



## CON: Specific Pediatric Accreditation Is Not Critical for Integrated Pediatric and Adult Sleep Medicine Programs

David Gozal, M.D.

*Department of Pediatrics, Section of Pediatric Sleep Medicine, The Biological Sciences Division, Pritzker School of Medicine, The University of Chicago, Chicago, IL*

There is no doubt that the ability to summon extraordinary eloquence during a debate provides a compelling tendency for endorsement of any reasonably valid argument in which opposite and contradictory opinions on certain details are discussed. Furthermore, we routinely tend to side with the “underdog,” and will more willingly support minority opinions, especially when such opinions deal with a sector of our population for whom we are genetically and evolutionarily conditioned to protect, namely our children. In their rendering of an opinion on integrated sleep centers, Owens et al. demonstrate in a superlative manner the persuasive nature of such skills and circumstances. However, in spite of an almost relentless inner drive to cede to my esteemed colleagues, I will try to delineate some of the drawbacks of the proposal they so eloquently formulate.

### Access to Care

Under the auspices of the most recent consensus focused on indications for PSG in children with respiratory symptoms,<sup>1</sup> and similar guidelines originating from different countries and medical disciplines over the last decade,<sup>2-9</sup> and with the ever increasing awareness among pediatricians and primary care physicians on the importance of healthy sleep in children’s well-being, it is indeed predictable that a progressive increase in the utilization of sleep services will occur in the pediatric age range. The major problems with this proposition are that access to pediatric sleep specialists is quite limited in the US, and even further restricted in other countries around the world. As such, the access to care will be further compromised particularly considering that only a very small number of pediatricians are formally trained in sleep medicine on a yearly basis. Therefore, although relying on a different perspective of medical practice, I will wholeheartedly agree with Owens et al. that demand will definitively increase for pediatric clinical services. What remains unclear is whether such services will require in-laboratory PSG, or whether similar to the current trends in adult sleep medicine, we will witness a progressive transition to alternative diagnostic methods relying on polygraphic respiratory recordings at home<sup>10</sup> or on innovative urine biomarkers.<sup>11</sup> Such uncertainties are likely to dampen any “business-oriented” initiatives to expand the current capacity of sleep laboratories. However, the increased demand in a setting of declining activity around adult patients will, at least temporarily, shift the current trends to increase the current proportion of children being evaluated in

sleep medicine centers around the country. Under such circumstances, there is no doubt that the accrediting bodies will have to incorporate improved methods for ascertaining the adequacy of resources and capabilities embedded in the accreditation process of sleep laboratories and centers that evaluate and manage children. In other words, the accreditation process is not in need of change, but rather the specific content as it relates to children will need to gain more specific attention during the accreditation and reporting process.

### Medical Home Concept

The conceptual framework of patient centered care and medical home is not novel but has received more recent attention in the context of the emerging radial changes in the delivery of healthcare in our country.<sup>12</sup> As part of this trend, the AASM has indeed fostered a vibrant discussion process that is still in its initial operational implementation stages.<sup>13,14</sup> Under such conceptual framework, there is clearly a need for revising the current accreditation standards and implementing a new revised set of well-validated and standardized definitions and metrics for assessing health outcomes, in the context of the full spectrum of sleep disorders. There is no doubt that lack of inclusion of any specific constituent into the overall operational set of guidelines may have detrimental effects and result in substandard care for patients. However, the concepts enunciated are not exclusive of children or geriatric patients or any other specific patient group, and therefore, we need to operate as collaboratively as possible to ascertain that the common goals are fulfilled and that specific differences pertaining to any special group of patients or diseases are addressed. Efforts in this direction have clearly been implemented in many of the practice guidelines documents emanating from the AASM, whereby pediatric experts have consistently been included and have contributed to the content and specific items prescribed in such guidelines.

### The Multidisciplinary Aspects of Sleep Medicine

The most attractive characteristic of our field of sleep medicine is the fact that we operate in a multidisciplinary contextual setting, whereby the classic specialties are incorporated into the overarching umbrella of sleep. A potential consequence of requiring specific and distinctly separate sets of operational guidelines and accreditation standards in the context of pediatric patients could create a domino effect, whereby all the “silos”

subspecialties represented in AASM may see as pertinent the need to segregate and formulate separate documents and rules. In other words, do we need then specific sub-accreditations for a sleep program or center, if patients with neurological, psychiatric, psychological, cardiovascular, pulmonary, etc... diseases are evaluated and treated in such center? I firmly believe that the AASM, as the leading organization responsible for establishing professional guidelines in sleep medicine, should merge all of these silos and provide a set of standard guidelines for accreditation that are operationally sound, protect the welfare of the patient, promote optimized outcomes, and overall improve health. If any specific unpredictable adverse consequences result from such efforts in the context of the continuous self-critical evaluation and appraisal process that is implemented as part of such efforts, then, and only then, specific corrections will be needed.

Before I address each of the 7 arguments enunciated as being detrimental to the outcomes of pediatric patients, I will have to point out that none of such arguments relies on objective data that have been critically assessed, and as such, they are more akin to a “gut feeling” rather than being based on specific facts and figures.

### **(1) Inappropriate or substandard pediatric sleep testing drives up healthcare costs.**

Owens et al. contend that if pediatric sleep studies are inappropriately conducted, interpreted, or scored by sleep medicine providers inadequately trained in pediatrics, then excessive healthcare costs will result, and that therefore the implementation of specialized pediatric accreditation standards would substantially reduce this risk. The problem with this statement is that there is absolutely no evidence to support this contention. For example, ~90% of all children with habitual snoring are currently undergoing evaluation and treatment by Ear Nose and Throat specialists in the absence of any evaluation by Sleep Medicine physicians.<sup>15</sup> However, there are no studies documenting that the outcomes of such pediatric patients are worse than similar patients being evaluated in pediatric sleep centers. Furthermore, there is no evidence that habitually snoring children referred by pediatricians to either sleep centers or ENT practices present with significant differences in the prevalence of PSG-diagnosed sleep apnea.<sup>16</sup> In addition, I could contend that implementation of PSG in children in the US alone to establish the definitive diagnosis of OSA among the estimated 500,000 habitually snoring children undergoing adenotonsillectomy each year, would not only be unfeasible when considering the current number of sleep centers that are proficient in pediatric sleep issues, but would also undoubtedly and excessively delay access to treatment, potentially aggravating end-organ morbidity, and furthermore increasing the already elevated healthcare costs among these children.<sup>17-19</sup> One could further propose that increased access to the existing large network of accredited adult sleep laboratories in the US could markedly reduce the current resistance to include a PSG as part of the diagnostic process, and thus overall favorably impact the outcomes in the pediatric population.

### **(2) Conducting, scoring, and interpreting sleep studies in children require specialized training of both health care providers and technologists.**

There is no doubt that the statements regarding the difficulties and challenges regarding delivery of optimal sleep medicine ser-

vices to pediatric populations are correct and point out the formidable barriers that will need to be overcome. Most, if not all of the arguments advanced regarding the training experience acquired during fellowship and the scarcity of comprehensive pediatric sleep centers available as well as the high degree of variability in experience by physicians and technologists encompass likely contributions to the less than optimal standard performances by most sleep centers that are not extensively engaged in pediatrics. However, requesting specific accreditation standards that can not be pragmatically implemented due to the lack of appropriate training opportunities will not change the current reality. Instead, a more realistic evolutionary process that implements a set of desirable performance milestones and quality control supervision by the AASM might provide a more tangible solution and resolve some of the more acute problems in this area.

### **(3) Family-centered care is a mandatory component of pediatric sleep diagnostic and treatment services.**

In this area, reason and extensive experience in pediatrics clearly mandate the implementation of requirements to enable adequate facilities and accommodations to the family unit during diagnostic and treatment phases of children. Although the current prescriptive requirements for accreditation do not mandate a detailed set of guidelines, there is no doubt that most of these requirements should be easily delineated and could become rapidly enforceable in sleep programs aiming to expand their pediatric scope of clinical activities.

### **(4 and 5) Appropriate triaging of pediatric patients is fundamental to successful integration of pediatric sleep services. Comprehensive clinical care, including follow-up care for pediatric sleep patients undergoing diagnostic procedures, and evaluation and management of children with the full range of sleep disorders is a necessary component of an integrated sleep medicine program.**

The premise that accredited adult sleep labs would be allowed to restrict the scope of clinical services to exclusively testing for sleep disordered breathing is not a viable proposition. However, we could contemplate the option that many of the screening and post-test functions could be assumed by physicians with expertise in pediatrics, whereby the lab unit performing the test would be responsible for providing a “dry assessment and interpretation” of the test, rather than integrating the test results into the conglomerate of complexities associated with each individual patient. This approach alone could clearly reduce the substantial bottleneck and waiting periods associated with pediatric diagnostic and treatment services. One could further argue that the training and certification of sleep physicians has clearly endorsed the view of *sleep as a continuum from prematurity to geriatrics*, and that therefore we should believe that *medicine is not practiced by professional associations, but is rather practiced by individual physicians*, such that the burden of responsibility and accountability falls on the sleep specialists to deliver the best possible care and ascertain optimal outcomes. Thus, one could easily view the evolution and emergence of hierarchically structure sleep programs, in which the degree of complexity in both the diagnosis and management would enable provision of different levels of service.

Of course, such service structure may not be ideal and will likely evolve over time. However, improved timely access to diagnosis is the first step of the process, and one that, as discussed earlier, is markedly deficient in pediatric settings.

### (6) Adequate evaluation, treatment, and follow-up of pediatric sleep disorders, including sleep disordered breathing, may not be available in the community.

It is not only evident that both primary care pediatricians and other specialists are deficiently trained in the diagnosis and management of children with sleep disorders,<sup>20</sup> but it is further disappointing that the vast majority of such physicians do not adhere to the existing professional guidelines.<sup>21,22</sup> Therefore, before we blame those who wish to help children in “adult-oriented” facilities, we first need to fix things at home.<sup>23</sup>

### (7) Ultimately, failure to include special considerations for the pediatric population in planning for the future of sleep medicine would represent the loss of a major opportunity to improve the health of children and advance the field.

Mandating accreditation standards for the delivery of sleep services for children by the AASM will not solve the extreme shortages in well-trained pediatric sleep specialists, and the unique disparities to access to care that are pervasively engrained in our society and healthcare systems.

The future of pediatric sleep medicine is dependent on those of us who will assume the leadership roles of promoting Sleep Medicine to our students, our colleagues, and our own pediatric professional organizations, through stringent demonstration of evidence and progress across the translational planes. If we believe that children are our future, then it is on us to make sure that those of us who have chosen the path of caring for children will build and prepare their future as best as we can. In this regard, I am confident that the AASM will prove to be a valuable and worthy partner in such efforts.

## CITATION

Gozal D. Con: Specific pediatric accreditation is not critical for integrated pediatric and adult sleep medicine programs. *J Clin Sleep Med* 2012;8(5):477-479.

## REFERENCES

1. Wise MS, Nichols CD, Grigg-Damberger MM, et al. Executive Summary of respiratory indications for polysomnography in children: an evidence-based review. *Sleep* 2011;34:389-98.
2. Section on Pediatric Pulmonology, Subcommittee on Obstructive Sleep Apnea Syndrome, American Academy of Pediatrics. Clinical practice guideline: diagnosis and management of childhood obstructive sleep apnea syndrome. *Pediatrics* 2002;109:704-12.
3. Villa Asensi JR, Martínez Carrasco C, Pérez Pérez G, et al; Sociedad Española de neumología pediátrica. [Guidelines for the diagnosis and management of sleep apnea-hypopnea syndrome in children]. *An Pediatr (Barc)* 2006;65:364-376. Spanish.
4. Editorial Board of Chinese Journal of Otorhinolaryngology Head-and Neck Surgery; Chinese Otorhinolaryngology of Chinese Medical Association. [Draft of guidelines for the diagnosis and treatment of pediatric sleep apnea hypopnea syndrome (Urumqi)]. *Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi* 2007;42:83-84. Chinese.
5. Robb PJ, Bew S, Kubba H, et al. Tonsillectomy and adenoidectomy in children with sleep-related breathing disorders: consensus statement of a UK multidisciplinary working party. *Ann R Coll Surg Engl* 2009;91:371-3.

6. Tsara V, Amfilochiou A, Papagrigorakis JM, et al. Guidelines for diagnosing and treating sleep related breathing disorders in adults and children (Part 3: obstructive sleep apnea in children, diagnosis and treatment). *Hippokratia* 2010;14:57-62.
7. Alonso-Álvarez ML, Canet T, Cubell-Alarco M, et al. Documento de consenso del síndrome de apneas-hipopneas durante el sueño en niños. *Arch Bronconeumol* 2011;47(Supl 5):2-18.
8. Aurora RN, Zak RS, Karipott A, et al; American Academy of Sleep Medicine. Practice parameters for the respiratory indications for polysomnography in children. *Sleep* 2011;34:379-88.
9. Roland PS, Rosenfeld RM, Brooks LJ, et al; American Academy of Otolaryngology—Head and Neck Surgery Foundation. Clinical practice guideline: Polysomnography for sleep-disordered breathing prior to tonsillectomy in children. *Otolaryngol Head Neck Surg* 2011;145(1 Suppl):S1-15.
10. Alonso Alvarez ML, Terán Santos J, Cordero Guevara JA, et al. [Reliability of respiratory polygraphy for the diagnosis of sleep apnea-hypopnea syndrome in children]. *Arch Bronconeumol* 2008;44:318-23.
11. Gozal D, Jortani S, Snow AB, et al. Two-dimensional differential in-gel electrophoresis proteomic approaches reveal urine candidate biomarkers in pediatric obstructive sleep apnea. *Am J Respir Crit Care Med* 2009;180:1253-61.
12. Carrier E, Gourevitch MN, Shah NR. Medical homes: challenges in translating theory into practice. *Med Care* 2009;47:714-22.
13. Strollo PJ Jr. Embracing change, responding to challenge, and looking toward the future. *J Clin Sleep Med* 2010;6:312-3.
14. Strollo PJ Jr, Badr MS, Coppola MP, Fleishman SA, Jacobowitz O, Kushida CA. AASM Task Force Report: The future of sleep medicine. *Sleep* 2011;34:1613-9.
15. Weatherly RA, Mai EF, Ruzicka DL, Chervin RD. Identification and evaluation of obstructive sleep apnea prior to adenotonsillectomy in children: a survey of practice patterns. *Sleep Med* 2003;4:297-307.
16. Bhattacharjee R, Dayyat E, Kheirandish-Gozal L, Sans Capdevila O, Gozal D. Nocturnal polysomnographic characteristics of habitually snoring children initially referred to pediatric ENT or sleep clinics. *Sleep Med* 2009;10:1031-4.
17. Reuveni H, Simon T, Tal A, Elhayany A, Tarasiuk A. Health care services utilization in children with obstructive sleep apnea syndrome. *Pediatrics* 2002;110:68-72.
18. Tarasiuk A, Simon T, Tal A, Reuveni H. Adenotonsillectomy in children with obstructive sleep apnea syndrome reduces health care utilization. *Pediatrics* 2004;113:351-6.
19. Tarasiuk A, Greenberg-Dotan S, Simon-Tuval T, et al. Elevated morbidity and health care use in children with obstructive sleep apnea syndrome. *Am J Respir Crit Care Med* 2007;175:55-61.
20. Owens JA. The practice of pediatric sleep medicine: results of a community survey. *Pediatrics* 2001;108:E51.
21. Chervin RD, Archbold KH, Panahi P, Pituch KJ. Sleep problems seldom addressed at two general pediatric clinics. *Pediatrics* 2001;107:1375-80.
22. Erichsen D, Godoy C, Grånse F, Axelsson J, Rubin D, Gozal D. Screening for sleep disorders in pediatric primary care: Are we there yet? *Clin Pediatr* 2012; (in press).
23. Owens JA, Mindell JA. Pediatric sleep medicine: priorities for research, patient care, policy and education. *J Clin Sleep Med* 2006;2:77-88.

## ACKNOWLEDGMENTS

Dr. Gozal is supported by National Institutes of Health grants RO1 HL-065270, RO1 HL-086662, and 5P50HL107160.

## SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication May, 2012

Submitted in final revised form May, 2012

Accepted for publication May, 2012

Address correspondence to: David Gozal, M.D., Department of Pediatrics, Comer Children's Hospital, The University of Chicago, 5721 S. Maryland Avenue, Chicago, IL 60637. Tel: (773) 702-6205; Fax: (773) 702-4523; E-mail: dgozal@peds.bsd.uchicago.edu or dgozal@uchicago.edu

## DISCLOSURE STATEMENT

This was not an industry supported study. Dr. Gozal has indicated no financial conflicts of interest.