



AST Standards of Practice for Handling and Care of Surgical Specimens

Introduction

The following Standards of Practice were researched and authored by the AST Education and Professional Standards Committee and have been approved by the AST Board of Directors. They are effective April 13, 2008.

AST developed the Standards of Practice to support the healthcare facilities in the reinforcement of best practices, related to the handling and care of surgical specimens in the perioperative setting. The purpose of the Standards is to provide an outline that healthcare workers (HCWs) in the perioperative setting can use to develop and implement policies and procedures for the handling and care of surgical specimens. The Standards are presented with the understanding that it is the responsibility of the healthcare facility to develop, approve, and establish policies and procedures for the handling and care of surgical specimens according to established healthcare facility protocols.

Rationale

The following are Standards of Practice related to the proper handling and care of surgical specimens in the perioperative setting. The handling of specimens before they reach the pathology department is referred to as the preanalytic phase.⁹ It is a process that involves many HCWs and many steps including communication of information among the surgical team members, labeling, packaging, and transport of the specimen that may contribute to increasing the risk of error. In one six-month study conducted at a university healthcare facility, the following was identified⁵:

- Of 10,354 surgery department specimens, 38 had errors.
- Of the 21,351 total number of specimens studied that originated from various hospital departments, 54 of 91 mislabeled specimens originated from the surgery department. Out of those 54, the surgical procedures in which specimens were most commonly mislabeled are:
 - breast
 - skin
 - colon
 - prostate

Another major concern in addition to mislabeling errors is loss of specimen. When addressing loss of specimen, there are two categories: (1) procedure that can be repeated in order to obtain another specimen; (2) specimen that cannot be replaced, such as an excised organ or tumor.⁹ The first category is not optimal since the patient has to repeat the risk of undergoing a procedure again as well as increasing patient morbidity, loss of time from job and family, and increase the patient's mental stress and anxiety. The

second category represents the greatest concern since an incomplete diagnosis, misdiagnosis, or delayed treatment, could result in wrong treatment, causing the patient to undergo additional treatment as a safety measure even though it may not be needed, or cause treatment of wrong area of the body.

Additionally, for both categories, the healthcare facility is facing possible litigation.¹¹

As previously mentioned, delivering a specimen to the pathology department involves many steps including:

1. Correctly identify the patient.
2. Correctly identify and confirm the specimen by the surgical team.
3. Placing the specimen in an appropriate container and preservative.
4. Correctly label the specimen.
5. Complete the pathology requisition slip.
6. Transport the specimen to the pathology department.

Each of these steps can involve additional sub-steps that increase the risk for error. Therefore, on an overall basis, the purpose of proper handling and care of specimens is that the collection, labeling, preservation, transportation and chain of custody ensures continuity of quality care for the patient and provides a method to retrieve needed information. Each HCW involved in the chain of custody must understand and know the procedures for the handling and care of specimens, and the consequences to the patient if there are errors.

Standard of Practice I

The proper handling and care of specimens begins during the preoperative phase of patient care and preparations including all communications should involve the surgical team.

1. The surgical team should coordinate the information concerning the specimen(s) to include:
 - A. Type of specimen, eg frozen section, aerobic or anaerobic, specimen to be placed in preservative
 - B. Confirm with surgeon other types of diagnostic studies to be performed, including Gram stain, acid fast and mycological.
 - C. Anticipated number of specimens.
 - D. Type and size of needed container(s) including whether they the containers should be sterile or clean
 - E. Will preservative be required and what type of preservative?
2. The surgical team should be aware of any cultural preferences of the patient concerning the specimen, eg certain religions require an amputated body part to be given to the patient. This information should be documented in the patient's chart.
 - A. If the patient requests to keep a specimen, the specimen should still undergo pathological examination, and the surgical team should follow healthcare facility policies and procedures, including standard precautions in returning the specimen to the patient.

3. Planning involves communicating with the department(s) and persons that will be involved in the chain of custody including:
 - A. Providing assistance to the pathology department in identifying the surgical procedures that will have surgical specimen(s)
 - B. Communicating to the pathology department the surgical procedures where a frozen section will be required
 - C. Communicating to HCWs involved in the chain of custody any special circumstances, eg specimen for frozen section needing immediate delivery to the pathology department, anaerobic or aerobic culture that needs to be immediately delivered to laboratory.

Standard II

Specimens to be transported to the pathology department should be placed in the proper container to preserve and protect the specimen.

1. Containers should be rigid, impermeable, unbreakable and non-reactive to fixative solutions to prevent HCWs from becoming infected as a result of exposure to infectious substance.¹⁸
2. The correct size of container must be used to hold and protect specimens.
3. Containers should have a secure, tight-fitting cover/lid to prevent the fixative solution from escaping in order to prevent the HCW from contamination when handling the container and to prevent the escape of noxious fumes that could also be a health hazard.^{8,18}
4. The healthcare facility must maintain an inventory of various sizes of containers in order to accommodate the different types and sizes of specimens.
5. The containers should not be transparent in order prevent visualization of the contents when transporting to the pathology department. The documentation accompanying the container should be maintained in a manner that ensures patient confidentiality.¹⁴

Standard of Practice III

HCWs should practice appropriate precautions in the handling of specimens and the containers to protect the specimen as well as to prevent self-contamination.

1. Unless otherwise indicated, specimens should be kept moist and must never be allowed to dry.
 - A. Specimens should be placed into the container with fixative as soon as possible. If this cannot be completed in a timely manner, the specimen should be placed in a sterile basin and kept moist with sterile saline or wrapped in saline-soaked sponges until the specimen can be passed off the sterile field to the circulator and placed in the container with fixative.
2. Specimens must not be passed off with, or on, a radiopaque counted sponge.
 - A. Small specimens should be placed on a sterile Telfa™ pad and using aseptic technique, passed off the sterile field to the circulator.
3. Specimens should be gently handled by the Certified Surgical Technologist (CST) in the first scrub role when receiving from the surgeon and when passing off to the circulator.

- A. The use of surgical instruments should be avoided if possible when handing the specimen to prevent crushing or damaging the tissue.
 - B. If a surgical instrument must be used when passing the specimen to the circulator, the CST should use an atraumatic clamp or tissue forceps.
 - C. When manually handling the specimen, avoid crushing the tissue with the fingers.
4. Large specimens that will not fit in the largest container available may be placed in a sterile basin and passed off the sterile field to the circulator.
 - A. Prior to delivery to the pathology department, the circulator should place a towel over the basin, place the basin in a clear, impervious bag and have the specimen immediately delivered to the pathology department.
 5. When a sterile container is used by the CST, standard precautions should be followed.
 - A. Prior to passing off the sterile container to the circulator, the CST should wipe down the outside of the container with a clean, sterile sponge.
 - B. The circulator should wear gloves when receiving the container from the CST using aseptic technique.
 - C. The circulator should wipe down the outside of the container with a clean sponge or towel, and place the container in a clear, impervious bag.
 6. The Certified Surgical Technologist (CST) should obtain permission from the surgeon to pass the specimen off the sterile field to the circulator.
 7. When delivering the container to the pathology department, HCWs should not open the container after the lid has been placed to avoid spilling the fixative and/or become contaminated by the specimen.

Standard of Practice IV

Specimen containers should be properly labeled.

1. The following information should be written on the label in the operating room by the circulator:
 - A. Type of specimen
 - B. Site of specimen including left or right side
 - C. Two unique identifiers, eg patient name and hospital number¹³
 - D. Date and time specimen received from CST
 - E. Type of preservative, if used
 - F. Surgeon's name
 - G. Suture tag if present and placement, eg 12 o'clock position or lower left quadrant
2. The label should be placed on the side of the container and not the lid to avoid loss of the label when the lid is removed in the pathology or laboratory department.
3. The container should be clearly labeled when containing a biohazardous substance to alert the HCWs handling the container and prevent personnel contamination.¹⁸
4. Permanent black or blue ink should be used when writing the information on the label.

Standard of Practice V

Preservative solutions should be handled, distributed and disposed of by HCWs in accordance with established healthcare facility policies and procedures.

1. The healthcare facility should establish policies and procedures for the handling, distribution and disposal of preservative solutions based on the standards and regulations as established by the Occupational Safety and Health Administration, EPA and manufacturer's recommendations.
 - A. HCWs should be knowledgeable about the healthcare facility's policies and procedures for the handling of preservative solutions.
 - B. HCWs should receive training on the safe handling of preservative solutions, including use of personal protective equipment, care and treatment of self and others in the event of an accident, and cleanup of spills.
2. The use of a preservative should be confirmed by the CST and circulator with the surgeon.
3. Formalin is a common preservative; precautions include the following when handling formalin.
 - A. Formalin contains formaldehyde, which is dangerous if swallowed. It is harmful and an irritant if inhaled, can be absorbed through the skin also causing irritation, and if splashed in the eye causes irritation and possible corneal damage. There is also sufficient evidence that formaldehyde can cause nasopharyngeal cancer in humans. Therefore, when handling formalin, all precautions should be taken to avoid exposure to the toxic fumes and splashing into the eyes or onto the skin.
 - B. Formalin should not be poured directly over a specimen to avoid splashing. A specimen container in which the formalin has been pre-poured should be used when placing the specimen in the container.
 - C. HCWs should wear the proper PPE when handling formalin, including goggles, mask, face shield, protective impervious gloves and appropriate protective impervious clothing/cover apparel.^{7,12} The PPE should be worn when pouring formalin into containers or when the risk of exposure exists. The face shields should not be substituted for eye protection; both should be worn.¹²
 - D. The HCW should thoroughly wash the hands and forearms after handling formalin.¹²
 - E. The healthcare facility should monitor exposure to formalin fumes, in particular in the room where formalin is stored. If it is determined that the possibility exists for exposure that is above the OSHA permissible exposure limit (PEL), the HCW should wear a NIOSH-approved full facepiece respirator when handling formalin.⁷
4. A designated area in the surgery department should be established for storing formalin. The OSHA and EPA regulations for storage should be followed.^{7,15}
 - A. The storage room should be cool, dry and well ventilated with a negative pressure ventilation system and contain an exhaust hood.
 - B. Substances that are incompatible with formalin should not be placed in the storage room.⁷

- C. Formalin storage containers should be clearly marked as formalin and have a chemical hazard label fixed on the container.
 - D. HCWs should know the healthcare facility's policies and procedures for storage and dispensing of formalin.
5. HCWs should follow the healthcare facility's policies and procedures for the cleanup of spills. Healthcare facilities policies should comply with EPA regulations for the clean-up of hazardous waste.
 - A. If a large quantity of formalin is spilled, the HCW should immediately leave the area and report it to the proper healthcare facility personnel. Designated HCWs that are responsible for the cleanup should isolate the area and not allow personnel who are not wearing the proper PPE to enter. (OSHA, Substance technical guidelines for formalin). Sources of ignition should be immediately removed from the area of spill.
 - B. For small spills, the HCW should don the PPE, immediately remove sources of ignition from the area of the spill, neutralize the spill with use of sodium hydroxide and use absorbent material to clean the spill. The absorbent material should be placed into a container marked with a hazardous label and disposed (see #6 for disposal of chemical waste).⁷
 6. Formalin is regulated substance of the US Environmental Protection Agency (EPA). The EPA lists formalin as a U-listed hazardous chemical that should be disposed of according to local, state and federal laws.^{7,15}
 7. In the event of accidental unprotected contact or excessive inhalation of formalin, the healthcare facility's policies and procedures for care and treatment of the HCW should be followed, as well as proper reporting procedures. First aid procedures include the following¹²:
 - A. Formalin splashed into eye(s): Immediately flush the eye(s) with water occasionally lifting the upper and lower eyelids and seek medical treatment.
 - B. Formalin contact with skin: Immediately remove contaminated clothing, including shoes if necessary. Flush the skin with water and seek medical treatment.
 - C. Excessive inhalation: Immediately remove HCW from exposure area to an area where fresh air is available. If the exposure area is heavily contaminated with fumes, the rescuer may need to don PPE before assisting the exposed HCW. Administer oxygen via mask as soon as possible. If exposed HCW is unconscious and not breathing, administer artificial respiration after removing from exposure area.
 8. The Material Safety Data Sheet for formalin (formaldehyde) should be permanently maintained and easily accessible at all times by HCWs who have the potential for exposure to formalin and/or handle formalin.

Standard of Practice VI

Specimens designated for frozen section should be properly handled, transported and disposed of according to healthcare facility policies and procedures.

1. The CST and circulator should confirm with the surgeon preoperatively and intraoperatively that the specimen is designated for frozen section.

- A. The pathology department should be notified preoperatively of the surgical procedure(s) in which a specimen for frozen section will be transported to the department.
2. Specimens designated for frozen section must be immediately passed off the sterile field to the circulator and delivered to the pathology department.
 - A. The specimen should be passed off the sterile field by the CST to the circulator using aseptic technique. The circulator should be wearing gloves when receiving the specimen.
 - B. The specimen should not be passed off the sterile field with the use of a counted radiopaque sponge. The CST should use a Telfa™ pad, sterile towel, sterile container or medicine cup.
 - C. Specimens designated for frozen section should not be placed in a preservative solution.
 - D. Healthcare facility policy and procedure should be followed for the proper labeling and transportation of the specimen to the pathology department.
3. The pathologist should communicate directly with the surgeon when providing information related to the diagnosis of the specimen.
 - A. A verbal direct report from the pathologist to the surgeon should be recorded in the patient's OR record. The pathologist should be informed of the patient's level of consciousness prior to providing an oral report whether in person, by telephone or intercom.
 - B. If verbal communication is not possible, the communication should be written to include the date, time communication was written, and signed by the pathologist, as well as placed in the patient's OR record.

Standard of Practice VII

Aerobic and anaerobic culture specimens should be properly obtained, handled, transported and disposed of according to healthcare facility policies and procedures.

1. The culture should be obtained by the surgical team using aseptic technique to prevent contamination of the inside of the culture tube and swab.
2. If the circulator dispensed the culture tube onto the sterile field, he/she should be wearing gloves when the CST passes off the culture tube from the sterile field. The circulator should decontaminate the exterior of the culture tube prior to transport to the laboratory department.
3. Healthcare facility policy and procedure should be followed for the proper labeling and transportation of the culture tube to the laboratory department. The culture tube should be immediately delivered to the laboratory department.

Standard of Practice VIII

Anaerobic culture specimens obtained with a syringe should be properly handled, transported and disposed of according to healthcare facility policies and procedures.

1. When a hypodermic needle attached to the syringe is used to aspirate the fluid, the CST should remove the needle, place it in the sharps container on the sterile backtable, recap the syringe and, using aseptic technique, pass the syringe off the sterile field to the circulator.

2. When a needle is not used for aspirating the fluid, the CST should recap the syringe before passing it off the sterile field to the circulator, in order to prevent the fluid from escaping.
3. The circulator should be wearing gloves when handling the syringe.
4. Decontamination of the exterior of the syringe is not recommended since it may cause the pushing or pulling of the plunger, causing leakage or ejection of the fluid.
5. The circulator should place the syringe in an impervious bag or container for transport to the laboratory department.
 - A. Laboratory personnel should be notified that the inside of the impervious bag or container is considered contaminated since the exterior of the syringe has not been decontaminated.
6. Healthcare facility policy and procedure should be followed for the proper labeling and transportation of the syringe to the laboratory department. The syringe should be immediately delivered to the laboratory department.

Standard of Practice IX

Radioactive specimens should be properly handled, transported and disposed of according to healthcare facility policies and procedures.

1. The healthcare facility should develop written procedures for handling, labeling, transporting, storing and disposing of radioactive specimens.
 - A. The policies should be written with the primary purpose of keeping radiation exposure to HCWs as low as possible.⁴
 - B. The policy should address the training of designated HCWs in the handling of radioactive specimens, as well as document that HCWs are knowledgeable about the policy. The healthcare facility radiation safety officer (RSO) is responsible for training surgical personnel and other HCWs. Only those HCWs who have been documented by the RSO as having completed the proper training should be authorized to handle radioactive specimens.
 - C. The development of safety procedures should be the responsibility of the RSO.⁴
 - D. The policy should address how specimen containers are labeled. Labeling should follow the US Nuclear Regulatory Commission Regulations.¹⁷ Federal law requires that labels attached to a container indicating radioactive material must be removed prior to disposal of the container.
 - E. The pathology requisition slip should include the name of the radioactive material, ie sentinel lymph node – technetium injection.
 - F. The policy should describe the methods of transporting radioactive specimens from the surgery department to the pathology department. Radioactive specimens should be immediately transported from the operating room to pathology; the specimen should not be left unattended in an unsecure area prior to being transported to pathology.⁴
 - G. The surgical personnel who transport radioactive specimens to pathology should wear gloves when handling the container.

Standard of Practice X

The handling and reporting processes of defective medical device specimens should be established by the healthcare facility in accordance with federal regulations.

1. The defective medical device should be reported to the manufacturer according to the policies and procedures of the US Food and Drug Administration¹⁶: A healthcare facility report in regard to the medical device should be completed and provided to the manufacturer; information explaining the reason for removal of the medical device should be included in the report.
2. Upon removal of the medical device, it should be placed in an impervious bag or appropriate size container, and all parts of the medical device should be kept together in the bag or container. The medical device must not be decontaminated or sterilized prior to transport from the surgery department.
3. The medical device should be transported to the pathology department in order to document the confirmation of identity.

Standard of Practice XI

Foreign objects such as bullets are medical-legal evidence and should be properly managed in order to preserve the evidence as well as follow healthcare facility policies and procedures for documenting the chain of custody.

1. In situations where a criminal investigation is occurring and/or the patient is under arrest, the patient's clothes and other belongings should be secured as evidence to turn over to law enforcement.
 - A. Surgical team members who are handling evidence, including clothes, should do so wearing non-powdered gloves. Evidence should be handled as little as possible, in particular clothes, to avoid particles falling off that could also serve as evidence.
 - B. Clothing that is being removed from the patient should be cut along the seams. Avoid cutting through holes or punctures. Cut around them since they may provide law enforcement with evidence of bullet or knife entries.¹⁰
 - C. Clothing should be placed into paper bags and not placed into plastic bags. Plastic bags confine moisture which can decompose evidence and contribute to the formation of mold and mildew that will also destroy evidence.
 - D. Clothes that are wet with blood, body fluids or other fluids should be placed in moisture-proof bags to avoid leaking and cross-contamination of surgical personnel and law enforcement officers that handle the bags.
 - E. Footwear should be placed in a separate paper bag.¹⁰
 - F. The sheet(s) from the stretcher should be placed in a separate paper bag, since evidence may have fallen from the clothes onto the sheet.¹⁰
 - G. Each paper and plastic bag should be labeled with the patient's name, contents, and numbered. All of this information should also be documented in the patient's OR record.
2. Detailed documentation and descriptions of wounds and other body markings that are discovered on the patient should be completed. Additionally, any sites on the skin that have been punctured by OR personnel should be recorded, eg site of IV

- insertion. If the patient makes any statements before or during induction, they should be documented in detail.¹⁰
3. Bullets should not be handled with a metal instrument unless tip covers were placed by the CST. Handling a bullet with a metal instrument can scratch the surface of the bullet, thus interfering with evidence markings.
 - A. When removed, the CST should use sterile water to rinse off the blood and tissue to prevent microscopic evidence markings from being destroyed.
 - B. The CST should place the bullet into a nonmetal specimen container and, using aseptic technique, pass off to the circulator. The circulator should wear gloves when receiving the container and decontaminate the outside of the container. The circulator then places the container in an evidence envelope, seals the envelope, completes the healthcare facility evidence document and attaches it to the envelope. A label with the patient's identification (name and hospital number), date and time when evidence was collected, and name of surgeon should be attached to the envelope.
 4. To avoid smearing fingerprints, a knife should be handled on areas not normally handled and immediately placed into an evidence envelope or bag by the surgeon upon removal.¹⁰
 5. Sealed evidence should be transferred to the law enforcement officer. Documentation should be completed verifying the chain of custody from removal of the evidence by the surgeon to examination of the evidence.
 - A. Documentation in the patient's OR record should include area of the body where evidence was removed, eg lower left quadrant of abdomen; description of removed foreign body; name and badge number of law enforcement officer who was given the evidence; time of transfer and how evidence was transferred to the law enforcement officer.¹⁰
 - B. If the law enforcement officer is not immediately available to receive the evidence, healthcare facility policy and procedures should be followed for securing the evidence, until transfer can take place. The evidence with attached label and documentation should be kept in a secure, locked location where only one person has a key in order to guarantee the chain of custody.⁹

Standard XII

Healthcare facilities should establish policies addressing specimens that are identified as not having to be submitted to the pathology department, specimens that only require gross examination and specimens that should undergo routine microscopic examination.

1. Healthcare facility policy and procedures for determining specimens that are not required to be submitted to the pathology department, specimens that require only gross examination and specimens that should undergo routine microscopic examination must be jointly formed by the pathologist and facility's clinical staff, according to The Joint Commission's Standards and College of American Pathologists recommendations.^{3,13}
 - A. The policy should include that specimens not exempted from examination must be submitted to the pathology department.

- B. The surgeon and pathologist jointly have final decision making authority related to determining the degree of pathological examination a specimen should undergo.⁹
2. Healthcare facility policy and procedures for the disposition of tissue specimens should be based upon local, state and federal regulations.⁶

Standard XIII

A systems approach should be utilized when developing the healthcare facility's procedures and policies for identification, handling, communication, documentation, transportation and disposition of specimens.

1. A systems approach places emphasis on viewing the process as a whole in the handling and transport of specimens. Rather than focus on the traditional approach of attaching blame on an individual, policies and procedures formed within a systems approach focuses on the safeguards that can be established to reduce the risk of errors.^{9,11} Additionally, if an error occurs in the handling of a specimen, the system/policies and procedures can be reviewed and revised as necessary to avoid a future system error.
 - A. Establishing consistent methods of verbal and written communication as well as chain of custody is essential to decreasing the risk of errors. The development of a flowchart that can be periodically reviewed is a useful aid.
 - B. Immediately placing the specimen into the container and labeling the container reduces the risk of losing the specimen during clean-up of the OR. Verbal confirmation of patient and specimen information between the surgeon and CST, CST and circulator, circulator and surgeon will aid in ensuring that the specimen has been retrieved, secured, and properly labeled.
 - C. The use of pre-printed forms, including checklists, laboratory requisition slips and daily specimen logs indicating information to be entered reduces the need for HCWs to rely on memory and ensure that all required information for processing specimens is obtained.
 - A checklist that is completed by the circulator prior to the specimen being transported out of the OR aids in reducing error. The checklist can serve as a double check for accuracy; it can be prompted by the circulator asking "has the specimen been verified" and each member of the surgical team verifying.
 - D. A requisition form should accompany all specimens delivered to the pathology or laboratory department. The healthcare facility should have a pre-printed requisition form. Pertinent information may be stamped on the form using the patient's addressograph card. The following information should be completed on the form:
 - Patient's name
 - Patient's healthcare facility identification number
 - Patient's unit and/or room number
 - Clinical diagnosis
 - Surgeon's name

- Source of specimen to include anatomical location where the specimen was removed, side, etc.
 - Type of tissue
 - Date and time of collection in the OR
 - Study requested, eg culture, Gram stain, frozen section, etc.
 - Other pertinent clinical information
 - Name of circulator who completed documentation and preparation of the specimen for transport to the pathology or laboratory department
- E. Chain of custody tracking should be established within the system for handling specimens. The chain of custody process should be simplified and the number of hand-offs kept at a minimum; each hand-off is represented as a potential source of error.^{9,11} A surgery department specimen log book should be used to record each specimen to include name of specimen, two patient identifiers, date, time of log-in, and name of each HCW involved in the transport of the specimen.
- F. The pathology, laboratory and surgery departments should agree upon an established schedule for the pick-up/transport of permanent specimens.
- G. To create ownership of the process of handling specimens, a healthcare facility department, such as the pathology department, should be designated as overseeing the system, including development and revision of policies.¹¹
2. Periodic training of HCWs involved in the handling of specimens should be completed. The training should involve review of policies and procedures, as well as receiving feedback from HCWs for improvement of the system.

Competency Statements

| Competency Statements | Measurable Criteria |
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| <p>1. CSTs and Certified Surgical First Assistants (CSFAs) have the knowledge and skills for the proper handling of all types of surgical specimens in the perioperative environment including completing required documentation, labeling, containment and storing, and transporting.</p> <p>2. CSTs and CSFAs understand and implement the policies and procedures for the chain of custody of specimens.</p> <p>3. CSTs and CSFAs have the knowledge and skills for implementing aseptic technique in the handling of specimens on and off the sterile field.</p> | <p>1. Educational standards as established by the <i>Core Curriculum for Surgical Assisting</i> and <i>Core Curriculum for Surgical Technology</i>.^{1,2}</p> <p>2. The subject of care and handling of specimens is included in the didactic studies as a student. Additionally the studies include completing the proper documentation and legal and ethical aspects.</p> <p>3. Students demonstrate knowledge of handling specimens in the lab/mock OR setting and during clinical rotation to include implementing the use of PPE.</p> |

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| <p>4. CSTs and CSFAs understand and implement the EPA, CDC and OSHA regulations and recommendations for the handling of toxic preservative solutions.</p> <p>5. CSTs and CSFAs are knowledgeable of Standard Precautions and the use of personal protective equipment (PPE) when handling specimens.</p> <p>6. CSTs and CSFAs understand the physical and psychological effects on the patient in regard to the loss, mishandling or damage to a specimen, as well as the legal ramifications.</p> | <p>4. As practitioners, CSTs and CSFAs care and handle for specimens in the perioperative environment according to healthcare facility policies and procedures. Healthcare facilities whose protocols and policies allow, CSTs and CSFAs complete the required documentation.</p> <p>5. CSTs and CSFAs complete continuing education to remain current in their knowledge of Standard Precautions and PPE as well as annual review of the policies of the healthcare facility in regard to the handling of specimens.</p> |
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