



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **HLTTH406C Provide intra-operative equipment and technical support**

**Release: 1**

## **HLTTH406C Provide intra-operative equipment and technical support**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit of competency describes the skills and knowledge required to provide equipment and technical support during operative procedures

### **Application of the Unit**

#### **Application**

Work is performed within a defined range of functions and known routines and procedures, under the guidance of surgical and anaesthetic medical staff. The work requires a range of well developed skills where some discretion and judgment is required, and individuals take responsibility for the quality of their outputs

All activities are carried out in accordance with organisational policies, procedures and infection control guidelines and under the direction of operating room health professionals

### **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. Monitor the performance of *equipment* used

### PERFORMANCE CRITERIA

- 1.1 Observe *equipment* to ensure correct operation
- 1.2 Switch on warning devices and ensure that it is registering that the equipment is safe
- 1.3 Ensure gas, electrical, vacuum supplies are adequate for procedure at hand and/or back-up supply is available
- 1.4 Observe equipment whilst in use and, if a fault develops, take immediate action to avoid danger to clients, staff and equipment
- 1.5 Follow established procedures to rectify faulty equipment

**ELEMENT****PERFORMANCE CRITERIA**

2. Attach and detach *client attachments* as required

- 2.1 Use *personal protective equipment*
- 2.2 Select appropriate *client attachments* and ensure equipment is attached safely and securely to appropriate sites
- 2.3 Re-position *client attachments* during theatre procedures as required
- 2.4 Safely detach *client attachments* when no longer required with minimum risk of damage to client, staff or equipment
- 2.5 Provide counter-traction during orthopaedic and plastic procedures and manipulations as directed

3. Connect irrigation as directed

- 3.1 Select correct irrigation for operative procedure under the guidance of the surgical medical staff in correct sequence as required
- 3.2 Check irrigation type, sterile integrity and expiry date
- 3.3 Connect irrigation to sterile giving set using correct aseptic techniques
- 3.4 Change irrigation using aseptic techniques
- 3.5 Communicate the volume, type and number of irrigation bags to scout nurse
- 3.6 Dispose of used irrigation bags/giving sets according to organisational policy and procedures

**ELEMENT****PERFORMANCE CRITERIA**4. Adjust *surgical equipment*

- 4.1 Turn on/off *surgical equipment* under the guidance of medical staff and within manufacturers guidelines
- 4.2 Connect *surgical equipment* to electrical, vacuum, gas supply as required, and in accordance with standard operating procedures
- 4.3 Adjust surgical equipment settings to suit the surgical medical staff and in consultation with anaesthetic medical staff as required and within manufacturers guidelines
- 4.4 Communicate readings to surgical/anaesthetic medical staff as required
- 4.5 Communicate alarms/warnings, abnormal readings and equipment usage times to medical staff as required
- 4.6 Use aseptic techniques to pass *sterile equipment/lines* from the *surgical team* and connect to surgical equipment
- 4.7 Disconnect /reconnect surgical equipment, move and adjust during medical emergencies, repositioning of client and/or change of surgical procedure under the guidance of medical and nursing staff.

**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:

- Anatomy and physiology relevant to safe use of surgical equipment
- Basis principles of electricity
- Client positioning aides and attachments

## REQUIRED SKILLS AND KNOWLEDGE

- Functions of relevant equipment
- Hazards and precautions of surgical equipment
- Hazards and precautions of various client positions
- Hazards associated with irrigation administration
- Infection control procedures
- Intra-operative client and staff safety concerning the settings of surgical equipment
- Manufacturer's instructions of surgical equipment
- Medical terms used in the operating room relevant to the technician's role
- Medico-legal requirements relevant to role and scope of work practice
- Occupational health and safety procedures
- Overview of operating room air-conditioning and ventilation systems and their impact on the technician's role and work practices
- Properties of matter relevant to the technician's role and work practice
- Range of positions required for operative procedures

### *Essential skills:*

It is critical that the candidate demonstrate the ability to:

- Apply knowledge of sterilisation methods
- Apply manual handling procedures
- Follow procedures for timely set-up, trouble-shooting, and shut-down of equipment
- Identify basic and routine faults and problems with surgical equipment
- Identify the range and purpose of a range of operating theatre equipment
- Maintain client confidentiality
- Perform minor maintenance procedures
- Recognise boundary of role in relation to maintenance of operating theatre equipment
- Recognise hazards related to the use of each item of a range of operating theatre equipment
- Use correct procedures for:
  - adjustment of surgical equipment
  - attachment and detachment of relevant equipment from clients in the operating room
  - maintenance of sterility
  - turning on/ shutting down surgical equipment
- Use correct sequencing for the movement and connection of surgical equipment in relation to sterile equipment placement, anaesthetic and surgical team requirements
- Work as part of a team and follow directions from operating room health professionals

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

## REQUIRED SKILLS AND KNOWLEDGE

the identified work role

This includes the ability to:

- Communicate with health professionals
- Complete basic arithmetic calculations
- Deal with difficult co-workers and conflict
- Demonstrate aseptic technique
- Demonstrate manual dexterity during medical emergencies
- Maintain the dignity and privacy of clients
- Solve problems including the ability to use available resources and prioritise workload
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues
- Use oral communication skills as required to fulfil job roles in a safe manner and as specified by the organisation, including skills in:
  - asking questions
  - providing clear information
  - listening to and understanding workplace instructions
  - clarifying workplace instructions when necessary
  - literacy in English or a community language, depending on client group and organisation requirements

*continued ...*

*Essential skills:*

- Use reading and writing skills as required to fulfil job roles in a safe manner and as specified by organisation at a level of skill that may range from the ability to understand symbols used in OHS signs to reading and interpreting manufacturers' instructions for equipment, workplace safety pamphlets or procedure manuals to reading labels and handling chemicals such as cleaning fluids
- Work cooperatively in a team environment
- Work with others and display empathy with client and relatives

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the

## EVIDENCE GUIDE

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
- 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

*Context of and specific resources for assessment:*

- Access to appropriate workplace where assessment can take place
- Simulation of realistic workplace setting for assessment
- Relevant organisational policy, guidelines, procedures and protocols



## EVIDENCE GUIDE

### *Method of assessment*

- Observation of work activities when providing intra-operative equipment and technical support
- Observation of simulation and/or role play when providing intra-operative equipment and technical support
- Discussion of physical and/or behavioural contingency scenarios involving duty of care
- Authenticated transcripts of relevant education/training courses
- Recognition of relevant life/work experience
- Written assignments/projects or questioning should be used to assess knowledge
- Authenticated reports of experience when providing intra-operative equipment and technical support (Documentation associated with performance reviews, supervisor/coordinator evaluations of work performance)
- Training records associated occupational health and safety training, orientation/induction training, safe manual handling, universal infection control procedures
- Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice

### *Access and equity considerations:*

- Workers should have an understanding of Aboriginal and/or Torres Strait Islander culture and history and an ability to work with Aboriginal and/or Torres Strait Islander clients and communities
- Assessors and trainers must have a knowledge of and take into account the influence of cultural and historic factors relating to health for those working with Aboriginal and/or Torres Strait Islander clients and communities

### *Related units:*

- This unit can be assessed independently, however holistic assessment practice with other health services units of competency is encouraged

## **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.

## RANGE STATEMENT

*Equipment may include:*

- Endoscopic equipment
- Diathermy
- Arthroscopic equipment
- Lasers
- Monitors and camera tower
- Printers videos
- Lithoplast
- Lithoclast/lithotripter
- Saws/drills
- Orthopaedic surgical equipment
- Microscopes
- Gas cylinders
- Warming equipment
- Tourniquet
- Insufflator/laparoflater/hystroflator
- Electrical and air-powered equipment
- Calf compressors/stimulators
- Cavitron ultrasonic surgical aspirator
- Cryogen
- Headlights
- Light sources
- Smoke evacuators
- Suction equipment
- Stealth/medrex
- Operating table and attachments
- Exsanguinators
- Electro-surgical unit
- Anti-embolus equipment
- Suction
- Light Sources
- Lithoclast/lithotripter
- Operating lights
- Air/electric power sources for drills/saws
- Phacoemulsification machine

*continued ...*

**RANGE STATEMENT**

*Equipment may include:  
(contd)*

- Resuscitation cot/porta cot
- Smoke evacuators
- Fire extinguisher
- Single lens reflect/digital cameras
- Gel pads
- Ultracision
- Fluid management systems
- Optical tracking devices
- Cell saver
- Warming equipment
- Drains
- Catheters
- Intravenous lines
- Intravenous pressure bags

*Client attachments may include:*

- Anti-embolism equipment
- Diathermy earth-plate and lead
- Traction devices
- Zimmer knee splints
- Charnley pillow
- Ted stockings
- Tourniquets

*Personal protective equipment  
may include:*

- Gown
- Gloves
- Mask
- Protective eyewear
- Apron
- Lead Gown

**RANGE STATEMENT**

*Sterile equipment/lines may include:*

- Irrigation lines
- Drill/saw/reamer electrical cords/hoses
- Insufflator/hystroflator/laporaflator gas tubing
- Suction tubing
- Mono-polar/bi-polar diathermy/phaco leads
- Book-walter retractor
- Camera lead
- Light source fibre-optic cord
- Endoscopic shaver cord
- Traction devices
- Smoke evacuators
- Cranial arc leads
- Probe leads

*Surgical team may include:*

- Registered nurses
- Enrolled nurses
- Surgeon
- Anaesthetist
- Other medical practitioner
- Perfusionist
- Other operating theatre staff

**RANGE STATEMENT**

*Surgical equipment may include*

- Phacoemulsification machine
- Endoscopic equipment
- Diathermy
- Arthroscopic equipment
- Operating chairs
- Operating tables and accessories
- Positioning aids and equipment
- Lasers
- Monitors and camera tower
- Theatre lights
- Printers videos
- Lithoclast/lithotriptor/lithoplast
- Saws/drills
- Orthopaedic surgical equipment
- Orthopaedic frames
- Microscopes
- Warming equipment
- Tourniquet
- Insufflator/laparoflator/hystroflator
- Electrical and air-powered equipment
- Calf compressors/stimulators
- CUSA
- Cell saver
- Cryogen
- Headlights
- Light sources
- Smoke evacuators
- Suction equipment
- Stealth/medrex

**RANGE STATEMENT**

*Operative procedure may include:*

- General, regional and local anaesthetic
- Interventional radiology
- General surgery
- Gastro-intestinal
- Ear, nose and throat
- Gynaecology
- Obstetrics
- Orthopaedics
- Vascular
- Urology
- Oral, dental and maxillofacial
- Cardiothoracic
- Neurosurgery
- Plastics and reconstructive
- Trauma/emergency surgery
- Ophthalmic surgery

**Unit Sector(s)**

Not Applicable