



**Australian Government**

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

# **HLTNE405D Provide care and maintenance of neurophysiology equipment**

**Release: 1**

## HLTNE405D Provide care and maintenance of neurophysiology equipment

### Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTNE405C Provide care and maintenance of neurophysiology equipment	HLTNE405D - Provide care and maintenance of neurophysiology equipment	Unit updated in V5. ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. No change to competency outcome.

### Unit Descriptor

#### Descriptor

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

Provision of structured evaluation and recommendations for equipment being considered for purchase is included

### 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

Neurophysiology tests are commonly conducted in hospitals and neurologists' rooms

All activities are carried out in accordance with 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. Perform pre-use *checks*

### PERFORMANCE CRITERIA

- 1.1 Set up and check *equipment* in accordance with *organisation policies* and procedures and manufacturer's specifications
- 1.2 Complete care and maintenance of equipment required prior to use
- 1.3 Identify and correct minor equipment problems
- 1.4 Report hazardous, damaged or faulty equipment and arrange repairs

**ELEMENT****PERFORMANCE CRITERIA**

- |  |  |
|--|--|
| 2. Implement planned maintenance                   | 2.1 Identify maintenance procedures and appropriate documentation  |
|  | 2.2 Maintain neurophysiology equipment in accordance with organisation policies and procedures, relevant standards and manufacturer's guidelines |
|  | 2.3 Complete documentation in accordance with organisation policies and procedures, relevant standards and manufacturer's guidelines             |
|  | 2.4 Review and update maintenance records in accordance with organisation policies and procedures  |
| 3. Repair faulty equipment                         | 3.1 Identify and label faulty equipment  |
|  | 3.2 Complete documentation of breakdown and/or maintenance in accordance with organisation policies and procedures                               |
|  | 3.3 Complete equipment repair in accordance with organisation policies and procedures and manufacturer's instructions                            |
| 4. Orient other staff to neurophysiology equipment | 4.1 Update and make available protocol of operative procedures   |
|  | 4.2 Provide instruction on equipment operation to staff as required  |
|  | 4.3 Provide in-service training on basic equipment operation as required   |
| 5. Evaluate neurophysiology equipment              | 5.1 Conduct evaluations of equipment being considered for purchase   |
|  | 5.2 Provide recommendations for purchase   |

**ELEMENT****PERFORMANCE CRITERIA**

## 6. Introduce new equipment

- 6.1 Identify the need for introduction of new techniques in EEG recording, related to new equipment
- 6.2 Apply new techniques to existing conditions in accordance with current standards, manufacturer's guidelines and organisation policies and procedures
- 6.3 Review and update policies and procedures
- 6.4 Evaluate new techniques and policy and procedures
- 6.5 Implement staff development/training

**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:

- Application of neurophysiology equipment and the contraindications and complications associated with their use
- Basic electrical knowledge and electrical safety requirements
- Infection control policy and procedures in relation to neurophysiology equipment
- Medical terminology used relevant to care and maintenance of neurophysiology equipment
- Neurophysiology equipment cleaning, decontamination and sterilisation procedures
- Work health and safety (WHS) procedures in relation to neurophysiology equipment
- Relevant anatomy and physiology related to the set-up and operation of neurophysiology equipment
- The current range and use of neurophysiology equipment

*Essential skills:*

It is critical that the candidate demonstrate the ability to:

- Apply knowledge of boundaries of responsibilities and refer problems to supervisor,

neurologist or other appropriate health professional

- Comply with policies and procedures including those of WHS and infection control
- Follow procedures for timely set-up, trouble-shooting, shut-down, cleaning and storage of neurophysiology equipment
- Identify and manage faults and problems with neurophysiology equipment
- Identify the range and purpose of a range of neurophysiology equipment
- Perform neurophysiology equipment cleaning and sterilisation procedures
- Recognise hazards related to the use of each item of a range of neurophysiology equipment

*continued ...*

*Essential skills (contd):*

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:

- Calibrate and maintain equipment to required standard in accordance with manufacturer's guidelines, organisation policies and procedures
- Communicate with maintenance engineers
- Deal with conflict
- Demonstrate basic training and instruction skills
- Demonstrate computer skills relevant to workers' role
- Identify and rectify equipment problems
- Solve problems including an ability to use available resources
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues
- Use appropriate cleaning chemicals
- 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 and display empathy with clients and relatives
- Use oral communication skills 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
  - using effective verbal and non verbal communication skills with a range of internal and external persons
  - literacy in English or a community language, depending on client group and organisation requirements
- Use numeracy skills including the ability to complete basic arithmetic calculations, and

record stock levels

## 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 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
- 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
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace

*Context of and specific resources for assessment:*

- Relevant organisation policy, guidelines, procedures and protocols

## EVIDENCE GUIDE

### *Method of assessment:*

- 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
- Observation of work activities when providing care and maintenance of neurophysiology equipment
- Observation of simulation and/or role play when providing care and maintenance of neurophysiology equipment
- 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
- Questioning, written assessments/projects, e-learning can be used to assess knowledge
- Authenticated reports of experience in providing care and maintenance of neurophysiology equipment (Documentation associated with performance reviews, supervisor/co-ordinator evaluations of work performance)
- Training records associated with First Aid, OH 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



## EVIDENCE GUIDE

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

## 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.

- Equipment may include:*
- Electroencephalography (EEG) machine; digital, analogue, portable, standard, ambulatory, video
  - Evoked potential (EP) machine
  - Electromyography (EMG) machine
  - Machine for nerve conduction studies
  - Respiration, movement and tremor monitors
  - Electrodes
  - Head box
  - Photic stimulator
  - Video cassette recorders
  - Cameras
- Checks of equipment may include:*
- Routine calibration daily and on each test
  - Full calibration monthly
- Organisation policies and procedures may refer to:*
- Infection control
  - Work health and safety (WHS)
  - Equipment handling and set up procedures
  - Maintenance procedures
  - Electrical hazards
- Equipment care and maintenance may include:*
- Pen/galvanometer alignment
  - Sensitivity and linearity
  - Pen/galvanometer centring
  - Electrical and mechanical centring
  - Damping
  - Chart speed and time markers
  - Time constants / low frequency filters
  - High frequency filters
  - Noise levels and line thickness
  - Paper, ink and disc storage
  - Common mode rejection
  - Faulty leads
  - Blown globes/fuses
  - Computer hardware and software faults

*Documentation of planned maintenance may include:*

- Service log of machine faults
- Service log of biomedical machine safety checks

*Instruction on equipment operation and in-service training on equipment may include:*

- Set up procedures and safety checks
- Basic fault finding
- Assembly and connection procedures
- Preparation of equipment for use
- Organisation policy and procedures

## **Unit Sector(s)**

Not Applicable