An Introduction to Aseptic Technique

National Safety and Quality Health Service
Standard 3 : Preventing and Controlling Healthcare Associated Infections

Key contact: Infection Control Department
Extension: 55740
Objectives

• To introduce Aseptic Technique

• To provide a framework which standardise Aseptic Technique for every clinical practice at RCH
Why is aseptic Technique important?

• To ensure the avoidance of Healthcare associated infections (HAIs) that occur as a result of healthcare interventions.

• Each year in Australia there are about 200,000 HAIs. Many of these infections are preventable.

• Prevention of HAI is the responsibility of all healthcare workers (HCWs). HAI is not considered an unpredictable ‘complication’, but rather a potentially preventable ‘adverse event’.
Aseptic Technique

A technique which aims to prevent pathogenic microorganisms from being introduced to susceptible sites by hands, surfaces and/or equipment.

There are three types of Aseptic Technique:

- Sterile Technique
- Surgical Aseptic Technique
- Standard Aseptic Technique
Key Terms

- Aseptic Non-touch Technique
- Key sites
- Key parts
- Aseptic Field
- General Aseptic Field
- Critical Aseptic Field
- Micro Critical Aseptic Field
- Aseptic technique
  - Standard Aseptic Technique
  - Surgical Aseptic Technique
- Sterile technique
Aseptic Non-Touch Technique

- **Aseptic**: A technique which aims to prevent pathogenic microorganisms from being introduced to susceptible sites by hands, surfaces and/or equipment.

- **Non touch**: refers to preventing contamination of susceptible sites by hands, surfaces or equipment.

- **Technique**: refers to identifying the risk of contamination and choosing the right field and technique.
Key Parts

Key Parts are the most critical parts of the procedural equipment, that if contaminated are likely to cause infection.

Examples:
Key Sites

Key Sites are medical device access sites or open wounds.

Examples:
Aseptic Field

An Aseptic Field is a controlled workspace used to promote asepsis during a clinical procedure.

There are three types of Aseptic Fields:

- General Aseptic Field
- Critical Aseptic Field
- Micro Critical Aseptic Field
General Aseptic Field

A work space that promotes asepsis and is utilised when key parts and/or key sites can be easily protected.

Example
Critical Aseptic Field

A work space that is managed as a key part.

- Utilised when key parts/sites are large or numerous.
- Utilised when key parts/sites can’t be easily protected by covers or caps or can’t be handled with a non-touch technique.
Critical Micro Aseptic Field

A technique that ensures the asepsis of key parts by utilising caps, sheaths and packaging

• Utilised at all times when using a General Aseptic Field

• Utilised where possible when using a Critical Aseptic Field
Sterile Technique

A technique that aims to achieve total absence of microorganisms

- A Sterile Technique is only ever achieved in an operating suite or using a laminar air flow cabinet
Standard Aseptic Technique

A technique that utilises a General Aseptic Field, Critical Micro Aseptic Fields, hand hygiene, non-touch technique and non-sterile gloves to achieve a safe level of asepsis for:

- Technically simple and short procedures
- Procedures that involve few key parts or key site
In what procedures would you need to use a standard technique?
Surgical Aseptic Technique

A technique that utilises a Critical Aseptic Field which is treated like a key part and also uses:

- Full barrier precautions such as sterile gloves, sterile gowns, cap, mask
- Critical Micro Aseptic Fields
- Hand hygiene
- Non-touch technique where practical to do so

It achieves a safe level of asepsis for procedures that are:

- Technically complex procedures
- Extended periods of time
- Large, open or multiple key sites

Example:

  PICC insertion
In what procedures would you need to use a surgical aseptic technique?
Pre-procedure Guide

Consider Environmental Factors

Identify Key-Parts and Key-Sites

• Large or numerous Key-Parts
  • Large open Key-Sites

Yes

No

Yes

Procedure greater than 20 minutes

Yes

Non-sterile gloves

Non touch technique

Critical-Micro Aseptic Fields essential to protect Key-Parts and Key-Sites

Surgical Aseptic Technique

Main Critical Aseptic Field
Sterile gloves
Non touch technique
Often full protective precautions
Critical-Micro Aseptic Fields desirable to protect Key-Parts and Key-Sites

Examples
Surgical procedures
Large complex wound dressings
CVAD insertion
IDC insertion
CVAD line change (without Smartsites®)

Standard Aseptic Technique

Main General Aseptic Field
Non-sterile gloves
Non touch technique
Critical Micro-Aseptic Fields essential to protect Key-Parts and Key-Sites

Examples
Uncomplicated wound dressings
IV insertion
CVAD management
IV drug preparation / administration
CVAD line change (with Smartsites®)

Hand hygiene
Choosing the Right Technique

It is essential to choose the right technique and field to prevent pathogenic microorganisms from being introduced to susceptible sites by hands, surfaces and/or equipment.

To help you choose correctly based on your skill level and the procedural requirements, a risk assessment can be undertaken by applying a few key considerations.
Key Considerations

HAND HYGIENE:
What measures do I need to take to ensure I have performed adequate hand hygiene?

GLOVES:
Can this procedure be performed without touching key parts or key sites directly?
Key Considerations

ASEPTIC FIELD:
Is it a technically difficult procedure?
Are there multiple key parts/sites?

ASEPTIC TECHNIQUE:
Can I ensure that aseptic key parts only come into contact with other aseptic key parts or key sites?
Key Consideration Guide

Consider Environmental Factors
- Yes
- No
  - Yes: Identify Key-Parts and Key-Sites
    - Yes: Procedure greater than 20 minutes
      - Yes: Surgical Aseptic Technique
        - Main Critical Aseptic Field
          - Sterile gloves
          - Non touch technique
          - Often full protective precautions
          - Critical-Micro Aseptic Fields desirable to protect Key-Parts and Key-Sites
        - Examples:
          - Surgical procedures
          - Large complex wound dressings
          - CVAD insertion
          - IDC insertion
          - CVAD line change (without Smartsites®)
      - No: Standard Aseptic Technique
        - Main General Aseptic Field
          - Non-sterile gloves
          - Non touch technique
          - Critical Micro-Aseptic Fields essential to protect Key-Parts and Key-Sites
        - Examples:
          - Uncomplicated wound dressings
          - IV insertion
          - CVAD management
          - IV drug preparation / administration
          - CVAD line change (with Smartsites®)
  - No: Main General Aseptic Field
    - Hand hygiene
Conclusion

• Standardisation of Aseptic Technique will assist in reducing HAIs and improve patient outcomes

• The terminology used clarifies, standardises and simplifies practice

• Ensure your clinical practice is reflective of the new Aseptic Technique Procedure. See link below

Policies and Procedures : Aseptic Technique
References & Resources


• The Association for Safe Aseptic Practice. Aseptic Non Touch Technique [Internet]. 2012. [http://www.antt.org.uk/ANTT_Site/Home.html](http://www.antt.org.uk/ANTT_Site/Home.html)
Quiz

1. Name a common procedure in our area requiring Standard Aseptic Technique?
2. Name a common procedure in our area requiring Surgical Aseptic Technique?
3. Which technique utilises General Aseptic Field, Critical Micro Aseptic Fields, hand hygiene, non-touch technique and non-sterile gloves to achieve a safe level of asepsis?
4. What changes if any might need to be made to current practice in our area?