111 E. University Dr., Ste. 105–355
Denton, TX 76209
Phone/Fax: (217) 726-7980

LAB-LTM: Epilepsy Monitoring and Critical Care EEG Monitoring

ACCREDITATION APPLICATION

PART 2

Please submit the following 6 items (refer to the LTM Intro & Standards document for additional information, references, and ABRET policies):

1. **Policies and Procedures** in electronic form. Please include a Table of Contents with page numbers for the submitted policies. *Please do not include extraneous/additional information that is not listed below*. Upload the relevant portions of your policies that address the following in the order in which they are listed.
    1) Staffing policies (Job descriptions/Competencies)
    2) Infection Control
    3) Electrical Safety
    4) Patient safety
        - Role of technologists, nurses, house staff
        - Monitoring Environment
        - Out of bed policy (including bathroom safety)
    5) Quality Improvement
    6) Continuing Education Requirements
    7) Emergency Coverage
    8) HIPAA:
        - Hospital or departmental patient authorization for usage of identifiable material (audio, video) for patient care.
        - For teaching institutions, provide additional patient authorization for educational usage of identifiable audio-video material within the institution.
    9) Archiving:
        - Data retention policy (storage media, security, duration)
        - Archiving procedure (auto-editing/manual clipping, quality control) for:
            - Epilepsy Monitoring
            - Critical Care EEG
    10) Procedural Policies**:
        - Epilepsy Monitoring
        - Critical Care EEG

    **Please address the following elements in each Procedural Policy:
        - Information including patient's name, age, record ID, inpatient or outpatient date, and name of technologist
        - Patient preparation
        - Patient history
        - Electrode placement and application standards

- Electrode impedance standards
- Recording protocols including calibration, montages, activation, length of record, instrument adjustment and record annotation
- Monitoring for scalp breakdown
- Event annotation, testing, documentation, and notification standards
- Documentation of daily medication changes, changes in clinical status, other diagnostic tests, and monitoring procedures
- Monitoring Protocol: If not already included in the policies, provide a narrative addressing:
    - **Epilepsy Monitoring:** type of personnel, hours and days of coverage, backup monitoring plan during breaks, review of raw data, utilization of seizure and spike detection software, access for physicians to review after hour recordings, response to critical results, standard montages available for review.
    - **Critical Care EEG:** review and report ongoing studies, weekend and overnight coverage, utilization of seizure detection software and quantitative EEG, standards for emergency hookup and reporting, access for physicians to review after hour recordings, response to critical results.
- Use of specialized electrodes
    - Epilepsy Monitoring: For extraoperative recording and mapping
    - Critical Care EEG: Imaging compatible electrodes, needle, subdermal electrodes
- Information Technology:
    - Protocol for equipment and network dysfunction (during and after working hours). Include your contingency plan if remote monitoring is not available.

2. Recordings: Provide the official report (interictal abnormalities, ictal abnormalities) with each submitted record. *It is highly recommended that all recordings align with the Expected Technical Standards for Recordings as defined below beginning on page 4*.

<u>For Epilepsy Monitoring</u>:

- Submit 3 records (individual patients, complete 12–24-hour continuous EEG segments including annotations) should be submitted for the Epilepsy Monitoring application. All records must have clinical events, at least 2 should demonstrate clinical and/or electrographic seizures.
- An additional recording will be requested based on a date selected by the LAB-LTM Board. The random file does not need to be continuous or contain audio/video unless there are clinical events.
- Pediatric Centers: One of the three records should be a vEEGs on a patient under the age of 2 years.
- Laboratories performing extraoperative invasive recordings (including all designated level 4 NAEC centers) should submit one additional invasive recording showing clinical and electrographic seizures.
    - Clipped and archived records are allowed but the submitted record should be from a 24-hour continuous segment. An invasive map (manual, pictures, or image co-registration) and list of implanted electrodes with names and locations should be included.

For Critical Care EEG Monitoring:

- Two 12–24-hour EEG recordings (individual patients, continuous 12–24-hour EEG segments including annotations and audio/video clips of the clinical events) including electrographic seizures with or without clinical correlate.
- An additional recording will be requested based on a selected date. The random file does not need to be continuous or contain audio/video unless there are clinical events.

Important NOTES:

I. Records should be saved and encrypted according to institutional policies, with reading software and all montages typically used in the laboratory and mailed to the address below. Patient identifying information should be removed if possible. *Send two sets of data*, each on their own drive, to facilitate review.

II. Alternatively, EEG records and other application documents can be uploaded ABRET's secure, HIPAA-compliant ShareFile server or saved to a portable hard drive or USB and mailed to the address listed below. To request a private ShareFile folder, contact anna@abret.org for a link.

III. Application materials and records saved on CD, DVD, flash drive, or portable hard drives may be mailed to:

ABRET LAB – LTM
c/o Anna M. Bonner
2054 Kildaire Farm Road, #431
Cary, NC 27518

IV. A Business Associate Agreement must be completed to satisfy HIPAA requirements (use either your own institutional agreement form or request on from ABRET via anna@abret.org). Data will only be used for evaluation and deleted or returned by request at the completion of the evaluation.

3. Fees:

- Submit a check or credit card payment for $2000.00 for both Epilepsy Monitoring **and** Critical Care EEG Accreditation (or $1500 for one) payable to ABRET. NAEC Level IV Centers should add $500 for Epilepsy Monitoring plus Extraoperative Invasive Recordings.
- For centers running both Adult and Pediatric programs, if the administration and monitoring staff are the same, both may be recognized under the same application for a discounted fee of $3000.00 for both Epilepsy Monitoring and CC-EEG Programs. Add $500 for Epilepsy Monitoring plus Extraoperative Invasive Recordings.
- Satellite or related labs may be recognized under the same application for a discounted fee if the staff, medical director, and policies are the same. $2000.00 for both Epilepsy Monitoring and CC-EEG Programs for the first lab and $1000 for additional labs. Add $500 for Epilepsy Monitoring plus Extraoperative Invasive Recordings.

Contact ABRET if you require an invoice; anna@abret.org.

EXPECTED TECHNICAL STANDARDS FOR RECORDINGS

1. All recordings must be interpretable (provide ancillary material as needed, e.g., event log, electrode map and montages).
2. All submitted records must have been recorded within twelve months of the application.
3. Every record must contain a minimum of sixteen EEG electrodes for ICU and twenty-one for EMU recordings.
4. Every record must contain an EKG channel.
5. All inter-electrode impedances (not greater than 10,000 ohms) should be balanced and documented at least once a day.
6. Patient Age, Date, Tech Name, or ID.
7. Required documentation on the report: Time of Recording, Time and Description of Symptoms or Events, Behavioral State of Patient, Medication, Summary of Relevant Medical History.
8. If meaningful calibration is not available, ideally the first 30 seconds of the recording should be observed by the technologist using the primary system reference montage.
9. Scalp recording standards:

   Sensitivity of 5-10 μv/mm is required and should be adjusted as needed.

   Low frequency (high-pass) filter 1 Hz or lower (time constant of not <0.16 seconds) is required and should be adjusted as needed.

   High frequency (low-pass) filter greater than or equal to 70 Hz is required and should be adjusted as needed.
10. Intracranial recordings:

    Low frequency (high-pass) filter 0.5 Hz or lower; high frequency (high-pass) filter 70 Hz or higher.
11. The notch filter should not be defaulted to “on”.
12. Any artifacts should be corrected or monitored, as necessary.
13. For epilepsy monitoring:

    If hyperventilation is performed, effort should be noted.

    If photic stimulation is performed, stimulus frequency and effect should be documented.
14. Visual, auditory, somatosensory stimulation or noxious stimulation should be used and documented daily. Clear documentation of the patient’s maximal level of alertness must take place at some time during recording.
15. Before submitting data, verify it is viewable on a generic PC, and not just on your review station. Provide additional information/instructions as to how to use your particular reading software, and if there are any nuances to facilitate the process, such as passwords.

References: American Clinical Neurophysiology Society Guidelines (www.acns.org)

1) Minimal Technical Requirements for Performing Clinical EEG, Guideline 1
2) Recording Clinical EEG on Digital Media, Guideline 4
3) Minimal Technical Standards for Pediatric EEG, Guideline 5
4) Standards for Long Term Monitoring for Epilepsy, Guideline 12
5) Guideline on Continuous EEG Monitoring in Neonates, Guideline 13
6) Standardized Critical Care EEG Terminology, Guideline 14