

## Research for Sanity and Survival

Anthony Rosner, PhD, LLD [Hon.], LLC

The American novelist F. Scott Fitzgerald once wrote, "The test of a first-rate intelligence is the ability to hold two mutually exclusive ideas in the mind at the same time and still retain the ability to function."<sup>1</sup> In looking over a few examples of the latest health care literature I deemed reasonably "definitive," I started to raise serious questions as to whether (a) my intelligence needed to extend well beyond the universe, or the mind of, say, J.S. Bach (whichever is larger) in order to accommodate a couple of conflicting concepts; and (b) whether I truly would be able to retain the functional capacity of a human being rather than a nematode.

Here is my problem: Like something out of Dick Tracy's "Crimestopper's Textbook," I've been asked to refute a statement that discredits cervical manipulation and that recently appeared in the National Guideline Clearinghouse paper on headache: "Previous studies suggested potentially high levels of risk with improper application of this modality. Although more recent studies report few complications, the scientific evidence is not convincing. There is well-documented evidence of cerebral infarction and death from cervical manipulation."<sup>2</sup>

On the same day I was asked to refute the above, almost as if by fate, I received an unsolicited copy of the *Physician's Guide to Alternative Medicine*, Vol. VII, under my door. Imagine my surprise when I read:<sup>3</sup>

"One of the myths about chiropractic is that spinal manipulation, especially cervical (emphasis added), is actually dangerous. In fact, the estimated risk of a major complication from cervical spine manipulation is 6.39 per 10 million manipulations and 1 per 100 million manipulations for lumbar spine manipulations.<sup>4</sup> This compares quite favorably to the other forms of therapy for the same conditions. The rate of serious complications for spinal surgeries is 15.6 per 1,000 surgeries and 3.2 per 1,000 subjects for NSAIDs."<sup>4</sup>

And this was written by an MD!

These diametrically opposed statements may be an amusing anecdote in and of itself until you realize - as they used to say in the entertainment magazine *Variety*, about a long-running and widely viewed production - this has legs! That is, these statements will be carried forward and digested by millions, including third-party payors who use this material to either approve or deny reimbursements for procedures carried out in practice. The falsehoods, unfortunately, will be accepted as gospel or, as has been said previously, "A lie can make its way halfway around the world before truth has time to put its boots on."<sup>5</sup>

This is why, more than ever, the practitioner has to come to grips with the ability to perform critical appraisal such as to be able to stare down and refute the misinformation that passes for definitive

information - something that I have to do seemingly on a daily basis, given the volume of misinformation and bias which affects the reporting of health care.

An ideal first step to be able to address this problem and come to grips with the research literature is for the practitioner to master the case study. For it is within his or her own practice that the physician has the opportunity to organize relevant information regarding an interesting patient and to meld that with information previously described in the scientific literature. And in that regard, FCER is pleased to report that very shortly, it will have posted an online CE course in cooperation with the postgraduate division of New York Chiropractic College on the essentials of appreciating, organizing and conducting a case study. The case study not only brings the practitioner into a closer dialogue with the research community, but also provides the first stepping stone to being able to review and discuss scientific information from a more critical and scholarly perspective.

Once you are comfortable with managing the basics of the case study, you would then be in the position to expand your understanding and appreciation of such larger clinical designs as the case series, the cohort study, or even a randomized clinical trial. I would regard mastering these advanced forms of clinical research design to be absolutely mandatory, in light of the following: Randomized clinical trials often present conflicting results, with the more highly cited works appearing to bear the brunt of these contradictions;<sup>6</sup> and even what one might regard as the most rigorous of clinical research designs, the meta-analysis, is extremely susceptible to bias with purely subjective criteria.<sup>7</sup> A far more extensive deconstruction of some of the flawed randomized clinical trials with clear implications upon the acceptance and practice of chiropractic appears elsewhere.<sup>8</sup> Eventually, one would hope that every practitioner would be able to stand up to the words of a neurologist I heard categorically deny that there were any clinical trials supporting the efficacy of various alternative medical therapies, including chiropractic.

It is the research that has come home to roost here; something that every practitioner needs to realize for his or her very survival, to say nothing of the chiropractic profession as a whole. The services and support of FCER are perhaps the most effective implements in the practitioner's toolbox to enable these increasingly urgent steps to be taken.

### References

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