

Value of Respiratory Therapists in Managing Patients with Sleep Disorders

by Brian W. Carlin, MD, FCCP, FAACVPR, FAARC

The prevalence of sleep disorders in the United States is ever increasing with both insomnia and sleep-disordered breathing (SDB) affecting a significant proportion of the population. Respiratory therapists are in a unique position to assist in detecting, diagnosing, and managing patients with sleep disorders. Nearly every RT has had some interaction, either in the inpatient and/or outpatient setting, with patients who have a sleep disorder.

Hospitalized setting

The most common sleep disorder encountered in hospitalized patients is insomnia. Insomnia is a result of a variety of causes, including: new sleep environment, pain or discomfort, interruptions from hospital staff during sleeping hours, and medication effects. Recognition of the potential causes for insomnia can help the respiratory therapist, in conjunction with the nursing and physician staffs, develop a care plan to minimize their effects on sleep.

Another common sleep disorder that is noted in hospitalized patients is obstructive sleep apnea (OSA). In many patients, the OSA has yet to be diagnosed. Obstructive sleep apnea is associated with several other conditions (e.g., hypertension, chronic heart disease, stroke, atrial fibrillation, diabetes, and obesity) that are often causes for hospital admission. The respiratory therapist is often involved in the care of these patients by providing oxygen therapy, aerosolized bronchodilator therapy, chest physiotherapy, or mechanical ventilator therapy. The presence of snoring, witnessed apneas, and/or nocturnal oxygen desatura-

tion may be noted by the RT while making nighttime rounds. Should one of these findings be noted, the RT can report this to the nursing and physician staffs and then appropriate diagnostic testing can be performed.

One area within the hospital where one might not expect to find patients with an underlying sleep disorder is the post-anesthesia care unit. For patients with OSA who are undergoing anesthesia, worsening of the underlying OSA may occur and be manifest by significant oxygen desaturation either during surgery or in the immediate postoperative period. The RT may be requested to provide oxygen therapy or positive pressure therapy in these instances. For those patients suspected of having OSA but who are otherwise undiagnosed, appropriate recommendations from the respiratory therapist to the nursing and physician staff can help begin a diagnostic evaluation to determine the presence (or absence) of the illness.



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The RT is often requested to provide treatment for a hospitalized patient who has documented OSA. Such treatment includes administering positive airway pressure (PAP) through a continuous PAP or a bi-level PAP device. Respiratory therapists are uniquely positioned to provide such therapy, given their training and experience in the use of these devices and their understanding of lung mechanics. The use of the proper type of equipment and appropriate fitting of the nasal/full mask interface are skills the respiratory therapist possesses. RTs are uniquely qualified to provide this type of care.

Outpatient management

Respiratory therapists are also well positioned to manage patients with sleep disorders outside the hospital in a variety of settings (e.g., sleep laboratory, office, or home). Many therapists are involved in the performance of sleep-disorders testing. While the exact number of RTs involved in the performance of sleep-disorders testing is unknown, this number is ever increasing. Therapists are also becoming more involved in the oversight and management of sleep-disorders centers.

Recognizing that respiratory therapists are indeed becoming more involved in managing the complexities of a sleep-disorder department, some respiratory therapy education programs accredited by the Committee on Accreditation for Respiratory Care (CoARC) have added an additional polysomnography component that interested RTs may choose to take after graduation from their own associate's or bachelor's degree respiratory therapy education program. There are currently 12 such accredited add-on programs, and the number is expected to increase. This "polysom add-on" provides a more intensive focus on sleep-disorder services that builds on the courses taught in the respiratory therapy undergraduate program.

Most recently, the National Board for Respiratory Care (NBRC) has developed and made available a specialty examination specifically for respiratory therapists who want to concentrate their skills in the area of sleep-disorder testing and therapeutics. The new specialty credential, the Sleep Disorder Specialist (SDS) is a hierarchical credential available only to credentialed respiratory therapists. The SDS credential is one of four advanced credentials offered by the NBRC to respiratory therapists who wish to demonstrate their advanced skills.

A detailed content outline for the SDS examination can be found on the NBRC web site (www.nbrc.org). Respiratory therapists who hold the CRT or RRT credential and have full-time work experience in a sleep diagnostics

and testing laboratory are eligible to take the examination. CRTs will need six months of this experience post-certification and RRTs require three months. In addition, those RTs who have completed a CoARC-accredited respiratory therapist program with a sleep add-on track are eligible to take the examination.

The Board of Registered Polysomnographic Technologists (BRPT) has for many years offered an examination in sleep disorders or polysomnography. The credential awarded after passing this exam is the Registered Polysomnographic Technologist (RPSGT). The BRPT provides four different training pathways to applicants who wish to sit for the exam, including one for health care professionals (e.g., nurses and RTs) who hold their own professional credentials.

Opportunities for RTs

Many opportunities are developing for RTs in the field of sleep medicine. Currently, there are numerous RTs actively engaged in home respiratory therapy, including providing services to sleep-disorder patients. The use of PAP, mask interface fitting, oxygen therapy, and monitoring therapy compliance are just a few of the sleep-

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related services provided by respiratory therapists. With the recent Centers for Medicare and Medicaid Services (CMS) ruling extending Medicare coverage of home sleep testing for OSA patients, the home will not only be the site of follow-up care and therapy but also where sleep testing can occur.

The development of wireless technology to assist with device usage, the availability of portable sleep-testing equipment, and newer PAP devices (e.g., adaptive servo ventilation for use in patients with central sleep apnea and/or chronic heart failure) are exciting technologies for which RTs are uniquely positioned to assist with their use in the overall disease management of patients with SDB, including those with co-morbid conditions.

One of the most valuable opportunities available for RTs is the ability to provide education and care to a patient with SDB in all health care settings. Sleep-disorder centers that provide diagnostic testing as well as patient management and follow-up are becoming more widely accepted throughout the country. RTs will continue to

provide valuable care in these settings from both patient care management, patient education, and equipment management standpoints. With the provision of a continuum of care from diagnosis of the illness, to treatment of the illness, to follow-up of the treatment plan, the patient will ultimately benefit from the services of respiratory therapists.

These opportunities currently exist, with many more on the horizon, for respiratory therapists to become more involved in the comprehensive care of patients with sleep-disordered breathing. ■

RESOURCES

American Academy of Sleep Medicine (AASM): www.aasmnet.org

Board of Registered Polysomnographic Technologists (BRPT): www.brpt.org

Commission on Accreditation of Allied Health Education Programs (CAAHEP): www.caahep.org

National Board for Respiratory Care (NBRC): www.nbrc.org