**Canberra Hospital and Health Services**

**ClinicalProcedure**

**Aseptic Technique**

|  |
| --- |
| Contents |

[Contents 1](#_Toc507150449)

[Purpose 2](#_Toc507150450)

[Alerts 2](#_Toc507150451)

[Scope 2](#_Toc507150452)

[Background 2](#_Toc507150453)

[Section 1 – Preparing the Sterile Field 3](#_Toc507150454)

[Section 2 – Sterile Stock 5](#_Toc507150455)

[Implementation 5](#_Toc507150456)

[Related Policies, Procedures, Guidelines and Legislation 5](#_Toc507150457)

[References 6](#_Toc507150458)

[Definition of Terms 6](#_Toc507150459)

[Search Terms 8](#_Toc507150460)

[Attachments 8](#_Toc507150461)

[Attachment 1 – Use of aseptic non-touch technique for specific procedures 9](#_Toc507150462)

|  |
| --- |
| Purpose |

To provide guidance on the correct and appropriate implementation of aseptic technique.

[*Back to Table of Contents*](#Contents)

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| Alerts |

All clinical staff who perform aseptic technique must also complete the online aseptic technique training available through capability.

[*Back to Table of Contents*](#Contents)

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| Scope |

This document pertains to all staff who perform aseptic technique procedures at CHHS.

This document applies to:

* Medical Officers
* Nurses and Midwives who are working within their scope of practice (Refer to *“Nursing and Midwifery Continuing Competence Policy”)*
* Students under direct supervision.
* Allied Health Practitioners working within their scope of practice performing invasive procedures

[*Back to Table of Contents*](#Contents)

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| Background |

Aseptic technique guidelines help standardise practice, technique and equipment levels. Aseptic technique can be separated into two types:

1. **Standard Aseptic Technique** — Clinical procedures managed with standard aseptic technique will characteristically be technically simple, short in duration (approximately less than 20 minutes), and involve relatively few and small key sites and key parts (such as accessing IV devices and small wound dressings). Standard aseptic technique requires the use of a main general aseptic field, micro critical aseptic fields and non-sterile gloves. The use of aseptic fields and a non-touch technique is essential to protect key parts and key sites. Standard aseptic technique can be performed by experienced staff without touching key areas. If staff do not feel confident to complete the procedure without touching key sites or parts then sterile gloves should be used.
2. **Surgical Aseptic Technique** — Surgical aseptic technique is required when procedures are technically complex, involve extended periods of time, large open key sites or large or numerous key parts. To counter these risks, a main critical aseptic field and sterile gloves are required and often the addition of full barrier precautions such as sterile drapes.

Hand hygiene is an essential component of aseptic technique.

In **Standard aseptic technique**, hand hygiene should be performed with either alcohol based hand rub (for minimum 30 seconds) or a procedural antimicrobial hand wash for one (1) minute.

In the case of the **Surgical aseptic technique**, the first scrub using an antimicrobial agent is five (5) minutes thereafter a three (3) minute scrub is required as per Australian College of Operating Room Nurses (ACORN, 2016) Standards. For a surgical hand rub using an alcohol based surgical hand rub agent, (eg. Skinman 90®) antimicrobial surgical hand scrub agents and alcohol based surgical hand rub agents should not be combined sequentially. If hands are visibly soiled or dirty they must be washed with soap and dried before applying the alcohol based surgical hand rub

**Use of standard and surgical aseptic technique**

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| **Figure 1. Standard aseptic technique** and the use of a general **Main Aseptic Field** and **Micro Critical Aseptic fields** | **Figure 2. Surgical aseptic technique** and the use of a main **Critical Aseptic Field** |

[*Back to Table of Contents*](#Contents)

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| Section 1 – Preparing the Sterile Field |

Prior to aseptic procedures, healthcare workers must ensure that there are no avoidable nearby environmental risk factors, such as bed making, patients using commodes, or ward cleaning that will aerosolise dust particles into the air.

Staff must:

1. Ensure the patient is aware that the clinician is using an aseptic technique and why; and the associated implications for the patient (for example ensuring the patient does not touch the aseptic field)
2. Understand the correct procedure to don and doff personal protective equipment (PPE) (Refer to *Healthcare Associated Infections* Clinical procedure document)
3. Conduct appropriate hand hygiene before the procedure (including 3 or 5 minute surgical scrub as appropriate if the procedure is surgical aseptic technique) and after removing gloves on completion of the procedure (Refer to *Healthcare Associated Infections* Clinical procedure document).
4. Understand that wounds must be cleaned from clean then to contaminated areas (Refer to *Wound Management* Clinical Procedure document).

See **Appendix 1** for Use of aseptic non-touch technique for specific procedures.

**Note:**

At no time should the patient’s bed or bedside table area be used to set up for any bedside procedure (eg lumbar puncture), a clean dressing trolley must be used.

If at any time the aseptic field does become contaminated the procedure must be stopped and recommenced using aseptic technique. If there is doubt regarding an item’s sterility it should be considered non sterile.

To prepare a surgical aseptic field:

1. Assess whether a general or a critical aseptic field is required for the procedure
2. Clean trolley with detergent impregnated wipes cleaning from top to bottom.
3. Gather and prepare equipment **immediately prior** to procedure to maintain a surgical aseptic field:

* The aseptic field once established shall be constantly monitored for contamination
* Do not cough, sneeze or laugh over an aseptic field. Minimise talking over aseptic field if possible
* Minimize air movement around the aseptic area, shut doors if possible
* Movement of personnel and equipment within or around the aseptic field shall be minimal and deliberate in order to maintain the integrity of the aseptic field
* Items used within an aseptic field shall be sterile
* All items introduced onto an aseptic field shall be opened, dispensed and transferred by methods that maintain asepsis and integrity of the item
* Avoid wetting the packaging of sterile equipment
* Recognise that the area up to 2.5 cm from the edge of an aseptic field is considered unsterile.

[*Back to Table of Contents*](#Contents)

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| Section 2 – Sterile Stock |

To maintain sterile stock as sterile:

1. Keep sterile stock dry – avoid external wrap/packaging becoming wet
2. Open sterile stock immediately prior to performing the procedure
3. Always check the integrity of the external wrapping/packaging for damage/contamination
4. Always check the sterilisation indicator on the external wrapper (if present) before opening
5. Always check the sterility expiry date (if present) on the external package

Sterile stock must not be used when:

1. There is no indication on the individual item or its original box that the item has been through a sterilizing process as indicated, by date of sterilization or colour change chemical indicator
2. There is any suspicion that the integrity of the packaging has been compromised (event – related sterility);

e.g. If the packaging is wet or oily, and/or

1. If the package is opened or damaged prior to use
2. The item is incorrectly wrapped/packaged
3. The item/package has been dropped on the floor or other dirty surface
4. The item has exceeded the sterility expiry date (the 'use by' date) indicated on individual item or original box

[*Back to Table of Contents*](#Contents)

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| Implementation |

Implementation of this updated aseptic technique clinical procedure document is to be incorporated into existing infection control and staff development unit training programs and orientation plans.

[*Back to Table of Contents*](#Contents)

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| Related Policies, Procedures, Guidelines and Legislation |

**Policies**

* Health Directorate Nursing and Midwifery Continuing Competence Policy
* Consent and Treatment

**Procedures**

* Canberra Hospital and Health Services Clinical Procedure Healthcare Associated Infections
* ACT Health Nursing and Midwifery Continuing Competence Standard Operating Procedure
* Canberra Hospital and Health Services Clinical Procedure Wound Management

**Legislation**

* *Human Rights Act* 2004
* *Work Health and Safety Act* 2011

[*Back to Table of Contents*](#Contents)

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| References |

1. ACORN Standards for Perioperative Nursing 14th ed. 2016. The Australian College of Operating Room Nurses Ltd. Adelaide South Australia.
2. Fraise, P. & Bradley, C., *Ayliffes* Control of Healthcare Associated Infection, 5th ed. Arnold, UK 2009.
3. NHMRC (2010) Australian Guidelines for the Prevention and Control of Infection in Healthcare. Commonwealth of Australia.
4. Australian Government National Health and Medical Research Council –Australian Guidelines for the Prevention and Control of Infection in Healthcare 2010

<http://www.nhmrc.gov.au/book/australian-guidelines-prevention-and-control-infection-healthcare-2010/b1-7-aseptic-technique>

[*Back to Table of Contents*](#Contents)

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| Definition of Terms |

**Aseptic technique:** Aims to prevent pathogenic organisms, in sufficient quantity to cause infection, from being introduced to susceptible sites by hands, surfaces and equipment. Therefore, unlike sterile techniques, aseptic techniques are possible and can be achieved in typical hospital and community settings

**Sterile:** Free from microorganisms. Due to the natural multitude of organisms in the atmosphere it is not possible to achieve a sterile technique in a typical healthcare setting. Near sterile techniques can only be achieved in controlled environments such as a laminar air flow cabinet or a specially equipped theatre. The commonly used term, ‘sterile technique’ i.e. the instruction to maintain sterility of equipment exposed to air, is obviously not possible and is often applied inaccurately

**Asepsis:**Freedom from infection or infectious (pathogenic) material

**Aseptic Fields**: Provide a controlled aseptic working space to ensure the integrity of asepsis during clinical procedures and should be fit for purpose

**Critical Aseptic Fields** are used when the key parts of the procedure due to their size or number cannot be easily protected at all times with covers and caps or handled at all times by a non-touch technique. Examples are insertion of PICC lines, urinary catheters, complex wound care and large invasive procedures such as cardiac catheter insertion. Only sterilised equipment can touch the surgical aseptic field and sterilised gloves, drapes and gowns are used

**General Aseptic Fields:** Are used when key parts can be easily protected by critical micro aseptic fields and a non-touch technique. Mobile aseptic fields such as plastic trays provide adequate working space to contain equipment sharps and spillages and non-sterile clean gloves are used

**Clean:** Free from dirt, marks or stains. Although cleaning followed by drying of equipment and surfaces can be very effective it does not necessarily meet the quality standard of asepsis (Fraise and Bradley, 2009) 2000). However, the action of cleaning is an important component in helping render equipment and skin aseptic, especially when there are high levels of contamination that require removal or reduction. However, to be confident of achieving asepsis an application of a skin or hard surface disinfectant is required either during cleaning or afterwards.

**Key Sites**: Are any portal of entry on a patient such as an open wound, a catheter insertion site and skin puncture site eg Bone marrow aspiration site, needle puncture site, IV cannula site.

**Key Parts**: Are the most critical parts of the procedure equipment or medical devices that come into direct or indirect contact with other aseptic key parts, any liquid infusion or key sites eg.

* An intravenous needless port
* A needle
* A sterilised swab for wound care
* A urinary catheter
* A urinary catheter drainage bag
* The wound side of a sterilised dressing.

**Micro Critical Aseptic Fields**: These protect **Key parts** within the **general aseptic field** eg.

* Sterilised caps or covers
* The inside of effectively managed original equipment packaging.

[*Back to Table of Contents*](#Contents)

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| Search Terms |

Aseptic technique, aseptic non touch technique, ANTT

[*Back to Table of Contents*](#Contents)

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| Attachments |

**Attachment 1 – Use of aseptic non-touch technique for specific procedures**

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*Policy Team ONLY to complete the following:*

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| *Date Amended* | *Section Amended* | *Divisional Approval* | *Final Approval* |
| *21/02/2018* | *Complete Review* | *Lisa Gilmore, A/g ED CSS* | *CHHS Policy Committee* |
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*This document supersedes the following:*

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| *Document Number* | *Document Name* |
| *CHHS14/011* | *Aseptic Non Touch Technique* |
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## Attachment 1 – Use of aseptic non-touch technique for specific procedures

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| **Procedure** | **Standard /Surgical Aseptic technique** | **Rationale/typical procedure** |
| IV therapy (including accessing, preparation and administration of routine IV medications | Standard aseptic technique | Key parts can typically be protected by optimal critical micro fields and non-touch technique. Key sites are small. Procedures are technically simple and <20 mins duration. |
| Simple wound dressings | Standard aseptic technique | Key parts and sites can be protected by optimal critical micro fields and non-touch technique. Procedures are technically simple and <20 mins duration. |
| Complex or large wound dressings or complex procedures performed at bedside. eg. Lumbar puncture, ascetic tap | Surgical aseptic technique | The complexity, duration or number of key parts may demand a critical aseptic field. |
| Urinary catheterisation | Standard plus the addition of sterile gloves / surgical aseptic technique | A standard urinary catheter insertion pack comprises of its own aseptic field which is large enough for an experienced healthcare worker. An less experienced healthcare worker may need the use of sterile drapes to form a larger critical aseptic field. A clean gown rather than a sterile gown may be used by an experienced healthcare worker. |
| IV Cannulation/venepuncture | Standard plus the addition of sterile gloves if indicated | Although technically quite simple the close proximity of healthcare worker hands to the puncture site and key parts may demand sterile gloves – dependent upon healthcare worker competency. |
| PICC/CVC insertion | Surgical aseptic technique | The size of the CVC or PICC line, invasiveness, numerous key parts and equipment and duration will demand a critical aseptic field and full barrier precautions. |
| Surgery / Procedures performed in Interventional suites | Surgical aseptic technique | Surgical access involves deep or large exposed wounds, numerous key parts and equipment and long procedures. Standard operating room precautions required. |

*Adapted from NHMRC Australian Guidelines for the Prevention and Control of Infection in Healthcare (2010)*