

The Perfect Count: Multidisciplinary Strategy for the Prevention of Retained Surgical Items

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BACKGROUND

- Retained Surgical Items (RSI) are objects specific to surgery, such as tools, equipment and supplies that are used by the health care team to heal but when accidentally left in the patient can cause serious harm.
- Current studies indicate a prevalence rate of 0.3- 1% per 1000 surgical cases in the United States (Stawicki et al 2013) with estimates that rates in Canada are more than three times higher (CIHI 2011).
- Counting of instruments and supplies used at the beginning and end of surgery is the primary measure to prevent RSI but it is a method that is at high risk for human error (N. Rivera et al 2008). Incorrect surgical counts are a significant risk factor for RSI in addition to a waste of resources.
- Incorrect counts are consistently one of the more common Patient Safety Learning System (PSLS) reported events for the OR at BCCH. Nursing staff have expressed dissatisfaction with the current count policy and documentation tool while PSLS reporting indicates possible lack of consistency in actions taken during an incorrect count.
- According to Dr. Verna C Gibbs (2011) RSI's have less to do with patient characteristics and "everything to do with operating room culture."

METHODOLOGY

- A retrospective chart review followed by operating room observations to identify risk factors for retained surgical items was conducted. The medical records of all patients with PSLS reported incorrect counts (2012-2013) while undergoing surgery at BC Children's Hospital were reviewed to identify common trends and adherence to current policies.
- Operating room observations were conducted in order to identify common themes in team communication and interaction during the count process as well as observable distractions and interruptions.
- Engagement exercises were completed with frontline OR nurses to gain their insight on the frequency of incorrect counts and the underlying contributing factors.

RESULTS

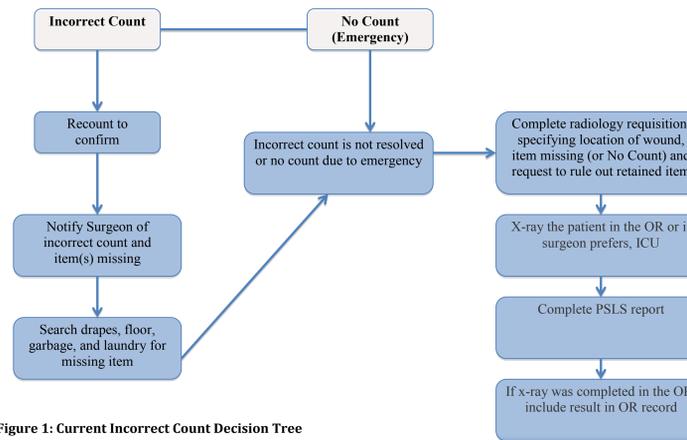
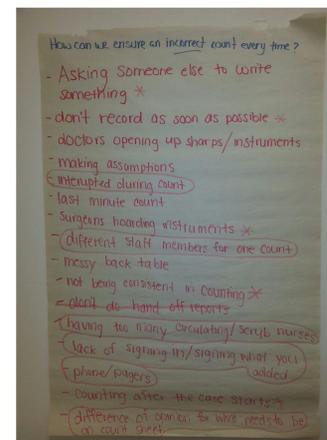
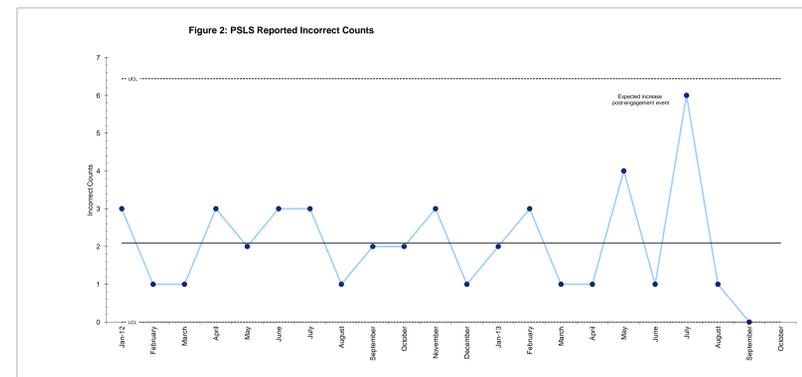


Figure 1: Current Incorrect Count Decision Tree



OR nurses completed a **TRIZ** (Theory of Inventive Problem Solving) exercise, devising creative solutions to problems by exploring ways to not succeed. Post-exercise, nearly 50% of participants volunteered to join an OR RN Working Group on incorrect counts. Aside from ideas to improve efficiency and reduce unnecessary counting (Table 3), the group identified products that would increase reliability in counting.

- RFID tagged sponges have proven to be cost effective investments at other facilities due to their ability to reduce the incidence of costly incorrect counts.
- Sponge counter bags allow easy isolation and visualization of sponges for all team members during counting while giving the surgeon and anesthesia provider a visual indicator of EBL.



Table 1. OR Observation Findings – Frequency of Distractions and Interruptions

- 54% of observed cases experienced interruptions during opening and/or closing counts (e.g.: circulator asked to get supplies during closing, sign-in for patient arrival)
- 39% of observed cases experienced distractions during counts (e.g.: phone ringing, loud talking, music)

Table 2. OR Observation Findings – Common Obstacles Affecting Accurate Counts

- Anesthesia needs during counts
- Pager and telephone interruptions
- Patient, family and team members needing attention during the count
- Leaving the room for additional supplies
- Additional staff entering/exiting OR
- Impatient team members
- Loud discussions and distractions
- Surgeons requesting additional items
- Timing of breaks, shift change

Table 3. OR RN Working Group – Counting Practice Variations

- Rules for counts during shift change
- Can counted items be removed from OR?
- Which small items must be counted in opening count?
- Counting instruments in first count of laparoscopic cases
- Timing of counts
- Does the count sheet match the order of instruments in the pan?
- Efficiency Idea: Set weight limits to reduce unnecessary counting (e.g.: counting instruments in infants)
- Proper communication and steps for an incorrect count
- Who can interpret x-rays?
- Specialty specific variations
- Surgeons unfamiliar with policy and not cooperative with incorrect count procedures
- Who is accountable?
- Disagreements over what/when to count
- No rules about the order of counting

CONCLUSIONS

Although infrequent, Retained Surgical Items are 'Never Events' that can have enormous cost to both the patient and the care providers. As the most common risk factor for RSI, incorrect counts themselves can cause patient harm and result in wasted time, money and resources by:

- Exposing patients and staff to unintended and unnecessary radiation
- Extending anesthetic and operative times
- Unnecessary use of costly resources such as staffing, OR time and Radiology equipment

Facilities can enhance patient safety and OR efficiency by reviewing their count policies and practice regularly to ensure best practice utilization. Operating room culture must be a focus of any change effort, with the goal of improving team communication and aiding in the application of evidence-based best practices in the prevention of retained surgical items.

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