Recommended Practices for High-Level Disinfection

The following recommended practices were developed by the AORN Recommended Practices Committee and have been approved by the AORN Board of Directors. They were presented as proposed recommendations for comments by members and others. They are effective January 1, 2009.

These recommended practices are intended as achievable recommendations representing what is believed to be an optimal level of practice. Policies and procedures will reflect variations in practice settings and/or clinical situations that determine the degree to which the recommended practices can be implemented. AORN recognizes the various settings in which perioperative nurses practice. These recommended practices are intended as guidelines adaptable to various practice settings. These practice settings include traditional operating rooms, ambulatory surgery centers, physician's offices, cardiac catheterization laboratories, endoscopy suites, radiology departments, and all other areas where surgery may be performed.

Purpose

These recommended practices provide guidance for achieving safe and effective high-level disinfection (HLD) of reusable instruments and equipment. Care and cleaning of flexible endoscopes is outside the scope of these recommended practices. Refer to the AORN "Recommended practices for cleaning and processing endoscopes and endoscope accessories."

Recommendation I

Items to be reprocessed should be categorized as critical, semicritical, and noncritical.

The Spaulding classification system, developed by Earle Spaulding in 1968, has withstood the passage of time and continues to be used today by infection preventionists and others to determine the correct processing methods for preparing instruments and other items for patient use. According to the Spaulding system, the level of processing required is based on the nature of the item requiring processing and the manner in which it is to be used (**Table 1**).[1-5]

I.a. Items that enter sterile tissue or the vascular system are categorized as critical and should be sterile when used. Sterility may be achieved by physical or chemical processes.[1,5-9]

When critical items are contaminated with microorganisms, including bacterial spores, the risk of infection is substantial.[2,10-12] Examples of critical items include, but are not limited to,

- surgical instruments;
- cutting endoscopic accessories that break the mucosal barrier;
- endoscopes used in sterile body cavities;
- cardiac, vascular, and urinary catheters;
- implants;
- needles; and
- ultrasound probes used in sterile body cavities.

I.b. Items that come in contact with nonintact skin or mucous membranes are considered semicritical and should receive a minimum of high-level disinfection.[1,5-9,13]

Intact mucous membranes generally provide a barrier to common bacterial spores but not to organisms such as tubercle bacilli and viruses.[2,11] Examples of semicritical items include, but are not limited to,

- vaginal and rectal probes, even when sheaths are used;
- respiratory therapy equipment;
- anesthesia equipment;
- bronchoscopes; and
- gastrointestinal endoscopes and accessories.

I.b.1. Semicritical devices contaminated or potentially contaminated with hepatitis B virus (HBV), hepatitis C virus (HCV), HIV, multi-drug resistant bacteria, or *Mycobacterium tuberculosis* (TB) should receive a minimum of high-level disinfection.[2]

Literature has supported and research has demonstrated that high-level disinfectants inactivate these and other pathogens that may contaminate semicritical devices.[3,6,10,14-22] The practice of using HLD is consistent with standard precautions, which presume that all patients potentially are infected.[2]

I.c. Items that contact only intact skin are categorized as noncritical items and should receive intermediate-level disinfection, low-level disinfection, or cleaning.[1,5-9]