



Technologists Performing Apnea Studies

Sleep apnea is one of 77 disorders of sleep recognized by the American Sleep Disorders Association. Polysomnograms, often called sleep studies, are electrical recordings of brain wave and physiological activity. One use of a polysomnogram is to help make the diagnosis of sleep apnea, then implement treatment. A primary treatment for sleep apnea is nasal continuous positive airway pressure (NCPAP). The non-invasive nasal CPAP used with the polysomnogram is significantly different from the CPAP used for intubated and ventilated patients. Since NCPAP's inception in the early 1980s, polysomnographic technologists have been using NCPAP and performing titrations of the NCPAP device in conjunction with the sleep study.

Polysomnographic technologists work under the direction of a physician who specializes in sleep medicine, usually a neurologist or pulmonologist. The protocols followed by the technologist for the utilization and titration of NCPAP are determined by the medical director of the laboratory. The polysomnographic technologist has not been, and should not be, required to hold a license as a respiratory therapist or respiratory care professional to perform these procedures during a polysomnogram.

In addition to a thorough understanding of respiratory function, any individual performing NCPAP procedures must have a command of polysomnographic technology, including neurological changes during sleep, cardiopulmonary function during sleep, polysomnographic and ancillary instrumentation, sleep stage scoring, and the effect of sleep pathology on other physiological processes.

The polysomnographic technologist has been especially trained:

- * to use specialized instruments to record electrical potentials from the brain (electroencephalogram)
- * to measure other physiologic events during sleep such as respiration, naso-oral airflow, electrocardiogram, electrooculogram, electromyogram, thoracic/abdominal effort, and pulse oximetry, and to distinguish physiologic activity from artifact
- * to employ and maintain specialized recording devices (e.g., esophageal pressure and pH monitors, NPT strain gauges, and snoring sensors)
- * to analyze the polysomnographic recording and prepare a detailed report of sleep stages; sleep architecture; and limb movements; as well as cardiac, respiratory, and other physiologic events recorded throughout the night
- * to employ the appropriate procedures to properly fit and set-up the NCPAP, and to properly titrate the system to the patient's needs
- * to recognize and appropriately respond to critical events related to sleep pathology and seizure disorders, as well as medical emergencies that arise during the study, and
- * to interact with the patient to assure patient comfort, and to provide education on sleep apnea and NCPAP, thereby enhancing patient compliance with the NCPAP therapy.

The medical director and the physicians who interpret the sleep studies have the ultimate responsibility for monitoring quality and assuring staff competency.

This position is supported by the following organizations whose members are professionals involved in sleep disorders medicine:

American Society of Electroneurodiagnostic Technologists (endorsed December, 1997)

Association of Polysomnographic Technologists (endorsed December, 1997)

American Clinical Neurophysiology Society (endorsed April, 1998)

American Academy of Neurology (endorsed July, 1998)

American Society of Electroneurodiagnostic Technologists, Inc. [ASET]

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