

COMMENTARY

The Internet: Sleep On It

Comment on Lee et al. Accuracy and reliability of internet resources providing information on obstructive sleep apnea. *J Clin Sleep Med*. 2018;14(10):1717–1723.

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Obstructive sleep apnea (OSA) is a common¹ and important condition as people with it can have significant symptoms that may have a major effect on their quality of life.^{2,3} It can also be associated with other important adverse health outcomes such as hypertension and cardiovascular disease,⁴ and affect daily living activities such as driving.⁵

Sometimes sleep apnea can be cured, for example, with upper airway surgery in school aged children—and less commonly in adults⁶—or with significant weight loss in patients who are obese.⁷ However, for most people with sleep apnea, long term treatment is required with continuous positive airway pressure (CPAP)⁸ or oral devices.⁹

Adherence with long term treatment is a major problem, and adherence with CPAP and other sleep apnea treatments are no exception.¹⁰ Patient education is important to enhance acceptance and adherence with treatments, but knowledge of sleep apnea in the general population is poor.¹¹ Clinicians have recognized this and attempt to educate patients about their treatment.¹² This especially applies to CPAP, which requires motivation by patients to go to the trouble of having a mask fitted, using it at home and tolerating air blowing into the nose and/or mouth. There is possible embarrassment in doing these in front of a bed partner, and, depending on the health care system, there can also be considerable expense. Once CPAP is established, some effort is still required by patients to use it every night, especially if the symptomatic benefit is not immediately apparent, or if other issues arise such as travel, respiratory tract infections, or vasomotor rhinitis from the CPAP itself.

So patient education is an integral part of the treatment of sleep apnea, and, as with other medical treatments, the quality of education should be assessed to ensure its effectiveness. One aspect of patient education is the use of resources on the internet. Patients, their relatives and friends often refer to these without clinical prompts. Up to 80% of searches on the web are for medical topics.¹³ Busy clinicians may be tempted to delegate education of patients to the internet to save time. However in patients who are older, this is not always appropriate. In Australia, only about half of elderly people use the internet, although two-thirds of this use is for health reasons.¹⁴

It is with this background I found it pleasing that Lee et al. has published a study in this issue of the *Journal of Clinical*

Sleep Medicine assessing the accuracy and reliability of information about OSA on the internet.¹⁵ However, it was not pleasing that they found that much of the information was not accurate or reliable.

The websites that they assessed were the most popular ones and accessible to the general public. Validated tools were used to assess the readability and quality of information in each site. The sites were divided into five groups: “scientific resource, foundation, news/media report, commercial website, and personal commentary.” To improve the reliability of the assessments, some were done by two independent reviewers; however, the level of agreement between the reviewers was not included in the paper.

The largest group of websites were commercial in origin. The next most common were scientific websites, and those related to news and media articles. Only 16% were from foundations and only 14% had Health on the Net Foundation (HON) accreditation (<https://www.hon.ch/en/>). HON was established in Geneva in 1996. It is a non-profit and non-government organization, although it does have a formal link with the World Health Organization. Those developing health-related websites can apply for certification. In the study by Lee et al., sites with HON accreditation did not score as well as those without accreditation, so even the presence or absence of accreditation may not guide patients to sites that can provide reliable information.

Although there were statistically significant differences between different types of websites with respect to DISCERN and the *Journal of the American Medical Association* (JAMA) scores, overall scores were unimpressive. Commercial websites performed worse with respect to providing information about diagnosis and management of OSA, and scientific and foundation sites performed better. However the differences were not great. The readability of the websites was generally good with average scores indicating that the sites could be read by people as young as 12 to 15 years old.

As clinicians we need to be somewhat circumspect about websites providing information on OSA for our patients. This is not the first time that the quality of OSA sites has been shown not to be good.¹⁶ Additionally, it is not just OSA, as another study assessing the quality of information about insomnia on internet sites concluded that the quality was “moderate.”¹⁷

Sleep medicine is not alone, although it has been found to have the best internet information from professional societies compared with other internal medicine subspecialties.¹⁸

Web-based education has been found to increase clinic attendance, but not increase adherence with CPAP.¹⁹ An educational video has also been shown not to be effective.²⁰ It seems that more personal education is still required to improve CPAP usage.²¹

It behoves us to take responsibility for the information that patients receive about OSA and particularly about its treatment with CPAP if we are to provide them with the best chances of success with treatment. If we are to recommend a website, we need to first check it ourselves to see if we are happy with the information that it provides.

For those sleep practitioners and professional societies involved in developing and contributing to websites, we should provide information that is readable, reliable and accurate, and of course, kept up to date. As this information may form part of the management of patients with OSA, attempts to assess these characteristics objectively would seem to be appropriate. This can be done with tools such as those provided by HON, JAMA, DISCERN and Flesch Reading Ease Score.

CITATION

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The author reports no conflicts of interest.