

Te Whatu Ora Health New Zealand

START STAY CLEAN CLEAN

NEW ZEALAND ASEPTIC TECHNIQUE

ASEPTIC TECHNIQUE AUDITOR RESOURCE

New Zealand Aseptic Technique (NZAT) Project

According to the national point prevalence survey, 6.6% of people will develop a healthcare-associated infection (HAI) while receiving medical treatment in Aotearoa New Zealand. These infections often occur as a result of procedures that are performed outside of theatre.

Aseptic technique is a globally recognised method of preventing microbial contamination which can be applied to all invasive procedures performed outside of theatre. Therefore, it is relevant to all healthcare professionals that undertake these procedures such as medical, nursing professionals and other allied health professionals. Some examples of invasive procedures include insertion of peripheral intravenous, accessing central lines, wound dressing, urinary catheterisation, and chest drain insertion.

Currently these procedures are taught in isolation without a standard approach to aseptic technique. As a result, there has been observed a huge variation in understanding and application of aseptic technique between individuals as well as between different specialty services and professional groups. Current evidence would support that this variable practice is contributing to healthcare- associated infections.

The aim of the New Zealand aseptic technique project is to have a focused education package that can be used by all healthcare professionals. This package includes:

- teaching the key principles of aseptic technique (preparation, protection of key sites, key parts, and advice)
- standardising terminology.

These resources can be applied across all healthcare settings both community and hospital, and across the professional groups that perform invasive procedures.

Auditing clinical areas and healthcare facilities that undertake invasive procedures will help to determine current practice and knowledge of principles of aseptic technique as well as ensure ongoing competency

¹National point prevalence survey of healthcare-associated infections: www. hqsc.govt.nz/resources/resource-library/pps-report-2022



Principles of Aseptic Technique

Aseptic technique means adhering to a set of principles to reduce the risk of infection when performing a procedure. It aims to prevent pathogenic organisms from being introduced to susceptible sites by hands, surfaces, and equipment. When done correctly it reduces the risk of healthcare-associated infections.

A simplified way of looking at aseptic technique is to "Start Clean + Stay Clean".

NZAT focuses on four principles

- **1. Preparation** taking time to prepare the environment, patient, and equipment to reduce the chance of contamination.
- Key parts protecting the parts of the equipment which breach the skin or have contact with sterile fluids or key sites.
- **3. Key sites** protecting sites on the body, where the normal skin barrier is breached. These sites need to be cleaned prior to use with appropriate antiseptic or solution.
- 4. Advice giving patients and their whānau clear and simple advice about how to care for the procedure site and when and how to alert healthcare workers of early signs of complications. Ideally this should be written.

Aseptic Technique Audit Tool Guidance

Audits can be undertaken in all healthcare facilities (excluding theatres) where invasive procedures are performed. Initial auditing will determine current aseptic technique standards. Post education audits will allow assessment of retention of knowledge and identify further learning opportunities.

All healthcare professionals who perform invasive procedures should be included e.g. nurses, doctors, medical imaging technicians, allied health professionals etc.

Auditors will need to check whether their organisation is going to included staff that are not employed by them in the audits.

Prior to undertaking an audit, consent must be given by both the patient and the healthcare professional whose practice is being audited.

If a breach is observed at the time of auditing, then it is expected that the auditor intervenes, and the breach is immediately addressed. Before undertaking the audit ensure the healthcare professional is aware the auditor may intervene.

To begin this project, we need to determine current practice and knowledge of principles by auditing clinical areas that undertake invasive procedures.



Audit Tool

Prior to starting the audit, it is important to capture the details of the audit including the position of the person being audited and the procedure being undertaken. It will be up to your organisation as to where and how this information is stored. Please ensure that the person being audited understands what is happening with this information, and that they consent to this process.

The audit tool is broken down into four sections; preparation, key parts, key sites and advice all of which is underpinned by hand hygiene.

Hand Hygiene

Audit points, 3,5 & 9:

- Hand hygiene was performed before equipment set-up.
- Hand hygiene performed immediately before the procedure (before putting on gloves if gloves are required).
- Hand hygiene was performed following the procedure.

Effective hand hygiene is an essential component of aseptic technique and must follow the WHO 5 moments of hand hygiene principles. Hands should be cleaned with either soap & water or, alcohol hand gel, for a minimum of 15 seconds. The healthcare professional does not fail an aseptic technique audit if they perform hand hygiene more often than indicated.

Preparation

Audit point 1:

 All necessary equipment was gathered before set-up, including sterile gloves if needed

Prior to commencing the procedure, the healthcare professional needs to demonstrate that they have planned for the procedure. This may involve referring to local procedure guidelines and/or local policy. They will need to decide on what worksurface they will use and collect all the equipment they require, including if they will need sterile gloves.

They will need to plan for the sequence they are going to undertake the procedure, aiming to undertake dirty tasks before clean.

PPE: Gloves

Gloves should be worn in line with routine standard precautions practice.

If it is necessary for the healthcare professional to touch key parts or key sites, sterile gloves must be used to minimise the risk of contamination. However, please note that for some invasive procedure's polices/guidelines dictate that sterile gloves must be worn, these policies/guidelines must be followed.

If key parts or key sites are not touched directly, non-sterile gloves can be used to protect the healthcare professional from blood or body fluids or exposure to toxic drugs during administration.

Gloves do not replace the need for hand hygiene. Hand hygiene must be performed before and after glove use

Consideration for Auditor

If a healthcare professional does not wear sterile gloves as indicated by the procedure, they must be prompted to do so (and a NO indicated on the audit form).



PPE: Aprons, Gowns, Masks

Aprons, gowns, masks or eye protection should be worn in line with routine standard precautions practice to reduce the risk of blood and body fluid exposure to the healthcare professional.

Audit point 2:

 The patient and environment were prepared before the procedure commenced with hand hygiene performed at appropriate moments.

Environment

The healthcare professional must ensure there are no environmental risks nearby that might prevent adherence to aseptic technique. E.g. linen covering key sites, bed curtains across the work area, commodes or waste within the work area, staff cleaning or making beds nearby.

This includes appropriate placement of aseptic field and equipment for ease of access. Appropriate placement of rubbish bin.

These need to be managed prior to the commencement of any procedure.

Patient

Prior to commencing the procedure, the healthcare professional needs to have positioned the patient in a way that allows them access to the key parts and key sites. They will also need to consider whether they need an assistant to help with either the procedure or with the patient's positioning.

Audit point 4:

 All equipment was set up before the procedure commenced.

Prior to starting the procedure, the healthcare professional needs to set up and prepare all the equipment required, taking care to protect key parts and key sites.

Key Parts

Audit point 6:

 Key parts were kept sterile before use and not contaminated during the procedure.

Key parts are the parts of the equipment which breach the skin or have contact with sterile fluids or key sites. They are the sterile components of equipment used during the procedure. These can include bungs, needle hubs, syringe tips, dressing packs etc.

Key parts should be kept sterile by being placed on an aseptic field or in their original protective packages (e.g. kept within the sterile packet, or with a sterile lid on) prior to use.

The healthcare professional must avoid touching the key parts. If they cannot avoid touching, then they should only touch with uncontaminated sterile gloves or forceps.

Consideration for Auditor

If the healthcare professional does not keep the key part/s sterile prior to use, they must be prompted to replace the item for one that is sterile (and a NO indicated on the audit form).



Key Sites

Audit point 7:

 Key sites were cleaned with appropriate antiseptic or solution and allowed adequate drying time.

Audit point 8:

 Key sites were not retouched or were only touched with sterile gloves or key parts.

Key sites are sites on the body where the normal skin barrier is breached.

Key sites should always be cleaned appropriately (as per procedure guide) with an approved solution prior to/during the invasive procedure. This should be allowed to dry.

The healthcare professional should avoid directly touching the key site/s. If they cannot avoid touching the key site, then they must only touch with uncontaminated sterile gloves, sterile forceps, or sterile products. Even then any touching should be limited and purposeful.

Consideration for Auditor

If a healthcare professional does contaminate a key site after it has been appropriately cleaned, the auditor must prompt them to re- clean the site before continuing (and a NO indicated on the audit form).

Advice

Audit point 10:

 The patient and/or caregiver was given advice about care of the procedure site and signs of possible complications.

The healthcare professional should on completion of the procedure provide the patient and/or their whānau or caregiver with clear and simple advice about how to care for the procedure site. This advice should include the signs of complications, including the early signs and symptoms of infection such as pain, redness, swelling and/or ooze.

The advice should include when and how to contact a health professional for further guidance. Ideally this advice should be written.

