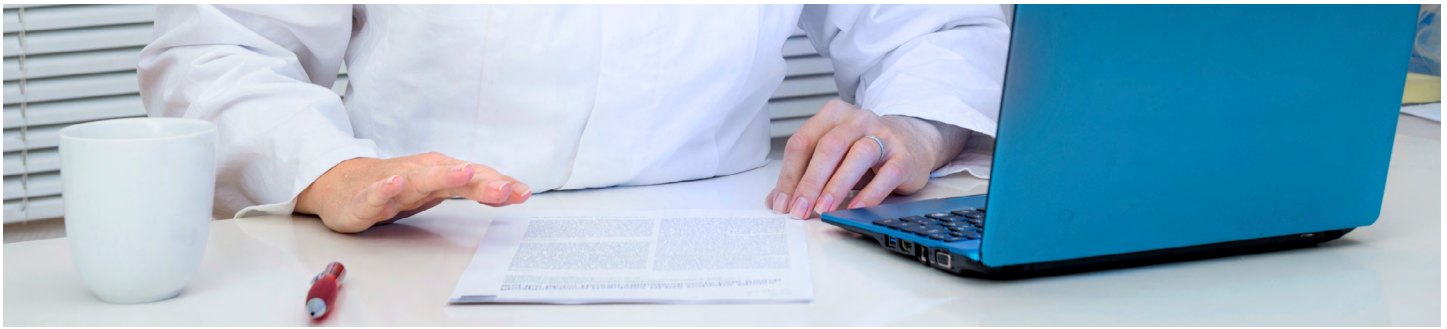


SHOULD SLEEP TECHNOLOGISTS BE READING CLINICAL RESEARCH STUDIES?

By Tamara Kaye Sellman, RPSGT, CCSH



It's such a relief when you pass those boards and get your credentials, isn't it? No more homework, no more thinking about the biology of the brain, the half-life metabolism of drugs, the special needs of pediatric patients you may never see...

Except that this isn't the reality for people who work in the healthcare field. We all know this. It's called continuing education, and we need to capture those annual credits through webinars, conferences and other forms of homework in order to keep our jobs.

Is it enough to just maintain our credentials?

There are some pretty compelling reasons to work beyond the minimum requirements in order to maintain your credential. Most of these reasons are tied into the availability of information on the internet, our need to be *more* educated than our patients on topics even *beyond* sleep and a growing call for workers in our field to become active advocates for sleep health in our communities. In every case, these efforts begin with mastering the interpretation of clinical research studies.

WHY WE SHOULD BE READING (AND UNDERSTANDING) CLINICAL RESEARCH STUDIES

Our patients are doing it.

For good reasons or not, more than 2/3 of patients will go to "Dr. Google" first for answers to their healthcare questions. Often, this can be disastrous. Americans aren't particularly media literate,

so their ability to distinguish legitimate medical information from bogus clickbait is questionable. Fear-based articles based on nameless "studies" pushing questionable alternatives with no scientific backing do not help matters.

The popular media also has a bias and tends toward headlines that ask questions their articles never really answer, knowing full well that many will never read past those headlines. But it's not all bad. These same patients may also access quality information online. What they do with it, however, can be problematic:

- As a healthcare professional, you know, first hand, how challenging it can be to interpret a clinical research study's results. There are lots of features to a published study that require attention before one can make any assumptions about the validity of its tests or results.
- Meanwhile, medical writers can't be trusted to be on top of this. They sometimes write "conclusive" articles derived from clinical research that only observes results from a handful of participants or is funded by a pharmaceutical sponsor. If medical writers can't see through the holes or the spin, how are average citizens of average literacy going to do it?

Another relatively new trend that probably isn't going away any time soon: Patients now bring copies of these studies to their appointments to assert some claim they want to make about their own health ("Here is proof I don't snore," or "I am certain that I have narcolepsy; can you just give me Provigil?").

It's a sad fact that perceptions about the healthcare field in 2016 (as recently detailed in a Gallup Poll) have plummeted to all-time lows; patients do not trust the medical profession like they used to. The outcome is "research" often conducted by people with very little to no biology education. This is where your skill in interpreting clinical research studies can really come in handy. By spending a few minutes to help them understand what they are reading, you are doing your job as a patient educator, as well as improving the level of trust your patient has with your clinic.



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But you must already know how to interpret clinical research studies in order to do this. How sharp are your skills? Where can you improve?

We need to be able to answer questions that exceed our basic knowledge of sleep health in order to inspire patient confidence.

Taking things one step further ... as sleep technologists and patient educators, we already know how complex the sleep process is, and that it intertwines with nearly every system in the body. We really *do* need to know *more* than our patients, not only about sleep (and, by default, pulmonology or respiratory health), but also about cardiology, vascular disease, metabolic syndrome, neurological conditions, mood disorders, brain and blood chemistry, neuropathy, drug addiction, cranial physiology, even basic eye health.

This is *not* because we are allowed to diagnose anything, because we absolutely *aren't*. But our patients spend more time with us than with nearly any other medical professional they will encounter in their continuum of care with regard to a sleep complaint. The odds are much higher that they will ask you questions that might be better addressed to their physicians, based entirely on proximity. You still need to be able to provide cogent, educated responses to patient's questions, nonetheless.

Keep in mind patients don't know how protocols in our field work. If you have scrubs on, they think you could be a technologist, a doctor, a nurse or some other specialist. They do not know the chain of command, they only know they aren't feeling well and you are someone who should know how to help them.

If you encounter lots of patients with **cardiac issues**, then it behooves you to learn all you can about cardiology: arrhythmias, procedures, electrocardiogram (EKG) anomalies, drugs that impact heart health and so forth.

If you encounter **veterans**, then you are best advised to keep up on all things related to post-traumatic stress disorder (PTSD), which is a very fluid arena of inquiry at present, given the vast numbers of soldiers returning home from the Middle East with major sleep and behavioral problems.

If most of your patients are **African American**, you should really stay on top of research focused on the full range of African American health issues (and *not* just *sleep* issues).

Your effort at becoming an expert in your field may never be reimbursed (although you are probably able to at least get free access to PubMed or other subscription-only research resources through your employer). This should not be the reason why you read above and beyond what your day-to-day job requires, anyway; you should be thinking about ways to be the resource that your patients need you to be, and that may mean doing

HOW TO INTERPRET CLINICAL RESEARCH STUDIES

Let's face it, not all of us in the sleep technology field have the skills necessary to parse a 15-page clinical research study. It's nothing to be ashamed of; this research is written for an audience of physicians who have read countless studies and written a few themselves. Also, even if you have been in the field for longer than credentialing programs have existed, you may never have encountered clinical research studies except to pass (or renew) your boards. It can't hurt to learn the skill now.

Here are some great resources for learning how to break down a research study to more effectively understand and interpret it so that you can share what it says to patients, who most likely do not have this skill set.

- University of California San Francisco Medical Center: "Evaluating Health Information" — This patient-focused guide can benefit sleep techs, too.
- American Nursing Association: "Framework for how to read and critique a research study" — This is an amazing resource from Louise Kaplan, PhD, Senior Policy Fellow for the ANA.
- The Crohnology Blog: "How To Read Medical Research" — Some of the best resources for learning how to interpret clinical research studies come from chronic illness advocates. This is a good starting point for not only understanding the format and information provided, but for practicing critical thinking. Similarly ... from the Lewy Body Dementia Association: "Increasing Knowledge — How to Read a Research Paper".
- Susan G. Komen: "How to read a research table" — If we are to be smarter than our patients, we need to have better health literacy than they do, and that means beginning with how we interpret data presentations.
- The BMJ: "How to read a paper" — This article breaks down the different kinds of clinical research studies, an important distinction when talking with patients, who do not always understand that research has many faces and can take many years to complete.
- Journal of Oral and Maxillofacial Pathology: "Art of reading a journal article: Methodically and effectively" — Also, consult the links in the References section at the end.

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more homework even in the absence of “credits.” It’s the same in every career path ... those who do the extra work will generally reap the extra “credit” with job promotions, raises and more visibility.

Sleep activism requires it.

The sleep field has long been in need of advocacy, and with the wide range of media outlets available to us now — and a growing army of sleep health educators with CCSH credentials out there looking to put their new knowledge to use — sleep activism is beginning to have both a presence and an impact. Bolstering your knowledge of sleep through mastery of current research trends is one way to establish yourself as an expert. The best activists succeed because they are perceived as having expertise.

Here are some ways you put yours to use:

- Media outlets like the *Huffington Post* are obvious targets for advocacy efforts, but there are all kinds of great publishers of web and print content looking for sleep health information and advocacy.
- The American Academy of Sleep Medicine (AASM) always needs volunteers to help with lobbying, such as with the most recent discussions about requiring transportation operators (drivers, pilots, captains, etc.) to undergo sleep health evaluations periodically to help reduce the risks for drowsy driving.
- Local school boards need our help in convincing districts to switch to later school start times for teenagers as a way to stem the tide of sleep deprivation among America’s young adults, who accrue sleep debt at a much higher rate than nearly any other population.
- Big business is becoming more friendly to the concept of the employee nap and flex hours, as statistics continue to show

a bottom-line deficit when it comes to the effects of sleep deprivation in the workplace. An activist can mine this (quite lucratively) by providing sleep health presentations to CEOs, employee unions and the human resource departments of small businesses most impacted by sleep deprivation.

- Hospital systems across the country are working hard to eliminate sudden infant death syndrome (SIDS) among their populations, and this means constant public education about what constitutes healthy sleeping conditions. Your expertise with pediatric sleep makes you a perfect spokesperson.
- Speaking of healthy sleeping conditions, there are “right to sleep” campaigns cropping up all over these days, for divergent populations including the homeless and emergency room doctors. Sleep educators can make serious headway as advocates in this space. ❖

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LOCATING AND ACCESSING CLINICAL RESEARCH STUDIES

This can be challenging because many study publishers only offer an abstract, with a members-only paywall barricading readers from access to the actual data. However, there are ways around this (including taking advantage of your hospital PubMed subscription). Scientist and writer Tanner Helland of *Mythbusters* fame offers “How to Access Science and Medical Research without Paying an Arm and a Leg for It,” a useful article about accessing legitimate research through open sources.