

Intentionally Retained Surgical Items (IRSIs)

1. Introduction

Maintaining patient safety in the Operating Room (OR) includes the prevention of retained surgical items. On occasion, it is necessary to place items into a patient's surgical wound (e.g., [radiopaque sponges](#) as [therapeutic packing](#)) on a temporary basis.

1.1. Purpose

The purpose of this policy is to ensure that [Intentionally Retained Surgical Items](#) (IRSI) are removed upon final surgical wound closure and that there is clear communication and collaboration between health care teams.

1.2. Scope

This is a joint policy between Providence Health Care (PHC) and Vancouver Coastal Health (VCH).

This policy applies to all perioperative healthcare professionals who participate in operative procedures in any of the ORs within VCH and PHC.

1.3. Exceptions

This policy does not apply to:

- Surgical items that are intentionally placed in the patient as [Implantable Devices](#);
- Non-radiopaque items used as wound [dressing materials](#) in an operating room, ambulatory care or inpatient setting, such as dressing material used in the provision of [Negative Pressure Wound Therapy](#) (NPWT); or
- Temporary Abdominal closure devices.

2. Policy

- All surgical item(s) intentionally left in the patient as [therapeutic packing](#) at the end of surgery must be [radiopaque](#).
- The type and number of all IRSIs applied in the OR or peri-operative area as therapeutic packing must be documented on the appropriate paper and/or electronic patient care record.
- For patients returning to the OR for removal of therapeutic packing, all IRSIs removed from the wound must be reconciled with the previous case documentation.
- Any IRSIs re-inserted to the surgical wound in the OR must be identified and documented on the patient care record.

- The type and number of IRSIs removed or re-inserted in patient care areas other than the OR e.g. post-operative inpatient unit) must be documented on the patient care record.
- At final removal of all IRSI, an x-ray must be performed and interpreted prior to the patient leaving the OR suite.

3. Responsibilities

3.1 Nursing Staff (OR, Post-operative care area)

Nursing staff is responsible for:

- Completing intra-operative surgical counts; and
- Documenting insertion and removal of IRSI on the patient care record

3.2 Surgeon and/or Physician Designate

The surgeon and/or physician designate is responsible for:

- Providing verbal confirmation of the type and number of IRSIs inserted and/or removed.

3.3 [Surgical Team](#)

The surgical team will ensure an X-ray is performed and interpreted following final removal of all IRSI prior to the patient leaving the OR suite.

3.4 Radiologist

A Radiologist *may* be responsible for interpretation and communication of x-ray results to the surgical team as per site-specific protocol/workflow, so long as this process results in timely interpretation.

4. Compliance

All staff members are responsible for adhering to this policy and monitoring their activities in accordance with the policy. Staff members may warn others if they observe a violation of this policy. Failure by staff to comply with this policy may result in incident review, incident reporting, and/or disciplinary action, up to and including termination of employment, services, or privileges.

5. Supporting Documents

5.1 Related Policies

- [Surgical Count Policy](#) (VPP)
- [Surgical and Procedural Safety Checklist \(VCH/PHC\)](#)

5.2 Guidelines/Procedures/Forms

- [Surgical Count Management](#) (VCH/PHSA)
- [Surgical Count Protocol](#) (PHC)
- [Negative Pressure Wound Therapy \(NPWT\): Guideline for Adults and Children](#) (VCH/PHC)
- [Negative Pressure Wound Therapy](#) (NPWT) (PHSA)
- [Intentionally Retained Surgical Items \(IRSI\) Record](#) (VGH)

6. Definitions

“Dressing Material” refers to items that are inserted into a surgical wound as part of a wound dressing (e.g., NPWT sponges and Mepitel®). These items are NOT radiopaque.

“Implantable Devices” refers to device(s) placed into a surgically created or naturally formed cavity of the human body that is/are intended to remain there for a period of 6 weeks or more.

This includes (but is not limited to):

- Orthopedic - cement, rods, screws, and plates
- Cardiac and Vascular - grafts, pacemakers, and leads
- Neurology - aneurysm clips, screws, and plates
- Plastics - breast implants, tissue expanders, and microvascular anastomotic devices
- Ophthalmic - intraocular lenses
- Urology - Universa® ureteric stent
- General - mesh and biologic dermal matrix (e.g., Alloderm)

This excludes:

- Staples, hemoclips, suture material, and pledgets
- Chemical hemostatic agents (e.g., Gelfoam, Surgicel, Tisseel, and Floseal)
- Intentional therapeutic packing (e.g., lap sponges and towels)
- External fixation devices (e.g., rods and connectors)
- Intraoral fixation devices (e.g., arch bars and wires)
- Tubes (e.g., chest tubes, NG tubes, feeding tubes, and Foley catheters)
- Drains (e.g., Hemovac)
- Temporary ureteric stents
- Enteral feeding tubes (e.g., PEG tube)
- Dialysis catheters
- Lacrimal tubes and stents (e.g., Crawford tubes)

“Intentionally Retained Surgical Items” refers to items that are intentionally temporarily inserted into a patient’s body as a planned intervention during a surgical procedure. These items may be removed and replaced (sometimes more than once). The plan of care will include the eventual complete removal of these items, and final closure of the surgical wound.

“Negative Pressure Wound Therapy (NPWT)” refers to an advanced therapy that delivers continuous, intermittent, or dynamic negative (sub-atmospheric) pressure distributed equally across the wound area, incision line, or skin graft site to accelerate the natural wound healing process.

“Radiopaque” means detectable by x-ray.

“Radiopaque material” refers to surgical items that are x-ray detectable in their entirety and surgical items that contain a [radiopaque](#) marker (e.g., surgical sponge).

“Staff” means all employees (including management and leadership), medical staff, residents, fellows and trainees, health care professionals, students, volunteers, contractors, researchers, and other service providers engaged by PHC or VCH.

“Surgical Team” means a team in the perioperative area that consists of a combination of an anesthesiologist, surgeon(s), radiologist, fellow(s), resident(s), medical student intern(s), OR nurse(s), or staff and technicians who are involved in the care of the patient while in surgery.

“Therapeutic packing” refers to non-dressing materials that are radiopaque and are inserted in the OR during an operative procedure (e.g., surgical sponges or towels).

7. References

Association of periOperative Registered Nurses. (2022). *Guidelines for perioperative practice: retained surgical items*. <https://www.aornguidelines.org/guidelines?bookid=2260>

Canadian Medical Protective Association. (2021, December). *Mitigating the risk of retained foreign bodies during surgery*. <https://www.cmpa-acpm.ca/en/advice-publications/browse-articles/2021/mitigating-the-risk-of-retained-foreign-bodies-during-surgery>

Feldman, D.L. (2011). Prevention of retained surgical items. *Mt Sinai J Med*, 78(6), 865-871. <https://doi.org/10.1002/msj.20299>

Gibbs, V. (2021). *NoThing Left Behind®: A national surgical patient safety project to prevent retained surgical items*. http://www.nothingleftbehind.org/Home_Page.html

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