Bridging the Gap
Health Care Environmental Services

Study Guide
Terminal Cleaning the Operating Room

Training Education and Developmental Series
INTRODUCTION

Every Operating Room has policies and procedures for environmental cleaning and disinfecting. But how do you know surfaces are truly free of pathogens that could transmit infection?

*IN TODAY’S HEALTHCARE ENVIRONMENT, THE STAKES ARE HIGH.*

Cleaning and disinfecting process can be and must be improved to help eliminate Surgical Site Infections and Healthcare Associated Infections (HAIs), which cost lives and millions of dollars to the healthcare industry.

Cleaning and disinfecting all areas of the Operating Room makes a difference.

Most Operating Rooms have environmental cleaning and disinfecting protocols based on recommendations from the Association of Peri-Operative Room Nurses (AORN), the Centers for Disease Control and Prevention (CDC), Association for the Healthcare Environment (AHE), as well as, other state and Federal Regulatory agencies.

A high-quality surface cleaning program for the OR requires a joint effort by the OR leadership, infection preventionist, and environmental services.

This goal of this Module is to train and educate the Environmental Service Technician on the importance of the best practices of cleaning and disinfecting the Operating Room.
OVERVIEW

In reviewing the Operating Room’s environmental cleaning and disinfecting protocol, some principles to keep in mind are:

1. High-touch surfaces are critical in infection transmission.
2. How thoroughly the cleaning and disinfecting process is performed is at least as important as what cleaning agent is used.

Cleaning and disinfecting using an Environmental Protection Agency (EPA)-registered disinfectant or sporicidal cleaner disinfectant to remove visible dust, dirt, and debris from surfaces and allow the disinfectant to kill the microbes is a mandatory process.

One can clean without disinfecting, but one cannot disinfect without cleaning!

DEDICATED SUPPLIES

It is recommended that carts, cleaning tools, vacuums and floor machines be dedicated to the OR and Sterile Corridors.

Dedicated equipment can assist in preventing transmission of microorganisms, particularly from wheels of floor machines used in other areas.
GUIDELINES

Guidelines recommend Operating Rooms be cleaned at three distinct times and per facility policy.

Before the first case of the day

Before supplies are brought into the operating room for the first case of the day, the following duties should be completed:

Remove unnecessary tables and equipment from the room and arrange remaining items away from the traffic pattern. Damp dust (with a facility-approved agent) the overhead operating lights, furniture, and all flat surfaces, and damp dust the tops and rims of the sterilizer and the countertops in the sub sterile room.

Use caution and speak with the OR charge nurse if surgical equipment trays have already been laid out for the first case of the day.

Between cases

After the patient has exited the room, the following areas are considered contaminated: all furniture, OR equipment and the floor immediately are surrounding the focus area or patient area.

Decontaminate as follows: Wear clean gloves during the cleanup process. For furniture, wash horizontal surfaces of all tables and equipment with a disinfectant solution and lint free wipes.

Operating table mattress pads must be washed also. Clean the casters of mobile furniture by pushing through the disinfectant solution.

For overhead lighting, wash light reflectors with the manufacturer-recommended disinfectant solution. Clean all areas where gross debris is evident. Place all disposable masks, tubing, and circuits in the trash.

Terminal Clean

Terminal clean after the last case of the day as per facility policy.

Consult facility standard operating procedures to determine the objects that must be cleaned and disinfecting between OR cases.
ENVIRONMENTAL SERVICES CART SET UP

Properly stocked carts will prevent unnecessary trips to the supply closet.

1. Goggles or safety glasses
2. Step stool (stored in or on the cart)
3. Color-coded microfiber cleaning cloth system or disposable wipes
4. Color-coded bucket system if diluted solutions are applied from a bucket rather than premixed
5. Pour bottles or wiper dispensers
6. Nylon toy broom/lobby dust pan (for larger debris)
7. Microfiber flat mop system (solution stores in the handle, in a cartridge or backpack) or a microfiber bucket mop system
8. Microfiber high dusting tool and replacement pads
9. Wet floor sign
10. Toilet bowl mop and caddy (johnny mop)
11. Putty knife
12. Quality CHECKLIST and pen

CHEMICALS

1. EPA-registered, hospital-grade disinfectant (quat, sodium hypochlorite, hydrogen peroxide and acetic acid, tuberculocidal)
2. Neutral cleaner or general purpose detergent solution
3. Ammonia-free glass cleaner

CONSUMABLES

1. Hand soap
2. Large and small trash liners for regular and red bag waste
3. Disposable non-latex gloves (on the cart)
4. Disposable masks (on the cart)
5. Alcohol-based hand sanitizer
Always review the Material Safety Data Sheet (MSDS or SDS) and/or labels when selecting chemicals for the cleaning cart.

Current research findings suggest that cotton rags reduce the effectiveness of quaternary ammonium compounds.

Use of color-coded microfiber cloths or wipes is recommended.

SAFETY

Always think about your personal safety first. You should always wear healthcare approved Personal Protective Equipment (PPE).

You should always start your day with appropriate hand hygiene. This practice has long been recognized as the most important way to reduce the transmission of pathogens in healthcare settings.

1. Standard precaution applies.
2. Be alert for sharps and sharp objects.
3. Wear the proper personal protective equipment (PPE): Scrubs or scrub suit, shoe covers, surgical cap, latex-free disposable gloves, mask or face shield, as dictated by facility policy.
4. Always display wet floor or caution signs when cleaning floors or vacuuming.
5. Practice proper lifting techniques and request assistance when objects are too heavy.
6. Use chemicals as directed by the manufacturer’s label.
7. Do not mix or combine chemicals.
8. For environmental and worker safety, the preference is for chemicals to be applied using pour spouts, not spray bottles.
9. If using a cleaning cloth and bucket system, never re-immersing cloths into the bucket. Instead, change cloths.
10. If using pop-up disposable wipes:

   Use properly by changing wipes frequently to ensure proper application.

   Be sure they are dispersing sufficient amount of disinfectant for the appropriate dwell time.

   If a bucket system is used with facility choice disinfectant, be sure wipes are properly saturated (follow directions on the label) and close properly between use and when storing to prevent wipers from drying out.

11. Assure functionality of electrical equipment and scan for electrical cord damage before using or cleaning.
Each Operating Room in the facility, whether or not it was used that day, should be terminally cleaned every day. In fact, AORN’s Recommended Practices for Environmental Cleaning in the Surgical Practice Setting states, “surgical procedure rooms and scrub/utility areas should be terminally cleaned daily”.

1. Follow facility protocol for hand hygiene and use of alcohol-based hand sanitizers.
2. Perform hand hygiene and don PPE.
3. Always check the fit of PPE before entering.
4. The cleaning checklist should include specific intermediate-level disinfectants such as EPA-registered, hospital-grade disinfectant labeled as a tuberculocide. Be sure to follow your facility’s protocol.
5. If facility/IC policy states that ES technicians are responsible for blood pressure cuffs etc., be sure to follow manufacturer instructions.
6. Always enter the room slowly.
7. Leave the ES cart in the hall near the door, but be sure not to obstruct passage. Carry supplies and equipment into the room as needed.
8. As with other cleaning procedures, work methodically in an organized pattern through the room, starting from the ceiling down.
9. Items that are ES’s responsibility to clean will be pre-determined by facility policy.
10. Frequently change to a fresh cleaning cloth or saturated wipe when needed, and never re-dip cloths or re-use.
11. The cleaning of transport vehicles may fall under the responsibility of Environmental Services – if in doubt, check with the ES supervisor or the OR charge nurse.

The scrub room, halls and utility room are part of the sterile operating room area, and should be included in all cleaning and disinfecting procedures.
CLEANING PROCEDURES

1. **D**on appropriate PPE before beginning and check for proper fit.

2. **W**ipe sink shelves and surrounding surfaces with a clean cloth and cleaner disinfectant. Thoroughly clean the scrub sink area, including the counter, faucet and handles, sink basin, under the sink, and all pipes where condensation can harbor germs. Clean the spout of the faucet by putting the cloth in the opening and wipe. Be sure to lift any floor mats when cleaning these areas and clean mats as well.

3. **P**ay special attention to corners, the soap dispenser, and rim of the sink drain.

4. **C**hange gloves, perform hand hygiene and enter the OR suite to be cleaned, closing the door behind.

5. **R**emoval of instruments, basins, trays, and sharps, such as needles, is the responsibility of the surgical staff. Be aware of overlooked items. Change out sharps containers if this is an EVS responsibility at your facility.

6. **S**urvey the area for waste involving blood or blood-soaked linens. The OR staff should have removed this waste prior to cleaning. However, smaller items may be accidentally left behind. If so, place in the appropriate bio-hazardous container. If large amounts are present, contact the supervisor or address in accordance with facility policy.

REMOVE TRASH AND DEBRIS

7. **P**ick up loose trash.

8. **R**emove trash.

   a. Leave plastic trash can liner in container, close, twist and tie knot in the top of bag.

   b. Use caution and look for protruding objects in the waste bag or container. Never reach into or push on the bag to compress the trash.

   c. Lift the liner carefully and place the bag of trash into the container on the cart or take it to the waste pick-up point. Never carry a bag of trash against the body.

   d. Wipe all surfaces of the waste container with cleaning solution and allow to air dry. Re-line the container with the appropriate liner prior to mopping the floor.
CLEANING PROCEDURES

REMOVE SOILED LINEN FROM OPERATING ROOM

9. All linen is considered contaminated. Remove all soiled linen including gowns, towels, and washcloths. Handle soiled linen carefully, being alert for sharps, or other objects. Do not carry or hold linens near the body.

   a. Roll the linen into a bundle for easy handling. Avoid excessive handling or shaking of the linen.

   b. Carry the linen away from the body and place it in the color-coded, labeled, leak proof, tear-resistant containers or bags.

   c. Used disposable drapes, gloves, gowns, and PPE that do not contain blood or body matter are not necessarily infectious waste. If you are unclear about the nature of the waste, ask your supervisor.

10. Any area visibly soiled with small amounts of blood, tissue, body fluids or other potentially infectious material should be spot cleaned with a cleaner disinfectant and allowed to air dry.

11. Use a damp high dusting tool with cleaner disinfectant solution, and a ladder, as necessary, to clean fixed and ceiling-mounted equipment, as well as, surgical lights and external tracks.

12. Perform other high dusting with a clean damp microfiber high duster with cleaner disinfectant, and be sure to check high wall vents using a stool if necessary.

CLEAN AND DISINFECT OVERHEAD LIGHTS

13. Move the lights down from over the operating table and wipe with cleaner disinfectant, wiping all areas of the top of the light including the extender arms.

14. Wipe light reflectors where organic debris and splatters are common.
CLEANING PROCEDURES

CLEAN WALLS AND LEDGES

15. Wipe walls, ledges and other surface areas such as cabinet and closet doors and handles with a cleaner disinfectant. Overall, cleaning procedures such as wall and ceiling washing should be done on a defined, regular basis.

16. Clean air intake grills, ducts, and filter covers as they must be kept free of lint and dust.

CLEAN AND DISINFECT OPERATING ROOM FURNISHING

17. Clean and disinfect all furniture and equipment, wiping down stands, foot pedals and cords, light switches, push plates, counters, horizontal surfaces, fixtures, stools and casters. Use a fresh microfiber cloth or saturated wipe as necessary. 

   Carefully move any counter top blanket warmers and wipe behind them.

CLEAN AND DISINFECT OPERATING ROOM TABLE

18. Unlock the OR table and completely break down all pads and straps so all surfaces can be cleaned with a cleaner disinfectant.

19. Wipe the joints, table attachments, frame, legs, and rails.

20. Turn down the mattress and wipe the table bed frame and back of the mattress, working from the top, and repeat at the bottom.

21. Wipe sides of the mattress and change wipe or cloth as needed. Be sure to also wipe both sides of coated pillows and allow all elements to air dry.
CLEANING PROCEDURES

22. **Next**, clean the operating room floor. Start by clearing half of the operating room of all furnishings.

   a. **Since** all these items are mounted on casters, the job of moving things can be done in minutes.

   b. **Just** remember the original placement of all the items that were moved. (Draw a map of the room of how it is set up so that putting the items back is easily done).

   c. **All** furnishings have a "start-point," and operating furnishings must be returned to this point.

   d. **Dip** the high absorbent microfiber flat pad into the pedal ring bucket filled with germicidal solution, and lightly wring out the excess solution. Then go to the far corner of the floor and begin mopping the floor.

   e. **Use** a figure eight pattern when mopping a floor. This ensures better coverage of the mopping solution.

   f. **Using** a low speed scrub machine to clean the floor.

   g. **Also** you can use an automatic scrubber to perform the entire process. After covering the entire area with the solution, let the solution dwell, per label directions. (In most cases 10 minutes). This will ensure that the cleaning chemical will have time to kill the germs present on the floor.

   h. **These** machines save time and eliminate the possibility of recontamination.

   i. **Using** a regular microfiber flat pad mop around furniture legs if necessary to clean the entire floor.

   J. **Use** the wet-vac wand to pick up all of the solution on the floor, moving the wand forward to the wall, and then pulling back to remove the solution from the floor.

   K. **When** finished with one side of the floor, move all operating room furnishings back to the cleaned area of the floor to clean the other half of the floor.
CLEANING PROCEDURES

ARRANGE FURNISHINGS

23. Next, arrange the operating room furnishings. Again, put operating room equipment back in their "start positions."

24. Next, put a clean sheet on the operating room table and then place a second sheet over the center of the table.

Put a clear liner in the trash stand, along with a second bag to ensure a double thickness of plastic bags in each stand.

Do the same with the red liner in the trash stand, and again, place a second liner in the first to ensure the double bagging of all infectious waste.

INSPECT FOR CLEANING ERRORS

25. Finally, it’s time to inspect for cleaning errors. Always take the time to look around the operating room just cleaned to make sure nothing was missed. Look at the overhead lights, the walls and everything else. If something is seen that still needs to be cleaned, then clean it before leaving.

REMOVE PPE’s and PERFORM HAND HYGIENE

26. Remove PPE after leaving the OR suite. Avoid touching the outside of these items as infectious organisms may have settled there.

27. Carefully pull PPE off by grabbing less exposed areas, and dispose of properly.

28. Immediately perform hand hygiene.

29. Don new gloves and with a clean cloth or wipe, wipe mop handles and other equipment, and return to the cart.

30. Complete quality checklist and turn in to the supervisor before the end of the shift.
This Study Guide, Cleaning and Disinfecting the Operating Room, both between Case Cleans and Terminal Cleaning, is a process that is informed and guided by established and evidence-based research and science.