***Department of Anaesthesia***

***St Vincent’s Hospital***

Guidelines for INFECTION CONTROL

Version 1.2 (2013)

These guidelines are to be used in conjunction with published guidelines from other professional bodies in particular ANZCA “Guidelines on infection Control in Anaesthesia” PS28 (2013). The relationship between contamination, colonisation and infection is complex however it is imperative that we should minimise the risks of infection for ourselves and our patients by undertaking practical measures outlined in this document.

## DEFINITIONS

**Decontamination:** The removal of micro-organisms and unwanted matter from contaminated materials or living tissue.

**Disinfection**: The inactivation of non-sporing micro-organisms using either thermal or chemical means.

**Asepsis:** The prevention of microbial contamination of living tissues or sterile materials.

**Full aseptic technique**: Facemask, protective eyewear, surgical handwash, sterile gown and gloves and sterile disinfection of the skin area with use of a sterile field bordered by sterile drapes.

## GENERAL PRINCIPLES

### Hand Hygiene

The most important infection control measure is handwashing. Effective hand decontamination will result in a significant reduction in the transfer of potential pathogens. This includes before every episode of direct patient contact, handling drugs or equipment to be used on a new patient, following patient contact, before and after using gloves and when contaminated. Chlorhexidine Hand Rub (Avagard) can be used when there is no contamination, otherwise Chlorhexidine Hand Soap or Betadine Hand Soap are appropriate.

### Gloves

Gloves offer some protection against inoculation with blood-borne viruses. Incorrect use may actually spread infection between patients. They are only to be used on a single occasion to minimise the risk of infection. They should be worn for all clinical activities which pose a risk of exposure to blood, bodily fluids and secretions. Non-sterile gloves must be worn for peripheral IV cannulation, arterial line insertion, insertion and removal of airway devices. Sterile gloves must be worn for aseptic procedures.

### Facemasks

Masks with a face shield should be worn when there is a risk of blood, body fluids, secretions and excretions splashing into the face and eyes. Masks must be worn when undertaking sterile procedures under full aseptic technique. Masks should not be taken down to speak and should be changed if they become damp or contaminated. Appropriate facemasks should be worn when advised for airborne pathogens (swine flu, TB) and in laser surgery.

### Theatre Caps

Theatre caps should be worn in the general operating theatre. Appropriate headgear should be worn especially during orthopaedic implant surgery.

### Theatre Suits and Gowns

Clean theatre suits should be available and worn. Staff leaving theatre should change into normal clothes or wear boiler suits.

### Shoes and Overshoes

Special footwear should be worn in theatre and cleaned if contaminated.

## SAFE USE AND DISPOSAL OF SHARPS

Care must be taken in handling sharps. They should be discarded into an approved sharps container immediately after use. Sharps must not be transferred between personnel and handling should be kept to a minimum. Needles should not be re-sheathed. Institutional protocols should be followed in the event of a needlestick injury.

## PREVENTING CONTAMINATION OF DRUGS

Needles and syringes are sterile, single-patient use items. Syringes should be capped to avoid contamination and stored in a clean container. Following a drug bolus the blunt plastic cannulas should be recapped to preserve the residual drug if further administration is required for an individual patient. At the conclusion of an anaesthetic all used syringes with needles should be discarded. Ampoules can be kept for identification purposes and discarded at the end of the list. Multiple-use ampoules are not recommended.

All infusions and administration sets are single-patient use. Aseptic technique should be used when preparing IV infusion and administration sets. Injection ports and the IV tubing spike should be maintained with a sterile technique.

## INVASIVE PROCEDURES

### Peripheral Venous and Arterial Cannulation

Handwashing must be performed prior and protective gloves worn. Disinfection of the skin prior to cannulation and the technique should be performed in a manner which ensures that the tip and shaft of the cannula remain sterile throughout.

### Central Vascular Cannulation & RICC/PICC & Femoral Arterial Lines

Full aseptic technique including facemask, protective eyewear, surgical handwash, sterile gown and gloves and sterile disinfection of the skin area with use of a sterile field bordered by sterile drapes. The sterile field draping should be widely and carefully done to ensure that equipment (eg Seldinger wires) is not able to be contaminated. Skin preparation should be done using prep solution included in the CVC access pack (if available) or using 2% chlorhexidine swabsicks or liquid 0.5% chlorhexidine or alcoholic iodine decanted from a single-use container. Skin preparation should be done prior to scrubbing and gloving (to avoid contamination) or by an assistant. Skin prep must be allowed to dry before proceeding.

Under ***no circumstances*** must skin prep or skin prep contaminated equipment be allowed on the procedural tray.

## Regional Anaesthesia

Skin preparation should be done using 2% chlorhexidine swabsicks or liquid 0.5% chlorhexidine or alcoholic iodine decanted from a single-use container. Skin preparation should be done prior to scrubbing and gloving (to avoid contamination) or by an assistant. Skin prep must be allowed to dry before proceeding.

Under ***no circumstances*** must skin prep or skin prep contaminated equipment be allowed on the procedural tray.

#### Central Neuraxial Blockade & Peripheral Nerve Blocks with Indwelling Catheter

Full aseptic technique including facemask, protective eyewear, surgical handwash, sterile gown and gloves and sterile disinfection of the skin area with use of a sterile field bordered by sterile drapes.

***Drawing up drugs for intrathecal injection*** from outside the sterile field. To maintain asepsis for drugs being drawn up from off the field use a 0.2 micron filters to draw up from the ampoule through the filter before any dilution within the sterile field. This will remove bacteria and particles. The dead-space of the filters is 0.7 mL. The filter is completely sterile within the pack. This will avoid particulate and bacterial contamination.

#### Single Shot Peripheral Nerve Blocks

Handwashing performed prior, facemask, protective eyewear, sterile gloves and disinfection of the skin area with use of a sterile field bordered by sterile drapes. The technique needs to be performed in a manner which ensures that the regional block needle remains sterile throughout.

## ANAESTHETIC EQUIPMENT

### Side-line Capnography & Oxygen Facemasks

A disposable filter must be used on the capnography line for each new patient. Special oxygen facemasks are available with a built in filtered sampling port.

### Surface Ultrasound

Where an invasive procedure is to be performed utilising ultrasound or there is existing skin breakdown or infection, the probe must be covered using an appropriate sheath. The ultrasound probe must be cleaned following use.

### Arterial Blood Gas Analysis

Clean gloves should be worn whilst handling the blood gas syringe. Appropriate disinfection must be undertaken if contamination of the analyser occurs.

## ADDITIONAL NOTES

1. Immunocompromised patients should be identified on preoperative assessment and more stringent infection control practices should be followed in these individuals.
2. Institutional practices exist for the management of VRE and CJD positive patients.

## REFERENCES

1. ANZCA Guidelines on infection control in Anaesthesia PS28 (2013)
2. AAGBI Guidelines on infection control in Anaesthesia; Anaesthesia 2008, 62, 1027-1036
3. ASA Recommendations for infection control for the practice of anaesthesiology 2nd edition

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