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# JOINT SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES

## SPINE SECTION NEWSLETTER



*The American Association of Neurological Surgeons  
and  
Congress of Neurological Surgeons*



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### EVIDENCE BASED MEDICINE AND YOU

Evidence Based Medicine is becoming steadily more important in the current neurosurgical environment. The spine section is no exception and has responded enthusiastically to the call from our national leadership for EBM studies and Guidelines development. The spine and peripheral nerve section has had a subcommittee on Outcomes that dates back more than five years. Last year guidelines covering lumbar fusion were published in the *Journal of Neurosurgery: Spine* and the section has currently tasked a team under the direction of Paul Matz to generate guidelines in the area of cervical spondylosis.

What then is Evidenced Based Medicine and how does it relate to the way medicine was practiced in the pre-EBM era? At its core EBM is a system for applying the relevant literature in the most appropriate way for an individual patient with a particular clinical problem. It is a formalism that stratifies the literature into different classes based on the strength of the evidence. In EBM a Randomized Controlled Trail receives more emphasis than a case report. This is very similar to the process that surgeons have been employing to make sense out of the literature long before the buzzword EBM reached such prominence. EBM is the farthest thing in the world from *cook book medicine* or *medicine by committee*. In fact, EBM readily acknowledges that expert opinion and prior clinical experience are appropriate bases for clinical decision making especially for questions in which the literature does not provide strong guidance.<sup>i</sup>

Recognizing that EBM is built upon scientific principles that most physicians would readily endorse it is somewhat surprising that EBM has become controversial. To find the explanation we must look to politics rather than science. In situations where the literature does not provide evidence for a procedure, EBM principles can be perverted to suggest that the procedure therefore should not be done. This fits the agenda of payers who are looking to reduce their health care expenditures and plaintiffs who are looking for

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proof that a particular medical decision was inappropriate, however, its scientific underpinnings are disingenuous. The flaw in this reasoning was humorously exposed in a recent article regarding skydiving which concluded that there was insufficient evidence in the literature to recommend the use of a parachute when jumping out of an airplane and noted the need for a randomized controlled trial.<sup>ii</sup>

At its best EBM is a cognitive tool for clinicians to advance the delivery of health care. It is unfortunate that it has been misused at times to repudiate prior methods of health care and justify a lack of support for surgical treatments that do not enjoy demonstrated efficacy with Class I evidence. By putting epidemiologists and economists on par with physicians EBM is having an unintended but dramatic effect on the healthcare landscape. As spine surgeons we continue to care for patients one at a time and individualize our treatment recommendations. At the same time we should not throw the baby out with the bath water. There is much at the core of EBM that enhances our ability to care for patients even while we acknowledge that at times it is taken to absurd extremes. For my part, when my turn comes to jump I'm taking the parachute!

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<sup>i</sup> Sackett et al. Evidence-Based Medicine: How to practice and teach. Second Edition. Churchill Livingstone

<sup>ii</sup> Smith CG and Pell JP, Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomized controlled trials. BJM 2005