Unit 68: Assisting with Electroencephalography

Level:	**4**
Unit type:	**Optional (Neurophysiology)**
Credit value:	**15**
Guided learning hours:	**120**

Unit summary

In this unit, you will develop the knowledge, understanding and skills needed to assist and support the healthcare science practitioner/clinical scientist in performing quality-assured, safe, electroencephalography in adults and children. In addition, you will gain an understanding of the other common measurement procedures in neurophysiology. You will be expected to build your patient-centred professional practice and practise safely in the workplace.

Unit assessment requirements

There are no specific assessment requirements for this unit. Please refer to the assessment strategy in *Annexe B*.

Additional information

All procedures must be undertaken in accordance with the Standard Operating Procedures (SOPs) in own work practice.

AC1.1 includes knowledge of a range of procedures undertaken in neurophysiology, which could include:

- electroencephalography
- electromyograms
- nerve conduction studies
- visual evoked potentials
- visual electrophysiology
- brainstem auditory evoked potentials
- somatosensory evoked potentials.

AC1.2 could include:

- carpal tunnel syndrome
- diabetic neuropathy
- disorders of the optic nerve
- disorders of the retina
- disorders of sleep
- dementia
- encephalitis
- entrapment neuropathies
- epilepsy
- head injury
- meningitis
- multiple sclerosis
- myopathy
- stroke.

AC1.3 includes:

- greeting the individual – 'hello my name is'
- explain own role
- communicating with individuals in a way that respects their dignity, rights, privacy and confidentiality.

AC1.4 includes:

- informed consent procedures in adults and children.

AC1.6 includes:

- recognising that you are personally responsible for and must be able to justify your decisions

AC 2.1 includes:

- causes of seizures, e.g., genetic, trauma, damage, neurological diseases
- biological generation of action potentials- inhibitory and excitatory

AC 2.3 includes:

- calibration, safety and quality procedures.

AC3.1 includes:

- minimising risks and hazards in compliance with health and safety policies
- controlling infection risks
- washing hands
- chaperoning.

AC3.2 includes across the range of EEGs, electrodes, headbox, photic lamp.

AC3.3 includes electrode types, impedance, amplifier settings, filters.

AC3.4 includes:

- any special needs of the individual
- age of the individual
- light, heat, ventilation.

AC 3.5 includes:

- checking, calibrating and preparing the equipment
- identification of common faults and taking remedial action
- accurately inputting the individual demographics on the system

AC3.6includes:

- greeting individual using patient centred approach
- communicating effectively with the individual/carer, confirming individual's identification.
- identification of standard electrode sites
- preparation of electrode site and accurate application of electrodes under supervision
- rectification of high impedance measurement
- correct positioning of patient
- support/encouragement during activation procedures

AC3.8 includes:

- babies and toddlers
- children and young people
- individuals with learning difficulties and/or challenging behaviours

AC4.1 includes:

- different method of application – glue, paste, tape.

Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet **in own area of work and in accordance with Standard Operating Procedures (SOPs)** to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand the range of procedures undertaken in a neurophysiology department and the importance of patient-centred practice	1.1	Explain the range of procedures undertaken in neurophysiology departments			
		1.2	Explain the common reasons for referring patients to neurophysiology departments			
		1.3	Explain how to embed the principles of patient-centred care in own area of practice			
		1.4	Explain the principles, guidance and law for gaining informed consent, including the limits of consent			
		1.5	Evaluate safeguarding procedures and the process for reporting safeguarding issue			
		1.6	Discuss the limits of your practice and when to seek advice or refer to another professional			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Understand the principles and practice of electroencephalography (EEG)	2.1	Explain the main causes and pathophysiological changes associated with epilepsy			
		2.2	Explain the routine clinical indications and contraindications for EEG			
		2.3	Explain the measurements that may be required pre and post investigation			
		2.4	Discuss the potential risks of using defective equipment in clinical practice and the implications of use			
		2.5	Evaluate the requirements for quality-assured investigations			
		2.6	Explain the procedure to be followed in the event of identifying an issue of quality assurance			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Be able to assist with recording of electroencephalograms (EEG) in accordance with Standard Operating Procedures	3.1	Evaluate the Standard Operating Procedure underpinning the recording of EEGs			
		3.2	Explain the factors influencing the choice of equipment for the investigation and select equipment			
		3.3	Explain the principles of measurement for the range of equipment used			
		3.4	Prepare the environment for EEG			
		3.5	Assist in preparing the equipment for the investigation			
		3.6	Assist in preparing the patient for the investigation and support senior staff during the investigation as instructed			
		3.7	Perform all procedures in accordance with the Standard Operating Procedures			
		3.8	Explain the potential special needs of patients referred for investigation and the relevant action required			
		3.9	Act on any special patient requirements, discussing with senior staff and carers if necessary			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Be able to assist following completion of the recording	4.1	Explain how to remove electrodes and clean the site with minimum discomfort to the patient			
		4.2	Remove electrodes and clean the site minimising discomfort to the patient			
		4.3	Provide information to the patient with respect to how they will be informed of results of the investigation			
		4.4	Ensure that all the required arrangements are in place for the patient/carer following completion of the electroencephalogram			
5	Be able to clean and decontaminate equipment used to record an EEG	5.1	Evaluate the protocols for cleaning and decontaminating equipment used to record an EEG			
		5.2	Decontaminate equipment and environment following protocols			
		5.3	Ensure equipment is left in a suitable condition for reuse			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(*if sampled*)