



INTEGRATING EVIDENCE-BASED MEDICINE INTO AN ALLIED HEALTH CURRICULUM

by Sandra McCleaster RRT

Broadly defined, evidence-based medicine (EBM) is the “use of the best clinical evidence in making patient care decisions.” Current literature has brought us to believe that EBM is central to effective patient care. Teaching in the health professions should be based on best practice, and EBM is currently considered to be the best practice. As an educator, my concern now is how to incorporate EBM into the education of allied health students.

To be sure, there are many issues surrounding the teaching of EBM. It serves little purpose for it to be taught in the didactic curriculum and then left there. To be useful, EBM needs to be brought to the patient’s bedside and put into practice. If EBM is simply something that’s taught in theory but never put to use, students certainly can’t be expected to value, let alone implement, the concept.

Teaching EBM at the bedside has obvious constraints. The development and implementation of research is a relatively new endeavor for most on the front lines of respiratory care. If experienced therapists have a problem trying to implement some evidence-based modality, can we possibly expect a student to do it? Clinical instructors will only teach and exemplify EBM if they have incorporated this approach

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in their own practice. That’s not likely to have happened. Plus, some respiratory care experts can find a literature source to back up whatever their view is in a particular clinical situation. But let us not throw out the baby with the bathwater.

Understanding EBM

For starters, students need to know what EBM is and understand it. For that to happen, a core set of techniques should be applied. These include an ability to frame questions based on patients’ problems, a way to search the literature for answers and the ability to filter good data from bad. This will provide an appropriate evidence-based context within which students can learn.

Students learn facts in the classroom. They then go to clinical where there is lots of rote learning. Then they graduate and usually stop reading. Certainly there are new studies and published clinical research, but does it really apply to bedside care providers? For example, RCPs don’t order therapy. They can’t change the protocol.

This begs a larger question: Is what most respiratory care practitioners or other allied health practitioners do on a day-to-day basis related to research and evidence-based practice? There seems to be a consensus that not a lot of evidence exists for much of what we do in respiratory care. Here’s one telling example.

In a recent American Association for Respiratory Care (AARC) Webcast titled “How to Select the Best Mode of Ventilation,” Robert Chatburn, RRT-NPS, FAARC, a recognized authority on classification of ventilator modes, ponders the question: “What vent mode would be the best for this patient at this point in time?” He evaluated more than 20 “new” modes of ventilation and, in the process, pointed out that no one mode has been demonstrated to improve patient outcomes. Chatburn went on to say, “There will never be convincing evidence to rank all available modes of ventilation. It will never happen.” Small wonder EBM is often a hard sell.

But things may be changing. The last few years have provided us with perfect examples of how new thinking in respiratory care has been applied to the direct benefit of the patient. The use of tidal volumes smaller than what we’d been accustomed to using has become the norm. Medical practice is getting a handle on ventilator-associated pneumonia because now everyone’s paying attention to what is being published. For these reasons and others, I believe students can and should learn in an evidence-based context.

Teaching and learning strategies

Journal clubs are a great place to get going and they can serve several purposes. They provide a format for discussion of clinical questions and can help with evaluating current care practice. And they help students and their teachers keep abreast of evidence-based practice. Simply assign students to read relevant articles. Then follow up with questions and dialogue.

The idea is to incorporate the best evidence into everyday clinical practice. According to Dean Hess, PhD RRT FAARC, director of respiratory services at Massachusetts General Hospital, the challenge of EMB is locating the best evidence. That’s why a how-to on literature searching is essential. Everyone needs to have access to information sources. Your college or hospital library will be happy to assist you and your students in searching quality online resources such as PubMed, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) or MedLine. Students need to know that traditional textbooks are not evidence based, and that they are often out of date by the time they are published.

There is actually a lot of raw material to draw from and plenty of help out there. The AARC is at the forefront with respiratory therapist conducted research. Its clinical practice guidelines are regarded a gold standard for respiratory care practice. And RC Journal, their monthly scientific publication, is second to none in its coverage of patient-focused respiratory care research.

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Other creative assignments can be used to encourage an evidence-based path to respiratory care. One tried and true approach is to start with a lecture, the content of which is based on research. Then have students search for, find and critique a related article. Each student then gives a short presentation of his or her findings.

Students' questions about lecture content or patients they have encountered can be answered by guiding them through a brief literature search. This helps them evaluate the evidence and arrive at a clinical conclusion.

Most student clinical rotations utilize small groups for case discussion and presentation. Both are fertile ground for evidence-based thinking. Patient rounds, "morning report" and case-based conferences are also perfect clinical settings to incorporate EBM concepts. So, too, are workshops conducted at continuing educational conferences.

There's a bonus in all of this for the teachers, too. Educators would be wise to know what constitutes best practice. Few of us are very well-versed in EBM concepts, and we can all afford to raise our comfort level with reading scientific literature. We will all improve our understanding of the strength of evidence and have a basis on which to recommend a practice change. We'll all learn to ask, "Is this an effective practice?"

It will take the combined efforts of classroom and clinical faculty, but evidence-based thinking will eventually find its way to the everyday care at the patient's bedside. That, of course, is the place where it really belongs.

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Two other significant communication tools are performance reviews and planning quarterly social times to celebrate birthdays, a new designation earned or a holiday. Social communication properly orchestrated without work stress is a powerful retention tool.

And don't forget, a competitive salary and benefits are absolutely necessary. But remember, the vast majority of sleep professionals work for more than money. Knowledge that they are making a meaningful difference in patient lives, dignity, professional growth, a need to be personally recognized and a sense of belonging are important. Be sure to provide these and it is a quadruple win — for your patient, your employee, you and your sleep lab's financial bottom line.

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tinuous positive airway pressure (CPAP). There are also surgical procedures and oral appliances that can effectively treat OSA.

The presence of restless legs syndrome (RLS) usually can be established by one question: Do you have creepy, crawly feelings in your legs when you are sitting quietly that go away or are relieved when you walk around? If the answer is yes, your patient almost certainly has RLS.

The prevalence of RLS in the Caucasian population is about 10 percent, and women typically outnumber men 2 to 1. Treatment for RLS can include lifestyle changes such as decreased use of caffeine, alcohol and tobacco, as well as pharmacological options, including dopaminergic agents, benzodiazepines, opioids and anticonvulsants. These all have been shown to reduce the symptoms of RLS.

Finally, for insomnia the question to ask is simply, "Do you have trouble sleeping?" If the answer is "yes," the follow up question would be, "How often?" Treatment of primary insomnia often requires a multifaceted approach. While there are currently several safe and effective hypnotics, it is also critical to assess sleep hygiene issues which could be causing or aggravating the insomnia. A combination of cognitive behavioral therapy (CBT) and short-term hypnotic use has been shown to improve insomnia complaints.

These few simple questions should be a part of every physician's clinical routine. If presented with a more complex case, expert consultation is readily available. There are now more than 1,500 fully accredited sleep centers in the U.S., and the number is growing rapidly. A current list compiled by the American Academy of Sleep Medicine can be found at www.sleepcenters.org.

In conclusion, physicians taking it upon themselves to become acquainted with the steps necessary to diagnose and treat the three most common sleep disorders will be making an excellent beginning. To continue to ignore the fact that sleep disorders and sleep deprivation comprise a gigantic, worldwide problem and to allow millions of people to continue to suffer is unconscionable. The massive definitive textbook, Principles and Practice of Sleep Medicine, is available to help you; however, a number of more concise and practical texts have been recently published.

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