

Position Statement

Cervical Manipulation - Applying high velocity, low amplitude thrust techniques to cervical spinal joints

Position

It is the responsibility of New Zealand registered Physiotherapists who hold a current Annual Practising Certificate (APC) and who apply high velocity, low amplitude thrust (HVT) techniques to cervical spine joints to do so in accordance with the;

- Health Practitioners Competence Assurance Act (the Act) (Part 1 s9, Certain activities restricted to particular health practitioners); and
- comply with The International Federation of Orthopaedic Manipulative Physical Therapists (IFOMPT) Framework; and
- Aotearoa New Zealand Physiotherapy Code of Ethics and Professional Conduct,

Purpose

- To ensure that physiotherapists are aware of their obligations under the Act and Aotearoa New Zealand Physiotherapy Code of Ethics and Professional Conduct.
- To ensure they have the appropriate, knowledge and training, as well as current knowledge of evidence based guidelines for minimising potential risk.

Introduction

The Health Practitioners Competence Assurance Act (the Act), Part 1 s9, restricts certain activities to particular health practitioners, in order to protect members of the public from the risk of serious or permanent harm ("Health Practitioners Competence Assurance Act ", 2003; The Ministry of Health, 2014). One of the restricted activities is the application of high velocity, low amplitude manipulative techniques to cervical spine joints (Cartwright, 2005). Although the incidence of serious adverse events as a result of cervical manipulation is very low, the severity of serious adverse event is potentially very high. Physiotherapists are privileged to be allowed to perform cervical manipulation, and with this come responsibilities.

Responsibilities under the Act

As part of their general scope of practice, physiotherapists, may perform the restricted activity of cervical manipulation - applying high velocity, low amplitude, thrust techniques to cervical spinal joints. "This (the restricted activity) is specific to cervical spinal joints - where the risk of stroke or death related to manipulation occurs. The wording 'high velocity, low amplitude'

is commonly understood by practitioners as a description of the dangerous element to this activity” (The Ministry of Health, 2014).¹

The Physiotherapy Board is responsible for monitoring the ongoing competence of physiotherapists through the recertification programme and expects all physiotherapists to take responsibility for maintaining appropriate levels of training and professional development for their ongoing skills as an autonomous practitioner.

The International Federation of Orthopaedic Manipulative Physical Therapists Framework

The International Federation of Orthopaedic Manipulative Physical Therapists (IFOMPT) has published a comprehensive [framework document](#) to inform practitioners. This document contains guidelines for safe practice, risk / benefit analysis, case studies and relevant literature (IFOMPT, 2012). The authors of this framework document have also published a corresponding and updated article in 2014 (Rushton et al., 2014). The New Zealand Manipulative Physiotherapists Association (NZMPA) is a Member Organisation of IFOMPT. Current members and Tutors within NZMPA have had direct input into the IFOMPT framework document.

There has recently been a change in emphasis for identifying patients who are potentially at risk from cervical manipulation. The importance of assessing the health of the patient is paramount.

“The best, most recent scientific evidence is combined with international expert opinion, and is presented with the intention to be informative, but not prescriptive; and therefore as an aid to the clinician’s clinical reasoning. Important underlying principles of the framework are that 1] although presentations and adverse events of Cervical Arterial Dysfunction are rare, it is a potentially serious condition and needs to be considered in musculoskeletal assessment; 2] manual therapists cannot rely on the results of one clinical test to draw conclusions as to the presence or risk of Cervical Arterial Dysfunction; and 3] a clinically reasoned understanding of the patient’s presentation, including a risk: benefit analysis, following an informed, planned and individualised assessment, is essential for recognition of this condition and for safe manual therapy practice in the cervical region. Clinicians should also be cognisant of jurisdictionally specific requirements and obligations, particularly related to patient informed consent, when intending to use manual therapy in the cervical region.”
(Rushton et al., 2014) abstract

It is of particular importance to note key risk factors in the medical history such as high blood pressure, high cholesterol levels and smoking to name but a few. These medical factors have a significant effect on the vascular health of the patient.

The Aotearoa New Zealand Physiotherapy Code of Ethics and Professional Conduct

The following sections of the Code of Ethics are relevant to all aspects of the physiotherapy assessment and management process but are of particular significance for restricted activities such as HVT.

¹ The potential ‘danger’ in using cervical manipulation is not necessarily the thrust itself, but is applying the thrust in the wrong circumstance and/or to the wrong person (ie. someone who may have contraindications to manipulation)(NZMPA)

- 2.5 clearly inform patients / clients of the purpose and nature of physiotherapy intervention to enable all patients / clients to make an informed choice
- 2.6 seek patient / client consent prior to providing physiotherapy services, ensuring that patient / client consent is freely given and appropriately documented;
- and
- 5.1 base physiotherapy interventions on the best available evidence
- 5.2 make sound professional judgments within their scope of practice and level of expertise and be accountable for their professional activities
- 5.3 provide physiotherapy services that are clinically justifiable
- 5.4 practice according to documented competencies and standards and maintain these
- 5.5 incorporate safety and risk management strategies within physiotherapy practice to ensure the safety of patients / clients and staff.
- 5.7 keep contemporaneous, accurate and legible records of patient / client treatment and progress.

All Physiotherapists in New Zealand are required to practise in accordance with 'The Aotearoa New Zealand Physiotherapy Code of Ethics and Professional Conduct ("Aotearoa New Zealand Physiotherapy Code of Ethics and Professional Conduct with Commentary," 2011).

Reporting adverse events and near misses

In the situation where an adverse event or near miss occurs as a result of cervical manipulation, the immediate requirement is to ensure patient safety.

The Physiotherapy Board of New Zealand expects physiotherapists to report any cervical manipulation adverse event or near miss to the Central Repository of the Health Quality and Safety Commission (HQSC) in accordance with their guidelines (Health Quality and Safety Commission New Zealand - Kupu Taurangi Hauora o Aotearoa, 2013). [Reporting guidelines and forms](#) as well as the [severity assessment matrix](#) are available on the HQSC website.

Physiotherapy New Zealand (PNZ) members are also requested to send a report to PNZ for their adverse reaction database.

Definitions

Adverse event

HQSC defines an adverse event as "An adverse event is an incident which results in harm to a consumer"

In a systematic review, Carlesso et al. looked at the adverse events associated with the use of cervical manipulation and mobilisation for the treatment of neck pain in adults. The adverse events were grouped into;

- **major** death, stroke or permanent neurological deficits, and
- **minor** transient neurological symptoms, increased neck pain/stiffness, headache, radiating pain, fatigue or other.

(Carlesso et al., 2010)

These adverse events are not confined to cervical manipulation but may also occur with other forms of manual therapy such as mobilisation (Paanalahti et al., 2014).

Near miss incident

HQSC defines a near miss incident as “an incident which under different circumstances could have caused harm to a consumer but did not, and which is indistinguishable from an adverse event in all but outcome (Health Quality and Safety Commission New Zealand - Kupu Taurangi Hauora o Aotearoa, 2013).

A near miss could be considered as new symptoms that were not an expected outcome of treatment, but were not serious enough to cause harm. It is important for practitioners to report such events as they provide useful information that assist in informing policies and procedures that may reduce harm in the future. An exacerbation of the presenting symptoms is not uncommon in patients with neck pain but these are mostly transient and resolve within 24 hours (Cagnie, Vinck, Beernaert, & Cambier, 2004). These are not usually events that warrant reporting.

Supporting Information

Aotearoa New Zealand Physiotherapy Code of Ethics and Professional Conduct with Commentary. (2011).

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IFOMPT. (2012). Cervical Screening Document. 2014, from

<http://www.ifompt.com/ReportsDocuments/Cervical+Screening+Document.html>

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Rushton, A., Rivett, D., Carlesso, L., Flynn, T., Hing, W., & Kerry, R. (2014). International framework for examination of the cervical region for potential of Cervical Arterial Dysfunction prior to Orthopaedic Manual Therapy intervention. *Manual Therapy*, 19(3), 222-228.

The Ministry of Health. (2014). Restricted Activities Under the Act. 2014, from

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