

Certification in Long Term Monitoring Practice Analysis

2019

(20-22%) Domain I - Preparation

- T-1 Review monitoring orders and extract relevant patient health information from medical records and obtain additional information from patient/family/bedside 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 drugs on patients and recordings
- K-4 Neurological disorders (e.g. epilepsy, tumors, vascular disease)
- K-5 Psychiatric disorders
- K-6 Toxic/metabolic disorders
- K-7 Head trauma
- K-8 Neuroanatomy and neurophysiology
- K-9 Medical contraindications to activation procedures
- K-10 Electrographic correlates to clinical entities
- K-11 HIPAA HITECH Standards
- K-12 LTM procedures (e.g., intracranial monitoring, ICU recordings, epilepsy monitoring, functional mapping, ambulatory EEG)
- K-13 Age-specific criteria
- K-14 Infection control
- K-15 Allergies and sensitivities
- K-16 Neuroimaging procedures
- K-17 Elements of a neurological examination
- K-18 Comorbidities (e.g., cardiac, autoimmune)
- K-19 Barriers to and modifications of electrode placement
- K-20 Effects of indwelling and external devices

- T-2 Communicate the monitoring plan to patient/family/bedside caregivers in a manner consistent with their ability to understand in order to reassure the patient, establish rapport, elicit cooperation, and set expectations.

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

- K-1 Elements of a patient history
- K-9 Medical contraindications to activation procedures
- K-12 LTM procedures (e.g., intracranial monitoring, ICU recordings, epilepsy monitoring, functional mapping, ambulatory EEG)
- K-13 Age-specific criteria

- K-18 Comorbidities (e.g., cardiac, autoimmune)
- K-21 Techniques for establishing rapport
- K-22 Cognitive limitations
- K-23 Safety protocols (electrical, environmental, procedural)
- K-24 Seizure precautions and seizure first-aid
- K-25 Significant patient behaviors and clinical events (e.g., changes in level of consciousness, body movements, and episodes)

(50-54%) Domain II - Performing the Study

- T-1 Select equipment pertinent to the study to be performed.

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

- K-12 LTM procedures (e.g., intracranial monitoring, ICU recordings, epilepsy monitoring, functional mapping, ambulatory EEG)
- K-13 Age-specific criteria
- K-14 Infection control
- K-26 Electrode types

- T-2 Securely apply and/or connect electrodes.

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

- K-8 Neuroanatomy and neurophysiology
- K-13 Age-specific criteria
- K-14 Infection control
- K-19 Barriers to and modifications of electrode placement
- K-21 Techniques for establishing rapport
- K-22 Cognitive limitations
- K-23 Safety protocols (electrical, environmental, procedural)
- K-26 Electrode types
- K-27 10-20, 10-10 electrode placement system and verification
- K-28 Invasive and non-invasive electrode application or connection techniques (e.g. paste, collodion, needle electrodes, grids and strips; securing, providing strain relief)
- K-29 SDS/OSHA standards

- T-3 Select and/or create montages and recording parameters.

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

- K-1 Elements of a patient history
- K-8 Neuroanatomy and neurophysiology

- K-12 LTM procedures (e.g., intracranial monitoring, ICU recordings, epilepsy monitoring, functional mapping, ambulatory EEG)
- K-30 The differential amplifier (e.g., polarity, CMRR)
- K-31 Digital analysis (trending, spike and seizure detection, etc)
- K-32 Computer knowledge related to LTM devices and networks
- K-33 Audio-video technology
- K-34 Digital instrument concepts (e.g. reformatting, sampling rate, post acquisition review)
- K-35 ACNS Guidelines
- K-36 Montage modifications

T-4 Calibrate equipment, check impedance and troubleshoot equipment to ensure electrode integrity.

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

- K-14 Infection control
- K-20 Effects of indwelling and external devices
- K-23 Safety protocols (electrical, environmental, procedural)
- K-27 10-20, 10-10 electrode placement system and verification
- K-30 The differential amplifier (e.g., polarity, CMRR)
- K-31 Computer knowledge related to LTM devices and networks
- K-34 Digital instrument concepts (e.g. reformatting, sampling rate, post acquisition review)
- K-35 ACNS Guidelines
- K-37 Troubleshooting techniques
- K-38 Effects of instrument settings (e.g. filters, display gain, epoch)
- K-39 Impedance checks and their contraindications

T-5 Initiate recording and maintain 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 drugs on patients and recordings
- K-4 Neurological disorders (e.g. epilepsy, tumors, vascular disease)
- K-5 Psychiatric disorders
- K-6 Toxic/metabolic disorders
- K-7 Head trauma
- K-8 Neuroanatomy and neurophysiology
- K-9 Medical contraindications to activation procedures
- K-10 Neurophysiologic correlates to clinical entities
- K-11 HIPAA HITECH Standards

- K-12 LTM procedures (e.g., intracranial monitoring, ICU recordings, epilepsy monitoring, functional mapping, ambulatory EEG)
 - K-13 Age-specific criteria
 - K-14 Infection control
 - K-17 Elements of a neurological examination
 - K-18 Comorbidities (e.g., cardiac, autoimmune)
 - K-22 Cognitive limitations
 - K-27 10-20, 10-10 electrode placement system and verification
 - K-29 The differential amplifier (e.g. polarity, CMRR)
 - K-31 Digital analysis (trending, spike and seizure detection, etc)
 - K-32 Computer knowledge related to LTM devices and networks
 - K-33 Audio-video technology
 - K-34 Digital instrumentation concepts (e.g. reformatting, sampling rate, post-acquisition review)
 - K-35 ACNS Guidelines
 - K-36 Montage modifications
 - K-37 Troubleshooting techniques
 - K-38 Effects of instrument settings (e.g. filters, display gain, epoch)
 - K-39 Impedance checks and their contraindications
 - K-40 Activation procedures
 - K-41 Artifact monitoring, identification, and elimination
 - K-42 Waveform identification
 - K-43 Localization techniques
 - K-44 Seizure precautions and seizure first-aid
 - K-45 Basic cardiac rhythms and rhythms associated with EEG changes
- T-6 Modify or adjust the recording strategy and/or instrument parameters based on the assessment of 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 drugs on patients and recordings
- K-4 Neurological disorders (e.g. epilepsy, tumors, vascular disease)
- K-5 Psychiatric disorders
- K-6 Toxic/metabolic disorders
- K-7 Head trauma
- K-8 Neuroanatomy and neurophysiology
- K-9 Medical contraindications to activation procedures
- K-10 Neurophysiologic correlates to clinical entities
- K-12 LTM procedures (e.g., intracranial monitoring, ICU recordings, epilepsy monitoring, functional mapping, ambulatory EEG)
- K-13 Age-specific criteria
- K-14 Infection control

- K-17 Elements of a neurological examination
- K-22 Cognitive limitations
- K-23 Safety protocols (electrical, environmental, procedural)
- K-26 Electrode types
- K-27 10-20, 10-10 electrode placement system and verification
- K-31 Digital analysis (trending, spike and seizure detection, etc)
- K-32 Computer knowledge related to LTM devices and networks
- K-33 Audio-video technology
- K-34 Digital instrumentation concepts (e.g. reformatting, sampling rate, post-acquisition review)
- K-35 ACNS Guidelines
- K-36 Montage modifications
- K-37 Troubleshooting techniques
- K-38 Effects of instrument settings (e.g. filters, display gain, epoch)
- K-39 Impedance checks and their contraindications
- K-41 Artifact monitoring, identification, and elimination
- K-42 Waveform identification
- K-43 Localization techniques
- K-44 Seizure precautions and seizure first-aid
- K-45 Basic cardiac rhythms and rhythms associated with EEG changes
- K-46 Significant patient behaviors and clinical events (e.g., changes in level of consciousness, body movements, episodes)
- K-47 Electrographic changes requiring provider notification

(21-23%) Domain III - Post-Study Procedures

- T-1 Analyze, prepare and process patient data for physician review.

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 drugs on patients and recordings
- K-4 Neurological disorders (e.g. epilepsy, tumors, vascular disease)
- K-5 Psychiatric disorders
- K-6 Toxic/metabolic disorders
- K-7 Head trauma
- K-8 Neuroanatomy and neurophysiology
- K-10 Electrographic correlates to clinical entities
- K-11 HIPAA HITECH Standards
- K-18 Comorbidities (e.g., cardiac, autoimmune)
- K-31 Digital analysis (trending, spike and seizure detection, etc)
- K-32 Computer knowledge related to LTM devices and networks
- K-33 Audio-video technology

- K-34 Digital instrumentation concepts (e.g. reformatting, sampling rate, post-acquisition review)
- K-35 ACNS Guidelines
- K-36 Montage modifications
- K-37 Troubleshooting techniques
- K-38 Effects of instrument settings (e.g. filters, display gain, epoch)
- K-42 Waveform identification
- K-43 Localization techniques
- K-45 Basic cardiac rhythms and rhythms associated with EEG changes
- K-46 Significant patient behaviors and clinical events (e.g., changes in level of consciousness, body movements, episodes)
- K-47 Electrographic changes requiring provider notification
- K-48 Data management and storage

- T-2 Remove and clean electrode sites, assess patient scalp, and clean and disinfect electrodes and cables.

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

- K-13 Age-specific criteria
- K-14 Infection control
- K-15 Allergies and sensitivities
- K-23 Safety protocols (electrical, environmental, procedural)
- K-26 Electrode types
- K-29 SDS/OSHA standards

- T-3 Ensure that scheduled maintenance of equipment is performed.

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

- K-11 HIPAA HITECH Standards
- K-32 Computer knowledge related to LTM devices and networks
- K-35 ACNS Guidelines
- K-48 Data management and storage

(5-7%)

Domain IV - Ethics and Safety Issues

T-1 LTM technologists practice in a manner consistent with the ABRET Code of Ethics.

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

K-49 The ABRET Code of Ethics

T-2 LTM technologists safeguard patient safety in all aspects of their practice.

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

K-3 Effects of drugs on patients and recordings

K-9 Medical contraindications to activation procedures

K-11 HIPAA HITECH Standards

K-14 Infection control

K-15 Allergies and sensitivities

K-18 Comorbidities (e.g., cardiac, autoimmune)

K-22 Cognitive limitations

K-23 Safety protocols (electrical, environmental, procedural)

K-29 SDS/OSHA standards

K-44 Seizure precautions and seizure first-aid

K-46 Significant patient behaviors and clinical events (e.g., changes in level of consciousness, body movements, episodes)

K-47 Electrographic changes requiring provider notification

K-49 The ABRET Code of Ethics

K-50 Culture of safety (e.g., fall risks, restraints)