

LETTERS TO THE EDITOR

Consumer Sleep Technologies, Clinical Guidelines, and Evidence-Based Medicine: This is Not a Zero-Sum Game

Response to Magnusdottir. The importance of evidence-based medicine and clinical guidelines: meaningful and clinically actionable information cannot be compromised for the convenience of consumer sleep data. *J Clin Sleep Med*. 2019;15(5):795–796.

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We thank Dr. Magnusdottir for continuing the conversation regarding the transformative nature of consumer sleep technologies (CSTs) to population sleep health.¹ Innovation is the lifeblood of any enterprise and sleep health care is no exception. Innovation by its very nature challenges the status quo by asking questions and exploring paradigms from novel and unique perspectives. Innovators do not accept the world as it is, but rather view the world through a unique lens that allows them to see the world as it can be. Mental and physical roadblocks promoted by those with entrenched interests do not deter but rather motivate innovators. Certainly, the pursuit of innovation is anything but a tidy process.

CSTs represent the pursuit of innovation to the benefit of global sleep health. Dr. Magnusdottir points to the importance of CST validation,¹ a sentiment we wholeheartedly support.² However, what has not been acknowledged is the substantive validation currently existing for some, albeit not all, CSTs.^{3–6} Indeed, if validation seeks to separate the CST “wheat from the chaff,” one has to acknowledge the presence of some wheat in the harvest. Dr. Magnusdottir refers to “proper validation” without providing an exacting definition. How much validation is enough, and within what context? The sleep medicine community and CST sleep innovators need answers to these questions to move global sleep health forward. Clearly, partnerships between researchers and CST entities focused on collaboration in pursuit of validation is necessary. Beyond this, we miss the point when we create a false dichotomy between CSTs and current sleep medicine diagnosis and treatment paradigms because CSTs measure sleep in different ways and in different contexts than current sleep diagnostic technologies.² Indeed, to suggest the current state of CST innovation is an affront to evidence-based medicine and clinical guidelines is simply a “straw-man” argument that misses the potential opportunities this innovation affords.

Dr. Magnusdottir points to the International Medical Device Regulator’s Forum guide for “Software as a Medical Device” as an exemplar for a “common language” for emerging CSTs.¹ However, not surprisingly, sleep-specific language is

mostly lacking from these documents, which are focused more on generalities related to the role of newly developed software technology and health care. Herein lies the challenge to the sleep medicine community. If we are to control our destiny in these changing times, we must lead these conversations so the validation we require is the validation we receive. The serious entities in the CST space are waiting to know where the sleep medicine community sets the bar so they can endeavor to clear it. We know we have a workforce shortage and an access problem in sleep medicine.² Conscientious sleep physicians philosophically desire to cure all the sleep disease in the world. It is possible that CSTs are the tool by which this can be accomplished by vastly increasing access to sleep health on a global scale. The existential question facing the sleep medicine community is whether or not they are prepared to pick up this tool, hone it, and get to work.

CITATION

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