New Research

JCSM
Journal of Clinical Sleep Medicine

http://dx.doi.org/10.5664/jcsm.3090

COMMENTARY

Bears and Bubbles: Prognosticating the Future of Sleep Technologists

Commentary on Wells and Vaughn. Sleep technologists educational needs assessment: a survey of polysomnography, electroneurodiagnostic technology, and respiratory therapy education program directors. J Clin Sleep Med 2013;9:1081-1086.

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Much as the polar bear represents a sentinel for the health of the arctic and is currently struggling with climate change,[1] clinical sleep medicine appears to be entering a similar phase of adjusting to a new medical environment. Clinical sleep medicine has been a growth industry for at least the last 15 years: Laboratories opened, technologists were hired, and patients were tested and treated; this cycle was repeated throughout the country. The number of American Academy of Sleep Medicine-accredited sleep centers increased from approximately 500 in the year 2000 to more than 2000 in the year 2010. Medicare spending on polysomnography alone grew 4-fold in the years from 2001 to 2009, not including spending on clinical visits and durable medical equipment related to sleep medicine.[2] However, as recently described by Drs. Epstein and Quan in this journal's editorial section,[3] the economic growth wave of sleep medicine may be coming to an end. A portion of the financial slowdown is related to the approval by the Center for Medicare and Medicaid Services (CMS) of out of center sleep testing as a replacement for in-laboratory polysomnography; home-based tests typically generate significantly less revenue than their in-laboratory counterpart.[2]

Wells and Vaughn's article[4] discusses polling results from leaders of sleep technologist training programs. Approximately 25% of the program directors responded to the authors' twenty-question poll in this study. The response of the polled group included the following statement: "74% of the study participants agree that demand for qualified sleep technologists will increase; yet 50% of those surveyed believe there are not enough educational programs to meet the demand."

A large majority of these program directors predict a rising demand for sleep technologists. That viewpoint is likely based on multiple factors: that there are suspected to be vast numbers of undiagnosed sleep apnea patients,[5] that public interest in sleep is high, and that growth has been the model for sleep medicine over the last decade. Additionally, the nighttime hours of sleep studies are difficult for some technologists to manage in the long term, and employee turnover into other fields may be high.

However, similar to the case of 2006-2007 housing foreclosures presaging the massive housing bubble burst in the United States economy in 2008, the negative impact of the insurance payor changes in Massachusetts on Sleep HealthCenters and other Massachusetts sleep programs may represent the beginning of a bubble burst for sleep medicine. The experience at the recently-closed Sleep HealthCenters with the appearance of utilization management (UM) companies and the resultant algorithmic authorizations for sleep studies was that many sleep studies previously performed in the laboratory were instead run outside the laboratory (out-of-center sleep testing). One UM program leader was quoted in 2012 that 70% of studies should be run in the home, a number which would have a major impact on any sleep laboratory.[6] While some practitioners might point to this being solely a Massachusetts phenomenon, multiple national insurance programs have adopted similar practices: United Health Care and Aetna in 2012, Cigna in 2013. A national shift to home testing on a similar level to that observed in Massachusetts would likely presage the closure or contracting of sleep laboratories across the country and thus a generally lower demand for sleep technologists. In small pockets of the country, sleep laboratories may grow, bolstered by nearby closing sleep laboratories or to incorporate a new influx of patients, but these will likely be the exceptions rather than the rule.

The loss of a large number of overnight in-laboratory polysomnograms does not mean the end of the need for sleep technologists. Certified sleep technologists will continue to be required for the in-laboratory studies for complex patients with sleep disordered breathing or those with non-apneic sleep disorders. Similarly, sleep laboratory managers (often sleep technologists) will continue to be required for workforce management, staff education, and technological fixes. Some current sleep technologists may consider transitioning their skills in a comprehensive sleep center to be educators for patients about sleep disorders, to train patients on the use of home sleep testing and score those home studies, and to aid patients in their adherence to CPAP by helping with mask adjustments or other equipment concerns. Given the likely increasing number of home sleep tests and the evolving care of the sleep patient to a longitudinal model to ensure long-term compliance with OSA treatment, these skill sets should

be in high demand. Sleep medicine will continue to grow in the clinic setting, even if in-laboratory testing shrinks.

Wells and Vaughn's article[4] provides valuable insight into the views of program directors of training programs for sleep technologists. Though many of these program directors suggest that a higher overall demand for sleep technologists will occur, this phenomenon appears unlikely based on a changing model for sleep laboratories. The practical shift to home testing and the contraction of sleep laboratories may not take place immediately or everywhere, but "preparation is half of the battle." The whole sleep medicine community (including clinicians, sleep technologists, respiratory therapists, and others) should assess their current clinical programs, planning to grow certain aspects and limit others, based on the evolving medical environment. Current sleep technologists should focus on learning new sleep-specific skills to keep pace with the evolving climate in sleep medicine, buffering them against the potential loss of overnight sleep technologist jobs. Clinical sleep medicine will survive as a field and will likely have continued patient growth over the next several years; however, our field will need to adapt our diagnostic and therapeutic practices to best endure the "climate change."

CITATION

Kirsch D. Bears and bubbles: prognosticating the future of sleep technologists. *J Clin Sleep Med* 2013;9(10):1087-1088.

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SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication August, 2013
Accepted for publication August, 2013
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DISCLOSURE STATEMENT

Dr. Kirsch has indicated no financial conflicts of interest.