

COMMENTARY

COMMENTARY: THE NATIONAL WORKSHOP TO DEVELOP THE CHIROPRACTIC RESEARCH AGENDA: 10 YEARS ON, A NEW SET OF WHITE PAPERS

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ABSTRACT

This commentary reports on the advances that have occurred over the 10-year period since the first National Workshop to Develop the Chiropractic Research Agenda was held and introduces the second set of white papers that were produced as a result of the 10th annual Research Agenda Conference. Four working groups were convened to update the original 5 white papers that represented the most significant results from the first workshop in 1996. Each group was to review the first report, examine the action steps and recommendations that were published in each report to see how much had been completed in the past decade, and develop new action steps and recommendations for the future. Four new articles were developed, each updating and adding significant amounts of new research to the original versions. New action steps and recommendations will help move the profession forward into the future. Chiropractic scientists have worked diligently over the past decade to address the recommendations noted in the first set of white papers. Despite significant advances in knowledge and scientific capacity, the chiropractic profession is still confronted with a large number of research challenges. (*J Manipulative Physiol Ther* 2006;29:690-694)

Key Indexing Terms: *Chiropractic; Research; Health care policy*

The first National Workshop to Develop the Chiropractic Research Agenda was held on July 12 to 14, 1996, in Washington, DC. It was a culmination of efforts by the Palmer College of Chiropractic and the HRSA-BHP (Health Resources and Services Administration, Bureau of Health Professions) to convene a meeting to develop a research agenda for the chiropractic profession that would aid in increasing the profession's research capacity. At the time that conference ended, work was not completed, and the HRSA-BHP

agreed to provide funding to allow the project to sustain itself into a second year. That was more than 10 years ago, and there has been a conference, known as the Research Agenda Conference (RAC), being held every year since the first. The RAC is now held in conjunction with the annual meeting of the Association of Chiropractic Colleges (ACC), thereby leading to the combined conference called the ACC-RAC.

This article revisits the original goals and history of the first conference and introduces the second set of white papers that were produced as a result of the 10th annual RAC. One of the main products of the first conference was a set of 5 articles that examined the state of chiropractic in specific discipline areas: basic sciences; clinical sciences; outcomes research; health policy research; and educational research. In planning the 10th annual RAC, we decided that it was time to revisit those articles to see what recommendations had been made then, to see how well those recommendations and action plans had worked, to update the science for each article, and to develop new action plans and recommendations for the future.

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DISCUSSION

The First Workshop

In the original article discussing the development of the national workshop, Hawk et al¹ noted the following objectives for the project:

- (a) To identify existing gaps in chiropractic basic science, clinical, educational, health services, and outcomes research;
- (b) To identify areas where current and potential scientific and practice advances merit concentrated investigation;
- (c) To establish a prioritized research agenda including identification of barriers and strategies to overcome them in regard to each component; and
- (d) To report and disseminate recommendations made by each work group at the conclusion of the workshop.

To actualize these objectives, the workshop planning committee chose 35 participants representing a variety of disciplines and areas of expertise. The individuals came from chiropractic, allopathic and osteopathic medicine, physical therapy, and kinesiology/occupational therapy as well as from basic sciences, clinical sciences, the educational setting, the health sciences setting, and the outcomes research setting. Other variables included to increase the perspectives brought to the participant group were consideration of the profession, expertise, geographic location, college attended (for chiropractors), academic appointment or private practice settings, years of experience, and professional visibility (which today might be related to opinion leaders).

Five teams were formed, with individuals self-selecting their membership in each team; these teams later were influential in the white papers that were prepared and included, again, basic sciences, clinical sciences, outcomes research, health services research, and educational research. Each participant was provided with a detailed annotated bibliography of research and literature pertaining to their particular team assignment; these data had been developed by individuals selected specifically for that purpose. Each participant received the materials approximately 4 weeks before the conference. A survey of chiropractic college faculty was also completed and sent to the participants at the same time. This survey examined information on research-related attitudes and behaviors among chiropractic college faculty.²

The workshop was held on July 12 to 14, 1996. There were two plenary sessions that allowed for group input and the consensus process. Each primary author for the 5 white papers gave a review of his or her topic area. After this, participants met and worked toward reaching a consensus on recommendations specific for each research area and on recommendations of a more general nature related to the

Table 1. Participants in the first National Workshop to Develop the Chiropractic Research Agenda

Workshop Planning Committee
Alan Adams, DC
Patricia Brennan, PhD
Ian Coulter, PhD
Phillip Greenman, DO
Scott Haldeman, DC, MD, PhD
Robert Mootz, DC
Joanne Nyiendo, PhD
Charles Sawyer, DC
Frank Stritter, PhD
Lisa Killinger, DC—Project Coordinator
Lori McElderry—Administrative Assistant
Consultants and Recorders
Meridel Gatterman, DC, MA, MEd
Mitch Haas, MA, DC
Charles Henderson, DC, PhD
Maria Hondras, DC, MPH
Steven Kirstukas, PhD
Dennis Marchiori, DC
Paul Osterbauer, DC
Donald Peterson
Anthony Rosner, PhD
Participants
Susan Baptiste, OT
Thomas Bergmann, DC
Ronald Bulbulian, PhD
Peter Coggan, MD
Mary Cummings, RN, DPH
Arlan Fuhr, DC
Christine Goertz, DC
Steve Gordon, PhD
Chris Hafner-Eaton, MPH, PhD
Charles Herring, DC
Carol Hudgings, PhD, FAAN
Gail Jensen, PT, PhD
Partap Khalsa, DC, PhD
Paul Lambert, JD
Dana Lawrence, DC
Edward Maurer, DC, DACBR
Marion McGregor, DC, MS
George McLelland, DC
Silvano Mior, DC
Edward Owens, MS, DC
Reed Phillips, DC, PhD
Malcolm Pope, DrMedSci, PhD
Gary Sanders, PhD
Paul Shekelle, MD, PhD
Louis Sportelli, DC
Rand Swenson, DC, MD, PhD
John Triano, MA, DC

Many individuals have earned additional degrees since the original conference.

overall research infrastructure for the chiropractic profession. Each work group had 7 members, a lead facilitator, and a recorder, and each facilitator was instructed to develop recommendations with action steps (and agents responsible for accomplishing those action steps) along with the specific and general recommendations noted. A consensus methodology was used to aid the process of development, and both

Table 2. *White Paper Team members for the 10th annual RAC*

Basic Sciences
Greg Cramer, DC, PhD—Team Lead
Brian Budgell, DC, PhD
Charles Henderson, DC, PhD
Partap Khalsa, DC, PhD
Joel Pickar, DC, PhD
Clinical Sciences
Gert Bronfort, DC, PhD—Team Lead
Roni Evans, DC, MS
Mitch Haas, MA, DC
Health Services Research
Robert Mootz, DC—Team Lead
Alan Breen, DC, PhD
Dan Hansen, DC
Lisa Killinger, DC
Craig Nelson, DC, MS
Educational Research
John P. Mrozek, DC, MEd—Team Lead
Anne L. Taylor-Vaisey, MLS
Hettie Till, MSC, MMedEd, DED
David R. Wickes, DC

Delphi and nominal group methods were used. What resulted from this process were the 5 original articles, which were published in the 1997 March/April issue of the *Journal of Manipulative and Physiological Therapeutics*.³⁻⁷ Each article represented a synthesis of the information compiled in the annotated bibliographies, the expertise of recognized authorities on each topic, and the consensus of the work groups at the workshop. The full list of participants can be seen in Table 1. It is notable to see how many of these people are still contributing to the chiropractic research base.

Updating the White Papers

At the 10th annual meeting of the RAC, we determined that it would be wise to revisit and update the original set of white papers. We invited 4 individuals to take the lead in developing new teams to reassess and update each white paper. We collapsed outcomes research into the clinical sciences team, such that the original 5 groups were reduced to 4. Those team leaders and their team members are listed in Table 2. The team leaders selected their own team members. They were responsible for gathering information about new research in their discipline area, summarizing the original recommendations and action steps as “expectations met,” and updating the original paper with their new material while also developing new recommendations, action steps, and directions. As stated in an earlier work, the new articles describe where we were, where we are, and where we should go.⁸

The process of development worked first to allow team members to review the prior material and then to allow them to prepare a new draft as cited. However, a series of review steps was implemented. After the first draft was

completed, it was sent to a board of external reviewers for evaluation. These reviewers were individuals from the profession with expertise in the subject area, most of whom had no position in the ACC-RAC Planning Committee. Suggestions for revisions and additions/alternations were returned to the team, and a second draft that incorporated those suggestions was developed. The second drafts were then posted on the ACC-RAC web site through which registrants to the program had access to the articles and were invited to submit comments and concerns. These comments were again provided to the team leaders. At the RAC, breakout sessions were held for each article; each article was presented, and the team leads (and their invited representatives) took written questions and verbal questions from the audience. Each meeting (occurring twice during the conference to allow for greater opportunity for feedback) was recorded. From all the comments, criticisms, and concerns, a final article was crafted; each is presented in this issue of the journal.

Research and Scholarly Behavior

In 1998, Marchiori et al⁹ wrote about chiropractic college faculty: “In summary, the majority of faculty do not publish and are not involved with research activities. They would like additional training, but likely only as research consumers. If left to set their own agenda, most would not produce research.” This gloomy comment concluded with an article that examined the research capacity among chiropractic colleges. A companion article looked into productivity and found that 3 groups of faculty had a greater number of publications compared to other faculty groups, with publication being seen as a significant measure of faculty scholarly productivity.² These groups were faculty assigned primarily to research, faculty with the rank of a full professor, and faculty with either a DC or a DC/PhD degree. However, nearly three fourths (72.2%) of all faculty had not published a single article in the past 3 years and less than 2% of faculty had more than 10 articles in that same time frame. In a study that addressed attitudes, Marchiori et al⁹ found that most faculty would like to read and better understand research and were willing to conduct research as a member of a team or on their own. At the same time, most faculty listed a number of barriers to conducting research; these included low expectations from direct supervisors for research activity, limited time set aside for actually developing and doing research, and a general and pervasive attitude that conducting research was the job of those faculty in the research department. A follow-up study presented by Meeker at the 1999 RAC indicated growth in the profession with regard to productivity, but it was modest in nature. Full-time faculty assigned to research had grown in number from 58 in 1995 to 72 in 1998; full-time equivalent numbers grew from 58.4 to 62.3 over the same period. Research budgets had grown as well, along with

research expenditures as a percentage of the total institutional budget. The same was true for grants submitted and awarded. Obviously, the research enterprise for the profession showed some growth over that 4-year period.

Although heartening, when the work of Marchiori et al⁹ is taken into account, the indication is that few devoted people are responsible for the growths seen. By and large, rank-and-file faculty are not engaging in research. This occurs at a time when more institutional resources are being given toward teaching students critical appraisal skills and at a time when, at present, two National Institutes of Health awards have been given to chiropractic colleges to build research topics into the undergraduate DC curriculum. Although it has been some time since the last survey of research capacity was conducted, there is little to suggest that the situation is markedly different now; in fact, recent decreases in enrollments, leading to decreased institutional budgets, suggest that commitment to research might have suffered. Faculty are often called upon to cover more hours, decreasing their ability to engage in scholarly activity. Marchiori et al⁹ showed that chiropractic faculty assigned to an academic department on average spent less than 10% of their time on research. This leaves the researchers to conduct research, a situation that also feeds into the general belief that researchers, not teachers, do research. This situation must change if the profession is to remain clinically competitive and be able to develop, improve, and implement new treatment methods and modalities.

Evidence suggests that few researchers have made large strides in the past decade. More chiropractors are earning second academic degrees at the master's or doctoral level. In addition, they are doing so in a greater number of discipline areas, opening opportunities for greater amounts of collaboration. As for collaboration, we see it happening at nearly every level. There are now interinstitutional collaborations, interdisciplinary and intradisciplinary collaborations, educational collaborations, doctoral- and master's-level training collaborations, developing collaborations between chiropractic institutions and both the Veterans Administration and the US military, and developing collaborations between individual chiropractors and individual Veterans Administration or military medicine programs. Chiropractic research is starting to reach out and mature.

In 1990, Dunn et al¹⁰ made the following comment: "Chiropractic science does not exist at present since chiropractic rationale is not only untested, but falsified by current scientific knowledge." A statement such as that is ironic because it was published in the chiropractic profession's leading bioscientific journal, which had been in existence for 13 years; it is also ironic because the authors had to be fully aware of that fact when they selected a journal in which to publish their article. Furthermore, in any event, such a statement is not categorically true. Certain tenets of chiropractic may not have been tested, but few falsify our rationale *per se*. The work cited in the 4 new

white papers is important in contextualizing the chiropractic profession and its research base. In the basic sciences, much of what occurs in some way or another relates to core chiropractic constructs such as subluxation, adjustment, and health. In the clinical sciences, we see findings from the basic sciences starting to be applied to patient care. Health services research assesses cost-effectiveness, use, and access, thus addressing the bigger question as to how chiropractors fit into the overall health care system. In addition, educational research looks into how we instruct our students, develop and implement curricular changes, and define assessment and teaching methodologies. The articles in this issue of the journal will provide a deeply detailed picture of the last 10 years of our science.

General Status of Chiropractic Research Infrastructure: Then and Now

In 1998, a subcommittee of the ACC initiated strategic planning pertaining to the chiropractic research infrastructure that led to the development of a working document; unfortunately, that document was never published (Evans R, Cramer G, Meeker W, Sawyer C, Allenburg J. Report of the ACC Strategic Plan Development Subcommittee for Goal 2.3: Foster the development of the profession's research infrastructure. Document dated July 12, 1998, unpublished). However, the document contains a number of important points that merit citation. It reviewed earlier studies on chiropractic research infrastructure⁴ and noted the following findings:

1. Research is complicated and costly for the institutions that conduct it.
2. Those attracted to research are those who have unique personal characteristics and are motivated to seek answers.
3. Those who conduct research need access to mentors, a network of like-minded colleagues, resources, and uninterrupted time.
4. Inexperienced faculty need release time to gain the skills necessary to conduct research and to plan projects, as well as to write them up when done. The more an institution supports research, the more productive its research productivity will be.
5. We do not have the critical mass of people to do all the work that is needed, and our infrastructure remains weak as a result.
6. Funding is a key to future success, and more funding mechanisms must be found.
7. There is an infrastructure disparity among the chiropractic colleges. We will not be competitive for grants until we have developed our research to the degree we can compete.
8. There is a need for research into chiropractic, given the interest the government has in complementary and alternative medicine.

The report concluded by offering several initiatives: to engender respect for research in the profession; to increase research capacity through increasing research infrastructure; to develop funding sources; to develop research partnerships; and to develop relations between the field and the research community. In looking over the current reports, it is easy to see that, as far as we have come, we have not come far enough. The chiropractic profession still has too few people involved in research; thus, the critical mass of researchers eludes us. Even as funding has become available from the federal government, it has become more difficult to obtain. At the R21 (Exploratory/Research Grant Award) and R01 (Research Project Grant) levels, competition is growing significantly, and yet we still have too few people moving into research full time. At the same time, opportunities are developing; there is real potential to conduct research through the Veterans Administration, for example. Collaboration has become a much greater part of chiropractic research; many colleges now work in concert with other institutions while conducting research. In fact, the theme of the most recent 2006 RAC was collaboration.

What now remains to be seen is whether the chiropractic colleges active in research and even those that are not would begin to develop intraprofessional collaborations, thus preventing an excessive amount of professional rivalry for available funds. This would bode well for multicenter studies focusing specifically on chiropractic interventions. It would also provide funding to a wider range of institutions.

CONCLUSION

At the 10th annual RAC, a procedure was used to revisit and update the original set of white papers that were the chief product of the first RAC in 1996. Four new articles provide an overview of the 4 main research areas for the chiropractic profession: basic sciences, clinical sciences, health services research, and educational research. Over that same period, the profession has seen growth in its research base at the same time that new challenges with regard to declining enrollments confronted our educational establishments. One of the more significant developments

has been the increased amount of collaboration at every level of the profession, something that bodes well for the future. At the same time, a large percentage of the academic community does not participate in research at any significant level. This is a pervasive problem with worrisome implications. Continued growth in the research infrastructure is necessary but insufficient in and by itself in enhancing patient care and improving educational outcomes. Ten years from now, let us not find ourselves in the same place as we are in now.

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