Mastering Counting Basics in Surgery: A SMART Card Approach

Brenda G Larkin, MS, APRN, ACNS-BC, CNS-CP, CSSM, CNOR, LSSGB, FAORN
Lisa K Hyde, BSN, RN, RNFA, CNOR

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Abstract

Surgical count accuracy is essential in preventing unintentionally retained surgical items. The ability to standardize the count process goes beyond having a policy. Having perioperative staff who can be either employed or contracted increases the risk of practice drift due to staff's misconceptions of what should be counted and when. The complexity of aligning policy on counting practices is compounded when there are multiple facilities, such as a 9-hospital system.

Introduction

Variation in counting practices increases risk for error in surgery. According to AORN, use of a consistent, standardized practice has been shown to reduce the reports of incorrect counts and rates of overall serious reportable events.[1]

The shared governance care council at the tertiary care facility in a 9-hospital system identified the need to increase standardization of surgical counts (instruments, sponges and sharps) due to receiving multiple questions on what should or should not be counted. Compounding these concerns included having staff who had been trained at outside facilities and hired either as permanent staff or as travelers. Inconsistencies existed in understanding the facility's count policy as it applied to all specialties and to all situations (e.g., elective or urgent/emergent). Nurses and Certified Surgical Technologists hired as new staff were facing challenges with executing surgical counts from the more experienced staff, including the traveling staff. New staff were further confused about what processes were correct as many were faced with rationale that wasn't taught in their education, training or onboarding.

(All new nurses went through the Periop 101: A Core Curriculum™ course as part of their orientation.)

Counting Basics – OR Staff

S.M.A.R.T

Staff Maintaining Accreditation Readiness Together

Reference Card

Why?

Deliberate, consistent adherence to a standardized count procedure is necessary to prevent retained surgical items. The persons performing the count must have uninterrupted time to perform the count.

Counting Basics:

- Counted items will be clearly viewed by both persons counting, one of which is a Nurse
- Break the tape on sponges and count them individually, fully separating each one
- Multi-packaged suture needles will be opened and counted individually
- Instruments are counted one at a time, not in pairs.
- Open, Robotic, and Laparoscopic cases with incisions >5cm will have an instrument count completed at the end of the case
- Remove any items not counted from the room prior to the count
- Don't subtract items from the count. All counted items stay in the room
- Always count at the time of permanent relief of the scrub or Nurse Circulator
- Place soiled sponges in a sponge counter when counting with the radiopaque strip showing. Each type of sponge will be identified separately. Don't count from the kick bucket
- Dressing sponges will not be opened to the field until the final sponge count is completed. Dressing sponges included in custom packs will remain sealed and isolated on the field until the final count is complete
- Incorrectly numbered packages of sponges or sharps shall be removed from the sterile field. The item and packaging shall be submitted to Inventory Management
- Sharps or instruments broken during a procedure will be accounted for in their entirety and removed from the sterile field. Any pieces not accounted for will result in an incomplete count and need X-ray reconciliation and an event report filled out
- In the event a count is not performed when indicated, as in an Emergency, an x-ray must be taken and the absence of sponges, sharps, and/or instruments verified by a Radiologist. An event report must be filled out
- An Instrument count may be omitted when the quantity of instruments and items (plates, screws) is too large to safely count (e.g., ALIF). A flat plate X-ray will be taken at end of case for reconciliation and read by the Radiologist prior to closing. An event report will be filled out to offset the extra charge for X-ray

Counting Basics – OR Staff

How To…

Exceptions to the Instrument Count:

- An instrument count need not be done if, in the judgement of the OR team, the size of the instrument in relation to the size of the incision (e.g., laparoscopy, neonates) would not allow for an instrument to be left within the surgical wound. However, if an additional incision is necessary to retrieve tissue, or if there is conversion from laparoscopy to laparotomy, a count is required
- An instrument count need not be done if the pelvic cavity is entered through a vaginal approach (e.g., Total Vaginal Hysterectomy)
- If C-arm X-ray is routinely used during the procedure for verification of implant placement just prior to closure (e.g., Anterior-Posterior Lumbar Fusion). The Radiologist will verify the flat plate x-ray prior to closing the incision. Nurse will document findings
- The count process is omitted for organ donation cases

Incorrect Counts:

- After a thorough search, a flat plate X-ray must be taken to reconcile the count
- An event report must be filled out to offset extra charges incurred for X-ray
- The wound MUST NOT be closed in its entirety until the count is reconciled
- An X-ray must be taken when the incorrect count is due to additional items found, not just missing items
- In the event a micro needle (smaller than 9.6 mm) is not accounted for during closure counts, the surgeon may decline X-ray and/or retrieval if medically appropriate and they document the event in patient's progress note. The OR nurse will document the event in the OR record and complete an event report

Intentionally Retained Sponges for Packing:

- When soft goods such as sponges are intentionally used as therapeutic packing and patient leaves the OR with this packing in place the number and type of sponge placed will be documented under IRFO in the LDA section of the Intra-op record. Upon return to the OR for a subsequent procedure, an X-ray will be performed prior to final closure to assure removal of retained items

REVIEW QUESTIONS

1. Can the employee describe the correct process for sponge counts and instrument counts?

References: *Policy = PC240*

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Methodology

The shared governance care council decided to standardize the count practices at their facility by creating and using a SMART Card approach.

SMART cards are daily rounding tools that provide for real-time insight into key quality, safety and accreditation risk points, leading to meaningful conversation and immediate feedback to improve patient care.

SMART Cards provide a visual reminder for staff that allows for:

- Review/Reference of standard work
- Real-time feedback to ensure that patients receive care that is based on policies, protocols, unit standards and national guidelines
- Questions on the topics can be voiced in a non-punitive, comfortable setting
- There is Subject Matter Expert support for each SMART topic, and
- Focus is on high risk, low frequency events, or skills that need improvement.

SMART Cards also allow for real-time documentation review which gives the staff opportunity to adjust clinical practice interventions and documentation to provide a better picture of the quality of care provided.

Finally, SMART Cards may contain a QR Code to allow the staff to attest to the content being reviewed. This allows nursing leaders the ability to ensure all staff have reviewed the content/education. SMART Cards can be reviewed independently for those staff the are not at the huddles where the content is shared.

Results

The staff can use the Counting Basics SMART Card as a reference during complex cases and as a support to comply with policy for newer staff.

Since the Counting Basics SMART Card was implemented in 02/2024, there have been no reports of retained surgical items the main operating room at the system's tertiary facility.

The card has been distributed to all other surgical suites in the system, including CVOR, and hospital outpatient surgery sites. No reports of retained surgical items have been received since this was implemented.

Conclusion

Standardizing surgical counting processes can be difficult when there is varying practices amongst staff. Reviewing a policy during orientation is not enough to ensure best practice at the bedside or to prevent practice drift from occurring over time. Using a tool like the SMART Card enables leaders to review best practice in a non-punitive, interactive manner. Tracking staff's engagement in the process of periodic review of high-risk, low-volume patient care interventions is made easier when a QR code is associated with the SMART Card.

References:

Association of Perioperative Registered Nurses. Retained Surgical Items: AORN eGuidelines⁺. December 9, 2021. Accessed October 20, 2023.