

# North York General Hospital Policy Manual

Aseptic Technique (Non-Operating Room)

NUMBER: IP-VI-30

CROSS REFERENCE:

ORIGINATOR: Manager, IPAC

APPROVED BY: Medical Advisory Committee  
Operations Committee

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## **POLICY**

Asepsis is defined as 'a condition in which living pathogenic organisms are absent: a state of sterility'. Aseptic technique is used to prevent the contamination of surgical wounds and other sterile/susceptible sites by organisms.

Aseptic technique is vital in reducing the risk of healthcare associated infections. It should be used during any invasive procedure which breeches the body's natural defenses (including skin and mucous membranes), or when handling equipment which will enter a normally sterile cavity or area.

This policy covers non-Operating Room areas. The Operating Room will adhere to current Association of Perioperative Registered Nurses (AORN)/Operating Room Nurses Association of Canada (ORNAC) standards.

## **PROCEDURE**

### **A. PRINCIPLES OF ASEPSIS**

The principles of asepsis have six components:

- Hand hygiene
- Personal protective equipment
- Preparation of the patient for an invasive procedure
- Creating and maintaining a sterile field
- Use of safe invasive techniques
- Creating the safe environment

#### 1. Hand Hygiene

Effective hand hygiene is the most important component of good infection prevention and control as contaminated hands are a common route of transmission of infection. Transient bacteria can be removed by effective hand hygiene techniques. (Refer to the Hand Hygiene policy #III-10)

#### 2. Personal Protective Equipment

Personal protective equipment (PPE) is used during aseptic procedures to prevent transmission of infectious agents both from patient-to-staff and staff-to-patient. The determination of which PPE should be used and whether it should be clean or sterile, is made by assessing the risk involved to both the patient and the health care worker. Please see the table below for the PPE required for some common procedures.

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Aspects of PPE that are relevant to aseptic procedures are as follows:

- **Gloves and Hand Hygiene**

- Because non-sterile exam gloves are not completely free of leaks and hands may become contaminated when removing gloves, hands must be cleaned before putting on gloves for an aseptic/clean procedure and after glove removal.
- Gloves must be worn when it is anticipated that the hands will be in contact with mucous membranes, non-intact skin, tissue, blood, body fluids, secretions, excretions, or equipment and environmental surfaces contaminated with the above.
- Sterile gloves are used when performing sterile procedures (i.e., the breach of skin or mucous membranes), particularly when manipulation/palpation of the site/equipment will be required by the gloved hand(s) after antisepsis, such as central line insertions, lumbar punctures, or when handling sterile equipment.

- **Gowns**

- A gown should be worn to prevent contamination of the health care worker's clothing from pathogenic organisms as well as preventing clothing from becoming wet, soiled or stained during the procedure. It will also prevent the transfer of potentially pathogenic organisms from staff to patient.
- A sterile gown must be worn and full sterile draping underaken when performing central line insertions. Sterile gowns should be worn for procedures in the Operating Room and Interventional Radiology.
- A non-sterile gown, if the gown will not come in contact with the sterile field, may be worn in other minor aseptic procedures.

- **Masks**

- A mask is used by a health care provider (in addition to eye protection) both to protect the mucous membranes of the operator (splashes or sprays of blood/body fluids/secretions) and to prevent contamination of the sterile field created for the aseptic procedure.

- **Surgical caps**

- Surgical caps should be worn for procedures shown to require maximal barrier precautions, including insertion of central lines.
- Surgical caps should also be worn when there is concern of hair falling into the sterile field.

### 3. Preparation of the patient for an invasive procedure

#### Skin/Site preparation

Good skin preparation assists in the reduction of infection by lowering the chances that the patient's own skin flora will not enter the wound. If skin is to be prepared for a procedure such as central line insertion, it should be decontaminated with a

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hospital antiseptic solution (e.g., chlorhexidine in alcohol), applied in concentric circles from cleanest area outwards.. The antiseptic solution should be allowed to dry before commencing the procedure for maximal benefit.

#### 4. Creating and maintaining a sterile field

A sterile field is an area that is created by placing a sterile towel/s or draping around the procedure site and on the surface that will hold sterile instruments and other items such as dressings. Once sterile items come into contact with a non-sterile item, object, person or environmental contaminants such as dust or airborne particles the object is no longer sterile.

#### 5. Use of safe optimal technique

Performing good procedural technique during an aseptic procedure can minimize the risk of infection and cross contamination. Post-procedure infections are more likely to occur if excessive bleeding occurs as this can increase susceptibility to invasive organisms; and if tissue is damaged due to rough or excessive manipulation during the procedure. Damaged tissue takes longer to heal and is more susceptible to infection.

#### 6. Creating a safe environment

Clinical rooms should be designated for the performance of invasive procedures:

- Activities in this area and through traffic and number of people in these areas should be limited (including staff, families, etc).
- Surfaces within the procedure room should be free of extraneous items such as paper work, books, etc.
- Close doors during procedures to minimize disturbance of dust
- The room and areas or surfaces that may have been contaminated during a procedure should be cleaned and disinfected between patients.

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## Appendix 1

### Recommended Technique Applicable for Commonly Performed Procedures

**NOTE: When uncertain, use maximal barrier precautions – hand hygiene, cap, mask, sterile gown and sterile gloves.**

Procedure	Technique	Comments
Central Venous Catheter insertion	Aseptic	Surgical hand hygiene Sterile gloves Maximum barrier precautions <sup>1</sup>
Gastrostomy or jejunostomy tube insertion (endoscopic/surgical or radiological guidance)	Aseptic	Surgical hand hygiene Sterile gloves Maximum barrier precautions
Indwelling urinary catheter insertion	Aseptic	Routine hand hygiene Sterile gloves Gown optional
Intermittent urethral catheterization	Clean technique in patient's home Aseptic in hospital	Routine hand hygiene Sterile gloves Gown optional
Suprapubic catheter insertion	Aseptic	Surgical hand hygiene Sterile gloves Gown (Sterile gown in OR, IR) Manage as surgical wound until healed
Paracentesis, thoracentesis, chest tube insertion, pericardiocentesis, joint fluid aspiration, epidural insertion, lumbar puncture, arterial line insertion	Aseptic	Surgical hand hygiene Sterile gloves Surgical mask Gown

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Safer Healthcare Now! Getting Started Kit – Prevent Central Line Infections available at: <http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/CLI-resources-Getting-Started-Kit.aspx>

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