Name of Policy:	**Recording Routine EEG's**
Policy Number:	3364-138-05
Department:	Neurodiagnostics
Approving Officer:	Associate VP of Patient Care Services - UTMC
Responsible Agent:	Manager, Neurodiagnostics
Scope:	The University of Toledo Medical Center Neurodiagnostics

Effective Date: **6/1/2020**
Initial Effective Date: 5/27/2014

_____ New policy proposal	_____ Minor/technical revision of existing policy
_____ Major revision of existing policy	**X** Reaffirmation of existing policy

Purpose of this procedure is to establish guidelines for performing EEG.

1. Electrodes application

    a. The electrodes should be applied to the scalp according to Procedure # 138-06, Electrode Application & Removal techniques.
    b. Electrode impedances must be measured and reduced to less than 10 Kohms. Interelectrode impedances must be within 5 Kohms.
    c. Electrodes that are not applied in the 10/20 measured placement should be noted on technologist report and recording.
    d. If one electrode is moved due to defect then the other corresponding electrode must be moved also.

2. Recording Techniques:

    a. Calibration should be run for 20 seconds according to manufacturer's recommendations.
    b. Bio-Cal should be run for 20 seconds using Fp1-02 montage.
    c. Standard EEG filters should be used.
        i. Sensitivity for adults should be set in the range of 5-10uv/mm, pediatric patients may require up to15uv/mm.
        ii. High Frequency Filter should be set at 70Hz
        iii. Low Frequency Filter should be set at 1Hz.
    d. Montage selection will include 18.1, 18.2, 18.3 and Queen square. Each montage will be run for 5 minutes. 18.1 should be run for the necessary time to complete the EEG. HV & PS will be performed during 18.1.
    e. The EEG recording should be at least 20 minutes excluding hyperventilation and photic stimulation. If sleep is not achieved early in the recording it should be ran 30-40 minutes.
    f. The recording should be clearly marked with patient's level of consciousness, including any changes.

g. Activations to be included are eyes opening/closure, alert testing, HV and PS. Do not perform HV or PS if contraindicated. Refer to procedure #138-16, Photic Stimulation during EEG recording and #138-17, Hyperventilation during EEG recording.
h. Careful observation of the patient with frequent annotations on the recording is essential particularly when unusual waveforms are observed in the recording. Annotate instructions given to patient.
i. HV and Photic stimulation will be done at end of recording. A sleep deprived patient can perform HV early in the recording. HV can also be helpful in relaxing a patient.

3. Artifact Localization:

a. All artifacts that cannot be removed will be monitored.
b. EKG will be monitoring on the last channel of every montage. Electrodes will be placed on the right and left upper chest area.
c. EMG will be monitored by placing electrodes over the most involved muscle group.
d. Electrodes can be placed to monitor eye movements.
e. The 60 Hz filter can be used to filter out electrical interference that is present. Only use filter if you cannot eliminate the source.

4. End of recording:

a. Calibration and Bio-Cal should be performing for 20 seconds
b. Electrodes should be removed according to Procedure # 138-06, Electrode Application & Removal techniques.
c. All paper work should be completed

Approved by:		**Review/Revision Date:**
/s/ Cynthia Zapotosky, BSN, RN Manager, Neurodiagnostics	Date	5/27/2014 6/1/2017 5/29/2020
/s/ Monecca Smith, MSN, RN Associate Vice President of Patient Care Services	Date	
		Next Review Date: 6/1/2023
Policies Superseded by This Policy:		