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LETTERS TO THE EDITOR

Making Dollars and Sense of SAVE

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In their recent journal club article for the *Journal of Clinical Sleep Medicine*, "SAVE me from CPAP," Collop and colleagues correctly assert that novel and innovative treatments are desperately needed to improve clinical outcomes and reduce public health burden associated with obstructive sleep apnea (OSA),[1] a potentially life-threatening condition that affects 3% to 9% of adult women and 10% to 17% of adult men.[2] Although positive airway pressure therapy (PAP) is a highly effective treatment when used, the challenges associated with PAP adherence are well documented. In the Sleep Apnea Cardiovascular Endpoints (SAVE) trial, PAP adherence was particularly low (ie, mean use was only 3.3 hours, and only 42% of users used PAP ≥ 4 hours on ≥ 70% of nights), making it impossible to determine whether greater PAP usage might have improved cardiovascular outcomes.[3] In addition to highlighting the unclear protocol for PAP management, Collop and colleagues[1] and others (eg, Mokhlesi and Ayas[4]) have raised numerous and important methodological concerns regarding SAVE, including the generalizability of the sample, validity of the diagnostic approach, and rationale for inclusion/exclusion criteria. Beyond these salient points, several health economic aspects of SAVE warrant consideration.

From a population health perspective, economic outcomes in SAVE and all sleep-related clinical trials warrant much greater attention than they have received thus far in the sleep medicine literature. In our modern health care climate of increasing costs on the one hand and limited resources on the other, economic aspects of specialty medical care are increasingly recognized as essential determinants of resource allocation. This scrutiny seems particularly salient in SAVE, where even low levels of PAP adherence were associated with significant improvements in quality of life and increased workplace productivity.[3] These outcomes have quantifiable economic value (ie, quality-adjusted life-years and costs of days missed from work, respectively) pertinent to patients, employers, and other health and economic stakeholders. Similarly, important health economic insights are likely to be gained from *post hoc* analyses in SAVE. For example, when PAP adherers were compared to nonadherers, a nonsignificant trend (P = .13) toward reductions in cardiovascular events was observed.[3] Presumably, these reductions in cardiovascular events resulted in reduced hospitalizations and other cost savings. In light of the very high costs associated with hospital readmissions among patients with cardiovascular diseases (eg, heart failure[5,6]), the population-level economic benefit from such reduction could be substantial. Although the nature of these data was unclear in supplementary material from SAVE, such economic insights are likely to be of great interest to all involved in OSA care.

A health economic perspective also has direct implications for providing patient-centered care and enhancing PAP adherence in SAVE and elsewhere. For example, a patient-centered approach to PAP adherence requires early and ongoing attention to barriers and facilitators to PAP in three distinct, overlapping domains: physiologic (eg, nasal volume or rhinitis), technical (eg, mask fit), and behavioral/motivational (eg, patient goals for treatment).[7] Presumably, attending to these multiple factors would have increased PAP adherence in SAVE. Of course, maximizing PAP adherence can be time- and resource-intensive, and as noted by Collop and colleagues, some patients will never adjust to the therapy.[1] Nonetheless, given the limited number OSA treatment options currently available, understanding the economic cost-benefit of achieving PAP adherence would provide valuable guidance to payers and other stakeholders. This is especially true in very high-cost populations (eg, SAVE), where the economic benefit of PAP adherence could be great.

To maximize the effect on public health and ensure the availability of sleep medicine services, sleep medicine specialists must (1) provide excellent, patient-centered, outcomes-driven clinical care; (2) differentiate care provided by sleep specialists from nonspecialists; and (3) understand, demonstrate, and articulate the value of sleep specialty care. A health economic perspective is central to achieving each of these objectives.

CITATION

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