

Scrub Practice Standards Clinical Guideline

V4.2

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1. Aim/Purpose of this Guideline

1.1. Please note that this is one of 4 documents that make up the theatre standards, namely:

- Generic Theatre Practice Standards Clinical Guideline
- Scrub Practice Standards Clinical Guideline
- Anaesthetic Services Practice Standards Clinical Guideline
- Post Anaesthetic Practice Standards Clinical Guideline

1.2. All healthcare professionals have a duty to set a standard by which to practice. With a focus on clinical effectiveness and evidence based care theatre staff must be able to demonstrate the ability to audit care and theatre practice. The care that is delivered and improvements in practice must be based on evidence and best practice guidance.

1.3. The aim of this policy is to outline the standards of care that must be delivered to each individual patient to ensure a high quality of care is provided to patients entering all Trust Operating Theatres.

1.4. Objectives

- To ensure that a standard of care is delivered to each individual that is equitable and fair.
- To identify the standards of care to be delivered to patients through all the areas within the operating theatres i.e. anaesthetic room, Operating Theatres and the Post Anaesthetic Care Unit.
- To enable auditing of theatre practice and patient care throughout all areas.
- To ensure all staff are aware of standards of care to be delivered to patients whilst in the Operating Department.
- To provide information to all staff of the departments expectation of the standards of care to be delivered to all patients.

1.5. Scope

- These standards of care will apply to all Operating Theatres across Royal Cornwall Hospital Trust sites.
- All new members of staff will receive an electronic copy of the standards applicable to the area they will work in. All staff will be able to access the care standards via desktops in operating departments.

1.6. This version supersedes any previous versions of this document.

2. The Guidance

2.1. Operating Theatre Standard No 1 - Aseptic Technique.

2.1.1 Standard Statement: All staff involved in the preparation and performance of surgical procedures will ensure a safe environment for the patient by maintaining asepsis and limiting the risk of contamination.

2.1.2 Method:

- All staff will be aware of the principles of asepsis, have received appropriate training in and have been assessed as competent in this skill, before

- undertaking any procedure requiring an aseptic technique to be applied.
- Perioperative staff with infected skin lesions of the skin or bacterial infections of the upper respiratory system should not participate in any aseptic technique.
 - Staff participating in a surgical aseptic procedure should be scrubbed, gowned and gloved.
 - Personnel participating within sterile procedures must stay within the sterile boundaries, and a wide margin of safety should be given between scrubbed and non- scrubbed persons.
 - All pre-sterilised articles must be checked for damage and expiry date prior to use. Any packs found to be in an unsatisfactory condition must be discarded.
 - All items used within the sterile field must be sterile.
 - An adequate quantity of sterile drapes must be used to establish a sterile field.
 - To maintain asepsis, it is essential that all staff are aware of the correct method of opening sterile packages, to avoid contamination of their contents.
 - Dressings must be removed carefully from pre-existing wounds to prevent scattering of microorganisms into the air. An assistant wearing gloves rather than a scrubbed member of the surgical team should carry this out.
 - Talking, moving, opening and closing of doors, exposure of wounds, disturbance of clothing or linen and number of personnel in theatre should be kept to a minimum to reduce the risk of airborne cross infection.
 - Every sterile field must be constantly monitored and maintained, as sterility cannot be assured without direct observation of the sterile field.

Compliance: 100% Exceptions: None

References:

AfPP Principles of Safe Practice in the Perioperative Environment (2011) RCH Trust
Infection Control Policy

2.2. Operating Theatre Standard No 2 - Surgical Hand Antisepsis, Gowning and Gloving

2.2.1. Standard Statement: All staff that take part in operative procedures will be able to scrub, gown and glove effectively to ensure asepsis is maintained in order to reduce the risk of cross infection to the patient.

2.2.2. General Considerations

- Regular education and training of staff, plus audit of practice should be undertaken.
- Training and induction for all new personnel, both medical and perioperative staff should be undertaken to ensure compliance.
- Staff must be aware of differences between sterile items and non-sterile items and share the responsibility for monitoring aseptic practice.

2.2.3. Facilities

- Wet floors in the scrub up area are a potential hazard, with the risk of injury caused by slipping. It is important that floor surfaces be kept as dry as possible. Storage facilities for all necessary sterile equipment should be available and located away from the sterile field. Where sterile equipment is stored in the scrub-up area, it should be situated away from the sink area, in order to prevent water contamination.
- The shelf or work surface used to open gowns should not be directly below any storage.
- Disposal bins for waste paper must be provided, that do not require hands to open.
- The scrub-up area must be kept adequately stocked with necessary equipment. Careful consideration should be paid to the number of sterile gowns required to be stored in the scrub-up area, ensuring adequate stock rotation.
- Some individual perioperative staff may be allergic to some antiseptic preparations. A choice of antiseptic solutions should be provided.

2.2.4. Surgical Hand antisepsis

- All staff should be in the appropriate theatre attire before commencing surgical hand antisepsis.
- Fingernails must be short and free from polish or artificial (including acrylic and gel) nails.
- Hands and forearms should be free from lesions or breaks in skin integrity. Minor lesions must be covered by a waterproof occlusive dressing. An individual with a major wound or infected wound must not scrub.

2.2.5. A systematic method

- Using a systematic method of hand washing ensures an effective way of cleansing all areas of the hands and arms (Gould, 2000). Surgical hand antisepsis must be performed before donning sterile gloves for clinical invasive procedures.

Surgical Hand Antisepsis Method:

1. For the first antisepsis of the day; hands must be washed with plain soap or an antiseptic solution and running water immediately before beginning of the surgical hand antisepsis.
2. Water should be at a comfortable temperature with a steady flow.
3. Hands and arms must be wet before applying the antiseptic solution.
4. The first wash should encompass of a hands and arms to the elbows, utilising a systematic method to cover all areas.
5. The hands must remain above the level of the elbows and away from theatre attire to avoid contamination from a splashing.
- 6. The six steps of hand washing should be used for surgical antisepsis and social hand washing:**

- Palm to palm
- Right palm over left the dorsum that and left palm over right dorsum
- Palm to palm, fingers interlaced
- Backs of fingers to opposing palms with fingers interlocked
- Rotational rubbing of right thumb clasped in the left palm and vice versa
- Rotational rubbing backwards and forwards with clasped fingers of right hand in the left palm and vice versa.

7. Rinsing should be performed from the fingertips to the elbows using the water flow only
8. Nails can be cleaned using a disposable nail pick under running water.
9. The use of a scrubbing brush is not necessary for reduction of bacterial counts and can lead to skin damage and an increase in skin cell shedding
10. Subsequent washes should encompass 2/3 of the forearms to avoid compromising the cleanliness of the hands.
11. Hands must be rinsed thoroughly from the fingertips to the elbows, allowing excess water to drain from the elbows into the sink.
12. Splashing surgical attire should be avoided. If surgical attire becomes excessively wet this can compromise the protection afforded by the gown. It may be necessary to change attire before beginning the scrub-up procedure again.
13. Vigorous shaking of the hands to dispel water should be avoided.
14. Hands must be dried thoroughly – The skin should be blotted dry with sterile towels, as rubbing the skin in order to dry it will disturb skin cells. Adhering to the principle of working from the fingertips to the elbows and using one towel per hand first by placing the opposite hand behind the towel and blotting the skin – and then using a corkscrew movement to dry from the hand to the elbow. The towel must not be returned to the hand once the arm has been dried and must be discarded immediately. The process is repeated for the opposite hand.

15. Hands should be held high Hands are dried held than elbows and away from surgical attire during the process of surgical scrubbing and upon completion.
16. There is no evidence that more than 2 minute wash (decontamination) using an aqueous disinfectant is required, before any sterile procedure can be undertaken (HIS, 2002).
17. Unless proceeding directly from one procedure to another, subsequent hand antisepsis should be the same as for initial scrubs. Although evidence shows a reduction in microorganisms on the skin over time with a cumulative effect, this depends on the solution used and the technique applied.
18. Advocating the same procedure for all hand antisepsis reduces confusion and increases compliance.
19. Alcohol hands rubs are an acceptable alternative to repeated washing. Alcohol hand rubs are not appropriate for use when hands are visibly contaminated, as these hand rubs do not remove soil or debris.
20. When proceeding directly from one procedure to another, cleaning the nails with a pick can be omitted

2.2.6. Surgical anti-microbial solutions

- Antiseptic hand washing solutions must be antiseptic or alcohol based, fast acting and have a broad spectrum of action and residual effect.
- Alcohol based solutions provide the most rapid and greatest reduction in microbial count, but are not effective at removing debris and soiling.
- Soap and water alone are not acceptable, as soap has no antiseptic properties. Personnel who are allergic to antiseptic solutions should be allowed to use soap but must combine this with an alcohol solution/gel following consultation with the infection prevention and control team and occupational health department.
- Each antiseptic solution varies in the time needed for optimum effect and the manufacturer's instructions should be adhered to. Antiseptic solutions must be in adequate volume and contact with the skin to achieve their optimal effect.
- Manufacturer's instructions must be followed, but generally approximately 5mls of solution should be used at each application. Using copious amounts of antiseptic solution with quick application and rinsing is neither efficient in technique nor cost effective.
- Alcohol based hand disinfectants have a higher efficacy against microorganisms than antiseptic wash lotions. An antiseptis protocol with alcohol based antiseptic is no more damaging to skin than traditional methods. Selected products also have very good skin care properties. With hot water and wash lotion natural skin oils are rinsed away and this can try out the skin. Dry skin can harbour micro- organisms, especially Staphylococcus aureus and others. Healthy skin is essential for a successful hygienic and surgical hand disinfection procedure

2.2.7. Alcohol Hand rubs

- Alcohol hand rubs are not appropriate for use when hands are visibly contaminated as they do not remove soil or debris.
- Alcohol rubs with additional active ingredients appear to be more effective

than the traditional scrubs in reducing bacterial counts but there is no evidence of the impact on the surgical site infection.

- When using an alcohol-based surgical hand rub product with sustained activity, follow the manufacturer's instructions for application times.
- When using an alcohol-based surgical hand rub, use sufficient product to keep hands and forearms wet with the hand rub throughout the surgical hand preparation procedure.
- After application of the alcohol-based hand rub as recommended, allow hands and forearms to dry thoroughly before donning sterile gloves.

Surgical Alcohol hand rub method

1. Dispense alcohol hand rub into palm of left hand.
2. Dip fingers of right hand to decontaminate nails for 5 seconds
3. Apply alcohol hand rub to right forearm up to elbow using circular movements to ensure skin is covered.
4. Continue until the alcohol gel has fully evaporated
5. Repeat 1 to 4 with left hand and forearm.
6. Dispense alcohol hand rub into palm of hands
7. Cover whole surface of hands up to wrists, rubbing palm to palm.
8. Spread alcohol hand rub over the back of each hand, including the wrists, with fingers interlaced.
9. Rub palms back and forth with interlaced fingers
10. Grip the fingers of each hand and rub in a sideways back and forth movement.
11. Clasp each thumb in the opposite hand and rotate
12. When the hands are dry, sterile surgical clothing and gloves can be donned.

2.2.8. Face and eye protection

- Although surgical facemasks were originally developed to protect the patient from microorganisms expelled from the mouth and nasopharynx of surgical staff during procedures, they also provide a protective barrier for the surgical team.
- Given the anticipated risk of splash injuries from blood and body fluids, face and eye protection (that also covers the side of the face) must be used by scrub-up personnel.
- Face masks should be positioned and secured prior to hand antisepsis to cover the nose and mouth. Masks must be handled only by the ties. Spectacles or microscopic glasses must also protect the sides of the face/eyes.
- Perioperative personnel should also note the following:
 - Specific face masks and/or eye protection are required when dealing with specific risks, for example surgical smoke plume or lasers.

- Specific equipment must be donned for use within laminar flow enclosures, for example aspirators.
- Additional protective clothing may be indicated, for example lead gowns, plastic aprons.

2.2.9. Gowning Procedures

- On completion of surgical hand antisepsis, the folded gown should be lifted from the gown pack, and then allowed to unfold without contamination against any other surface, whilst retaining a grip on the shoulder and neck of the gown. The arms should then be inserted into the gown but should not protrude through the cuff of the gown at this stage. The back of the gown should be fastened by another person. The wraparound tie should be handed off to the circulator once gloves have been donned and not before.

2.2.10. Gloving procedures

- Failure of surgical gloves from sutures, sharp instruments, bone fragments and natural wear and tear is a common source of contamination of the hands of surgical personnel with blood and body fluids.
- Double gloving provides an extra layer of protection and significantly reduces the number of perforations to inner gloves in low risk surgery.
- The decision to double glove should be based on the risk posed by the surgical procedure e.g. the exposure to sharps and not the risk posed by the patient, or personal preference.
- Evidence supports the use of double gloving for all surgery including low risk surgery.
- Surgeons who are reluctant to double glove should consider double gloving on the non-dominant hand, which is more at risk of puncture.
- Aqueous fluids can affect the integrity of the glove. This indicates that the outer glove should be changed after preparation of the patient's skin for surgery.
- Latex free gloves are available for individuals who are sensitized.
- The 'closed' method of gloving is the preferred option for donning sterile gloves.
- When gloves require changing intraoperatively due to a puncture or inadvertent contamination, the glove must be removed in a way that avoids further contamination i.e closed technique. A new glove should then be donned using the same technique to ensure sterility is maintained. .

2.2.11. Intraoperative and post-procedure protocol

- When staff have performed hand antisepsis and are gowned and gloved, it is considered that the area of sterility includes:
 - their gloved hands and forearms
- below nipple line to waist level. Hands must be kept at or above waist level and below shoulder level, and should be visible at all times in order to avoid inadvertent contamination
- Scrubbed personnel must only touch items or areas which are sterile. When not involved in a sterile procedure, scrubbed personnel should stand with their hands within the area of the sterile field.
- At the completion of the sterile procedure, gowns and gloves are treated as

clinically contaminated or clinical waste. When removing the gown, contaminated hands should not undo the gown. Once released the gown should be pulled forward over the gloved hands, folding it onto itself. It should then be discarded appropriately.

- To avoid contamination of the hand, gloves should be removed by ensuring that the glove surface comes into contact with the glove, and skin with skin.
- Face masks and single used eye protection must be discarded after each procedure.
- Reusable eye protection must be cleaned between procedures in accordance with the manufacturer's instructions.
- Personnel should inspect their hands post procedure for contamination.
- Hands must be washed thoroughly once gown, gloves and face protection are removed.

2.2.12. Skin Care

- Personnel should care for their hands in order to ensure adequate hand decontamination and good practice.
- When skin is damaged the micro-organism count rises, leading to an increased risk of cross infection.
- Antiseptic solutions and soap must only be applied to wet hands. Hands must be rinsed thoroughly to remove any soap residue and then dried properly.
- Hand creams can be used but they must be non-ionic in order to avoid their inhibiting actions on some antiseptic solutions and latex gloves. Hydrocarbon products are not compatible with latex, water based hand creams are best. Products containing mineral oil, petroleum or lanolin should be avoided. The user should always check with the manufacturer of the skin care product to verify that it is compatible with the chosen hand antisepsis agent. Containers must not be communal as they can be contaminated.
- Occupational health guidance must be sought for any skin problems.

Compliance: 100% Exceptions: None

References:

AfPP Principles of Safe Practice in the Perioperative Environment (2011) See also Theatre Standards:
Aseptic Technique

Disposal of Waste Refuse and Linen Preparation of Personnel

2.3. Operating Theatre Standard No 3 - Opening of sterile trays and packages.

2.3.1. Statement Standard: All sterile items to be used during an operative procedure will be opened in a manner so as to avoid any possible contamination, and therefore minimise the risk of cross infection to the patient.

2.3.2. Method:

- All members of staff will be given training regarding the safe opening and of equipment, and will have been assessed as competent before undertaking this unsupervised.
- Staff must check that the pack to be opened is intact i.e. no visible tearing of either paper or drape.
- Any packaging that feels damp or contains moisture is not fit for use, and must be discarded.
- Staff must be aware that all packaging has a shelf life and must therefore examine each item before opening to check the expiry date has not been exceeded.
- Any tray or package that has auto-clave tape must be checked to ensure that the tape has turned brown indicating the item has been through a correct autoclaving process.
- A lot of items are now purchased pre-sterilised and will have been sterilised by irradiation. These items have a longer shelf life, but still carry an expiry date, which must be checked.
- Auto-clave tape must be peeled upwards, care being taken not to tear the outer packaging in the process.
- When an item is packaged in a bag staff must run their fingers along the gulleys on either side in an upward motion so the inner package emerges from the top.
- Trays must be opened in a manner whereby the unscrubbed circulating person does not lean over any part of the sterile inner drapes.
- Items must not be dropped onto the scrub trolley without the scrub persons consent and knowledge as to what the item actually is.
- Sutures must be peeled open and presented for the scrub person to take. Items must be presented to the scrub person from the edge of the sterile field.
- Staplers and disposable pre-packaged items should have the paper peeled off the top of their packaging, from the semi-peeled point, so as the scrub person can take the item from within the sterile plastic packaging.
- Prostheses and other implants must be opened according to manufacturer's instructions and must not be opened until both the surgeon and scrub person have identified them as the required item.
- If staff touch, or suspect they touched a sterile item, then it must be discarded and a fresh one introduced.
- Any sterility stickers or implant / prostheses labels must be removed and placed in the patients notes, and if appropriate on the reordering sheet.

Compliance: 100% Exceptions: None

References: AfPP Principles of Safe Practice in the Perioperative Environment (2011) The Royal Marsden Hospital Manual Of Clinical Nursing Procedures.

See Also Theatre Standards: Aseptic Technique
Theatre Documentation

2.4. Operating Theatre Standard No 4 - Trolley Preparation for Surgical Intervention.

2.4.1 Standard Statement: The preparation of sterile instrument trolleys for surgical intervention is a skilled and precise procedure that requires adherence to a strict aseptic technique throughout. Staff will prepare and maintain a sterile field at all times to minimise the risk of cross infection to the patient.

Staff will ensure the patients safety throughout the procedure.

Staff will ensure appropriate use of resources and minimise waste.

2.4.2. Method:

General considerations

- Perioperative staff with infected lesions of the skin or bacterial infections of the upper respiratory system should not participate in any aseptic technique.
- Staff must be aware of differences between sterile items and non-sterile items and share responsibility for monitoring aseptic practice.
- The environment and all working surfaces must be cleaned according to RCHT Decontamination Policy and the Cleaning Policy.
- All practitioners, staff and clinicians working, or who come to work in the operating theatre environment are expected to act as role models, demonstrating positive behaviours that actively promote best practice for infection prevention and control procedures in the operating theatre environment.
- A 'zero' tolerance for breaches to practice for infection prevention and control procedures in the operating theatre environment must be fostered.
- All staff involved in the preparation of trolleys for surgical intervention will have received training appropriate to their level of participation and have been assessed as competent.
- Staff will ensure that sufficient trolleys, mayo stands and bowl stands are available for the planned surgical procedure and that they are in a good state of repair and have been cleaned thoroughly prior to use.
- Staff will collect together all items expected to be required for each procedure in advance of surgery. Any items not available must be detailed to the surgeon in charge of the case prior to start of anaesthesia, to allow the surgeon to make an informed decision regarding whether to continue.
- All items to be used must be inspected for sterility and damage.
- Equipment and medical devices safeguards
- All pre-sterilised articles must be checked for evidence of sterilisation, damage, the integrity of packaging, and an expiry date, prior to use. Any packs found to be in an unsatisfactory condition must be discarded.
- Items used within a sterile field must be sterile. Any items that fall into an area of questionable cleanliness must be considered non-sterile.
- Sterile drapes must be handled as little as possible. The drapes must be applied from the surgical site to the periphery, avoiding reaching over non sterile areas. Once placed, drapes must not be repositioned to avoid contamination of the sterile field.
- Trolleys must be prepared immediately prior to each individual surgical

intervention in accordance with the planned operative procedure and individual patient needs.

- Trolleys must only be laid up in an area that affords sufficient space to open packs and maintain a sterile field. There should be minimal movement of personnel within this area during preparation of the trolley.
- For Orthopaedic surgery, trays and packs must not be opened until the patient's position on the operating table is finalised, including catheterisation, and the ward bed has been removed from the operating theatre.
- All trolleys must remain within the boundaries of the Laminar Flow.
- All doors within the operating theatre must remain closed wherever possible to maintain correct airflow changes.
- A minimum of two personnel are required to prepare sterile trolleys. It is essential that one member is scrubbed, gowned and gloved, and strictly follows the principles of the aseptic technique.

2.4.3. Scrubbed personnel

- Staff participating in an aseptic technique should present themselves as recommended if gowns or gloves are contaminated they must be changed as soon as physically able and safe to do so whilst ensuring patient safety.
- Scrubbed personnel should remain close to the sterile field and not leave the immediate area. If personnel leave the sterile field and exit the operating theatre they must re-scrub before returning to the sterile field. Leaving the sterile field increases the risk for potential contamination.
- Personnel participating within sterile procedures should stay within the sterile boundaries, and a wide margin of safety should be given between scrubbed and non-scrubbed persons.
- When changing positions or moving between sterile areas, scrubbed personnel should turn back to back or face to face to avoid contamination.
- Scrubbed personnel should keep their arms and hands within the sterile field at all times. Contamination may occur if hands are moved below the level of the sterile field.
- Scrubbed personnel should only be seated when the operative procedure is to be performed at that level.
- Circulating personnel should not walk between the two sterile fields and should be keep an adequate distance from the sterile field.

2.4.4. Special Considerations

- Dressings must be removed carefully from the wound to prevent scattering of micro-organisms into the air. It is recommended that this is carried out by an assistant wearing gloves rather than a scrubbed member of the surgical team. Used and soiled dressings should be discarded immediately and in accordance with RCHT Generic Waste Management Policy
- To reduce the risk of airborne cross infection, talking, movement, opening and closing doors, exposure of wounds, disturbance of clothing and linen, and number of personnel in the theatre must be kept to a minimum. Special consideration must be taken to maintain the integrity of the sterile field at all times.
- The sterile field should be constantly monitored and maintained, as sterility cannot be assured without direct observation of the sterile field. Any break in sterility must be reported and acted on to ensure patient safety.

- Laying up of instruments in a theatre with an ultra-clean ventilation system should be done entirely under the canopy wherever possible.
- Scrubbed personnel must move draped sterile trolleys by placing hands on the horizontal surfaces only.
- To maintain asepsis it is essential that all staff are aware of the correct method for opening different sterile packages to avoid the contamination of contents. Circulating persons must open wrapped sterile supplies by opening the wrapper furthest away from them first. The nearest wrapper must be opened last. Outer wrappers must be secured when presenting sterile items, to avoid contamination.
- Sterile items must be presented to the scrubbed person or placed securely on a specific area of the sterile field identified and managed by the scrubbed person. Items must not be tossed on to the sterile field as they may roll off or cause other items to be displaced.
- Sharps and heavy items must be presented to the scrubbed person to avoid penetration of the sterile field.
- When dispensing solutions, the solution vessel must be placed near the trolley edge or held by the scrubbed person. The solution must be poured slowly to avoid splashing which could cause strike-through and compromise the sterile field.
- Sterile fields should be prepared as close as possible to the time of use.
- Multi-dispensing antiseptic containers e.g. betadine / videne must not be refilled and must be discarded at the end of the day.
- Preparation of sterile trolleys in advance is not recommended, even with the use of sterile sheets to cover them. The trolleys are subject to contamination over time and removal of sheets without contamination cannot be guaranteed. In addition, unless trolleys are continuously monitored, there is a potential for sterility to be compromised.
- Sterile equipment must be presented to the scrub person from the edge of the sterile field and received in such a way as to prevent glove contamination on the unsterile wraps.
- It is recommended that wherever possible items are handed directly to the scrub person. Where this is not possible, items may be delivered directly to the sterile field, but it is recommended that a separate area is identified for this purpose, away from the work area to minimise the risk of contamination.
- Items must only be delivered to the sterile field at the request of the scrub person. Although anticipation of needs by the circulating person is appreciated, they must not open additional items prior to a request being made, to ensure best possible use of resources.
- Once prepared the trolley must be attended at all times.
- Standard basic layout of trolleys should be followed in order to facilitate continuity of patient care and safety in the event of a sudden change of scrub personnel during the operative procedure.
- Trolleys must be placed correctly around and above the patient depending on the planned operative procedure.
- Care must be taken to ensure there is no undue pressure on any part of the patient's body or limbs.
- All instruments must be returned to the trolley or mayo stand in order to prevent accidental injury to the patient or members of the surgical team.
- Any breach of aseptic technique must be acknowledged and acted on

immediately.

- Contaminated equipment must be removed from the sterile field. Re-gloving, gowning and draping should be carried out as required.

2.4.5. Practice

- The following practices will support infection prevention and control for patients undergoing interventional procedures.
- Do not routinely remove hair. If hair must be removed from the operative area, electric clippers are available.
- Prepare the skin at the surgical site immediately before incision using an antiseptic preparation.
- Maintain the patient's temperature intra-operatively.
- Maintain adequate oxygenation and perfusion throughout surgery
- Cover surgical incisions with an appropriate dressing at the end of the operation.

Compliance: 100% Exception: None

References:

AfPP Principles of Safe Practice in the Perioperative Environment 2011

RCHT Infection Control Policy

See also

Theatre Standards for: Aseptic Technique Disposal of Equipment

Disposal of Waste and Linen

Safe Handling and Disposal of Sharps Scrubbing Gowning and Gloving

2.5. Operating Theatre Standard No 5 – Skin Preparation and Draping

2.5.1 Standard Statement: Theatre staff will ensure that the patient's skin is prepared for surgery in a safe and aseptic manner, exposing the patient as little as possible. Staff will ensure that sufficient quantities of sterile drapes are applied, in order to maintain an adequate sterile field around the site of surgery.

2.5.2. Method:

Preparation of the Patient Undergoing a Procedure in the RCHT Perioperative Environment

2.5.3. Competency Domains for the

• Circulating practitioner role:

- Assist scrub practitioner / advanced scrub practitioner with setting up for prepping and draping.
- Anticipation and preparation of scrub practitioner's requirements for prepping and draping.
- Ensure a safe operating field and correct prepping and draping practice
- Observance for breaks in the sterile field and bringing this to the attention of scrubbed personnel.
- Applies to Non-registered staff, registered practitioners and students

• Scrub practitioner role:

- Aseptically set up for prepping and draping
- Ensure a safe operating field and prepping and correct draping practice
- Maintenance of the sterile field
- Anticipation and preparation of surgeon's requirements for prepping and draping.
- Assist the medical/surgical team with their prepping and draping of the patient.
- Applies to Non-registered at Band 4 staff, registered practitioners and students

• Scrub practitioner role – Competency to prep and drape

- Undertake competent and skilled assistance preparation and draping under the direct supervision of the operating surgeon
- Applies to registered Scrub practitioners that have passed the relevant competency assessment only
- All healthcare practitioners must have successfully achieved all aspects of competency assessments before being permitted to work in the above tasks. A record of this must be maintained within the Steps Framework.

2.5.4. Preoperative skin preparation

- Showering or bathing on the day of surgery is recommended (except in emergency situations). Transient skin bacteria are easily removed with soap and water.
- The skin must be assessed for any breaks, cuts, abrasions and sores as the effectiveness of the skin as a protective barrier is reduced if the skin is not intact.

- Any skin breaks must be documented. The presence of moles, warts, rashes, tattoos or other skin conditions at the surgical site must also be documented in the patients perioperative record.
- Checks prior to surgery must be made to ensure that there are no allergies to antiseptic agents. If there are allergies to any cleaning agents, this must be documented and an alternative found.
- Attention should be paid to any 'contraindications' or 'cautions' for surgical use, for example caution must be used with iodine during pregnancy.

2.5.5. Preoperative hair removal

- Hair should only be removed if it will directly interfere with access to the incision site, or if there is a risk it will contaminate the wound site.
- Where hair removal is necessary:
 - Patient consent must be obtained prior to hair removal, with a full explanation of the method to be used and why it is necessary.
 - The person who performed the hair removal, the area from where the hair was removed and the method should be documented.
 - Hair removal should take place as close to the time of surgery as possible to minimize the risk of bacterial contamination to the skin surface.
 - Hair removal should be carried out by an experienced practitioner in a clean area of the surgical suite, with good lighting, affording patient privacy at all times.
- Clippers used for hair removal, must be stored and decontaminated between patient use according to manufacturer's instructions and Trust decontamination guidelines. Single use shaving heads must be used and discarded after every patient use.
- Shaving including wet shaving is not an appropriate method, due to the skin trauma it can cause and associated increased risk of surgical site infection.
- When surgery is to be performed on an already contaminated wound, shaving prior to surgery is not recommended as this holds a high risk of postoperative wound infection.

2.5.6. Types of solutions used in skin preparation

- There are several types of antiseptic skin preparations available at RCHT. The type of solution selected should be influenced by the area that requires preparation, the condition of the skin and patient allergies.
- Sodium chloride 0.9% can be used for wound irrigation and to clean the skin immediately after surgery. Sterile water can be used to clean instruments throughout the surgical procedure. Hydrogen peroxide 3% solution can be used to cleanse dirty and infected wounds and methylene blue 1% can be used to mark or stain the skin.
- Alcohol solutions are deemed more efficient than aqueous solutions (Hospital Infection Society 2002).
- Where possible antiseptics should be sourced and supplied in ready to use, single use containers or sachets, as there is an increased risk of contamination from using multiple use containers.
- When multi-dispensing containers have to be used practitioners must be mindful of the following:
 - The edge of the skin solution container should be considered

contaminated after the cap is removed and therefore the sterility of its contents cannot be guaranteed once the cap is replaced (Hospital Infection Society 2002).

- When multiple used containers are used, they must not be refilled and must be discarded at the end of the day.
- When using alcohol based solutions, it is imperative that the skin is allowed to dry completely after every application by evaporation, prior to applying electro cautery or laser treatment. Spontaneous combustion can occur when flammable solutions are exposed to an ignition source when oxygen is present.
- Skin preparation solutions must be stored in a locked cupboard and flammable solutions must be stored in accordance with COSHH regulations.

2.5.7. Intraoperative skin preparation

- If antiseptic solution needs to be reapplied, the same type of antiseptic must be used.
- Skin solutions must be used in accordance with the manufacturer's instructions and Control of Substances Hazardous to Health.
- Skin solutions must be checked by the scrub and circulating practitioner to ensure they are in date and sterile.
- Solutions must be poured into a container at the edge of the sterile field, from a height of approximately 10cm, to avoid contamination of the sterile area.
- Care must be taken to avoid spillage onto the sterile area.
- Within the registered practitioner team, only the Advanced Scrub Practitioner, who has been assessed as competent and skilled in skin preparation techniques, is able to apply antiseptic skin prep to the surgical site.
- Skin preparation should be carried out using an aseptic and non-touch technique using sponge holders. A non-touch technique will prevent contamination of sterile gloves.
- Sponges should be positioned on the holder in such a way that the end of the holder cannot traumatise patients' skin.
- Swabs, which are used for prepping, must be retained as part of the scrub count.
- To maintain dignity and needless heat loss, unnecessary exposure of the patient should be avoided. However the area exposed must be sufficient to comply with recognised skin preparation guidelines and surgical preference.
- Skin solutions must not be allowed to seep or pool under the patient. To prevent seepage or pooling, absorbent or sterile towels can be placed under the patient. These must be removed if they become wet, as this may cause unnecessary skin irritation, even if the solution used is non-irritating.
- Flammable solutions must be allowed to evaporate before placing the drapes to avoid fumes accumulating under them. This will reduce the risk of chemical burns.
- Great care must be taken to avoid solutions running onto diathermy electrode plates, electrocardiogram (ECG) leads and tourniquets. This will also reduce the risk of chemical burns.
- Only sufficient antiseptic solution must be applied.
- Skin preparation must proceed from clean to dirty areas. Cleansing must begin at the incision site and continue outwards to the periphery in a circular

motion. This will prevent any micro-organisms being returned to the incision site. This process should be repeated several times with a clean sponge each time.

- An adequate area of skin surface must be prepared in order to allow for safe extension of the incision, placement of drains and for any possible movement of the drapes.
- Used sponges and holders must be discarded after each application. Once all applications are complete, the area should be allowed time to air dry naturally through evaporation.

2.5.8. Additional considerations

- In cases where a contaminated area is within the area to be prepped, skin preparation must start at the surrounding skin.
- Areas which are considered to be heavily contaminated such as the perineum, anus, vagina and axilla must be prepped last. The umbilicus must be prepared first to prevent dirty solution running onto clean skin. Special care must be taken to avoid pooling of skin preparation within the umbilicus.
- Skin ulcers and draining sinuses are also considered heavily contaminated areas and should be prepped last.
- Multiple incision sites must be prepped separately.
- Additional care should be given to prepping malignant areas to prevent potential spread of cancer cells.
- Traumatic wounds may require large amounts of irrigation in addition to skin preparation to remove larger amounts of dirt or debris.
- Stomas must be sealed with adhesive drapes. If a stoma is within an area to be prepped, it can be covered with a sterile swab and the area around it must be prepared first. Once the surrounding area is cleansed, the swab can be removed, and the stoma cleaned.
- Delicate areas such as the eyes and ears may require special diluted solutions.
- All patients undergoing eye surgery will have Povidone Iodine (Videne) for skin prep. However, Videne should be diluted with either normal saline or Balanced Salt Solution before its use (Royal College of Ophthalmologists guidelines and manufacturer's recommendation). Patients known to be allergic to Iodine should have Chlorhexidine as skin prep.
- Solutions should not be allowed to pool in the patient's eye.
- Skin preparation of wound sites following the removal of casts or dressings may require soaking with sterile solutions to remove skin squames or adherent dressings.
- During preparation of limbs, additional personnel or equipment may be required to hold the limb securely thus allowing the whole circumference to be cleansed safely.
- Graft and donor sites are prepared separately to prevent cross-contamination from one site to another. The donor site is prepared first. Colourless antiseptic solutions allow the surgeon to evaluate the vascularity of the graft.
- The patient's skin must be dry prior to commencement of the draping procedure

2.5.9. Documentation

- The following must be documented in the perioperative record):
 - The condition of the skin at the surgical site if abnormal.
 - Hair removal if performed, including method and time of removal.
 - Type of skin preparation used.
 - Personnel performing skin preparation.
 - Development of any patient hypersensitivity reactions should be recorded in the incident recording system.
 - Postoperative skin assessment.

2.5.10. Disposable Drapes

- The Procurement Policy outlines how drape and gown selection is made.

2.5.11. Storage of Drapes

- Storage areas for drapes will be kept clean, dry and tidy.
- Guidelines for draping
- Prior to surgery, it is recommended that the scrub team checks the effectiveness of the planned draping for the forthcoming surgery.
- Adequate time should be available for draping including the drying time for the skin prep.
- The scrub practitioner should also have a good knowledge and understanding of the procedure being undertaken.
- Sterilisation wrap products should not be considered to be sterile drapes and therefore should not be used as trolley covers.
- The area surrounding the table and the patient must be as free as possible from equipment, to prevent contamination of the drapes while draping. Any equipment required for the procedure must be moved into place once draping has taken place.
- The patient's skin should be dry prior to commencement of the draping procedure.
- Drapes must be handled as little as possible and not fanned or waved in the air.
- The sterile gloves of the person undertaking the draping should be protected by folding the drape around the hand.
- Whilst undertaking draping the scrub practitioner must keep a safe distance (about 30cm) from the operating table, to avoid contamination of their sterile gown and gloves. The drapes are carried to the operating table and the area closest to the scrub practitioner must be draped first.
- The person applying drapes must not reach across the operating table, or lean on the patient to place drapes.
- Drapes must be held high enough to prevent contact with any non-sterile areas before placing the over the patient. The distal edges of the drapes must be allowed to fall naturally. The area below waist level is not considered sterile.
- Once the drapes have been placed, they should remain in position until the end of the procedure, however if they become wet or soiled during surgery, they should be removed and replaced with new sterile drapes. Contaminated gloves must also be replaced.
- If a hole is found in a drape, this must be covered with another drape or the drape discarded and replaced. If there is any doubt regarding the sterility of a drape, then it must also be discarded.

- Hair or foreign bodies found on the sterile drapes must be removed and handed off the sterile field, along with any item which has come into contact with the foreign body, such as gloves. The area must then be re-covered with another sterile drape. Alternatively, the whole pack can be discarded and the process restarted using a new pack.
- Non-adhesive drapes should be held in place by an atraumatic towel clip, or extra sterile adhesive tape, to hold the drapes together. There is a responsibility to ensure that the skin is not punctured inadvertently. Traumatic (sharp) towel clips run the risk of potentially causing a secondary wound with increased risk of infection. It is wholly inappropriate to use surgical instruments not designed for holding drapes e.g. Mosquito artery forceps, since this increases the likelihood of premature failure in the strength of these specialist surgical instruments.
- Where adhesive drapes are used, checks must be made of the patient sensitivity to adhesives.
- The drapes must remain in place until the dressing has been applied.
- Removal of self-adhesive drapes must be performed in a precise and deliberate manner.
- When removing adhesive drapes the skin must be supported with the fingertips as, to reduce likelihood of skin trauma.
- The drape should be peeled back, slowly, at an angle of 180 degrees.
- Following removal of the adhesive drape the skin condition must be checked to see that the integrity remains intact. Any noticeable skin trauma must be noted in appropriate documentation and DATIX raised if necessary, e.g. skin layer has been removed or excessive redness.
- The scrub practitioner must be considered the person of choice to dispose of all drapes into appropriate bags for disposal, while still gowned and gloved. All waste leaving the theatre must be labelled in accordance with the Waste Policy.

Compliance: 100% Exceptions: None

References:

AfPP Principles of Safe Practice in the Perioperative Environment (2011) RCH Trust
Infection Control Policy

2.6. Operating Theatre Standard No 6 - Use and Handling of Surgical Instruments

2.6.1 Standard Statement:

All staff involved in the use and handling of surgical instruments will ensure correct safe preparation for use by maintaining asepsis and limiting the risk of contamination

2.6.2. General Safeguards

- Surgical instruments and powered equipment must be used and handled in accordance with the manufacturer's instructions and used for the purpose for which they are designed. Knowledge of anatomy, instrumentation and surgical procedures is required to achieve this (Taylor and Campbell, 2000).
- To prevent damage, delicate instruments must be handled with care and separated from other instruments.
- Specialised instruments will be checked regularly by appropriately trained personnel in the Sterile services Department (SSD). Specialist test equipment will be made available to check the integrity of instruments such as diathermy cables, electrodes and fibreoptic cables in SSD. In addition, accurate records of the number of uses of each individual item will be maintained by SSD in order to comply with the manufacturer's recommendations. This will be managed by the Sterile Services Department.
- In order to maintain asepsis, instruments found to be contaminated with dried blood or body tissue prior to surgery must be discarded. If any such items are found on a tray of instruments, the whole tray must be discarded and the incident reported to the appropriate person. In addition, this must be followed with a written report using the DATIX reporting system.
- Each instrument tray will contain an instrument checklist, which incorporates the information necessary for a recorded programme of use. The instruments on each set must be checked against this list, in accordance with the RCHT Standard: The Swab Instrument, Needle and Sharps Count for Invasive Procedures in the Perioperative Environment.
- Any discrepancies noted in the instrument count must be recorded on the instrument checklist in addition to DATIX.
- Instrument sets at RCHT have been standardized, within reason, with the minimum variety and number of instruments needed for the procedure. Consideration should be given by Team leaders and managers for instruments not routinely used during procedures to be deleted from instrument sets/trays and be made available as separate items.
- The Decontamination Policy outlines the Trust procedures for tracking and traceability of surgical instruments. Each set of instruments or peel pack of instruments comes with a unique traceability sticker. This sticker must be placed on patient documentation which will allow traceability between set and patient, identifying which set was used for the patient and the decontamination process it has undergone. Such a system is required in the event of a 'look back' exercise. Tracking systems are also available for endoscopes processed through automated endoscope re-processors.
- Instruments must be accounted for at all times during a surgical procedure.
- When handling or counting instruments it is important to handle them gently, in small lots or individually whilst extra care must be taken to protect the tips of the instruments and not to touch the part of the instrument that is to enter the patient's wound.

- The scrub practitioner will ensure that instruments are handled in such a manner as to avoid injury to the patient, other members of the team and personal injury.
- Special care must be taken with sharp instruments (e.g. scalpels and loaded needle holders). All sharp instruments such as scalpels will be transferred between staff in a receiver (kidney dish).
- Instruments will not be allowed to rest directly on the patient as this could cause injury to the patient or damage to the drapes. In situations where this is likely to occur consideration must be given to the use of appropriate additional sterile surfaces (e.g. Mayo tables, magnetic pads).
- It is important to avoid bouncing, dropping or weighing down instruments under heavier items.
- Instruments should only be used for their specific purpose e.g.
 - Artery forceps must never be used as suction tubing clamps, needle holders or pliers.
 - Needle holders must never be used as pliers and must correspond with the needle size to be used.
 - Scissors used for dissecting must not be used for any other purpose e.g. not used for cutting suture materials.
- When returning instruments to SSD all instruments from each set must be returned for the set from which it was used.
- Ring handled instruments that arrived on a pin must be returned on a pin with curve tips pointing in the same direction.
- Instruments that are controlled with a ratchet must be stored and returned to SSD clamped on the 1st ratchet.
- Extra instruments opened in addition to those in a set, must be returned in a clear plastic bag and great care must be taken that these instruments are carefully protected from damage if not protected by a container.
- If unusual circumstances arise, where instruments will not be able to be processed within 12 hours, SSD must be consulted on how the set should be stored until such time as it can be decontaminated. SSD may suggest using an instrument spray conditioner that will maintain the instruments in safe 'moist' condition to prevent organic matter damaging or corroding them.
- Bench top sterilizers must not be used and should be removed from all areas.
- Sterile trays should not be opened until they are specifically needed during the procedure.
- If a tray is opened but is not immediately used (eg an delayed start to a procedure or multiple procedures performed in the same setting) coverage of open trays with a sterile towel is recommended to minimise exposure to environmental conditions.
- Traffic through the operating theatre should be kept to a minimum.

2.6.3. Storage of instruments

- The storage area must be clean and dry, free of dust and free from sharp edges that could cause penetration of the sterile wraps.
- All storage surfaces must be smooth, non-porous and be cleaned on a regular basis, a record of this must be kept by the theatre manager and available for audit purposes.
- Sterile items must be protected from direct sunlight.
- The temperature of the storage area should range between 22° C and 24° C

- with a relative humidity of 35 to 68%.
- Perioperative staff must have the knowledge and skills related to the handling of sterile items.
- Sterilised items must be transferred to and from the storage areas on clean, specifically designated trolleys.
- Items must be transferred carefully from the trolleys onto the storage shelves with care to minimize the potential for any damage to occur to the wrappings.
- Care must be taken to ensure that sterile packed items and sets/trays are not packed tightly onto shelves.
- There must be agreement on how many sets may be stored on top of each other with SSD, in order to ensure the storage does not damage wrappings occur, and reduce the integrity of the sterile items.
- In addition, stock must be rotated whenever additional sterile items are placed in storage, thus ensuring that all stock is used in the correct date order.
- All sterile items have an event-related shelf life. The length of time an item can be considered sterile is referred to as the “shelf life”. The event-related outdating theory is based on the assumption that if items are properly cleaned, wrapped, sterilized, stored and handled they can remain sterile indefinitely unless the integrity of the packaging is compromised. SSD provides a ‘date of sterilisation’ together with an ‘out of date’ sticker for each item. Therefore, the shelf life of an item is dependent not only on the storage, handling and type of packaging material, but also the span of life as identified by SSD.
- Adequate handling, storage and robust stock rotation have the potential to reduce the costs of reprocessing instruments by minimizing the risk of damage to the integrity of sterile stock.

2.6.4. Education and training

- All new staff to the department must receive training on the care, use, handling and storage of instruments as part of their induction. Documentation that this has occurred must be kept and made available by the Theatre Manager.
- Perioperative staff must not handle instruments unless they are competent to do so and unless they understand their use in general and specific specialties
- New products must not be introduced into the operating department until staff have received training in their use. Documentation of this training must be available and kept by the Theatre Manager.
- Any training on instrumentation must not be undertaken when the instruments are in use during a procedure.
- Instrumentation on loan must not be introduced into the operating department until staff have received training in their use. Documentation of this training must be available and kept by the Theatre Manager.
- Training on loan equipment must take place before the instruments have been sterilized for the specific patient they have been obtained for.
- An introduction to the local policy must be included in the orientation programme for all new staff. Documentary evidence of this should be available for audit.

2.7. Operating Theatre Standard No 7 - Handling of Instruments During Surgical Procedures

2.7.1. Standard Statement:

All staff will ensure instruments are handled safely to minimise the risk of accidental injury to the patient, self and colleagues. All instruments will be checked prior to and following use to ensure that they are fit for their intended purpose and remain so following their use.

2.7.2. Method:

- All staff will receive training on how to handle instruments and will be assessed as competent before carrying this out unsupported.
- All staff will be familiar with RCH Trust Infection Control Policies on Linen and Waste Disposal, Occupational Health Policy on Needlestick Injury, and other Theatre Standards as detailed.
- The scrub person will check each instrument prior to its use to ensure it is fit for its purpose, and that no parts are missing e.g. screws.
- All items are handed to the surgeon firmly and precisely, with verbal confirmation of which instrument has been handed if not requested by name by the surgeon.
- Any item with variable settings, such as cutting jigs, impaction / delivery devices etc. may be set by the scrub practitioner, according to the surgeon's instructions. On delivering the item to the operative field, the scrub practitioner should clearly, verbally state the equipment settings and receive confirmation of correct settings from the surgeon.
- Items with ring handles should be held by the shank, with the handles facing downwards, to be placed into the palm of the surgeon's hand, unless it is indicated by the surgeon otherwise.
- Instruments with an open/close mechanism must always be handed over in the closed position. If there is a ratchet on the item this should be secured.
- Holding or touching instruments by the working tips should be avoided wherever possible.
- Instruments should be kept as clean as possible, using a swab to wipe excess blood and body substances from them.
- Sharp items should be passed in a receptacle such as a receiver, to minimise the risk of accidental injury.
- Diathermy equipment must be kept within an insulated receptacle such as a quiver when not in use to minimise the risk of accidental burns.
- Scratch pads may be used to clean the tips of monopolar diathermy, to ensure good contact with bleeding vessels is maintained, and to prevent sticking.
- Scratch pads must never be used on bi-polar forceps as they remove the non-stick properties and render the instrument useless.
- Instruments must not be allowed to rest directly on the patient, as they may either cause injury to the patient and members of the surgical team, or may damage the drapes and compromise the sterile field.
- Consideration should be given to the use of appropriate additional surfaces such as Mayo tables or magnetic mats.
- At the end of the procedure instruments should be returned to their original trays, additional items placed on the principal tray, and all disposable sharps removed and safely disposed of.

Compliance: 100% Exceptions: None **References:**

AfPP Principles of Safe Practice in the Perioperative Environment (2011)

RCH Trust Infection Control Linen and Waste Policies

Sharps Policy

See also Theatre Standards: Aseptic Technique

Disposal of Instruments Disposal of Waste and Linen

Safe Use and Disposal of Sharps Swab and Instrument Counts Trolley Preparation

2.8. Operating Theatre Standard No 8 - Handling of Prostheses and Implants

2.8.1. Standard Statement:

All staff will ensure that any implant or prosthesis is minimally handled to reduce the risks of both cross infection and the mishandling and dropping of the item, thereby reducing cost to the trust in treatment of post-operative infection, and cost to the department in wasted implants / prostheses.

2.8.2. Method:

- The implant / prostheses must not be opened until the scrub person and the surgeon have checked the item and requested its delivery to the sterile trolley.
- The item should be opened carefully according to the manufacturer's guidelines and should be taken directly by the scrub person. The item must not be dropped on to the sterile surface to prevent, both damage to the item, accidental contamination, and wastage if the item should fall.
- The scrub person having taken the item should identify a sterile receiver, if appropriate, or a safe area of the sterile trolley, that is away from the working area, for storage of the item, until it is actually required.
- Where the item is provide sealed within another layer of packaging, the scrub person should leave this packaging intact as long as possible, to reduce possible cross contamination.
- When the surgeon requests the item, the packaging may be opened on a clutter free sterile area of the trolley ensuring adequate drop space around the item. The item should be kept as close to the surface of the trolley as possible, in case the item is accidentally dropped.
- Transfer of the item wherever possible should be either, within the opened sterile packaging provided, or in an identified safe receptacle, such as a receiver.
- Where the item has its own specific delivery instrument or impaction device, the item, where possible should be mounted by the surgeon who is undertaking the procedure. Once mounted the whole should be placed very carefully on a flat sterile surface, of sufficient area, free from any other swabs or instruments. The surgeons themselves should then pick up the item as required.
- Where there is no other option but to hand the item from scrub person to surgeon, this must be done directly and never through a third party, such as assisting surgeon, or trainee scrub person to reduce the risk of wastage and cross contamination.
- Any traceability stickers or prostheses/implant details must be recorded in the patients' notes and on the theatre sheet for reordering.
- In the event of a prosthesis or implant being dropped or contaminated, the item must be discarded and a fresh sterile item sourced. It is not acceptable to attempt to decontaminate any implants or prostheses by any means within the operating department.

Compliance: 100% Exceptions: None **References:**

AfPP Principles of Safe Practice in the Perioperative Environment (2011)

2.9. Operating Theatre Standard No 8a - Checking of Prostheses and Implants

2.9.1. Standard Statement:

All prosthesis / implants intended for implantation during surgical procedures will be checked prior to use by the surgeon and scrub practitioner to confirm: size, type, manufacturer and side (if applicable).

2.9.2. Method:

- The surgeon at the pre-list briefing will specify the prosthesis system to be used. Where the prosthesis is a non-stock item, the surgeon will notify the Theatre Procurement Coordinator by email at least 7 days prior to the prosthesis being required.
- The Theatre Procurement Coordinator is responsible for checking stocks of prosthesis, ordering and ensuring that expiry dates are checked on a monthly basis and removing those prosthesis which have passed their expiry date. They are also responsible for ensuring that any non-stock items are ordered, received and checked prior to the procedure.
- When known during the procedure the surgeon will state the prosthesis that are required by size, type, manufacturer and side (if applicable)
- The theatre circulator will write the requested items clearly on to the theatre white board in the designated area.
- The surgeon and scrub practitioner will confirm that all recorded details are correct before the circulator leaves the theatre to collect the items.
- If possible the items should be located close to the operating theatre, e.g. by the use of flight cases.
- The circulator will collect the prosthesis component from the store and confirm that the details are consistent with those recorded. – **check one**
- The circulator will return to the operating theatre with the prosthesis and announce “prosthesis here” after entering.
- At an appropriate point in the procedure the surgeon and scrub practitioner will pause and focus on checking the prosthesis.
- The surgeon will read out loud the details of the prosthesis and must include: manufacturer, type, size, side (if applicable) and expiry date. The scrub practitioner will confirm that all details match the requested items recorded on the theatre white board. – **check two.**
- Once confirmed that all details are correct, the surgeon will state verbally that the prosthesis can be opened. (Any prostheses which are not to be used for the patient will be segregated to minimise the risk of confusion between prostheses at that time of implantation.
- The circulator will then open the outer packaging of the correct prosthesis and before proceeding will hold the item so that scrub practitioner can check the INNER packaging and confirm, manufacturer, size, type, side (if applicable) and expiry date. –**check three.**
- Once confirmed the scrub practitioner will receive the prosthesis and open onto the sterile trolley – please see standard 8 Handling of Prosthesis and Implants.
- The circulator will retain all labels associated with the prosthesis and ensure that items are accurately and fully recorded in the patient record. Where a label is not available, the following should be recorded in the patient’s notes manufacturer, style, size, manufacturers’ unique identifier for the prosthesis, e.g. the serial number.

- Instances of failed prosthesis verification, wrong prosthesis insertion and 'near misses' should be reported, recorded and openly discussed at the debriefing and reported via Datix.

Note: There is a shared responsibility for performance of this patient safety check. The operating surgeon retains the overall responsibility for ensuring that the correct prosthesis is implanted. This is an incremental check procedure will all three components contributing to overall safety and compliance. All three components must be performed. The operating surgeon may delegate verbalising of the prosthesis details to the scrub practitioner or senior assistant during check two if this is assessed as more appropriate by the operating team. The operating surgeon will retain the overall responsibility for ensuring that the prosthesis is correct.

All members of theatre teams who are participating in prosthesis collection and checks must have completed the associated tool box training and been assessed as competent by a registered practitioner. A record of competency will be retained in the operating department.

Compliance with this procedure will be audited monthly by relevant Theatre Manager / Deputy.

Compliance: 100% Exceptions: None **References:**

AfPP Principles of Safe Practice in the Perioperative Environment (2011)

2.10. Operating Theatre Standard No 9 – Prevention of Retained Foreign Objects: Swab and Instrument Counts

2.10.1. Standard Statement:

All staff will adhere to the RCH Theatre Policy regarding the counting and recording of swabs, instruments and additional items; in order to provide a safe environment for the patient to undergo surgical procedures, and ensure that all the items are accounted for and that no item is unintentionally retained at the surgical site, in a body cavity, on the surface of the body, or in the patient's clothing or bedding.

2.10.2. Method: Swab, Instrument and Needle Count

- All staff performing swab, needle and instrument counts will be required to demonstrate competence yearly.
- Student ODPs, pre-registered nursing students or student assistant theatre practitioners should have 'supernumerary' status until they have been deemed competent to assist with the count by an appropriately qualified senior member of staff.
- An introduction to the local count policy must be included in the induction to the operating theatre for all new staff.
- Healthcare assistants/support workers should not be involved with the count until they have been assessed as competent to do so by a registered senior practitioner.
- A record of competence must be made in the core competency pack held within the theatre steps programme.
- In procedures where there is dual site surgery being performed simultaneously, there must be a scrub practitioner for each site. Efforts should be made to ensure that all swabs, sharps and instruments for each site are kept separate and separate counts should take place.

2.10.3. Packaging

- All swabs, Small (10cm x 7.5cm), Large (36cm x 11cm) and Abdominal Packs (45cm x 45cm), lahey swabs (peanuts, pledgets), neuro patties, tonsil swabs and vaginal roll/packs that are used during invasive procedures must have an X-ray detectable marker fixed securely across the width of the swab.
- All swabs and packs must be packed in bundles of five and be of a uniform size and weight. Any package containing fewer or more than five should be removed from the procedure immediately. Checks should be made on multiples of five and recorded on the count board in multiples of five. This includes the use of cotton wool balls utilised in ear, nose and throat surgery.
- Red string ties that are used to tie swabs together must be retained in theatre to aid in swab counts. If a discrepancy is identified they serve as an additional point of reference. The ties should be secured on an instrument clip and kept apart from the working area to ensure that they cannot migrate to the operative site.
- Red ties should not be discarded or placed loosely on instrument trolleys. Red ties from tonsil swabs will need to be re-tied and placed on a clip, once they have been removed from the bundle.
- They can and should be counted (as needed) during the procedure to verify swab counts as recorded on the theatre white board, (particularly with complex cases) and counted at the end of the procedure to ensure (both ties

and swab counts) are correct as documented.

- Used swabs and packs must be counted off the sterile field in batches of five and disposed of into clear polythene bags. Each bag should be sealed and the number of swabs inside i.e. 5, and the type recorded on the outside in permanent marker.
- The red ties that are secured on the instrument clip are not counted down to the circulating staff for the duration of the procedure, to aid in the final check process.
- It is accepted that some procedure packs (such as in Ophthalmology) have swabs that are not tied with a red tie, in this case once the swabs are recorded on the whiteboard, a circle must be placed around the '5' to signify that there was no tie present.

2.10.4. Responsibility for Counts

- Each count must be performed by two members of staff, one of whom must be a registered or assistant practitioner.
- If there is no 'scrub practitioner', e.g. for dilatation & curettage procedure, the circulating practitioner must be a registered practitioner, and the count conducted with the operating surgeon.
- The same two perioperative staff must perform all the counts that are done during the surgical procedure.
- In the unlikely event, of a scrub practitioner needing to be replaced during a procedure, a complete count must be performed including a full instrument check, recorded and signed by both incoming and outgoing practitioners.
- Should it be necessary to replace either person in the count team temporarily, the relieving practitioner should follow the standard procedure and note and sign any additions on the intra-operative record.
- The name of the replacement or relieving practitioner must be recorded on the electronic register and the intra-operative record.
- For operations likely to take longer than six hours:
 - A risk assessment must be performed to make sure the scrub and 'lead checking / circulating' practitioners are fit to practice for the length of the case.
 - Staff delegated to perform the task should inform the line manager well in advance of the planned procedure if they do not feel fit to practice for reasons of health or competence.
- The scrub practitioner must inform the operating surgeon of the need for a changeover of scrub practitioner. It is then a joint responsibility for assessing when the best opportunity for the changeover, which should take into account the need for a subsequent swab, instrument, needle and sharps count.
- The operating surgeon must cease all activity if the scrub practitioner has to leave the operating table for a comfort break; or until the scrub practitioner has returned / been replaced and is ready to continue.
- Items that are to remain in the patient, this includes patient's natural orifices, by intention (for example packing gauze, drainage tubes, catheters) must be recorded in the patient's electronic records and patient's clinical and nursing notes. The items removal must also be recorded, including the time, date, name, and designation of the practitioner removing the item.
- All items must remain in the operating theatre until the procedure has been completed and the dressing has been applied. This includes laundry, sharps

and clinical waste containers / bags. Clinical waste bags should be labelled with the patient's number, date of operation and theatre identity.

- Gauze used as surface dressing does not have an X-ray detectable marker, is blue in colour and must only be opened once the final closure, usually 'skin', has been completed.
- X-ray detectable gauze swabs must not have the raytec thread removed by any member of the operating team.

2.10.5. Checking procedure

- A swab, instrument and needle count should be performed for all clinically invasive procedures and recorded immediately. This record should be retained in the patient's notes and electronic record.
- Each theatre is provided with a standardized 'dry wipe' count board. It must remain visible to the scrub team at all times.
- Pharyngeal packs must contain a radio opaque marker. The insertion and removal of the pharyngeal pack should be documented on the anaesthetic record and the theatre dry wipe count board.
- The scrub practitioner, whose responsibility it is to look after the instruments for that procedure, must check the integrity of all items before and after use, including the component parts of equipment and instrumentation. Any implanted items removed from the patient during the procedure must be checked for completeness with the operating surgeon on extraction.
- The initial full swab, instrument and sharps count must be performed immediately prior to the commencement of surgery. The AfPP state that countable items may include, but are not limited to:
- Blades • Bulldogs • Cotton wool balls • Diathermy tip cleaners • Instruments including screws or detachable parts • Lahey swabs (peanuts, pledgets) • Liga-reels • Local infiltration needles • Laparoscopic retrieval bag • Other isolation bags • Needles • Ophthalmic micro sponges • Patties • Red ties from swab packs (also acts as an additional check with the count board for swab number accuracy) • Slings/sloops • Shods • Sponges • Tapes • X-ray detectable gauze swabs, mops or packs – names vary according to local requirements.
- Plus anything additional procured during surgery that has the potential to be retained within a body cavity (e.g. tips of surgical instruments, drill bits etc.).
- A second count should occur before closure of a cavity within a cavity, before wound closure begins and finally at skin closure or at the end of the procedure.
- During the final check it is expected that all non-essential background activity will cease and background music etc. turned off, this is to ensure that the scrub practitioner and circulating practitioner are able to concentrate and communicate effectively.
- The operating surgeon should check the wound carefully for foreign objects before closure.
- When additional items are added to the field, they should be counted at the time and recorded as part of the count documentation to keep the count current and accurate.
- In the event of NCEPOD 1 immediate life threatening emergency, it is recognised that it is not always feasible to perform an initial swab and instrument count. In these circumstances all packaging must be retained to facilitate a count to be undertaken at the earliest appropriate opportunity,

and this must be documented in the patient's and department records.

- Items added during the procedure must be counted and recorded.
- Extra instruments should be added to the traceability paperwork of accounting for instruments that are used during the procedure either by sticker or written.
- At all times during a surgical procedure, the scrub practitioner must be aware of the location of all swabs, instruments and medical devices. The scrub practitioner should try to maintain a neat instrument trolley and sterile field to ensure that only necessary equipment is in use at any given time.
- If a blade, needle or instrument breaks during use, the scrub practitioner must ensure that all pieces have been returned to the scrub practitioner at the end of the case and are accounted for.
- Any instrument found to be damaged will compromise patient safety and therefore must be immediately taken out of use and labelled for repair. The registered practitioner, responsible for the count, must ensure that the Sterile Supplies Department are informed through the traceability paperwork.
- If an obvious fault is found with equipment, the decision lies with the Theatre Manager/team leader and SSD manager to contact the Manufactures and/or Medical & Healthcare products Regulatory Agency (MHRA), who must be informed. If appropriate, MHRA or the National Patient Safety Agency (NPSA) will issue a Hazard Warning or Safety Bulletin. A Datix record must be completed.
- A full swab, instrument and sharp count must be performed at the commencement of the closure of any cavity, and the final count at the commencement of skin closure.
- When checking swabs the scrub practitioner should ensure that the item is fully opened to check its integrity.
- Instruments and items with screw and/or removable parts should also be included in the count at the commencement and end of the procedure. These items and their component parts will be listed on the instrument tray list.
- The surgical team must allow time for these counts to be undertaken without pressure.
- On completion of the final count, the scrub practitioner will issue a verbal statement to the effect that all swabs, instruments and sharps are accounted for, and verbal acknowledgement must be received from the operating surgeon in order to avoid any misunderstanding. The scrub practitioner will verify with the circulating practitioner that the operating surgeon acknowledged the verbal statement.
- The scrub practitioner is responsible for the safe and secure disposal (according to local waste policy) of all needles, blades and sharps.
- It is the responsibility of the scrub practitioner to ensure that documentation for completion of the count is recorded accurately and confirmation that the count is correct is completed on the electronic record.

2.10.6. Checking Techniques

- Both practitioners must count aloud and in unison. Items should be completely separated during the checking procedure. The counting sequence should be in a logical progression, e.g. from small to large. The recommended sequence of surgical counts is: swabs, sharps, and instruments.

- Interruptions during the count should not occur. Once a count has been started it should be completed. If an interruption occurs, the count should be resumed at the end of the last recorded item. Music and background noise should be kept to a minimum at this time. When completing the final check, silent cockpit behaviours such as silence and the ceasing of non-essential activity should be observed in order for the scrub practitioner and circulating to focus on the count itself.
- Instruments should be counted audibly, singularly and viewed by the scrub practitioner and another individual. The SSD count sheet / tray list that accompany the set must be used for documenting instrument counts, signed and dated by the scrub practitioner, or delegated to the second counter, to verify the correct count at the start of the procedure and at the completion of the procedure. Names must be legible.
- The integrity of the X-ray detectable markers in swabs, packs, peanuts etc. must be checked during the count. This includes the integrity of tapes on abdominal swabs/packs with a gentle tug.
- At the initial count, and when added during the procedure, swabs and packs should be counted into groups of five. These should not be added to those already counted until verification of the number in the packet. The additions should be in multiples of five.
- In the event of an incorrect number of swabs or packs (ie: not five) the entire packet must be removed from the procedure area. The batch and lot numbers must be identified, the pack removed from stock. The Theatre manager/team leader and the SSD manager must be notified and a Datix record completed.
- If the instrument tray is deemed incorrect from the supplied SSD Tray list, this should be noted on the tray list, reported on the paperwork returning to SSD, to the team leader and a Datix record completed.
- Hypodermic and suture needles should be recorded as a total amount at the commencement of the procedure and additional items should be added individually on the dry wipe board according to the number marked on the outer package. Suture packs may be retained and used for a check back procedure if required.
- Opening all packages during the initial needle count is not recommended. Used needles on the sterile field should be retained in a disposable, puncture resistant needle container.
- Wire snares should be measured to ensure the full 100mm length is present.
- Swabs should be in full view of the operating surgeon and anaesthetist where applicable throughout a clinically invasive procedure. Where swabs are left temporarily in a cavity this must be identified on the swab board clearly stating what cavity and number of swabs.
- Used swabs and packs should be counted off the sterile field. The technique used should be safe and should incorporate infection control measures in conjunction with standard precautions.
- All items should be fully opened by the circulating practitioner and placed into an appropriate contained disposal system. Currently at RCHT we use clear plastic bags.
- Used swabs and packs must be counted off the sterile field in batches of five and disposed of into clear polythene bags. Each bag should be sealed and the number of swabs inside i.e. 5, and the type recorded on the outside in permanent marker.

- If there is a discrepancy in the closure counts, all bags or containers must be opened and their contents recounted.
- When batches of 5 swabs are counted down the white board record must be crossed through but not erased.
- If a counted item is inadvertently dropped off the sterile field, the circulating staff member must retrieve it, show it to the scrub practitioner and isolate it from the field to be included in the final count.
 - Items must not be cut or altered unless specifically intended for the purpose.
 - If alteration of any item is requested by the person performing the procedure this must be documented in the patient's records, highlighted on the dry wipe board and included in the count.
 - If any interruption occurs during the counting procedure, the count should be recommenced.

2.10.7. Non-radio-opaque swabs

- It is acceptable to use non-radio-opaque swabs or cotton wool balls for urinary catheterization, when they come pre-packed with the sterile urinary catheterization pack.

When urinary catheterization takes place in the anaesthetic room.

- These white 'swabs' or 'balls' must be checked in number at the beginning and the end of the catheterization procedure, by the person performing the urinary catheterization, and discarded into a clinical waste bag in the anaesthetic room. They do not form part of the 'swab count'.

When urinary catheterization takes place in the theatre room

- These white 'swabs' or 'balls' must be checked in number at the beginning and the end of the catheterization procedure, by the person performing the urinary catheterization. Placed into a clear plastic bag, tied & labelled as catheterization balls and swabs and discarded into a clinical waste bag in the theatre. They do not form part of the 'swab count'.
- It is not recommended that X-ray detectable swabs are used for catheterisation procedures, however, if this does occur should remain in theatre and be part of the count.
- Gauze used as surface dressing does not have an X-ray detectable marker, is blue in colour and must only be opened once the final closure, usually 'skin', has been completed.

2.10.8. Instruments

- The individual Theatre Specialty Leads in conjunction with the CSSD team will be responsible for ensuring the periodical evaluation and risk assessment of instrument sets (to minimize the risk to patients from harm and retained foreign objects) and ensure their contents have been rationalized, contain the minimum amounts of required equipment; that the equipment is appropriately maintained and the instrument list is up-to-date. The integrity of the instrumentation must be assessed at this point taking into account the number of cycles the instrument has undergone.
- Equipment trays contain a comprehensive list of the instruments present to provide an accurate record to enable checking the instruments prior to the start of the procedure and at the completion of the procedure.
- Equipment that can be disassembled or has been disassembled for cleaning processes is clearly described on the instrument list, including the number of parts, e.g. retractors.

- Photographs of every instrument tray are held and are available at the Sterile Services Department, along with manufacturer's instructions for the instruments for that set.
- The majority of our instrument trays have been standardised to assist with counting.
- The staff involved in the counting procedure must be able to recognise and identify the instruments and medical devices in use.
- No instrument sets used in the Theatre department contain swabs.

2.10.9. Count Discrepancy

- If any discrepancy in the count is identified, the operating surgeon must be informed immediately and a thorough search implemented at once.
- If a thorough search does not locate the item, an X-ray should be ordered at the discretion of the surgeon before the patient leaves the operating theatre, or if this is not feasible, before the patient leaves the operating department.
- The check X-ray must be a plain film and not taken by a C Arm Fluoroscopy machine.
- Missing micro items, (for example, needles) and those that cannot be detected on X- ray) must be recorded on the intraoperative record and theatre register and an X-ray performed at the discretion of the surgeon.
- All missing items must be documented in the patient's medical and nursing notes, theatre register and Galaxy system. The Datix incident procedure must be followed in accordance with local policy. The discrepancy and subsequent action must be reported to the Theatre manager/team leader, and SSD manager.
- Comprehensive documentation relating the unaccounted item should be added to the patient's record and the patient informed.
- There must be clear understanding among the theatre team of which clinician will inform the patient of the unintentional retention of a foreign object and what impact this may have on their health.

2.10.10. Documentation

- It is the responsibility of the scrub practitioner to ensure that documentation for completion of the count is recorded accurately and confirmation that the count is correct is completed on the electronic record e.g. Galaxy, and the instrument documentation from Sterile Services.
- The perioperative document must be fully completed and signed, indicating the scrub and circulating practitioners. This will be retained in the patients' medical record.
- When an item is intentionally retained, with plans for later removal, this should be documented appropriately in the patient record.

Compliance: 100% Exceptions: None **References:**

AfPP Principles of Safe Practice in the Perioperative Environment (2011)

2.11. Operating Theatre Standard No 10 - Use of Electro Surgical Equipment.

2.11.1. Standard Statement: Staff will ensure that all patients', whose surgery requires the use of diathermy, will be protected from the risk of burns.

2.11.2. Method:

- All personnel using diathermy equipment will receive the appropriate training and have been assessed as competent. They must be fully conversant with the safe use of the equipment and understand the principles of electro surgery.
- Diathermy machines will be checked prior to the start of every list, in accordance with the manufacturer's guidelines.
- Yearly maintenance and testing of equipment must take place by the appropriate team to ensure it's safety, any faulty or damaged items must be removed from use immediately and reported for repair.
- Application of diathermy grounding plates is only done by competent practitioners in accordance with the manufacturer's instructions, ie. Applied to a clean, dry, hair free, muscular area, as close to the operation site as possible, away from any pre-existing metal work in the patient.
- Diathermy grounding plates must be kept clean and dry, and preventative measures taken to ensure the plate does not become soiled with prep. solutions or body fluids.
- The scrub person must check diathermy forceps and leads prior to use, to confirm intact insulation and good connections between components.
- The scrub person must keep the diathermy forceps/ blade etc. within a suitable insulated receptacle during surgery, to prevent accidental burns to the patient or members of the surgical team.
- Scratch pads may be used to clean the tips of monopolar diathermy, to ensure good contact with bleeding vessels is maintained, to prevent sticking, and to prevent possible tissue damage from excessive charring on forcep ends.
- Scratch pads must never be used on bi-polar forceps as they remove the non-stick properties and render the instrument useless, a damp swab should be used to remove charred tissue
- All staff must be aware of any patient contraindication to the use of monopolar diathermy e.g. pacemaker, prior to commencement of surgery.
- Staff will be educated regarding the use of visor masks to prevent inhalation and eye contamination with diathermy plume.
- The diathermy machine must be switched off or set to standby before connecting or disconnecting live electrodes, and the surgeon informed of the power settings before commencing use.
- Single use return electrodes (grounding plates) must never be reused.

- The return electrode must be in direct and complete contact with the patient throughout their surgery. If the patient position is changed after application of the plate, the site must be rechecked.
- Patient skin condition must always be checked after removal of the grounding plate, and the site and skin condition recorded on the perioperative documentation.
- The patient must be shielded from metal objects to prevent a short circuit bypass of the grounding plate.

Compliance: 100% Exceptions: None **Reference:**

AfPP Principles of Safe Practice in the Perioperative Environment 2011

2.12. Operating Theatre Standard No 11 – Disposal of Used Instruments.

2.12.1. Standard Statement: All instruments used during surgical procedures will be returned to CSSD for reprocessing in a manner that minimises risk to all staff handling the contaminated items.

2.12.2. Method:

- All instrumentation used will be accounted for and returned to its original tray at the end of each operative procedure.
- All disposable items will be removed and safely disposed of.
- It is the scrub person's responsibility to ensure that all sharps are removed and discarded.
- Instruments which may potentially cause injury will be closed if possible e.g. ratcheted items, or placed within a receptacle e.g. diathermy point should be placed inside the quiver.
- All linen will be removed and sent for reprocessing as detailed in the Infection Control Policy.
- All disposable drapes will be removed by the scrub practitioner and disposed of correctly in clinical waste
- Used trays will be removed from theatre via the sluice area, and placed into the SSD "buggy", with the heaviest trays at the bottom and more delicate items on top.
- SSD staff will remove the buggy when full and deliver it to SSD for reprocessing.
- If items are required to be reprocessed quickly, the theatre team will telephone SSD as soon as the item is available to request urgent turn around. Transport to SSD is to be agreed by the theatre coordinator to facilitate urgent return to theatre.
- All single use items used during the procedure must be removed from the instrument tray and disposed of correctly by the scrub practitioner. Single use items returned to SSD by theatre staff will be datixed.
- Surgical instruments must be checked for completion at the end of the procedure by the scrub practitioner. Instrument sets should be "pinned" back together to enable checking.

Compliance: 100% Exceptions: None **References:**

AfPP Principles of Safe Practice in the Perioperative Environment (2011)

2.13. Operating Theatre Standard No 12 - Disposal of Waste and Soiled Linen.

2.13.1. Standard Statement: Waste products and linen must be correctly segregated and placed in the appropriate receptacle: the receptacle must never be overfilled and must be safely sealed and labelled prior to transportation.

2.13.2. Method:

- Staff must have access to and be aware of the Trust Infection Control Policy for Disposal of Waste, and the Linen Policy.
- Staff must have received appropriate training in the waste disposal procedure.
- Staff disposing of waste must be able to identify its categorisation and the appropriate packaging necessary for its disposal.
- Waste must be packaged correctly so that it does not present a risk to the environment and / or personnel when in transit or storage.
- Clinical waste except used batteries and pressurised cans must be placed into yellow bags; unsoiled household waste into black bags, and soiled linen must be placed in a white plastic bag, heavy soiling may require double bagging using a soluble bag..
- Each department must identify a collection and storage area for the disposal of used electrical batteries and pressurised cans. A clearly labelled container must be provided for each of these i.e. one for batteries and one for cans. When full, Facilities should be contacted and they will arrange for collection and safe disposal.
- Care must be taken not to inadvertently include non-linen items within the linen disposal system.
- Disposal bags/containers must be marked with which theatre they have come from, the date, and case number.
- Sealed bags and containers waiting collection must be stored in the designated area, which is safe and separate from patient areas. In theatres the designated area is the sluice.
- Where there is doubt as to the type of waste, it should be classed as clinical.
- Bags should never be more than $\frac{3}{4}$ full. Excess air should be removed, taking care not to squeeze the bag.
- The bag should be tied securely. Bags that are full prior to the end of the case may be sealed but must remain in theatre; fresh bags can be made up with the same details marked on them.
- Bags must only ever be discarded at the end of the case.
- Bags must be handled with care to avoid bursting or splitting.
- Sharps bins must be carried by the handle and never placed in bags. The details of the persons both assembling the bin and disposing of it must be marked on the receptacle.
- Staff must not decant one bag to another.
- Staff handling waste must wear gloves and protective clothing at all times. On removal of gloves, hands must be washed.

Compliance: 100% Exceptions: None **References:**

AfPP Principles of Safe Practice in the Perioperative Environment (2011) RCH Trust Infection Control Policies; Disposal of Waste, and Linen Policy.

2.14. Operating Theatre Standard No 13 - Disposal of Human Tissue

2.14.1. Standard Statement: Relevant staff must ensure that all human tissue removed during any operative procedure is disposed of in an ethical and respectful manner.

2.14.2. Method:

- Staff must confirm with the surgeon that the tissue in question is for disposal only and not required for specimens.
- Any human tissue that is required for laboratory analysis must be dealt with according to Generic Theatre Standard No 13 Management of Specimens.
- Any tissue for disposal that includes any foetal remains must be dealt with according to Generic Theatre Standard No 12 Management of Clinical waste.
- Any tissue for disposal should be kept separate until the operative procedure is complete and all counts have been carried out.
- The tissue may then be placed securely in a rigid yellow clinical waste bin for incineration. Care must be taken with any tissue containing sharp penetrative items such as bone fragments. Staff must wear appropriate personal protective equipment when dealing with tissue for disposal.
- Larger items, such as amputated limbs, should be placed directly into a rigid yellow bin. The bin should be sealed and labelled clearly with the Theatre of origin, date and case number.
- The general porters should then be contacted via theatre reception to arrange for removal of the bin to a secure area awaiting collection for incineration.

Compliance: 100% Exceptions: None **References:**
RCH Trust Waste Disposal Policy

2.15. Operating Theatre Standard No 14 - Wound, Drain and Catheter Dressings.

2.15.1. Standard Statement: The Theatre Team will ensure that an appropriate dressing is applied to the patient according to surgery, surgical preference and known patient allergies.

2.15.2. Method:

- Theatre personnel will ascertain any patient allergies.
- An appropriate dressing for the type, size and site of surgery will be selected.
- The dressing will be delivered to the scrub person at the end of the procedure using an aseptic technique.
- If plain gauze swabs are to be used, these should not be delivered to the scrub trolley until the final swab count has been completed.
- The scrub person or the surgeon will apply the dressing to a clean dry surface using clean-gloved hands.
- The drapes must not be removed from the patient until the dressing has been applied to minimise the risk of infection.
- All dressings must be detailed in the perioperative record. Especially any packing material such as ribbon gauze, Sorbasan etc. detailing quantity and type, to facilitate complete removal at a later date.

Compliance: 100%

Exceptions: Cases where no dressing is deemed necessary such as E.N.T., Maxillofacial etc.

Reference:

AfPP Principles of Safe Practice in the Perioperative Environment 2011

2.16. Operating Theatre Standard No 15 - Handling Wound Drains.

2.16.1. Standard Statement: Wound drains must be handled and attached maintaining an aseptic technique and following Infection Control guidelines.

2.16.2. Method:

- Staff must be aware of the content of and have access to the Trusts Infection Control Policy.
- Staff must have a good understanding of the mechanics of the different types of wound drains.
- They must have been taught how to correctly assemble the drains, ensuring that the relevant clamps are closed to prevent spillages.
- The Surgeon can insert the drain trochar and ensure that the sharp end is effectively protected.
- The drain receptacles must be kept in the bag and put to the side to prevent contamination.
- At the end of the case, at an appropriate time, the top gloves (when two pairs are worn) must be removed. An extra pair (when only one pair is worn) must be added. Clean gloves **MUST** be donned prior to handling.
- The drainage receptacle can then be attached maintaining an aseptic technique.

Compliance: 100% Exceptions: None

References:

AfPP Principles of Safe Practice in the Perioperative Environment 2011 See also Theatre Standards:
Dealing with Hazardous Spillages Personal Protective Equipment

2.17. Operating Theatre Standard No 16 – Completion of Perioperative Documentation

2.17.1. Standard Statement: All staff will adhere to the RCH Documentation Policy regarding the recording of patient care episodes in the operating department. All perioperative documentation will be completed as accurately and promptly as possible to ensure patient safety and optimum communication between team and staff during handovers of the patient.

2.17.2. Perioperative Documentation

- Theatre staff will ensure that all sterility processing stickers are attached to the appropriate page in the perioperative document.
- Adhesive labels from prostheses or implants used will be placed in the patient's surgical notes.
- The scrub person is responsible for checking that the theatre database and perioperative document has been completed and for providing PACU with a full handover of the patients' records.
- The scrub person will confirm the accuracy of the perioperative document before signature and handover to PACU

2.17.3. Sterile Services Unit Documentation

- The circulating person will ensure that all tray check sheets are attached together with the principle tray sheet on top.
- The circulating person will ensure that the principle tray sheet is completed with date, patient and theatre numbers, and that the scrub person and count checker are identified.
- Any discrepancies discovered between the check sheet and the tray contents on preliminary count must be recorded on the appropriate tray sheet.
- Any items requiring repair or replacement must be identified and recorded on the sheet.
- Any additional instruments used during a procedure must be recorded on the principle tray sheet and replaced on this tray at the end of the case.
- All tray sheets must be returned to SSD with the used trays at the end of the case.
- Any surplus documentation which is produced and on which, patient details can be identified, must be destroyed in accordance with RCHT Trust Policy.

Compliance: 100% Exceptions: None

2.18. Operating Theatre Standard No 17 - Disposal of Surgically Explanted Items

2.18.1. Standard Statement: Surgically explanted items will be handled and disposed of following Infection Control guidelines.

2.18.2. Method:

- Surgically removed human tissue and explanted items include (but not limited to):

- Bone fragments
- Foreign bodies
- Kirschner wires and pins
- Nails, plates and screws
- Stones and calculi
- Teeth

- A risk assessment must be undertaken on each individual prosthesis to be returned to the patient. This includes Kirchner wires, pins or interlocking nails which are particularly hazardous sharp devices and present a risk to the practitioner undertaking the decontamination process. These devices must be disposed of in a suitable clinical waste container in accordance with the local clinical waste policy.
- The risk assessment must determine whether the prosthesis could be decontaminated effectively and any bio-burden removed. This may prove difficult with implants that have become impacted with bone tissue (e.g. internal fixation plates). The presence of any organic material will inhibit the sterilisation process. If the material cannot be removed, then effective decontamination and sterility cannot be guaranteed. Due to the potential risk of contamination such devices must not be returned to the patient.
- Explanted items must be decontaminated through an automated washing machine method rather than a manual cleaning process. This will protect the practitioner from potential exposure to harmful Micro-organisms and aerosol contamination, which may occur as direct result of manual cleaning. Such devices must be sent to the Sterile Services Department for decontamination.
- The decontamination and sterilisation of explanted surgical items must be documented appropriately, identifying how the device was processed, which method was used, and who was responsible for managing the process.
- The method of containment for human tissue and/or explanted item/s must be clearly recorded in the Galaxy System and in the patients operating notes.
- In the absence of an adequate tracking and traceability system, explanted items must not be returned to the patient.

3. Monitoring compliance and effectiveness

- 3.1. Practice against the set standards will be reviewed monthly for all theatre suites and reported at the Clinical Matron meeting.
- 3.2. Overall performance against the standards will be included in the interdivisional Performance Assurance Framework with overview and exceptions tabled at monthly Divisional Governance Management Meeting.

Element to be monitored	Practice compliance against all practice standards will be monitored
Lead	Theatre Manager / Deputy Managers
Tool	The revised theatre safety audit tool will be used to monitor compliance monthly. Each senior auditor will assess practice observed at each audit Attach the tool to the policy or no one will know what you are monitoring.
Frequency	Each member of the theatre senior team will audit 10 observations of practice each month The observations will be submitted to the Governance Lead for Anaesthetics, Critical Care and Theatres by the 2nd of the following month for collation and reporting at the Care Group Huddle. Compliance with the WHO SSC standard 16 will be reported monthly to the management team.
Reporting arrangements	Care Group Huddle monthly, PRG monthly. Responses and actions agreed will be recorded in meeting minutes
Acting on recommendations and Lead(s)	It will be the responsibility of the Head of Nursing to action any recommendations from the report and report back to General Manager, Care Group Huddle on outcomes
Change in practice and lessons to be shared	This document consolidates and defines current practice, no changes to current practice are required. The documentation implementation will be led by the theatre managers in each area. All staff will have discussions on the local practice standards at yearly IPR. Any shortfalls by individuals identified will be dealt with by the appropriate manager in line with trust policy. Lessons learned will be shared with all stakeholders at theatre safety briefings and theatre managers meeting.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ['Equality, Inclusion & Human Rights Policy'](#) or the [Equality and Diversity website](#).

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Document Title	Scrub Practice Standards Clinical Guideline V4.2		
This document replaces (exact title of previous version):	Surgical Practice Standards Clinical Guideline V4.1		
Date Issued/Approved:	February 2021		
Date Valid From:	February 2021		
Date Valid To:	09 December 2022		
Directorate / Department responsible (author/owner):	Anaesthetics, Critical Care and Theatres Care Group		
Contact details:	01872 252645		
Brief summary of contents	Defined clinical standards relevant to theatre practice.		
Suggested Keywords:	Operating theatres, Surgical equipment, Standards, Clinical standards, Clinical practice, Theatre		
Target Audience	RCHT ✓	CFT	KCCG
Executive Director responsible for Policy:	Medical Director		
Approval route for consultation and ratification:	Care Group Board		
General Manager confirming approval processes	Doug Riley		
Name of Governance Lead confirming approval by specialty and care group management meetings	Matthew Body		
Links to key external standards	AfPP Standards & Recommendations for safe perioperative practice 2016.		
Related Documents:	No		
Training Need Identified?	No		
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet & Intranet	✓	Intranet Only
Document Library Folder/Sub Folder	Clinical / Theatres		

Version Control Table

Date	Version No	Summary of Changes	Changes Made by (Name and Job Title)
24 Feb 14	V1.0	Initial Issue	Sue Preston, Senior Matron, Theatres
22 Jul 15	V2.0	Standard 8a added and document formatted	Cathy Edwards
May 2017	V3.0	Compliance with Natsips	Cathy Edwards
December 2019	V4.0	Update to align with Care Group Structure, changes to areas regarding actions from serious incidents.	Matthew Body, Interim Governance Lead
January 2021	V4.1	Changes regarding count processes, theatre registers and other amendments	Matthew Body, Interim Service Manager
February 2021	V4.2	Name change, addition of paragraph to introduction to reflect there are four standards documents. Clarification of dual site surgery	Matthew Body, Interim Service Manager

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment Form						
Name of the strategy / policy / proposal / service function to be assessed Scrub Practice Standards Clinical Guideline V4.2						
Directorate and service area: Anaesthetics, Critical Care and Theatres			Is this a new or existing Policy? Existing			
Name of individual/group completing EIA Matthew Body			Contact details: 01872 252645			
1. Policy Aim Who is the strategy / policy / proposal / service function aimed at?		The aim of this policy is to outline the standards of care that must be delivered to each individual patient to ensure a high quality of care is provided to patients entering all Trust Operating Theatres.				
2. Policy Objectives		To standardise care and practice within theatres				
3. Policy Intended Outcomes		Standardisation of care and practice				
4. How will you measure the outcome?		Continuous Audit				
5. Who is intended to benefit from the policy?		Patients and staff				
6a). Who did you consult with?		Workforce	Patients	Local groups	External organisations	Other
		X				
b). Please list any groups who have been consulted about this procedure.		Please record specific names of groups: Theatre Senior Team				
c). What was the outcome of the consultation?		Acceptance				

7. The Impact				
Please complete the following table. If you are unsure/don't know if there is a negative impact you need to repeat the consultation step.				
Are there concerns that the policy could have a positive/negative impact on:				
Protected Characteristic	Yes	No	Unsure	Rationale for Assessment / Existing Evidence
Age		X		
Sex (male, female non-binary, asexual etc.)		X		
Gender reassignment		X		
Race/ethnic communities /groups		X		
Disability (learning disability, physical disability, sensory impairment, mental health problems and some long term health conditions)		X		
Religion/ other beliefs		X		
Marriage and civil partnership		X		
Pregnancy and maternity		X		
Sexual orientation (bisexual, gay, heterosexual, lesbian)		X		
<p>If all characteristics are ticked 'no', and this is not a major working or service change, you can end the assessment here as long as you have a robust rationale in place.</p> <p>I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.</p>				
Name of person confirming result of initial impact assessment:			Matthew Body, Interim Service Manager	
<p>If you have ticked 'yes' to any characteristic above OR this is a major working or service change, you will need to complete section 2 of the EIA form available here:</p> <p>Section 2. Full Equality Analysis</p> <p>For guidance please refer to the Equality Impact Assessments Policy (available from the document library) or contact the Human Rights, Equality and Inclusion Lead debby.lewis@nhs.net</p>				