

EVOKED POTENTIAL TECHNOLOGY PRACTICE ANALYSIS

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This Document represents a delineation of the tasks (T) performed and knowledge (K) applied by evoked potential technologists in the practice of their profession. This practice takes place in the context of their unwavering commitment to patient care and safety and their adherence to the highest principles of ethical behavior.

(20%) Domain I - Pre-study Procedures

- T-1 Obtain patient health information and additional information from medical records and patient/caregivers in order to plan recording strategies and avoid adverse effects

The safe and effective performance of this task requires knowledge of:

- K-1 Elements of a patient history
- K-2 Medical terminology
- K-3 Effects of medications on patients and recordings
- K-4 Neurological Disorders (e.g. tumors, vascular disease)
- K-5 Psychiatric Disorders
- K-6 Toxic/metabolic disorders
- K-7 Head trauma
- K-8 Neuroanatomy: central and peripheral
- K-9 Evoked potential correlates of clinical entities
- K-10 Sedation practices
- K-11 HIPAA
- K-38 Allergies/sensitivities (e.g., latex, tape)
- K-42 Neuroimaging and other diagnostic procedures

- T-2 Explain the testing procedure to patient/caregivers in a manner consistent with their ability to understand in order to establish rapport and elicit cooperation.

The safe and effective performance of this task requires knowledge of:

- K-12 Components of each evoked potential modality (e.g. stimulating and recording parameters, instruments, ancillary devices)
- K-13 Age-specific criteria
- K-14 Techniques for establishing rapport
- K-15 Cognitive limitations

- T-3 Perform assessment/measurement of peripheral systems relevant to the test modalities (visual, auditory, somatosensory)

The safe and effective performance of this task requires knowledge of:

- K-1 Elements of a patient history

- K-2 Medical terminology
- K-8 Neuroanatomy: central and peripheral
- K-12 Components of each evoked potential modality (e.g. stimulating and recording parameters, instruments, ancillary devices)
- K-13 Age-specific criteria
- K-14 Techniques for establishing rapport
- K-15 Cognitive limitations
- K-16 Assessment/measurement devices (e.g. eye charts, otoscope)
- K-17 Metric system

(65%) Domain II – Performing the Evoked Potential Study

T-1 Prepare the patient

- A. Measure and mark the patient to determine the electrode sites
- B. Prepare the sites for recording and stimulating electrodes in order to reduce impedance
- C. Securely apply the recording and stimulating electrodes
- D. Check impedance to ensure electrode integrity

The safe and effective performance of this task requires knowledge of:

- K-8 Neuroanatomy: central and peripheral
- K-13 Age-specific criteria
- K-14 Techniques for establishing rapport
- K-15 Cognitive limitations
- K-17 Metric system
- K-18 Electrode placement (recording and stimulation)
- K-19 Infection control
- K-20 General anatomy
- K-21 Conditions affecting impedance
- K-22 Electrode application techniques (e.g. paste, collodion)
- K-23 MSDS/OSHA standards
- K-24 Characteristics of the differential amplifier (e.g. polarity, CMRR)
- K-25 Range of standard impedance values
- K-38 Allergies/sensitivities (e.g., latex, tape)

T-2 Perform the evoked potential study according to ACNS Guidelines while ensuring the integrity of the data and equipment

The safe and effective performance of this task requires knowledge of:

- K-1 Elements of a patient history
- K-2 Medical terminology
- K-3 Effects of medications on patients and recordings

- K-4 Neurological Disorders (e.g. tumors, vascular disease)
 - K-5 Psychiatric Disorders
 - K-6 Toxic/metabolic disorders
 - K-7 Head trauma
 - K-8 Neuroanatomy: central and peripheral
 - K-9 Evoked potential correlates to clinical entities
 - K-12 Components of each evoked potential modality (e.g. stimulating and recording parameters, instruments, ancillary devices)
 - K-13 Age-specific criteria
 - K-15 Cognitive limitations
 - K-18 Electrode placement (recording and stimulation)
 - K-21 Conditions affecting impedance
 - K-24 Characteristics of the differential amplifier (e.g. polarity, CMRR)
 - K-26 ACNS Guidelines
 - K-27 Troubleshooting techniques
 - K-28 Artifact monitoring, identification, and elimination
 - K-29 Evoked potential waveforms (e.g. obligate waveforms, generator sites)
 - K-32 Digital instrumentation concepts (e.g. S/N ratio, sampling rate, analog to digital conversion)
 - K-39 Waveform analysis (latency and amplitude)
- T-3 Modify or adjust the recording strategy and/or instrument parameters based on the technologist's evaluation of recorded data to ensure a complete and comprehensive study

The safe and effective performance of this task requires knowledge of:

- K-1 Elements of a patient history
- K-2 Medical terminology
- K-3 Effects of medications on patients and recordings
- K-4 Neurological Disorders (e.g. tumors, vascular disease)
- K-5 Psychiatric Disorders
- K-6 Toxic/metabolic disorders
- K-7 Head trauma
- K-8 Neuroanatomy: central and peripheral
- K-9 Evoked potential correlates to clinical entities
- K-12 Components of each evoked potential modality (e.g. stimulating and recording parameters, instruments, ancillary devices)
- K-13 Age-specific criteria
- K-15 Cognitive limitations
- K-18 Electrode placement (recording and stimulation)
- K-21 Conditions affecting impedance
- K-24 Characteristics of the differential amplifier (e.g. polarity, CMRR)
- K-26 ACNS Guidelines
- K-27 Troubleshooting techniques
- K-28 Artifact monitoring, identification, and elimination
- K-29 Evoked potential patterns (e.g. obligate waveforms, generator sites)

- K-30 Effects of instrument settings (e.g. filters, display gain, epoch)
- K-31 Montage modifications
- K-32 Digital instrumentation concepts (e.g. S/N ratio, sampling rate, analog to digital conversion)
- K-39 Waveform analysis (latency and amplitude)

T-4 Remove the electrodes and clean the electrode sites

The safe and effective performance of this task requires knowledge of:

- K-19 Infection control
- K-23 MSDS/OSHA standards

(10%) **Domain III – Post-Study Procedures**

T-1 Document patient factors to provide additional information for interpretation and process acquired data

The safe and effective performance of this task requires knowledge of:

- K-11 HIPAA Standards
- K-33 Significant patient factors (e.g. patient cooperation, pain tolerance, and adequate twitch)
- K-41 Data management (copy, storage, archive, etc.)

T-2 Clean and disinfect electrodes and equipment

The safe and effective performance of this task requires knowledge of:

- K-19 Infection control

T-3 Ensure that scheduled maintenance of equipment is performed

The safe and effective performance of this task requires knowledge of:

- K-26 ACNS Guidelines
- K-34 Electrical safety techniques

(5%) **Domain IV – Ethics and Professional Issues**

T-1 Conduct practice in a manner consistent with the ABRET Code of Ethics, professional standards and national regulations

The safe and effective performance of this task requires knowledge of:

- K-1 Elements of a patient history
- K-35 The ABRET Code of Ethics
- K-36 National patient safety standards

T-2 Ensure patient safety

The safe and effective performance of this task requires knowledge of:

- K-10 Sedation practices
- K-19 Infection control
- K-23 MSDS/OSHA standards
- K-34 Electrical safety techniques
- K-36 National patient safety goals
- K-38 Allergies/sensitivities (e.g. latex, tape)