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Chiropractic residencies and fellowships as continuing education: a review of chiropractic state boards policies

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Abstract

Objective To review United States chiropractic state boards acceptance of chiropractic residencies and fellowships as continuing education (CE).

Methods Between February 2024 and April 2024, board websites and accompanying policy documents for all 50 states and the District of Columbia were manually searched for content related to residencies and fellowships and whether they were considered CE. Information regarding CE credit requirements for new licensees was also collected. Results were tabulated in a spreadsheet and descriptive analysis was performed. Consensus among a minimum of 5 of 6 investigators was sought.

Results Four states (Arizona, Indiana, Kansas, and Minnesota) accept residencies or fellowships for CE credit, 6 states possess unclear regulatory language regarding these programs, and 41 states make no mention of these training programs among approved CE. Twenty-one states required CE credits during a licensee's initial renewal period, 1 state was unclear based on website content alone, and 29 states did not mandate CE for initial license renewal. More than 90% (19/21) of states that require CE for a licensee's first renewal do not or are unclear if they accept residencies or fellowships for credit.

Conclusion Few chiropractic state boards currently accept residencies and fellowships as approved CE. As the number of these postdoctoral training programs for chiropractors grow, more state boards may be asked to determine their CE policies on them.

Keywords Chiropractic, Education, Residency, Fellowship, Continuing Education, Postgraduate

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Introduction

Chiropractic licensure in the United States (US) is established and overseen at the state level, with requirements set forth for license renewal varying by state [1]. In order to retain a license, chiropractors must demonstrate continued professional competence through continuing education (CE) [1]. Those who fail to obtain adequate CE face repercussions including fines, license suspension or revocation [1]. In its 2010 report *Redesigning Continuing Education in the Health Professions* the Institute of Medicine (now the National Academy of Medicine) described the purpose of CE as two-fold: to reinforce current practice and translate new knowledge into practice [2].

CE credits are the “currency” of CE activities and function as a proxy of instructional contact hours. To be considered by a chiropractic state board for CE credit, an educational activity generally must satisfy several conditions: (1) the activity must be sponsored by a chiropractic institution accredited by the Council on Chiropractic Education (CCE), chiropractic specialty council, or other national or state chiropractic organization, (2) the material must be developed and presented by subject matter experts, (3) the content must be pertinent to chiropractic art, science, philosophy, or practice, and (4) attendees must achieve specific learning objectives [3]. Chiropractic CE generally encompasses several formats including seminars, workshops, conferences, and distance learning activities, and take place over the span of hours or days [4]. CCE serves as the primary accrediting agency for both doctor of chiropractic and postgraduate chiropractic residency programs in the US [5, 6].

Recently, a number of US-based interprofessional postgraduate training programs for chiropractors have been identified [7]. Among these are various integrated clinical practice residencies and multi-year research fellowships. As of 2024, 11 chiropractic residencies possess direct accreditation through CCE [8]. No fellowships currently possess CCE-accreditation. Chiropractic residents in the Veterans Affairs (VA) participate in year-long training programs in which they spend approximately 1,250 hours in patient care, 250 hours on interprofessional rotations, and 350 hours engaging in scholarly activities such as appraising scientific literature, delivering presentations, and assisting in on-going research projects [9]. These experiences ensure the resident’s attainment of 7 core competencies stipulated by CCE curricular standards in areas such as collaborative practice, clinical service, and interpersonal communication skills [9]. Chiropractors have participated in 2 to 3-year long postdoctoral fellowships at institutions such as Yale University, Harvard University, and Dartmouth College. During these programs, chiropractors work closely with senior faculty mentors on current and prospective research projects, with several culminating in the attainment of a master’s degree

following concurrent course work in areas such as public health and health care research [7].

Interprofessional continuing medical education activities have historically lacked representation among accepted CE by chiropractic state licensing boards, with one study reporting that nearly three-quarters of boards did not accept these activities to apply to re-licensure credit requirements [10]. Given the extensive education and time commitment of both residents and fellows during their respective training programs, such additional CE requirements may represent a barrier to program implementation or licensee participation. Moreover, nearly 90% of VA chiropractic residents are within 2 years of having graduated from chiropractic school, suggesting that many of these individuals will likely be seeking or have recently received their state license [11]. It is therefore important to examine to what extent state boards accept these training programs toward CE credit requirements for initial license renewal. This lack of foundational knowledge presents a barrier to analyzing and supporting the inclusion of these advanced interprofessional educational programs among eligible CE. The aim of this study was to report how US chiropractic state board websites represent policies for accepting chiropractic residencies and fellowships as CE.

Methods

This cross-sectional study is reported in accordance with the Strengthening the Report of Observational Studies in Epidemiology (STROBE) guidelines [12]. According to the Office for Human Research Protections Decision Trees, this does not constitute human subject research and therefore does not require submission to an Institutional Review Board [13]. Between February 2024 and April 2024, US chiropractic state board websites were manually queried by 3 separate investigators (SMS, MRC, MRP). The study design was modeled after prior studies that located and reviewed chiropractic state board websites for guidance during the COVID-19 pandemic [14, 15]. The Federation of Chiropractic Licensing Board website was used to identify the boards of all 50 states and 1 federal district (District of Columbia [DC]) [1]. In the event a hyperlinked website was unobtainable by these means, websites were accessed using internet search engines (e.g., Google or Bing). If websites remained undiscoverable, they were excluded from eligibility.

Data collection

Once on the homepage, each investigator navigated to the CE, license renewal, and Frequently Asked Questions sections of the board’s website and manually searched each page for content related to chiropractic residencies or fellowships. Information regarding CE credit requirements for new licensees (i.e., those possessing an initial

license who have not yet obtained their 1st renewal) was also queried. If an administrative code was nested within any of these sections, it was probed in an identical manner. In instances when a state possessed a pre-approved CE course roster, the “find” function, “control+f” (or “command+f” depending on the operating system), was utilized in conjunction with truncated search terms. We elected to truncate the term “residency” and “fellowship” to “residen” and “fellow”, respectively, to ensure we exhaustively captured every iteration of the terms (i.e., residency, residencies, resident, fellow). Additionally, we incorporated a broader term, “postgrad”, into our search-and-find methodology to encompass instances of more general classification of these two programs under postgraduate training or education and to reduce the likelihood that programs were missed secondary to incongruent terminology.

Data extracted included whether residencies or fellowships were counted toward CE credit requirements, the number of credit hours approved for these training programs, and the number and type of CE credits required for licensees who obtained their initial license during the current reporting period. Five categories were developed to describe the dataset, including: yes, yes with conditions (i.e. CE credits were required for 1st renewal but were prorated based on date of initial licensure), unclear (i.e. insufficient information to determine categorization based on board’s web content alone), no, and no with conditions (i.e. CE is not required for newly graduated licensees or the only education required is a mandatory state-specific course).

Data analysis

Data were imported into an Excel spreadsheet (Microsoft Corp, Redmond, WA) for tabulation and descriptive analysis. In total, 6 reviewers participated in data collection. Among these, 3 investigators (SMS, MRC, and MRP) independently performed the initial search. Interrater agreement was estimated using Cohen’s kappa statistic (κ), with $\kappa=0.01-0.20$; $\kappa=0.21-0.40$; $\kappa=0.41-0.60$; $\kappa=0.61-0.80$; $\kappa=0.81-1.00$ indicating slight, fair, moderate, substantial, and nearly perfect level of agreement among reviewers, respectively [16]. Any cases of differential agreement were arbitrated among the investigators with cases of unanimous “unclear” categorization passed on to 3 additional investigators (FMB, BM, and KLC) for review. If categorization differed among these 3 investigators, all 6 repeated the protocol and discussed until consensus among a minimum of 5 of 6 reviewers was achieved.

Results

We were able to locate the board websites for all 50 states and DC. On initial search, there was moderate agreement among the 3 reviewers, $\kappa=0.43$. Through iterative discussion, consensus was achieved on all but 6 states for residency/fellowship inclusion in CE and 7 states for new licensee CE credit requirements. These retained “Unclear” categorization. Upon review by the 3 additional investigators, all 6 states initially designated “Unclear” for residencies and fellowships remained so. Concerning CE requirements for initial licensure, all 7 states possessed differential categorization by at least 1 of the investigators. As a result, the search strategy was repeated for these states (Louisiana, Massachusetts, Michigan, Oklahoma, North Dakota, Rhode Island and Wyoming) by all 6 investigators. After discussion, 4 states converted to “Yes”, 1 to “No”, 1 to “No with conditions” and 1 remained “Unclear”. Consensus among a minimum of 5 of the 6 investigators was achieved.

Our search strategy revealed 4 states (Arizona, Indiana, Kansas, and Minnesota) that accept or have accepted residencies or fellowships for CE credit, 6 states (Connecticut, Maine, Maryland, Massachusetts, Rhode Island, and Vermont) that possess unclear regulatory language regarding these programs, and 41 states that make no mention of these among approved CE (Table 1). Collectively, 21 states necessitated CE for a licensee’s first renewal. Of these, 13 states required the entire reporting period’s amount of CE while 8 required a prorated amount based upon the date of initial licensure. Only 2 states (Indiana and Arizona) that require CE for a licensee’s first renewal also accept residencies or fellowships for CE credit. Twenty-four states did not mandate any CE for initial license renewal while 5 (Iowa, Kentucky, North Carolina, West Virginia, and Wyoming) only had to complete a mandatory course (i.e., state-specific jurisprudence seminar) or have recently graduated from chiropractic school (and thus were considered “CE exempt” for reporting purposes). One state was “Unclear” based on website content alone.

Discussion

The chiropractic profession does not require the completion of a residency or fellowship program to practice in any state [1]. Rather, these training programs are optional and center on developing advanced postgraduate clinical and/or research acumen [6, 7]. We sought to assess chiropractic state board websites and report the representation of chiropractic residencies and fellowships among approved CE. Our findings support that currently there is limited inclusion of these training programs toward relicensure credit requirements, with only 4 states explicitly accepting them. We also demonstrated that variable

Table 1 Review of Chiropractic Continuing Education (CE) requirements summarized from State Board Licensure Requirements posted online in 2023. Table displays whether the state board explicitly stipulates that chiropractors may submit documentation of their participation in postgraduate clinical training programs to satisfy CE requirements and CE requirements for 1st renewal period

State (Including D.C.)	Residency/ Fellowship for CE	CE required during 1st renewal
Alabama	No	Yes
Alaska	No	No
Arizona	Yes	Yes
Arkansas	No	Yes*
California	No	No
Colorado	No	Yes
Connecticut	Unclear	No
Delaware	No	Yes
District of Columbia (D.C.)	No	No
Florida	No	Yes
Georgia	No	No
Hawaii	No	Yes*
Idaho	No	No
Illinois	No	No
Indiana	Yes	Yes*
Iowa	No	No*
Kansas	Yes	No
Kentucky	No	No*
Louisiana	No	Unclear
Maine	Unclear	No
Maryland	Unclear	Yes*
Massachusetts	Unclear	No
Michigan	No	Yes
Minnesota	Yes	No
Mississippi	No	Yes
Missouri	No	No
Montana	No	Yes
Nebraska	No	No
Nevada	No	No
New Hampshire	No	Yes*
New Jersey	No	No
New Mexico	No	Yes*
New York	No	No
North Carolina	No	No*
North Dakota	No	Yes
Ohio	No	No
Oklahoma	No	Yes
Oregon	No	Yes
Pennsylvania	No	No
Rhode Island	Unclear	Yes
South Carolina	No	No
South Dakota	No	Yes*
Tennessee	No	Yes
Texas	No	No
Utah	No	Yes*
Vermont	Unclear	No

Table 1 (continued)

State (Including D.C.)	Residency/ Fellowship for CE	CE required during 1st renewal
Virginia	No	No
Washington	No	No
West Virginia	No	No*
Wisconsin	No	No
Wyoming	No	No*

Yes*= Yes with conditions (i.e. CE credits were required for 1st renewal but were prorated based on date of initial licensure); No*= No with conditions (i.e. CE is not required for newly graduated licensees, except for a mandatory state-specific course)

mandates presently exist among state boards regarding CE requirements for new licensees.

Among the 4 states that accept or have accepted residencies and fellowships for approved CE, 3 specify the number of credits awarded while 1 does not. The chiropractic licensing board for the state of Indiana accepts approved internship or residency programs that are conducted in a hospital towards CE requirements. However, no amount of credit is specified, and a maximum of 12 hours may be obtained within each licensure year, 50% of their requirement. Conversely, the Kansas State Board of Healing Arts, which includes chiropractic, awards 50 credits for successful completion of 1 year of postgraduate training. Based upon timeframe and category (i.e., postgraduate training), we presumed this to encompass residencies and fellowships. On the Minnesota Board of Chiropractic Examiner's CE course database, 1.5 CE credits were awarded in 2017 for a course entitled, Residency Programs in the Veterans Administration. Both Minnesota and Arizona list several acupuncture fellowships among eligible CE, awarding 15 credit hours for completion, making the 1.5 CE hours for a 1-year VA chiropractic residency program disproportionately small by comparison.

More than 90% (19/21) of states that require CE for initial license renewal do not or are unclear if they accept residencies or fellowships for credit. Since it is common for chiropractors to engage in these training programs soon after graduation, combined with the fact that these programs becoming more common, chiropractic state boards may encounter a growing number of individual requests for these postdoctoral training programs to be considered for CE credit [7].

It is important to acknowledge that even if a board does not specifically state whether they pre-approve these training programs for CE credit, this does not categorically denote that they will refuse credit for those who submit for individual approval. It simply means that this approval is not codified within their regulatory code *en masse*. Each state provides information regarding the documentation required for CE approval. Customarily,

these include copies of course syllabi, attendance verification, and vitae for each instructor. The total number of CE credits earned during the educational activity are also submitted. These reflect cumulative instructional hours, with 1 CE hour representing 50 to 60 min of direct learning. Further, some licensing boards do not pre-approve CE courses, curriculum, or programs at all. In these cases, CE activities are stipulated to constitute a “meritorious learning experience.” However, this designation is deficient of a clear definition and licensees are required to submit the appropriate course documentation for board approval prior to the start date of the activity. For current trainees, this renders acceptance of these programs a moot point.

Comparison to other health professions

Chiropractic is not the only doctoral-level health profession that lacks residency or fellowship requirements for general licensure. Physical therapy, dentistry, pharmacy, and optometry also do not require residency or fellowship training to practice in the US (except for dentists practicing in Delaware and New York) [17–21]. Consequently, state boards for these professions face similar predicaments concerning the treatment of postgraduate training programs towards CE requirements. Several approaches have been adopted to overcome this challenge, including, a standardized allotment of CE hours for a given program, the exemption of CE credit requirements, and the issuance of a temporary license to providers engaged in advanced training programs.

Certain state boards choose to allot an amount of CE credit for each unit of time spent in postgraduate training (e.g., 1 CE credit for each month in clinic) [22–24]. These allotments are capped at a pre-specified ceiling which is usually a function of total credit requirements for a renewal period. In lieu of creating a standardized allotment of CE credit, other boards exempt licensees who are furthering their education in residencies or fellowships from CE credit renewal requirements during the reporting period, provided they can produce evidence of program attendance for verification of training status [23, 25, 26]. Alternatively, some boards have created a separate, temporary license that is extended to residents or fellows for the duration of their training program and expires upon completion [27]. Among the chiropractic state boards we manually reviewed, the state of Virginia, which organizes chiropractic under the “Healing Arts” (comprised of the practices of chiropractic, medicine/osteopathic medicine, and podiatry), issues temporary licenses for medical interns or residents [28]. However, it remains unclear if chiropractors have ever been issued this type of license.

Chiropractic state boards aspiring to incorporate residency or fellowship programs into CE regulatory

language could leverage any of the aforementioned options. Alternatively, boards could explicitly detail on their websites how individual licensees can petition for credit for postgraduate training programs, such as the Iowa Department of Inspections, Appeals, and Licensing has done for pharmacy residents [29]. Of note, licensing boards may not necessarily need to follow the approaches taken by other boards within the same jurisdiction. For instance, in the state of Ohio, dental residents are exempt from CE credit requirements, while physical therapy residents earn an allotment of CE credit upon program completion [25, 30]. This may afford chiropractic licensing boards more autonomy in selecting an approach that best reflects the needs of their licensees.

Chiropractic boards are not the only ones to lack homogeneity in navigating the confluence of postgraduate training and CE requirements. However, as previously reported, many residencies and fellowships are a novel development in chiropractic postgraduate education [7]. As a result, it is not surprising that few state boards have reflected these training programs in their regulatory language. To our knowledge, this is the first study to report on the acceptance of these programs for CE by state boards. The large differential that presently exists creates a watershed opportunity for boards that aspire to stand out as leaders in the profession to begin adopting language that reflects these advancements in chiropractic postgraduate education. In time, these same boards may prove to be useful models for licensing bodies in allied healthcare professions aiming to incorporate residencies and fellowships into administrative code.

Limitations

Our results were restricted to specific sections of the board’s website and publicly available administrative policies since we determined it was likely that these are the same ones that inquiring licensees would visit. Consequently, if relevant content was located elsewhere, our methodological approach would prove insufficient. Any updates to website content or administrative codes after April 2024 were not captured by our study. At times, interpretative assumptions had to be made by the study investigators when related language was obscure, further emphasizing the need for greater clarity on state board websites. This study only focuses on the presumptive role of residents/fellows as trainees in post-graduate programs. However, it is plausible that residents/fellows may also have an expectation/requirement to serve as educators during their residency/fellowship which may exempt them from CE requirements in certain states. We chose to delineate state boards as accepting of residencies or fellowships if any mention of these training programs was made by name alone. As such, this assumes that state boards are properly defining these programs. However,

this may not be the case as we found one instance of a board using pre-licensure training programs (i.e., preceptorships) interchangeably with postgraduate residency programs in their regulatory language [31]. Manual data extraction is known to be susceptible to errors which could have influenced the precision of our results. We attempted to mitigate this effect by duplicating the search strategy among 3 separate investigators. Finally, we included only US states and DC, and did not include Puerto Rico or other US territories, thus limiting the scope of our findings.

Conclusion

As of April 2024, there is significantly limited representation ($n=4$) of residencies and fellowships as approved CE among chiropractic state. Furthermore, boards possess markedly different CE requirements for new licensees, with the majority not requiring CE for initial renewal. Nevertheless, among those that do require CE credit for a licensee's first renewal, few demonstrate specific CE policies. As the number of these postdoctoral training programs for chiropractors grow, more state boards may be asked to determine their CE policies on them.

Abbreviations

CCE	Council on Chiropractic Education
CE	Continuing Education
US	United States
DC	District of Columbia
VA	Veteran's Affairs

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None.

Author contributions

SMS, MRC, MRP, and KLC all contributed to the conceptual development and design of the study. All authors (SMS, MRC, MRP, FMB, BHM, KLC) contributed to data collection, analysis, and interpretation. The table was created by SMS, MRC, and MRP. SMS conducted a review of the relevant literature and wrote the draft paper, which was reviewed and critically revised by all authors (SMS, MRC, MRP, FMB, BHM, KLC). All authors (SMS, MRC, MRP, FMB, BHM, KLC) approved the final version of the manuscript to be submitted.

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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