Protocol for Polysomnography

Audience: All personnel in the Sleep Disorder Center.

Purpose: A protocol for polysomnography that is consistent with AASM practice parameters assures appropriateness and consistency of testing.

Policy: Polysomnographic studies are performed on patients to diagnose a variety of sleep disorders when ordered by a sleep staff physician, or by another physician with the approval of a sleep staff physician. The use of polysomnographic testing follows AASM parameters for polysomnography.

- Ages accepted: 18 – 99 years of age
- Patient Status: Outpatient only
- Sleep Complaints Evaluated:
  - Sleep Apnea (Obstructive/ Central)
  - Organic sleep disorders
  - Parasomnias
  - Hypersomnia
- Exclusions: Any untreated psychiatric or medical condition that would affect the validity of the study or endanger the clinical staff.
- Referral Type: Physician referred (no self-referrals)

Procedure:

1. Prior to patient arrival:
   - Verify order
   - Review patient information
   - Review order for procedure to be performed
   - Review medical history
   - Prepare paperwork, equipment and rooms for procedure to be performed.
   - Input patient information into acquisition system
2. Upon patient arrival:
   - Orient patient to facility, bed room, and bathroom
   - Thoroughly and with patients concerns in mind explain all procedures that will be performed. Allow patient time to ask questions. Make every attempt to alleviate concerns a patient might be experiencing.
- Perform Sleep Study/ PAP initiation and orientation.
- Have patient change into bed time clothing (patients will be offered a hospital gown if appropriate clothing is not available). If the patient fails to comply with bedtime preparations for testing, contact the Medical Director or his designee to discuss moving forward with the scheduled test as proper acquisition of data may be compromised.
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3. Attach polysomnography monitoring electrodes and sensors to patient and plug into headbox. (See Patient Preparation and Electrode/ Sensor Application procedure)
- A few minutes prior start acquisition recording according to the manufacturer’s specifications using appropriate montage. Perform 30 second 50uv ac electrical calibration on the computer acquisition system according to the manufacturer’s specifications.
- When patient is ready for bed connect the cable linking headbox to pre-amplifier and perform Bio-calibration. (See Biocalibration Procedure)
- Upon successful completion of Biocalibration procedure proceed to lights off. Instruct the patient that the test is beginning and that if they need anything to contact the night tech at anytime and say Goodnight.
  - Input Lights Off tag in digital recording
  - Input PAP pressure tag into digital recording (if available)
  - Input Oxygen Flow Rate tag into digital recording (if available)
  - Input Position tag into recording
  - Document all tags on PSG flow sheet and Technical Impression Worksheet in the appropriate location.
- Inputting and documenting all tags and pertinent information throughout the entire polysomnogram will be done on the flow worksheet and in the digital recording at the appropriate location time. Pertinent information would include but not be limited to the following:
  - Patient complaints
  - Atypical body/limb movements
  - Atypical behaviors
  - Description of snores
  - Sleep talking
  - PAP leak
  - ECG arrhythmias
  - SaO2 data
4. An accurate tally of sleep related breathing episodes must also be kept throughout a baseline polysomnogram for determination of whether or not to initiate a split night procedure (See split night procedure).

5. Monitoring and documenting of SaO2, arousals, leak, PAP pressure changes, reasoning of PAP pressure change, O2 flowrate, and respiratory events will also be done during positive airway pressure and/or oxygen titration. (See CPAP titration, BiPAP titration, and Oxygen Administration procedures)

6. All reasonable efforts will be made to respond to patients needs and ensure patient safety throughout the entire duration of the visit.

7. Artifact recognition and elimination is a primary responsibility of Sleep Technologist throughout the recording of a polysomnogram. (See Artifact Recognition and Elimination policy)

8. Lights On:
   - A minimum of six hours of total recording time should be obtained prior to ending polysomnogram.
   - Upon awakening patient input and document Lights On tag in digital recording and document on Technical Impression Worksheet and perform biocalibrations (see biocalibrations procedure)
   - Disconnect patient from equipment (see Patient Preparation and Electrode/ Sensor Application procedure)
   - Refrain from discussing specifics about study results
   - Inform the patient that they can dress and prepare for the day
   - Perform 30 second 50uv ac electrical calibration on the computer acquisition system according to the manufacturer’s specifications.
   - Close acquisition
   - Copy study onto removable data storage if appropriate

9. Prior to the patient leaving instruct the following:
   - Fill out and leave post sleep questionnaire
   - The sleep study results will be available to the ordering physician in approximately 2 weeks, and that the patient should contact the ordering physician's office and ask how they would like to review the results of the sleep study.

10. Ensure the patient exits the facility properly.

11. Clean and put away equipment properly (see Patient Preparation and Electrode/ Sensor Application)

12. Change out linens, make bed, organize monitoring room, file patients chart appropriately.
13. If no other employees are in facility when leaving, lock all office entrance doors.

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Medical Director