

# Recommended Practices for Environmental Cleaning in the Perioperative Setting

The following recommended practices for environmental cleaning in the perioperative setting 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, 2008. 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 numerous types of settings in which perioperative nurses practice. These recommended practices are intended as guidelines adaptable to various practice settings. These practice settings include traditional ORs, ambulatory surgery units, physicians' offices, cardiac catheterization suites, endoscopy suites, radiology departments, and all other areas where operative and other invasive procedures may be performed. The reader is referred to the Perioperative Nursing Data Set (PNDS) for explanation of nursing diagnoses, interventions, and outcomes.<sup>1</sup>

## Purpose

These recommended practices provide guidance for environmental cleaning and disinfection in the surgical practice setting. Conscientious application of these recommended practices should result in a clean environment for surgical patients and minimize the exposure risk of health care personnel and patients to potentially infectious microorganisms. Potentially, any patient could be infected with bloodborne or other pathogens; therefore, all surgical procedures should be considered potentially infectious.

## Recommendation I

### The patient should be provided a clean, safe environment.

Exogenous sources for pathogens that may cause a surgical site infection (SSI) include surgical personnel; the operating room environment (including the air); and all tools, instruments, and supplies brought to the sterile field during the procedure. Exogenous flora are mainly aerobes.<sup>2</sup> Health care-associated infections have been linked to external sources, which can include environmental surfaces.<sup>3</sup> The risk of infection from pathogenic organisms on environmental surfaces is due not only to their presence, but to their ability to survive on and be transferred to many surfaces.<sup>4</sup>

I.a. The perioperative registered nurse should assess the perioperative environment frequently for cleanliness and take action to implement cleaning and disinfection procedures if needed.<sup>5</sup> Cleanliness means the absence of visible dust, debris, soil, or body substances.

Environmental cleaning and disinfection is a team effort involving surgical personnel and environmental services personnel. The responsibility for verifying a clean surgical environment rests with perioperative nurses.

I.a.1. Preparation of the OR should include visual inspection for cleanliness before case carts, supplies, equipment, and instrument sets are brought into the room.

I.b. All horizontal surfaces in the OR (eg, furniture, surgical lights, booms, equipment) should be damp dusted before the first scheduled surgical procedure of the day.<sup>2</sup> Plasma and monitor screens should be cleaned according to manufacturers' instructions.

Dust is known to contain human skin and hair, fabric fibers, pollens, mold, fungi, insect parts, glove powder, and paper fibers among other things.<sup>6-8</sup> Airborne particles range in size from 0.001 microns to several hundred microns. Contamination from particles can come from an external source (eg, ventilation, doors) or an internal source (eg, equipment, personnel activity).<sup>9</sup>

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, the growth of gram-negative bacilli may persist.<sup>10</sup> Fungi, which favor moist, fibrous material, also are found in dust. Damp dusting prevents microbial-laden dust from being dispersed throughout the environment.<sup>8</sup>

I.b.1. Equipment from areas outside the restricted area of the OR should be cleaned before being brought into an OR.

I.b.2. A clean, lint-free cloth moistened with an Environmental Protection Agency (EPA)-registered hospital detergent/disinfectant should be used to damp-dust.

I.b.3. Cleaning and disinfection methods that produce mist, aerosols, or dust (eg, spray bottles containing disinfectant) should not be used.<sup>11</sup>

