Dynamic Chiropractic

CHIROPRACTIC (GENERAL)

Expanded Research Objectives: "You're Going to Need a Bigger Boat"

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Health sciences research, and chiropractic research in particular, have entered a new era in the face of crushing challenges to the American health care system.[1] With the advent of new research paradigms such as comparative effectiveness research[2-4] and the appearance of such welcome studies addressing the preventive aspects of spinal manipulation,[5-6] I can't help but think of a classic parallel from the movie "Jaws." It's when Chief Morton Brody [Roy Scheider] is out on Sam Quint's [Richard Shaw's] fishing vessel, chumming for the Great White Shark that has been gobbling up or otherwise maiming the citizens of Amityville one by one. When the primordial sea monster swims up to the boat for the first time, Scheider retreats to the wheelhouse in total shock and in subdued and quavering voice proclaims to the captain, "You're going to need a bigger boat!"[7]

What kind of boat are we talking about? When it comes to health care, it's obvious that we're witnessing an almost frantic search for the appropriate vessel, when you consider the succession of titles and missions of granting, and administrative agencies charged with directing the U.S. health care research initiative.

As I spelled out previously,[4] there has been a succession through no less than five agencies and the proliferation of at least nine in attempting to improve or otherwise levitate U.S. health care above its quality ranking of 37th on a worldwide list of 191,8 not to mention the fact that the life expectancy of individuals in the U.S. is far from first when compared to other countries.[9] And research and evidence paradigms have trundled through all manner of configurations and modifications of clinical research and evidence (pragmatic clinical trials, factorial design, preference trials, n of 1 design, randomized encouragement design, nonrandom quantitative assignment of treatment, whole systems research, and patient-oriented evidence that matters) to attempt to capture and reproduce the heart of a clinical experience.

Since 2000, no less an authority than David Sackett has pointed out that evidence-based medicine is no less than tripartite in its structure. This tri-legged stool not only takes the published and peer-reviewed literature into account [called "external evidence"], but also (b) the clinician's clinical judgment, and (c) patient values and expectations.[10] Wayne Jonas had added the invaluable contribution of challenging the traditional pyramid of clinical evidence – which touts systematic reviews, meta-analyses, and randomized controlled trials as the most qualified to direct a clinical decision – by offering what he has termed the *evidence house*, extending overdue recognition to the research contributions of the basic scientists, the epidemiologists and the economists.[11] It all adds up to taking into account a multiplicity of real-world factors, all of which influence the clinical outcomes and well-being of a particular patient.

I offer my own personal narrative as a classic case study to exemplify what may be widespread

disconnects in health care in the U.S. On my flight home from the ACC-RAC conference in Las Vegas, I had the unfortunate experience of having both my middle ears plug up and become infected upon the airplane's descent into Boston. Notwithstanding the fact that this felt like (I imagine) being continuously waterboarded, I plowed through a succession of health care professionals (two general practitioners, two ear, nose and throat physicians rated as tops in the Boston area, and three chiropractors) desperately seeking relief.

The ENT people, to their credit, held off on puncturing my eardrum with tympanostomy tubes, instead banking on an initial course of antibiotics to clear what was obviously an infection, followed by the use of nasal steroids and cholinergic agents. The chiropractors, on the other hand, emphasized the importance of the pterygoid and tensor veli palatini / tensor tympani muscles, which govern the opening and constriction of the eustachian tubes. Their manual methods and recommended exercises seemed to evoke a response to promote drainage – but it was slow and incremental in coming.

No health care professional offered even a whisper supporting the fact that *red peppers* and other spices that might be found in curries could turn out to produce the most productive drainage of any of the therapeutic approaches. My only regret was that I didn't get to the curries sooner, instead enduring three weeks of having my head enclosed in a bell jar before figuring out that a spicy dinner just might clear the congestion.

In retrospect, I have to say that I'm particularly astounded that the ENT folks paid virtually no attention to rehabilitating or exercising the eustachian tubes, simply declaring that one had to wait weeks or even months to let the drainage clear spontaneously. To their credit, on the other hand, they attacked the infection itself directly and expeditiously with antibiotics. On the chiropractors' side, it would have helped for them to at least assess the pros and cons of a short course of steroids to effect sinus and eustachian tube dilation. And certainly some recognition of the effects of red peppers – reported in the literature in basic research studies to stimulate a protein kinase,[12] increase the latency periods in response to thermal shock,[13] and block an autoimmune response which destroys pancreatic cells (thereby preventing diabetes in mice)[14] by *anyone* would have been of great, noninvasive, absurdly inexpensive clinical value.

It is here where one looks longingly for a research program – and ultimately a health care intervention – that is capable of encompassing a broad scope of nutritional, emotional and other lifestyle elements that are part and parcel of everyone's daily existence. My own migration into the field of applied kinesiology was driven by just this directive. As a functional neurology, AK emphasizes direct or reflex manifestations within the structure or function of the muscular system and, in theory, would have been most suited for managing my ear fluid that was trapped by muscle hypertonicity.

By employing a vast array of interventions (chiropractic techniques, SOT blocking, cranial technique, therapeutic massage, reflex therapies, acupuncture, exercises and stretches, nutritional supplementation, emotional support and modalities, and lifestyle changes), AK presents itself as sort of a double-edged sword. On the one hand, it breaks down the silos of therapeutic isolation that I have attempted to depict with my own case history; on the other, it presents immense challenges to the more traditional experimental models in which one attempts to limit or at least equalize all variables except those involved with the therapeutic approach. But this challenge is not insurmountable, instead demanding that we look at the big picture of employing appropriate and varied experimental designs.

Regardless of what professional persuasion one chooses to follow, it is clear that preventive health

care and the research that has accompanied it are in line to receive far more emphasis if the U.S. health care crisis is ever going to be brought under control. That is why it is so perplexing and maddening that the U.S. House of Representatives has actually just passed a bill to *eliminate* a visionary program (the Prevention and Public Health Fund) designed to help states and communities prevent diseases.

For a savings of $16 billion over an entire decade, the House, in its collective wisdom in tinkering with a trillion-dollar health reform, has poleaxed a concerted effort to prevent such chronic illnesses brought on by lifestyle decisions as diabetes, heart disease, and cancer.[15] It is taking us in precisely the opposite direction in which we need to go.

So, one could argue that all health care professions, in their need to rethink research priorities and methods of health care delivery – to say nothing of being battered politically – are in the same boat. That means, as Morton Brody so aptly proclaimed after sighting a horrific threat, that we're going to need a bigger boat.

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