**University of Colorado Hospital Policy**

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| **Surgical Counts** | |
| **Effective Date:** 05/1999 | **Replaces Policy:**  n/a |
| **Revised Date:** 09/2014 | **Policy Owner:**  Professional Practice Policy & Procedure Committee  OR Committee |

**Introduction:**

This policy is to describe consistent and accurate accounting of all items used during a surgical procedure to promote patient safety and positive surgical outcomes.

**Scope:**

1. It shall be the shared responsibility of all health care providers to participate in activities to decrease the likelihood of a retained surgical item (RSI).
2. The behavior of healthcare providers in the OR or procedural areas must support teamwork and open communication. An environment free from unprofessional or disrespectful behavior is critical to patient safety and the prevention of retained surgical items.
3. The Surgeon is responsible for conducting a Methodical Wound Exploration (MWE) and for communicating via telephone with the Radiologist while concurrently viewing films in PACS for any incorrect surgical count for which radiologic studies were done.
4. The Radiologist who reads any films related to an incorrect surgical count is responsible for telephone communication with the Surgeon while concurrently viewing PACS films for any incorrect surgical count for which radiologic studies were done.
5. The Circulating Registered Nurse is responsible for initiating and conducting the procedural count and notifying the surgeon/proceduralist of the results and any discrepancies, for actively observing the MWE, and for documenting the status of the counts.
6. The scrub RN/tech is responsible for counting items and ensuring items utilized are received back in their entirety.
7. Please note that the accountability in each of the above roles includes the above responsibilities, but this list is not intended to be all-inclusive. All reasonable actions will be taken to ensure the safety of the patient.

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# Policy Details:

1. **Policies and Procedures**

# Items are counted to ensure that the patient is not injured because of a retained surgical item (RSI). The implementation of a standardized accounting process helps promote an optimal perioperative patient outcome. Any unintended retention of an item in a patient after surgery or other invasive procedure that was not intended to remain is considered a sentinel event.

1. A registered nurse (RN) must initiate and be involved in sponge, sharp, miscellaneous, and instrument counts. Counts will be done at the following times:
   1. Before each incision/procedure to establish baseline
   2. When additional items are added to the sterile field. Additions to the sterile field are immediately noted on the white board/count sheet and a running tally maintained.
   3. Prior to closure of a cavity within a cavity
   4. When wound closure begins
   5. At the time of skin closure or end of procedure

The final/skin count occurs when ALL the sponges that have been opened during the case (used and unused) are placed into the hanging blue backed sponge holders and all sharps/miscellaneous items and instruments that are used during closure are accounted for.

1. Breaks and permanent relief counts:
   1. At the time of permanent relief of either the scrub and/or the circulating nurse
   2. Break counts.

These counts should include surgical sponges, surgical sharps, and miscellaneous items. The incoming staff will perform the counts while the outgoing team continues the procedure.Scrubbed personnel facilitate relief counts by knowing how many items are in use in the patient at all times. The scrub should ask the surgeon if it is an appropriate time in the case to count and be relieved. A hand-off reporting the location of all counted items will occur.

1. Accounting for items used during a surgical procedure is the responsibility of all members of the surgical team. Team members must support the counting process and be aware that the count is taking place. OR nurses and Surgical technologist must be allowed sufficient time, free from distractions and interruptions for counting. In order to achieve this, the circulating nurse will announce “surgical count in progress” at which time there should be no non-emergent distractions or interruptions during counting. The counting practice should be in a standardized manner and in sequence according to the guidelines. All items utilized in a procedure must be accounted for in their entirety. The accounting process defines countable items as sponges, sharps, instruments, and miscellaneous items. These items include but are not limited to:
   1. *Surgical sponges:* items used to absorb fluids, protect tissues, and/or apply pressure or traction and include, but are not limited to radio-opaque gauze pads, cottonoids, dissectors, laparotomy sponges, tonsil sponges, vaginal packing and cotton balls. Only x-ray detectable towels may be used in the incision.
   2. *Surgical sharps: include, but are not limited to: suture needles, scalpel blades, hypodermic needles, electrosurgical needles and blades.*
   3. *Instruments: surgical tools or devices designed to perform a specific function such as cutting, dissecting, grasping, holding, retracting, or suturing.*
   4. *Miscellaneous items: clip bars, vessel loops, instrument vessel clips, vein cannula,* Koh cups, umbilical and hernia tapes, vascular inserts, cautery scratch pads, trocar sealing caps, rulers, rummel pieces, clamp inserts, rubber bands, navigation spheres, acorns and ANY other discretional items that are used in and around the surgical site that have the potential for being retained in a surgical incision.

All sponges must be separated, counted audibly and concurrently viewed during the count procedures. All needles, instruments, and miscellaneous items must be counted audibly and viewed concurrently.

1. An initial sponge, sharp, and miscellaneous count is performed for all procedures where an incision is made. An initial instrument count will be performed whenever a cavity is entered, when there is a potential for entering a body cavity, or on procedures in which the size of the incision is large enough to retain an instrument. Cavities include, but are not limited to abdominal, thoracic, retroperitoneal, supra-pubic, and pelvic**.**
   1. A surgeon or his/her designee retains the authority to declare any procedure "emergent," at which point all or part of the initial surgical count may be omitted; however an x-ray will be taken in the Operating Room before closing in lieu of the surgical counts. The registered nurse will document in the patient operative record that the procedure was declared an emergency by a specific surgeon.
   2. Countable sponges, sharps, instruments, and miscellaneous items, used prior to the incision of the primary procedure, for central line insertions and/or intravenous cut-downs need not be counted and are removed from the room before the start of the case.
   3. If an instrument count is not completed due to the complexity of instrumentation, a mandatory x-ray will be taken before closing. Fluoroscopy is not sufficient to rule out retained surgical items. For spine case exceptions, see Attachment B.
   4. An initial count of sponges, sharps, instruments, and miscellaneous items will be performed for all minimally invasive endoscopic procedures (i.e. laparoscopic, laparoscopically assisted, robotic or thoracoscopic). If the procedure does not advance to an open procedure, only the sponges, sharps and miscellaneous items need to be included in the closing and final counts.
2. Count Management:
   1. Packages, with an incorrect number of sponges or suture needles, and the original packages are removed from the operating/procedure room immediately on discovery.
   2. Counted items are to be confined to the operating room and/or sterile field while a procedure is in progress.
   3. Counted sponges are not cut or used for dressings.
   4. Linen hampers and trash containers are not removed from the operating/procedure room until counts are completed and resolved.
   5. Instruments, suture needles, or devices broken during a procedure must be accounted for in their entirety. All broken parts are accounted for and present at the final closure. If a fragment cannot be located or safely retrieved, this must be communicated to the entire team and documented appropriately in the Electronic Health Record (EHR). In addition, the patient should be informed and a disclosure discussion held. Device fragments may migrate, embolize, heat during MRI, and may cause injury. Future diagnostic testing cannot be predicted so the patient should be informed.
   6. At the end-of-procedure, all sponges, sharps, instruments, and miscellaneous items must be removed from the OR or procedural area to avoid potential incorrect counts on subsequent procedures.
3. Methodical Wound Examination (MWE)
   1. It is expected that a methodical exploration of the operative wound must be conducted prior to closure in every operation. The space to be closed must be carefully examined. Special focus should be given to closure of a cavity in a cavity (i.e. heart, major vessel, stomach, bladder, uterus, and vagina). Surgeons should strive to see and touch during the exploration whenever possible.
   2. Any member of the OR team is empowered to encourage a repeat MWE for any reason.
   3. A surgeon is required to orally communicate that the wound has been visually and manually explored to the extent possible and that no unintended surgical items have been identified.
4. Pause for the Gauze, Communication and Documentation
   1. The pause for the gauze is mandatory pausing point, which occurs at closing. Before asking for closing suture, the surgeon will perform the MWE, while staff performs closing activities. All interruptions and distractions shall be kept to a minimum during this time e.g. music is turned off and staff changes should not occur during the closing count.
   2. Before closing, the surgeon should make his/her best effort to remove all sponges, then the nurse and scrub person will count them and verbally communicate to surgeon that all sponges have been accounted for.
   3. Oral communication of all findings is an expectation. As an example, if a surgical count is correct the OR circulating RN should state “the closing count is correct” and this should be verbally affirmed with a closed loop response of “I acknowledge the closing count is correct” from the attending surgeon.
   4. Report from surgeon to surgeon regarding packed sponges is essential when multiple procedures are being performed.
   5. Items packed or still in use at closing must also be identified on the communication/white board, e.g. malleable retractor, surgical fish.
   6. Circulating nurses or designees are responsible for maintaining accurate documentation of the counts throughout procedures and communicating the status of the count during hand-off.
5. Count Discrepancy: A count in which the number and/or type of sponges, sharps, instruments or miscellaneous items does not match the count board or count sheet is considered an incorrect/unreconciled count.
6. An X-ray must be performed in the OR/procedural area if a count discrepancy exists. When a count discrepancy occurs, an intraoperative x-ray is ordered and the incorrect count checklist (attachment A) and standard processes are utilized. The x-ray will be read by a radiologist.
   1. Surgeons can override a mandatory X-ray in the OR Suite on grounds of patient acuity, but films must be taken in the ICU. It is the responsibility of the OR RN to document in the EHR reason X-ray was not taken in the OR and to report to accepting RN that an X-ray must be taken in ICU or other unit. It is the responsibility of the attending physician to order the x-ray in the ICU or other unit, specifically stating the reason for the x-ray.
   2. Unreconciled counts and actions taken need to be documented in the EHR appropriately by the circulating RN.
   3. Consideration should be given to obtain two views on x-ray (usually an AP and an oblique). If there are any questions about the appropriate images or quality, consult immediately with the radiologist.
   4. An x-ray may be waived if the needle(s) missing are smaller than 15 mm.
   5. In procedural areas with limited access to x-ray capability, the surgeon will determine an appropriate course of action.
7. Each patient and procedural environment is assessed by the team for risk factors that lead to a potential retained surgical item. A Surgeon or designee may request an X-ray for patients meeting one or more of the following high-risk criteria. Any member of the surgical team can and should take responsibility to remind the entire team that the patient meets one or more of the high-risk criteria. The surgeon may elect to do an x-ray, do a repeat MWE, or verbally acknowledge the reminder. The high risk criteria include:
   1. Obesity (BMI greater than 35).
   2. Unexpected intraoperative events such as but not limited to: blood loss greater than 500 ml (Note: in certain cases Estimated blood loss (EBL) is expected and will not be considered a risk factor), intraoperative complication i.e. any unexpected change in surgical procedure, including conversion from laparoscopic to open procedure, or patient code, and equipment failure.
   3. Procedure duration greater than 4 hours.
   4. Any safety variance (i.e. incorrect count at any time during procedure, sponge bags not used properly, lack of attestation/safety documentation, no documented wound exploration).
   5. Emergent nature of a procedure.
   6. Procedures involving more than one surgical team.
   7. Multiple staff changes (i.e. anesthesia, nursing, surgical techs).
   8. Inexperienced staff (less than 3 years in the OR).
8. Items intentionally retained:
   1. Sponges, sharps, instruments, and/or miscellaneous items that are intentionally included in/with/on a patient when the patient is discharged from the operating room are each/all accounted for in the patient operative record.
9. The final count is documented as "correct."
   1. Sponges, sharps, instruments, and/or miscellaneous items that are in/with/on a patient who returns to the operating room are each/all accounted for in the patient operative record.
10. The initial, closing and final counts are documented as "incorrect."
11. If a patient expires, a final closure count is done. If the count is incorrect, no measure is taken to account for the missing items. The count is recorded as incorrect in the patient operative record, the attending surgeon is notified, and the coroner is notified orally when reporting the death. The name of the person notified of the incorrect count at the coroner’s office is recorded in the nursing notes.
12. Organs for transplantation

If an organ for transplantation comes with a countable item, i.e. a lap sponge, the item needs to remain in the organ pump and needs to be accounted for in the subsequent counts.

1. Organ procurement

Sponges, sharps and instruments are counted during organ procurement. If the closing count is incorrect, no measures will be taken to reconcile the count. The count will be recorded as incorrect; the surgeon and procurement team will be notified. The coroner is notified verbally when reporting the donor death. The name of the person notified of the incorrect count at the coroner’s office is recorded in the nursing notes.

1. The occurrence reporting system for the facility will be utilized to identify any variance or deviation to this policy.

# Attachments

**Attachment A**: Incorrect/Unreconciled Count Checklist

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| Steps | Complete |
| Attending **surgeon performs a methodical wound exploration** that is actively observed by the circulating nurse |  |
| **Ensure entire team** (including surgeons, anesthesia, RNs, techs and any ancillary staff in procedure) **are aware of an unreconciled count and are managing the patient appropriately for the situation** (i.e. anesthetic milestones are planned appropriately). |  |
| **Remove any unnecessary items from the patient to optimize films and reduce extraneous items.** (I.e. remove any retractors, EKG leads etc.) |  |
| **Order intraoperative x-ray using specific language:**   * Item/s specifically missing or unreconciled * The surgical procedure * Body cavity or cavities involved in procedure * If x-ray is being requested due to patient falling under high risk criteria suggestive for a RSI, define what criteria patient falls under   + Obesity (BMI greater than 35)   + Blood loss greater than 500 ml (note some cases have expected blood loss greater than 500ml so this would not apply in those cases)   + Intraoperative complication/event including:     - unexpected change in surgical procedure     - conversion from laparoscopic to open procedure, or     - patient code     - equipment failure   + Procedure duration greater than 4 hours   + Any safety variance including     - incorrect count at any time during procedure     - sponge bags not used properly,     - lack of attestation/safety documentation     - no documented wound exploration * Emergent nature of a procedure * Procedures involving more than one surgical team * Multiple staff changes (i.e. anesthesia, nursing, surgical techs) * Inexperienced staff (less than 3 years in the OR) |  |
| **Surgeon and radiologist discuss via telephone while concurrently viewing films in PACS**   * What they do see: i.e. drains, catheters * What they don’t see: * Verification that the films covered the entire operative site * Verification of body cavity (cavities) involved in procedure   + Verification that the films covered the entire cavity if it involves a cavity * The radiologist should explicitly state the findings and address the adequacy of the images obtained. * Are two views (i.e. AP and oblique) warranted? * Results must have “read back” confirmation and the findings documented in the operative record. |  |
| **Circulating RN documents steps taken and results in:**   * EHR (included the name of the reading radiologist) * Completes an occurrence report in the system utilized by the facility report |  |

**Attachment B**:

This exception applies to spine non-emergent cases where instrument counts are not done due to the complexity of instrumentation. These cases are identified as Anterior, Thoracic or Anterior/Posterior approaches.

Specific criteria to be met to allow fluoroscopy utilization to rule out a retained surgical INSTRUMENT include:

* Surgeon utilizing fluoro must be credentialed to interpret fluoro and privileges should be confirmed
* The x-ray/fluoroscopy must encompass the entire wound and operative field
* If using fluoroscopy, the surgeon must validate the absence of retained surgical item
* Films must be saved to the medical record as films to establish no retained surgical items
* Documentation in the Electronic Medical Record (EMR), in the surgeon’s operative note, must discuss verification of no retained surgical items
* If the surgeon is unable to reconcile that no retained surgical instruments remain, a flat plate x-ray must be ordered to be read by radiologist
* If there is an incorrect count for sponges, needles or device fragments, a flat plate x-ray must be ordered to be read by radiologist

# Related Policies:

Sentinel Events and Potential Adverse Events

Patient Occurrence Reporting Process

# Definitions:

**Healthcare Professional:** Any individual who is licensed and/or qualified to practice a health care profession (for example, physician, nurse, social worker, clinical psychologist, pharmacist, PT/OT/ST, or respiratory therapist) and is engaged in the provision of care, treatment, or services as defined by their job description.

**Healthcare Provider:** A credentialed or licensed practitioner who has ordering privileges and prescribing authority.

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