

Once considered tangential to neurology, sleep disorders are rapidly becoming an integral part of practice. Here's how to see if this nascent field is right for you.



Waking Up to Opportunities in Sleep Medicine

By Nathan Hall, Associate Editor

Sleep disorders were ancient before Hippocrates wrote his theories in the *Corpus Hippocraticum*, and have no doubt plagued humans before the Egyptians recorded opium's value as a soporific. Yet despite being an essential part of the human condition, sleep has long remained on the fringes of medicine, overshadowed by diseases with symptoms affecting waking life. It would not be until the early 1800s that physicians started to study the relationship between sleep and the brain, and another hundred years before the disciplines of neurochemistry and electrophysiology would find a great deal of activity going on behind closed eyes.

It wasn't until the last half of the 20th century that medical science began to shed enough light on nocturnal problems to get a clear picture of their impact. Researchers from various disciplines began to realize the significance of rest to the mind and body. Sleep medicine became a field unto itself, ultimately earning the American Medical Association's recognition as a specialty in 1996.

Ten years later, sleep medicine has become an attractive area for researchers and clinicians alike. Whether they see sleep disruptions and parasomnias as comorbid conditions of an existing problem or symptoms of an underlying pathology, physicians have developed a new respect for the value of a good night's sleep. Medical administrators have also come to acknowledge the diversity of the conditions by updating the latest ICD-9 codes, adding many conditions that were previously not specified or lumped under "other."

Neurologists, in particular, have come to realize how sleep disorders are often associated with degenerative conditions,

dementia, Parkinson's, epilepsy and headache. Your expertise gives you special insights into the activities of a dreaming brain. It's no surprise that, lately, seminars focusing on the application of sleep science have become a bigger part of neurology conferences.

Like any subspecialty, sleep medicine will only be a good fit for a certain segment of neurologists who find themselves in the right circumstances. Here's how to tell if you're the type who may be interested in pursuing further training, and if so how to create a center worthy of a seal of excellence.

Specialists in a Multidisciplinary Field

The mainstream health media have raised awareness of sleep disorders to the point where more Americans are starting to realize their prevalence. According to the National Sleep Foundation's 2005 "Sleep in America" poll, 21 percent said they believed they could have a sleep problem but 75 percent said they experienced at least one symptom of a sleep problem a few nights a week or more. About one-third of respondents gave answers implying they were at risk for insomnia, restless leg syndrome and/or apnea, with two percent being at risk for all three. The REST general population study of RLS found that 1,114 of 15,391 respondents had RLS symptoms (of any frequency) within the past year; of the 416 who experienced it at least twice weekly, 337 discussed the problem with their primary care provider but only 21 were diagnosed (*Arch Intern Med* 2005;165:1286-1292).

These data offer a glimpse of how underdiagnosed these conditions are among the general population. This unmet patient care need shortchanges both the individuals who suffer

Opportunities in Sleep Medicine

from sleep disorders and the medical practices that could be providing much-needed care.

The growing awareness of sleep disorders in the last 20 years has fomented an explosion of sleep centers. Before such groups as the American Academy of Sleep Medicine created a certifiable standard of care, there was practically no oversight of how these centers were run and maintained. Before sleep fellowships were created, some centers were founded and operated by physicians from all areas of medicine with as little training as a weekend course in sleep medicine or maybe a few courses at a conference. That's all it once took to bill oneself as a "sleep specialist."

But that trend is changing, according to Kenneth Plotkin, MD, President and Medical Director of Sleep Insights in Rochester, NY. While he acknowledges that some sleep specialists who have not undergone fellowship training have become experts thanks to years of field experience, he says these days almost everyone goes through a one-year fellowship program approved by the American Board of Sleep Medicine before they begin practicing. "I'm not one to say that you have to do a fellowship to know what you're doing, but completing a fellowship shows that you have a particularly high interest in the practice of sleep medicine," he says.

Dr. Plotkin says although sleep medicine is a multidisciplinary field, neurologists have a special understanding of sleep regulation by the nervous system, and the central element of sleep diagnostic testing, the electroencephalogram. "Neurologists are more inclined to obtain extra data from the EEG, and may pay a little more attention to abnormalities and smaller clues that may indicate a problem," he says, noting how most technicians are only trained to notice differences in EEG patterns in relation to the stage of sleep.

Having gone through a fellowship program himself, Dr. Plotkin says it tends to enhance a physician's knowledge. "Getting involved in sleep medicine can expand a neurologists' approach to the general exam and scope of practice."

Explorers Wanted for Undiscovered Country

From the standpoint of a subspecialty, Dr. Plotkin says it takes a certain kind of person to get interested in sleep medicine. Those with the right mindset may find the unique challenges to be very rewarding; others may find more redundancy than novelty, and may prefer to stick to other areas in neurology.

First, Dr. Plotkin says sleep medicine is largely an "undiscovered country." New research is uncovering previously unknown aspects of these conditions and clinicians are finding new ways to treat the conditions. Hence, those who see themselves as explorers are drawn to this medical frontier.

Second, those who are interested in sleep medicine need to be comfortable in a multidisciplinary specialty, where those from

different traditions may have their own approaches to problems. "For some people, this is something that they enjoy, for but for others this makes it seem less pure and more complicated," Dr. Plotkin says, adding that personally he loves the variety of opinions that come from this aspect. "There are so many points of view and so many ways of looking at the conditions."

The research may come from all specialties but the practitioners can stay with those who have been through similar residency programs if they choose. From a clinical perspective, Dr. Plotkin says neurologists can either join with their like-minded colleagues in their own specialized centers or can bring a new subset of skills to a group comprised of different disciplines. "The plain fact is neurologists are welcomed in the field by their colleagues in other specialties," he says. "To be fair to my sleep colleagues from other specialties, there are many good sleep specialists cut from many cloths."

Third, this sort of clinical work requires a certain personality type. Dr. Plotkin says some neurologists prefer to be on the acute side of care, such as the stroke specialists. A sleep specialist may not intervene as often in immediate life and death decisions, but "they solve puzzles for each particular patient, providing something that makes a huge difference in people's lives," he says.

A Place for Patients to Lay Their Heads

After completing a fellowship in sleep, the newly minted specialist has two options: you can either start your own sleep center or join an existing one.

If a practitioner is interested in starting his or her own sleep center, he or she needs to approach it with the planning and gumption that would go into founding any other business. And as is the rule for starting many ventures, the three most important things to consider are location, location and location.

Glenn Roldan, Vice-President and Course Director of the California Institute of Sleep Medicine in Sunnyvale, CA, says there are a few indicators a physician can take note of to tell if there is a need for a sleep center in his or her area. One of these would be no other sleep centers within a 25-mile radius or greater, because referring physicians don't want to send their patients far away for sleep studies. If there are centers in the area, then a long time-frame (more than two weeks) to schedule a patient for a sleep study and/or a wait of more than two weeks to obtain results from a sleep study could mean there's room for a new business to pick up some slack.

"A private practitioner should not have to worry about determining if there are enough patients in the area to undergo sleep studies," Mr. Roldan says. "At least 10 percent of the population, and this is a conservative figure, has a sleep disorder or may experience a sleep disorder in their lifetime, be it difficulty initiating and/or maintaining sleep, excessive daytime sleepiness, snoring associated with sleep apnea or another condition."

How to Earn AASM Certification

The American Academy of Sleep Medicine set these standards for accreditation of sleep centers:

PERSONNEL

Standard 1. Each center must have as Medical Director a physician with a license valid in the state of the center and in all states in which patients are seen. The Medical Director is responsible for all medical personnel within the center.

Standard 2. Each center must have a Diplomate of the American Board of Sleep Medicine (DABSM) on staff, or an individual who has been accepted by the ABSM to sit for its certification exam. The DABSM must perform duties on site.

Standard 3. The center must maintain a staff of appropriately trained and supervised technicians.

PATIENT ACCEPTANCE

Standard 4. Patient acceptance policies and procedures sufficient to support safe and effective patient evaluation must be in place.

FACILITY & EQUIPMENT

Standard 5. The program must maintain an identity as a unified center, including separate phone lines, stationery and signage that identify the program as a "sleep center."

Standard 6. Patient testing rooms must afford comfort, privacy, safety, and accessibility and allow for effective data acquisition.

Standard 7. The control room must be adequate in size, design, location and comfort to allow for effective function and comfort of technologists.

Standard 8. The center must maintain adequate and safe equipment for sleep studies.

POLICIES & PROCEDURES

Standard 9. The center must maintain a written or electronic *Policy and Procedures Manual* which is easily accessible from the control room and which contains all appropriate policies, procedures and clinical standards.

DATA ACQUISITION

Standard 10. The comprehensive polysomnogram must record sufficient data for sleep stage scoring and evaluation of major sleep disorders. Parameters must include: EEG, EOG, EMG, breathing, leg movements, oxygen saturation and EKG.

Standard 11. Technician logs, including body position and patient activity, must be part of the polysomnographic record.

Standard 12. Multiple sleep latency tests must be performed with AASM Practice Parameters.

Standard 13. The center must have written protocols for: the titration of CPAP, if used, titration of PAP during the course of diagnostic polysomnogram; use of bi-level positive airway pressure; and, if used, actigraphy, maintenance of wakefulness testing, temperature monitoring or other related monitoring procedures.

In addition to these rules, all accredited sleep centers are required to follow the "Code of Medical Ethics" of the American Medical Association. For more information on these requirements, including a full checklist of each standard, go to www.aasm.org.

Whether the local market will be crowded or offer room for a new center may depend on how metropolitan it is, according to Mr. Roldan. "Geographically, in major cities, the market can be competitive," he says. "In the suburbs or rural areas, there is a need for sleep centers as most patients don't want to travel far for their medical needs."

Although it is possible for a practicing neurologist to conduct sleep studies in a room of their existing practice, Mr. Roldan says this is easier said than done. The physician should allocate two bedrooms and one technical room because it is

always feasible for a technician to perform two studies in one night rather than one-on-one. The ideal size for bedrooms is 12'x10' (120 sq. ft) and the technical control room should be 10'x10' (100 sq. ft.) with 25 square feet of computer space, and the location would have to be quiet from any external noises with the rooms kept at a comfortable, even temperature and constantly cleaned. Therefore, he usually recommends creating an independent location devoted to sleep studies.

The price of the equipment and office furnishings necessary for setting up the lab, Mr. Roldan says, depends on the

Eye-Opening Numbers

Neurologists are known to specialize in a number of relatively uncommon medical conditions, but in sleep medicine the typical conditions are far more prevalent. Here are a few key statistics from the National Institutes of Health:

- At least 40 million Americans suffer from chronic, long-term sleeping disorders, and an additional 20 million experience occasional sleep problems.
- Almost everyone suffers from short-term insomnia from stress, jet lag, diet or other factors, but about 60 million Americans suffer from insomnia frequently or for extended periods of time.
- An estimated 18 million Americans have sleep apnea, but very few have been diagnosed.
- As many as 12 million Americans have restless leg syndrome, and although symptoms can occur in any age the severe form is most common in the elderly.
- Approximately 250,000 Americans suffer from narcolepsy, making it almost as widespread as multiple sclerosis.

manufacturer and how in-depth a physician wants to get on a particular system. “The range can vary from the mid-teens to mid-twenty thousand range,” he says. The location of the lab can also have an impact on the costs, as Mr. Roldan notes the office space in California is much more expensive than it would be in a less populated state such as Georgia. The staffers may also demand higher salaries depending on the cost of living of each particular geographic area. “Of all the expenses incurred in a sleep lab, probably the most expensive cost is the office staff,” he says.

While the fellowship training taught him a great deal about sleep medicine, Dr. Plotkin says he was not ready to open a sleep laboratory immediately after leaving his fellowship. As is often the case in medical training, he says the experience taught him a great deal about the conditions but very little about the skills needed to run a business. Nevertheless, he now runs his own center. “Over time, a physician can pick up the needed elements to run a business like this.”

After some time spent building up a patient base and learning the nuances of the business, the physician will usually be ready to start his or her own venture. Those who may lack the resources to start their own center or would rather focus on patients instead of worrying about a business may be better served in joining an existing center, Dr. Plotkin says. To find

out how well a sleep center is run, he suggests spending some time there, such as part of an evening with the technical staff to see how they conduct studies, and some time during the day to see how the office is handled. “Spending an afternoon and an evening there is well worth the invested time,” he says, adding it’s also good to talk to the other clinicians to get a feel for the quality they strive for as a standard of care.

From a big-picture perspective, Dr. Plotkin says the physician should consider if they’re interested in joining a diversified group of multispecialty practitioners or a neurology-specific sleep center. He also suggests looking for accreditation as a sign that the center is committed to providing good care.

The Dream for Sleep Centers

The American Association of Sleep Medicine certification program is considered the gold standard for sleep care. Although prestigious enough to earn the attention of clinicians and respect from some managed care providers, perhaps even influencing the reimbursement for services rendered, it is not required to run a sleep center. Nevertheless, Dr. Plotkin says, “it takes time, organization, and energy to qualify; any center worth its salt should strive for certification.”

Both Dr. Plotkin and Mr. Roldan say AASM certification can help a center stand out from the others in the area. More practitioners are starting to pay attention to the need to differentiate themselves as a place run by physicians as opposed to a facility maintained by technicians without formal medical training in an increasingly crowded market.

“The AASM accreditation process isn’t as difficult as it seems,” Mr. Roldan says. “They have a checklist that a physician/sleep center would need to go by. Once they have met all the criteria, they can submit for accreditation consideration.” (See page 17 for a summary of the requirements.)

Big Day Coming?

The growing acceptance of sleep medicine may seem like the dawn over a new horizon to some physicians. Those who would welcome the prospect of using their specific understanding of neurology to work with specialists from other disciplines while exploring an emerging science may want to consider looking at their local market’s need for sleep centers. If there is an underserved patient population and room for one more sleep center, it may be time to look for sleep fellowships from nearby academic medical centers.

Those who are happy with general neurology or their current subspecialty may still want to take note of the local sleep market. It will likely become crucial to find a good facility to direct patients to when they start realizing that they need not suffer their rest-related disorders any longer. You don’t want to be caught napping when patients ask for a referral. **PN**