

## Podcast of the *Journal of Clinical Sleep Medicine*

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Welcome to the regular podcast of the *Journal of Clinical Sleep Medicine*. I am Dr. Stuart Quan, editor of the *Journal*. These podcasts are a regular feature of each issue of the *Journal* and can be downloaded at the *Journal's* website. Each podcast features summaries of important articles published in the current issue of the *Journal*, as well as occasional interviews with authors of these papers.

The first paper to be discussed in this podcast is entitled, "A Multi-Centered, Comparative Effectiveness Study of the Effect of Physician Certification and Center Accreditation on Patient-Centered Outcomes in Obstructive Sleep Apnea," by Dr. Sairam Parthasarathy and colleagues from the Arizona Respiratory Center and Department of Medicine, University of Arizona, Tucson, AZ, Division of Pulmonary & Critical Care and Sleep, Mercy West Hospital, Cincinnati, OH, and the Division of Sleep Medicine, Harvard Medical School, Boston, MA. For this podcast, we are pleased to have the first author of this paper, Dr. Sairam Parthasarathy, here to discuss the results of this study.

**Dr. Quan:** Sai, why was this study done?

**Dr. Parthasarathy:** We know a lot about factors and psychological factors that can influence adherence to positive-air pressure therapy but with where the healthcare systems and changes are currently, CPAP adherence and patient satisfaction and the patient experience are increasingly becoming important quality matrixes to how the field is going to be assessed and judged by third-party payers. Previous studies have shown, by our group looking at cross-sectional studies, that both certified physicians and accredited centers do a better job at patient education and patient satisfaction and, therefore, CPAP adherence. Another retrospective study had been done in this area by Pamidi colleagues from the University of Chicago and a more recent study from Australia implied that primary care physicians are just as good as these specialists in rendering such care to sleep apnea patients. However, in a randomized, control trial they had educated primary care physicians and providers to do a better job. So, in some sense, it was a test of an educational intervention administered to primary care physicians, rather than how primary care physicians practiced at this current point in time and how they practice in the U.S. as opposed to Australia. Our study was a real-world comparative effectiveness study, trying to answer this question as to whether physician certification and center accreditation really make a difference in outcomes, patient-centered outcomes and patients with sleep apnea. That was why we conducted the study.

**Dr. Quan:** Can you please describe for our listeners, briefly, how you conducted the study?

**Dr. Parthasarathy:** Our study was done as a comparative effectiveness study, not to be confused with randomized control trials. In some sense, randomized control trials are artificial circumstances in which trained providers and trained technicians or multiple technicians render care under research conditions which are usually more stringent and more time consuming than what is done as part of routine care. There's a much greater emphasis now that some of the findings in health services research done under artificial constraints in a randomized controlled trial may not be extrapolatable or generalizable to a real-world practice. That's why we did our study as a pragmatic, comparative effectiveness, real-world study. We took four centers, two accredited and two non-accredited, which are, of course, serviced by both certified and non-certified sleep physicians, and we "consented" the patients as they went through and as they streamed through the process. This was done as a cluster design, wherein there were some centers which were accredited and some that were not. As you can tell, this is not something that can be subject to randomization but it becomes a prospective, observational comparative effectiveness study in a real-world circumstance.

**Dr. Quan:** What did the study show?

**Dr. Parthasarathy:** The study showed that patients' CPAP adherence was much better in accredited sites than non-accredited sites and that certified physicians did a better job of educating patients. As a result of better education, these patients had a greater amount of risk perception, which is a very key driver of how adherent patients are to their therapies because if they are afraid that a disease will lead to a problem they are more likely to embrace the therapy. We also found that patient satisfaction was inversely related to the delays in care delivery and we all know access to care and getting a test done promptly or being able to reach a physician is very important for the patient as a consumer. All in all, we found that accredited centers and certified physicians not only did a better job educating the patients, raising their risk perception, improving their CPAP adherence, and doing a better job with patient satisfaction.

**Dr. Quan:** Given all the uncertainty regarding the practice of sleep medicine these days and the economics behind sleep medicine as it is practiced in the U.S., so why are these results important for that issue?

**Dr. Parthasarathy:** These results are important because these findings are important for how we care for our patient on a day-to-day basis and they need to inform public health policy. By public health policy, I mean policies of not only private insurance carriers and third-party payers but also Medicare, in that they need to be more cognizant and these are the factors that affect patient adherence and of patient adherence to treatment. Their subsequent outcomes are contingent or dependent on physician certification and center accreditation policies and procedures should embrace these important aspects or criteria of healthcare delivery. Be it the center, meaning the accredited center, or be it the certification of the physician, needs to be woven into healthcare policy. I think there is a little bit of that's already going with some local Medicare carriers, requiring physician certification or center accreditation, but we need to get more main stream.

**Dr. Quan:** It sounds like this is going to be a very important paper for the field sleep medicine and I want to thank you for being on this podcast. I will ask the listeners to read the entire paper to get all the details of the study and also to read other articles in the *Journal*. Thank you very much and we look forward to future research from you and your group in this area.

**Dr. Parthasarathy:** It was a pleasure. Thanks for having me.

I would also like to call the reader's attention to the editorial written, regarding the paper written by Dr. Parthasarathy and colleagues, by Drs. Chediak and Ibraheim, entitled, "Sleep Medicine Board Certification Status of Physicians and American Academy of Sleep Medicine Sleep Center Accreditation Improves Healthcare Outcomes in Obstructive Sleep Apnea Patients Treated with Positive Pressure Therapy. It's Not Complicated!"

The final paper to be discussed in this podcast is entitled, "Modulation of Inflammatory and Hemostatic Markers in Obstructive Sleep Apnea Patients Treated with Mandibular

Advancement Splints: A Parallel Controlled Trial," by Dr. Agata Nizankowska-Jedrzejczyk and colleagues from the Department of Orthodontics, Jagiellonian University Medical College, Krakow, Poland, Department of Oral Health Sciences, University of British Columbia, Vancouver, British Columbia, Canada, Department of Pulmonology, Jagiellonian University Medical College, Krakow, Poland, Department of Biochemistry, University of Vermont, Burlington, VA, and the Institute of Cardiology, Jagiellonian University Medical College, Krakow, Poland. There is increasing evidence that obstructive sleep apnea is associated with systemic inflammation and a hypercoagulable state. In the current study, the authors attempted to determine whether use of a mandibular advancement splint or an oral appliance affects inflammatory or hemostatic markers in patients with mild to moderate sleep apnea. They studied 22 patients with mild to moderate obstructive sleep apnea who were treated with an oral appliance for six months. There were also 19 control patients who were similar to the OSA group with respect to age, gender and body-mass index. The baseline apnea-hypopnea index in the experimental group was 24 events per hour of total sleep time and the apnea-hypopnea index in the controls was 2.05 events per hour of total sleep time. After six months of treatment, the oral appliance reduced the apnea-hypopnea index to 7.05 events per hour of total sleep time in the OSA group. At baseline, compared with controls, subjects who had obstructive sleep apnea had higher levels of fibrinogen, 6-keto PGF1 alpha, glucose and thrombin activatable fibrinolysis inhibitor. Treatment with an oral appliance significantly improved levels of IL1 Beta, D dimer, thrombin activatable fibrinolysis inhibitor and fibrin clot lysis time. The level of these hemostatic and inflammatory markers was similar to the control group, except for the glucose.

This concludes the regular podcast of the *Journal of Clinical Sleep Medicine*. The listener is encouraged to read the contents of the *Journal* for additional information regarding each of the articles summarized in this podcast, as well as other papers published in this issue of the *Journal*.