

AORN's 2011 Recommended Practices

A summary of recommendations from the Association for periOperative Registered Nurses

To help healthcare laundries better serve hospital clients, the American Reusable Textile Association (ARTA) has summarized recommended practices from the Association of periOperative Registered Nurses (AORN). Included in this summary are AORN recommendations on overall selection of reusable textile products, as well as specific advice on selecting surgical attire, gowns and drapes, packaging systems and on maintaining a sterile field.

Product Selection

Healthcare laundry management should be involved in the decision-making process to determine when and whether reusable products are purchased. The purchase of reusable medical textiles must include consideration of the following:

- ◆ Inventory requirements
- ◆ Storage facilities
- ◆ Inventory requirements
- ◆ Useful life of the reusable product
- ◆ Instructions for proper use, maintenance and repair
- ◆ Environmental and
- ◆ Financial impact of the product(s).

Rules on Surgical Attire

- ◆ Fabrics for surgical attire should be tightly woven, of a thread count of 560 x 395 threads/10 cm or greater;
- ◆ Scrub tops should be tucked into the pants, secured at the waist or be tight fitting, to prevent skin cells from entering into the surgical environment;
- ◆ One hundred percent cotton fleece should not be used as a fabric for surgical attire.
- ◆ Lab coats and cover gowns have not been shown to reduce contamination in the surgical environment. However, if these items are worn, they should be washed daily by a healthcare-approved or accredited laundry.
- ◆ Surgical attire that is worn should be changed daily, or at the end of the shift, and washed at a healthcare-approved or accredited laundry facility.
- ◆ Surgical attire contaminated with blood or other potentially infectious substances should not be rinsed or sorted at the location of use. Instead, any contaminated items should be changed as soon as possible and washed by a healthcare-approved or accredited laundry facility.
- ◆ A healthcare-approved or accredited laundry facility is recommended for washing healthcare textiles. To secure accreditation from the Healthcare Laundry Accreditation Council (HLAC), a laundry must apply for inspection to become accredited for a

period of three years. Whether a hospital is accredited or not, its laundry should require the following:

- Quality control procedures and monitoring are defined and implemented, including water quality testing on a routine basis;
- Adequate inventory is available to meet demand;
- Physical barriers separate soiled from clean textiles, including during transportation;
- Adequate and appropriate ventilation is controlled;
- Clean textiles are stored in areas controlled for temperature, dust and vermin, and on appropriate shelves and carts;
- Exposure Control Plan is in place and PPE is provided, as well as Material Safety Data Sheets for each chemical used.
- ◆ Home laundering of medical reusable textiles is not recommended for many reasons, including:
 - Quality procedures may not be in place, and
 - Home washers have a lower temperature and less mechanical action than available in commercial laundry facilities.

Selection and Use of Surgical Gowns and Drapes

OSHA and ANSI/AAMI have established guidelines for personal protective equipment (PPE). These guidelines provide a classification system for selecting protective apparel based on barrier protection. Factors to consider when selecting surgical gowns and drapes include:

1. The level of protection is claimed by a product needs to be maintained throughout its use and in all critical areas, including the seams of the sleeves on a doctor's gowns.
2. Gowns and drapes used in surgery should be resistant to bloodborne pathogens.
3. Products should be selected for use based on the level of exposure anticipated. Factors that influence the potential for exposure include: length of procedure, amount of fluid present and pressure against the product.
4. Gowns and drapes are visually inspected before use for holes, tears and abrasions to ensure acceptable quality level. If holes are found on an item, it can be repaired with heat-sealed patches of the same material, as follows:
 - Patch one side only of single-ply material;
 - Patch both sides of two-ply material;
 - Repairs should not be done by sewing in the critical areas of the item to be repaired (hems, seams and ties are acceptable).
 - The overall integrity and barrier properties of the item should be maintained throughout its use.

any failures of a product to perform should be reported as required by the Safe Medical Devices Act of 1990.

Selection and Use of Packaging Systems for Sterilization

In order to assure safety, select packaging systems that:

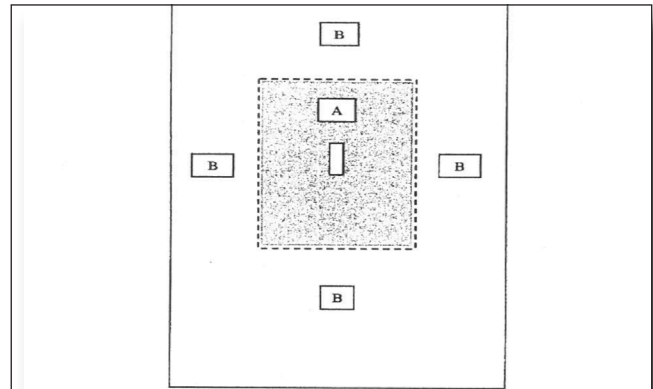
- ◆ Provide a barrier to microorganisms, particles and fluids, yet still allow for penetration by steam or gas for sterilization, and permit air removal;
- ◆ Are free of dyes, toxic ingredients and low-linting;
- ◆ Have adequate size to completely cover the contents of the pack and evenly distribute the mass;
- ◆ Employ a method that seals packages completely, provides evidence of tampering, and cannot be re-sealed;
- ◆ Open easily while maintaining the sterility of the contents and the environment;
- ◆ Have a visible label that identifies the contents, includes a method to identify the person who assembled and wrapped the pack, and has a lot control number, which remains securely fastened until opened for use;
- ◆ Are cost-effective; and
- ◆ Include instructions for use from the manufacturer.

When using and making up packaging systems:

- ◆ Reusable materials should be laundered between each use to rehydrate them. Textiles that are re-sterilized without laundering may cause superheating, which can prevent sterilization.
- ◆ Materials should be stored at temperatures between 68°F to 73° F (20°C to 23° C) and at a relative humidity of 30% to 60% for at least two hours before use. This allows for adequate steam penetration during sterilization and prevents superheating.
- ◆ When using reusable barrier wrappers, it's recommended that packages be wrapped sequentially (wrap contents once with one wrapper, then wrap again with the second wrapper) to maintain the sterile environment within the operating room.
- ◆ Each package should contain an internal indicator/integrator that is placed in the center of the pack, visible to the end user when the package is opened. The internal indicator verifies that the sterilant has penetrated to the center of the pack and air has been removed.
- ◆ Each package should also have an external indicator on the outside of the pack to indicate that the package has been subjected to a sterilization cycle.

A quality control program should be in place to ensure:

1. A system for monitoring and recording the numbers of wash and sterilization cycles that each product has gone through, with written instructions regarding removal from service and downgrading to another category.
2. Materials used for packaging are visually inspected before use for holes, tears and abrasions. If holes are found on an item, it can be repaired with heat-sealed patches of the same material, as follows:
 - Patch one side only of single-ply material;
 - Patch both sides of two-ply material;
 - Repairs should not be done by sewing in the critical



NOTE — The entire surgical drape (areas A and B) is required to have a barrier performance of at least Level 1 (as per 4.2.3.2). Seams between two protective areas must have at least the barrier performance of the lower-performing area (as per 4.2.3.2). Table B.3 illustrates the requirements of 4.2.3.2 and shows how the barrier performance classification of the drape would be determined.

Table B.3 – Barrier performance classification of surgical drapes

Area A (Critical zone)	Area B	Final barrier performance classification
Level 1	Level 1, 2, 3, or 4	Level 1
Level 2	Level 1, 2, 3, or 4	Level 2
Level 3	Level 1, 2, 3, or 4	Level 3
Level 4	Level 1, 2, 3, or 4	Level 4

areas of the item to be repaired (hems, seams and ties are acceptable).

- The overall integrity and barrier properties of the item should be maintained throughout its use.

Recommendations on Maintaining a Sterile Field

- ◆ When reusable gowns and drapes are used in the operating room, they should be selected according to AORN's "Recommended Practices for Selection and Use of Surgical Gowns and Drapes," and AAMI's barrier protection guidelines.
- ◆ The front of a sterile gown is considered sterile from the chest to the level of the sterile field; the sleeves are considered sterile from two inches above the elbow to the cuff. These areas must provide the appropriate level of barrier protection required for the procedure.
- ◆ Gowns should be of an adequate size to be completely closed; sleeves length should prevent the back of the hand becoming exposed.
- ◆ All of the items within a sterile field should be sterile. Reusable textiles should be folded and packaged so the contents can be opened without compromising the sterile environment. Because portions of drapes help create the sterile field, a drape should be folded to allow for correct positioning without moving the drape. Once a sterile field has been created, it should not be covered because removing the cover may cause contamination of the field.
- ◆ Once an item has been sterilized, it is considered sterile unless an event occurs that compromises the sterility of the item, referred to as "event-related sterility."