

Replacement Ready

Split-Night Success

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For sleep techs, patient education and comprehensive planning are two keys to efficiently diagnosing and titrating patients in the same night.

By Cassandra Perez

A split-night study can be an efficient and cost-effective way to diagnose and treat moderate to severe obstructive sleep apnea all in the same night, potentially reducing costs and eliminating the need for an additional night of testing. This type of sleep study, though, can present a number of challenges for the sleep tech, such as obstacles related to maximizing patient comfort and performing multiple patient tests concurrently. However, with the use of technology and through proper patient education and preparation, a sleep tech can effectually execute split-night studies to achieve accurate, reliable diagnosis and treatment with limited patient distress.

Patient Preparation

For individuals who will be undergoing a sleep study, the idea of sleeping in a lab and being closely monitored may induce feelings of anxiety and distress. As such, adequately informing the patient about the split-night study, including specific procedures to be performed and equipment to be used, will help him feel more at ease. This will improve comfort during the test and enable the sleep tech to efficiently execute the study.

Deborah Kovacs-Sturdevant, RPSGT, RRT, BA, LSSMBB, director for the Board of Registered Polysomnographic Technologists and market manager at The Sleep Centers at Mercy Health in Ohio, says planning for every possibility is key.

“At our centers, we have a protocol in place,” she says. “The night of the diagnostic testing we begin by having a purposeful conversation with the patient, including mask fitting prior to going to sleep. We make sure the patient understands the process and reasons for performing a split-night study, should that be necessary.”

Giving the patient a realistic expectation of what awaits them during the overnight study can help to not only prepare the patient for testing but also improve treatment compliance in the long-term. Jeremy Andra, RPSGT, RST, product manager, sleep, at Cadwell Laboratories, says, “Technicians who tell patients that it will be the best night of their life are generally doing a disservice. When it is a bad first night and patients were told this would be the best, they may make up their minds to discontinue efforts moving forward for PAP therapy.”

Overall, providing the patient with thorough information about the testing night and any procedures may aid in the successful performance of the split-night study and lessen patient anxiety.

Multiple Patient Tests

Another challenge a sleep tech may encounter is being assigned several overnight sleep studies on multiple patients. Performing a split-night study requires attention and focus as the tech for the study must monitor the patient and administer therapy as well as make any necessary treatment adjustments. As such, having multiple patients can present a challenge in the areas of time management and patient care. Kovacs-Sturdevant says, “Since split-night testing is more time-consuming than diagnostic testing, it becomes more of a challenge if the technologist has more than two patients. Not impossible, but definitely challenging.”

A practical tip is simply to stay organized. A checklist is one method of staying on top of the evening and early morning tasks. Kovacs-Sturdevant says, “Keeping your organizational skills well-honed will help you get through those times when you may be working alone. Prioritize and keep track of all that you must accomplish that night so things don’t fall through the cracks. I like to take a few minutes to make a checklist for myself to keep me focused and organized.”

Laura Linley, RST, RPSGT, president elect of the American Association of Sleep Technologists, suggests techs organize their work spaces and patient recording rooms in order to conduct efficient studies. She says, “You need to have a setup cart/caddy of some sort so you know where your supplies are; it helps with the middle of the recording fixes that have to be done.”

For sleep techs who have colleagues available in the lab, asking for assistance can help to effectually execute multiple sleep studies. Part of being a member of a healthcare team includes relying on colleagues at challenging times, Kovacs-Sturdevant says. “Don’t be afraid to ask for help as you don’t want to compromise patient care or safety. Huddle and discuss a game plan ahead of time with your team to plan for those times when team members may need additional support,” she says.

A patient with sleep difficulties may require added attention from a tech. As such, relying on the assistance of colleagues may help in these instances. Linley says, “Some nights it does become a challenge, especially if you have a patient wanting to get up frequently to use the restroom. Direct patient care is always priority, and other duties, such as scoring, may need to be given to another staff member if patient care becomes too demanding.”

Kovacs-Sturdevant says that when a sleep tech is conducting tests on multiple patients, comprehensive planning can help preserve time. She says, “Time is the most valuable commodity we have. I believe teamwork, planning, prioritization, good work practices, and process management are the cornerstones of good time management.”

Technology

Technology can be an additional tool for sleep techs conducting split-night studies. Kovacs-Sturdevant says auto-scoring, an option offered by most sleep diagnostic vendors, may aid in performing split-night sleep studies. She says, “Some centers may use auto-scoring to analyze the first 2 hours of sleep prior to splitting the study.” In addition, some sleep software vendors offer the option of formatting a report while in acquisition mode once the tech has manually scored the raw data, according to Kovacs-Sturdevant.

In split-night studies that involve the use of a CPAP machine, auto-set is a feature that can simplify the titration process. Andra says, “PAP companies have also given pressure relief features, BiLevel, ASV, humidification, and more to give patient options for the problems they may encounter that make the titration challenging.” Andra adds that auto-set is very capable of titrating a pressure to a patient.

An additional technological aid is a polysomnography (PSG) device with the capability of conducting a running respiratory disturbance index (RDI). Linley says, “Many of the diagnostic PSG equipment has the ability to give you a running RDI. This will tally even if you don’t have time to stage the record.” She says this will give the tech a good idea if the patient is presenting with enough obstructive events to meet split-night criteria.

Guidelines for Efficiency

As efficiency is key in a split-night study, simple tips can help sleep techs successfully perform. Andra suggests trying out a few different types of CPAP mask for patients before the test starts. Andra says, “I had a hard and fast rule to try a few types of mask for a patient prior to testing to know what to switch to if they were having problems during the night. This is often the case and can eliminate variables prior to testing, [which] is always a good thing.”

Kovacs-Sturdevant says an experienced tech is best suited to perform split-night testing. She says, “Many of the cases requiring split-night testing are either complex or severe. Due to the time constraints of split-night testing, it is easy to undertitrate. And those complex cases may need other treatment options....Split-night tests require more aggressive titration in order to get to optimal PAP levels in a shorter amount of time. Less experienced technicians or technologists should perform split testing under direct supervision, which is a terrific learning opportunity.”

In order to allow sleep lab techs to focus on testing and patient care, Kovacs-Sturdevant recommends the patient:tech guideline of 2:1 for staffing. She says, “In the past at our centers, we followed the patient to tech guideline of 2:1 for scheduling those patients ordered as split-night testing. If a technologist had three patients (with no ordered splits), then there was no expectation that they would/could split anyone that night due to time constraints.”

Linley also says appropriate technologist to patient staffing ratios should be established by sleep centers for adequate patient care and to ensure patient safety. The maximum ratio of two patients to one technician/technologist is in accordance with American Academy of Sleep Medicine guidelines, but in the event that a study with a pediatric patient will be conducted with a child <3 years of age, the ratio should be 1:1, according to Linley. Also, she says, “If a patient presents to the sleep facility and requires continuous medical attention (due to underlying medical problems), the technologist to patient ratio should be 1:1.”

Sleep to Success

A split-night sleep study can have a number of advantages for both the sleep technician and the patient,

including cost savings and patient comfort. Kovacs-Sturdevant says, “Many patients are satisfied at only having to visit the sleep center for one night instead of two. We also have the opportunity to begin therapy for the patient quicker after using split-night testing.”

A sleep tech has a variety of tools and tips available to maximize efficiency when performing a split-night sleep test; however, patient education and the techs themselves may be the most essential components in a successful study. Andra says, “I would say that the most important tool is the technicians themselves. The technicians who explain, educate, and work with the patients have the highest ratios of long-term patient compliance. Helping a patient adjust to a new condition that is foreign to them is most of the battle.”

Cassandra Perez is associate editor for Sleep Review. CONTACT cperez@allied360.com.