Recommended Standard of Practice for Counts

Introduction

The following Recommended Standards of Practice were researched and written by the AST Education and Professional Standards Committee and have been approved by the AST Board of Directors. They are effective October 27, 2006.

AST developed the following Recommended Standards of Practice to support facilities in the reinforcement of best practices, related to performing the sponge, needle and instrument counts in the perioperative setting. The purpose of the Recommended Standards is to provide an outline that surgical team members can use to develop and implement policies and procedures for counts. The Recommended Standards is presented with the understanding that it is the responsibility of the healthcare facility to develop, approve, and establish policies and procedures for performing counts, according to established healthcare facility protocols.

Rationale

The following are Recommended Standards of Practice related to properly performing sponge, needle and instrument counts in the perioperative setting. It is recommended that sponge, needle and instrument counts be performed on all procedures that present with the possibility that a foreign object could be retained in order to increase patient safety practices in the perioperative setting. Risk factors identified as increasing the occurrence of an incorrect count or retained item include the following: emergency surgical procedures, unexpected change in the scope of the surgical procedure, procedures involving more than one surgical team, extended procedural length of time, unexpected transfusions, and morbidly obese patients.[18] One of several safe patient outcomes related to surgery is all items viewed as retainable foreign objects are accounted for at the end of the surgical procedure, due to careful counting and documentation by the surgical team. Several legal terms can be applied to a retained foreign object situation including iatrogenic injury, negligence, standard of care and *res ipsa loquitur*. All of them point to each member of the surgical team as playing an equal role and having shared responsibility in assuring the accuracy of counts, including any one of the surgical team members can be held liable for a foreign object retained by a patient due to error.[12,15] By following meticulous counting processes, the incidence of retained foreign objects should be reduced or better yet, not occur. All members of the surgical team should be involved in the process of developing and implementing healthcare facility policies and procedures for the performance of counts.[2]

Standard of Practice I

Sponges should be counted on all procedures that present with the possibility that a foreign object could be retained in order to support patient safety practices in the perioperative setting.

1. It is the responsibility of the Certified Surgical Technologist (CST) and circulator to properly perform the sponge counts.
    A. Sponge counts should occur as follows[3]:
        (1) Prior to the skin incision
        (2) When closure of peritoneum is initiated or any first layer of a cavity or
        (3) When closure of fascia is initiated or layer before subcutaneous
        (4) As soon as skin closure is initiated
    B. Instances in which additional sponge counts should occur include:
        (1) Intraoperative additions of sponges
        (2) Change in circulator
        (3) Change in CST
    C. The initial count should be recorded on the count sheet by the circulator as reference to ensure a sponge is not retained. Intraoperative additions of sponges should be recorded on the count sheet and added to the initial count, eg 10 initial count 4x4 Raytec sponges + 10 added sponges = 20 total.
    D. The facility policies on counting sponges may indicate situations when a count may not be performed or counts are not required[6]; see "G" below for stat emergency procedure situations.
    Instances of when counts may not be required include cystoscopy and ophthalmology procedures.
    E. The procedure for counting sponges should include the following guidelines:
        (1) The CST and circulator should audibly count the sponges and visualize each sponge.[3]
        (2) Each sponge should be separated to confirm all sponges are present and not sticking together, and the correct number of sponges were packaged by the manufacturer; see "F" for manufacturer mistakes in packaging.[11]
        (3) All sponges must be counted.
        (4) All sponges used during the procedure, with the exception of dressing sponges, must be radiopaque, eg X-ray detectable, to facilitate locating in the case of a retained sponge.
        (5) The binding strip of packaged sponges should only be broken when the sponges are to be counted and used, according to policies.
        (6) Sponge counts should be performed in the same sequence each time; healthcare facility policy should define the sequence. A typical sequence for intraoperative counts is as follows: surgical field, Mayo stand, back table and round basin, kick bucket(s),

discarded sponges/bagged sponges. Additionally the sequence of types of sponges should be established, eg smallest sized sponges to largest, or vice-versa. A standardized method for conducting the counts aids the surgical team members in knowing that the counts will always be done the same way for every procedure in order to contribute to accuracy and efficiency.[19]

F. The CST and circulator should never assume a manufacturer's prepackaged item is correctly counted. A package of sterile sponges that contains an incorrect number of sponges should be removed from the sterile field, bagged, labeled as incorrect and the number of sponges in the bag, and placed away from the rest of the sponges in the OR However, **do not remove** the bag from the OR until the procedure has been completed. A count is **also incorrect** if there are too many sponges, as well as if there are too few. If the sponge count(s) are incorrect, the possibility exists that a sponge or sponges from the package with the incorrect number of sponges were added to the sterile field. Keeping the incorrect prepackaged sponges in the OR contributes to reducing the possibility of errors during intraoperative sponge counts.[13]
G. In the event of a stat emergency procedure in which time is critical and the patient's life takes precedence, eg trauma, abdominal aortic aneurysm, cesarean section, an initial sponge count may not be able to be performed.[10] It is recommended that a sponge count be performed upon closure. However, an X-ray **must** still be done to assure no foreign bodies are present in the patient.[17] Refer to the last statement in this section for further recommendations related to no count/wrong count.
H. Sponges should not be altered, such as cutting to a smaller size or cutting off the strings on tonsil or neuro sponges. Altering the sponge increases the chance of an incorrect count occurring, or the cut portion of the sponge retained by the patient.
I. All counted sponges, including sponges that have been bagged, should not be removed from the OR, until the completion of the procedure, and all counts have been verified as being correct. Linen and waste containers should not be removed from the room, until all counts have been completed and verified as being correct.
J. It is recommended that counted sponges of any type should not be used for postoperative packing; only non-Raytec sponges should be used. Use of counted sponges for packing can contribute to an inaccurate count and should not leave the OR with the patient.
K. Miscellaneous items that will be used on and/or placed within the patient should have a radiopaque marker and be included in the count indicated as "miscellaneous items." A common miscellaneous item is towels often used to pack away bowel within the surgical wound; the towels should be included in the counts and kept separate from other non-counted items.[16]
L. It is recommended that radiopaque counted sponges should not be used for patient skin preps. If counted sponges are used, special attention should be

given to preventing them being thrown in the waste container. Unmarked sponges used for skin prep should be thrown into the waste container to avoid being mixed in with counted sponges.

M. Radiopaque counted sponges should not be used for dressings for the following reasons:
    (1) If the final count has not yet been completed, use of counted sponges as dressings could contribute to an incorrect count.
    (2) If the patient has to be brought back to surgery before the dressing is removed on the ward, and the dressing is removed in the OR, there is an increase in the chance of incorrect counts occurring.
    (3) Radiopaque sponges used as dressing material, could be misdiagnosed as a foreign object on postoperative X-rays.[18]

N. The CST should not request the dressing materials to be opened onto the sterile field by the circulator, until the skin incision of the surgical wound is fully closed [18] It is recommended the CST keep the dressing sponges separate from the counted sponges; this will prevent the non-counted, non-radiopaque sponges from becoming mixed in with the counted sponges.

O. Contaminated sponges must be handled according to the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard. Recommendations include wearing personal protective equipment in the handling of contaminated sponges and using bags that are leakproof for the disposal of the sponges to reduce the staff's exposure to infectious pathogens.

P. All sponges, counted and non-counted, should be removed from the OR at the end of the procedure. Removal of the sponges aids in preventing wrong counts during subsequent procedures in the room.

Standard of Practice II

Sharps and miscellaneous items should be counted on all procedures that present with the possibility that a foreign object could be retained in order to support patient safety practices in the perioperative setting.

1. Sharps and miscellaneous items should be counted on all surgical procedures by the CST and circulator.
    A. Counts should occur as follows:
        (1) Prior to the skin incision.
        (2) When closure of the peritoneum is initiated or any first layer of a cavity
        (3) When closure of fascia is initiated or layer before subcutaneous
        (4) As soon as skin closure is initiated
    B. Instances in which additional counts should occur include:
        (1) Intraoperative additions of sharps and miscellaneous items
        (2) Change in circulator
        (3) Change in CST
    C. The initial count should be recorded on the count sheet by the circulator as reference to ensure a sharp or miscellaneous item is not retained.

Intraoperative additions of sharps and miscellaneous items should be recorded on the count sheet and added to the initial count. Counting and recording sharps not only aid in preventing foreign object retention, but contribute to the awareness of the CST on the location of the sharps to help in preventing sharps injuries. Approximately 78% of needle-stick injuries are sustained by surgical team members.[1]

D. The following are the sharps recommended to count, including but not limited to, blades (scalpel blades, beaver blades), needles (atraumatic, free and hypodermic), Bovie tips, saw blades, and drill bits. Miscellaneous items that should be counted include suture reels, shods, umbilical tape, vessel loops, hemoclip cartridges, electrosurgical scratch pad, and trocar sealing caps.

E. The procedure for counting sharps and miscellaneous items should include the following guidelines:
    (1) The CST and circulator should audibly count each item, and each item should be visualized by both individuals to decrease the risk for incorrect counts.
    (2) Suture needles should be counted according to the number indicated on the outside of the manufacturer's outer sterile package. The CST should verify the number of needles when the package is opened. In some instances, the CST may open a suture packet that has multiple needles enclosed to count with the circulator prior to the incision. Facility policy should dictate, if this practice is acceptable.
    (3) It is not recommended that the empty suture packets be used to resolve a discrepancy in the sharps count since the number of needles on the sterile field may not match the number of empty suture packets.
    (4) Sharps counts should be performed in the same sequence each time; facility policy should define the sequence. A typical sequence for intraoperative counts is: surgical field (needle in needle holder), Mayo stand, back table (sharps container), and off the field (if any needles were contaminated or fell on the floor). A standardized method for conducting the sharps counts aids the surgical team members in knowing that the counts will always be done the same way for every procedure in order to contribute to accuracy and efficiency.[19]

F. The CST and circulator should never assume a manufacturer's prepackaged suture packet is correct, in particular packets that contain multiple needles. A suture packet that contains an incorrect number of needles should be removed from the sterile field, labeled as incorrect and put in a secure place in the OR However, **do not remove** the suture packet from the OR until the procedure has been completed. Keeping the incorrect prepackaged suture packet in the OR contributes to reducing the possibility of errors during intraoperative sharps counts.[13]

G. It should be the responsibility of the CST to account for all sharps on the sterile field. It is also the responsibility of the individual to properly secure sharps and not allow them to remain on the sterile field in a free manner that could contribute to the accidental introduction into the surgical wound, break in aseptic technique by piercing the sterile drapes, injury to the patient, or dropping on the floor. Sharps on the sterile field should be controlled and placed in a sterile disposable, puncture-resistant container, sometimes referred to as the needle counter. The use of a container helps to control and contain the needles on the sterile field and decrease the risk of injury to the surgical team and patient. The container also provides a safe method for disposing of needles after the procedure has been completed.

   When the sterile needle container is full, the CST may hand it off to the circulator to be bagged and placed in a secure area of the OR; however, facility policy should dictate, if this is an acceptable practice. The needles in the container should be counted prior to being placed in the bag.

H. It is recommended that the CST pass sharps to the surgeon, in particular suture needles, on a one-for-one exchange basis, utilizing the neutral zone.[3] Passing sharps to the surgeon on a one-for-one exchange basis contributes to patient safety and preventing a surgical team member from sustaining a sharps injury, including accounting for all counted sharps.[4,5]
I. Surgical team members, in particular the CST and circulator, should account for all sharps and miscellaneous items that broke or parts became separated. It is recommended that if a needle or miscellaneous item breaks or becomes separated, the CST inform the surgeon and circulator, collect all the broken portions, verify that all broken parts are accounted for to prevent accidental retention of a foreign body, and secure all pieces in the sterile sharps container, or pass off to the circulator.
J. All counted sharps, including sharps containers that have been passed off to the circulator and bagged, should not be removed from the OR until the completion of the procedure, and all counts have been verified as being correct. Linen and waste containers should not be removed from the room, until all counts have been completed and verified as being correct. If a sharp is dropped on the floor, the circulator should be immediately notified, so as to retrieve in safe manner and placed in secure area in the OR to be included in all counts.
K. Sharps must be handled according to the OSHA Bloodborne Pathogens Standard. Recommendations include wearing personal protective equipment in the handling of contaminated sharps and using leak-proof, puncture resistant nonsterile sharps containers for the disposal of sharps to reduce the staff's exposure to infectious pathogens.[9]

Standard of Practice III
Instruments should be counted on all procedures that present with the possibility that a foreign object could be retained in order to support patient safety practices in the perioperative setting.

1. Instruments should be counted by the CST and circulator for all procedures. Facility policy may indicate procedures or types of procedures, when counts are not required. However, the recommendation is that an instrument count should be performed for all procedures, including minimally invasive, due to unanticipated events that can widen the scope of the procedure.
    A. Counts should occur as follows:
        (1) Prior to the skin incision
        (2) Prior to closure of the body cavity
    B. Instances when additional counts should occur include:
        (1) Intraoperative addition of instrument or instruments
        (2) If possible, change in circulator and/or CST.
    C. The initial count should be recorded on the count sheet by the circulator as reference to ensure an instrument is not retained. Intraoperative additions of an instrument, or instruments, should be recorded on the count sheet and added to the initial count.
    D. The procedure for counting instruments should include the following guidelines:
        (1) The CST and circulator should audibly count each item, and each item should be visualized by both individuals to decrease the risk for incorrect counts. Facility policy should dictate the method of counting, eg each instrument counted individually or in groups, such as five scissors.
        (2) All pieces of instruments that can be disassembled should be counted and recorded on the count sheet. Examples include retractor blades of a Balfour retractor, wing nuts, and delivery forceps.
        (3) Instrument counts should be performed in the same sequence each time; facility policy should define the sequence. A typical sequence for intraoperative counts is: surgical field, Mayo stand, back table, and off the field. A standardized method for conducting the instrument counts aids the surgical team members in knowing that the counts will always be performed the same way for every procedure, in order to contribute to accuracy and efficiency.[19]
    E. The CST and circulator should never assume the instrument count performed in the Central Sterile Processing Department (CSPD) is correct. Not performing an instrument count and assuming the count sheet completed by the CSPD is correct should not be an accepted practice.
    F. It should be the responsibility of the CST to account for all instruments on the sterile field. Instruments on the sterile field should be controlled and kept organized to prevent accidental introduction into the surgical wound,

break in aseptic technique by causing a tear in the sterile drapes, injury to the patient or surgical team members, or dropping on the floor.

G. Surgical team members, in particular the CST and circulator, should account for instruments that break or parts become separated. It is recommended the CST inform the surgeon and circulator, collect all the broken or separated portions, verify all pieces are accounted for to prevent accidental retention of a foreign body, and pass off the broken pieces to the circulator to be bagged and placed in a secure area of the OR
H. All counted instruments, including broken or separated instruments that have been passed off to the circulator and bagged, should not be removed from the OR, until the completion of the procedure, and all counts have been verified as being correct.
I. Instruments must be handled according to the OSHA Bloodborne Pathogens Standard. Recommendations include wearing personal protective equipment in the handling of contaminated instruments to reduce the staff's exposure to infectious pathogens.

Standard of Practice IV
The proper steps should be completed to resolve a wrong count and prevent the retention of a foreign object.

1. When a wrong sponge, sharp, and/or instrument count occurs, it is the responsibility of the surgical team to resolve the situation. Dismissing/accepting an incorrect count by the perioperative team should not be accepted.[14] Recommended steps to follow include:
    A. The CST and/or circulator must inform the surgeon of the incorrect count.
    B. A visual search of the sterile field and nonsterile field should be initiated.
    C. The surgeon may perform an exploration of the abdomen or cavity.[18]
    D. If the item is not found, an intraoperative X-ray should be ordered and taken, before the surgical wound is closed, and the patient is taken out of the OR The X-ray should be read by a radiologist.
    E. All steps taken to find the missing item should be documented in the patient's record, including communications among the surgical team and with other facility staff members.

Standard of Practice V
Sponge, sharp and instrument counts should be documented in the patient's intraoperative record and included in the patient's chart.

1. The documented counts should include the following information:
    A. Types of counts
    B. Number of each item counted
    C. Names and titles of surgical team members who performed the counts
    D. Results of the counts, eg correct or incorrect
    E. Measures taken to resolve incorrect counts
    F. Explanation for counts not performed
2. The CST should sign the intraoperative record next to where the counts are recorded; credentials should be included.

3. The surgeon should be given a verbal confirmation of correct count results.

Competency Statements

Competency Statements	Measurable Criteria
1. CSTs and Certified Surgical First Assistants (CSFAs) have the knowledge and proper skills to perform the surgical counts in a manner that promotes patient and surgical team safety. 2. The CST and CSFA are qualified to complete the intraoperative record to include the information pertaining to surgical counts.	1. Educational standards as established by the *Core Curriculum for Surgical Technology* and *Core Curriculum for Surgical Assisting*.[1,2] 2. The subject of surgical counts is included in the didactic studies as a surgical technology and surgical assistant student, including concepts of patient and surgical team safety. Additionally, the studies include the proper documentation of the counts In the intraoperative record. 3. Students demonstrate knowledge of surgical counts in the lab/mock OR setting and during clinical rotation. 4. As practitioners, CSTs and CFAs perform surgical counts, implementing patient and surgical team safety policies. facilities whose protocols and policies allow, CSTs and CFAs complete the intraoperative record to include the information pertaining to surgical counts. 5. CSTs and CFAs complete continuing education to remain current in their knowledge of surgical counts, including annual review of the policies of the facility.[17]

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