



Australian Government

Department of Education, Employment and Workplace Relations

HLTAN408B Provide basic care and maintenance of anaesthetic and monitoring equipment

Release: 1

HLTAN408B Provide basic care and maintenance of anaesthetic and monitoring equipment

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to provide care and maintenance for anaesthetic and monitoring equipment

Application of the Unit

Application

Work performed requires a broad knowledge, range of well developed skills and the ability to develop and apply solutions to a range of predictable and unpredictable problems. Individuals use discretion and judgement and take responsibility for their own outputs

Administration of anaesthesia may occur in various locations within the hospital environment e.g. operating theatres, emergency department, intensive care unit (ICU), radiology department

All activities are carried out in accordance with relevant Australian and New Zealand College of Anaesthetists policy documents, organisation policies, procedures and infection control guidelines

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in *italics* are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

1. Conduct daily care and maintenance

PERFORMANCE CRITERIA

- 1.1 Perform *safety checks* in accordance with organisation policies and procedures, manufacturer's guidelines and current standards
- 1.2 Ensure *anaesthetic equipment* is functioning correctly
- 1.3 Identify and correct anaesthetic equipment problems
- 1.4 Report hazardous, damaged or faulty equipment is reported and arrange repairs
- 1.5 Clean anaesthetic equipment in accordance with *organisation policies and procedures* and manufacturer's recommendations
- 1.6 Disassemble and clean anaesthetic equipment is in accordance with *organisation policies and procedures* and manufacturer's recommendations
- 1.7 Dispose of disposable/single use items in accordance with waste management policies, manufacturer's recommendations and infection control policies

ELEMENT

PERFORMANCE CRITERIA

2. Arrange required repairs of *anaesthetic equipment*

- 2.1 Identify anaesthetic equipment faults and label anaesthetic equipment
- 2.2 Complete documentation in accordance with organisation policies and procedures
- 2.3 Complete anaesthetic equipment repair in accordance *with organisation policies and procedures* and manufacturer's instructions

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Anaesthetic and monitoring equipment cleaning procedures
- Application of anaesthetic and monitoring equipment and the contraindications, complications and limitations associated with their use
- Basic electronic knowledge and electrical safety requirements
- Boundaries of responsibilities and ability to refer problems to supervisor, anaesthetist or other appropriate health professional
- Current range and use of anaesthetic and monitoring equipment
- Infection control policy and procedures in relation to anaesthetic and monitoring equipment
- Intra-operative client safety concerning the location and movement of equipment
- Medical terminology used relevant to the worker's role
- Occupational health and safety procedures in relation to anaesthetic and monitoring equipment
- Principles of measurement e.g. thermodynamics, gas laws, fluid dynamics, potentiometry and optics
- Principles of safe operation of equipment
- Relevant anatomy and physiology related to the set-up and operation of anaesthetic and monitoring equipment
- Safe handling of gases

Essential skills:

It is critical that the candidate demonstrate the ability to:

- Apply basic training and instruction skills and assessments
- Calibrate and maintain equipment to required standard
- Communicate with health professionals
- Communicate with maintenance engineers

REQUIRED SKILLS AND KNOWLEDGE

- Identify and rectify equipment problems
- Use appropriate cleaning chemicals

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Comply with organisation policies and procedures including those of OHS and infection control, and current standards
- Deal with conflict
- Follow procedures for timely set-up, trouble-shooting, shut-down, cleaning and storage of anaesthetic and monitoring equipment
- Identify and manage faults and problems with anaesthetic and monitoring equipment
- Identify the range and purpose, and principle of operation of a range of anaesthetic and monitoring equipment
- Recognise hazards related to the use of each item of a range of anaesthetic and monitoring equipment
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues
- Use numeracy skills that may range from the ability to complete basic arithmetic calculations, recording stock levels and statistical information
- Use oral communication skills - language competence required to fulfil job roles in a safe manner and as specified by the organisation. Assessors should look for skills in asking questions, providing clear information, listening to and understanding workplace instructions, and clarifying workplace instructions when necessary. Effective verbal and non verbal communication skills with a range of internal and external persons are essential. Organisation may require competence in English or a community language, depending on client group
- Use problem solving skills required including an ability to use available resources
- Use reading and writing skills-literacy competence required to fulfil job roles in a safe manner and as specified by the organisation. The level of skill required involves reading and documenting technical information and understanding complex policy and procedure manuals.
- Work with others within a team

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

EVIDENCE GUIDE

Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate this competency unit:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Observation of workplace performance is essential for assessment of this unit
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace
- Where, for reasons of safety, space, or access to equipment and resources, assessment takes place away from the workplace, the assessment environment should represent workplace conditions as closely as possible

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Context of and specific resources for assessment

- Resources essential for assessment include:
 - access to appropriate workplace where assessment can take place
 - simulation of realistic workplace setting for assessment
 - relevant organisation policy, guidelines, procedures and protocols

EVIDENCE GUIDE

Method of assessment

- Observation in the workplace
- Evidence gathered from clinical work environment
- Written assignments/projects or questioning should be used to assess knowledge
- Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice.
- Questioning - verbal and written
- Role play/simulation
- Clinical skills involving direct client care are to be assessed initially in a simulated clinical setting (laboratory). If successful, a second assessment is to be conducted during workplace application under direct supervision

Related units:

- This unit can be assessed independently, however holistic assessment practice with other health services units of competency is encouraged
- This unit is embedded into elements 1 and 3 of unit HLTAN506C Provide advanced care and maintenance of anaesthetic equipment

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Safety checks of equipment may include:

- Calibration
- Pre-use checks
- Correct operation and function

RANGE STATEMENT

Organisation policies and procedures may refer to:

- Infection control
- Occupational health and safety
- Equipment handling and set up procedures
- Maintenance procedures
- Electrical hazards

Anaesthetic and equipment must include:

- Anaesthetic machine and components, including alarms and scavenger
- Work station/trolley
- Ventilator and components
- Gas supply equipment
- Vaporisers or other systems designed for delivery of inhalation anaesthetic agents
- Breathing systems/circuits and attachments
- Laryngoscopes
- Intubation aids, including standard and difficult intubation equipment, fiberoptic bronchoscopes and video equipment
- Artificial airways
- Oxygen masks

Monitoring equipment includes:

- Electrocardiography (ECG)
- Pulse oximetry
- Non-invasive and invasive blood pressure monitoring
- Temperature monitoring
- Central venous pressure (CVP) monitoring
- Intravascular monitoring
- Gas analysers, including oxygen, carbon dioxide and anaesthetic agent
- Expired/inspired volume/pressure
- Neuromuscular transmission
- Cardiac output monitoring
- Cerebral activity monitors
- Stethoscopes, including oesophageal

Other equipment includes:

- Defibrillator/cardioverters
- Infusion equipment, including oxygen, carbon dioxide and anaesthetic agent
- Warming/cooling equipment for client and

RANGE STATEMENT

intravenous fluids

- Equipment to minimise heat loss
- Tourniquets and exsanguinators
- Nerve stimulator
- Neuromuscular function
- Blood analysis devices e.g. gas, electrolytes, haemoglobin, pH

Unit Sector(s)

Not Applicable