PRODUCT SELECTION AND USE

• Select disinfectants for use in the perioperative setting based on the following factors:
  - Environmental Protection Agency (EPA) registration and hospital-grade rating
  - targeted organisms
  - contact times
  - manufacturers’ instructions for use (IFU)
  - compatibility with surfaces, cleaning materials, and equipment
  - patient population
  - cost
  - safety
  - effect on the environment
• Do not use high-level disinfectants or liquid chemical sterilants to clean and disinfect environmental surfaces or noncritical devices.
• Do not use alcohol to disinfect large environmental surfaces (eg, tables, OR bed).
• Do not use disinfectants (eg, phenolics) to clean infant bassinets or incubators while these items are occupied. If disinfectants are used to terminally clean infant bassinets or incubators, prepare solutions in the correct concentrations per the manufacturer’s IFU and rinse treated surfaces with water.
• Prepare, handle, use, store, and dispose of cleaning chemicals in accordance with manufacturers’ IFU and local, state, and federal regulations.
• If the cleaning chemical is removed from the original container, immediately label the secondary container with the chemical name, concentration, and expiration date.
• Make the safety data sheets available for each cleaning chemical.
• Conduct an annual chemical-hazard risk assessment of all cleaning chemicals in use.
• Remove visible soil from a surface before applying a disinfectant.
• Do not use a spray bottle to apply disinfectants; use a cloth or pour disinfectants onto environmental surfaces in a manner that prevents splashing.
• Use low-linting cleaning materials (eg, mop heads, cloths).
• Do not use a broom with bristles to sweep the floor in the semi-restricted or restricted areas.
• Dedicate cleaning materials, tools, and equipment for use only in restricted and semi-restricted areas.
• Before storage and reuse, disassemble cleaning equipment according to the manufacturers’ IFU, then clean, disinfect with an EPA-registered disinfectant, and dry the equipment.

A standardized product selection process assists in the selection of functional and reliable products that are safe, cost-effective, and environmentally preferable and that promote quality care, as well as decreases duplication or rapid obsolescence. Effective cleaning and disinfection is accomplished when the correct tools and equipment are paired with the correct chemicals, and are used according to the manufacturer’s IFU.
CLEANING PROCEDURES

- Use standard precautions when cleaning to prevent contact with blood, other body fluids, or other potentially infectious materials.
- Identify high-touch objects and surfaces to be cleaned and disinfected.
- Determine the frequency and extent of cleaning required when areas are not occupied (eg, unused rooms).
- Perform cleaning activities in a methodical pattern.
- When cleaning with the same cleaning material (eg, cloth, wipe, mop head), progress from clean to dirty and top to bottom, including when damp dusting.
- Do not return cleaning materials to the cleaning solution container.
- Change reusable cleaning materials after each use. Discard disposable cleaning materials after each use according to the manufacturer’s IFU.
- Clean and disinfect items that contact the floor per the manufacturer’s IFU.
- Mop floors in semi-restricted and restricted areas with a damp or wet mop. Do not dust the floor with a dry mop.
- Mop from the cleanest to the dirtiest areas of the floor.
- After each patient use, clean and disinfect reusable, noncritical, nonporous surfaces such as mattress covers, pneumatic tourniquets, blood pressure cuffs, and other patient equipment according to the manufacturer’s IFU.
- Discard single-use items after each patient use.
- Apply a protective barrier covering to noncritical equipment surfaces if the surface cannot withstand disinfection or is difficult to clean (eg, computer keyboards, foot pedals, touchscreen computer monitors). Remove or clean and disinfect the cover after use per the manufacturer’s IFU.
- Clean and disinfect equipment that is stored outside the surgical suite before bringing it into the semi-restricted area.
- Remove and replace damaged or worn mattress coverings and padded positioning devices.

Cleaning an area in a methodical pattern establishes a routine for cleaning so that items are not missed during the cleaning process. Even in the best scenario, the floor is essentially contaminated as soon as it is cleaned because of new contaminants introduced by air currents or traffic. Nonintact surfaces may become reservoirs for microorganisms and may harbor pathogens.

BETWEEN-PATIENT CLEANING

- Damp dust all horizontal surfaces (eg, furniture, surgical lights, booms, equipment) with a clean, low-linting cloth moistened with a disinfectant before the first scheduled surgical or other invasive procedure of the day.
- Damp dust before case carts, supplies, and equipment are brought into the room.
- Clean and disinfect ORs after each patient procedure.
- Do not begin environmental cleaning, including trash and contaminated laundry removal, until the patient has left the OR or procedure room.
- Remove trash and used linen from the room.
- Clean and disinfect all items used during patient care:
  - anesthesia carts, including the top and drawer handles
  - anesthesia equipment (eg, IV poles, IV pumps)
  - anesthesia machines, including dials, knobs, and valves
  - patient monitors, including cables
  - OR beds
  - reusable bed attachments (eg, arm boards, stirrups, head rests)
- positioning devices
- patient transfer devices (eg, roll boards)
- overhead procedure lights
- tables and Mayo stands
- mobile and fixed equipment

- Clean and disinfect the floor with a mop after each surgical or invasive procedure when the floor is visibly or potentially soiled by blood or other body fluids (eg, splash, splatter, a dropped item).

- Spot clean and disinfect the walls after each surgical or invasive procedure when the walls are visibly soiled.

Dust is known to contain human skin and hair, fabric fibers, pollens, mold, fungi, insect parts, glove powder, and paper fibers, among other components. In settings with dry conditions, gram-positive cocci (eg, coagulase-negative Staphylococcus species) found in dust may persist; in settings with surfaces that are moist and soiled, gram-negative bacilli may persist.

TERMINAL CLEANING

- Terminally clean operating and procedure rooms each day the rooms are used.

- Clean and disinfect the exposed surfaces, including wheels and casters, of all items:
  - anesthesia carts, including the top and drawer handles
  - anesthesia equipment
  - anesthesia machines, including dials, knobs, and valves
  - patient monitors, including cables
  - OR beds
  - reusable table straps
  - OR bed attachments
  - storage cabinets, supply carts, and furniture
  - light switches
  - door handles and push plates
  - telephones and mobile communication devices
  - computer accessories (eg, keyboard, mouse, touch screen)
  - chairs, stools, and step stools
  - trash and linen receptacles

- Clean and disinfect the entire floor, including areas under the OR bed and mobile equipment, using either a wet vacuum or mop.

Terminal cleaning is thorough environmental cleaning performed at the end of each day the room or area is used. It is not necessary to perform terminal cleaning or close the OR after a contaminated or dirty/infected procedure (ie, Class III, Class IV). Enhanced environmental cleaning should be performed if the patient is infected with a multidrug-resistant organism (MDRO).

PREOPERATIVE AND POSTOPERATIVE AREAS

- Clean preoperative and postoperative areas after each patient has left the area.

- Clean and disinfect items that are used during patient care, including:
  - patient monitors
  - infusion pumps and IV poles
  - patient beds and stretchers
  - over-bed tables
  - televisions remote controls
  - call lights

- Clean and disinfect mobile and fixed equipment used during patient care.

- Clean and disinfect the floor with a mop when the floor is visibly soiled or potentially soiled by blood or other body fluids.

- Spot clean and disinfect the walls when the walls are visibly soiled.

- Terminally clean the preoperative and postoperative patient care areas each day the areas are used.
• Clean and disinfect the exposed surfaces, including wheels and casters, of all items in the area:
  - patient monitors
  - patient beds or stretchers
  - over-bed tables
  - television remote controls
  - call lights
  - mobile and fixed equipment
  - storage cabinets and supply carts
  - furniture
  - light switches
  - door handles and push plates
  - telephones and mobile communication devices
  - computer accessories
  - chairs, stools, and step stools
  - trash and linen receptacles
• Clean and disinfect the entire floor, including areas under mobile equipment, using either a wet vacuum or mop.

Cleaning of the preoperative and postoperative areas after each patient has left the area is a regulatory requirement of the Centers for Disease Control and Prevention and the Centers for Medicare & Medicaid Services.

STERILE PROCESSING AREAS
• Damp dust all horizontal surfaces in the sterilization packaging area (eg, countertops, workstations) at least daily with a clean, low-linting cloth moistened with a disinfectant.
• Terminally clean sterile processing areas each day the areas are used.
• Clean and disinfect the clean work areas (eg, the packaging area, the sterile storage area) before the dirty work areas (eg, the decontamination area).

• Avoid terminal cleaning while personnel are actively decontaminating instruments.
• Clean and disinfect all work surfaces and high-touch objects in the clean work areas and decontamination areas using a clean, low-linting cloth.
• Remove trash from receptacles at least daily and when they are full.
• Clean and disinfect all floors in sterile processing areas each day the areas are used.

Dust or debris on surfaces can be aerosolized onto sterilized items or instruments being prepared for sterilization. Damp dusting and terminally cleaning sterile processing areas daily helps to minimize the opportunity for dust dispersal. Sterile processing areas have some of the highest risks for environmental contamination of all perioperative areas.

SCHEDULED CLEANING
• Clean areas and equipment that are not terminally cleaned on a schedule (eg, weekly, monthly), including:
  - clean and soiled areas
  - sterile storage area
  - shelving, drawers, and storage bins
  - corridors, including stairwells and elevators
  - walls and ceilings
  - privacy curtains
  - pneumatic tubes and carriers
  - sterilizers and loading carts
  - sterilizer service access rooms
  - lounges, waiting rooms, locker rooms, bathrooms, and offices
  - environmental services closets
  - ventilation ducts, including vents and grilles
  - linen chutes
- refrigerators and ice machines
- sinks and eye wash stations

Areas and equipment that are not cleaned according to a schedule may be missed during routine cleaning procedures and become environmental reservoirs for dust, debris, and microorganisms.

ENHANCED CLEANING

- Follow enhanced environmental cleaning procedures after caring for patients who are known or suspected to be infected or colonized with an MDRO or other significant pathogens.
- Clean and disinfect all items touched during patient care, including:
  - storage cabinets, supply carts, and furniture
  - light switches
  - door handles and push plates
  - telephones and mobile communication devices
  - computer accessories
  - chairs, stools, and step stools
  - trash and linen receptacles
  - privacy curtains in the perioperative patient care areas
- In addition to using standard precautions, wear a gown and gloves when performing enhanced environmental cleaning procedures.
- Use an EPA-registered disinfectant that is effective against *Clostridioides difficile* spores after caring for patients diagnosed or suspected of infection with *C difficile*.

CONSTRUCTION/REMEDIATION

- Implement cleaning and disinfection procedures for construction, renovation, repair, demolition, and disaster remediation.
- Use an EPA-registered disinfectant that is effective against *C difficile* spores after caring for a patient diagnosed with or suspected of infection or colonization with *Candida auris*.
- Restrict room access following the care of a patient diagnosed with or suspected of infection with an airborne transmissible disease (eg, tuberculosis) and following aerosolization activities (eg, intubation, extubation, cough-generating activities) of a patient diagnosed with or suspected of infection with a droplet transmissible disease (eg, influenza) until adequate time has passed for air exchanges per hour to remove 99% of airborne particles from the air (eg, 15 air exchanges per hour for 28 minutes to remove 99.9% of airborne contaminants).
- Wear respiratory protection (eg, an N95 respirator) to perform environmental cleaning if entering the room before a complete air exchange occurs.

Enhanced environmental cleaning is the cleaning of surfaces that extends beyond routine cleaning and is performed following the care of a patient who is infected or colonized with an MDRO. Decreasing environmental contamination on high-touch surfaces may decrease the risk of MDRO transmission.
• Perform cleaning and disinfection of environmental surfaces to remove dust and debris.

• If dust is contaminating areas outside of the construction barriers, assess the barriers to determine their effectiveness before starting any construction project.

• Perform terminal cleaning before equipment and supplies are placed in the area where the construction, renovation, repair, demolition, or disaster remediation has been completed.

• If flooding or a water-related emergency occurs, including sewage intrusion, inspect the area for water damage and implement a cleaning and disinfection process.

• When surfaces remain in good repair, allow them to dry for 72 hours and then perform terminal cleaning.

• If surfaces are damaged or cannot dry within 72 hours, perform remediation to replace the surface with new materials after the facility engineer determines that the underlying structure is dry.

• Perform terminal cleaning of affected areas when condensation is observed on surfaces.

• When contamination of the incoming air occurs, perform terminal cleaning of the affected areas, including ventilation ducts, air vents, and grilles, and change air filters after the source of the contamination is identified and contained.

Determine the cleaning and disinfection procedures and frequencies during construction, renovation, repair, demolition, and disaster remediation based on an infection-control risk assessment performed by an interdisciplinary team that includes an infection preventionist.