DEVELOPING A TECHNICAL READER PROGRAM

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Environment

- Teaching
- Training
- Sharing
- Educational opportunities
- Faculty/Staff relationships

Career Tracks

- Students
- LaBoure' College & Institute of Health Sciences
- Clinical Mentoring/Proctoring
- Board Prep
- Technical skills/Personality adaptations
- Technical progression

Easy Does It

- Allow Students/Techs enough time to absorb each modality
- Allow for experiences, trials and tribulations
- Allow techs transition time from technician to technologist
- Allow time for rational thought processes
- Allow each tech time for study/testing

Mentoring

- R. EEG T. with students/technicians for:
- Emergency Room STATs
- Challenging routine EEGs:
- Contact precautions – PNES – Other staff considerations
- Special Procedures:
- TILT – PET – Wada – SPECT – ECoG - ICM

Guidance

- Knowing when to push/when to back away
- Allowing techs to self-pace; but not to become lazy!
- Maintaining growth thru competency milestones
- Quality assessments
- Personal evaluations

EEG READER job description

- Advanced level R. EEG T. who has demonstrated competent levels of skill in evaluation of continuous brain wave recording and quantitative EEG; as determined by the Medical Director of Neurophysiology in conjunction with the Technical Director of Neurophysiology. The Epilepsy Program Director and EMU Medical Director are also part of the recommendation team as well as the lead Reader.

- Skills include determination of subtle seizures, changes in levels of consciousness as well as recognizing artifacts. The technologist evaluates the video recording concordantly with the EEG; as well as utilizes multiple trends of quantitative EEG. The technologist maintains communication throughout their course of scanning and monitoring each patient with the Fellow/Attending on service. Written reports and sign-outs are provided at the end of each reader technologist's shift to oncoming reader technologists/Fellows/Attendings.

- The EEG Reader annotates rhythmic/evolving discharges, seizures, state of consciousness changes, lateralized or localized abnormalities as well as breach rhythms. The Attending on service is notified of any emergent situations such as status, nonconvulsive status or ischemic changes which could indicate impending herniation/death.

- The EEG Reader keeps a daily log of each patient's findings, imaging, medications, etc which will be helpful during sign-out. The Reader may be monitoring various patients from the ICU or EMU service and is required to know who to contact for emergencies in each area.

KEY RESPONSIBILITIES:

Receives sign-out from previous Reader, scans/annotates patients for previous and current epoch, Monitors assigned patients, Calls/reports any electrographic or clinical seizure activity to the Fellow/Attending on service.

Reader will interact with nurses, nurse practioners, other technologists and will need to access the Electronic Medical Record to adequately assess state changes due to medications or on-going patient procedures. The Reader may be monitoring patients from the ICU and EMU areas and must know who to contact in each area for emergencies.

The EEG Reader will notify other readers for lunch/break absences. A technical Reader must be in the Monitoring Area at all times.

Minimum qualifications:

R. EEG T. with minimum 5 yrs experience in routine, ICU and EMU modalities; CLTM preferred with documented levels of skills evaluation as noted above.

Knowledge of all EEG recording modalities and equipment. Advanced knowledge of neurophysiology as it applies to Epilepsy and the documentation of seizures. Ongoing education through provided technical instruction and maintenance of continuing education courses is required. Attendance at one advanced technology course each year is encouraged

EEG READER COMPETENCY

Six month fellowship:

> 2 months in the Epilepsy Monitoring Unit under the direction of the EMU Attending.

> 2 months in the Intensive Care Unit under the direction of the ICU Attending.

> 1 month in the Continuous Monitoring Unit with the Lead EEG Technical Reader reviewing reporting and Medical Record procedures. Review all neurophysiology modalities of routine, ambulatory, neuropsychology, imaging, Wada, Tilt, ECoG, PET and SPECT. Review reports of same.

> 1 month elective study: Pediatrics, Sleep, Intracranial, etc

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At the end of 6 months intensive training the EEG Technical Reader:

Demonstrates a keen ability to scan/monitor critically ill and refractory epilepsy patients.

Demonstrates the ability to recognize/document convulsive and nonconvulsive seizures As well as understands electrographic changes seen with altered consciousness, coma, Sedation, brain hemorrhage, breach rhythms and acute encephalopathies.

Demonstrates the ability to discern artifact from abnormalities utilizing video and quantitative EEG.

Demonstrates the ability to maintain organization of several monitored patients and reports to the appropriate Fellow/Attending at least once/shift. Acute or life-threatening changes are documented and reported to the Fellow/Attending with acknowledgement Required.

Maintains written documentation of hourly monitoring with special attention to acutely reported changes throughout their shift. Maintains daily documentation of important clinical history, baseline EEG, medication changes, etc. This documentation assists in sign-out to the next shift EEG Reader.

Utilizes appropriate language as set forth by ACNS for quantification of seizures, localization of abnormalities and levels of coma reported to physicians.

The EEG READER with one year experience in the reader position will be eligible to be considered for Competencies in an instructor/educator position.

Upon completion of these competencies and one year as educator the Reader may also be considered for evaluation/recommendations of other technologists as EEG Readers.

Advanced LTM Analyst Job Description

This job description is designed to be used as a guideline in conjunction with the facility policies and procedures. The duties listed in this job description are performed under the direction of administrative and clinical leadership as defined by facility policies and procedures. The supervision levels in this job description guideline refer to technical supervision only.

GENERAL SUMMARY:
The Advanced LTM Analyst is an integral part of the general care team, working closely with direct care providers and multidisciplinary team members. The Advanced LTM Analyst holds a credential in Electroencephalography (R. EEG T.), certification in Long Term Monitoring (CLTM) and has a minimum of seven years experience in LTM, ICU and/or cEEG monitoring after attaining the CLTM credential.

The Advanced LTM Analyst has proven competence in Long Term Monitoring in the Epilepsy Monitoring Unit as well as continuous EEG monitoring in critical areas such as ICUs and has developed the highest skills and expertise to provide the most complex monitoring needed for brain and epilepsy surgery cases and/or patients in ICU.

Strong, well-developed communication skills are essential for this position. The Advanced LTM Analyst works under general supervision during all long term monitoring procedures, including

Advanced LTM Analyst Job Description

It is expected that the institution employing the Advanced LTM Analyst also makes available the appropriate personnel to provide required general supervision.

General supervision requires that procedures are performed under the general direction and oversight of a qualified Medical Director; however, the physician is not required to be present during the performance of the procedures.

Minimum requirements:
Holds registry in EEG (R. EEG T.)
Holds current certification in Long Term Monitoring (CLTM)
Minimum 7 years experience in LTM and/or ICU after attaining CLTM credential.
Have strong, well developed communication and critical thinking skills.
Extensive knowledge of medication and effects on EEG waveforms.
Current BLS certification required.
An associate of Bachelor's degree from accredited college or university is preferred.

Advanced LTM Analyst Job Description

Education: Completion of a Commission on Accreditation of Allied Health Program (CAAHEP) accredited Neurodiagnostic Technology Program or a Bachelor's Degree from an accredited collegeor university is preferred. It is recommended that education in sterile technique and operating room orientation per institution protocol be required.

Reports to: Administrative and clinical leadership as defined by facility policy and procedures.

Principal Duties and Responsibilities: Expected level of competency in performance of duties and responsibilities listed below:

The Advanced LTM Analyst is independent and proficient in the performance and training of all duties and responsibilities for LTM/ICU/cEEG monitoring and may act as the physician extender in collaboration with the supervising physician and other healthcare staff.

Extensive knowledge of medications and its effects on EEG waveforms and patterns is required.

Must have extensive knowledge of EEG Technology concepts and advanced techniques for LTM/ICU/cEEG including:

Advanced LTM Analyst Job Description

1. Equipment set for ICU cEEG recordings and application of scalp electrodes utilizing International 10-20 or 10-10 System of Electrode Placement using collodion or paste adhesives.
2. Activating procedures (hyperventilation, photic stimulation) as appropriate.
3. All duties and responsibilities for typical and special consideration for routine and advances EEG/ECoG (electrocorticography)
4. Extensive knowledge in neuroanesthesia and its application to neuromonitoring.
5. All aspects of the subdural grid implant preoperatively, intraoperatively and postoperatively, including but not limited to: electrode set-up, montage creation/verification, troubleshooting, hook-up and discontinuation and stimulation for cortical mapping.

Recognizes physiologic and nonphysiologic artifacts; eliminates and/or properly monitors.
Reviews, evaluates, maps and classifies impressions of ictal, interictal and paroxysmal events from EEG/Video data.

Describes examination made during admission to the monitoring units.

Responsible for daily scanning, documentation and annotation of ictal, interictal and paroxysmal events.
Writes final report and detailed desction of EEG patterns, seizure semiology, radiologic findings, mapping of ictal and interictal abnormalities; selection of representative EEG samples.

Maps interictal and ictal patterns and creates permanent file clips which represent these findings.

Details patient history from patient interviews and writes daily monitoring descriptions in the patient hospital charts.

Edits and archives EEG and video data of patients' Video/EEG monitoring.

Educates the patient and family regarding their LTM/ICU/cEEG monitoring procedure as well as interacting on a level appropriate to the patient's age and mental capacity. Documents description of the patient's events and pertinent history to include current and previous medications, family history, surgeries, skull defects, etc. into the patient's record.

Must have above average computer skills.

Utilizes universal precautions and adheres to infection control standards of the institution.

Establishes lab protocols according to American Clinical Neurophysiology Society (ACNS) guidelines and complies with the safety policies and procedures of the medical institution and as recommended by the American Epilepsy Society (AES). Knowledge and practice of department management including budgeting, scheduling and equipment purchases.

Tutors, demonstrates and mentors other team members.

Maintains continuing education requirements of ABRET for CLTM* by reviewing current literature and attending continuing education meetings and seminars. All other related duties that are consistent with patient and technical care for this level.

Physical Skills:
1. Frequent walking 25-75%
2. Sitting/Standing 67-100%
3. Reaching including above/below shoulder height 33%
4. Some kneeling/crawling 5%
5. Pulling/pushing >50 pounds 20%
6. Carrying <50 pounds 20%
7. Frequent bending/stooping/crouching/twisting and continuous repetitive movements.

Physical Exposure:
Lighting bright and dim, mechanical hazards, hazardous substances, infectious diseases, ionizing/non-ionizing radiation and toleration of temperatures 60 to 75 degrees F.

Physical Ability:
   Must be good or greater visio, hearing, manual dexterity, talking, speech, typing. Requires the ability to concentrate for long periods of time under stressful conditions and still perform properly and effectively.

   The Advances LTM Analyst job description does not supersede governmental regulation and/or state licensure laws of affect the interpretation of such laws if they so exist.

   The R. EEG T. and CLTM credentials are granted by ABRET Neurodiagnostic Credentialing and Accreditation (ABRET) www.abret.org

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