

Investigating the Ability of Chiropractors to Advertise on Their Website an Expertise in the Treatment of Pediatric Patients.

Charles L. Blum, DC

Charles L. Blum, DC is the Sacro Occipital Technique Organization – USA’s (SOTO-USA) research chair. He is also adjunct research faculty at Cleveland Chiropractic College – Los Angeles, associate faculty at Southern California University of Health Sciences, teaching cranial biodynamics and cranial technique, and associate faculty at Palmer College of Chiropractic – West teaching sacro occipital technique (SOT). Dr. Blum is a Certified SOT Cranial Practitioner, and on the peer review board of the Journal of Vertebral Subluxation Research and Journal of Chiropractic Medicine. He has lectured nationally and internationally, has written various SOT related texts, compiled SOT and cranial related research, and extensively publishes in multiple peer reviewed indexed journals and at research conferences from 1984 to the present. Dr. Blum is the SOTO-USA representative to the American Alliance of TMD Organizations and a Senior Clinical Instructor at the White Memorial Medical Center’s Cranial Facial/TMJ Clinic in Los Angeles, California.

The field of chiropractic is attempting to encourage the concepts of evidence-based care to chiropractors in clinical practice. This desire is to help support the ethics and integrity of chiropractic while at the same time protecting the public from any harm physically or financially. One avenue of this concern involves what a chiropractor might advertise on their website ^{1,2}.

There have been a few articles written about the level of evidence utilized by chiropractic national organizations’, chiropractic colleges’, and research organizations’ in brochures and on websites ^{3,4}. For instance in the Grod and Sikorski study “web sites were reviewed for claims related to chiropractic theories and methods for which there is currently inadequate scientific evidence, to the best of our knowledge ⁴.”

The Canadian Chiropractic Association guidelines describes in the “Consultation and Examination (Item 13): The chiropractor will recommend only those diagnostic procedures deemed necessary to assist in the care of the patient, and treatment considered essential for the well-being of the patient ⁵.” The challenge becomes determining what are the international chiropractic standards for colleges, the scope of practice, and what does the evidence based literature reveal?

When a chiropractor advertises that they can treat pediatric patients, infants and children, on their website what specific qualities make this appropriate. There are some reasonable and specific factors, which need to be considered:

- I. What is evidence based literature and what are the challenges for alternative healthcare providers? Does the evidence solely rest upon randomized controlled studies (RCT)? Are there limitations or alternatives**

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- to using RCTs as the prime determinant factor for allowing a doctor to advertise that they treat pediatric patients?**
- II. Are there studies that discuss the safety of chiropractic pediatric care?**
 - III. Is there an evidence base accumulation of chiropractic pediatric literature?**
 - IV. What are the commonly accepted chiropractic pediatric standards of care determined by the colleges and their accrediting organizations?**

1. Evidence Based or Informed Practice

Evidence-based practice (EBP) aims to apply the best available evidence gained from the scientific method to clinical decision-making⁶. It seeks to assess the strength of evidence of the risks and benefits of treatments (including lack of treatment) and diagnostic tests⁷. While this seems quite benign and reasonable there are some issues that make EBP not so simple. EBP has been used as a tool by policy makers, insurers, and opponents to complementary alternative healthcare to prevent professions such as chiropractic from exercising their best practice clinical decisions.

Alternative Healthcare, Evidence, and RCT Hurdles

There are particular challenges in the pediatric chiropractic field that are shared by other healthcare disciplines as well. Most notably, how can the chiropractic research community perform high level “randomized, triple-blind, placebo-controlled trials with allocation concealment and complete follow-up involving a homogeneous patient population and medical condition” with its limited resources. Before this high level of chiropractic research for the care of children can be performed there are some hurdles that will need to be vaulted. They include:

- 1. Written consent is essential for studies and there is some question whether a child’s consent can be superseded by the parent for the purposes of a research study⁸.
- 2. Most alternative healthcare professional organizations do not have the research infrastructure that is properly funded or have secondary research monetary support (e.g., pharmaceutical industry) for the highly costly triple blinded randomized controlled trials, that involve extensive recruitment, elaborate study design, a group of researchers to perform the study, statisticians to interpret the study’s results, and teams of researchers to write the study for publication⁹.
- 3. In all forms of healthcare, chiropractic not excluded, there is a profound disconnect between the doctors in practice and their profession’s researchers. Instead of an allied front each group tends to have an element of distrust as well as discounting what each has to offer. So, often times what clinicians find in

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practice is discounted by the research community as being biased, lacking in controls or sham comparative procedures, and ultimately anecdotal. On the other side of the fence the doctors in practice tend to see the “evidence” gathered by the research community to be out of touch with what is taking place in the clinical trenches ¹⁰.

Does the evidence solely rest upon randomized controlled studies (RCT)?

Alternative healthcare professions such as chiropractic have had a difficult time moving forward in the evidence based arena. In this climate the field of chiropractic is attempting to respond to its challengers. The Brontfort et al, study ¹¹ is one such response. Other responses involve assessing risk benefit ratio of comparative interventions as well as what has been found in clinical practice. It is important to remember that when we look at the evidence based practice credo, it states that part of this evidence involves the biological plausibility of a therapeutic intervention, case reports, and clinical judgment of the practitioner.

Therefore it is not uncommon for chiropractic practitioners of pediatric care to be challenged by the statement that there is no evidence to support chiropractic care of pediatric conditions. This is countered by stating that there is significant evidence, albeit not at the “high” level the challengers seem to require. So we come to a situation where both sides are highly selective and one might say, “biased” in the choice and application of the current research.

There has been a large reliance upon the recent Brontfort et al study ¹¹, which has stated, “In children, the evidence is inconclusive regarding the effectiveness for otitis media and enuresis, and it is not effective for infantile colic and asthma when compared to sham manipulation ¹¹.” Their conclusions were solely based upon, “... the results of systematic reviews of randomized clinical trials (RCTs), widely accepted and primarily UK and United States evidence-based clinical guidelines, plus the results of all RCTs not yet included in the first three categories ¹¹.” While RCTs are considered to have a higher degree of evidence relying on RCTs presents an inherent bias by not offering weight to case reports, expert opinion, and practitioner’s clinical judgment.

Concato et al questioned the sole reliance upon RCTs to base clinical guidelines, and they concluded that, “... results of well-designed observational studies (with either a cohort or a case-control design) do not systematically overestimate the magnitude of the effects of treatment as compared with those in randomized, controlled trials on the same topic ¹².” The issue with all research, RCTs included, is that they can only share guidance and all aspects of the field of “evidence” needs to be used to develop proper informed chiropractic clinical practice. For instance, Alcantara ¹³ gives an example challenging Bronfort, et al’s study ¹¹ relating to the effectiveness of manual therapies for various conditions. He stated,

“I believe Bronfort and colleagues are wrong in their conclusion regarding the evidence for colic. If one closely examines the clinical trials on chiropractic spinal

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manipulative therapy (SMT) and infantile colic, you will find that no study exists comparing chiropractic SMT versus sham therapy.

“Now, sham therapy has been defined as a procedure that closely mimics the active procedure, but remains inert with respect to the specific effects of the active treatment. Wiberg and colleagues compared the effects of chiropractic SMT versus simethicone, a common medication for infantile colic. Browning and colleagues compared the effects of chiropractic SMT and occipito-decompression in infantile colic. Finally, Olafsdottir and colleagues compared an unproven chiropractic technique versus "no treatment."

“Wiberg and colleagues found chiropractic superior to simethicone; Browning and colleagues found both techniques decreased the hours of crying compared to baseline; and Olafsdottir and colleagues found their chiropractic technique as ineffective. So, the bottom line is, there is some evidence in support of chiropractic care for infantile colic ¹³.”

The challenges to RCTs are occurring not because chiropractor practitioners want to perform care that is unethical or irresponsible, but because the emerging chiropractic literature has not yet caught up with what is commonly taking place in clinical practice. These chiropractic pediatric clinical studies have been routinely published within chiropractic pediatric journals ^{14, 15} for years.

Another challenge to the sole use of the RCT to reach an evidence-based determination has been made by Anthony Rosner, PhD (past research director of the Foundation for Chiropractic Education and Research).

Dr. Rosner notes that “in the space of just about a decade, health policy-makers have begun to move away from a base of only randomized clinical trials and meta-analyses to a triad of decision-drivers that also includes clinical judgment from experience ¹⁶ and the empowerment of the patient through their values, expectations and requests. This is precisely why the term evidence-based medicine has only recently fallen out of favor, being replaced by the moniker, evidence-informed medicine ¹⁷⁻⁹.”

Rosner has shared a quote from the American social scientist Donald Campbell, "More and more I have come to the conclusion that the core of the scientific method is not experimentation per se, but rather the strategy connoted by phrase, 'plausible rival hypotheses.' ... We should use those singular event case studies [which can never be replicated] to their fullest, but we should also be alert for opportunities to do intentionally replicated studies. ... I like to believe that this shift was facilitated by ... laboratory research on that most hard-to-specify stimulus, the human face, and that this experience provided awareness of the crucial role of pattern and context in achieving knowledge ²⁰."

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2. Are there studies that discuss the safety of chiropractic pediatric care?

Before anyone can advocate a method of care it must be determined if it is safe and how it compares to other methods such as watching and waiting, medications, and surgical interventions. When we look at the various studies evaluating the risk of chiropractic treatment, we find the risk to be rare and infrequent.

The ICPA PBRN study by Alcantara et al, described how 264 “chiropractors reported on 512 children. An adverse event (AE) prevalence of 0.67% was calculated. In terms of risk estimates, 880 cases for a first AE, 141 cases for a second AE and 28 cases of a third AE would occur if we followed 1 million children under chiropractic care in one year. Four hundred forty nine parents independently reported on 449 children under chiropractic care. An AE prevalence of 4.45% was found. Risk estimates indicated that 978 cases of a first AE and 172 cases of a second AE would be expected if 1 million children under chiropractic care were followed for one year ²¹.”

They continued that their “findings confirm previous findings that children attend chiropractic care for wellness and to address dysfunctions of the neuromusculoskeletal system and conditions of childhood. With respect to safety, we found a relatively higher prevalence of (AEs) attributed to pediatric SMT than previously reported but confirm these AEs to be minor and self-limiting. This is the first reporting of risk estimates for AEs from pediatric chiropractic SMT and supports its safety. Parents indicated a high-perceived effectiveness with chiropractic care ²¹.”

Other studies exploring the issues of safety and risk of chiropractic care of children have found that chiropractors trained in pediatric care offer a significant low risk option ²²⁻⁵ and that “serious adverse events are rare and much less than for medication commonly prescribed for these problems ²⁶.” So with the risk from chiropractic care being very low and the safety therefore considered good the next step is to investigate if there is evidence to support its benefit.

3. Is there an evidence base accumulation of chiropractic pediatric literature?

We know that chiropractors have been successfully treating children for years ²⁷ and a recent study in the Journal of Alternative Complementary Medicine supports this contention ²⁸. Reviewing the literature, it is noted that in 2009-2010 the Journal of Manipulative and Physiological Therapeutics ²⁹ and the Journal of Chiropractic and Osteopathy ³⁰ had journal issues dedicated predominately to chiropractic care of children. Additionally, two journals have the focus of their publications specifically on the chiropractic care of children: the Journal of Clinical Chiropractic Pediatrics ¹⁴ and the Journal of Pediatric, Maternal & Family Health ¹⁵. A brief review of their table of contents will reveal hundreds of chiropractic pediatric published studies. Also a review of all the chiropractic peer review journals would similarly yield at least one hundred chiropractic pediatric studies.

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What programs and conferences are taking place to build a chiropractic pediatric evidence base?

- a. A practice based research network (PBRN) is defined as practitioners devoted principally to the care of patients and also affiliated with each other for the purpose of revealing the phenomena of clinical practice occurring in their communities. The development of such a network by the International Chiropractic Pediatric Association (ICPA) has taken place and is conducting research relevant to the pediatric chiropractic and develop evidence-based practice models for family based doctors of chiropractic ³¹.
 - b. All fields of healthcare have research conferences, which are venues where researchers and clinicians can come together to learn and share. Just as it is important for the doctors in practice to understand research and evidence based practice the research arena needs to hear the voices from the doctors in clinical practice. While there are other chiropractic research conferences, the two largest ones are the Research Agenda Conference (RAC)/ Association of Chiropractic Colleges (ACC) ³² or the World Federation of Chiropractic (WFC)/International Conference on Chiropractic Research (ICCR) ³³. At these conferences it is common to see many research presentations and posters that illustrate chiropractic care of children.
 - c. While there may be research protocols higher up the evidence based hierarchy, doctors in practice need some way of communicating what is commonly occurring in their clinical practice. A conference such as the ICPA Wellness Conference, taking place in Washington, DC, USA October 21st 2010 and its proceedings offers just such a venue. This is one way clinicians can share with the research community and hopefully help guide future research endeavors and studies.
- 4. What are the commonly accepted chiropractic pediatric standards of care determined by the colleges and their accrediting organizations?**

The Council on Chiropractic Educational represents an organizational oversight for chiropractic colleges and so that the chiropractic profession can adequately monitor what is taught in the undergraduate programs and set minimum standards for participant member colleges. The Council on Chiropractic Educational International member groups include Australia, New Zealand, Canada, United States, and Europe at this time. Each of the following members have minimum standards which require that a college must teach pediatrics: Council on Chiropractic Education Australasia (CCEA) ³⁴, Canadian Federation of Chiropractic Regulatory and Educational Accrediting Boards (CFCREAB) ³⁵, Council on Chiropractic Education United States of America (CCE) ³⁶, European Council on Chiropractic Education (ECCE) ³⁷.

Conclusion:

Therefore within the chiropractic community chiropractic pediatrics is a mandatory course within the chiropractic undergraduate program. Doctors are exposed to

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chiropractic pediatric post-graduate seminars and the majority of chiropractic published literature supports chiropractic care of children. Chiropractic care of children is safe and offers a conservative option to more invasive and higher risk alternatives. Parents and the public, in general, are looking for alternative care and chiropractic care is one of the large groups represented in the field of complementary alternative medicine (CAM). It is both reasonable and incumbent upon chiropractors trained in pediatrics to have a vehicle where they can share with the public their expertise, and their website should be an appropriate and acceptable venue.

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