



POSITION PAPER: SLEEP TECHNOLOGY A DISTINCT PROFESSION

Sleep Technology is a separate and distinct multidisciplinary allied health care occupation, embracing a unique body of knowledge and methodological skills. Overnight polysomnography is a standard tool in Sleep Medicine for evaluating sleep-related pathophysiology, sleep architecture, and sleep integrity. Specifically, it is a complex evaluation used as a quantitative measurement of multiple physiological parameters during sleep, combined with expert observational reporting. Sleep technologists, technicians and trainees are the technical group specially trained to perform polysomnography and other technical evaluations used for the diagnosis and treatment of sleep/arousal disorders. They are health care professionals who work as part of a team under the general supervision of a licensed physician to assist in the education, evaluation, treatment and follow-up of sleep disorders patients of all ages. They follow accepted standards of care, including American Academy of Sleep Medicine (AASM) Clinical Practice Parameters, which are the foundation for clinical/technical decision-making, and provision of patient sensitive care. This profession employs a unique set of diagnostic tools used in the interest of establishing diagnoses and developing future therapeutic interventions.

The growth in the field has been exponential as evidenced by the number of sleep centers and educational program which have recently opened across the country. The American Association of Sleep Technologists (AAST) has acknowledged the need for a formal educational format for the profession and recognizes that polysomnographic educational programs should follow standardized curriculum and guidelines. To achieve standardization, AAST adheres to accreditation standards established by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). CAAHEP, the largest programmatic accreditor in the health sciences field, establishes, maintains and promotes appropriate standards of quality for educational programs in polysomnographic technology and provides recognition for educational programs that meet or exceed the minimum standards outlined in the CAAHEP accreditation standards. AAST is currently a sponsoring organization of the Committee on Accreditation for Polysomnographic Technology (CoA-PSG) which submits recommendations for accrediting polysomnographic programs to CAAHEP. AAST also supports the Accredited Sleep Technologist Educational Program (A-STEP), which is accredited by the American Academy of Sleep Medicine (AASM), to fulfill the immediate need of individuals entering the sleep technology field until an sufficient number of CAAHEP programs exist.

Historically, as the medical specialty emerges so does the associated allied health profession. The development of modern Sleep Medicine began to see significant

expansion with research completed in the early 1950s with the discovery of rapid eye movement (REM) sleep. Since that time, more than eighty specific disorders of sleep and arousal are identified in the AASM nosology. A polysomnographic evaluation is one of the tools used by physicians that can result in a specific diagnosis of a sleep disorder that might otherwise be missed. The most common reasons for an individual to be referred to the sleep disorders facility for evaluation include: (1) episodes of sleep at inappropriate times; (2) difficulty sleeping during scheduled sleep periods; (3) difficulty staying awake during scheduled wake periods; (4) atypical behavioral events during sleep; (5) to document the effectiveness of various therapeutic interventions utilized for the management of the documented sleep disorder.

A polysomnographic evaluation is necessary because physiological function changes during the sleeping state and many disorders are specifically induced by sleep. Likewise, a polysomnographic evaluation allows events occurring in a variety of physiological systems to be observed simultaneously. Much of its diagnostic utility depends on the ability to correlate specific changes or abnormalities of one physiological parameter with specific conditions defined by another parameter or parameters. Consequently, it is a significantly more powerful and complex tool than could be provided by individual and independent measurements of each variable. The polysomnographic evaluation requires a complete polysomnography to document (1) the underlying sleep disorder, i.e. sleep apnea or PLMs; (2) the success of treatment of sleep apnea, i.e. Nasal CPAP titration; (3) sleep stage and respiratory disturbance parameters.

Polysomnographic technologists, polysomnographic technicians and polysomnographic trainees follow standards of care which are the foundation for clinical/technical decision-making. These standards embody all the significant activities undertaken by these professionals in provision of patient care. The polysomnographic recording montage consists of the measurement of the defined parameters which include electro-oculography (EOG), electroencephalography (EEG), electromyography (EMG) of the chin and anterior tibialis muscle, snoring, electrocardiography (ECG), nasal/oral airflow, chest and abdominal breathing effort, body position, and oxygen saturation. Monitoring these parameters allows the polysomnographic technologist, polysomnographic technician and polysomnographic trainee to determine and initiate appropriate treatment modalities/interventions per facility protocol. Thus, this profession has unique diagnostic tools and therapeutic interventions which require expertise in this unique specialty of Sleep Technology.

Sleep Technology is a distinct profession that has evolved to address an array of highly prevalent sleep disorders which are profoundly influenced by the sleep - wake cycle across the spectrum of age, gender and organ systems. A substantial body of knowledge exists that specifically relates to disorders of the sleep-wake cycle. One of the indicators of this growth of knowledge and interest is seen in the dramatic increase in the number of medical journals publishing papers in the areas of sleep medicine and sleep science.

The AAST maintains its strong connection with the American Academy of Sleep Medicine and the Sleep Medicine community to collaborate in the development of educational programs for the sleep technology profession.