Dynamic Chiropractic

CHIROPRACTIC (GENERAL)

A Strategy for Clinical Research: Theory Based but Outcome Oriented

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I must confess that the concept and title for this essay is a rip-off of commentary in the American Psychologist (1977) by Nathan Azrin, PhD. When first encountered during my graduate school years, it was as though a light had been turned on. There was indeed wonderful purpose for all the rigors of training as a clinician-investigator. There may also be some guidance in Dr. Azrin's perspectives for chiropractors and chiropractic investigators as the profession begins to evolve as a scholarly clinical discipline.

Azrin is an academic descendant of B.F. Skinner, and was trained in a strong theoretical tradition: the learning theories (i.e., a behavioral orientation). As an experimental psychologist (basic scientist) his goal was understanding the phenomena he explored. However, when his attention shifted to the application of behavioral principles to the practical problems of an institutionalized retarded population, he had to rethink his manner of approaching problems and his goals as an applied investigator. Among the ways he noted that clinical research differs from basic research:

- an emphasis on outcomes rather than conceptual analysis
- clinical significance rather than response simplicity
- diversity among patients vs. the homogeneity of controlled group studies
- a "systems" approach rather than single variables
- subjective preferences and responses rather than, or in addition to, more objective measures
- practicality and cost-effectiveness rather than statistical significance
- an interest in side effects rather than the central tendencies of groups

Dr. Azrin has some considerable authority in addressing this redirection of thinking, since he is credited with original clinical contributions in areas such as enuresis in retarded adults and normal children, toilet training, marital therapy, alcoholism and job finding. In each of these areas he found that the mere application of laboratory-derived principles of learning was inadequate to the successful resolution of real-world problems. Instead, he notes, that in each area to which he applied the various theories of learning, it was necessary to supplement his a priori constructs with the practical knowledge of the unique area he was studying. He found in many cases that new

principles, not predicted from the original theoretical model, emerged from these efforts to aid his clients in successfully resolving their difficulties. Truly, necessity was the mother of invention; patient-benefit was the goal.

This scientist-turned-clinical-innovator also argues that the development of successful clinical applications must often involve the study of "treatment packages" rather than the testing of isolated independent variables. Multi-component interventions were tested in an effort to produce clinical benefits, and only thereafter were the components of the package tested individually to determine "active ingredients." According to Azrin, "little seems to be gained by limiting oneself to partial benefits initially in order to achieve conceptual purity."

I suspect that there is wisdom in Azrin's perspective that we may tap into. Clinical research in chiropractic, I propose, would be well-guided were it "theory based, but outcome oriented." An interest in investigating brand name techniques is alright, but only so long as the primary emphasis becomes the search for patient improvements rather than an unreasoning defense of tradition. Our first responsibility, and the growing demand of the health care market, is to demonstrate patient benefits from the care that doctors of chiropractic provide. Accordingly, we might choose to investigate the clinical meaningfulness of subluxation, but would do so in order to produce beneficial outcomes in patients, rather than to "prove" some notion of "chiropractic principle."

I can think of at least one chiropractic friend who will be hard pressed not to consider this orientation "medical" or "therapeutic" in intent, and therefore "not true chiropractic." To this doctor I would suggest that we are at a very primitive stage of chiropractic knowledge, and it behooves us and better serves our clientele that we not box the profession into a one-true-theory or one-true-philosophy attitude toward the science of chiropractic. There is far too much potential benefit in this largely unknown phenomenon we call chiropractic for us to dismiss favorable clinical outcomes on merely theoretical bases. Symptoms are important, as are etiologies (if and when we can find them). Our ability to influence symptoms (e.g., via adjustment of subluxated vertebrae or other segmental dysfunctions) is part of what justifies chiropractors' status as holistic practitioners. If chiropractors are merely lesion-focused rather than patient-outcome-focused, then chiropractic would seem a technology rather than a profession.

Actually, subluxation-based chiropractic clinical research fits nicely into this modified-Azrin perspective, although clearly many other forms of the conservative care which DCs have traditionally provided also find a place in this approach. The critical ingredient is the focus on patient benefit, whether this derives from long-cherished theories and methods or from derivative theories and procedures or from notions of autonomic stimulation/inhibition by adjustment (a non-subluxation orientation to patient care). Our ability to produce changes congruent with the nature of patients' complaints (e.g., reduction in pain and other symptoms) and with society's need for economy (e.g., favorable cost/benefit ratios) could guide us toward renewed interest in the traditional chiropractic lesion, or in novel directions, some of which we may not now be able to imagine.

Some might object to this orientation on the grounds that the use of multiple simultaneous forms of clinical intervention make clear-cut delineation of cause-effect relationships more difficult to discern. The child with otitis media who responds favorably to a complex program of cervical adjustment and massage, endo-nasal technique, and the elimination of dairy products, may have improved for one or all of these (or perhaps some other) factors. If however we can demonstrate that the package reliably produces patient-benefit in a well-identified population, then we have the pleasurable secondary task of teasing out which variable or variable(s) are responsible for this improvement.

Or course, the options suggested herein are not available to those rigid ideologists who insist that subluxation-reduction is intrinsically beneficial (i.e., without reference to any other measurable function in the person). Nor is the flexibility needed for a clinical outcome program of research likely to be found among those who "know it works" before the research is conducted. Equally unlikely will be substantive contributions to the knowledge base from those who refuse to critically challenge their preconceived notions (hypotheses, theories) about subluxation, subluxation-detection and treatment methods. Clinicians who insist on their theories irrespective of data lack the critical attitudes and curiosity so essential to the research enterprise. And, as we have seen so often in recent years, those who insist on destroying the credibility of the scientific process in chiropractic by stretching the results of scientific studies (e.g., "research proves it ... chiropractic WORKS!") can continue to wreak havoc on the profession no matter how little or much we pursue scientific development.

One additional benefit from the "theory-based, outcome-oriented" strategy suggested here is the potentially significant contributions that individual doctors of chiropractic could make to the literature. The development of clinically effective treatment packages can proceed one patient at a time, and thereby lends itself to case study methods of research design and reporting (Keating, 1992). Here is a practical path that any doctor can follow: single-patient case descriptions of patients' clinical, social and economic outcomes under the skilled and creative care of chiropractors.

References

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