Sleep-Disordered Breathing in Michigan: A Practice Pattern Survey


ABSTRACT

Objectives: This survey sought to determine whether self-professed sleep specialists in the State of Michigan show practice variations in the diagnosis and management of sleep-disordered breathing (SDB), and whether such variations occur between pulmonologists and neurologists. Methods: Questionnaires on practice volume and patterns during the prior 12 months were mailed to physician members of the Michigan Sleep Disorders Association (n = 119); 67 were completed and returned. Results: Respondents reported that they personally saw a median of 8 new patients each week for suspected SDB; estimates were that 86% of these patients were eventually confirmed to have SDB. Most patients (82%) had laboratory-based polysomnography after an initial clinic evaluation, and most (69%) of those treated for SDB received continuous positive airway pressure. However, practice patterns differed substantially among respondents, even when the analysis was limited to the 42 who reported board certification by the American Board of Sleep Medicine. For example, among all surveyed practices the likelihood that suspected SDB would be evaluated with a split-night diagnostic and treatment polysomnogram varied from 0 to 90%. The likelihood of SDB treatment with bilevel positive airway pressure varied from 0 to 50%, with automatically titrating devices from 0 to 100%, with surgery from 0 to 100% (0 to 50% among certified practitioners), and with oral appliances from 0 to 20%. The practice patterns of pulmonologists and neurologists did not differ significantly. Conclusion: Approaches to SDB vary widely in Michigan, though not according to clinician background in pulmo-
Cost-effectiveness analyses help to motivate decisions about healthcare expenditures, and in particular could influence the direction that sleep medicine takes in its comparatively early stages of development. However, cost-effectiveness analyses in sleep medicine have been rare. All such analyses must compare one strategy or procedure—usually a newly proposed intervention—to another method, most often standard practice. Lack of knowledge about current practices constitutes part of the reason why more cost-effectiveness analyses have not been performed. A study by Richard Coleman and colleagues in the early 1980’s, and a follow-up study more recently, showed that sleep-disordered breathing (SDB) is by far the most common clinical diagnosis and reason for testing at large academic sleep centers. However, these studies did not examine clinicians’ practice patterns with respect to SDB, or the experience of their patients.

In countries that do not have nationalized healthcare systems and records, practice pattern studies still can be accomplished conveniently within specific healthcare systems, health maintenance organizations, or third-party payors. However, more generalizable, regional data are more difficult to obtain. We surveyed physicians who view themselves as sleep specialists, as suggested by membership in the Michigan Sleep Disorders Association, about their experience, practices, diagnostic procedures, and management strategies with respect to SDB. The aim of this descriptive study was to provide estimates of practice patterns with respect to SDB. Such data are illuminating by themselves, and they also facilitate development of cost-effectiveness models.

**METHODS**

**Subjects**

Names and addresses were obtained for all Michigan Sleep Disorders Association members who are physicians. The Michigan Sleep Disorders Association is believed to have been the first state-based organization of its kind at its founding in 1980. The organization sponsors a well-attended annual meeting, a smaller annual research meeting, a newsletter, and a Web site. Although membership in this organization is not required to practice sleep medicine in Michigan, membership is comparatively inexpensive ($50 per year) and the large majority of clinicians with active sleep medicine practices are believed to belong to this organization. The number of clinician members compares closely to the Michigan membership roster listed in the American Academy of Sleep Medicine Directory, 2002–2003 (n = 159, including several technicians, research associates, or other nonclinicians). On August 17, 2001, Internal Review Board-approved cover letters and questionnaires were mailed to all 119 physician members of the Michigan Sleep Disorders Association. A lengthy consent that could have reduced response rates was avoided by keeping this IRB-approved survey anonymous. Respondents were asked to mail a coded postcard separately, at the same time that they mailed the survey, to let investigators know their questionnaire had been completed. On September 14, 2001, nonresponders were mailed a follow-up request to complete the survey. All responses included in this report were received by the end of 2001.

**KEYWORDS:** Sleep apnea syndromes, physician’s practice patterns, polysomnography, continuous positive airway pressure