

NSQHS Standards Implementation guide for Action 3.11 Aseptic Technique



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This resource has been developed to support health service organisations (HSOs) meet the requirements of the National Safety and Quality Health Service (NSQHS) Standards, in regard to *Action 3.11 Aseptic technique*.

This Action requires that HSOs have processes to:

- Identify the procedures where aseptic technique applies
- Assess the competence of the workforce in performing aseptic technique
- Provide training to address gaps in competency
- Monitor compliance with the organisation's policies on aseptic technique

Action 3.11 aims to support improved patient safety and quality improvement interventions. This Action requires HSOs to implement systems that support the delivery of safe clinical care and reduce the risk of healthcare-associated infections (HAIs) that complicate patient recovery, increase healthcare costs and potentially increase the length of hospital stays.

This resource:

- Provides information to support HSOs and members of the clinical workforce to demonstrate compliance and competence with aseptic technique.
- Incorporates the changes in the 2021 Preventing and Controlling Infections Standard, which supersedes the 2017 NSQHS Preventing and Controlling Healthcare-Associated Infection Standard.

A [factsheet](#) has also been developed to provide information on the alignment of the actions and criteria from the 2017 Preventing and Controlling Healthcare-Associated Infections Standard to the 2021 Preventing and Controlling Infections Standard. The Commission's [implementation support resources](#) for the NSQHS Standards are currently being revised to align with 2021 Preventing and Controlling Infections Standard.

The difference between aseptic technique and sterile technique

Often the terms aseptic technique and sterile technique are used interchangeably, not accurately reflecting important differences between these two techniques.

An **aseptic technique** aims to prevent pathogenic organisms, in sufficient quantity to cause infection, from being introduced into susceptible body sites by the hands of staff or the surfaces of equipment. It protects patients during invasive clinical procedures by utilising infection prevention and control measures that minimise the presence of microorganisms.¹ Aseptic technique is achievable in clinical and non-clinical settings by applying the five principles of aseptic technique, and modifying practice to mitigate infection risks.²⁻⁴ A **sterile technique** uses practices aimed at preventing the introduction of all microorganisms into a sterile field, equipment and procedure site. This is near impossible to achieve in the clinical setting due to the presence of microorganism in the air and the clinical environment. True sterile conditions are only achievable in strictly controlled environments such as laminar flow hoods used in laboratories and pharmacies.⁵

Aseptic technique

Many of the work practices that form standard precautions are also required for aseptic technique. For example, hand hygiene and the use of personal protective equipment. However, adherence to these practices individually does not constitute aseptic technique.⁴ Further guidance on aseptic technique can be found in [The Australian Guidelines for the Prevention and Control of Infections in Healthcare](#).

Prior to commencing any clinical procedure where aseptic technique is required, a risk assessment should be performed, and any identified risks should be eliminated or minimised before and during the procedure.

This resource focuses on optimising aseptic technique in the context of meeting the requirements of the NSQHS Standards.

Meeting the requirements of Action 3.11 Aseptic technique

a. Identify the procedures where aseptic technique applies

Aseptic technique is required for a broad range of clinical procedures ranging from the preparation of parental medication to surgical procedures. The types of clinical procedures performed in a HSO vary depending on the scope of the services provided.

A range of information can be used by HSOs to identify which clinical procedures require aseptic technique. Examples include, but are not limited to:

- **Documentation audits** of organisational policies and procedures, patient healthcare records, consent forms procedure checklists, stock inventories
- **Observational audits** of the clinical workflow in various settings
- **Surveying** members of the clinical workforce or individuals to identify commonly performed clinical procedures that require aseptic technique.

Clinical procedures can be classified as either simple or complex procedures.

Simple procedures are generally technically simple, use simple equipment with minimal key parts, involve small key sites and are of a short duration of time (usually less than 20 minutes).² Examples include simple wound dressings, maintenance of vascular access devices, collection of clinical specimens (blood, swabs or urine) or parenteral medication preparation.

Complex procedures are generally technically difficult, invasive procedures require specialised equipment with many key parts and large or many key sites, and require extended periods of time to complete.² Complex procedures may be performed in dedicated clinical environments such as operating theatres or procedural suites or at the bedside.

Examples of complex procedures include surgery, debridement of a wound, vascular access insertions, drain insertion, or catheterisations (for example urinary, cardiac or peritoneal dialysis).²

Knowing the types of aseptic procedures undertaken within an organisation can help to identify and reduce the risks for the organisation and the patient. Factors to consider when assessing the risks associated with aseptic procedures for an organisation include the types of aseptic procedures, the frequency with which these procedures are undertaken, the equipment required to perform these procedures, and the different clinical environments where these procedures are performed.

b. Assess the competence of the workforce in performing aseptic technique

The risk of a patient acquiring an infection during a procedure that requires aseptic technique is lower if the clinical workforce is competent in performing both aseptic technique and the procedure itself.

Competency-based assessment is the assessment of theoretical knowledge and practical skills that a person can demonstrate in the workplace. A workplace assessor, such as a clinical supervisor or educator, reviews the evidence and verifies the person's competence in performing the assessed task.⁶

A workplace assessor, who is responsible for assessing others for competency in aseptic technique, must also demonstrate that they are competent in aseptic technique prior to assessing other members of the workforce. Theoretical knowledge, or an understanding of aseptic technique alone, are not enough to ensure someone can demonstrate practical competence in aseptic technique.

A theoretical understanding may be demonstrated by either explaining the principles of aseptic technique during a practical assessment, or through the completion of a written or online assessment or learning module. Someone who understands aseptic technique should be able to:

- Use the correct terminology to describe concepts used in aseptic technique such as key sites, key parts, and micro fields
- Describe how to assess the risk of infection associated with a particular procedure and how to mitigate those risks
- Describe the correct sequence to perform each step in a procedure to maintain asepsis
- Describe the correct steps to take if asepsis is breached during a procedure
- Describe other factors that may affect asepsis such as sterile stock storage and handling, environmental and patient factors.

Practical competency in aseptic technique is crucial for patient safety and preventing infections. Practical competency may be demonstrated through the performance of a clinical procedure that requires the use of aseptic technique in a simulated or actual clinical environment. Someone who is practically competent in aseptic technique should be able to:

- Demonstrate the correct method and sequence to perform a procedure that requires aseptic technique, consistent with local policy or written procedures
- Maintain asepsis throughout the procedure
- Use standard precautions during the procedure, including performing hand hygiene, use of person protective equipment (PPE), safe handling and disposal of sharps and waste
- Demonstrate the correct steps to take if asepsis is breached during a procedure.

To meet this action, HSOs should also refer to the [Clinical Governance Standard, criterion Clinical performance and effectiveness](#) for guidance.

Further guidance on assessment of competence in performance of aseptic technique can be found in the [NSQHS Guide for Hospitals](#).

c. Provide training to address gaps in competency

Training programs for aseptic technique may either be specific to individual clinical procedures, or may apply to many different clinical procedures. These programs need to incorporate all the principles of aseptic technique. For example, how to assess for, and, minimise infection risks; setting up an aseptic field and equipment; and appropriate glove use and hand hygiene.

All aseptic technique training programs should meet the learning and professional needs of the clinical workforce of a specific HSO. Training programs for aseptic technique may include, but are not limited to:

- Online learning packages
- Practical simulations of clinical procedures
- Train-the-trainer workshops
- Utilisation of industry-run training and accreditation programs,
- Mandatory/standardised in-house training and competency-based assessments programs.

To identify gaps in aseptic technique training programs for members of the clinical workforce, the HSO may consider:

- Identifying specific gaps in workforce competency (e.g. members of the clinical workforce do not know how to apply the principles of aseptic technique to a clinical procedure, or are unable to provide evidence of competency in aseptic technique)
- Identifying gaps in the HSO's aseptic technique training content (e.g. current training and assessment programs do not meet the learning or professional needs of the clinical workforce).

1. Identifying gaps in workforce aseptic technique training and competency

Training records can be used to identify members of the clinical workforce who need to complete further training, or re-training in aseptic technique.

A sample training log for tracking workforce compliance with aseptic technique training and practical competency assessment is provided in Appendix 1. A training log like this can be used to identify who has and has not completed training and assessment for aseptic technique by procedure type.

The HSO should respond to the identified gaps in workforce competency with a plan that ensures that all members of the clinical workforce complete relevant aseptic technique training, and are able to provide evidence of competency in aseptic technique. Action plans can be used to show the processes for the identification of gaps/issues; how these gaps/issues were managed; and, as evidence for compliance with the NSQHS Standards.

Guidance on action plans and monitoring for the NSQHS Standards can be found on the [Commission's website](#). Individual states, territories and health service organisations may also have guidance on or examples of action plans.

2. Identifying gaps in aseptic technique training content

Gaps and variations in HSO aseptic technique training and assessment programs can be identified by comparing local training content against:

- The current edition of the [Australian Guidelines for the Prevention and Control of Infection in Healthcare](#)
- Relevant local policies and procedures
- Training provided by relevant professional associations/ colleges
- State and territory health resources such as guidelines, policies and procedures relating to the use of aseptic technique.

If a HSO identifies gaps in the content of its local training programs, these programs should be updated to ensure compliance with the best practice. Refresher training should then be delivered to previously trained members of the clinical workforce to address gaps in training and current competencies.

d. Monitor compliance with the organisation's policies on aseptic technique

Policies, procedures and guidelines can be used to facilitate compliance with the principles of aseptic technique. HSOs should ensure that policies, procedures and guidelines relevant to aseptic technique:

- Provide guidance for all clinical procedures that require aseptic technique
- Provide guidance on risk assessment, pre-procedure preparation, performing the procedure, post-procedure practices, handover and documentation
- Provide guidance on how frequently the clinical workforce should complete aseptic technique training and competency assessments
- Address all of the principles of aseptic technique
- Are reviewed and updated routinely
- Are accessible to the relevant clinical workforce at all times
- Stipulate that only members of the clinical workforce deemed competent in aseptic technique and the performance of the clinical procedure can carry out the procedure.⁷

Strategies to monitor whether members of the clinical workforce are compliant with the HSO's policies, procedures and guidelines for aseptic technique may include, but are not limited to:

- Observational audit tools
- Procedural check lists
- Review of adverse patient outcomes data such as clinical incident summaries, morbidity and mortality reports or Root Cause Analysis (RCA) data relating to breaches or non-compliance in aseptic technique
- Healthcare-associated infections (HAI) surveillance data for rates of infections associated with clinical procedures
- Hand hygiene compliance data for clinical procedures.

Questions?

For more information concerning the National Safety and quality in Health Service Standards, please visit:

safetyandquality.gov.au/nsqhs-standards

You can also email the advice centre at AdviceCentre@safetyandquality.gov.au or call 1800 304 056.

The Commission has developed a suite of [Infection Prevention and Control eLearning modules](#) provide information on the principles of infection prevention and control, including good aseptic technique in Australian healthcare settings.

1. South Australia Health. Aseptic Technique: Staff training, self-assessment and competency workbook. 2020.
2. National Health and Medical Research Council, Australian Commission on Safety and Quality in Health Care, (ACSQHC). Australian Guidelines for the Prevention and Control of Infection in Healthcare. Canberra: 2019.
3. Aseptic Technique. [Internet]: State of Queensland (Queensland Health); 2019 [updated 26 July 2019] Available from: <https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/infection-prevention/standard-precautions/aseptic>.
4. Aseptic Non Touch Technique. The Association for Safe Aseptic Practice (ASAP). Aseptic Non Touch Technique. . [Internet] 2019 Available from: http://antt.org/ANTT_Site/theory.html.
5. Weller B. Bailliere's Nurses' Dictionary: For Nurses and Health Care Workers. 26th ed: Baillière Tindall; 2014.
6. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards: Guide for Hospitals. Sydney: 2017.

References

Appendix 1

Sample training log to track workforce aseptic technique training and practical competency assessment

Employee name/ number	Procedures requiring aseptic technique											
	IVC insertion		IDC insertion		Simple wound dressing		Central line access and maintenance		Add other clinical procedures here		Add other clinical procedures here	
	Theory training	Practical assessment	Theory training	Practical assessment	Theory training	Practical assessment	Theory training	Practical assessment	Theory training	Practical assessment	Theory training	Practical assessment
#1			N/A	N/A			N/A	N/A				
#2												
#3			N/A	N/A			N/A	N/A				
#4												

- Note which members of the clinical workforce can provide evidence for completion of the theoretical competence and or practical competence for aseptic technique training and assessment. Where a procedure is not applicable or within the scope of an individual staff member's role, record N/A in the grid
- Using a colour code on the training log, as shown below, to identify:
 - Need for theoretical training
 - Need for practical training (because they already have theory)
 - Need for both theory and practical training
 - Completion of both theory and practical training
- Develop an action plan to ensure that all members of the clinical workforce complete training and assessment for aseptic technique as per HSO's requirement.