Specimen Management

Purpose/Goal:

To provide the learner with knowledge specific to the management of surgical specimens. Effective specimen management in the perioperative setting is essential for accurate patient diagnosis and intervention. In collaboration with a multidisciplinary team, the implementation of a specimen management process includes a needs assessment, site identification, collection and handling, transfer from the sterile field, containment, specimen identification and labeling, preservation, transport, disposition, and documentation. Accurate specimen management requires effective multidisciplinary communication and an awareness of the potential opportunities for error.
Specimen management is a multifaceted, multidisciplinary process in which perioperative nurses play a crucial role. As members of a multidisciplinary team, perioperative nurses can help establish policies and procedures for specimen management that will comply with regulatory requirements and accreditation standards and promote safe patient care. Understanding the facets of the specimen management process can help personnel preserve the integrity of the specimen and prevent exposure of health care workers to blood, body fluids, and other potentially infectious materials or chemical hazards. Correctly managing the specimen can help ensure that the patient receives an accurate diagnosis and effective treatment.

The AORN “Recommended practices for specimen management” provides guidance for developing a specimen management process. The RP document contains expanded content to provide perioperative RNs and other perioperative personnel with guidelines for managing specific types of specimens in perioperative practice settings, including breast cancer specimens, digits and limbs to be reattached to patients, forensic and radioactive specimens, and explanted medical devices and orthopedic hardware. Regulatory requirements are included to address medical device recalls and required documentation. Accurate specimen management is essential to providing timely diagnosis and effective treatment for surgical patients. It is not uncommon for multiple specimens to be taken from one patient; in these cases, additional processes may be required to facilitate accurate site identification and specimen collection, handling, transfer, containment, identification and labeling, preservation, transport, and documentation. Opportunities exist for multidisciplinary communication between perioperative team members and others who may have contact with the specimen to ensure processes are identified to help prevent errors from occurring.

Errors can occur in various phases of the specimen management process. Errors in specimen management often are related to human factors resulting from slips and lapses that may not be noticed at the time they occur. Adhering to the specimen management recommendations can help prevent errors that may adversely affect patient care.
Appropriate specimen management requires that perioperative RNs adhere to best practices for specimen management and strive to prevent errors. Specimen related errors may lead to inaccurate or incomplete diagnoses, the need for additional procedures, and perhaps most importantly, physical and psychological injury to patients.

Although the specific steps for handling various types of specimens may differ, the management process is essentially the same. For example, a frozen section specimen may be handled or preserved somewhat differently than a cytology sample; however, the management process for both specimens is essentially the same. Specimen management is a multifaceted, multidisciplinary process.

The following is a safety tool developed by the Hard Wire Safety Tools Committee at Westchester Medical Center, to be used by the surgical team when specimens will be obtained as a part of the procedure, to ensure patient safety in the procurement of specimens.
**Procurement of Specimens**

**Hard Wired Safety Tool**

- All specimens will have a “Call OUT” and “Acknowledgement” through the chain of control (Surgeon> Scrub Personnel> Circulating Nurse)
- Verbal acknowledgement/ verification of specimen will include: Patient label, source (site/side), type of tissue, clinical diagnosis, pertinent clinical information, method of preservation and indicated study requested
- Circulator and Scrub both verify specimen with write down and read back
- Scrub Personnel will ask surgical attending “May I hand off the specimen?”
- If specimen is not handed off immediately, it **MUST BE** labeled on the back table and passed off “AS SOON AS POSSIBLE”
- Verbal verification, of each specimen, **“Must”** happen between the circulator and surgeon at the time the specimen is handed off field
- Surgeon signs the Pathology Request form for final verification and completes the Clinical Data field as appropriate.
Reducing errors in specimen management requires a careful review of previous errors. The simple application of redundancy to various portions of the specimen management cycle (ie, double-checking the steps of the process) may significantly reduce errors.

**Specimen Management must include:**
- The patient and specimen identification information must be included on the label, and
- Specimens must be labeled to communicate preservative and biohazard information
- Specimen containers must be leak proof and puncture resistant. (This is a regulatory requirement).
- Air exposure can desiccate the tissue. Dry surfaces may adhere to the tissue, and this can result in loss of portions of the resection margins when the specimen is removed from the dry surface.
- Careful monitoring of specimens that must remain on the sterile field reduces the possibility for the specimen to be lost or compromised. Passing specimens off the sterile field as soon as possible reduces the possibility for the specimen to be lost or compromised.
- Breast cancer specimens should be handled in a manner that preserves the molecular and genetic signatures of the specimen. Delays in fixation can result in a decreased ability to detect breast biomarkers in the sample.

Perioperative nurses play an important role in advocating for patients and working together with members of the health care team to provide a safe perioperative environment. One basic element of advocating for patients and promoting a safe perioperative environment is to adhere to best practices for specimen management and to do everything possible to prevent specimen-related errors. These errors may lead to inaccurate or incomplete diagnoses, the need for additional procedures, and perhaps most importantly, physical and psychological injury to patients.