Are You Taking Risks When Cleaning Reusable Medical Devices?

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Objectives
After completion of this self-study activity, the learner will be able to:
1. Discuss the importance of pre-cleaning in the operating room.
2. Describe the critical factors for effective manual cleaning.
3. Describe the critical factors for effective mechanical cleaning.
4. Discuss how to test the efficacy of the manual and mechanical cleaning processes.

Test Questions

1. Medical device manufacturer’s instructions for use (IFU) should be evaluated before purchasing to ensure the time and resources are available to follow these IFUs.
   A. True  B. False

2. Pre-clean instruments in the operating room (OR) to ensure effective reprocessing.
   A. True  B. False

3. When manually cleaning, monitor and document the temperature of the water/cleaning agent and soaking time to ensure the cleaning agent is effective.
   A. True  B. False

4. The instrument manufacturer’s IFU should provide the following brush information for each instrument lumen: the appropriate type, size (diameter and length), bristle type, and material.
   A. True  B. False

5. The final rinse water for cleaning all instruments should be treated (e.g., deionized, distilled or reverse osmosis).
   A. True  B. False

6. Some mechanical washers have alarms to warn when the storage barrel of cleaning agent is low, but they will not warn when the agent is not being delivered.
   A. True  B. False

7. If you need more capacity for loading instruments, place an additional tray or rack into the mechanical washer.
   A. True  B. False

8. When using an ultrasonic, connect the lumen to the port using the correct lumen adapter, close off unused ports, and periodically check to see if the lumen is still attached to ensure adequate fluid flow.
   A. True  B. False

9. The cleaning effectiveness of mechanical cleaning equipment should be verified upon installation, weekly (preferably daily), during routine use, after major repairs, and when evaluating or changing to a new type of cleaning chemistry.
   A. True  B. False

10. Verifying the cleanliness of instruments after manual cleaning, sonication, or mechanical cleaning will identify failures in the cleaning process.
    A. True  B. False
Introduction

Are you taking risks when reprocessing reusable medical devices? Will the results of those risks show up in the news? A recent report from iwatchnews.org stated “Filthy, dangerous medical implements have been showing up in hospitals and outpatient surgery centers with alarming regularity.”\(^1\) This report was the basis of a Today Show feature in February, 2012. In Men's Health, October 2012 a special report entitled, The Dirty Truth about Hospitals, was published which discussed contaminated tools used in surgery.\(^2\)

The Emergency Care Research Institute’s (ECRI) Top 10 Health Technology Hazards for 2013 was published in November, 2012. The number 8 hazard was inadequate reprocessing of endoscopic devices and surgical instruments.\(^3\) ECRI Institute said this recommendation “was influenced by both incident reports obtained and analyzed by ECRI Institute PSO and by the results of a recent investigation that the ECRI Institute conducted for a facility that was experiencing repeated reprocessing failures.”\(^4\) In this report ECRI said that data from the Joint Commission (TJC) shows that “36% of accredited hospitals surveyed in 2011 were noncompliant with its standards to reduce the risk of infection associated with medical equipment, devices, and supplies.”\(^5\) Failures included improper decontamination, cleaning, disinfection, and sterilization of medical equipment. The standards and recommended practices that should be followed to meet TJC standard are from the Association for the Advancement of Medical Instrumentation (AAMI), the Association of periOperative Registered Nurses (AORN), and the Centers for Disease Control and Prevention (CDC).

ECRI Institute also states to “Seek input from the reprocessing department staff when assessing instruments for purchase to identify devices that may require additional time or resources to reprocess effectively.”\(^6\) If the medical device requires more time and resources than available a different purchase decision may need to be made.\(^3\)

The importance of reviewing written instructions for use (IFU) is also stressed by AORN. AORN states the written and validated IFU “should be obtained and evaluated to determine the ability to adequately clean and reprocess the equipment within the healthcare facility before purchasing surgical instruments and powered equipment.”\(^4\)

Sterile processing, operating room, and infection prevention personnel, no matter what type of healthcare facility they work in, are becoming increasingly aware of the need to control, standardize, and verify the cleaning process to ensure effective disinfection and sterilization. This inservice will discuss the manual and mechanical cleaning process and the monitoring tools available to verify the effectiveness of both of these processes.

Manual cleaning process

The manual cleaning process may be recommended for delicate instruments, such as microsurgical instruments, lensed instruments, and air-powered drills which may not be placed through a mechanical cleaning process or for more complex instruments that may require both a manual and mechanical cleaning process. In either case the medical device manufacturer’s written IFU should be followed.

Pre-cleaning in the Operating Room

The AORN Recommended Practices for Cleaning and Care of Surgical Instruments and Powered Equipment discusses pre-cleaning in Recommendation IV and V.\(^4\) The objective of pre-cleaning in the OR is to keep instruments free of gross soil during the surgical procedures.\(^4\) This is because “Blood and body fluids can cause pitting of instruments and, if left to dry, can be difficult to remove” and “prevent adequate sterilization.”\(^4\) This could be “an avenue for transmission of other potentially infectious materials.”\(^4\) (See Figure 1)

Skipping the pre-cleaning step in the OR will also add additional processing time to the cleaning step in sterile processing (SP) and delay the return of instruments to the OR, so the entire OR workflow and customer service will be affected. Time will be lost and the risks to the patient will increase.

AORN states:

“ Instruments should be wiped as needed with sterile surgical sponges moistened with sterile water during the procedure to remove gross soil.”\(^4\) (IV.a.)

“ Instruments with lumens should be irrigated with sterile water as needed throughout the surgical procedure.”\(^4\) (IV.b.)

“Electrosurgical unit (ESU) active electrode tips should be cleaned frequently, away from the surgical site, to remove eschar.”\(^4\) (IV.c.)

At the end of the OR procedure and while wearing personal protective clothing (PPE) (See Table 1):

- Remove all gross soil to prevent formation of bioburden;\(^6\) (V.a.)
- Open and disassemble all instruments whether or not they have been used;\(^6\) (V.b., V.d.)
- To prevent injury to personnel
  - Segregate sharp instruments;\(^6\) (V.c.)
  - Remove and dispose of sharps in proper receptacles;\(^6\) (V.c.1.)
  - Place reusable scalpel handles in appropriate receptacle;\(^6\) (V.c.3.)
• To facilitate the mechanical cleaning process
  – Place instruments in a perforated or mesh-bottom tray; (V.d.1.)
  – Fully open instrument box locks and secure using stringers, racks, or instrument pegs; (V.d.2.)
• For protection of instruments
  – Place delicate and light weight instruments on top of heavier instruments; (V.e.1.)
  – Segregate microsurgical instruments in separate containers; (V.e.2.)

Containerize the instruments and treat with an instrument cleaner recommended by the manufacturer’s IFU for transportation to another location. If a liquid is used it is discarded before transportation. A foam, spray or gel product can be used instead of a liquid cleaner. If transport is immediate, a towel soaked with water can be used to keep the instruments moist for transportation. (V, AAMI ST79 Section 6.4) Label the container with a biohazardous label. (See Figures 2 and 3)

Table 1. Personal Protective Clothing

<table>
<thead>
<tr>
<th>In the decontamination area the following PPE should be worn:</th>
</tr>
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<tbody>
<tr>
<td>• To protect from splash or splatter</td>
</tr>
<tr>
<td>– Fluid-resistant mask covering nose and mouth;</td>
</tr>
<tr>
<td>– Liquid-resistant covering with sleeves;</td>
</tr>
<tr>
<td>• To protect from liquid splashes, microorganisms, and chemicals</td>
</tr>
<tr>
<td>– Eye protection</td>
</tr>
<tr>
<td>◆ Goggles or full length face shield (mask still needed);</td>
</tr>
<tr>
<td>• To protect shoes from becoming contaminated and/or soaked with blood or other bodily fluids</td>
</tr>
<tr>
<td>– Liquid-resistant shoe covers;</td>
</tr>
<tr>
<td>• Prevent punctures, contact with microorganisms, disease cross-contamination</td>
</tr>
<tr>
<td>– General-purpose utility gloves. (Section 4.5.2)</td>
</tr>
</tbody>
</table>

PPE should be decontaminated at least daily and between employees, torn gloves should be replaced immediately, disposable PPE should be removed prior to leaving the decontamination area, being careful not to contaminate scrub suit or skin, and wash hands prior to leaving the decontamination area. (4.5.2)
ECRI institute states pre-cleaning at point of use is an important and sometimes overlooked step and recommends this be done to ensure effective reprocessing of endoscopes and other instruments.3

**Critical factors of manual cleaning**

The instrument manufacturer’s written IFU should be followed for the cleaning agent, brushes or other tools to use, and water for rinsing. Section 7.5 of AAMI ST79 discusses the recommended practices for cleaning.5

All cleaning should be done in the decontamination area wearing the appropriate PPE. Instruments and other items composed of more than one part “should be disassembled to expose all surfaces to the cleaning process.”(7.4.1)5 Box locks should also be opened for cleaning.

An initial cold water rinse or soak in cold water and/or soil dissolving enzymatic cleaners “will help prevent coagulation of blood onto the device and assist in removal of blood, tissue, and gross debris from device lumens, joints, and serrations.”(7.5.6)5 Instruments should be immersed unless not recommended (e.g., air-powered instruments) to avoid aerosolization of microorganisms.

The cleaning agent manufacturer’s written IFUs should be followed to ensure the cleaning agent is diluted properly and used for the appropriate time and temperature. TJC will want to know how you determine the correct amount of cleaning agent and water needed to meet the IFU dilution requirements each time the cleaning agent is used. Suggestions are a graduated cylinder to measure the cleaning solution to expose the cleaning agent, and a mark in the sink for the amount of water to use.6

Automated chemical delivery system/device or sink proportioner can also be used to ensure appropriate dilution of the cleaning agent. “The cleaning solution should be changed frequently (e.g., after each set of instruments) to keep the bioburden low.”(7.5.6)5 The cleaning agent should be used within its shelf life.

The temperature of the water/cleaning agent mix should be monitored and documented in addition to the soaking time to ensure the cleaning agent is effective.(7.5.3.2)5 A water temperature that is too high will inactivate the enzymes.

The instrument manufacturer’s written IFU should provide the correct brushes to use to clean lumens. The brush of the “appropriate type, size (diameter and length), and bristle type and material should be specified.”(7.5.3.2)6 Companies that sell brushes have some tools to use to determine the diameter of the brushes to use but it is the instrument manufacturer’s responsibility to provide that information to users.7

These brushes “should either be single-use, disposable items or, if reusable, be decontaminated at least daily.”(7.5.3.2)6 Following this recommended practice should assist in elimination of microorganisms, patient tissue, blood, and lubricants that could be passed from patient to patient and also pose a risk to personnel.

Following brushing, the cleaning solution should be flushed through the lumen for the time recommended in the IFU, followed by a water rinse, for the recommended time or volume of water needed to remove chemicals and/or debris remaining in the lumen.(7.5.3.2)5

The external parts of the instruments and lumens can be initially rinsed with tap water, but the final rinse should be treated water to prevent staining and/or contamination of the instruments.(7.5.4)5

This water should have a low endotoxin content.(7.5.1)5 The final rinse water should be done with deionized, distilled, or reverse osmosis water.

Water-soluble instrument lubricants should be used since they do not interfere with steam penetration. Instruments should be inspected after cleaning “for flaws, damage, debris, detergent residue, and completeness” to ensure they are in working order.(7.5.6)5 AORN states in XI.b., instruments should also be dried to prevent rust formation during instrument storage. The presence of moisture also impedes the penetration of steam, creates wet packs, and aborts in hydrogen peroxide sterilization processes.(X.I.b., 7.5.6)5. Cloths and towels should be clean and lint-free.
Mechanical Cleaning

“Mechanical cleaning equipment removes soil and microorganisms through an automated cleaning and rinsing process.” (7.5.3.3) Mechanical cleaning equipment includes utensil and cart washers, washer-sanitizers, pasteurization equipment, washer-disinfectors, washer-decontaminators, and ultrasonic cleaners. Section 7.5 of the AAMI ST79 discusses the recommended practices for cleaning.

Critical factors of mechanical cleaning

The written IFU of the manufacturer of the instruments (e.g., with and without containment devices), the mechanical cleaning equipment, the cleaning agent, and the generic rigid containers should be followed to determine the cleaning agent and cycle parameters (e.g., time and temperature) of the mechanical cleaning process. If the IFUs conflict, the instrument manufacturer’s IFU should be followed since they are responsible for validating the cleaning process for their specific medical device.

The staff should be trained and competent on how to use the mechanical equipment, which cleaning agent to use, and the limitations of those cleaning agents. For example, the staff should know most washers have alarms to warn when the storage barrel of the cleaning solution is low, but they will not warn when detergent is not being delivered.

The mechanical action of the washer depends on its cycle setting which includes pre-wash, rinse, enzymatic/detergent, ultrasonic, disinfection, and drying. The correct cycle is used based on the IFU from the instrument and cleaning agent manufacturer.

The final rinse should always be treated water (e.g., deionized, distilled, or reverse osmosis). Regular maintenance of this water supply is also important to prevent pyrogens from contaminating the water.

The mechanical efficiency of this equipment depends on how instruments and containers are loaded into the equipment and tray and rack selection. The written IFU of the cleaning equipment, instruments, and containers should be followed for a positive outcome. For the instruments and containers to be clean, the cleaning and rinse solution needs to contact all surfaces.

- Do not add additional trays or racks if not in the equipment manufacturer’s IFU.
- Do not stack items in the washer-disinfector that could physically block the spray arm from spinning.
- Use recommended specialty baskets/trays when available.
- Avoid using trays with solid sides or limited perforations.
- Open hinged instruments and disassemble instruments as required in IFU.
- Place concave instruments on their sides or upside down.
- Place heavy instruments on the bottom of the basket, lighter instruments on top.
- Place different metals in their own tray/basket if possible.
- Avoid overloading the baskets. Instruments should not be protruding outside of the rack.
- Do not clean instruments inside a generic rigid container. Remove the mesh trays/baskets containing the set of instruments from rigid containers when loading.
- Load the empty generic rigid containers according to the manufacturer’s IFU. The IFU may require the retention plates to be removed, the lid, the instrument trays and bottom to be loaded separately. (See Figures 4 and 5)
- Remove sets that arrive in containment devices from those devices if recommended by the instrument/containment device manufacturer. Some may require the lid, the instrument tray/basket, and bottom to be loaded separately and some may not. (7.6.2.3) (See Figure 6)
Daily and preventive maintenance is vital to the proper function of all mechanical cleaning equipment. Section 7.6.2.3 of AAMI ST79 and the AORN Recommended Practice for Care and Cleaning of Surgical Instruments and Powered Equipment, Recommendation X discusses these recommended practices.

For utensil and cart washers, washer-sanitizers, washer-disinfectors, and washer-decontaminators this includes following the equipment manufacturer’s IFU which may include some or all of the following to be performed daily:

- Cleaning;
- Strainer to ensure the dirty detergent/water is being removed and instruments/containers are not being contaminated by standing water;
- Spray arms and nozzles to ensure there is no blockage of the cleaning agent/water that should be contacting the instruments/containers; (7.6.2.3)
- Verifying that all spray arms are correctly connected and achieve full rotation and nozzles are positioned to ensure effective cleaning action; (7.6.2.3)
- Verifying the coupler that holds the baskets of instruments to the washer is connected and secure for proper cleaning efficiency; (8)
- Cleaning chamber when visibly soiled and at least daily. (X.c.11.)
- Opening box locks;
- Spraying instruments out over tray to allow maximum exposure to cavitation power;
- Connecting the lumens to the ports using correct lumen adapters, closing off unused ports to allow maximum flow to the lumens, and checking periodically to ensure the lumens are still attached to the adapter so there is adequate fluid flow. (8)

For ultrasonic cleaners, also follow the equipment manufacturer’s IFU for maintenance which may include some or all of the following:

- Verifying the correct chemicals and lubricants are being used and connected properly; and,
- Verifying pumps are delivering the correct chemicals and lubricants through the feed tubes (e.g., mark containers to know the use pattern). (8)
- De-gassing water to release dissolved air bubbles within the cleaning solution which if present weaken the cavitation force of the ultrasonic cleaner; (7.5.3.3)
- Checking cleaning solutions between cycles and changing immediately if becomes heavily contaminated or at least daily to prevent loss of ultrasonic cleaning power and possible damage to the equipment; (7.5.3.3)
- Cleaning chamber when visibly soiled and at least daily. (X.c.11.)

In addition, perform any regular preventive maintenance that is required.
Quality Control

“A quality system would call for monitoring and documenting decontamination process parameters, whether the process is accomplished by hand or mechanically.” (7.5.5) 

Testing of manual and mechanical cleaning processes evaluates the competency of personnel to perform manual cleaning and to prepare and run mechanical cleaning equipment. The recommended practices for cleaning verification are discussed in AAMI ST79 Section 7.5.3, 7.5.5, 10.2 and Annex D.

AAMI states:

“For verification of routine cleaning processes, users should incorporate test methods that verify the functionality of the automated washer (if used) and the cleanliness of specific devices after manual or automated cleaning (e.g., washer disinfector, ultrasonic) is completed. These verification tests are part of continuous quality improvement to demonstrate continued compliance with cleaning benchmarks, once these benchmarks have been defined.” (Annex D, D.1)

Since visual inspection will not detect biofilm, biological residues, or what is inside lumens, another verification method should be used that allows the “assessment of both external surfaces and inner housing and channels of medical devices.” (Annex D, D.1) The fluid flow in equipment that has adaptors for lumened instruments also needs to be verified along with key cleaning parameters such as temperature. (10.5, Annex D, D.1)

Verifying the cleaning efficacy of mechanical equipment

Mechanical cleaning equipment fails for many reasons. AAMI ST79 states mechanical cleaning equipment should be tested:

- Upon installation;
- Weekly (preferably daily) during routine use;
- After major repairs and when evaluating or changing to a new type of cleaning chemistry. (7.5.3.3, 10.2)

All cycles used should be tested after major repairs and when evaluating or changing to a new type of cleaning chemistry because the cycles might be reprogrammed and the effectiveness of the cleaning chemistry and cleaning action needs verification. (7.5.3.3, 10.2)

“A major repair is a repair outside the scope of routine preventive maintenance and that significantly affects the performance of the equipment.” (7.5.3.3, 10.2) This includes replacement of the water pump(s), detergent delivery system, heating system, water delivery system, water treatment system, or computer control or an upgrade to software.

For washer disinfectors and washer decontaminators, a blood soil test object is an example of a test to verify the efficacy of this mechanical cleaning equipment. (Annex D, D.2) One test is placed inside an empty tray/basket on each level and run in a complete cycle. Document the result and diagnose the problem if it fails.

If the washer equipment has the ability to irrigate hollow instruments, a test that consists of a blood soil test strip in a capsule with lumens should be used to verify the ability of the irrigators to clean lumens. (10.2) If the washer has an ultrasonic cycle, the effectiveness of the cavitation can also be tested using a vial containing fluid and glass beads with the fluid changing color if the cavitation is effective. Use the ATP bioluminescence (quantitative) or protein (qualitative) test to verify the cleaning effectiveness of individual instruments. See the section on Verifying if instruments are clean. Figure 7 shows placement of blood soil test object and cavitation test.

Figure 7. Placement of blood soil test object and test for cavitation effectiveness in mechanical washer basket

To ensure the thermal disinfection rinse of this equipment is functioning, an irreversible thermometer or a remote sensing device should be used to monitor the temperature. (7.6.2.3) The same tests can be placed inside cart washers to determine if the detergent and rinse water is cleaning all areas of the case carts. If it is not, the position of the spray arms and/or water temperature may need adjusting.

For ultrasonic cleaners several monitors are available to verify their cleaning effectiveness.

- A blood soil test to verify the cleaning efficacy of instruments
- Place one test in an empty tray/basket;

8
Cavitation tests (periodic functional test and routine test) to verify the effectiveness of cavitation created by mechanical action of the generators and that the transducers are working

- Periodic functional test performed for initial set-up and quarterly or after repairs;
  - Multiple tests are placed in an empty tray/basket spaced so as to verify that all the transducers needed for cavitation are functioning throughout the bath;
  - Routine test performed weekly, preferably daily to verify proper cavitation;
  - One test in an empty small tank and 3 in an empty large tank to monitor the functioning of all transducers;

- A temperature test (e.g., irreversible thermometer or a remote sensing device) to verify the water temperature is correct for the cleaning solution being used;

- A lumen instrument test to verify adequate fluid flow in the lumens and correct loading of the lumened instruments;

- ATP bioluminescence (quantitative) or protein (qualitative) test to verify the cleaning effectiveness of individual instruments.

Verifying if instruments are clean

AORN states “Manual cleaning should be evaluated when new types of instruments are reprocessed and periodically, at intervals determined by the health care organization.” This recommendation should be expanded to a program for routine monitoring of the cleanliness of individual instruments after manual washing, sonication, or mechanical cleaning to identify failures in the system so corrective action can be taken.

Before routine testing is started, a sampling of instruments are tested to understand the current status of surgical instrument cleanliness and establish an appropriate Pass, Caution, and Fail benchmark level for routine testing. It is suggested to use three surgical instruments that are considered hard to clean (e.g., Ronguer, reamer, laparoscopic instrument). Data should be collected from 20–30 separate decontamination cycles. This routine testing should be weekly, preferably daily as AAMI recommends for testing of mechanical cleaning equipment. Select 3 to 10 instruments that represent those most difficult to clean. Routinely test these instruments at the desired frequency after manual washing, sonication, or mechanical cleaning. Swab the instruments using the ATP bioluminescence technology which is quantitative. If the results show the instrument is not clean, the tray can be reprocessed immediately.

A protein test which is a qualitative test could also be used to show a pass or fail, but does not provide a quantitative number. Check with the manufacturer’s IFU for information on how to perform this test.

Figure 8. ATP bioluminescence test for verifying cleaning of instruments

As with biological indicator testing of sterilizers, the more often you monitor the manual or mechanical cleaning process, the quicker the detection and correction of cleaning failures which reduces patient risk, saves money, and provides peace of mind.

Water quality

“A water quality assessment should be performed periodically and after major maintenance to the water source.” This water testing should also be done to measure the hardness, pH-level, temperature and purity (microbial contamination) to ensure the final treated water rinse is of the correct quality. Regular maintenance of the water treatment process is also essential to prevent pyrogens from contaminating the water supply.

Documentation

Each cycle printout should be reviewed and initialed as is done for sterilizers. The results should be documented. “Ideally, cleaned medical devices should be traceable to the patients on whom they are used.”

Documentation should include maintaining records of the cleaning of instruments including, but not limited to:

- Date;
- Time;
- Instruments;
- Method of cleaning;
- Number of identifier of mechanical decontaminator;
- Name of person performing the cleaning;
- Lot number of chemical used;
- Testing results on mechanical instrument washers;
- Testing results on insulated electrical instruments, and;
- Disposition of defective equipment.
Education

The tools discussed in the quality section are not a substitute for adequate training, competency assessment, certification, and re-certification. The basic fundamentals of proper cleaning of medical devices begins with the staff being properly trained, having the adequate resources (e.g., equipment, cleaning agents, brushes and other tools, etc.) and time, and having access to the most up-to-date IFU and recommended practices. The ECRI institute stresses the importance of training, re-training, and education to ensure effective reprocessing of endoscopes and other instruments.3

Summary

Do you have a better understanding of all the places where human and mechanical errors can occur and increase the risk of a patient acquiring an infection from an instrument that has not been cleaned properly? The ECRI Institute stresses the importance of “adequate space, equipment, trained staff, instructional materials, and resources for the reprocessing function to be performed effectively.”3 The ECRI Institute also states that “ensuring that ORs and other procedure areas have sufficient instruments to meet demand, allowing for adequate time for instrument processing” is important.3 Insufficient inventory and short turnaround times “could create an environment in which staff are tempted to take risky short cuts.”3 Are you taking risky short cuts to meet demands? Is administration supporting changes to reduce risk? Use this inservice and the ECRI Institute’s Top 10 Health Technology Hazards for 2013 to support changes in the cleaning process that will reduce the risk of a patient getting an infection in your healthcare facility.

Photos provided by: Mark Duro, New England Baptist Hospital of Boston; Steve Kovach and Ray Taurasi, Healthmark Industries; Rose Seavey, Seavey Healthcare Consulting, LLC; and Sue Klacik, St Elizabeth Health Center, Youngstown, Ohio.

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Answers

1. A  
2. A  
3. A  
4. A  
5. A  
6. A  
7. B  
8. A  
9. A  
10. A

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Martha Young, BS, MS, CSPDT, is president of Martha L. Young, LLC, providing SAVVY sterilization solutions to healthcare manufacturers and facilities and a consultant for 3M. She retired from the 3M Infection Prevention Division, St. Paul, MN in 2009 after 31 years and has over thirty years of experience in the specialty area of cleaning/disinfection and sterilization. Ms. Young has lectured around the world, has numerous publications on infection prevention with an emphasis on how to improve the performance of the sterilization process, and writes a quarterly column for OR Manager. She is a member of IAHCSMM, AORN (Past Professional/Practice Issues Chair for AORN Specialty Assembly for Sterilization Processing and Materials Management from 2006-2010), APIC and a certified Central Sterile Processing and Distribution Technician. Additionally, Ms. Young is a voting member of several AAMI working groups developing recommended practices. In 2007 HPN acknowledged her as one of the “30 Pros Worth Knowing” who are the Most Influential in Healthcare Sterile Processing. Ms. Young can be reached at marthalyoung1@aol.com.

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Sterile Process and Distribution CE Information

CE Applicant Name: 
Address: 
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The CBSPD (Certification Board for Sterile Processing and Distribution) has pre-approved this inservice for 1.5 contact hours for a period of five (5) years from the date of publication. Successful completion of the lesson and post test must be documented by facility management and those records maintained by the individuals until re-certification is required. DO NOT SEND LESSON OR TEST TO CBSPD.

For additional information regarding Certification contact: CBSPD, Inc. 148 Main St., Lebanon, NJ, 08833 or call 908-236-0530 or 1-800-555-9765 or visit the website at www.sterileprocessing.org.

IAHCSMM has awarded 1.5 approved contact points for completion of this continuing education lesson toward IAHCSMM recertification.

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This inservice is approved by the California Board of Registered Nurses, CEP 5770 for 1 contact hour. This form is valid up to five (5) years from the date of publication.

1. Make a photocopy of this form.
2. Print your name, address and daytime phone number and position/title.
3. Add the last 4 digits of your social security number or your nursing license number.
4. Date the application and sign.
5. Answer the true/false CE questions. Keep a copy for your records.

6. Submit this form and the answer sheet to:
   3M Infection Prevention
   Attn: HC4160
   RR Donnelly Fulfillment Services
   585 Hale Avenue North
   Oakdale, MN 55128-9935

7. For questions please call the 3M Healthcare helpline: 1-800-228-3957.
8. Participants who score at least 70% will receive a certificate of completion within 30 days of RR Donnelly’s receipt of the application.

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Social Security or Nursing License Number: 
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