

Interprofessional education for medical students in clinical settings: a practical guide for an elective half-day

John J. Riva, BA, DC†

Allison M. Crombeen, BHSc, MD**

Jennifer E. Rycroft, BSc, MA, MD‡

Kelly E Donkers Ainsworth, BSc, DC, MD§

Tobias P. Gissler, DC£

Stephen J. Burnie, BSc, DC, MSc¶

Jason W. Busse, DC, PhD*

Introduction

Use of complementary and alternative medicine (CAM) in Canada is considerable and in 2006 more than half (54%) of a random sample of 2000 Canadian adults (response rate 18.8%) reported use of CAM in the past year.¹ In response to CAM use by Canadians, there is growing interest by faculty at medical schools for providing education on chiropractic.² As well, interprofessional education (IPE) is recognized by the World Health Organization (WHO) as a means to address upcoming healthcare workforce shortages.³ Canadian students support the need for greater interprofessional collaboration⁴ and have highlighted a lack of knowledge with respect to CAM providers as a barrier.⁵

Since 2008, chiropractic in Switzerland has been a publicly funded medical profession regulated on the same federal level as medical doctors.⁶ The Swiss Bachelor of Medicine program has all medical students (including future chiropractors) immersed in the same program for 3 years.^{7,8} In addition, chiropractors must complete

a 4-month, full time, rotation through rheumatology and orthopaedic surgery in a hospital setting as part of the requirements of the Swiss Chiropractic Academy.^{9,10} During these rotations they must participate in history taking, physical examination, diagnosis, drug prescription (supervised) and general problem solving. In orthopaedics they scrub into surgery and have the opportunity to assist in surgical procedures, including difficult spine cases. The Swiss system provides an example of medical doctors and chiropractors working and training together, whereas in most of the world this opportunity does not exist which leads to a lack of understanding of what chiropractors do and how best to use their services.

Opportunities will increasingly arise for chiropractors to provide IPE in various clinical settings, such as private practice, hospital-based practice,¹¹ or as part of a Family Health Team.¹² The Centre for the Advancement of Interprofessional Education has defined IPE as: “when two or more professions learn with, from and about each other to improve collaboration and the quality of care.”¹³

† Department of Family Medicine, McMaster University, Hamilton, Ontario.

‡ Michael G. DeGroote School of Medicine, McMaster University, Hamilton, Ontario.

§ Department of Radiology, McMaster University, Hamilton, Ontario.

£ Swiss Chiropractic Academy, Berne, Switzerland.

¶ Canadian Memorial Chiropractic College, Toronto, Ontario.

* Department of Clinical Epidemiology & Biostatistics, McMaster University, Hamilton; Institute for Work & Health, Toronto; Ontario.

** Schulich School of Medicine & Dentistry, University of Western Ontario, London.

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Correspondence: Dr. John J. Riva, Department of Family Medicine, McMaster University, McMaster Innovation Park, 175 Longwood Road South, Hamilton, Ontario; email: rivaj@mcmaster.ca

Systematic reviews on models of IPE aimed at improving collaboration and quality of care favour clinical encounter approaches.^{14,15} However, structure is necessary for effective IPE or there is a risk that the learners may become overwhelmed.¹⁶ Also, providing structure to IPE will help to ensure information deemed pertinent to a successful elective is provided.¹⁷

A survey of all Canadian medical school deans and associate deans (100% response rate) in 1999 noted that 6 of 16 medical schools included chiropractic in their course material and 3 programs offered a structured clinical experience on CAM interventions.¹⁸ In 2010, 42.5% of medical students graduating from the Michael G. DeGroot School of Medicine at McMaster University ranked family medicine as their first choice for post-graduate training.¹⁹ During the family medicine clerkship all learners participate in mandatory half-day observations with CAM providers, such as chiropractors. Students have given feedback that even a half-day observation or shadowing experience is sufficient to generate a positive experience.²⁰

Chiropractors often train in isolation from other health-care professions, which limits opportunities for IPE,²¹ and many may feel unprepared to participate in training medical students or residents. Boud et al. has suggested three steps for learners to achieve an effective observation experience:²²

- 1 Preparation before events
- 2 Active observation
- 3 Reflection during the observation and afterwards

We propose a structure for providing IPE to medical learners based on this 3-step framework for an elective half-day clinical observation. Our recommendations are based on our experiences as teachers of medical students (JJR and JWB), a medical resident with dual certification in chiropractic and medicine (KED-A), a student pursuing chiropractic training within a medical school (TPG), medical resident who have completed a clinical observation with a chiropractor (AMC and JER) and researchers with experience interacting with physicians (JWB and SJB).

Arranging an Observership and Sending a Biography

Most learners prefer to arrange sessions via e-mail and re-

quests from a learner should be replied to in a timely fashion with: your office hours; where to park; who to contact on arrival; dress code; number of hours required for the observation; and directions to the clinic. Once a mutually convenient time is arranged, a confirmation e-mail should be sent to the learner along with a 1-page biography of the chiropractor. The biography should inform the learner about your scope of practice, training, services provided, fee schedule and any areas of specialization.

Practice and Research Information Package

A brief focused information package should also be provided in advance of the placement that includes patient intake and informed consent forms relevant to your jurisdiction. Information on therapy, whenever possible, should consist of systematic reviews or randomized controlled trials, as these research designs are generally accepted to represent the highest quality research.

Neither the format nor the research content of an ideal chiropractic information package for medical learners has been formally studied; however, one of us (JWB) has recently surveyed 1000 North American orthopedic surgeons (response rate 49%) regarding their attitudes towards chiropractic,²³ and these findings may be helpful in designing an information package. Specifically, most respondents (68%) felt that medical training should include exposure to chiropractic, and key areas of interest were the clinical training of chiropractors, safety of cervical spine manipulation, effectiveness of joint manipulation for musculoskeletal complaints, and diversity within the chiropractic profession. The following provides some guidance for addressing these issues.

A brief statement on training, admission requirements and scope of practice is helpful. In Canada, approximately 80% of chiropractors are graduates of the Canadian Memorial Chiropractic College (CMCC),²⁴ the only English-language chiropractic college in Canada, and as such the curriculum at CMCC provides a relevant summary of the training of most Canadian practitioners.²⁵ In other jurisdictions, the local chiropractic institution or WHO guidelines²⁶ may provide helpful information.

Risk of vertebral artery stroke following cervical spine manipulation is a controversial and evolving topic. Nonetheless, recent high quality studies have failed to confirm either an association between increased utilization of chiropractic and increased risk of stroke,²⁷ or an

association between chiropractic care and an increased risk of stroke compared to primary care.²⁸

The effectiveness of joint manipulation, for predominantly axial musculoskeletal conditions, has been endorsed by a number of practice guidelines²⁹ and systematic reviews^{30–33} that can be summarized as a basis for discussion. A brief description of interventions chiropractors provide in addition to spinal manipulation should also be considered, including patient education and active care.

The chiropractic profession in Canada represents a diverse array of practice styles, techniques, and practitioner philosophies.³⁴ During the observership ensure that the student is aware that, should they wish to refer patients for chiropractic care, they will need to identify practitioners who are aligned with their treatment expectations.

Meeting the Medical Student or Resident

When first meeting a learner to begin their observership, their current level of medical training and specialty interest should be considered. Those students destined for primary care specialties such as family medicine or pediatrics may focus their interests more on how to bring other health professionals like chiropractors into a multi-disciplinary team;³⁵ whereas those destined for specialist work in hospitals may focus more on learning when referral for chiropractic treatment may be appropriate.

There should be time reserved at the beginning of the elective session for an introduction to the practice and treatment modalities offered without patients present. The introduction should be brief and include some protocol description for the observership ahead, including:

- at what time the observership will end
- how many patients will be seen
- what type of appointments are in the schedule (i.e. follow ups, new patients)
- the procedure for obtaining patient consent before each encounter

Learners should be informed of the expectations of both the chiropractor and the medical school administrator who facilitated the elective. An example of an achievable learning objective between a learner and a chiropractor would be teaching a focused musculoskeletal examination of the spine or extremity area. Being an elective, learners should have the opportunity to modify the goals

of the session within the context of their pre-determined (or core) curriculum objectives to achieve a mutually beneficial learning experience for both the chiropractor and learner.

An office tour provides an opportunity for discussions around quality indicators³⁶ you strive for at your site. The learner, who typically will have no previous training on chiropractic, should gain some sense of where chiropractic fills gaps within the healthcare system so that they can incorporate this knowledge into their future care decisions. If there is a team meeting scheduled for the day, invite the learner to attend as this has been shown to positively influence their ability to understand how the care team works together at the site.³⁷

Discuss the types of services typically provided, including costs and treatment frequency related to chiropractic care, both in general terms across the profession and specific to your practice. It is helpful for the learner to understand treatment frequency and costs as their future decisions regarding referral for chiropractic care may be influenced by patient's financial ability to pay for services.³⁸

Active Observation with Patients

Learners should be made aware that their patients may be hesitant to bring up chiropractic care on their own for fear of being thought of as “fringe, ungrateful, unrealistic or gullible”;³⁹ or because they believe that chiropractic care is irrelevant to medical treatment.⁴⁰ It seems reasonable that physicians who are comfortable discussing chiropractic care will be more likely to engage in discussions on this topic with patients. This may allow physicians to better participate in shared decision-making regarding complaints that may be amenable to chiropractic care.

While the learner is observing the chiropractor in the treatment room, a few questions can be posed informally to each patient to help convey how chiropractic care fills gaps within the healthcare system:

- 1 “What made you decide to see a chiropractor?”
- 2 “How is this different than medical care?”
- 3 “How is this different than massage therapy or physiotherapy?”

Review the patient's medical record for each patient so the student understands both the similarities and differ-

ences in record-keeping format between medicine and chiropractic. Point out the value of record sharing in a team of providers for both continuity of care and clinical effectiveness.⁴¹ As well, highlight profession-specific terminology and forms of diagnoses in the patient's record, relevant to chiropractic, that may be either similar or different than medical practice. This can be achieved by asking the learner to point out any terms they do not recognize.

Fragmentation of care is a potential problem for patients that are under both medical and chiropractic care⁴² and you may wish to use an example from your own practice to highlight this issue. Lastly, at the end of the session, time should be reserved to discuss any remaining questions about specific patients or treatments.

Reflection for Learner and Chiropractor

Reflection will occur naturally between each patient by using a review of the clinical records and through learner dialogue with the chiropractor regarding the patient encounter. Practically, a chiropractor may wish to schedule more time for patient visits leaving more time to allow for this discussion. Following the half-day observation, both the learner and chiropractor should make an effort to actively reflect on the value of the experience. This exercise, done in person or via e-mail afterward, is not only helpful for the student, but provides feedback to the chiropractor.

Areas for the reflection with the student may revolve around what surprised them most and how the experience can be improved for future students. Also, a particular focus should be on whether mutually agreed upon learning objectives between the learner and chiropractor were accomplished during the session. Finally, this offers a quality improvement perspective to assist in ensuring that future students have the best possible experience.

Learner Perspectives

Due in large part to the lack of chiropractic exposure during medical school, our experiences suggest that learners and medical school faculty in Canada commonly equate chiropractors exclusively with spinal manipulation. Few understand that chiropractors assess extremity complaints, treat headaches, order and interpret plain films, formulate diagnoses, provide exercises or consult on lifestyle problems. Since chiropractors often train in isolation of other health providers and maintain primarily independ-

ent practices, there has historically been limited potential for communication between chiropractors and medical practitioners, which has likely contributed, to these basic knowledge gaps.

From a medical student's perspective, an observership with a chiropractor provides a unique opportunity to enhance interprofessional communication. In order for the elective session to be successful for the medical student and chiropractor, good communication needs to be established. Communication starts before the initial visit, when the goals and objectives of the elective session are being discussed, and should continue to be developed and enhanced throughout the observation.

Discussing a controversial issue with the learner, such as the association between vertebrobasilar stroke and cervical spine manipulation, demonstrates how the chiropractor may convey both the risks and benefits of a particular therapy to a patient. Addressing a controversial topic also provides the chiropractor with an opportunity to demonstrate an evidence-based approach to discussing therapies they provide.

After graduating from medical school, medical doctors must complete a residency program ranging from 2–6 years in length depending on whether they are training to become primary care or specialist physicians. Most of what medical residents learn is acquired through direct, hands-on patient care under the guidance of supervising staff, and senior residents and fellows. Participants in a pilot IPE program involving CAM providers reported enhanced understanding after active involvement in history-taking, physical exams and formulating treatment plans.⁴³ It follows that giving the medical resident opportunities to take patient histories and perform physical exams concurrently with the chiropractor would be an important feature of the half-day experience.

Effective Teaching Behaviours

Medical students and residents are well acquainted with health conditions that are readily treated with conventional medical therapies. One important question of particular relevance to learners is: does chiropractic have the potential to treat a medical condition for which conventional medical approaches are lacking?⁴⁴ Chiropractic preceptors may wish to consider how to emphasize the evidence for conditions they treat as well as how to teach this information in an effective way.

Characteristics thought to be effective teaching behaviours of preceptors to medical learners are ones that:⁴⁵

- actively involve the student
- foster a supportive interpersonal relationship
- emphasize problem solving and the understanding of general principles versus factual items
- balance clinical and teaching responsibilities
- demonstrate clinical and professional competence
- use an organized approach, including goal setting and summation
- provide ongoing feedback, assessments and evaluations

Conclusion

Those interested in hosting medical learners will discover that there are important educational opportunities to be realized for themselves. While the medical learner gains knowledge on chiropractic, discussion during the observation also assists the chiropractor in understanding the medical reasoning behind care decisions that often is unknown or assumed.

To our knowledge, this is the first published work that attempts to define a standardized clinical IPE observation between a medical learner and chiropractor. Further research in this area should be geared towards surveying medical learners and faculty from medical programs in order to identify the optimal format and content of an information package, prioritize learning objectives, and further define useful characteristics of the 3-step process for a clinical observation.

Key Points

- Improved communication is the goal of an inter-professional observation
- Include preparation, active observation and reflection components
- Send a biography and information package in advance
- Highlight how chiropractic fills gaps within the healthcare system
- Address diversity within the profession
- Increased collaboration and quality improvement in patient care may occur as a result of these observations

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