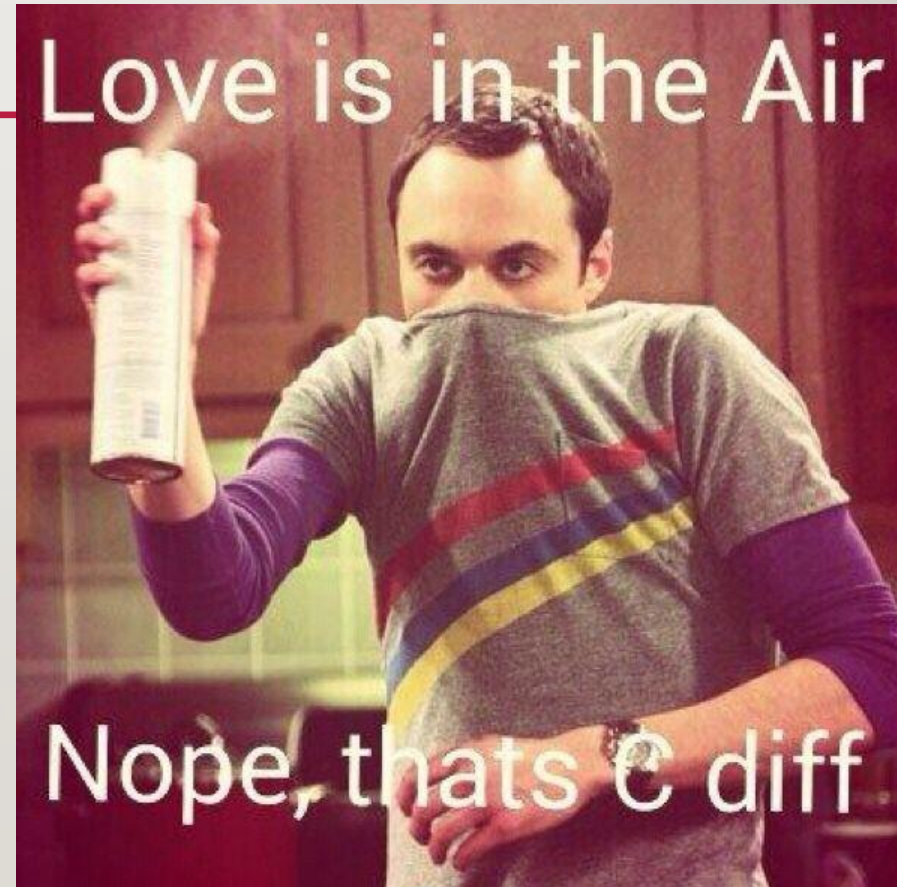
AS NEEDED CLEANING

- Both AAMI and AORN as well as OSHA recommend as needed cleaning for surfaces that have been exposed to pathogens.
- End of shift work area cleaning recommended specifically by OSHA.



SPECIAL SITUATIONS

- Potential exposure to spore forming diseases (eg, *Clostridium difficile*)
- Potential exposure to prion diseases (eg, CJD)
- Environmental contamination



CLEANING HAS AN ORDER

Sterile Storage



Prep & Pack



Decontamination



CLEANING HAS AN ORDER

CLEAN



DIRTIEST



CLEANING HAS AN ORDER

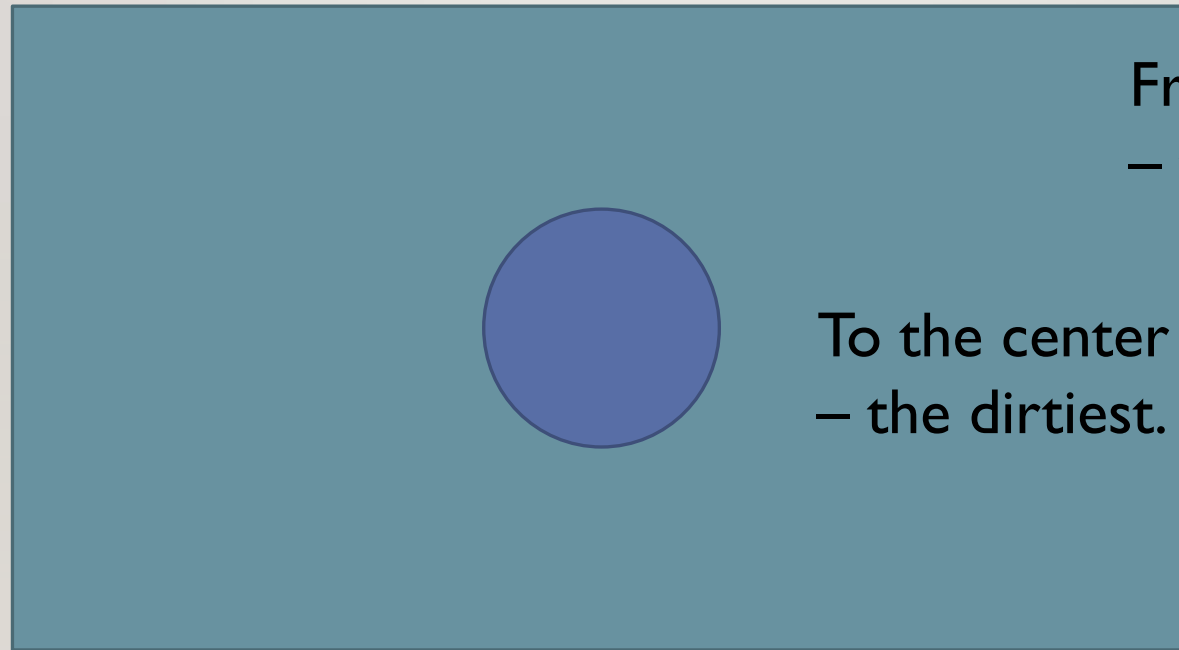
- CLEAN



- DISINFECT



CLEANING HAS AN ORDER



From the outside of the room
– the cleanest

To the center of the room
– the dirtiest.

CLEANING HAS AN ORDER

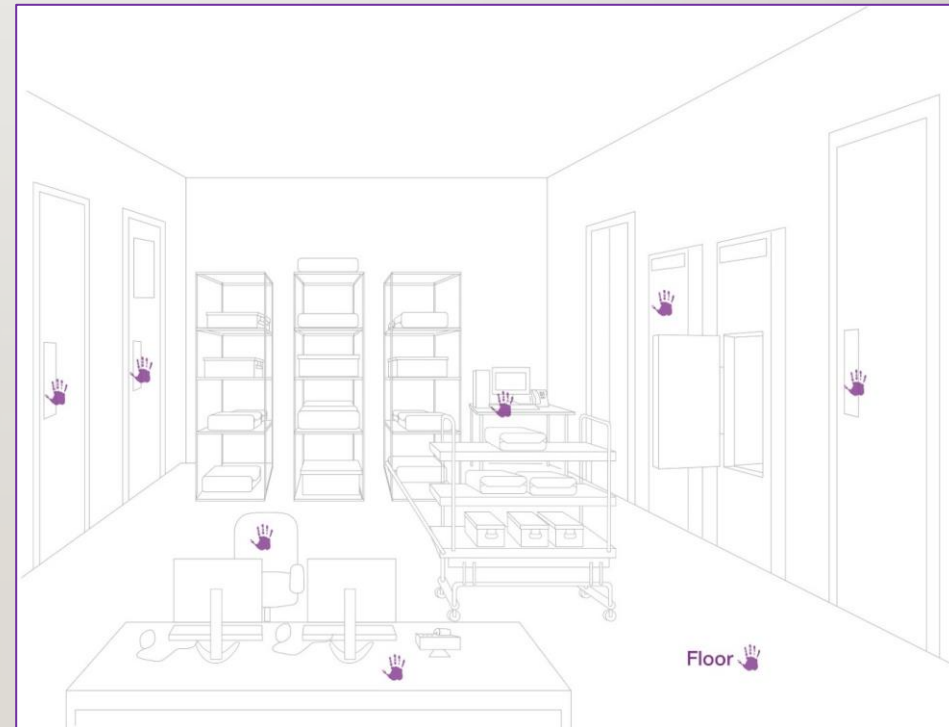
TOP



BOTTOM

STERILE STORAGE AREA CLEANING

- Terminal cleaning (daily)
 - Floors
 - All high and low touch surfaces
- Scheduled cleaning (weekly/monthly)
 - Storage shelves
 - Ventilation ducts
 - Air intake and return ducts
 - Walls
- Every 6 months (at least)
 - Lighting fixtures



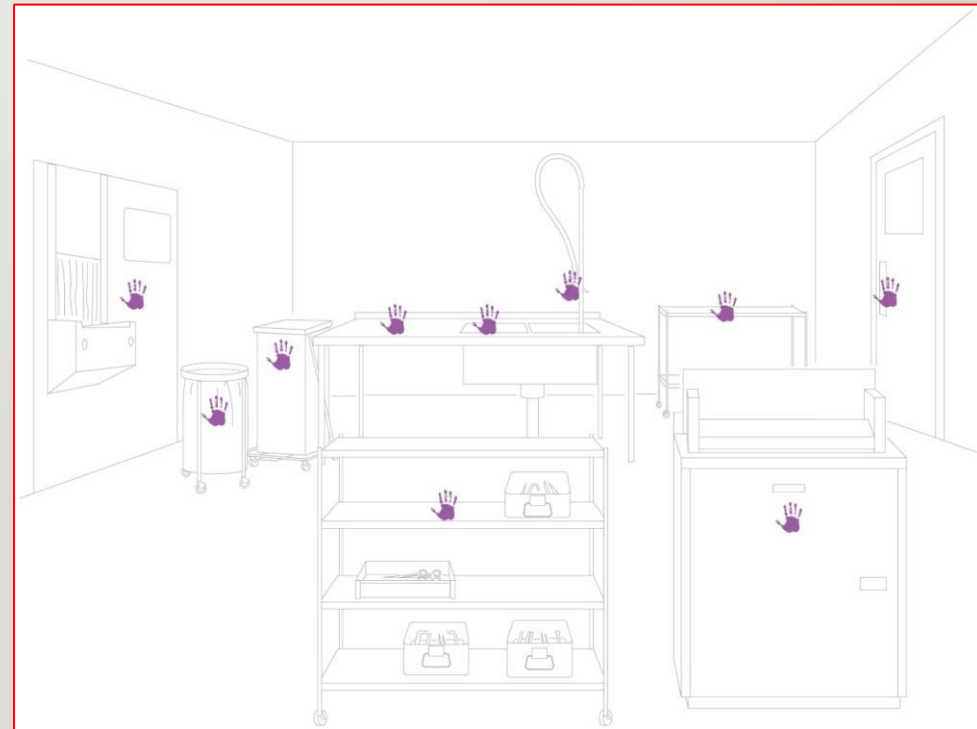
PREP AND PACK AREA CLEANING

- Terminal cleaning (daily)
 - Floors
 - All high and low touch surfaces
- Scheduled cleaning (weekly/monthly)
 - Storage shelves
 - Ventilation ducts
 - Air intake and return ducts
 - Walls
 - Sterilizer service access room
- Every 6 months (at least)
 - Lighting fixtures



DECONTAMINATION AREA CLEANING

- Terminal cleaning (daily)
 - Floors
 - All high and low touch surfaces
- Scheduled cleaning (weekly/monthly)
 - Storage shelves
 - Ventilation ducts
 - Air intake and return ducts
 - Walls
 - Eye wash stations
- Every 6 months (at least)
 - Lighting fixtures



THE FINISHING TOUCHES TO ENVIRONMENTAL CLEANING

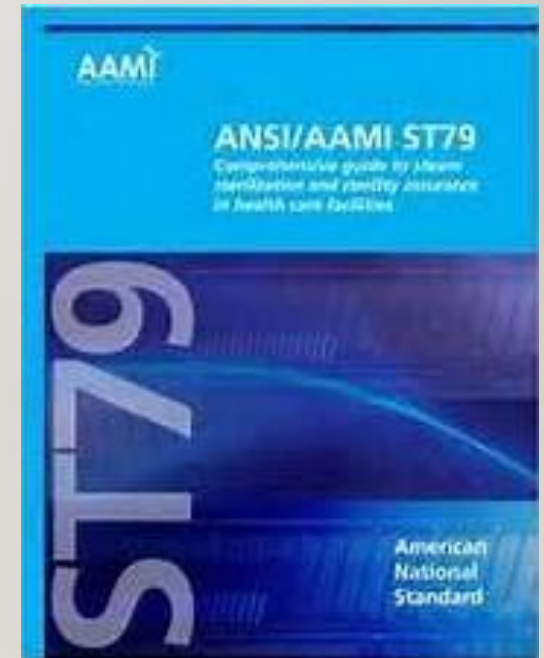


- Trash should be removed from the department:
 - When full
 - At least daily
- Housekeeping areas
 - Maintained in clean/sterile areas.
 - Maintained separately in the decontamination area.
 - Housekeeping areas should have scheduled cleaning.



THE RIGHT START TO ENVIRONMENTAL CLEANING DESIGN AFFECTS OUTCOME

- Floors, walls, ceilings, and doors should be of material that can withstand daily cleaning. AAMI 3.3.6.1 – 3.3.6.3, and 3.3.7.1
- Ventilation, temperature and humidity should comply with standards. AAMI 3.3.6.4, 3.3.6.5, and 3.3.6.6
- Pass thru windows and doors should remain closed. AAMI 3.3.7.1
- Hand hygiene should be readily available. AAMI 3.3.6.8
- Access for donning and removing proper PPE. AAMI 4.5.2
- Storage guidelines in the sterile area. AAMI 8.9.2



THE RIGHT START TO ENVIRONMENTAL CLEANING



- Department design, organization and product streamlining creates
 - Limit of cross contamination
 - Ease of department environmental cleaning
 - Efficiency of environmental cleaning

PAY ATTENTION TO THE DETAILS



TAKE A BREATH!



QUICK FIXES

TEMPERATURE AND HUMIDITY

- Temperature and Humidity maintenance in soiled areas 79, 3.3.6.5

	Temperature Range	Humidity
Decontamination area	60F – 65F (16C - 18C)	30%-60%
Prep and Packaging	68F – 73F (20C – 23C)	35% - 50%
Sterile Storage area	75F (24C)	Should not exceed 70%

- Personnel in these areas should be monitoring and recording temperatures and humidity to maintain correct levels.

Quick Fix Idea

Place digital monitors in each SPD area with a log book and have staff log temperature and humidity at least once a day. Have a contact number in the log book so staff can report incorrect readings.

QUICK FIXES PROPER PPE

- ANSI/AAMI ST79 quotes OSHA blood-borne pathogen for the decontamination area (4.5.2)
 - Utility gloves
 - Liquid resistant covering with sleeves
 - Fluid resistant face mask and eye protection
 - **Hair coverings**
 - “Employees should also remove and discard hair coverings before leaving the decontamination area.”

Quick Fix

Remind staff that hair coverings from decontamination should be removed before leaving the department and should not be worn anywhere else.

QUICK FIXES PROPER PPE

- ANSI/AAMI ST79 quotes OSHA blood-borne pathogen (1910.1030) for the decontamination area (4.5.2)
 - Utility gloves
 - Liquid resistant covering with sleeves
 - Fluid resistant face mask and eye protection
 - Hair coverings
 - **Liquid resistant shoe covers**

Quick Fix

Ensure that personnel in decontamination are wearing shoe covers before entering decontamination and removing and discarding them when leaving the department.



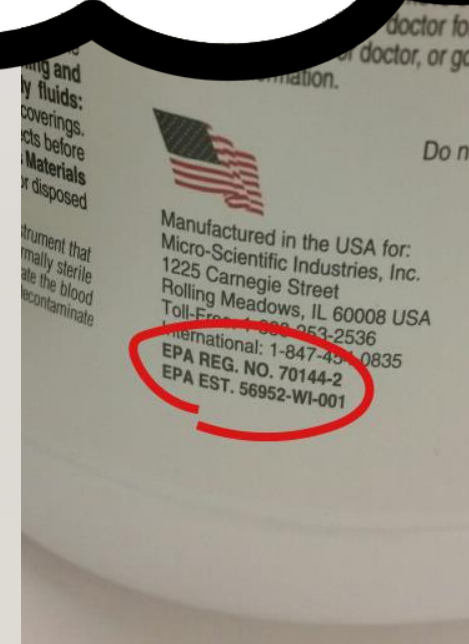
QUICK FIXES

PROPER ENVIRONMENTAL CLEANING

Quick Fix

Ensure that environmental cleaning chemicals used for cleaning all SPD surfaces have EPA registrations by looking on the back panel for an EPA registration number

- OSHA; final rule 29 CFR Part 1910.1030
 - In order to decontaminate soiled surfaces an EPA-registered disinfectant is required.
- AORN Recommended Practices for Environmental Cleaning
 - Cleaning chemicals should be registered and rated as hospital grade rated by the EPA.



QUICK FIXES

CLEANING IMPLEMENT UPI



Quick Fix

Ensure that windows and doors between the decontamination and the clean areas remain closed when not being actively used.

- ANSI/AAMI – 3.3.7.1
 - Pass thru windows and doors should remain closed

BEAUTY....



...SHOULD ALWAYS BE MORE THAN SKIN DEEP!



REFERENCES

- Recommended Practices for Environmental Cleaning, *Perioperative Standards and Recommended Practices*. Denver, CO: AORN, Inc; 2014:255-276.
- ANSI/AAMI ST79, *Comprehensive guide to steam sterilization and sterility assurance in health care facilities: ST79:2010 & A1:2010*
- *The Guideline for Disinfection and Sterilization in Healthcare Facilities – 2008*, CDC adopted
- OSHA (1992), *Occupational safety and health standards: Occupational exposure to bloodborne pathogens* (29 CFR 1910.1030)