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 lead article in this issue is entitled, "Truckers Drive Their Own Assessment For Obstructive Sleep Apnea: A Collaborative Approach To Online Self-Assessment For Obstructive Sleep Apnea." The authors are Ben Smith and Barbara Phillips from the Department of Computer Science, North Carolina State University in Raleigh, NC, and the Division of Pulmonary, Critical Care and Sleep Medicine at the University of Kentucky College of Medicine, in Lexington, KY. Recent recommendations of the medical expert panel, convened by the Federal Motor Carrier Safety Administration, are that commercial truck drivers categorized as high risk for obstructive sleep apnea according to the Berlin Questionnaire, those with a body-mass index greater than 33 kg/meter squared or those judged to be at risk for obstructive sleep apnea based on a clinical evaluation should undergo confirmatory testing to determine whether or not they have obstructive sleep apnea. Although these recommendations have not yet been implemented, there are some concerns as to whether commercial truck drivers would answer truthfully to questions related to their risk of obstructive sleep apnea during their mandatory medical evaluations given the potential adverse consequences of having a diagnosis of obstructive sleep apnea confirmed. In this study, an anonymous questionnaire was posted on the internet with the assistance of a voluntary organization of truck drivers. Over nine months of data collection, 595 drivers participated. 55.9% of these scored positive for sleep apnea on the Berlin survey. More than two-thirds of the respondents were obese and nearly half had a body-mass index greater than 33 kg/meter squared. Furthermore, 20.5% answered positively to the Berlin questionnaire item regarding falling asleep while driving. An additional 21% endorsed the symptom of witnessed apnea. Given that all of these truck drivers presumably had a commercial driver's license, these findings indicate that there is likely a substantial discordance between symptoms reported to medical examiners and those experienced by the drivers.

The next paper to be reviewed in this podcast is entitled, "Driving Simulator Performance Remains Impaired In Patients With Severe OSA After CPAP Treatment," by Andrew Vakulin, Stuart Baulk, Peter Catcheside, Nick Antic, Cameron Van Den Heuvel, Jillian Dorrian and Doug McEvoy from the University of Adelaide and the University of South Australia in Adelaide, Australia. Although CPAP treatment of obstructive sleep apnea definitely improves daytime sleepiness, there is some controversy as to whether it completely reverses the neurobehavioral deficits associated with this condition. Specifically, it is unclear whether simulated driving performance can be completely reversed with CPAP treatment. In this study, three months of CPAP treatment on driving-simulator performance was assessed in a group of patients with severe obstructive sleep apnea and a group of control subjects. The apnea-hypopnea index of the patients was greater than 45 events/hour of sleep. They were started on CPAP after diagnosis and treated for three months. Mean compliance over the three-month follow up period was six hours/night. Eleven subjects with severe obstructive sleep apnea and nine control subjects were studied. The results of the study revealed that CPAP improved performance on steering deviation in the sleep apnea patients. However, after three months the performance in the CPAP-treated sleep apnea patients was still worse than control subjects. Thus, these data suggest that despite CPAP treatment with good adherence for three months, driving-simulator performance was still impaired in obstructive sleep apnea patients. Furthermore, the findings provide additional evidence that not all neuroperformance deficits are corrected with CPAP treatment in those patients with severe obstructive sleep apnea.

The final paper to be reviewed in this podcast is entitled, "An Email Delivered CBT For Sleep Health Program For College Students: Effects On Sleep Quality And Depression Symptoms." The authors are Mickey Trockel, Rachel Manber, Vicky Chang, Alexandra Thurston and Craig Tailor from Stanford University in Palo Alto, CA. It is well known that college students have erratic sleep schedules, exhibit poor sleep hygiene and have a high prevalence of sleep complaints. These symptoms are often associated with symptoms of depression. Although cognitive behavioral therapy is effective treatment for symptoms of insomnia, under most circumstances, it is delivered by person-to-person interactions. Unfortunately, person-to-person intervention is not conducive to treatment of large numbers of individuals simultaneously. More recently, there have been studies indicating that CBT can be delivered effectively through the internet. In this study, the investigators adapted cognitive-behavioral therapy techniques to be delivered as an intervention provided by email. In the study, all students in one freshman dormitory were invited to participate in an eight-week cognitive-behavioral therapy based sleep health promotion program, with two-thirds of

eligible students electing to participate. All students in a second freshman dormitory were invited to participate in another health promotion program designed to help students cope with stress and improve their emotional health by using skills focused on improving depression. 41% of those eligible elected to participate in the latter program. In both cases, material was delivered by email. The programs were eight weeks in duration. The authors found that among students with poor sleep as assessed by a Pittsburgh Sleep Quality Index score greater than five at baseline, participation in the cognitive-behavioral therapy program devoted to improvement in sleep resulted in a greater improvement in their sleep quality in comparison to similar students participating in the program targeted at depression. However, in students with high sleep quality at baseline, there was no difference in either their sleep quality or their depression symptom severity. The authors conclude that it is possible to deliver a cognitive-behavioral sleep improvement program by email and this may be a cost effective method for improving poor sleep quality in college students.

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*.