

MANITOBA

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March 3, 2017

The Honourable Kelvin Goertzen
Minister of Health, Seniors and Active Living
Room 302, Legislative Building
450 Broadway
Winnipeg, MB R3C 0V8

Dear Minister:

The Health Professions Advisory Council is pleased to submit its report on the performance of "high neck manipulation" by regulated health professionals.

As part of the review process, we completed jurisdiction, literature and jurisprudence reviews with respect to the performance of the procedure. We also sought and received written input from the regulatory bodies for chiropractors, physiotherapists, naturopaths, and osteopaths and physicians.

We trust you will find this report informative and helpful.

Respectfully,

Original Signed By

Neil Duboff, Chair

Original Signed By

Lynne Fineman

Original Signed By

John Harvie

Original Signed By

David Schellenberg

Original Signed By

Bev Ann Murray

**A Report to the Minister of Health, Seniors and Active Living
on the Review of “High Neck Manipulation”
under *The Regulated Health Professions Act***

March 2017

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Table of Contents

INTRODUCTION.....	3
THE COUNCIL’S PROCESS.....	3
BACKGROUND INFORMATION.....	4
THE REVIEW.....	7
STATUS OF RESERVED ACT IN OTHER CANADIAN JURISDICTIONS.....	7
Chiropractors.....	7
Physiotherapists.....	8
Osteopaths.....	8
Naturopaths.....	8
THE RESEARCH LITERATURE REVIEW.....	9
THE JURISPRUDENCE REVIEW.....	11
WRITTEN SUBMISSIONS.....	12
Manitoba Chiropractic Stroke Survivors.....	12
Manitoba Chiropractors Association.....	15
College of Physiotherapists of Manitoba.....	17
Manitoba Naturopathic Association.....	18
College of Physicians and Surgeons of Manitoba.....	18
SUMMARY.....	19
<i>Appendix A.</i> The Spine	
<i>Appendix B.</i> Status of Reserved Act in other Canadian Jurisdiction	
<i>Appendix C.</i> Research Literature Review	
<i>Appendix D.</i> Jurisprudence Review	
<i>Appendix E.</i> Manitoba Chiropractic Stroke Survivors Submission	
<i>Appendix F.</i> Manitoba Chiropractors Association Submission	
<i>Appendix G.</i> College of Physiotherapists of Manitoba Submission	
<i>Appendix H.</i> Manitoba Naturopathic Association Submission	
<i>Appendix I.</i> College of Physicians and Surgeons of Manitoba Submission	

Introduction

The Minister of Health, Seniors and Active Living gave direction to the Health Professions Advisory Council (“the Council”) to undertake a review related to high neck manipulation¹. Specifically, the Minister directed the Council to undertake:

- 1) A review of the status of the reserved act in other Canadian jurisdictions,
- 2) A literature review related to the benefits to patients and risks to patient safety associated with the procedure, and
- 3) A jurisprudence review or a review into the legal issues that have arisen in Canada with respect to the performance of the procedure that touch upon the risk of harm to a patient.

In addition, the Minister requested the Council to seek written input on the issue from:

- Manitoba Chiropractic Stroke Survivors
- Manitoba Chiropractic Association
- College of Physiotherapists of Manitoba
- Manitoba Naturopathic Association
- College of Physicians and Surgeons of Manitoba
- other relevant interested parties as determined by the Council

The Council’s Process

Independent Review by the Council

Consistent with the Minister’s direction, the Council carried out a review of the status of the reserved act in other Canadian jurisdictions for chiropractors, physicians, physiotherapists and naturopaths through Internet searches.

Research Literature Review

The Council engaged an independent researcher through Manitoba Health, Seniors and Active Living to undertake a review and analysis of individual peer-reviewed articles found in the literature in order to identify relevant research or evaluations regarding the benefits to patients and the risks to patient safety associated with the performance of the reserved act and to summarize the findings.

Jurisprudence Review

At the request of Manitoba Health, Seniors and Active Living and for the purposes of the Health Professions Advisory Council, Manitoba Justice carried out a jurisprudence

¹ Section 4 of *The Regulated Health Professions Act* lists 21 categories of actions or clinical procedures used when providing health care that pose significant risk of harm or potential harm health, safety or well-being of the public. “High neck manipulation” forms part of the reserved act under subsection 15.

review of the Canadian case law and commentary related to the use of upper spinal/high neck manipulation. Cases and articles released before the year 2000 were excluded from the review.

Submissions from Regulatory Bodies

In letters to the regulatory bodies whose members perform the reserved act, the Council invited written submissions from:

- Manitoba Chiropractic Association (“MCA”)
- College of Physiotherapists of Manitoba (“CPM”)
- Manitoba Naturopathic Association (“MNA”)
- College of Physicians and Surgeons of Manitoba (“CPSM”)

The Council also invited the Manitoba Chiropractic Stroke Survivors (“MCSS”) to make a written submission.

Background Information

Section 4 of the RHPA regulates the performance of 21 categories of reserved acts “done with respect to an individual in the course of providing health care” that may present a demonstrable risk of harm to the public. Subsection 15 is the following reserved act (referred to as the “Reserved Act” in the balance of this review):

Administering a high velocity, low amplitude thrust to move a joint of the spine within its anatomical range of motion.

The Council notes that the Reserved Act is with reference to “a joint of the spine”, without noting a particular location on the spine. This review and report is with respect to “high neck manipulation” which forms part of the Reserved Act.

The MCA rejects the use of the term “high neck manipulation” as it is not a phrase used by the chiropractic community. The MCA believes the phraseology as described in subsection 4(15) appropriately describes the treatment and that there is ‘no rational distinction to delineate ‘low neck’, ‘middle neck’ or ‘high neck’.’² The MCA points out that while chiropractors use the term “adjustment” for this treatment modality, it can be used interchangeably with the term “manipulation” used by other professions.³

In its review, the Council was advised that this form of spinal adjustment is routinely performed by chiropractors as well as, to a lesser extent, by other regulated health professions.⁴ The MCA

² Manitoba Chiropractors Association, “Submission to the Health Professions Advisory Council” 17 November 2016 at 14.

³ Ibid, at 17.

⁴ For instance, members of the College of Physiotherapists of Manitoba, the Manitoba Naturopathic Association and the College of Physicians and Surgeons who hold a professional doctoral degree in osteopathic medicine.

stated in its submission to the Council that a 2009 survey of its members revealed that 99% performed the Reserved Act on a daily basis.⁵

The spine is made up of 33 bones (known as vertebrae). There are:

- 7 cervical vertebrae (neck)
- 12 thoracic vertebrae (mid back)
- 5 lumbar vertebrae (lower back)
- 5 sacral bones and
- 4 coccyx bones.

The last two groups are fused (fixed) and do not provide any movements in the spine. The cervical, thoracic and lumbar areas have discs between each vertebra. The vertebrae have joints on either side. These joints allow a wide range of movement in all directions. The joints 'slide' on each other.⁶ At Appendix A is an illustration of the spine.

In its submission, the MCA included a statement for healthcare professionals from the American Heart Association/American Stroke Association which describes cervical spine biomechanics and that the 1st and 2nd cervical vertebrae are most susceptible to injury:

The cervical spine has a unique anatomy and complex biomechanics. Despite centuries of study, a complete understanding of this topic has remained elusive. . . .

The cervical spine is made up of 7 vertebral bodies and is divided into 4 anatomic sections: the atlas, the axis, the root (C2-C3 junction), and the column (C3-C7)

The VAs (vertebral arteries) run through the transverse foramina of C1 through C6 and occasionally through C7. Four segments (of the vertebral arteries) are recognized The V3 segment takes a tortuous course between C2 to the suboccipital triangle between the atlas and the occiput, where it is covered by the atlanto-occipital membrane. The V3 segment, running horizontally in a groove on the superior aspect of the posterior arch of the atlas, adjacent to the atlanto-axial junction (C1-C2) where most rotation occurs, is the most susceptible to injury.

During high-velocity, low-amplitude manipulation, a controlled force is applied to a joint in a specified direction, causing movement of that joint and adjacent joints in the spine. The amount of force delivered during cervical spine manipulation with manual high-velocity, low-amplitude techniques on living human subjects is 100 to 150 N*.^{7,8}

⁵ Manitoba Chiropractors Association, "Submission to the Health Professions Advisory Council" 17 November 2016 at 15.

⁶ Retrieved from

<http://www.icid.salisbury.nhs.uk/ClinicalManagement/Rehabilitation/Documents/34304b44fac54157bbbc1ed055225e18spineanatomymay08PI0017.pdf>

⁷ Biller, Jose et al on behalf of the American Heart Association Stroke Council. "Cervical Arterial Dissections and Association with Cervical Manipulative Therapy: A Statement for Healthcare Professionals from the American Heart Association/American Stroke Association." *Stroke*. Published online, 7 August 2014 at 3.

The MCSS also notes that the 1st and 2nd cervical vertebrae are vulnerable and describes the injury done by an HVLA thrust at that location of the neck:

There are two main arterial systems, the carotid and the vertebral that serve as the arterial blood supply to the entire brain. The left and right run up the anterior of the neck and the left and right vertebral run up the posterior of the neck. The vertebral arteries pass through the holes (foramen) in each side of the neck vertebrae and unite to form the basilar artery at the base of the brain. . . .

The HVLA thrust of the high neck is an abrupt tilting (chin is raised), stretching and twisting of the vertebrae in the high neck within the high neck's anatomical range of motion. . . . With the abrupt tilting of the chin, stretching, and twisting of the high neck, the three delicate layers of the vertebral and carotid arterial walls are subject to complete separation and/or tearing, medically known as carotid artery dissection (CAD) or the more common, vertebral artery dissection (VAD).

At the 2nd cervical vertebrae, the vertebral arteries begin to make a slight horizontal turn. At the 1st cervical vertebrae the vertebral arteries make an abrupt 90 degree, horizontal turn and it is at this location, the 1st and 2nd cervical vertebrae that the vertebral arteries are extremely vulnerable to dissection from an HVLA thrust.

Once some degree of dissection occurs, the arterial wall will bleed causing the walls of the arteries to balloon and/or clot formation to occur. . . . The clot or parts of the clot can be dislodged and/or the arterial wall will balloon sufficiently enough to block blood flow to the brain, resulting in a full blown stroke. Should a dissection extend through the outer connective tissue layer of the arterial wall, a massive haemorrhage would occur.⁹

The MCSS has taken the position that a form of this spinal adjustment – “high neck manipulation” – creates a risk to patient safety, and chiropractors should not be permitted to perform it:

An HVLA (high velocity, low amplitude) thrust of the high neck within its anatomical range of motion poses a material risk. Adverse events as a result of HVLA thrust of the high neck can cause catastrophic, debilitating, lifelong, life altering consequences: arterial damage, brain deficits, paralysis, locked in syndrome, stroke and death, and

⁸ One newton (N) is the force needed to accelerate one kilogram of mass at the rate of one metre per second squared in the direction of the applied force. At average gravity on earth, a kilogram mass exerts a force of about 9.8 newtons. An average-sized apple exerts about one newton of force, which is measured as the apple's weight. The weight of an average North American adult (80.7 kg) exerts a force of about 791 N. Retrieved from [https://en.wikipedia.org/wiki/Newton_\(unit\)](https://en.wikipedia.org/wiki/Newton_(unit)) 21 February 2017.

⁹ Manitoba Chiropractic Stroke Survivors. “High Velocity Low Amplitude Thrust of the High Neck” November 2016 at 3-4.

most often in a population less than 45 years of age and free of risk factors for arterial damage and stroke.¹⁰

The Review

Status of Reserved Act in other Canadian Jurisdictions

In all Canadian jurisdictions with umbrella health profession legislation (British Columbia, Alberta, Manitoba, Ontario and Prince Edward Island (PEI)), regulated health professions are required to have both a scope of practice statement and reserved acts in their profession-specific legislation. (PEI passed the Regulated Health Professions Act in 2013 and to date, only pharmacists and pharmacy technicians have come under the legislation. Because the other professions in PEI have not yet come under the Act, direct comparisons of authorities for reserved acts with other jurisdictions with umbrella legislation is not always possible. The same can be said for Manitoba, where only audiologists and speech language pathologists have come under the RHPA.) The scope of practice statement briefly describes in a general way what the profession does and the methods it uses and provides a frame of reference for the performance of narrowly defined reserved acts (consistent also with the education and training and the standards of practice for the profession).

In those jurisdictions which have not adopted umbrella legislation and a reserved act model, regulated health professionals may provide services within the description set out in that profession's scope of practice statement in its profession-specific legislation. This permits the profession, based on its expertise, to define the scope of professional activity.

The Council prepared a table for each of the professions (at Appendix B), indicating, by province, whether the members of the profession have the legislative authority to perform the Reserved Act. For those jurisdictions where the reserved act model is not employed, the tables identify the legislated scope of practice for the profession. The Northwest Territories, Nunavut and the Yukon do not have legislation in place to regulate physiotherapists, osteopaths or naturopaths. Of the three territories, only the Yukon regulates chiropractors.

Chiropractors

In British Columbia, Alberta, Ontario and Prince Edward Island, chiropractors are authorized to perform the Reserved Act, described variously as moving a joint of the spine within the anatomical range of motion using a high velocity, low amplitude thrust, without restriction or limitation. In all other provinces and the Yukon, joint or spinal

¹⁰ Manitoba Chiropractors Association, "Submission to the Health Professions Advisory Council" 17 November 2016 at 1.

manipulation, principally by hand or manual therapy, is part of the scope of chiropractic practice.

Physiotherapists

Physiotherapists in Manitoba and PEI are not yet under umbrella health profession legislation. In BC, physiotherapists are not authorized to perform the Reserved Act. In Alberta and Ontario, physiotherapists may perform the Reserved Act only with the specific authorization of their college.

Osteopaths

Osteopathic physicians are licensed medical doctors who have trained at an osteopathic medical school in the United States accredited by the American Osteopathic Association. Osteopathic physicians are regulated by the medical college in the province in which they practise and have the legal rights and responsibilities of medical physicians, including using the title “doctor”.

Non-physician osteopathic manual therapists have trained at private osteopathic colleges in Canada or abroad. Their training is not recognized by provincial medical colleges.

Osteopathic physicians who are members of the medical college in the province in which they practise, as well as traditional medical physicians, may perform the Reserved Act, based on their education and competence. Legislation in BC, Alberta, and Ontario authorizes physicians, both osteopathic and traditional, to perform the Reserved Act.

Naturopaths

Naturopaths in BC have authority to perform the Reserved Act and naturopaths in Alberta must be on the appropriate College register to perform the act. The College of Naturopathic Physicians of BC provides its members with clinical guidelines for contraindications to high-velocity thrust procedures.¹¹

Naturopathic medicine is a regulated health profession in Saskatchewan, governed by the Saskatchewan Association of Naturopathic Practitioners under *The Naturopathy Act*. The Association has policies setting standards for the safe practice of the profession, including a policy which states only registrants of the Association may perform “moving of the joints of the spine beyond the individual’s usual physiological range of motion using a fast, low amplitude thrust.”¹² The Association also has a standard/guideline for manipulation “to minimize the risk to the public from harm from high velocity thrust

¹¹ College of Naturopathic Physicians of British Columbia, “Clinical Guidelines for Spinal Manipulation in Naturopathic Practice”, April 19, 2005. Retrieved from <http://www.cnpbc.bc.ca/wp-content/uploads/QAC-Manipulation.pdf>

¹² Saskatchewan Association of Naturopathic Practitioners. “Non-registered Grads.” Retrieved from http://www.sanp.ca/uploads/3/4/4/2/34420826/sanp_non-registered_grads_policy.pdf 25 January 2017.

procedures.”¹³ The document lists “absolute contraindications” for when it is inappropriate to perform the procedure and “relative contraindications” when naturopaths must use their professional judgement.

The Manitoba Naturopathic Association, the organization in Manitoba which registers and licenses naturopaths, advised the Council that “high neck manipulation continues to be regulated and practiced by eligible practitioners” in the province.¹⁴

In order to perform the Reserved Act in Ontario, naturopaths must conform to the standards of practice set out in legislation and may move the thoracic, lumbar and sacral joints of the spine and cervical joints of the spine. A naturopath may only move the cervical joints of the spine (the neck region) using three low amplitude thrust procedures specified in regulation. In all cases, naturopaths in Ontario may not perform spinal manipulation if any contraindications listed in the regulation exist.

The practice of naturopathy in New Brunswick, Prince Edward Island and Newfoundland is not regulated and legislation respecting naturopaths in Nova Scotia only provides title protection.

The Research Literature Review

The results of the literature review of individual peer-reviewed articles published between January 1990 and November 2016 indicate that cervical spine manipulation (“CSM”) is frequently associated with minor, benign, and transient or self-limiting adverse events including:

. . . transient neurological symptoms, increased neck pain or stiffness, headache, tiredness and fatigue, dizziness or imbalance, extremity weakness, ringing in the ears, depression or anxiety, nausea or vomiting, blurred or impaired vision, and confusion or disorientation. The majority of the evidence concerning minor adverse events in the literature pertains to spinal manipulation in general, and data on minor adverse events in reference to CSM in particular is limited.¹⁵

Evidence in the literature suggests that CSM is rarely associated with serious adverse events and relies mostly on case reports and case series which:

. . . are placed at the bottom of the hierarchy of clinical evidence, as they can only provide only anecdotal evidence and contain intrinsic methodological limitations, namely a lack of statistical sampling and an inability to strictly determine causation.¹⁶

¹³ Saskatchewan Association of Naturopathic Practitioners. “Manipulation.” Retrieved from http://www.sanp.ca/uploads/3/4/4/2/34420826/sanp_manipulation_policy.pdf 25 January 2017.

¹⁴ November 21, 2016 letter from Manitoba Naturopathic Association to the Council.

¹⁵ Manitoba Health, Seniors and Active Living. “Cervical Spine Manipulation: A Rapid Literature Review”, January 2017 at 8.

¹⁶ Ibid, at 7.

The strongest evidence in terms of clinical evidence concerns risk for vertebral artery dissection and ischemic stroke following CSM, “though further research is still required to solidify this association.”¹⁷ The literature review discusses serious adverse events following CSM involving the cerebrovascular system, such as cervical artery dissection, ischemic stroke, or transient ischemic attacks; the neurological system such as damage to nerves or the spinal cord; and the musculoskeletal system, such as injury to cervical vertebral discs, vertebrae fracture or dislocation, spinal edema, or issues with the paravertebral muscles.¹⁸

Benefits

The number of studies in the literature reporting health-related benefits was comparatively smaller than the literature concerning the risk of adverse outcomes associated with CSM. The literature indicated that while CSM is used for a variety of indications, including neck, upper back and shoulder/arm pain, as well as headaches, the evidence in the literature seems to support CSM as a treatment of headache and neck pain only.¹⁹ The review indicated that further research is required to:

- strengthen evidence for the efficacy of CSM as a treatment for neck pain and headache, “as well as for other indications where evidence currently does not exist (i.e., upper back and should/arm pain, high blood pressure, etc.)”²⁰
- establish safety and efficacy of CSM in infants and children
- assess the risk versus benefit in consideration of using HVLA cervical spine manipulation, which also involve cost-benefit analyses that compare CSM to other standard treatments.²¹

The literature review describes the current debate around cervical spine manipulation as polarized – some authors argue it should be abandoned due to the risk of adverse events and the lack of evidence around benefit and others advocate that until the evidence around risk is more clearly established, cervical spine manipulation should be considered safe. The literature review indicates that “the current state of the literature may not yet be robust enough to inform definitive prohibitory or permissive policies around the application” of cervical spine manipulation, the literature suggests what is described as a “harm-reduction strategy” to mitigate potential harm until more robust evidence is available.²² In the interim, as proposed by authors in the literature, providers of CSM treatment might be mandated to:

- inform patients of the risks of CSM treatments prior to consenting to treatment and

¹⁷ Ibid, at 21.

¹⁸ Ibid, at 3.

¹⁹ Ibid, at 19.

²⁰ Ibid, at 21.

²¹ Ibid, at 23.

²² Ibid, at 22.

- provide patients with information to help in the early recognition of a serious adverse event to prevent further injury or harm.

Authors also suggest that regulatory bodies could further research and mitigate risk to patients by:

- establishing consistent definitions of adverse events following CSM to facilitate effective reporting and surveillance,
- instituting rigorous protocol for identifying high-risk patients before CSM treatment and
- creating detailed guidelines for appropriate application and contraindications for CSM.²³

The Jurisprudence Review

The jurisprudence review surveyed the Canadian case law and commentary related to the use of upper spinal/high neck manipulation to (1) compile judicial and arbitral decisions that related to the performance of upper spinal/high neck manipulation and (2) to compile a list of legal publications and commentary related to such manipulation. Cases and articles released before the year 2000 were excluded from the survey.

Three legal databases were used to compile the relevant case law and commentary and after accounting for cases which appeared in more than one database, there were a grand total of 18 cases where spinal manipulation was one of the issues (more than one issue may arise in a given case). Of the 18 cases, 16 were decided by the courts and 2 were decided by tribunals. Of the 16 court cases, 2 did not concern spinal manipulation treatment in particular and 4 were appeals of earlier decisions. Where more than one court case deals with the same individual and issue, i.e., where one decision is an appeal of another, the Council counts only one case. As a result, the jurisprudence review found that the same individual and issue (spinal manipulation therapy) arose 10 times in the search results of the jurisprudence review. The review included two legal journal articles; however, they did not concern spinal manipulation treatment in particular.

In 7 of the 10 “relevant” results or narrowed list of cases, the patient received cervical spine manipulation only. In one case, the patient received cervical and thoracic spine manipulation and in 2 cases the patient received lumbar spine manipulation. In six of the eight cases where the patient received cervical spine manipulation, the claim was dismissed. In the two other cases involving cervical spine manipulation, the court found that (1) the patient sustained a muscle strain as a result of the manipulation and did not give informed consent to the treatment and (2) the chiropractor breached her duty to disclose the risks and caused the patient’s injuries - permanent balance impairment, hearing loss and tinnitus. In both cases involving the lumbar spine manipulation, damages were awarded. The chiropractors involved breached the standard of care by failing to put forward alternative care, failing to obtain informed consent and failing to

²³ Ibid, at 22-23.

advise of risks. The Council notes that, irrespective of the findings of the court, disclosure of risk to the patient and informed consent were issues for resolution in 6 of the 10 relevant cases.

Written Submissions

Manitoba Chiropractic Stroke Survivors (Appendix E)

The MCSS submission was based on the experience of its members, the organization's review of literature gathered from various sources and the opinion of its medical advisor, Dr. Murray Katz of Montreal, Quebec. The MCSS is of the opinion that "HVLA thrust of the high neck presents a material risk" to the patient and that "authority to perform HVLA thrust should be **denied** (emphasis in the original) or, at the very least, subject to legislated conditions, restrictions and limitations."²⁴ The MCSS suggests that HVLA thrust should not be administered to or for the following:

1. Infants and children – to treat such conditions as ear infections, tonsillitis, infantile colic, asthma or gastrointestinal disorders or as an alternative to immunizations.
2. Overall health and wellness.
3. Maintenance of proper alignment of the neck vertebrae.
4. Infections - to alter the immune system, or to prevent or treat bacterial, viral or fungal infections.
5. Bodily organs - as a health benefit to such organs as the heart, lungs, kidneys or liver, or as means of preventing the onset of genetic disorders or cancer.
6. Removal of vertebral subluxations²⁵ in the high neck area, to improve the function of the brain stem and to treat high blood pressure, multiple sclerosis and Parkinson's disease. As noted by the MCSS, in 2010, the General Chiropractic Council, the statutory body established to regulate chiropractors in the United Kingdom, issued a statement to chiropractors and to patients, stating that "chiropractic vertebral subluxation complex is an historical concept but it remains a theoretical model. It is not supported by any clinical research evidence that would allow claims to be made that it is the cause of disease."²⁶

²⁴ Manitoba Chiropractic Stroke Survivors. "High Velocity Low Amplitude Thrust of the High Neck" November 2016 at 43.

²⁵ WHO Guidelines on Basic Training and Safety in Chiropractic (2005) defines subluxation as "a lesion or dysfunction in a joint or motion segment in which alignment, movement integrity and/or physiological function are altered, although contact between joint surfaces remains intact. . . . It is hypothesized that significant neurophysiological consequences may occur as a result of mechanical spinal functional disturbances, described by chiropractors as subluxation and the vertebral subluxation complex." (pg. 4-6) This definition is different from the medical definition, in which subluxation means the incomplete or partial dislocation or displacement of a bone from a joint.

²⁶ Retrieved from <http://www.gcc-uk.org/UserFiles/Docs/What%20Can%20I%20Expect/Vertebral%20Subluxation%20Complex.pdf> 6 February 2017.

The MCSS also recommends legislative language²⁷ which would prevent chiropractors from:

- 1) Making a diagnosis of an organic disease, the immune system, an infectious disease and cancers, based on the manual examination of the highest neck area of the spinal column.
- 2) Making a diagnosis by means of thermographs, heat reading machines, postural analysis and “insight subluxation” devices, as applied to the spinal column.
- 3) Advising any patient that HVLA spinal thrust of the high neck/cervical area, from the base of the skull to the bottom of the second vertebrae, can be used to prevent, treat or influence the course of organic diseases of the body or the immune system, infectious diseases or cancers of the body.
- 4) Claiming that vertebral subluxations, as defined by the profession as vertebral bones that partly dislocated, can cause organic diseases of the body or the immune system, infectious diseases or cancers of the body.
- 5) Claiming that the removal of the chiropractic vertebral subluxation in the high neck/cervical spine can be used to treat, prevent or influence the course of organic diseases of the body, the immune system of a child or adult, infectious diseases or cancers of the body.

While the literature review prepared at the Council’s request systematically identifies peer-reviewed articles and evaluates and synthesizes the existing body of completed and recorded work produced by researchers, scholars, and practitioners to answer the given questions, the MCSS indicates that it has amassed “sixty years of scientific studies, case reports and reviews (which) conclude that HVLA thrust of the cervical spine, in particular the high cervical spine can and does cause arterial damage and stroke.”²⁸ The Council reviewed the extensive literature provided by the MCSS in support of its position and noted that in some cases the documents were dated. To determine whether the knowledge had advanced, the Council searched on-line and found it had. For instance, the MCSS pointed to the “Chiropractic Clinical Practice Guideline: Evidence-based Treatment of Adult Neck Pain not due to Whiplash”, published in 2005 in the Journal of the Canadian Chiropractic Association and the November 2005 summary of recommendations stemming from the clinical practice guideline. In October 2016, the Journal of Manipulative and Physiological Therapeutics published “The Treatment of Neck Pain-Associated Disorders and Whiplash-Associated Disorders: A Clinical Practice Guideline” which states that it supersedes the original (2005) neck pain guideline cited by the MCSS and the revised (2014) neck pain guideline as well as the 2010 whiplash-associated guidelines.²⁹

The 2016 guideline also encourages evidence-based therapy and includes a disclaimer that the guideline is not a replacement for informed clinical decision-making:

²⁷ Manitoba Chiropractic Stroke Survivors. “High Velocity Low Amplitude Thrust of the High Neck” November 2016 at 40-42.

²⁸ Ibid, at 26.

²⁹ Bussieres, Andre E. et al. “The Treatment of Neck Pain-Associated Disorders and Whiplash-Associated Disorders: A Clinical Practice Guideline”, The Journal of Manipulative and Physiological Therapeutics, October 2016 at 558.

People should receive care based on evidence-based therapeutic options. Based on patient preference and resources available, a mixed multimodal approach including manual therapy and advice about self-management and exercise (supervised/unsupervised or at home) may be an effective treatment strategy for recent-onset and persistent NAD (neck pain-associated disorders) and WAD (whiplash pain-associated disorders)

The evidence-based practice guidelines published by the CCGI (Canadian Chiropractic Guideline Initiative) include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options. Guidelines are intended to inform clinical decision making, are not prescriptive in nature, and do not replace professional chiropractic care or advice Furthermore, guidelines may not be complete or accurate because new studies that have been published too late in the process of guideline development Guideline users are urged to seek out newer information that might impact the diagnostic and/or treatment recommendations contained within a guideline.³⁰

Similarly, the MCSS references a patient handout distributed by the MCA and the Canadian Chiropractic Association (CCA) on neck adjustment. The patient handout references sources dated between 2001 and 2004, suggesting the handout is no longer current. A search of the MCA and CCA websites did not locate the handout. Instead, the MCA provides a link to the Canadian Chiropractic Association and the neck disorders and whiplash guidelines of the Canadian Chiropractic Guideline Initiative.

The MCSS, clearly compelled by the experiences of persons who have suffered a stroke and their loved ones, seeks publications studies and reports which corroborate those experiences and understandably seeks the prohibition of or severe constraints on the performance of HVLA. A closer examination of some of the studies cited by the MCSS does not, however, point to the need for such action as proposed by the MCSS. Norris et al (2000), on behalf of the Canadian Stroke Consortium, stated that most patients undergoing therapeutic neck manipulation will experience no ill effects but acknowledged that chiropractic neck manipulation can result in dissection of the carotid or vertebral arteries leading to stroke. The authors recommended that “until a high-risk group can be identified, chiropractors should inform all patients of possible serious complications before neck manipulation.”³¹ Paciaroni and Bogousslavsky (2009), after having reviewed synthesized available data on cerebrovascular adverse events associated with upper spinal manipulation, concluded that evidence shows an association between spinal manipulation and mild adverse events as well as with serious complications including dissection of cervical arteries most commonly involving the vertebral arteries and that specific risk factors for such adverse events and complications related to spinal manipulation have not been identified yet. The authors recommended that patients undergoing spinal manipulative therapy should be informed of the risk of stroke or vascular injury from this procedure.

³⁰ Ibid.

³¹ Norris, John W., Vadim Beletsky and Zurab G. Nadareishvili. “Sudden Neck Movement and Cervical Artery Dissection”, Canadian Medical Association Journal. 163 (1) July 2000 at 40.

Manitoba Chiropractors Association (Appendix F)

The MCA's written submission states that the administration of the Reserved Act is a key component of chiropractic practice in Manitoba; in a 2009 survey of chiropractors in Manitoba, 99% responded that they performed the Reserved Act on a daily basis. The MCA also points out that the Reserved Act is within the scope of practice of chiropractors in every Canadian jurisdiction, without any limitation as to specific location along the spine, i.e., cervical, thoracic or lumbar.

The MCA's position with respect to the Reserved Act as it is performed by chiropractors on the neck, or "neck adjustment" as the MCA describes it, is "that the adjustment of the spine is an efficient and safe modality which facilitates the patient's body to experience optimum health". The MCA provides four publications which "outline the value of spinal adjustment, particularly with respect to neck adjustment targeting neck pain and headaches". In reviewing the publications, the Council is not certain that these publications are demonstratively supportive of the MCA's position as comparisons are made only with exercise and massage and not other standard treatments such as over-the-counter pain medication. For example, Maiers et al concludes that spinal manipulative therapy combined with home exercise results in greater reduction of pain experienced by adults 65 years and over with a complaint of weekly mechanical neck pain, than home exercise alone.³² The study conducted by Haavik-Taylor and Murphy examined the mechanism(s) responsible for the relief of pain and restoration of functional ability after spinal manipulation but did not compare the effectiveness of spinal manipulation to other forms of treatment.³³ Haas et al compared the efficacy of two doses of spinal manipulation therapy and two doses of light massage for care of cervicogenic headache (such headache, according to the study, is associated with neck pain and dysfunction).³⁴ The World Health Organization Guidelines on Basic Training and Safety in Chiropractic stated "it is beyond the scope of these guidelines to review the various indications for chiropractic care and the supportive research evidence."³⁵

The MCA also asserted that a review of the literature included in its submission would show that chiropractic adjustment "is more effective for acute and sub-acute neck pain, over both the short and long term, than management with non-steroidal anti-inflammatory drugs"³⁶ (ex., Advil™). However, the Council was not able to locate the study in the MCA submission which supports such a finding.

The MCA states that the sum of the scientific studies and papers it included in its submission will lead to the conclusion "that, at worst, there is a 'temporal' connection between cervical and

³² Maiers, Michele et al. "Spinal Manipulative Therapy and Exercise for Seniors with Chronic Neck Pain", *The Spine Journal* 14 (2014) at 1887-1888.

³³ Haavik-Taylor, Heidi and Bernadette Murphy. "Cervical Spine Manipulation Alters Sensorimotor integration: A Somatosensory Evoked Potential Study", *Clinical Neurophysiology* 118 (2007) at 391.

³⁴ Haas, Mitchell et al. "Dose Response and Efficacy of Spinal Manipulation for Chronic Cervicogenic Headache: a Pilot Randomized Controlled Trial", *The Spine Journal* 10 (2010) at 117.

³⁵ World Health Organization, [WHO Guidelines on Basic Training and Safety in Chiropractic](#) (2005) at 19.

³⁶ Manitoba Chiropractors Association, "Submission to the Health Professions Advisory Council" 17 November 2016 at 5.

dissection of the cervical arteries that may lead to strokes. It is the assertion of the MCA that it is highly unlikely that there is a cause and effect link between spinal adjustment and strokes.”³⁷

The studies the MCA relies on to support its position are not as emphatic in their conclusions as the MCA suggests. For instance, in the case of Cassidy et al, the MCA takes the study to say “that it was not a chiropractic adjustment that caused the stroke to occur.”³⁸ Cassidy et al urged a cautious interpretation of its work, and treatment decisions based on effectiveness:

Our results should be interpreted cautiously and placed into clinical perspective. We have not ruled out neck manipulation as a potential cause of some VBA strokes. On the other hand, it is unlikely to be a major cause of these rare events. Our results suggest that the association between chiropractic care and VBA stroke found in previous studies is likely explained by presenting symptoms attributable to vertebral artery dissection Unfortunately, there is no acceptable screening procedure to identify patients with neck pain at risk of VBA stroke. These events are so rare and difficult to diagnose Given our current state of knowledge, the decision of how to treat patients with neck pain and/or headache should be driven by effectiveness and patient preference.³⁹

The MCA’s submission describes the entry-to-practice requirements for chiropractors and the key competencies of a licensed chiropractor in Manitoba. According to the MCA, “a typical doctor of chiropractic program includes an undergraduate university education as well as specific Doctor of Chiropractic training totally seven-eight years of intense study. This education includes classroom training, clinical skills development and evaluation. Doctor of Chiropractic programs involve an intensive four-year academic program in anatomy, physiology, biomechanics, pathology, orthopedics, neurology, radiology (x-ray), chiropractic technique, philosophy, public health, nutrition, disease prevention, rehabilitation and more. Chiropractic students undergo hundreds of hours of **specialized training in spinal adjustments** (emphasis in original).”⁴⁰ Applicants for registration in Manitoba must be graduates of a Council of Chiropractic Education (CCE)-accredited Doctor of Chiropractic program and have completed the Canadian Chiropractic Examining Board (CCEB) entry-to-practice national competency examinations.

The MCA requires its members to provide care in a manner consistent with standards of practice and the MCA *Patient Charter of Rights* (the “Charter”). Standard of Practice S-05 requires the chiropractor to obtain written informed consent from the patient and to disclose and discuss “potential risks (emphasis added) and benefits” while the *Charter* promises patients that the chiropractor will provide them with information about “any significant risks (emphasis added) associated with the proposed treatment”. The inconsistency in the language between the two documents may give rise to confusion about risks that need to be disclosed to chiropractic patients in Manitoba.

³⁷ Ibid, at 8.

³⁸ Ibid, at 10.

³⁹ Cassidy, David J. et al “Risk of Vertebrobasilar Stroke and Chiropractic Care”. *European Spine Journal* (2008) 17 at S181-82.

⁴⁰ Manitoba Chiropractors Association, “Submission to the Health Professions Advisory Council” 17 November 2016 at 15.

Part II – Informed Consent

Written informed consent must be obtained from the patient. A patient must be provided an opportunity to ask questions. Consent can be withdrawn by a patient at any time.

- Disclosure and discussion of potential risks and benefits, especially material; risks based on the patient's situation as well as alternatives to the proposed treatment.
- Subjective assessment by the practitioner that the patient in question has the capacity to understand the information provided and form a reasonable judgement as to consent.
- The material is presented in such a fashion that the patient is not subjected to external pressure or undue influence.
- There must be the opportunity for the patient to ask questions and discuss any concerns that may arise at that time or into the future.

(from MCA Standard of Practice S-05)

Chiropractic Patients in Manitoba have the right and expectation to:

.....

4. Participate in discussions and decisions with their chiropractor regarding their chiropractic care.

5. Receive clear information from their care provider about:

- a) Their diagnosis, prognosis and the proposed treatment plan
- b) Other options for care including referral to other health care providers or other chiropractors if appropriate
- c) Any significant risks associated with the proposed treatment.

(from MCA *Patient Charter of Rights*)

College of Physiotherapists of Manitoba (Appendix G)

In a letter to the Council, the CPM advised:

- Spinal manipulation treatment is taught in physiotherapy education programs at recognized universities in Canada. Postgraduate education in spinal manipulation techniques, including cervical manipulation, is available to practising physiotherapists.
- Manipulation of the spine, including “high level cervical manipulation” is within the scope of practice of physiotherapists in Manitoba and elsewhere in Canada.
- “It is well documented and noted amongst physiotherapists that there are certain high risks to applying cervical manipulation There are not good conclusive tests to indicate which client may suffer an untoward effect from a cervical manipulation. Consequently there are not many physiotherapists who practise high level cervical manipulation.”

Manitoba Naturopathic Association (Appendix H)

The MNA registers and licenses naturopathic doctors in Manitoba. In their letter to the Council, the MNA advised as follows:

- Spinal adjustments and high neck manipulation are part of the core curriculum in four-year naturopathic degree programs taught at naturopathic medical colleges in North America.
- Applicants must have successfully passed the Naturopathic Physicians Licensing Examinations (NPLEX) administered by the North American Board of Naturopathic Examiners (NABNE) prior to applying to the Manitoba Naturopathic Association.
- The use of spinal adjustments and high neck manipulation is part of the scope of practice for naturopathic doctors in North America.
- “Data regarding post procedure issues associated with high neck manipulation . . . shows that adverse events associated with this procedure are statistically low risk. (Research results) are generally inconclusive and may relate more to the predisposition or previously undiagnosed cardiovascular/cervical symptoms in a patient than the neck procedure itself.”

College of Physicians and Surgeons of Manitoba (Appendix I)

In its letter to the Council, the CPSM indicated it sought input from physician leaders in Neurosurgery, Physical Medicine and Rehabilitation, Neurology, and Orthopedic Surgery who each “independently and unanimously expressed serious reservations about the use of high velocity, low amplitude thrust to move a joint of the spine within its anatomical range by chiropractors.” The CPSM did not express an opinion about the performance of the Reserved Act by its own members. The physicians provided the CPSM with data in regard to the topic which the CPSM advised showed:

- Adverse events such as vertebral fracture, vertebral artery dissection and brain stem stroke, acute spinal cord injury, nerve root injury with motor and sensory deficit, quadriplegia and death.
- Reports of vertebral artery dissection and carotid artery dissection causing cerebral vascular accidents.
- Lesser adverse effects such as tiredness, dizziness, nausea, ringing in the ears, etc.

The spine surgeons noted the following risk factors:

- When a spinal nerve root, spinal cord and vertebral arteries are adjacent to an arthritic facet joint.
- Quantification of force to the spine is difficult to control
- Age, gender and ethnicity of patient

The position of physician leaders in Physical Medicine and Rehabilitation in regard to the Reserved Act is as follows:

- Chiropractic manipulation is not recommended in the absence of spinal pain in an asymptomatic individual.
- Chiropractic manipulation is not recommended for chronic spinal pain.
- Chiropractic manipulation is not recommended in the setting of radiculopathy (a set of conditions in which one or more nerves are affected and do not work properly).
- If a chiropractor chooses to perform an adjustment of the cervical spine, it should only occur after obtaining written informed consent from the patient that includes mention of the association of cervical artery dissections and stroke, post manipulation, in patients less than 45 years of age. [The Council notes that Rothwell et al found an association between recent chiropractic visits and the risk of vertebrobasilar accidents (a rare form of stroke) only in those aged less than 45 years. The study examined hospital records of all persons admitted to an Ontario acute care facility with a diagnosis of vertebrobasilar dissection (a cause of stroke) or occlusion of the vertebral artery (a cause of stroke) over a six-year period.⁴¹]

The CPSM indicated it had “serious reservations” about chiropractors having authority to perform the Reserved Act and did not limit its advice to “high neck manipulation” or cervical manipulation. The CPSM believes the MCA should be required to demonstrate scientifically the safety and efficacy of spinal manipulation therapy to ensure patient safety.

Summary

On the whole, the material provided to the Council does not generate sufficiently definitive or conclusive evidence which would lead to a prohibition of the performance by regulated health professionals of “high neck manipulation” as part of the larger Reserved Act. The evidence does indicate, however, that the performance of “high neck manipulation” or cervical spine manipulation does present a risk of harm to patients. This risk of harm must be understood by both the patient and the practitioner.

Both the jurisprudence review and the research literature review point to the need for the following actions to mitigate the risk of harm associated with the performance of cervical spine manipulation:

- Action One: Ensure that the patient provides written informed consent prior to initiating treatment which includes a discussion about the risk associated with cervical spine manipulation.

⁴¹ Rothwell, Deanna M., Susan J. Bondy and J. Ivan Williams. “Chiropractic Manipulation and Stroke: A Population-Based Case-Control Study” *Stroke*. 2001; 32: 1054- 1060.

- Action Two: Provide patients with information to assist in the early recognition of a serious adverse event.

Appendix A

Redacted – Subject to Copyright

Appendix B. Status of Reserved Act in other Canadian Jurisdiction

Chiropractors

Physiotherapists

Osteopaths

Naturopaths

Legislation - Chiropractors - Canada

Legislation – Chiropractors – Canada

Jurisdiction	Authority
<p>British Columbia</p>	<p>HEALTH PROFESSIONS ACT</p> <p>Chiropractors Regulation</p> <p>"chiropractic" means the health profession in which a person provides, for the purposes of promotion, maintenance and restoration of health, the services of</p> <ul style="list-style-type: none"> (a) assessment of the spine or other joints of the body and the associated tissue, and the nervous system, (b) treatment of nervous system, muscular and skeletal diseases, disorders and conditions through manipulation or adjustment of the spine or other joints of the body by hand or by using devices directly related to the manipulation or adjustment, and (c) advice and counseling on matters related to the condition of the spine or other joints of the body and the associated tissue, the nervous system and the overall health of the individual; <p>Restricted activities</p> <p>4 (1) A registrant in the course of practising chiropractic may do any of the following:</p> <ul style="list-style-type: none"> (a) make a diagnosis identifying, as the cause of signs or symptoms of an individual, a disease, disorder or condition of the spine or other joints of the body and the associated tissue, and the nervous system; (b) move a joint of the spine beyond the limits the body can voluntarily achieve but within the anatomical range of motion using a high velocity, low amplitude thrust; (c) put an instrument, a device or a finger into the external ear canal for the purpose of assessing the ear and auditory systems; (d) put a finger beyond the anal verge for the purpose of manipulating the coccyx; (e) apply X-rays for diagnostic or imaging purposes, excluding X-rays for the purpose of computerized axial tomography; (f) issue an instruction or authorization for another person to apply, to a named individual, <ul style="list-style-type: none"> (i) electromagnetism for the purpose of magnetic resonance imaging, or (ii) X-rays for diagnostic or imaging purposes, including X-rays for the purpose of computerized axial tomography.
<p>Alberta</p>	<p>HEALTH PROFESSIONS ACT</p> <p>Chiropractors Profession Regulation</p> <p>Alberta Regulation 277/2006</p>

Restricted Activities

Basic authorized activities

13 A regulated member may, in the practice of chiropractic and in accordance with the Standards of Practice, perform the following restricted activities:

- (a) to use a deliberate, brief, fast thrust to move the joints of the spine beyond the normal range but within the anatomical range of motion, which generally results in an audible click or pop;
- (b) to insert or remove instruments, devices or fingers
 - (i) beyond the cartilaginous portion of the ear canal,
 - (ii) beyond the point in the nasal passages where they normally narrow, and
 - (iii) beyond the anal verge;
- (c) to reduce a dislocation of a joint;
- (d) to order any form of ionizing radiation in
 - (i) medical radiography, and
 - (ii) nuclear medicine;
- (e) to apply any form of ionizing radiation in medical radiography;
- (f) to order non-ionizing radiation in
 - (i) magnetic resonance imaging, and
 - (ii) ultrasound imaging.

Other authorized activities

14(1) A regulated member

- (a) who has successfully completed an education program in needle acupuncture approved by the Council,
 - (b) who meets the additional requirements for continuing competence related to needle acupuncture set by the Council, and
 - (c) who has received notification from the Registrar that the authorization is indicated on the appropriate register
- may, in the practice of chiropractic and in accordance with the Standards of Practice, perform the restricted activity of cutting a body tissue or performing other invasive procedures on body tissue below the dermis or mucous membrane for the purpose of needle acupuncture.

(2) A regulated member

- (a) who has successfully completed a specialty program in orthopaedics approved by the Council,
- (b) who meets the additional requirements for continuing competence related to setting fractures set by the Council, and
- (c) who has received notification from the Registrar that the authorization is indicated on the appropriate register

	<p>may, in the practice of chiropractic and in accordance with the Standards of Practice, perform the restricted activity of setting or resetting a simple fracture of a bone.</p> <p>Restriction 15(1) Despite any authorization to perform restricted activities, regulated members must restrict themselves in performing restricted activities to those activities that they are competent to perform and to those that are appropriate to the member’s area of practice and the procedure being performed. (2) A regulated member who performs a restricted activity must do so in accordance with the Standards of Practice.</p>
Saskatchewan	<p>THE CHIROPRACTIC ACT, 1994</p> <p>“chiropractic” means: (i) the science and art of treatment, by methods of adjustment, by hand, of one or more of the several articulations of the human body; (ii) diagnosis, including all diagnostic methods, and spinal analysis; and (iii) the provision of direction and advice, written or otherwise; in relation to any ailment, disease, defect or disability of the spinal column or any other part of the human body, where the treatment, diagnosis or provision of direction or advice is taught in a College of Chiropractic accredited by the Council on Chiropractic Education (Canada);</p> <p>Limitation on practice 25(1) Nothing in this Act or the bylaws authorizes any member to: (a) prescribe or administer prescription drugs; (b) practise medicine, surgery or midwifery; (c) use any method other than chiropractic in the treatment of disease.</p> <p>(2) Subject to the bylaws, a practising member may in connection with the practice of chiropractic, use X-rays and produce plain film radiographs.</p>
Manitoba	<p>THE CHIROPRACTIC ACT</p> <p>"practice of chiropractic" means</p> <p>(a) any professional service usually performed by a chiropractor, including the examination and treatment, principally by hand and without use of drugs or surgery, of the spinal column, pelvis and extremities and associated soft tissues; and</p> <p>(b) such other services as may be approved by the regulations;</p> <p>Use of X-ray <u>12(2)</u> A chiropractor who is duly registered and licensed under this Act may, in connection with his practice, use x-ray for diagnostic purposes</p>

	<p>only if he is authorized by the board to do so.</p> <p>Limitation on practice</p> <p><u>53(4)</u> Nothing in this Act or the regulations authorizes any person to prescribe or administer drugs for internal or external use or to use, direct or prescribe the use of anaesthetic for any purpose whatsoever.</p>
Ontario	<p>CHIROPRACTIC ACT, 1991 S.O. 1991, CHAPTER 21</p> <p>Scope of practice</p> <p><u>3.</u> The practice of chiropractic is the assessment of conditions related to the spine, nervous system and joints and the diagnosis, prevention and treatment, primarily by adjustment, of,</p> <p>(a) dysfunctions or disorders arising from the structures or functions of the spine and the effects of those dysfunctions or disorders on the nervous system; and</p> <p>(b) dysfunctions or disorders arising from the structures or functions of the joints. 1991, c. 21, s. 3.</p> <p>Authorized acts</p> <p><u>4.</u> In the course of engaging in the practice of chiropractic, a member is authorized, subject to the terms, conditions and limitations imposed on his or her certificate of registration, to perform the following:</p> <p>1. Communicating a diagnosis identifying, as the cause of a person's symptoms,</p> <p>i. a disorder arising from the structures or functions of the spine and their effects on the nervous system, or</p> <p>ii. a disorder arising from the structures or functions of the joints of the extremities.</p> <p>2. Moving the joints of the spine beyond a person's usual physiological range of motion using a fast, low amplitude thrust.</p> <p>3. Putting a finger beyond the anal verge for the purpose of manipulating the tailbone.</p>
Quebec	<p>CHIROPRACTIC ACT</p> <p>PRACTICE OF CHIROPRACTIC</p> <p>6. Every act the object of which is to make corrections of the spinal column, pelvic bones or other joints of the human body, by use of the hands, constitutes the practice of chiropractic.</p> <p>7. A chiropractor may determine by clinical and radiological examination of the spinal column, pelvic bones and other joints of the human body, the chiropractic treatment indicated. However, a chiropractor shall not make radiological examinations unless he holds a radiology permit issued in accordance with section 187 of the Professional Code (chapter C-26).</p>
New Brunswick	<p>An Act to Incorporate the New Brunswick Chiropractors Association</p> <p>"practice of chiropractic" means primary care professional service</p>

	performed by a chiropractor for the diagnosis, including diagnostic imaging, and for the examination and treatment, principally by hand, and without the use of drugs or surgery, of the spinal column, pelvis, extremities and associated tissues
Nova Scotia	<p>CHIROPRACTIC ACT</p> <p>“chiropractic” means professional services usually performed by or under the supervision of a chiropractor and includes</p> <p>(i) diagnosis, examination and treatment of persons principally by hand and without the use of drugs or surgery of the spinal column, pelvis, extremities and associated tissues, and</p> <p>(ii) such services as approved by the regulations;</p>
Prince Edward Island	<p>CHIROPRACTIC ACT</p> <p>(j) “practice of chiropractic” means the provision of any professional service usually performed by a chiropractor, and includes the prevention, diagnosis, and treatment of biomechanical disorders of the neuromusculoskeletal system by methods that include the use of</p> <p>(i) imaging, laboratory and clinical diagnostic procedures,</p> <p>(ii) joint manipulation or other manual therapies, and</p> <p>(iii) exercise and patient education;</p> <p>(2) Nothing in this Act authorizes any person to</p> <p>(a) prescribe or administer drugs for internal or external use by any person;</p> <p>(b) direct or prescribe the use of anaesthetic for any purpose whatsoever; or</p> <p>(c) practise medicine, surgery or midwifery or to use any method other than chiropractic in providing services to clients.</p>
Newfoundland and Labrador	<p>CHIROPRACTORS ACT (O.C. 96-941)</p> <p><i>Chiropractors Regulations</i></p> <p>"chiropractic" means a professional service usually performed by a chiropractor directed towards the diagnosis, examination and treatment, principally by hand, and without use of drugs or surgery, of the spinal column, pelvis, extremities and associated tissues;</p> <p>Prohibition</p> <p>39. (1) A chiropractor shall not prescribe a laboratory test or maintain, use or have access to hospital or other laboratory services.</p> <p>(2) A chiropractor may provide x-ray services to his or her patients by prescription, to be carried out at a</p> <p>(a) chiropractic clinic; or</p> <p>(b) hospital or other health care facility.</p> <p>(3) X-ray services under subsection (2) shall be carried out as prescribed</p>

	<p>by regulation.</p> <p>(4) An action or other proceeding shall not be taken against</p> <ul style="list-style-type: none"> (a) a hospital or other health care facility; (b) a medical practitioner registered under the <i>Medical Act, 2005</i> and practising in a hospital or other health care facility; or (c) an employee of a hospital or other health care facility for x-ray services properly carried out at the request of a chiropractor. <p>(5) For the purpose of this section "hospital" means a hospital operated by a regional health authority under the <i>Regional Health Authorities Act</i>.</p> <p>Limitation</p> <p>40. A person registered under this Act shall not</p> <ul style="list-style-type: none"> (a) use, direct or prescribe the use of an anaesthetic; or (b) give treatments for dislocations or fractures. <p>Secondary therapies</p> <p>41. A person registered under this Act may employ as an aid to treatment and as secondary adjunctive therapies, electrotherapy, thermotherapy and counselling in relation to exercise, nutritional supplements and diet.</p> <p>Prohibition generally</p> <p>42. (1) A person shall not, for fee or reward, manipulate the joints of the human spinal column, including its immediate articulations, for therapeutic purposes unless</p> <ul style="list-style-type: none"> (a) the person is registered and licensed as a chiropractor under this Act; (b) the person does so as a part of a course of chiropractic education approved by the board; or (c) the person does so in connection with an examination arranged by the board. <p>(2) A person shall not permit his or her agent or employee to do an act in contravention of subsection (1).</p> <p>(3) For the purposes of subsection (1), a person manipulates the joints referred to in that subsection for fee or reward if he or she receives a fee or a reward for that manipulation or for a service performed or advice given in connection with that manipulation.</p>
<p>Yukon</p>	<p>CHIROPRACTORS ACT</p> <p>Interpretation</p> <p>1 In this Act,</p> <p>“adjustment” means a specific form of direct articular manipulation using either short or long lever techniques and characterized by a dynamic thrust of controlled velocity, amplitude and direction;</p> <p>“chiropractic” means the method of treating human beings for disease and the causes of disease by assessment and diagnosis of</p>

	<p>conditions related to the spine, joints and associated soft tissues, and treatment of those conditions primarily by adjustment with or without the aid of adjunctive therapies taught at an accredited school of chiropractic;</p> <p>Use of X-ray photographs</p> <p>13 A person registered as a chiropractor under this Act may in connection with their practice use X-ray shadow photographs and if they file with the registrar a certificate of competency pursuant to the regulations, may in connection with their practise use X-ray equipment for the purposes only of producing shadow photographs.</p> <p>Offences and penalties</p> <p>2) A chiropractor who</p> <ul style="list-style-type: none"> (a) prescribes or administers drugs or medicinal preparations; (b) treats venereal disease or any other communicable disease; (c) performs any surgical operation, (d) practises obstetrics or any branch of medicine or osteopathy; (e) uses or directs or prescribes the use of anaesthetics for any purpose; (f) uses any method other than chiropractic in the treatment of disease; or (g) except as provided by section 13, takes X-ray photographs without supervision by a medical practitioner, <p>is guilty of an offence.</p>
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*The Northwest Territories, Nunavut and the Yukon do not have legislation in place to regulate chiropractors.

Legislation - Physiotherapists/ Physical Therapists - Canada

Legislation – Physiotherapists/Physical Therapists – Canada

Jurisdiction	Authority
<p>British Columbia</p>	<p>HEALTH PROFESSIONS ACT</p> <p>Physical Therapists Regulation "physical therapy" means the treatment of the human body by physical or mechanical means, by manipulation, massage, exercise, the application of bandages, hydrotherapy and medical electricity, for the therapeutic purpose of maintaining or restoring function that has been impaired by injury or disease.</p> <p>Scope of practice 4 A registrant may practise physical therapy.</p> <p>Restricted activities 5 (1) No person other than a registrant may practise physical therapy. (2) Subsection (1) does not apply to a person employed by and on the premises of a hospital which has been designated by the minister and who is acting under the direction of a medical practitioner.</p> <p>Limit or condition on service 6 No registrant may prescribe or administer drugs or anaesthetics, or treat a recent fracture of a bone, except under the direction of a medical practitioner.</p> <hr/> <p>COLLEGE OF PHYSICAL THERAPISTS OF BRITISH COLUMBIA PRACTICE STANDARD Number 5 Effective: April 1, 2008 Replaces: September 1, 2006 December 1996</p> <p>SPINAL MANIPULATION 1. The physical therapist must obtain informed patient consent prior to performing spinal manipulation.</p> <p>2. The physical therapist using spinal manipulation in practice must be able to demonstrate that they are qualified to safely and effectively perform spinal manipulations as outlined in the College of Physical Therapists of Alberta document <i>Spinal Manipulation Competency Profile for Physical Therapists</i>.</p>

<p>Alberta</p>	<p>HEALTH PROFESSIONS ACT PHYSICAL THERAPISTS PROFESSION REGULATION Alberta Regulation 64/2011</p> <p>Other authorized activities 14 Only a regulated member (a) who is registered on the general register or on the courtesy register, (b) who has provided evidence to the Registrar of having the competencies required to perform the restricted activities described in clauses (d) to (h), and (c) who has received notification from the Registrar that the authorization is indicated on the general register or on the courtesy register, as the case may be, may, in the practice of physical therapy and in accordance with the standards of practice, perform the following restricted activities:</p> <p>(f) to use a deliberate, brief, fast thrust to move the joints of the spine beyond the normal range but within the anatomical range of motion, which generally results in an audible click or pop;</p> <hr/> <p>Standards of Practice for Alberta Physiotherapists Updated July 2012</p> <p>Performance of Restricted Activities ... the performance of restricted activities is restricted to those that the regulated member is authorized and competent to perform or is supervised to perform and, to those that are appropriate to the member’s area of practice.</p> <p>Dry needling, spinal manipulation and diagnostic imaging require specific authorization by the Registrar.</p>
<p>Saskatchewan</p>	<p>THE PHYSICAL THERAPISTS ACT, 1998</p> <p>Saskatchewan College of Physical Therapists (SCPT) The SCPT Regulatory Bylaws Amendments 2016</p> <p>Definitions 2 In these Bylaws:</p> <p>(e) “specialized physical therapy procedure” includes, acupuncture, dry needling, spinal manipulation and invasive techniques for the treatment of urogenital or rectal dysfunction.</p> <p>Specialized procedures 18(1) No member shall perform a specialized physical therapy procedure</p>

	<p>unless he or she has completed an educational program described in this section and recognized by the council.</p> <p>(6) To be recognized by the council, a course in spinal manipulation must:</p> <p>(a) be included in a recognized educational program;</p> <p>(b) be provided by a member organization and meet the standards of the International Federation of Orthopedic Manipulative Physical Therapists; or</p> <p>(c) provide education to the same level as a course described in clause (a) or (b).</p>
<p>Manitoba</p>	<p>THE PHYSIOTHERAPISTS ACT</p> <p>Practice of physiotherapy</p> <p>2(1) The practice of physiotherapy is the assessment and treatment of the body by physical or mechanical means for the purpose of restoring, maintaining or promoting physical function, mobility or health, or to relieve pain.</p> <p>Included practices</p> <p>2(2) Subject to the regulations, in the course of engaging in the practice of physiotherapy, a physiotherapist may plan, administer and evaluate a physiotherapy program that includes, but is not limited to, education, ergonomics and interventions such as exercise, massage, articular and soft tissue mobilizations and manipulations, acupuncture, hydrotherapy, tracheal suctioning, and the use of radiant, mechanical and electrical energy.</p> <p>Physiotherapists Regulation SCHEDULE A (Section 19) STANDARDS OF PRACTICE</p> <p>Standards of practice</p> <p>19 The standards of practice for a physiotherapist are as set out in Schedule A, and failure to comply with a standard may result in a proceeding against a member in accordance with the Act.</p> <p>Spinal manipulations</p> <p>12 No member may perform spinal manipulations unless</p> <p>(a) he or she has provided evidence satisfactory to the council of successful completion of a spinal manipulation training program that meets criteria approved by the council;</p>

	<p>(b) the spinal manipulations performed do not exceed the level of training completed; and (c) the spinal manipulations are performed in accordance with the document "<i>Competencies Required to Safely Perform Spinal Manipulation as a Physical Therapy Intervention</i>", published in April 2000 by the College of Physical Therapists of Alberta.</p>
<p>Ontario</p>	<p>PHYSIOTHERAPY ACT, 1991</p> <p>Scope of practice</p> <p>3. The practice of physiotherapy is the assessment of neuromuscular, musculoskeletal and cardio respiratory systems, the diagnosis of diseases or disorders associated with physical dysfunction, injury or pain and the treatment, rehabilitation and prevention or relief of physical dysfunction, injury or pain to develop, maintain, rehabilitate or augment function and promote mobility. 2009, c. 26, s. 22 (1).</p> <p>Authorized acts</p> <p>4. (1) In the course of engaging in the practice of physiotherapy, a member is authorized, subject to the terms, conditions and limitations imposed on his or her certificate of registration, to perform the following:</p> <p>2. Moving the joints of the spine beyond a person’s usual physiological range of motion using a fast, low amplitude thrust.</p> <p>Certain procedures subject to regulations</p> <p>(2) A member is not authorized to perform a procedure set out in paragraph 1, 2, 3, 4, 5 or 6 of subsection (1) unless the member complies with any applicable regulations respecting those paragraphs. 2009, c. 26, s. 22 (2).</p> <p>Regulations</p> <p>11.1 Subject to the approval of the Lieutenant Governor in Council and with prior review by the Minister, the Council may make regulations regulating and governing the performance of any act set out in paragraph 1, 2, 3, 4, 5 or 6 of subsection 4 (1) and ancillary matters, including, without limiting the generality of the foregoing,</p> <p>(a) establishing requirements for the performance of the act; (b) governing the purposes for which, and the circumstances under which, the act must be performed; (c) setting prohibitions. 2009, c. 26, s. 22 (3).</p> <hr/> <p>Standard for Professional Practice: Performing Controlled Acts and Other Restricted Activities</p> <p>5. Rosters for Controlled Acts</p> <p>The College keeps rosters listing the physiotherapists who are permitted to perform each controlled act. To perform the act, the physiotherapist must be listed on the roster.</p>

<p>New Brunswick</p>	<p>An Act Respecting the College of Physiotherapists of New Brunswick</p> <p>“physiotherapy” and “practice of physiotherapy” means the scientific application of physiotherapy knowledge, skill and judgement in optimizing functional independence and mobility, preventing and managing pain, and promoting health and wellness based on the art and science of therapeutic movement and through an evidence-based approach to assessment, identification of a physiotherapy diagnosis, intervention, and outcome evaluation including:</p> <p>(a) the selective application of a broad range of physical and physiological interventions including therapeutic exercise, massage and manipulation, radiant, mechanical, and electrical energy or acupuncture;</p> <p>(b) the planning, administration and evaluation of preventive, therapeutic and health maintenance programs; and</p> <p>(c) the provision of consultation, education, research and other physiotherapy services.</p>
<p>Nova Scotia</p>	<p>PHYSIOTHERAPY ACT</p> <p>“physiotherapy” or “physical therapy” means the application of professional physiotherapy knowledge, skills and judgement by a physiotherapist to obtain, regain or maintain optimal health and functional performance and includes, but is not limited to,</p> <p>...</p> <p>(v) spinal and peripheral joint manipulation</p> <hr/> <p>Practice Standard</p> <p>The College acknowledges that Spinal Manipulation is within the scope of physiotherapy practice. This standard applies to manipulation of the spinal column, by registered physiotherapists.</p> <p>Competency</p> <p>The physiotherapist using spinal manipulation in practice must be able to demonstrate that they are qualified to safely and effectively perform spinal manipulations as outlined in the <i>Spinal Manipulation Competency Profile for Physical Therapists (CPTA 2008)</i></p> <p>Informed Consent</p> <p>Informed written client consent specific to performing spinal manipulation is recommended.</p>

Prince Edward Island	<p>PHYSIOTHERAPY ACT</p> <p>(i) "physiotherapy" means physical therapy practised in a continuing way to remove, alleviate or prevent movement dysfunction or pain, in a manner that requires the practitioner's independent exercise of professional knowledge, skill, judgment, and ethical conduct, and includes diagnostic assessment, design and conduct of treatment involving exercise, massage, hydrotherapy, heat, sonic, laser and electrical techniques, evaluation of progress, patient instruction, research and educational or preventative measures;</p>
Newfoundland & Labrador	<p>AN ACT RESPECTING THE PRACTICE OF PHYSIOTHERAPY</p> <p>(e) "physiotherapy" means the application of professional physical therapy in the assessment and treatment of the human body in order to obtain, regain or maintain optimal function by the use of suitable therapeutic methods, including mobilization, manipulation and the use of physical agents.</p>

*The Northwest Territories, Nunavut and the Yukon do not have legislation in place to regulate physiotherapists.

Legislation - Osteopathic Physicians and Allopathic Physicians - Canada

Legislation – Osteopathic Physicians (diagnose disorders and injuries of the musculo-skeletal, circulatory and nervous systems and treat patients with manipulative therapy, medications or surgery) and Allopathic Physicians – Canada

Jurisdiction	Authority
British Columbia	<p>HEALTH PROFESSIONS ACT Medical Practitioners Regulation</p> <p>"osteopathic physician" means a registrant who is authorized under the bylaws to practise medicine as an osteopathic physician</p> <p>Reserved titles 2 (1) The following titles are reserved for exclusive use by registrants: (a) medical practitioner; (b) physician; (c) surgeon; (d) doctor.</p> <p>(2) The titles "osteopath" and "osteopathic physician" are reserved for exclusive use by osteopathic physicians.</p> <p>Restricted activities 4 (1) A registrant in the course of practising medicine may perform any restricted activity.</p>
Alberta	<p>HEALTH PROFESSIONS ACT Chapter H-7 Schedule 21 Profession of Physicians, Surgeons, Osteopaths and Physician Assistants</p> <p>Use of titles 2 A regulated member of the College of Physicians and Surgeons of Alberta may, as authorized by the regulations, use any of the following titles, abbreviations and initials: (a) physician; (b) repealed 2006 c19 s2(20); (c) general practitioner; (d) family physician; (e) osteopath; (f) osteopathic practitioner; (cccc) Doctor of Osteopathic Medicine; (dddd) D.O.; (eeee) Doctor of Osteopathy;</p> <p>Practice 3(1) In their practice of medicine, physicians, surgeons and osteopaths do one or more of the following:</p>

	<p>(a) assess the physical, mental and psychosocial condition of individuals to establish a diagnosis, (b) assist individuals to make informed choices about medical and surgical treatments, (c) treat physical, mental and psychosocial conditions, (d) promote wellness, injury avoidance, disease prevention and cure through research and education, (e) engage in research, education and administration with respect to health, and (f) provide restricted activities authorized by the regulations.</p> <p>ALBERTA REGULATION 350/2009 PHYSICIANS, SURGEONS AND OSTEOPATHS PROFESSION REGULATION</p> <p>Authorized restricted activities</p> <p>17 A regulated member registered on the general register, provisional register, limited practice register, courtesy register, emergency register or telemedicine register may, in the practice of medicine or osteopathy and in accordance with the standards of practice, perform the following restricted activities: . . .</p> <p>(f) to use a deliberate, brief, fast thrust to move the joints of the spine beyond the normal range but within the anatomical range of motion, which generally results in an audible click or pop</p>
<p>Saskatchewan</p>	<p>Osteopaths are eligible for full registration with the College of Physicians and Surgeons of Saskatchewan if they have a Doctor of Osteopathic Medicine degree from a school in the United States accredited by the American Osteopathic Association Commission on Osteopathic College Accreditation, if they have the obtained the designation of Licentiate of the Medical Council of Canada and if they have attained certification with the College of Family Physicians of Canada or with the Royal College of Physicians and Surgeons of Canada.</p> <p>THE MEDICAL PROFESSION ACT, 1981</p> <p>Practising defined</p> <p>79 Every person is deemed to practise medicine within the meaning of this Act who:</p> <p>(a) holds himself out as being able to diagnose, treat, operate or prescribe for any human disease, pain, injury, disability or physical condition; or (b) offers or undertakes by any means or methods to diagnose, treat, operate or prescribe for any human disease, pain, injury, disability or physical condition.</p>

<p>Manitoba</p>	<p>Osteopaths are eligible for full registration with the College of Physicians and Surgeons of Manitoba if they have the obtained the designation of Licentiate of the Medical Council of Canada and two years of postgraduate clinical training comprised of 8 weeks in each of the following areas – general medicine, general surgery, obstetrics & gynaecology and paediatrics – in an approved university teaching program or attained certification with the College of Family Physicians of Canada or with the Royal College of Physicians and Surgeons of Canada.</p> <p>THE MEDICAL ACT C.C.S.M. c. M90</p> <p>Definitions "practice of medicine" means, subject to section 2, the carrying on for hire, gain, or hope of gain or reward, either directly or indirectly, of the healing art or any of its branches</p> <p>Persons deemed practising medicine</p> <p>2(1) Without restricting the generality of the definition of practice of medicine, a person shall be deemed to be practising medicine within the meaning of this Act who</p> <ul style="list-style-type: none"> (a) by advertisement, sign, or statement of any kind, written or oral, alleges or implies or states that he is, or holds himself out as being, qualified, able, or willing, to diagnose, prescribe for, prevent, or treat, any human disease, ailment, deformity, defect, or injury, or to perform any operation or surgery to remedy any human disease, ailment, deformity, defect, or injury, or to examine or advise upon the physical or mental condition of any person; or (b) diagnoses, or offers to diagnose, or attempts by any means whatsoever to diagnose, any human disease, ailment, deformity, defect, or injury, or who examines or advises upon, or offers to examine or advise upon, the physical or mental condition of any person; or (c) prescribes or administers any drugs, serum, medicine, or any substance or remedy, whether for the cure, treatment, or prevention, of any human disease, ailment, deformity, defect, or injury; or (d) prescribes or administers any treatment, or performs any operation or manipulation, or applies any apparatus or appliance, for the cure, treatment, or prevention, of any human disease, ailment, deformity, defect, or injury, or acts as a midwife
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<p>Ontario</p>	<p>MEDICINE ACT, 1991 S.O. 1991, CHAPTER 30</p> <p>Authorized acts</p> <p>4. In the course of engaging in the practice of medicine, a member is authorized, subject to the terms, conditions and limitations imposed on his or her certificate of registration, to perform the following: . . .</p> <p>4. Moving the joints of the spine beyond a person’s usual physiological range of motion using a fast, low amplitude thrust.</p> <p>Restricted titles</p> <p>9. (1) No person other than a member shall use the titles “osteopath”, “physician” or “surgeon”, a variation or abbreviation or an equivalent in another language.</p>
<p>New Brunswick</p>	<p>College of Physicians and Surgeons of New Brunswick, Regulation #2</p> <p>Registration and Licensing</p> <p>1. A physician may be eligible for registration with a Regular, or Regular Locum, licence if they are a graduate of a medical or osteopathic medical school approved by Council and are:</p> <p>(a) Certified in Family Practice by the College of Family Physicians of Canada or le Collège des médecins du Québec;</p> <p>(b) Certified in a specialty by the Royal College of Physicians and Surgeons of Canada or le Collège des médecins du Québec.</p> <p>(c) Registered under the previous Regulation with a Full or Locum licence.</p> <p>2. In cases of demonstrated need as judged by Council, a physician may be eligible for registration with a Defined, or Defined Locum, licence if they are a graduate of a medical or osteopathic medical school approved by Council, and are:</p> <p>(a) a Licentiate of the Medical Council of Canada, and have successfully completed a period of acceptable pre-registration training of not less than two years in an accredited Canadian or American program, which will have adequately prepared them for practice in the setting and circumstances intended, and which requirement may be abridged at the discretion of Council; or</p> <p>(b) Licensed, or eligible for licensure, without significant restriction, with a medical regulatory authority in another province or territory of Canada; or</p>

	<p>(c) Licensed, or eligible for licensure, without significant restriction, with a medical regulatory authority in the United States; or</p> <p>(d) Have been registered and licensed under the previous regulation with a Defined or Defined Locum licence; or</p> <p>(e) Have completed an acceptable program of satisfactory pre-registration training, have successfully completed Part I of the Qualifying Examination of the Medical Council of Canada, and are eligible to take Part II of the Qualifying Examination of the Medical Council of Canada, but such registration shall terminate one year from the date of such eligibility unless special permission is granted by the Council; or</p> <p>(f) Otherwise, at the sole discretion of Council, deemed eligible for registration and licensure.</p> <p>MEDICAL ACT "practice of medicine" includes the practice of medicine, surgery, and osteopathic medicine and the specialties and subspecialties thereof;</p>
<p>Nova Scotia</p>	<p>Osteopaths are eligible for full registration with the College of Physicians and Surgeons of Nova Scotia if they have graduated from a university or school that is located in the United States and grants a Doctor of Osteopathic Medicine degree accredited by the American Osteopathic Association Commission on Osteopathic College Accreditation, are a Licentiate of the Medical Council of Canada or hold certification with the College of Family Physicians of Canada or the Royal College of Physicians and Surgeons of Canada.</p> <p>AN ACT RESPECTING THE PRACTICE OF MEDICINE "practice of medicine" means the practices and procedures usually performed by a medical practitioner and includes</p> <ul style="list-style-type: none"> (i) the art and science of the assessment, diagnosis or treatment of an individual, (ii) the related promotion of health and prevention of illness, and (iii) such other practices and procedures as taught in universities or schools approved by the Council for licensing purposes under this Act and regulations

<p>Prince Edward Island</p>	<p>Osteopaths are eligible for full registration with the College of Physicians and Surgeons of Prince Edward Island if they have graduated from a university or school that is located in the United States and grants a Doctor of Osteopathic Medicine degree accredited by the American Osteopathic Association Commission on Osteopathic College Accreditation, are a Licentiate of the Medical Council of Canada or hold certification with the College of Family Physicians of Canada or the Royal College of Physicians and Surgeons of Canada.</p> <p>MEDICAL ACT “practice of medicine” means the practice of medicine, surgery, obstetrics, pathology, radiology and the specialities thereof, but does not include veterinary surgery;</p>
<p>Newfoundland & Labrador</p>	<p>MEDICAL ACT, 2011 <i>Medical Regulations</i></p> <p>Qualification for registration</p> <p>18. A person who</p> <ul style="list-style-type: none"> (a) holds a medical degree granted by a medical school or an osteopathic medical school approved by the council; (b) is a licentiate of the Medical Council of Canada; (c) has completed the post-graduate education and training approved by the council as qualifying a person for registration on the medical register; and (d) possesses the other qualifications and meets the other requirements that may be prescribed in the regulations as qualifying a person for registration on the medical register <p>is entitled to be registered in the medical register upon payment of the fee for registration set by the council.</p> <p>AN ACT RESPECTING THE PRACTICE OF MEDICINE IN THE PROVINCE</p> <p>"practice of medicine" means the practice of medicine or surgery on the human body, and includes cardiology, dermatology, geriatrics, gynecology, neurology, obstetrics, ophthalmology, orthopedics, pathology, pediatrics, psychiatry and radiology and other specialities and subspecialties of medicine;</p>

*The Northwest Territories does not have legislation in place to regulate osteopathic physicians.

Legislation - Naturopaths - Canada

Legislation – Naturopaths - Canada

Jurisdiction	Authority
<p>British Columbia</p>	<p>HEALTH PROFESSIONS ACT</p> <p><i>Naturopathic Physicians Regulation</i></p> <p>Restricted activities</p> <p>5 (1) A registrant in the course of practising naturopathic medicine may do any of the following:</p> <ul style="list-style-type: none"> (a) use naturopathic techniques to make a diagnosis identifying, as the cause of signs or symptoms of an individual, a disease, disorder or condition; (b) perform a procedure on tissue <ul style="list-style-type: none"> (i) below the dermis, or (ii) below the surface of a mucous membrane; (c) move a joint of the spine beyond the limits the body can voluntarily achieve but within the anatomical range of motion using a high velocity, low amplitude thrust; (d) administer a substance <ul style="list-style-type: none"> (i) by injection, (ii) by inhalation, (iii) by irrigation, (iv) by enteral instillation or parenteral instillation, or (v) using a hyperbaric chamber; (e) put an instrument or a device or finger <ul style="list-style-type: none"> (i) into the external ear canal, up to the eardrum, (ii) beyond the point in the nasal passages where they normally narrow, (iii) beyond the opening of the urethra, (iv) beyond the labia majora, (v) beyond the anal verge, or (vi) into an artificial opening into the body; (f) put into the external ear canal, up to the eardrum, a substance that is under pressure; (g) apply <ul style="list-style-type: none"> (i) ultrasound for diagnostic or imaging purposes, including any application of ultrasound to a fetus, (ii) electricity for the purposes of <ul style="list-style-type: none"> (A) destroying tissue in the course of minor surgery, or (B) defibrillation in the course of emergency cardiac care, or (iii) X-rays for diagnostic or imaging purposes, excluding X-rays for the purpose of computerized axial tomography; (h) issue an instruction or authorization for another person to perform, in respect of a named individual, a restricted activity

- specified in paragraph (g) (i) or (iii);
- (i) in respect of a drug,
 - (i) prescribe the drug,
 - (ii) compound the drug,
 - (iii) dispense the drug, or
 - (iv) administer the drug by any method;
 - (j) if nutrition is administered by enteral instillation or parenteral instillation,
 - (i) select ingredients for a therapeutic diet,
 - (ii) compound a therapeutic diet, or
 - (iii) dispense a therapeutic diet;
 - (k) conduct challenge testing for allergies
 - (i) that involves injection, scratch tests or inhalation, if the individual being tested has not had a previous anaphylactic reaction, or
 - (ii) by any method, if the individual being tested has had a previous anaphylactic reaction;
 - (l) conduct desensitizing treatment for allergies
 - (i) that involves injection, scratch tests or inhalation, if the individual being tested has not had a previous anaphylactic reaction, or
 - (ii) by any method, if the individual being tested has had a previous anaphylactic reaction.

Limits or conditions on services and restricted activities

- 6 (1) A registrant may perform only surgery that is minor surgery.
- (2) A registrant may prescribe, compound, dispense or administer a drug only if
- (a) standards, limits and conditions have been established, under section 19 (1) (k) or (l) of the Act, respecting the prescribing, compounding, dispensing and administering of drugs by registrants,
 - (b) the standards, limits and conditions described in paragraph (a) are established on the recommendation of a committee that
 - (i) is established under section 19 (1) (t) of the Act, and
 - (ii) has the duty and power to develop, review and recommend those standards, limits and conditions, and
 - (c) the registrant has successfully completed a certification program established, required or approved under the bylaws to ensure that registrants are qualified and competent to prescribe, compound, dispense or administer a drug.
- (3) A registrant may perform an activity described in section 5 (1) (d) (v), (k) or (l) only if
- (a) standards, limits and conditions have been established, under section 19 (1) (k) or (l) of the Act, respecting the activity, and
 - (b) the standards, limits and conditions described in paragraph (a) are established on the recommendation of a committee that

	<p>(i) is established under section 19 (1) (t) of the Act, and (ii) has the duty and power to develop, review and recommend those standards, limits and conditions.</p>
<p>Alberta</p>	<p>HEALTH PROFESSIONS ACT <i>Naturopaths Profession Regulation</i></p> <p>Restricted activities authorization 14(1) Subject to subsections (2) and (3), a regulated member may, in the practice of naturopathic medicine and in accordance with the standards of practice, perform the following restricted activities:</p> <ul style="list-style-type: none"> (a) to cut a body tissue, to administer anything by an invasive procedure on body tissue or to perform other invasive procedures on body tissue below the dermis or the mucous membrane; (b) to insert or remove instruments, devices or fingers <ul style="list-style-type: none"> (i) beyond the cartilaginous portion of the ear canal, (ii) beyond the point in the nasal passages where they normally narrow, (iii) beyond the opening of the urethra for the purpose of obtaining diagnostic samples, (iv) beyond the labia majora, but not beyond the cervix, for the purpose of examining the cervix, performing Pap smears and obtaining diagnostic samples, and (v) beyond the anal verge, but not beyond the rectal-sigmoidal junction, for the purpose of a rectal exam or prostate exam. <p>(2) A regulated member may not perform any of the following restricted activities unless the regulated member meets the requirements of subsection (3):</p> <ul style="list-style-type: none"> (a) to cut a body tissue, to administer anything by an invasive procedure on body tissue or to perform invasive procedures on body tissue below the dermis or the mucous membrane for the purpose of needle acupuncture or administering intravenous ozone, chelation therapy or supplemental vitamins and minerals; (b) to insert or remove instruments, devices or fingers <ul style="list-style-type: none"> (i) beyond the labia majora for the purposes of vaginal ozone therapy, and (ii) beyond the anal verge for the purposes of performing colon hydrotherapy, rectal ozone therapy or the Keesey technique for reduction of hemorrhoids; (c) to use a deliberate, brief, fast thrust to move the joints of the spine beyond the normal range but within the anatomical range of motion, which generally results in an audible click or pop; (d) to administer blood products for the purposes of

	<p>administering intravenous ozone therapy.</p> <p>(3) A regulated member may perform a restricted activity described in subsection (2) only if the regulated member</p> <p>(a) has provided evidence to the Registrar of having the competencies required to perform the restricted activities described in subsection (2) and has received notification from the Registrar that the authorization to perform the restricted activities is indicated on the appropriate register, or</p> <p>(b) is enrolled in a training program approved by the Council in the restricted activity to be performed and performs the restricted activity with the consent of and under the supervision of a regulated member who is authorized under clause (a) to perform that restricted activity.</p> <p>(4) A regulated member who consents to supervise another regulated member under subsection (3)(b) must comply with the supervision requirements set out in section 17.</p> <p>Restriction</p> <p>15(1) Despite any authorization to perform restricted activities, regulated members must restrict themselves in performing restricted activities to those activities that they are competent to perform and to those that are appropriate to the member’s area of practice and the procedure being performed.</p> <p>(2) A regulated member who performs a restricted activity must do so in accordance with the standards of practice.</p>
<p>Saskatchewan</p>	<p>THE NATUROPATHY ACT</p> <p>“naturopathy” means the art of healing by natural methods as taught in recognized schools of naturopathy.</p> <p>Right to practise only naturopathy</p> <p>10 Nothing in this Act or the bylaws shall authorize any person to prescribe or administer drugs for use internally or externally, or to use or direct or prescribe the use of anaesthetics for any purpose whatsoever, or to treat venereal disease or a communicable disease as defined in <i>The Public Health Act, 1994</i>, or to practise medicine, surgery or midwifery, or to use any method of treatment other than naturopathy.</p> <p>Saskatchewan Association of Naturopathic Practitioners (SANP) Policies and Procedures Manipulation – Adopted April 5, 2009</p> <p>PURPOSE: The purpose of the standard/guideline is to minimize the risk to the public from harm from high velocity thrust procedures.</p>

	<p>In accordance with the SANP's Standards of Practice, all patients must have had a complete naturopathic work-up including case history, appropriate physical examination, diagnosis, plan of treatment and informed consent before spinal manipulation is initiated.</p>
<p>Manitoba</p>	<p>THE NATUROPATHIC ACT</p> <p>"naturopathy" means a drugless system of therapy that treats human injuries, ailments, or diseases, by natural methods, including any one or more of the physical, mechanical, or material, forces or agencies of nature, and employs as auxiliaries for such purposes the use of electro-therapy, hydro-therapy, body manipulations, or dietetics.</p>
<p>Ontario</p>	<p>NATUROPATHY ACT, 2007</p> <p>Authorized acts</p> <p>4. (1) In the course of engaging in the practice of naturopathy, a member is authorized, subject to the terms, conditions and limitations imposed on his or her certificate of registration, to perform the following:</p> <ol style="list-style-type: none"> 1. Putting an instrument, hand or finger beyond the labia majora but not beyond the cervix. 2. Putting an instrument, hand or finger beyond the anal verge but not beyond the rectal-sigmoidal junction. 3. Administering, by injection or inhalation, a prescribed substance. 4. Performing prescribed procedures involving moving the joints of the spine beyond the individual's usual physiological range of motion using a fast, low amplitude thrust. 5. Communicating a naturopathic diagnosis identifying, as the cause of an individual's symptoms, a disease, disorder or dysfunction that may be identified through an assessment that uses naturopathic techniques. 6. Taking blood samples from veins or by skin pricking for the purpose of prescribed naturopathic examinations on the samples. 7. Prescribing, dispensing, compounding or selling a drug designated in the regulations. <p>Ontario Regulation 168/15</p> <p>Moving the joints of the spine</p> <p>6. (1) For the purposes of paragraph 4 of subsection 4 (1) of the Act, a member who meets all of the standards of practice of the profession in this section and section 3 of this Regulation is authorized to move the thoracic, lumbar and sacral joints of the spine and the cervical joints of the spine.</p> <p>(2) A member may perform an act described in subsection (1) only if he or she meets all of the following standards of practice:</p> <ol style="list-style-type: none"> 1. The member shall use only one or more of the following low amplitude thrust procedures when he or she manipulates a patient's cervical joints of the spine: <ol style="list-style-type: none"> i. Supine lateral flexion. ii. Supine rotary.

	<ul style="list-style-type: none">iii. C2-C7 seated rotary.2. The member shall not perform a controlled act described in subsection (1) if, at the time that the controlled act is proposed,<ul style="list-style-type: none">i. the patient has or may have one or more of the contraindications listed in subsection (3), orii. the member is in doubt about the accuracy of the patient's health status or health history respecting any of the contraindications listed in subsection (3).(3) The contraindications mentioned in subparagraphs 2 i and ii of subsection (2) are the following:<ul style="list-style-type: none">1. Anomalies, including dens hypoplasia, unstable os odontoideum and similar diseases, disorders or dysfunctions.2. Acute fracture.3. Spinal cord tumour.4. Acute infection of the spine, including osteomyelitis, septic discitis and tuberculosis of the spine.5. Meningeal tumour.6. Haematomas, whether spinal or intracanalicular.7. Malignancy of the spine.8. Frank disc herniation with accompanying signs of progressive neurological deficit.9. Basilar invagination of the upper cervical spine (vertebrobasilar ischemia).10. Symptomatic Arnold-Chiari malformation of the upper cervical spine.11. Dislocation of a vertebra.12. Aggressive types of benign tumours, such as an aneurismal bone cyst, giant cell tumour, osteoblastoma or osteoid osteoma.13. Internal fixation/stabilization devices.14. Neoplastic disease of muscle or other soft tissue.15. Positive Kernig's or Lhermitte's signs.16. Congenital, generalized hypermobility.17. Syringomyelia.18. Hydrocephalus of unknown aetiology.19. Diastematomyelia.20. Cauda equina syndrome.21. Any other disease, disorder or dysfunction that the member knows or ought to know contraindicates performance of the controlled act in the relevant circumstances of the patient.
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<p>Nova Scotia</p>	<p>NATUROPATHIC DOCTORS ACT (<i>Private Member's Bill</i>) only provides title protection for naturopathic doctors practising in Nova Scotia.</p> <p>2 The purpose of this Act is to</p> <p>(a) provide assurance to the public that individuals representing themselves as practising the profession of naturopathic medicine as naturopathic doctors have prescribed minimum qualifications, thereby protecting the public health and safety from harm; and</p> <p>(b) provide legal recognition to naturopathic medicine as a health profession.</p> <p>4 No person shall engage in the practice of naturopathy or use the title "Naturopath", "Naturopathic Practitioner" or "Naturopathic Doctor", or any word, title or designation, abbreviated or otherwise, to imply that that person is engaged in the practice of naturopathy, unless that person</p> <p>(a) is a graduate of an accredited naturopathic school;</p> <p>(b) has passed both the basic science and clinical portion of the Naturopathic Physicians Licensing Examination;</p> <p>(c) holds a licence to practise naturopathic medicine issued by a province of Canada that licenses naturopathic medicine;</p> <p>(d) has malpractice insurance coverage;</p> <p>(e) is a member of the Canadian Association of Naturopathic Doctors; and</p> <p>(f) is a member of the Nova Scotia Association of Naturopathic Doctors.</p> <p>The website for the Nova Scotia Association of Naturopathic Doctors, the professional association representing licensed naturopathic doctors in Nova Scotia, states that therapy can include “naturopathic manipulation of muscle, bone or the spine.” http://nsand.ca/about/treatments/</p>
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*The Northwest Territories, Nunavut, the Yukon, Prince Edward Island, Newfoundland and Labrador, and New Brunswick do not have legislation in place to regulate naturopaths.



October 25, 2016

The Health Professions Advisory Council
c/o 300 Carlton Street
Winnipeg, Manitoba R3B 3M9

Dear Mr. Duboff:

Thank you for your letter of September 8, 2016 advising of the review with respect to the performance of high neck manipulation by regulated health professions.

Manipulation of the spine, including high level cervical manipulation is within the scope of practice of physiotherapists in Manitoba and elsewhere in the country. Physiotherapists study manipulation treatment within the physiotherapy education program at recognized universities across Canada. Additionally, post graduate education in spinal manipulation techniques, including cervical manipulation is readily available to practicing physiotherapists. Physiotherapists are expected to practice within their level of competence so should not be practicing high level cervical manipulations unless having received the requisite education.

Furthermore, it is well documented and noted amongst physiotherapists that there are certain high risks to applying cervical manipulation. Part of this risk factor is that there are not good conclusive tests to indicate which client may suffer an untoward effect from a cervical manipulation. Consequently, there are not many physiotherapists who practice high level cervical manipulations. The profession has been working on research to better test and apply this technique to the high cervical area as well as other types of spinal manipulation.

It is noted that to the best of our knowledge, no physiotherapist across Canada has been involved in causing harm to a client through a high cervical manipulation.

I trust this information is helpful to you. If you require more information or clarity on the above, please contact me.

On Behalf of the College,

Redacted to protect privacy

Brenda McKechnie BPT, MBA
Registrar/ Executive Director



Manitoba Naturopathic Association
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Mr. Neil Duboff, Chair
The Health Professions Advisory Council
c/o 300 Carlton Street
Winnipeg, MB R3B 3M9

November 21, 2016

Dear Mr. Duboff,

Please find enclosed our written response to your request for comments regarding the matter of the performance of high neck manipulation by regulated health professions.

The use of spinal adjustments and high neck manipulation is part of the scope of practice for naturopathic doctors in North America. Naturopathic medical colleges in North America teach manipulation as part of the core curriculum in the four-year naturopathic degree program. Students are then required to pass the Naturopathic Physician Licensing Exam (NPLEX) as well as the Manitoba Naturopathic Association's provincial board exam, which includes manipulation.

It is the opinion of the naturopathic profession that data regarding post procedure issues associated with high neck manipulation is quite well documented and shows that adverse events associated with this procedure are statistically low risk. Adverse events that may appear to be related to high neck manipulation have been researched in-depth; the results of which are generally inconclusive and may relate more to the predisposition or previously undiagnosed cardiovascular/cervical symptoms in a patient than the neck procedure itself.

Regulated health professionals who perform neck manipulations have extensive training in the performance of orthopaedic tests/diagnostics and are trained to screen out patients with contraindications. Therefore, it is the opinion of our Association that high neck manipulation continues to be regulated and practiced by eligible practitioners in Manitoba.

In closing, the board of the Manitoba Naturopathic Association would like to thank you for the opportunity to respond to this matter. Please contact Lesley Phimister, the MNA Registrar if you require more information or clarification.

Sincerely,

Redacted to protect privacy

Lesley Phimister, Executive Director/Registrar
Manitoba Naturopathic Association



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November 28, 2016

PERSONAL AND CONFIDENTIAL

Mr. Neil Duboff
Manitoba Health Professions Advisory Council
c/o 300 Carlton Street
Winnipeg, Manitoba R3B 3M9

Dear Mr. Duboff

The College of Physicians and Surgeons of Manitoba ("CPSM") is in receipt of your letter on behalf of the Manitoba Health Professions Advisory Council dated September 8, 2016.

In the letter you outline some of the acts the Manitoba Chiropractors Association is seeking authority under the RHPA to perform. The Health Professions Advisory Council is asking for input from the CPSM on the matter of the performance of the following reserved act by chiropractors when the Regulated Health Professions Act comes into force for the chiropractors:

Administering a high velocity, low amplitude thrust to move a joint of the spine within its anatomical range of motion.

The CPSM sought input from various physician leaders in related disciplines. We have received responses from the heads of Neurosurgery, Physical Medicine and Rehabilitation, Neurology, Orthopedic Surgery. Each has independently and unanimously expressed serious reservations about the use of high velocity, low amplitude thrust to move a joint of the spine within its anatomical range by chiropractors. They acknowledge that this is a controversial subject and provided evidence based data in regard to the topic.

The resulting clinical conditions can be quite serious and life threatening. The adverse effects can include: vertebral fracture, vertebral artery dissection and brain stem stroke, acute spinal cord injury, nerve root injury with motor and sensory deficit. The literature shows that there are reports of vertebral artery dissection and carotid artery dissection causing cerebral vascular accidents as well as lesser adverse effects such as tiredness, dizziness, nausea, ringing in the ears etc. The spine surgeons note that the administration of a force to a spinal segment can be deleterious, when a spinal nerve root, spinal cord and vertebral arteries are adjacent to an arthritic facet joint. They also point out that the quantification of a force to the spine would be quite variable and affected by age, gender and ethnicity and would be difficult to control.

The physicians note that there is a lack of evidence for efficacy in the proposed reserved act by the chiropractors and there are significant concerns about rare but serious adverse effects of spinal manipulation.

The Section of Physical Medicine and Rehabilitation outlines its position in regard to high velocity, low amplitude thrust to move a joint of the spine within its anatomical range of motion as follows:

1. *Chiropractic manipulation is not recommended in the absence of spinal pain (i.e. "to maintain spinal health") in an asymptomatic individual. In this instance, the risks would certainly outweigh the benefits.*
2. *Chiropractic manipulation is not recommended for chronic spinal pain. If the patient is not consistently reporting benefit, then the treatment should not be continued long-term.*
3. *Chiropractic manipulation is not recommended in the setting of radiculopathy.*
4. *Should a Chiropractor choose to perform an adjustment of the cervical spine, it should only occur after obtaining written informed consent from the patient that includes mentioning the association of cervical artery dissections and stroke post manipulation in patients less than 45 years of age.*

To summarize, based on the feedback the CPSM has received from physician leaders in the related areas of medicine, the CPSM has serious reservations about the proposal by the Chiropractors Association that "administering a high velocity, low amplitude thrust to move a joint of the spine within its anatomical range" be a reserved act for chiropractors under the RHPA. The CPSM believes the onus should be on the Chiropractors Association to demonstrate scientifically the safety and efficacy of this particular treatment. The onus should be on the chiropractors to approach all procedures with the same scientific rigor as is required for medical treatments and devices in order to ensure patient safety, especially when the consequences of the risks are so profound and include quadriplegia and death.

Thank you for giving the CPSM the opportunity to respond to this proposed reserved act request.

Yours sincerely
COLLEGE OF PHYSICIANS &
SURGEONS OF MANITOBA

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Redacted to protect privacy

ANNA ZIOMEK, MD
Registrar/CEO

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