# Recommended Practices for Sterile Technique

The following Recommended Practices for Sterile Technique have been approved by the AORN Recommended Practices Advisory Board. They were presented as proposed recommendations for comments by members and others. They are effective December 15, 2012. 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, and as such, these recommended practices are intended as guidelines adaptable to various practice settings. These practice settings include traditional operating rooms (ORs), ambulatory surgery centers, physicians' offices, cardiac catheterization laboratories, endoscopy suites, radiology departments, and all other areas where surgery and other invasive procedures may be performed.

## Purpose

These recommended practices provide guidance for establishing and maintaining a sterile field by following the principles and implementing the processes of sterile technique. Sterile technique involves the use of specific actions and activities to prevent contamination and maintain sterility of identified areas during operative and other invasive procedures. Implementing sterile technique when preparing, performing, or assisting with surgical and other invasive procedures is the cornerstone of maintaining sterility and preventing microbial contamination.

The creation and maintenance of a sterile field can directly influence patient outcomes.[1] All individuals who are involved in operative or other invasive procedures have a responsibility to provide a safe environment for patients. Perioperative team members must be vigilant in safeguarding the sterility of the field and ensuring that the principles and processes of sterile technique are followed and implemented. Perioperative leaders can promote a culture of safety by creating an environment where perioperative personnel are encouraged to identify, question, or stop practices believed to be unsafe without fear of repercussion.

The perioperative registered nurse (RN) uses ethical principles to make clinical decisions and act on them.[2] Adhering to the principles of and implementing the processes for sterile technique is a matter of individual conscience and an ethical obligation that applies to all members of the perioperative team. Perioperative team members should understand the professional responsibility to ensure that contamination of the sterile field is remedied immediately, and to make certain that any item for which sterility is in question is not used. Adhering to the principles of and implementing the processes for sterile technique and taking immediate action to protect the patient when breaks in sterile technique occur meets the maxim, "first, do no harm." The perioperative team serves as the protective intermediary between patients and personnel whose practices do not meet the highest standards of sterile technique. Perioperative nurses have a long-standing reputation of advocating for patients and working together with members of the health care team to provide a safe perioperative environment for patients undergoing operative or other invasive procedures.

Although these recommendations include several references to surgical attire (including surgical masks) and hand hygiene, the focus of this document is on sterile technique. Surgical attire and hand hygiene are outside the scope of these recommendations. The reader should refer to the AORN "Recommended practices for surgical attire"[3] and "Recommended practices for hand hygiene in the perioperative setting"[4] for additional guidance.

## Evidence Review

A medical librarian conducted a systematic review of MEDLINE®, CINAHL®, Scopus®, and the Cochrane Database of Systematic Reviews for meta-analyses, randomized and nonrandomized trials and studies, systematic and nonsystematic reviews, and opinion documents and letters. Search terms included *sterile field, sterile technique, aseptic technique, aseptic practices, surgical drapes, double-gloving, assisted gloving, closed gloving, time-related sterilization, event-related sterilization, surgical attire, protective clothing, sterile supplies, sterile barriers, barrier precautions, body-exhaust suits, space suits, laminar air flow, bowel technique, (glove expansion and fluids), (glove perforation and electrosurgery), strikethrough, Spaulding's criteria, product packaging,* and *equipment contamination.*

The lead author and medical librarian identified and obtained relevant guidelines from government agencies, other professional organizations, and standards-setting bodies. The lead author assessed additional professional literature, including some that initially appeared in other articles provided to the author.

The initial search was confined to 2006 to 2011, but the time restriction was not considered in subsequent searches. The librarian also established continuing alerts on the topics included in this recommended practice and provided relevant results to the lead author.

Articles identified by the search were provided to the project team for evaluation. The team consisted of