

Commentary: Competencies and Standardization in Chiropractic Pediatric Education: An Opinion on Taking the Next Step

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Competencies and standardization for any profession are a sign of a well-established, healthy organization. Educational as well as professional competencies and standardizations are currently in place to ensure the safety and effectiveness of the chiropractic profession. Different versions of codes of ethics are globally available to guide clinicians and safeguard the public according to each country and region.^{1,2,3}

The chiropractic profession has evolved and expanded to create several special interest groups over the years. These include sports, orthopedics, pediatrics, radiology, neurology and animal chiropractic. Unlike the global standardization of the chiropractic profession as a whole, there is a lack of guidelines in terms of special interest groups in general, as well as more specifically in the pediatric chiropractic arena.

It is understood that undergraduate chiropractic education is predominantly concerned with the development of education to further safe and effective practice for chiropractors to serve their community and adhere to evidence-based, collaborative healthcare standards.⁴ Although an introduction to special and specific population groups (athletes, geriatrics and pediatrics) are made in the undergraduate curriculum, this is to provide the students exposure to the practice of chiropractic and how it can be applied at different ages in a community's life span. Further training in the specific interest groups is offered at a post graduate level. In 2016, Hewitt, et.al. *Core Competencies of the Certified Pediatric Doctor of Chiropractic: Results of a Delphi Consensus Process* it was stated that, "All doctors of chiropractic are adequately trained in basic pediatric skills and are licensed to examine, treat, and manage pediatric patients."⁵

The goal of this commentary is to examine, in 2022, the education offered to the chiropractic profession, around the world. What does the current curriculum in undergraduate education provide students in chiropractic pediatrics education? Are there any discrepancies between institutions in the curriculum or delivery of undergraduate chiropractic pediatric courses? Are all graduates competent in treating pediatric cases? To further education, what are the additional postgraduate opportunities that are available to globally achieve the above standard in chiropractic pediatric education?

In the 2016 paper, Hewitt et al. stated that there are core

competencies that must be met following the completion of a postgraduate education. "Many of these skills naturally overlap with those of the general doctor of chiropractic. Normalizing these competencies does not imply that only certified pediatric doctors of chiropractic may treat children; rather, the certified pediatric doctor of chiropractic has obtained a deeper knowledge and skillset compared to the general doctor of chiropractic."⁵ Therefore, the skillsets for chiropractors in the area of pediatrics have been found adequate.

Table one (Pages 1856-1857) shows all current undergraduate chiropractic programs which provide specific pediatric education. The information was gathered from their published information at the time this paper was written and could be incomplete. What the table does show is that there are discrepancies in pediatric chiropractic education in undergraduate chiropractic university programs. Undergraduate pediatric chiropractic education is currently taught in 14/19 schools in North America (73%), 4/8 in Latin America (50%), 5/12 in Europe (42%), and no information is available on the 7 schools in Asia and two in Africa.

The comparison of contact hours and credit hours for pediatrics in the undergraduate programs, not only between schools on different continents but also neighboring countries, may be difficult and this must be taken into consideration by those who regulate chiropractic education, international chiropractic examining bodies and political bodies within the chiropractic profession. This is the time to regroup, reflect and create undergraduate competencies that all approved/accredited chiropractic institutions could adopt to ensure consistency in chiropractic pediatric education. If a baseline of fungible curriculum content were adopted by every undergraduate chiropractic program, it would serve to ensure that all students were credentialed to provide safe care for the pediatric patient.

Are all graduates competent in treating pediatric cases?

This is a good time to evaluate current undergraduate pediatric chiropractic education in terms of theory and contact hours ("hands on time") and chiropractic techniques considered appropriate or modifiable for the pediatric population. In addition, it is appropriate to compare and contrast areas that need to be standardized to establish competencies that apply across the board. Moreover, it is paramount that students understand current research and

are able to utilize such to support their work within special interest groups and to educate the public.

Taking a broad view of the current landscape of undergraduate chiropractic pediatric education, it is appropriate to review the discrepancies in the way undergraduate chiropractic pediatric courses are taught:

- There are a number of differences in the credit hours, course material, hands on experience and amount of educational material provided between educational institutions based in different countries and continents.
- Observing that this is a challenge faced by other professions, like allopathic medicine, allows an opportunity for interprofessional learning. Self-perception surveys on whether the courses fulfill certain criteria /are efficiently preparing students to meet basic competencies is one way utilized by medical educational research to evaluate such points.⁶ Additionally, performing cross sectional studies and comparing material against competencies in chiropractic pediatric education may support and enhance undergraduate chiropractic pediatric courses.
- Are all graduates competent in treating pediatric cases, considering that children are not 'small adults' and if not, what are the additional postgraduate opportunities available?^{7,8}

More information is needed to draw robust conclusions on these questions. Considering the discrepancies in hours of course delivery and with little information on the quantity and quality of education of new graduates, it is difficult to ascertain whether all graduates have been provided with adequate undergraduate training in pediatrics. Thus, the development of competencies in the basic knowledge and skills to treat children as chiropractors is paramount with the caveat that a graduate can pursue further education in pediatric chiropractic. This can be informed, for example, by the 'Tuning Education Project'.⁹

According to the *Core Competencies of the Certified Pediatric Chiropractor* - Hewitt, et al. 2016 state that, "These postgraduate programs entail between 280 and 400 hours of training taken over 2 to 3 years. As the purpose of these postgraduate training programs is to expand on and deepen the knowledge base obtained during the undergraduate chiropractic curriculum, the resulting competencies (applied to them) will be a combination of both the basic chiropractic training and the additional acquired skills."⁵

Current Chiropractic Profession organization structure

Chiropractic is organized in three tiers, local (National Associations), regional (European Chiropractors Union, Latin American Chiropractic Federation (FLAQ), East Mediterranean Middle East Chiropractic Federation (EMMECF), African Federation etc.) and global level of governance World Federation of Chiropractic (WFC). In this

manner, chiropractors are represented in the organizations that create practice policies in over 90 countries.

An excellent example of this structure of command and regulation is observed amongst one of the special interest groups, sports chiropractic International Federation of Sports Chiropractic: (FICS). This special interest group enrolls members who comply with the existing undergraduate chiropractic education requirements and further build upon their knowledge and skills following graduation. Although pediatrics is one of the popular special interest groups within the profession, the FICS structure is not mirrored. A lack of three-tiered (national, regional and global) regulation and representation is observed. Some isolated attempts are seen in different counties such as the Royal College of Chiropractors - Pregnancy and Paediatric Faculty in the UK, Australian College of Chiropractic Paediatrics (ACCP), American Chiropractic Association (ACA) Pediatrics Council and International Chiropractic Association Pediatrics Council.⁹ Despite attempts from local associations to create unity and discipline members with guidelines at a local or regional level, there is yet to be a more universal level of organization and competencies to follow.

Creating the three tiers of regulation allows for national cultural consideration, ethical consideration and community customs of each country to be taken into play. Similarly, regional representation can have an overview and collate data from each country and relay information to and from the global representation. It is appreciated that different geographical regions have unique requirements in terms of education. However, the core competencies for chiropractic care of the pediatric patient could be universally accepted and implemented aiding in reduction of educational discrepancies. This ensures a baseline minimum standard of pediatric chiropractic education that provides a guideline for the safety of both the patient and the practitioner.

As seen in the latest professional scoping review by Beliveau et.al 2017, only five articles were cited that included the pediatric patient population.¹⁰ An organized attempt to provide fungible education would help structure and provide more impactful and meaningful and plentiful pediatric research as well.

2022 is an exciting time for the pediatric chiropractic community as a number of initiatives around the world are being or have been put in place to address these concerns. In Europe, especially in the UK, the Royal College of Chiropractic (RCC) and the European Chiropractors' Union (ECU), special interest group (SIG) paediatrics, are drafting history and examination forms that would help standardize the baseline for chiropractic practitioners.¹¹ Similarly in Australia, there is a world-wide consensus

Name of institution	Location	Is undergraduate chiropractic pediatric education offered?	Is post graduate pediatric education offered?
USA			
Life Chiropractic College West ¹⁹	California	Yes - 3 credits	No
Cleveland University-Kansas City, College of Chiropractic ²⁰	Kansas City	Yes 3.5 credits	No
D'Youville College ²¹	Buffalo, New York	Yes - 2 credits	No
Keiser University ²²	Florida	Yes - 3 credits	No
Life University ²³	Georgia	Yes (22h contact)	No
Logan University ²⁴	Missouri	Yes 2 credits	YES
National University of Health Sciences ²⁵	Illinois	Yes - 3 credits	No
Northeast College of Health Sciences ²⁶ (formerly New York Chiropractic College)	New York	Not stated	No
Northwestern Health Sciences University ²⁷	Minnesota	Yes - 2 credits	No
Palmer College of Chiropractic ²⁸	Iowa	Yes	YES diplomate-certificate-programs
Parker University ²⁹	Dallas,Texas	Yes 4 credits	No
Sherman College of Chiropractic ³⁰	South Carolina	Yes - 4 credits	No
So California University of Health Sciences ³¹	California	Yes - 4 credits	No
Texas Chiropractic College ³²	Pasadena, Texas	Yes	No
University of Bridgeport ³³	Connecticut	Not stated (may be part of special groups module)	No
University of Western States ³⁴	Oregon	Not stated (may be part of special groups module)	No
Canada			
Canadian Memorial Chiropractic College ³⁵	Toronto, Ontario	Yes (not stated)	No
Université du Québec à Trois-Rivières ³⁶	Trois-Rivières, Québec	Not stated	No
Latin America			
Mexico			
Universidad Estatal del Valle de Ecatepec ³⁷	Estado de Mexico	Yes 4h	No
Universidad Estatal del Valle de Toluca ³⁸	Ocoyoacac, Mexico	Yes	No
Universidad Veracruzana ³⁹	VER, Mexico	Not stated	No
Chili			
Universidad Central de Chile ⁴⁰	Santiago, Chile	Not stated	No
Puerto Rico			
Universidad Central del Caribe - Doctor of Chiropractic Program ⁴¹	Bayamón, Puerto Rico	Not stated	No
Brazil			
Centro Universitario Uceff ⁴²	Chapecó, Santa Catarina	Yes 4 credits	No
Universidade Anhembi Morumbi ⁴³	São Paulo	Yes 4 credits	No
Universidade Feevale ⁴⁴	Novo Hamburgo,Rio Grande do Sul	Not stated	No
EUROPE			
Denmark			
Syddansk Universitet Odense ⁴⁵ (University of Southern Denmark)	Odense, Denmark	Not Stated	No
France			
Institut Franco-Européen de Chiropratique ⁴⁶	Campus de Paris	Yes	No
Institut Franco-Européen de Chiropratique ⁴⁷	Toulouse, France	Yes credits not stated	No
Spain			
Barcelona college of Chiropractic ⁴⁸	Barcelona, Spain	Not stated	No
Madrid College of Chiropractic-RCU ⁴⁹ (formerly RCU College of Chiropractic)	Madrid, Spain	Yes as part of other special population module	No

Name of institution	Location	Is undergraduate chiropractic pediatric education offered?	Is post graduate pediatric education offered?
Sweden Skandinaviska Kiropraktorhögskolan ⁵⁰ (Scandinavian College of Chiropractic)	Stockholm, Sweden	Not stated	No
Switzerland University of Zurich ⁵¹	Zurich, Switzerland	Yes	No
United Kingdom AECC University College ⁵²	Bournemouth, UK	Not stated	Yes
London South Bank University ⁵³	London, UK	Not stated	No
McTimoney College of Chiropractic ⁵⁴	Abingdon, UK	Not stated	Yes
Teesside University ⁵⁵	Middlesbrough, UK	Yes - as part of other modules special population	No
University of South Wales - Welsh Institute of Chiropractic ⁵⁶	Welsh, UK	Not stated	No
Africa Durban University of Technology ⁵⁷	Durban	Not stated	No
University of Johannesburg ⁵⁸	Johannesburg	Not stated	No
Asia New Zealand New Zealand College of Chiropractic ⁵⁹	New Zealand	Not stated	No
Australia Central Queensland University ⁶⁰	Queensland, Australia	Not stated	No
Macquarie University ⁶¹	New South Wales, Australia	Not stated	No
Murdoch University ⁶²	Murdoch WA	Not stated	No
RMIT University ⁶³	Melbourne, Australia	Not stated	Yes
Japan Tokyo College of Chiropractic ⁶⁴ (formerly RMIT University Chiropractic Unit Japan)	Tokyo, Japan	Not stated	No
Malaysia International Medical University ⁶⁵	Malaysia	Not stated	No

Table 1: Summary of all chiropractic education institutions, pediatric chiropractic education¹⁹⁻⁶⁵

process being developed to provide standards of practice for chiropractors who see pediatric patients, as a follow-on to the Safer Care Victoria report.¹² When these endeavors are added to the widely accepted best practice consensus processes previously published,^{5,13,14} including the current examination of chiropractic pediatric education, the profession's undergraduate and postgraduate curriculum is designed to keep the pediatric patient safe. Adverse events in this age group under chiropractic care have been found to be exceedingly rare.^{12,15-18} It is of utmost importance that a focus on education ultimately provides a focus on safety. Keeping the patients of this profession safe, as it has proven to be in the last 100 years, is of primary importance.

Conclusion:

In conclusion, ensuring a uniform minimum undergraduate education in pediatric chiropractic will raise the standard of education, skill set and experience of chiropractors and allow an easier transition to this domain's postgraduate studies. This could potentially allow doctors of chiropractic to hold the credential of 'expert in the pediatric MSK (PMSK) field' through development and maintenance of rigorous standardized competencies.

It is this author's sincere desire to see all organizations involved in pediatric chiropractic education come together to strengthen the education provided, create consistency

in education and enhance the professional level of care offered and provide enhanced and continued safety for the patient. Creating three-tiered chiropractic pediatric special interest groups would enhance and develop the consistent

collection of data and support of current research as well as inform future research needed to be done in areas such as safety, effectiveness and clinical management of pediatric chiropractic care.

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