

medical conditions. This approach results in similar outcomes and reduced costs for testing and treatment compared with a management strategy primarily based on PSG. Thus, an out-of-center approach utilizing HST as the first line of testing should be considered for most patients with a high clinical suspicion of OSA as long as the managing clinicians are adequately trained in how to interpret and manage the data from these technologies.

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## Rebuttal From Dr Pack

Allan I. Pack, MBChB, PhD; Philadelphia, PA

Dr Freedman<sup>1</sup> has accurately and effectively described the basis of the switch to use of home testing in the United States. I agree that for subjects with high pretest probabilities of OSA without other major issues, home testing is appropriate provided that subsequent management of therapy is by trained providers.

A test, however, does not by itself lead to “better outcomes.” What matters is management of the problem once the diagnosis is made. Moreover, what are the outcomes we seek to influence? Is it improved quality of life?<sup>2</sup> Is it reduced crash risk?<sup>3</sup> Is it improvement in BP?<sup>4,5</sup> Is it reduced long-term health-care costs?<sup>6</sup> Studies have shown that effective treatment of OSA can influence all of these outcomes.<sup>2-6</sup>

Thus, currently we need to move away from the stale debate of home vs in-laboratory testing and address the major questions that matter, that is,

1. What is the most cost-effective way to screen for OSA? Can we use data in the electronic medical record to facilitate this?

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2. We have three major “diagnostic” strategies: (a) straight to therapy with autoadjust positive airway pressure (PAP)<sup>7</sup>; (b) home studies, albeit with a large variety of different equipment with limited standardization as Dr Freedman<sup>1</sup> indicates; and (c) the traditional standardized in-laboratory polysomnogram. Standards for laboratory studies were developed many years ago. The question is: Which patients are best served by use of these different approaches?
3. Once diagnosed, how is therapy best initiated? Do durable medical equipment companies provide value and what is expected of them?
4. Who should manage the millions of patients with OSA in the United States? Should this become the province of primary care physicians if they receive relevant training? Or should we seek to amplify the impact of sleep medicine physicians with a team approach using nurse practitioners, retrained sleep technologists who can act as sleep medicine coordinators, and so forth?
5. What are the outcomes of care that would be documented to show that our care is of high quality?
6. How should we approach chronic care management? Who will be the primary staff doing this? What training will they need? Will insurance pay for this essential service? What information technology resources, including mobile health approaches, do we need to facilitate this? How do we get patients to participate in their own care? What is the role of social media?
7. When do we switch from PAP therapy to alternative approaches when PAP fails? What are the criteria for “PAP failure”? What is the role of the different alternative therapies?

Thus, for us to develop strategies to truly achieve optimal outcomes, all of these questions need to be addressed. This can only occur, in the United States, if sleep medicine develops a new financial model that ensures that sleep centers remain viable. Weaning ourselves from revenue primarily derived from in-laboratory polysomnograms is hard. However, we have millions of patients to serve. We have wonderful technology to remotely assess treatment adherence and efficacy. We markedly improve patient lives with simple therapy without risk. We add value.

Thus, the real big-picture question is: How do we improve outcomes for OSA with a comprehensive, integrated approach to screening, diagnosis, and therapy for OSA with chronic care management?

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## Rebuttal From Dr Freedman

Neil Freedman, MD, FCCP; Bannockburn, IL

Dr Pack<sup>1</sup> makes several excellent points, and unlike most pro-con debates, I tend to agree with most of his arguments. I would summarize and respond to his comments as follows.

I agree that home sleep testing (HST) has a role in the management of OSA, especially for symptomatic patients with a high pretest probability of OSA. A recent large-scale study would suggest that most patients who are undergoing HST in a real-world setting are appropriate candidates for this type of testing.<sup>2</sup> HST should not be used in patients with comorbidities that may predispose them to more complex sleep-disordered breathing as the data do not support its use in these patient populations.

Dr Pack<sup>1</sup> notes that since HSTs as a group of technologies are less sensitive by nature than polysomnography (PSG), some patients with OSA who could

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