

[Normal Priority] - H0627 : [COVID-19] Cleaning and Disinfection without Appropriate Training May Result in Damage to Equipment [ECRI Exclusive Hazard Report] Medical Device Hazard Report

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UMDNS Terms:

- Germicides [18159]
- Germicides, Liquid [18161]
- Towelettes, Surface Disinfection [18776]

Geographic Regions: Worldwide

Suggested Distribution: Clinical/Biomedical Engineering, Clinical Laboratory/Pathology, Critical Care, Dialysis/Nephrology, Emergency/Outpatient Services, Infection Control, Nursing, OR/Surgery, Risk Management/Continuous Quality Improvement, Facilities/Building Management, Home Care, Immunohematology/Blood Bank, Staff Education, EMS/Transport, Central Sterilization Reprocessing

Summary:

Please [CLICK HERE](#) for a brief *ECRI Micro e-learning Module* related to this Hazard Report. For more information regarding these modules, please contact hda@ecri.org.

Problem:

1. Use of overly saturated wipes, application of excessive amounts of cleaning solutions, and incorrect rinsing procedures while cleaning equipment may cause the following problems:
 1. Wetting of areas susceptible to fluid damage
 2. Fluid ingress into electronics and equipment controls
 3. Harmful residues remaining on surfaces
2. Failure to follow recommended cleaning procedures provided by both the manufacturers of the cleaning products and the manufacturers of the objects to be cleaned may result in:
 1. Surfaces remaining contaminated with pathogens and soil
 2. Equipment malfunctions and failures

ECRI Recommendations:

1. Train all relevant staff on effective cleaning and disinfection practices that will not compromise equipment. Note that some personnel, such as nurses and other staff, may not have traditionally been involved in cleaning and disinfection, but are now involved in this process because of the pandemic. Emphasize the following:
 1. Do not wet equipment to the point that fluid may intrude and cause breakage.
 2. Ensure that areas prone to contaminants are adequately cleaned and disinfected.
 3. Use only compatible cleaning wipes and liquids that will not degrade or damage equipment.
2. Keep appropriate cleaning supplies readily available where needed.
 1. Verify products on [EPA list N-disinfectants](#) for COVID virus.
3. Post device-specific cleaning instructions and reminders of good practices in the care area.
4. Attach laminated cleaning guides to sensitive equipment with visuals showing areas to focus on, areas to avoid, how agents should be applied, and whether or not rinsing is required.
5. See the supplementary hazard reports listed below for information on unsafe cleaning and disinfection practices.

Background:

1. In some instances, COVID-19 has led to changes in the personnel performing cleaning and disinfection activities. Based on the webcast poll from ECRI's COVID-19 and Medical Devices Lab Webcast Series "Cleaning and Disinfection Practices during the COVID-19 Pandemic," 35% of facilities report that nurses are performing terminal cleaning during the COVID-19 pandemic.
2. Hospital staff may not be aware of practices that may compromise sterility or damage equipment. Specifically:
 1. The use of overly saturated wipes and inappropriate rinsing may cause fluid intrusion and damage controls.
 2. Failure to disassemble key components before cleaning may result in failure to remove pathogens.
 3. Disassembly of components that should not be taken apart may compromise seals or mechanical functionality.
 4. Inappropriate immersion of devices in liquids may result in harmful residues becoming trapped between components.
 5. Use of incompatible cleaners may cause degradation of components and ultimately device and equipment failures.
 6. Use of unapproved cleaning products may damage equipment displays and key pads.

3. Staff may not always refer to precautions listed on the containers of cleaning products to avoid equipment damage.
4. Even when device and equipment manufacturers provide lists of compatible cleaning agents and practices, the instructions are not always readily available to hospital staff.

Supplementary Reports:

1. COVID hazards on unsafe cleaning and disinfection practices:
 1. [\[COVID-19\] Routine and Terminal Cleaning of Suspected or Confirmed COVID-19 Patient Rooms \[ECRI Exclusive Hazard Report\]](#)
 2. [\[COVID-19\] Health Canada Warns Users to Always Follow Label Directions for Cleaning and Disinfection Products](#)
2. Top 10 Hazards on unsafe cleaning and disinfection practices:
 1. [Cleaning Fluid Seeping into Electrical Components Can Lead to Equipment Damage and Fires \[#9—ECRI Institute Top Ten Hazards List for 2019\]](#)
 2. [Improper Cleaning May Cause Device Malfunctions, Equipment Failures, and Potential for Patient Injury \[#5—ECRI Institute Top Ten Hazards List for 2018\]](#)
 3. [Device Failures Caused by Cleaning Products and Practices \[#10—ECRI Institute Top Ten Hazards List for 2017\]](#)

Comments:

- This alert is a living document and may be updated when ECRI receives additional information.

Source(s):

- 2020 Jun 30. ECRI researched report