

Preventing Retained Surgical Items

The inadvertent retention of items after a surgical procedure is a preventative medical error that should never occur. However retained items do occur. In 2007–08 in excess of 256,000 surgical procedures were performed in Victorian public health services. There were 11(0.004%) cases reported through the Sentinel Event program relating to retained items whereby the patient was required to return to the operating room to have the item removed at a later date. Five of the reported cases involved retained wires, clips or instruments, five cases involved packs or swabs and one case was a dental plate. None of the cases resulted in any long-term adverse outcomes (DHS, 2008a).

Counting items before and after their use to check for discrepancies is our most widely used screening method. However we all know that counting is prone to errors as it relies on human consistency and accuracy in operating rooms where pressures of time, distractions and unexpected interruptions occur. Human factors that affect accuracy include stress, fatigue, lack of accountability, and communication breakdowns. The Australian Council for Safety and Quality in Health Care, and the Australian Medical Association have drawn attention to the relationship between fatigue and adverse events (VSCC, 2005).

Discrepancies in the count occur for a number of reasons. The count may be hurried, packs may not be separated, or the timing is wrong; e.g. at change of shift and staff. A procedure generally does not stop for the count, so the circulating nurse and instrument nurse continue to perform other tasks whilst counting. Large surgical teams make many requests that distract from the count. Patients who are obese, are having emergency surgery or unplanned changes to their surgery such as conversion from laparoscopy to open are at increased risk of retaining an item. Trauma procedures where two or more surgical teams are involved also pose a greater risk of a retained item (Jackson, 2008). It is vital to recognise the potential problems that may be encountered with the count process and to use prior knowledge and diligence during the counting phases to prevent incidents and thus ensure patient safety.

Case study one (DHS, 2008b).

A patient underwent a laparotomy for ulcerative colitis surgery. During the skin closure it was identified by the instrument nurse that an artery forcep was missing. The nurse told the circulating nurse and other members of the surgical team. A thorough search of the operating room environment failed to find the instrument. Subsequently an x-ray was taken in the post-anaesthetic recovery unit where the artery forcep was revealed in the abdominal cavity. The patient was returned to the operating room where the artery forcep was retrieved.

A review of the incident revealed the following factors. There was a divergence from usual practice when the patient was sent to the post-anaesthetic recovery unit with the artery forcep not yet found. There was no written procedure to follow when an incorrect count occurred that included the communication and acknowledgment of the discrepancy. There was an emphasis on where the forcep 'could not be' rather than where it 'could be.' This affected the decision making of where and when the x-ray was taken. The changes the health service made following this incident was to agree it was mandatory to take the x-ray prior to the patient leaving the operating room where the count is incorrect and the item has not been found. A protocol for incorrect counts was written and there was a review of staffing ratios, skill mix, resources and infrastructure for larger cases.

Case study two (DHS, 2008a).

A patient who underwent a septoplasty procedure had a throat pack inserted by the anaesthetist and was documented on the intraoperative count record by the nursing staff. The anaesthetist did not record that the throat pack was inserted. The pack was not documented as being removed at the final count. Neither the instrument nurse nor circulating nurse checked to confirm removal.

When the patient arrived in the post-anaesthetic recovery unit the anaesthetist was questioned by the circulating nurse as to whether he had remembered to remove the throat pack – he had not. The patient was checked immediately. The patient was questioned by the anaesthetist whether they felt any discomfort in the throat and replied that no discomfort was felt. A visual check was performed to check if the pack was in the throat without any visible signs. The patient had no respiratory distress at this time and was quite comfortable. The situation was explained fully to the patient and their family. The patient had their throat X-rayed but no pack was observed, so an upper abdominal X-ray was ordered and revealed the pack in the patient's stomach. The pack was removed via gastroscopy.

Trauma and emergency cases

Completing the initial count prior to a trauma/emergency patient entering the operating room is a major challenge. Perioperative teams can have very little notice before a patient with critical traumatic injuries or life threatening emergency conditions arrives. Foregoing the count places the patient at increased risk for a retained item. One study found that in 10% of procedures where an item was retained no surgical count had been conducted (Murdock, 2008). However it is acknowledged that in certain circumstances there is no time to count. Thus it becomes vital to organise every available minute efficiently to perform a base count of at least packs and gauze. The time for induction and positioning provides such a time. The count policy should contain a section that provides the guidelines for the count process in an emergency situation. Importantly it should point to invoking the incorrect count process where a discrepancy is suspected. The use of standardised trays and tray lists will be invaluable in emergency situations where there is no time to count instruments.

Sentinel event reporting

The Victorian Surgical Consultative Committee (VSCC) Sentinel Event Program has been in place since 2001. Health services must notify the Department of Human Services (DHS) within three days of the event being reported. From the date of notification, the health service involved must investigate the event and prepare a root cause analysis within two months. The report must identify causal and contributing factors, and a risk-reduction action plan to prevent future occurrences. The majority of cases referred to the VSCC fell into the following categories; procedures involving the wrong patient or body part and retained instruments or other material after surgery requiring re-operation (Rush, 2008).

Comparison between reported events in Victoria, 2002–03 to 2007–08 for retained instruments or other material after surgery requiring re-operation.

Year	02-03	03-04	04-05	05-06	06-07	07-08
No	9	8	5	6	8	11

(Rush, 2008)

Factors that contributed to retained item events identified in Australian public hospitals in 2004-05.

Factor	Policy	Documentation	Communication	Staffing	Equipment	Pt assessment
No	7	4	2	6	6	1

(AIHW, 2007).

Following the review of the number of cases of retained items, the VSCC strongly recommends that all operating suites implement and adhere to the current ACORN Counting standard regarding surgical counts. Thus review your count policies using the ACORN Counting Standard (S3) and the ACORN Count Resource Package. Review your incorrect count incidents and the factors that contributed to the errors. Use the information to collaboratively discuss how you may overcome, for the future, the problems that occurred or how you can prevent them occurring at all.

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