**INTRODUCTION**

Perioperative care is comprised of three phases of care: preoperative, intraoperative and postoperative. This standard covers intraoperative care which is defined as the period of time from a patient’s transfer to the operating room until admission to the post-anesthesia care unit.

### IOC1.0 INTRAOPERATIVE CARE

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<th>Item</th>
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<td>IOC1.1</td>
<td>Restricted access supports a high level of asepsis control.</td>
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| IOC1.1.1 | **M** The facility has three levels of increasingly restricted access.  
Guidance: The facility has three levels of increasingly restricted access from unrestricted areas, to semi-restricted areas and restricted areas. Unrestricted areas include waiting rooms, offices, locker rooms and break rooms. Between the unrestricted areas and the semi-restricted areas, there is a control point or desk to monitor and direct access to the semi-restricted area(s). Street clothes may be worn in unrestricted areas only. |
| IOC1.1.2 | **M** There is clear separation between the unrestricted and semi-restricted areas.  
Guidance: There is a door, signage or a line of demarcation to identify the separation between the unrestricted and semi-restricted areas. Separation with a door is preferred as it provides a physical barrier and assists in maintaining HVAC parameters. |
| IOC1.1.3 | **M** There is signage to indicate the attire required before entry into the semi-restricted area(s). |
| IOC1.2 | Appropriate attire is worn in the semi-restricted and restricted areas of the facility.                                                      |
| IOC1.2.1 | **M** Staff entering the semi-restricted area(s) are appropriately attired.  
Guidance: Semi-restricted areas include scrub sink areas, post-anesthesia care unit, medical device reprocessing areas, sterile storage and corridors leading to restricted areas. Surgical attire including hair coverings is worn and is donned in a designated locker area before entry into the semi-restricted area(s). Shoes are visibly clean and should be dedicated for use within the perioperative area. Shoe covers are not required but should be worn when gross contamination can reasonably be anticipated. A mask is also required of personnel who are completing or have completed a surgical hand scrub. Personnel are not to eat, drink, apply cosmetics or store personal belongings (i.e. fanny packs, backpacks, briefcases) in semi-restricted areas. Cultural or religious headgear is completely covered with an appropriate disposable hat. Alternately, cultural or religious headgear does not need to be covered with a disposable hat provided that it is laundered by a commercial health-care laundry service provider. |
| IOC1.2.2 | M | Patients entering the semi-restricted area(s) are appropriately attired.  
Guidance: Semi-restricted areas include scrub sink areas, medical device reprocessing areas, sterile storage and corridors leading to restricted areas. Patients are required to don a clean gown. Shoes, if worn, are covered with shoe covers. This attire is donned in a designated area before entry into the semi-restricted area(s). Cultural or religious headgear is completely covered with an appropriate disposable hat. |
| --- | --- | --- |
| IOC1.2.3 | M | Visitors entering the semi-restricted area(s) are appropriately attired.  
Guidance: Semi-restricted areas include scrub sink areas, medical device reprocessing areas, sterile storage and corridors leading to restricted areas. Visitors (i.e. vendors, biomedical engineers, maintenance personnel) are required to don surgical attire including hair coverings. Shoes are covered with shoe covers. Parents/accompanying adults entering the semi-restricted areas must wear either surgical attire or a gown that covers their street clothes, as well as head covers and shoe covers. This attire is donned in a designated area before entry into the semi-restricted area(s). Cultural or religious headgear is completely covered with an appropriate disposable hat. |
| IOC1.2.4 | M | Staff entering the restricted area(s) are appropriately attired.  
Guidance: Restricted areas include operating rooms and procedure rooms. Surgical attire including hair coverings is worn. A mask is also required in the presence of open sterile supplies or of personnel who are completing or have completed a surgical hand scrub. Shoes are visibly clean and should be dedicated for use within the perioperative area. Shoe covers are not required but should be worn when gross contamination can reasonably be anticipated. Personnel are not to eat, drink, apply cosmetics or store personal belongings (i.e. fanny packs, backpacks, briefcases) in restricted areas. Cultural or religious headgear is completely covered with an appropriate disposable hat. Alternately, cultural or religious headgear does not need to be covered with a disposable hat provided that it is laundered by a commercial health-care laundry service provider. |
| IOC1.2.5 | M | Patients entering the restricted area(s) are appropriately attired.  
Guidance: Restricted areas including operating rooms and procedure rooms. Patients are required to wear a clean gown. Shoes, if worn, are covered with shoe covers. Cultural or religious headgear is completely covered with an appropriate disposable hat. |
| IOC1.2.6 | M | Visitors entering the restricted area(s) are appropriately attired.  
Guidance: Restricted areas include operating rooms and procedure rooms. Surgical attire including hair coverings is worn. A mask is also required in the presence of open sterile supplies or of personnel who are completing or have completed a surgical hand scrub. Visitors (i.e. vendors, biomedical engineers, maintenance personnel) are required to don surgical attire including hair coverings. Shoes are covered with shoe covers. Parents/accompanying adults entering the semi-restricted areas must wear either surgical attire or a gown that covers their street clothes, as well as head covers and shoe covers. Cultural or religious headgear is completely covered with an appropriate disposable hat. |
| IOC1.2.7 | M | Personal attire is contained within the scrub attire.  
Guidance: Personal attire such as a long-sleeved shirt that cannot be contained within the scrub attire is not worn in semi-restricted or restricted areas. |
| IOC1.2.8 | M | Jewelry is removed before entering the restricted areas.  
Guidance: Earrings, necklaces, bracelets, watches and rings are to be removed before entering the restricted areas. |
**IOC1.3**  The operating room is appropriately equipped for the surgical services performed at the facility.
*Intent: Each operating/procedure room must be appropriately equipped for the procedures performed*

| IOC1.3   | M | The room is equipped with an operating room table/chair  
*Guidance: The operating room table/chair is capable of Trendelenburg and reverse Trendelenburg, has adequate range of movement for the procedure performed (i.e. lateral tilt, back up/down, leg up/down), and an adjustable headrest to facilitate intubation.* |
|----------|---|--------------------------------------------------------|
| IOC1.3.1 | M | The room is equipped with safety straps, as appropriate.  
*Guidance: The safety straps are designed and intended for use with the operating room table/chair and area and manufacturer’s instructions for use (MIFUs) are followed for all safety and positioning straps. Depending on the procedure(s) performed and/or level of anesthesia, Class 2 (IV procedural sedation) and Class 3 (local anesthesia only) facilities may not need safety straps.* |
| IOC1.3.2 | M | The room is equipped with positioning equipment.  
*Guidance: Gel pads and positioning equipment are designed and intended for positioning surgical patients. The gel pads and positioning equipment are appropriate for the intended procedure(s) (e.g. arm boards, stirrups). Manufacturer’s instructions for use are followed for all positioning equipment.* |
| IOC1.3.3 | M | The room is equipped with monitoring equipment appropriate for the level of anesthesia delivered and the procedure performed.  
*Guidance: Class 1 facilities and class 2 facilities with an anesthesiologist on staff are also assessed using the Anesthesia Care standard. At minimum, all operating/procedure rooms are equipped with a pulse oximeter and apparatus to measure blood pressure.* |
| IOC1.3.4 | M | The room is equipped with oxygen.  
*Guidance: Class 1 facilities are required to have a central medical gas pipeline system. Class 2 and class 3 facilities are not required to have a central medical gas pipeline system. However, these facilities are required to have oxygen cylinders located at the bedside, in addition to the supply on the emergency cart.* |
| IOC1.3.5 | M | The room is equipped with patient warming equipment, as appropriate.  
*Guidance: Patients undergoing procedures of greater than or equal to 30 minutes should be actively pre-warmed and active warming methods should be used for surgical procedures longer than 30 minutes. Active warming methods include but are not limited to forced air warming blankets. If the facility does not perform procedures that are greater than or equal to 30 minutes then patient warming equipment is not required.* |
| IOC1.3.6 | M | The room is equipped with surgical lights.  
*Guidance: The room is equipped with ceiling-mounted or mobile overhead lighting.* |
| IOC1.3.7 | M | The room is equipped with suction. |
| IOC1.3.8 | M | The room is equipped with equipment and instrumentation appropriate for the procedure performed.  
*Guidance: E.g. endoscopic towers, insufflators, light source, camera, cautery, mechanical thromboprophylaxis device, tourniquet.* |

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| IOC1.3.10 | M | The room is equipped with appropriate furniture that can withstand low-level disinfection.  
*Guidance: Instrument tables (i.e. mayo stand, back table) are stainless steel. Furnishings must be cleanable. Upholstered furniture in the operating room is covered with fabrics that are fluid-resistant, non-porous and able to withstand cleaning with hospital-grade disinfectants.* |
| IOC1.3.11 | M | The room is equipped with a smoke evacuation system.  
*Guidance: Surgical smoke generated in open and minimally invasive surgical procedures must be evacuated at the source using a plume scavenging system (i.e. laser plume, electrosurgical plume, power instrument plume). Central medical-surgical vacuum systems (wall suction) are not to be used for surgical smoke evacuation.* |
| IOC1.3.12 | M | The room is equipped with a wall clock with second hand.  
*Guidance: Digital clocks displaying time in hours, minutes and seconds are acceptable.* |
| IOC1.3.13 | M | The room is equipped with means for viewing diagnostic imaging, as appropriate.  
*Guidance: There is a means for viewing (i.e. view box, computer) diagnostic imaging such as X-rays, MRI and CT scans for procedures where viewing diagnostic imaging during the procedure may be needed.* |
| IOC1.3.14 | M | The room is equipped with communication link(s).  
*Guidance: There is one communication link, at a minimum. Communication links include but are not limited to telephone, intercom and computer.* |
| IOC1.3.15 | M | The room is equipped with uninterrupted power supply for critical equipment.  
*Guidance: Critical equipment has an uninterrupted power supply (UPS). Critical equipment includes but is not limited to anesthesia machines, refractive surgery lasers.* |
| IOC1.3.16 | M | The room is equipped with an emergency light source.  
*Guidance: The room is equipped with emergency lighting and a battery operated hand-held light source (i.e. flashlight).* |
| **IOC1.4** | Operating room staffing supports safe patient care and promotes a safe procedural environment. |
| IOC1.4.1 | M | A minimum of two perioperative nurses are dedicated to the operating room.  
*Guidance: For procedures that do not require a scrub role (e.g. endoscopy, endovascular ablation, Mohs, IVF), only one registered nurse is required to be present in the circulating role. However, there must be a second regulated health professional immediately available to assist in the event of an emergency. The second regulated health professional may be an RN or another physician.  
Refractive laser eye procedure rooms are staffed with a minimum of one laser technician in addition to the surgeon and there must be a second staff member immediately available to assist in the event of an emergency. If the surgeon needs a scrub assist, the refractive laser eye procedure room is staffed with a minimum of two laser technicians in addition to the surgeon.* |
| IOC1.4.2 | M | The scrub role is assigned to either a perioperative RN or an LPN who has completed a perioperative nursing program  
*Guidance: All licensed practical nurses in the operating room must have completed a perioperative nursing program from a post-secondary educational institution. Examples include MacEwan University Perioperative Nursing for Licensed Practical Nurses and Saskatchewan Polytechnic. In BC non-hospital facilities, the scope of practice of a perioperative trained LPN is limited to the scrub role only.* |
| IOC1.4 | M | **The circulating role is assigned to a perioperative RN.**  
*Guidance: In accordance with the Operating Room Nurses Association of Canada (ORNAC), the primary circulating role shall be assigned only to a perioperative registered nurse. Perioperative LPNs may not relieve the primary circulating RN for coffee, lunch or other duties. Perioperative LPNs may only circulate as a second circulator in addition to a primary circulating RN who is also present in the operating room.* |
| IOC1.4.4 | M | **The circulating RN is assigned to only one room.** |
| IOC1.4.5 | M | **The circulating RN is present during the induction and emergence phases of anesthesia.** |
| IOC1.4.6 | M | **The anesthesiologist is dedicated to the operating room from the start to the finish of each procedure.**  
*Guidance: In accordance with the Canadian Anesthesiology Society Guidelines, the anesthesiologist shall remain with the patient at all times throughout the conduct of all anesthesia until the patient is transferred to the post-anesthesia care unit. If the attending anesthesiologist leaves the operating room temporarily, care of the patient must be delegated to another anesthesiologist who shall remain with the patient. Anesthesia assistant(s), if present, may only provide care under the direct supervision of an anesthesiologist (e.g. anesthesiologist present in the operating/procedure room at all times). An anesthesia assistant may be a registered respiratory therapist or a registered nurse who has completed didactic and clinical training specific to the competencies required to be an anesthesia assistant.* |
| IOC1.5 | **The perioperative team performs a standardized surgical hand scrub.** |
| IOC1.5.1 | M | **All perioperative team members perform a surgical hand scrub prior to gowning and gloving.** |
| IOC1.5.2 | M | **A product intended for surgical hand antisepsis is used.**  
*Guidance: Surgical hand scrub products may be water facilitated products (e.g. antimicrobial surgical hand scrub with or without a sponge) or waterless products (e.g. alcohol-based antiseptic surgical hand rub).* |
| IOC1.5.3 | M | **Surgical hand scrub procedures follow a standardized protocol.**  
*Guidance: Surgical hand scrub procedures may be water-facilitated scrub methods (e.g. antimicrobial surgical hand scrub with or without a sponge) or waterless scrub methods (e.g. alcohol-based antiseptic surgical hand rub). Nails are cleaned using a disposable nail cleaner. Traditional surgical hand scrub procedures use either a timed surgical scrub method or a counted stroke method. Surgical hand scrub is not performed using a brush. Nail cleaners are used to remove soil from nails. Nail cleaning is done before performing the first scrub of the day. Alcohol-based antiseptic surgical hand rub procedures follow the manufacturer’s instructions for use.* |
| IOC1.6 | **An aseptic environment is established and maintained for all surgical procedures** |
| IOC1.6.1 | M | **The doors to the operating room remain closed.**  
*Guidance: The doors to the operating room remain closed except when moving patients, supplies or equipment in and out of the room.* |
| IOC1.6.2 | M | **Traffic flow into the operating room is kept to a minimum.** |
| IOC1.6.3 | M | **The number of personnel assigned to the operating room during a procedure is kept to a minimum.** |
| IOC1.6.4 | M | A surgical mask is worn in the presence of open sterile supplies.  

*Guidance:* The surgical mask covers the mouth and nose and are tied in a manner that prevents venting at the sides. Surgical masks are not hanging around the neck or stored in pockets. |

| IOC1.6.5 | M | Supplies and equipment in the operating room are kept to a minimum.  

*Guidance:* Sterile and clean supplies are to be stored in designated sterile and clean storage areas outside of the medical device reprocessing and operating/procedure rooms. Minimal supplies (clean and sterile) in the operating room are to be stored in closed cabinets to minimize the risk of contamination. Only essential equipment is maintained in the operating/procedure room. |

| IOC1.7 | | A sterile field is established and maintained for all surgical procedures. |

| IOC1.7.1 | M | Only qualified perioperative personnel establish, function within and monitor the sterile field.  

*Guidance:* Qualified perioperative personnel include the surgeon and perioperative nurses. Sterile personnel should remain close to and face the sterile field. If position changes are necessary, scrubbed personnel pass face to face or back to back. Unsterile personnel must remain at a safe distance of at least one foot (30 cm) away from the sterile field. Breaks in sterile technique are monitored, documented and corrective action taken. |

| IOC1.7.2 | M | All items are assessed for sterility prior to opening.  

*Guidance:* Sterility is assessed by observing for signs/presence of moisture, confirming wrapper integrity, verifying external locks, latch filters, valves and tamper-evident devices of rigid containers, verifying the presence and appropriate changes of external and internal indicators and confirming expiry date. Packages dropped on the floor, compressed, torn or wet are considered contaminated. If there is any doubt about the sterility of an item, it is considered contaminated and unsterile. |

| IOC1.7.3 | M | Sterile drapes, wrappers and gowns are appropriate for the procedure being performed.  

*Guidance:* Sterile drapes, wrappers and gowns are blood and fluid resistant, resistant to tears and punctures, lint and shedding free, dull and non-glaring, flame resistant, functional and flexible. |

| IOC1.7.4 | M | Sterile drape(s) cover the entire working surface of the sterile field.  

*Guidance:* Sterile drapes are placed on the patient, tables and equipment in the sterile field and are handled in a manner that prevents contamination. |

| IOC1.7.5 | M | Unsterile equipment is covered with a sterile barrier before introduction into the sterile field.  

*Guidance:* Examples of equipment that require a sterile barrier/cover include but are not limited to C-arms, ultrasound probes, laparoscopic cameras, some positioning devices. |

| IOC1.7.6 | M | All items introduced to the sterile field are opened, dispensed and transferred by methods that maintain item sterility and integrity.  

*Guidance:* Accepted methods of transfer include but are not limited to presenting item(s) directly to the scrub nurse, exposing the contents for the scrub nurse to remove the item from the wrapper or package, placing the item(s) securely on the edge of the sterile field. Items are not flipped or shaken from their package onto the sterile field. Packages dropped on the floor, compressed, torn or wet are considered contaminated. If there is any doubt about the sterility of an item, it is considered contaminated and unsterile. |
### IOC1.7.7

**M** Sterile solution bottles are opened, the required amount dispensed and any remaining solution discarded.

*Guidance: The edge of a container is considered contaminated once the contents have been poured. The bottle is not to be recapped for reuse. The pour spout and cap are considered contaminated.*

### IOC1.7.8

**M** Opened sterile supplies are not left unattended.

*Guidance: The sterility of items cannot be ensured without direct observation. Contamination can occur at any time from personnel, airborne contaminants, liquids and insects.*

### IOC1.7.9

**M** Sterile set-ups are not covered with an intent to use at a later time.

*Guidance: Removing the cover drape would contaminate the set-up.*

### IOC1.7.10

**M** All supplies and sterile items that have been opened but not used are considered contaminated.

*Guidance: All supplies and sterile items that have been opened but not used during a procedure are considered contaminated and shall not be reused. All supplies and sterile items that have been opened for a procedure that was cancelled are considered contaminated and shall not be reused. Single-use items are discarded. Reusable items are reprocessed (i.e. re-cleaned, disinfected, wrapped and sterilized) in accordance with manufacturer’s instructions for use (MIFUs) before reuse.*

### IOC1.7.11

**M** Movement of clean and sterile supplies and equipment is separated from the movement of contaminated supplies, equipment and waste.

*Guidance: Separation of the movement and/or transportation of clean and sterile supplies and equipment from contaminated supplies, equipment and waste can be achieved through physical space, time or traffic pattern. Clean and sterile supplies and equipment for the next case do not enter the operating room until turnover cleaning is completed. Clean and sterile supplies and equipment are not to pass by (i.e. in the hallway, elevator) contaminated supplies, equipment and waste during transportation throughout the facility.*

### IOC1.8

**The surgical count process is a primary patient injury prevention strategy.**

*Intent: All surgical team members are responsible for the prevention of retained surgical items. Although the surgeon and anesthesiologist do not perform the count, they must maintain situational awareness and engage in safe practices that support the prevention of retained surgical items such as communicating placement of surgical items, acknowledging start of the count and accounting for surgical items in the surgical field.*

### IOC1.8.1

**M** Counts are performed by two regulated health professionals, one of whom is a registered nurse.

*Guidance: For procedures that require a scrub nurse and a circulating nurse, the count is performed by the two perioperative nurses. For procedures that require only one nurse in the circulating role, the count is performed by the circulating nurse and the procedural physician.*

### IOC1.8.2

**M** All items are counted audibly and viewed concurrently by the two regulated health professionals.

*Guidance: The initial count should be performed before the patient enters the operating room. When conducting the initial count before the patient enters the operating room is not possible, one RN circulator is dedicated to the count process and a second RN circulator is dedicated to patient care.*
| IOC1.8.3 | M | A count of sponges is performed for all procedures.  
*Guidance:* Any item that has the potential for being retained must be counted. Sponges include all sizes and shapes of absorbent materials such as gauze, laparotomy sponges, pushers, peanuts, dissectors and kitners. Each dispensed package of sponges is counted twice before counting the next package. Dispensed packages containing the incorrect number of sponges are contained/bagged, labelled and removed from the operating room prior to the patient entering the room. |
| IOC1.8.4 | M | A count of sharps and other miscellaneous items is performed for all procedures.  
*Guidance:* Any item that has the potential for being retained must be counted. Sharps include blades, needles and suture reels. Miscellaneous items include but are not limited to bulb syringes, delicate tip protectors, syringes, clip cartridges, vessel clip bars, vessel loops, umbilical and hernia tapes, pins, cautery tips and scratch pads and small endoscopic parts such as trocar sealing caps, springs, washers, valves and any other small items. |
| IOC1.8.5 | M | An instrument count is performed for any procedure in which there is potential that an instrument could be retained.  
*Guidance:* An instrument count is performed for all procedures where a cavity is entered and when there is the potential that a cavity may be entered (i.e. minimally invasive surgeries). Individual pieces of assembled instruments (i.e. suction tips, blades, sheathes) are counted separately and documented on the count sheet. For procedures when there is a potential that a cavity may be entered, if the procedure remains endoscopic, a sponge, sharp and miscellaneous count is performed at closure. If the case converts to an open procedure, a full count including instruments is performed at closure. |
| IOC1.8.6 | M | A standardized count sheet is used.  
*Guidance:* A standardized count sheet (i.e. pre-printed form) provides a consistent format for the documentation of the count and is key to preventing retained surgical items. The count sheet provides sufficient space to document every counted item, the number of each item, the number of times items are counted and the name, initials and position/role of each regulated health professional involved in the count. A pre-counted record of sponges, sharps, miscellaneous items and instruments must not be used. |
| IOC1.8.7 | M | The count is documented on the standardized count sheet after each type of item is counted.  
*Guidance:* All counted items are documented on the count sheet before proceeding to the next item. |
| IOC1.8.8 | M | The count is clearly documented.  
*Guidance:* The count is documented in a manner that does not obliterate the clarity of each number and the number of items each item is counted as well as the name, initials and position/role of each regulated health professional involved in the count. |
| IOC1.8.9 | M | Radiopaque materials are used.  
*Guidance:* Soft goods such as, but not limited to, sponges, gauze, throat packs, vaginal packs are radiopaque. As barium sulfate is toxic to oocytes, fertility facilities may use non-radiopaque sponges with the condition that a sponge count be completed pre- and post-procedure. |
| IOC1.8.10 | M | The scrub nurse maintains an organized sterile field.  
*Guidance:* Having an organized sterile field is a key strategy in maintaining awareness of all counted items throughout the procedure. |
| IOC1.8.11 | M | A neutral zone or hands-free technique is used for passing sharp instruments, blades and needles.  
*Guidance:* The perioperative team uses a neutral zone or hands-free technique for passing sharp instruments, blades and needles such as passing sharps in a basin, using a mat, having a designated area on the mayo stand. |
| IOC1.8.12 | M | Items are not removed from the operating room until the final count is complete.  
*Guidance:* All counted items, garbage and linen are to remain within the operating room until the counts are completed and reconciled. Confinement of all items, including garbage and laundry, allows for complete checking should a count discrepancy occur. |
| IOC1.8.13 | M | The anesthesiologist communicates to the perioperative team when items are inserted in the oropharynx.  
*Guidance:* The insertion of throat packs, bite blocks and other devices is communicated to the team. This is documented on the intraoperative record. |
| IOC1.8.14 | M | The anesthesiologist communicates to the perioperative team when items are removed from the oropharynx.  
*Guidance:* The removal of throat packs, bite blocks and other devices is communicated to the team. This is documented on the intraoperative record. |
| IOC1.8.15 | M | Sponges, sharps, other miscellaneous items and instruments added to the surgical field after the initial count are counted immediately and documented on the standardized count sheet. |
| IOC1.8.16 | M | A standardized count procedure is used for all surgical items opened or used during a procedure.  
*Guidance:* OUT counts are performed before closure of a cavity (placement of mesh to close a space requires a cavity count), before wound closure begins, at time of permanent relief of either the scrub or circulating nurse or anytime at the discretion of any member of the surgical team. In accordance with ORNAC, the recommended sequence of surgical count at closure is: sponges, sharps, miscellaneous items and instruments, starting from the sterile field → mayo stand → back table → any items removed from the sterile field. A final count is performed when all items are passed off the field. The final count is documented as CORRECT or INCORRECT. |
| IOC1.8.17 | M | A separate count sheet is used whenever there is more than one surgical set-up or more than one cavity is entered.  
*Guidance:* Separate counts sheets decrease confusion and prevent error. |
| IOC1.8.18 | M | Standardized measures are taken to investigate and reconcile a count discrepancy.  
*Guidance:* The surgical team is notified of the count discrepancy including the type and number of items missing and the surgeon verbally acknowledges the information. The RN circulator searches the room (i.e. floor, kick buckets, garbage and laundry containers) to locate the missing item(s) while the scrub nurse searches the sterile field including surgical site, drapes and tables. Recounts are undertaken. If a count discrepancy is not resolved, an X-ray should be arranged (this may require transferring the patient to the hospital following the procedure) and the final count is documented as INCORRECT. |
### IOC1.8.19 M
Actions taken in the event of an incorrect count are documented on the intraoperative record.

*Guidance:* Patient safety incidents, such as an incorrect count, are documented and investigated. Measures taken if an incorrect count is not rectified include documenting the incorrect count on the count sheet, disclosure of the incorrect count to the patient and arranging for patient transfer to hospital for an X-ray as indicated. If the surgeon declines the X-ray, this is documented on the intraoperative record including the reason for not arranging for an X-ray. An incorrect count (possible retained surgical item) is a patient safety incident requiring mandatory reporting. The medical director must notify the College within one working day after the discovery of a reportable incident. A completed Reportable Incident Form, signed by the medical director, must be submitted to the College within two weeks of the incident.

### IOC1.9 Medications and solutions in the operating or procedure room are safely prepared and administered.

| IOC1.9.1 M | Manufacturer’s medication and solution labels, strength/dose and expiry dates are verified verbally and visually by the scrub and circulating nurses concurrently before transfer to the sterile field. |
| IOC1.9.2 M | Only one medication or solution is transferred to the sterile field at a time and then immediately labeled.  
*Guidance:* The medication or solution is immediately labeled following transfer to the sterile field and before another medication or solution is transferred. |
| IOC1.9.3 M | All medication and solution both on and off the sterile field are appropriately labelled.  
*Guidance:* All medications transferred from their original packaging to another container (e.g. drawn-up into a syringe, poured into bowl, cup etc.) that are not immediately administered are labelled at all times with the medication/solution name, strength and dose, even if only a single agent is present. This includes all medications and solutions both on and off the sterile field. The contents of any unlabeled or poorly labeled container are discarded upon discovery. Any medications found unlabeled are immediately discarded upon discovery. |
| IOC1.9.4 M | Medication for topical use is placed in a container.  
*Guidance:* To prevent the risk of injection, medication intended for topical use is placed in a container, not a syringe. |
| IOC1.9.5 M | Medication for irrigation is poured into a container on the sterile field and separated from all other solution containers. |
| IOC1.9.6 M | Medicated irrigation solutions for instillation via irrigation tubing are labeled with a medication label and a second irrigation label and separated from all other solution bags.  
*Guidance:* To prevent the risk of injection of the irrigation medication into the vascular system, the medicated irrigation solution is labelled with a medication label and a second irrigation label, and separated from all other solution bags and hung on designated equipped (i.e. pole labeled for irrigation use only). |
| IOC1.9.7 M | All original medication and solution containers used for the procedure are retained for reference until the end of the case. |
| IOC1.9.8 M | All medications and solutions administered are documented in the intraoperative record.  
*Guidance:* Medications, hemostatic agents, sealants, adhesives, dyes and irrigation administered by the surgeon or the nursing staff are documented. |
### IOC1.9.9 Medication, solution and irrigation solution administration documentation is complete.

**Guidance:** Medication, solution and irrigation solution administration documentation includes the name, dose/concentration, volume, location, method of administration and name of person who administered it.

### IOC1.10 Patient positioning practices minimize the risk of injury to patients and staff.

#### IOC1.10.1 Safety straps are appropriately applied, as appropriate.

**Guidance:** Safety straps are applied in a manner that safely secures the patient. Their placement, tightness and security is verified after positioning and repositioning. Depending on the procedure(s) performed and/or level of anesthesia, Class 2 (IV procedural sedation) and Class 3 (local anesthesia only) facilities may not need safety straps.

#### IOC1.10.2 Safe positioning practices are implemented.

**Guidance:** The perioperative team takes the necessary steps to prevent positioning injury. A preoperative skin and positioning needs assessment is performed to identify patient and procedure factors which may increase the patient’s risk for positioning injury. Patient factors include age (i.e. pediatric, older adults ≥ 65 years), nutritional status, skin condition, comorbidities (i.e. diabetes, peripheral vascular disease), body mass index (i.e. underweight, obese) and physical/mobility limitations. Procedural factors include the type of procedure, length of procedure, procedural position and type of anesthesia. The patient’s body is not in contact with metal parts of the operating table or other hard surfaces; extremities are appropriately supported and secured and the patient’s body alignment is maintained. The patient is assessed post-operatively for signs and symptoms of positioning injury. Positioning documentation includes a pre- and post-operative skin assessment, the patient’s position and any intraoperative position changes, the type and location of positioning devices and the perioperative team members involved in positioning.

#### IOC1.10.3 Positioning equipment and other patient safety devices are used for positioning surgical patients.

#### IOC1.10.4 Manufacturer’s instructions for use (MIFUs) are followed for all transfer, positioning and other patient safety devices.

### IOC1.11 Pneumatic tourniquets are safely used.

#### IOC1.11.1 The tourniquet system is inspected and tested before each use.

**Guidance:** The entire tourniquet system is inspected and tested in accordance with the manufacturer’s instructions for use to ensure that the system is complete, clean and functioning (i.e. verifying the integrity of the cuff, tubing and connections, calibration if the system is not self-calibrating on start-up, verifying the alarms are functioning).

#### IOC1.11.2 Protective padding is applied beneath the tourniquet cuff.

**Guidance:** Protective padding is placed around the limb in accordance with the manufacturer’s instructions for use. The padding should be soft, wrinkle-free and should not pinch the skin. The condition of the skin under the cuff before and after tourniquet use is documented on the intraoperative record.

#### IOC1.11.3 The tourniquet is fitted appropriately to the patient limb.

**Guidance:** The cuff is positioned at the point of maximum circumference of the limb and is snug at both the proximal and distal edges. The cuff overlaps as specified by the manufacturer which is usually at least three inches (7.5 cm) and no more than six inches (15 cm). The tourniquet location, cuff size and name of person who applied the cuff is documented on the intraoperative record.
| IOC  | M    | The tourniquet is covered with an impervious drape or tourniquet cover. **Guidance:** Reusable tourniquet cuffs are protected from contamination by applying a tourniquet protector (e.g. U-shaped drape, adhesive drape, tourniquet cover). |
| IOC  | M    | Pressure settings are confirmed with the surgeon and anesthesiologist prior to inflation. **Guidance:** The pressure setting(s) are documented on the intraoperative record. |
| IOC  | M    | The tourniquet is inflated and deflated under the direction of the surgeon. **Guidance:** The surgeon directs the inflation and deflation of the tourniquet in consultation with the anesthesiologist. Inflation, deflation and reinflation times are documented on the intraoperative record. |
| IOC  | M    | The surgeon is notified of the tourniquet inflation time at regular intervals. **Guidance:** In accordance with ORNAC, the surgeon is to be notified when the cuff has been inflated for one hour and at 15 minute intervals thereafter. Inflation time should be kept to a minimum. Surgeon notification of elapsed time is documented on the intraoperative record. |
| IOC  | M    | The connecting tubing is labeled when multiple tourniquets are used. **Guidance:** The connecting tubing is labeled (i.e. left, right). |
| IOC  | M    | The cuff is cleaned and disinfected if reusable or discarded if single-use. **Guidance:** Reusable cuffs are cleaned and disinfected after each patient use in accordance with manufacturer’s instructions for use. Single-use cuffs are discarded after use. |
| IOC  | M    | Preoperative preparation of the patient’s skin reduces the risk of post-operative surgical site infection. |
| IOC  | M    | Jewelry, including body piercings, are removed whenever possible. **Guidance:** ORNAC states “all body jewelry that pierces the skin shall be removed and the pierced area cleaned thoroughly prior to the surgical skin preparation.” If items cannot be removed, the risks (e.g. potential for infection, burns) are explained to the patient and documented. |
| IOC  | M    | Hair is removed only if necessary, using clippers and is done as close to the time of surgery as possible. **Guidance:** Hair is not to be removed unless it will interfere with access to the operative area or fall into the wound. If hair removal is indicated, it is removed using clippers. Hair removal using razors increases the potential for wound infection. |
| IOC  | M    | The operative site and surrounding area are cleaned with an antiseptic skin preparation agent. **Guidance:** Skin preparations agents are Health Canada approved and appropriate for the anatomical area being prepped. In accordance with ORNAC, a chlorhexidine (CHG)/70% alcohol-based solution should be used. ORNAC further states that exceptions to CHG with alcohol would be procedures involving the ear, eye, mouth, mucous membranes and neural tissues where povidine iodine should be used. Surgeon preference/direction may also determine the antiseptic skin preparation agent used. |
| IOC  | M    | All other patient preparation activities are performed before antiseptic skin preparation is commenced. **Guidance:** Other patient preparation activities include but are not limited to inserting of a Foley catheter, removing body jewelry, positioning. |
| IOC.12.5 | M | Non-scrubbed perioperative personnel apply the antiseptic skin preparation agent using sterile technique.  
*Guidance:* Surgical skin preparation trays are opened aseptically immediately prior to skin prep. Sterile gloves are worn while performing skin prep. Non-sterile gloves may be worn when using a one-step skin prep if the antiseptic applicator is of sufficient length to prevent contact of the gloved hand with the antiseptic skin preparation agent and the patient’s skin. Sterile supplies are used to apply the antiseptic skin preparation agent. |
| IOC.12.6 | M | The antiseptic skin preparation agent is applied from the incision site to the periphery.  
*Guidance:* The prep is applied proceeding from the intended incision site to the periphery. The umbilical area is an exception and should be prepped first to prevent debris from contaminating the freshly prepped area. |
| IOC.12.7 | M | Antiseptic skin preparation agents are applied in a manner that prevents pooling and the agent is allowed to dry before sterile drapes are applied.  
*Guidance:* When applying antiseptic skin preparation agent, pooling in skin creases, under the patient, tourniquet cuff, electrosurgical dispersive pad or near electrodes is to be prevented. Pooling of antiseptic skin preparation agents may cause chemical burns or possibly fire. Damp linens and drop cloths are to be removed prior to draping. Allowing the antiseptic skin preparation agent to dry completely in accordance with manufacturer’s instructions for use improves the safety and efficacy of the preoperative skin prep. |
| IOC.12.8 | M | Prep solutions remain in their original manufacturer containers.  
*Guidance:* Prep solutions may not be decanted and stored in another container. Prep solutions are never topped up; they are discarded when empty, when contamination is suspected or within 30 days of opening, whichever occurs first. |
| IOC.12.9 | M | Prep solutions are dated when opened and discarded within 30 days of opening. |
| IOC.12.10 | M | Prep solutions are not warmed unless the manufacturer’s instructions for use state warming is acceptable. |
| **IOC.13** | **Electrosurgery devices are safely used.** |
| IOC.13.1 | M | The active electrode is inspected and tested before each use.  
*Guidance:* The active electrode (handpiece/cord) is inspected and tested before each use (i.e. integrity, verification of the activation tone). The type of device and the serial number are documented on the intraoperative record. |
| IOC.13.2 | M | An appropriate-sized dispersive electrode pad is used.  
*Guidance:* The pad is not to be cut or adjusted in size. Different sized pads are available for the patient population (i.e. adult, obese, pediatric). In accordance with ORNAC, a dispersive electrode pad should not be applied when using bipolar surgical energy. |
| IOC.13.3 | M | The dispersive electrode pad is applied to an appropriate site.  
*Guidance:* The pad is applied to a well-muscled, clean, dry area as close to the operative site as possible. The pad should not be placed on areas with bony prominences, excessive hair, skin folds, scar tissue, skin lesions or a tattoo. The location of the dispersive electrode pad placement and the condition of the patient’s skin before and after use of the dispersive electrode pad is documented on the intraoperative record. |
| IOC.13.4 | M | Sponges near the active electrode tip are moist.  
*Guidance:* Moist sponges are a fire prevention strategy. |
### IOC1.14
**A clean and safe surgical environment minimizes the exposure risk to potentially infectious microorganisms.**

<table>
<thead>
<tr>
<th>Code</th>
<th>Requirement</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOC1.14.1</td>
<td>Equipment entering or leaving the operating room is wiped with an appropriate disinfectant.</td>
<td></td>
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<tr>
<td>IOC1.14.2</td>
<td>Keyboards used by scrub personnel are cleaned between cases/procedures.</td>
<td>Guidance: Keyboards requiring cleaning between cases include but are not limited to refractive lasers, ultrasound.</td>
</tr>
<tr>
<td>IOC1.14.3</td>
<td>All garbage is removed at the end of the case and before any cleaning commences.</td>
<td></td>
</tr>
<tr>
<td>IOC1.14.4</td>
<td>All recyclables are removed at the end of the case and before any cleaning commences.</td>
<td></td>
</tr>
<tr>
<td>IOC1.14.5</td>
<td>All used linen is removed at the end of the case and before any cleaning commences.</td>
<td></td>
</tr>
<tr>
<td>IOC1.14.6</td>
<td>All contaminated instruments are removed at the end of the case and before any cleaning commences.</td>
<td></td>
</tr>
<tr>
<td>IOC1.14.7</td>
<td>All surfaces that come into contact with the patient or body fluids are cleaned between cases.</td>
<td></td>
</tr>
<tr>
<td>IOC1.14.8</td>
<td>All equipment that comes into contact with the patient or body fluids is cleaned between cases.</td>
<td></td>
</tr>
<tr>
<td>IOC1.14.9</td>
<td>Suction containers and tubing are changed between patients.</td>
<td>Guidance: Single-use containers are discarded. Reusable containers are cleaned and high-level disinfected between patients.</td>
</tr>
<tr>
<td>IOC1.14.10</td>
<td>Operating rooms, scrub area, corridor, furnishings and equipment is terminally cleaned after the day’s schedule.</td>
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</tbody>
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### IOC1.15
**Policies and procedures contain all the information necessary for the safety of patients, staff and visitors**

*Intent: Policies and procedures ensure that activities/procedures are performed consistently and accurately by all personnel within the non-hospital facility.*

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>IOC1.15.1</td>
<td>There is policy and procedures for dress code.</td>
<td>Guidance: The dress code policy and procedures outline the appropriate attire in the semi-restricted and restricted areas for staff, patients and visitors.</td>
</tr>
<tr>
<td>IOC1.15.2</td>
<td>There is policy and procedures for performing a surgical scrub.</td>
<td></td>
</tr>
<tr>
<td>IOC1.15.3</td>
<td>There is policy and procedures for patient positioning.</td>
<td>Guidance: The patient positioning policy and procedures outline the surgical positions utilized at the facility and the positioning principles for each position.</td>
</tr>
<tr>
<td>IOC1.15.4</td>
<td>There is policy and procedures for surgical count management.</td>
<td>Guidance: The surgical count management policy and procedures outline directions for performing counts (i.e. standardized process, sequence, item grouping), items to be counted, which procedures require an instrument count and actions to be taken in the event of a count discrepancy including transfer to hospital for postoperative imaging.</td>
</tr>
</tbody>
</table>
| IOC1.15.5 | M | There is policy and procedures for establishing and maintaining a sterile field.  
Guidance: The policy and procedures outline the principles and processes for traffic flow and personnel in the operating room, proper use of sterile gowns, sterile gloves and sterile drapes, verifying sterility of supplies, establishing and maintaining a sterile field and the monitoring, correcting and reporting of breaks in sterile technique. |
| IOC1.15.6 | M | There is policy and procedures for preoperative antiseptic skin preparation.  
Guidance: The policy and procedures outline the process for preoperative skin antisepsis product selection and use, hair removal when necessary, applying the preoperative antiseptic skin preparation agent and the handling, storage and disposal of antiseptic skin preparation agents. |
| IOC1.15.7 | M | There is policy and procedures for the safe use of pneumatic tourniquets.  
Guidance: The policy and procedures outline the safe applications, contraindications, troubleshooting and documentation of pneumatic tourniquets. |
| IOC1.15.8 | M | There is policy and procedures for the safe use of electrosurgery devices.  
Guidance: The policy and procedures outline the safe operation and documentation of electrosurgery devices. |
| IOC1.15.9 | M | There is policy and procedures for surgical and anesthesia equipment failure management.  
Guidance: The policy and procedures outline equipment failure management including equipment back-up and/or redundancy for critical/essential equipment (i.e. phacoemulsification machine, insufflators, light source, anesthesia machine/monitor). |
REFERENCES


