

Manual: INFECTION PREVENTION & CONTROL
Section: PRINCIPLES OF INFECTION PREVENTION
Subject: Asepsis & Aseptic Technique

Ref. No.: A26
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PURPOSE AND SCOPE

The purpose of this policy is to ensure healthcare staff are provided with the correct information in relation to Aseptic Technique which is the method used to prevent the contamination of wounds and other susceptible sites by potentially pathogenic organisms. It can also reduce the healthcare workers risk of exposure to potentially infectious blood and body tissues during clinical procedures.

- To prevent the introduction of potentially pathogenic micro-organisms into susceptible sites such as wounds or the bladder.
- To prevent the transfer of potentially pathogenic micro-organisms from one patient/resident to another.
- To prevent staff from acquiring an infection from the patient/resident

BACKGROUND

Aseptic Technique is vital in reducing the risk of healthcare associated infection. It should be used during any invasive procedure which breaches the bodies natural defences for example skin, mucous membranes or when handling equipment which will enter a normally sterile cavity or area.

ASEPTIC TECHNIQUE

Aseptic technique protects patients during invasive clinical procedures by employing infection control measures that minimise, as far as practicably possible, the presence of pathogenic microorganisms.

An **aseptic technique** is the method employed to help prevent contamination of wounds and other susceptible sites by organisms that could cause infection, by ensuring that only uncontaminated equipment and fluids come into contact with sterile/susceptible body sites during certain clinical procedures. It should be used during any procedure that bypasses the body's natural defences. Organisms can be transferred from one person to another if techniques to prevent such spread are not adopted.

PRINCIPLES

Indications for Aseptic Technique:

- Care of wounds healing by primary intention, e.g. surgical incisions and fresh breaks.
- Suturing of wounds
- Insertion of urinary catheters
- Insertion, re-siting or dressing intravenous cannulae or other intravascular devices, such as CVP lines, Hickman lines and Arterial lines
- Insertion of gastrostomy and jejunostomy tubes
- Insertion of tracheostomy tubes or chest drains
- Vaginal examination using instruments (e.g. smear taking, high vaginal swabbing, colposcopy)
- Biopsies

An aseptic technique aims to prevent pathogenic organisms, in sufficient quantity to cause infection, from being introduced to susceptible sites by hands, surfaces and equipment.

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.

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ASEPTIC TECHNIQUE (AT)

Aseptic Technique is a technique used to prevent contamination of key parts and key sites by microorganisms that could cause infection. In AT, asepsis is ensured by identifying and then protecting key parts and key sites by hand hygiene, non-touch technique, using new sterilised equipment and/or cleaning existing key parts to a standard that renders them aseptic prior to use (Rowley et al 2010).

RISK ASSESSMENT

While the principles of AT remain constant for all clinical procedures, the level of practice will change depending upon a standard AT risk assessment. Taking into account the technical difficulty of the procedure and his or her own competence, the healthcare worker assesses whether procedures can be performed without touching key parts and key sites directly. Precautions are then selected to counter the risks identified. (For example, if it were necessary to touch a key part directly, sterile gloves would be the gloves of choice. Otherwise non-sterile gloves would be used).

CORE INFECTION CONTROL COMPONENTS OF ASEPTIC TECHNIQUE (AT)

Hand hygiene

Effective hand hygiene is an essential component of AT

It is known that hand hygiene is not always correctly performed and that even correctly performed hand hygiene cannot always remove all pathogenic organisms. Therefore, a non-touch technique— identifying 'key parts' and not touching them directly or indirectly—is a vital component of achieving asepsis.

Glove use

Gloves are single-use items. In AT, if it is necessary to touch key parts or key sites directly, sterile gloves are used to minimise the risk of contamination. Otherwise, non-sterile gloves are typically the gloves of choice.

Aseptic fields

Aseptic fields are important in providing a controlled aseptic working space to help promote or ensure the integrity of asepsis during clinical procedures.

ANTT employs two types of aseptic field that require different management depending on whether the primary purpose is to promote or ensure asepsis.

Critical aseptic fields; ensuring asepsis

Critical aseptic fields are used when key parts and/or key sites, usually due to their size or number, cannot easily be protected at all times with covers and caps, or handled at all times by a non-touch technique (such as in PICC line, urinary catheter insertion, complex wound care etc), or when particularly open and invasive procedures demand large aseptic working areas for long durations, as in the operating room. In such cases, the critical aseptic field demands to be managed as a key part (i.e. only equipment that has been sterilised can come into contact with it). Such a critical aseptic field demands the use of sterilised gloves and, often, full barrier precautions (Pratt et al 2007). Large main critical aseptic fields are used in Surgical AT and as a result, technique is more complicated.

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General aseptic fields; promoting asepsis

General aseptic fields are used in Standard AT when key parts can easily and optimally be protected by critical micro aseptic fields and a non-touch technique. The main general aseptic field does not have to be managed as a key part and is essentially promoting rather than ensuring asepsis. Subsequently, aseptic technique is considerably simplified and typically involves non-sterile gloves.

Environmental control

Prior to aseptic procedures, healthcare workers must ensure that there are no avoidable nearby environmental risk factors, such as bed making or patients using commodes.

- **Standard AT**—Clinical procedures managed with Standard AT will characteristically be technically simple, short in duration (approximately less than 20 minutes), and involve relatively few and small key sites and key parts. Standard ANTT requires a main general aseptic field and non-sterile gloves. The use of critical micro aseptic fields and a non-touch technique is essential to protect key parts and key sites.

e.g. Simple wound dressings

Key parts and sites can be protected by optimal critical micro fields and non-touch technique. Procedures are technically simple and <20 mins duration.

- **Surgical AT**—Surgical AT is demanded 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 full barrier precautions (Pratt et al, 2007). Surgical AT should still utilise critical micro aseptic fields and non-touch technique where practical to do so.

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