

FEDERATION OF STATE BOARDS OF PHYSICAL THERAPY

Intramuscular Manual Therapy (Dry Needling)

Resource Paper

**Federation of State Boards of Physical Therapy
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The Federation of State Boards of Physical Therapy would encourage review of the information in this resource paper in order to determine whether intramuscular manual therapy (dry needling) is within the scope of practice for a physical therapist for the jurisdiction in question. The information presented in this paper will provide some background and evidence on which the state licensing authority may wish to base the decision regarding scope of practice.

Intramuscular Manual Therapy (Dry Needling) Resource Paper

Introduction

It is not unusual for a state licensing board to be asked for an opinion as to whether or not an evaluative technique, treatment, or procedure is within the scope of practice for that given profession. It is as important to base regulation on evidence, when possible, as it is to base practice on evidence. The Federation of State Boards of Physical Therapy would encourage review of the information in this resource paper in order to determine whether intramuscular manual therapy is within the scope of the physical therapist for the jurisdiction in question. The information presented in this paper will provide some background and evidence on which the state licensing authority may wish to base the decision regarding scope of practice.

State Boards are often faced with opposition when another professional group claims the activity in question as their own. However, it is very clear that no single profession owns any procedure or intervention. Overlap among professions is expected and necessary for access to high quality care.

One activity does not define a profession, but it is the entire scope of activities within the practice that makes any particular profession unique. Simply because a skill or activity is within one profession's skill set does not mean another profession cannot and should not include it in its own scope of practice.¹

The Federation of State Boards of Physical Therapy (FSBPT) collaborated with five other healthcare regulatory organizations to publish ***Changes in Healthcare Professions Scope of Practice: Legislative Considerations***. These organizations present the argument that if a profession can provide supportive evidence in the four foundational areas: Historical Basis, Education and Training, Evidence, and Regulatory Environment, then the proposed changes are likely to be in the public's best interest. A more developed investigation of the four foundational areas is found below.²

1. ***Is there a historical basis for adding the activity in question to the scope of practice?***
 - a. Has there been an evolution of the profession towards the addition of the new skill or service?
 - b. What is the evidence of this evolution?
 - c. How does the new skill or service fit within or enhance a current area of expertise?
2. ***Is there evidence of education and training which supports the addition of the activity in question to the scope of practice?***
 - a. Does current entry-level education prepare practitioners to perform this skill as their experience increases?
 - b. If the change in scope is an advanced skill that would not be tested on the entry-level licensure examination, how is competence in the new technique assured?
 - c. What competence measures are available and what is the validity of these measures?
 - d. Are there training programs within the profession for obtaining the new skill or technique?
 - e. Are standards and criteria established for these programs? Who develops these standards? How and by whom are these programs evaluated against these standards?
3. ***What is the evidence which supports the addition of the activity in question to the scope of practice?***
 - a. Is there evidence within the profession related to the particular procedures and skills involved in the changes in scope?
 - b. Is there evidence that the procedure or skill is beneficial to public health?

¹ ***Changes in Healthcare Professions Scope of Practice: Legislative Considerations***. Revised 10/2009, page 9.

² Ibid, page 12-13.

4. *What is the regulatory environment in the jurisdiction?*

- a. Is the regulatory board authorized to develop rules related to a changed or expanded scope?
- b. Is the board able to determine the assessment mechanisms for determining if an individual professional is competent to perform the task?
- c. Is the board able to determine the standards that training programs should be based on?
- d. Does the board have sufficient authority to discipline any practitioner who performs the task or skill incorrectly or might likely harm a patient?
- e. Have standards of practice been developed for the new task or skill?
- f. How has the education, training and assessment within the profession expanded to include the knowledge base, skill set and judgments required to perform the tasks and skills?
- g. What measures will be in place to assure competence?

Dry Needling- terms

The term dry needling itself may be confusing and have different meanings depending upon the audience. The term dry needling in the past was more generic, referring to the fact that nothing was injected with the needle; the term has evolved into being synonymous with trigger point dry needling. The World Health Organization (WHO) has published a number of reports on acupuncture. Specifically, the report discussing traditional medicine refers to dry needling in acupuncture, but in context, the reference is comparing needling alone with needling in conjunction with complements such as laser, TENS, and electro-acupuncture.³ The WHO report is not describing dry needling in the same context as intramuscular manual therapy or trigger point dry needling. Many of the World Health Organization's reports regarding acupuncture including "Acupuncture: Review and Analysis of Reports on Controlled Clinical Trials," do not contain the term dry needling at all.^{4 5 6} Beginning in 2009, the American Physical Therapy Association has recommended the use of the term "intramuscular manual therapy" to describe the intervention provided by physical therapists defined below.

Definitions

Intramuscular manual therapy is also known as dry needling, trigger point dry needling, or intramuscular needling.

- Intramuscular Manual Therapy (Dry Needling) is a technique used to treat myofascial pain that uses a dry needle, without medication, that is inserted into a trigger point with the goal of releasing/inactivating the trigger points and relieving pain⁷
- Physical therapy is defined in the Federation of State Boards of Physical Therapy **Model Practice Act for Physical Therapy** as "the care and services provided by or under the direction and supervision of a physical therapist who is licensed pursuant to this [act]. The term "physiotherapy" shall be synonymous with "physical therapy" pursuant to this [act]."⁸
- Acupuncture definitions vary widely. Acupuncture is defined in the Delaware and Florida statutes as follows:

³**Report Second Consultation Meeting On Traditional And Modern Medicine: Harmonizing The Two Approaches.** World Health Organization. April 2004. P. 7.

⁴**Acupuncture: Review And Analysis Of Reports On Controlled Clinical Trials.** World Health Organization.

⁵**International Standard Terminologies on Traditional Medicine in the Western Pacific Region.** World Health Organization

⁶**Guidelines on Basic Training and Safety in Acupuncture.** World Health Organization. 1996.

⁷Virginia Board of Physical Therapy Task Force on Dry Needling. Meeting minutes. March 2007.

⁸The Model Practice Act for Physical Therapy. A Tool for Public Protection and Legislative Change. p. 1.

Acupuncture" refers to a form of health care, based on a theory of energetic physiology that describes and explains the interrelationship of the body organs or functions with an associated acupuncture point or combination of points located on "channels" or "meridians". Acupuncture points shall include the classical points defined in authoritative acupuncture texts and special groupings of acupuncture points elicited using generally accepted diagnostic techniques of oriental medicine and selected for stimulation in accord with its principles and practices. Acupuncture points are stimulated in order to restore the normal function of the aforementioned organs or sets of functions. Acupuncture shall also include the ancillary techniques of oriental medicine including moxibustion, acupressure or other forms of manual meridian therapy and recommendations that include oriental dietary therapy, supplements and lifestyle modifications according to the principles of oriental medicine.⁹

"Acupuncture" means a form of primary health care, based on traditional Chinese medical concepts and modern oriental medical techniques, that employs acupuncture diagnosis and treatment, as well as adjunctive therapies and diagnostic techniques, for the promotion, maintenance, and restoration of health and the prevention of disease. Acupuncture shall include, but not be limited to, the insertion of acupuncture needles and the application of moxibustion to specific areas of the human body and the use of electroacupuncture, Qi Gong, oriental massage, herbal therapy, dietary guidelines, and other adjunctive therapies, as defined by board rule.¹⁰

Professional Association/Regulatory Agency Specific Support

American Academy of Orthopedic Manual Physical Therapists: October 2009 position statement supporting intramuscular/dry needling as being within the scope of PT practice

- **Position:**

It is the Position of the AAOMPT that dry needling is within the scope of physical therapist practice.

- **Support Statement:**

Dry needling is a neurophysiological evidence-based treatment technique that requires effective manual assessment of the neuromuscular system. Physical therapists are well trained to utilize dry needling in conjunction with manual physical therapy interventions. Research supports that dry needling improves pain control, reduces muscle tension, normalizes biochemical and electrical dysfunction of motor endplates, and facilitates an accelerated return to active rehabilitation¹¹

American Physical Therapy Association: Current there are no HOD or BOD policies or official positions on intramuscular manual therapy and an internal staff task force is looking further in to the need for a policy. APTA recognizes that PTs are performing dry needling and that PTs who do it should have additional education and be competent to do so.

Federation of State Boards of Physical Therapy: Although the FSBPT Model Practice Act does not specifically mention intramuscular manual therapy there is nothing to specifically exclude the technique.

⁹ Delaware State Code. TITLE 24 Professions and Occupations. CHAPTER 17 MEDICAL PRACTICE ACT. Subchapter X. Acupuncture Practitioners

¹⁰ Florida State Code. Title XXXII Regulation of Professions and Occupations. Chapter 457 Acupuncture. 457.102

¹¹ <http://aaompt.org/members/statements.cfm>

The following section from the Model Practice Act would be relevant in the discussion regarding intramuscular manual therapy:

Other procedures that might be addressed in rules are whether physical therapists can use certain machines and perform procedures such as electroneuromyography, needle EMG, dry needling, etc. that are not specifically addressed in the statutory language.¹²

State Legislation: There are no state physical therapy practice acts that specifically mention intramuscular manual therapy; however, Hawaii’s practice act specifically prohibits physical therapists from puncturing the skin. Although ambiguous as to the intent of the law regarding skin puncture by physical therapists overall, such as with EMG or other procedures, the Florida Physical Therapy practice act contains language which specifically excludes penetrating the skin in the performance of acupuncture:

"Practice of physical therapy" means the performance of physical therapy assessments and the treatment of any disability, injury, disease, or other health condition of human beings, or the prevention of such disability, injury, disease, or other condition of health, and rehabilitation as related thereto by the use of the physical, chemical, and other properties of air; electricity; exercise; massage; the performance of acupuncture only upon compliance with the criteria set forth by the Board of Medicine, when no penetration of the skin occurs;¹³

Current State Rulings (as of Feb 2010)

In 1989, Maryland became the first jurisdiction to allow intramuscular manual therapy. To date, fifteen licensing boards have issued interpretive opinions that intramuscular manual therapy is within the scope of physical therapy practice: AL, CO, DC, GA, KY, LA, MD, NM, NH, NJ, NM, OH, OR, SC, TX, VA, and WY. State boards of Arizona and Pennsylvania are legally not allowed to issue interpretations of the Physical Therapy Statutes, but have not restricted the use of dry needling.

Five state boards (Idaho, Nevada, New York, North Carolina, and Tennessee) have specifically said that intramuscular manual therapy is not within the scope of practice of physical therapy and in Hawaii it is prohibited by statute as physical therapists are not allowed to puncture the skin of a patient. Some of the reasons for finding against including intramuscular manual therapy in the scope of practice of a PT include the procedure being invasive, the technique is within the scope of acupuncture, and the lack of inclusion in the US educational curricula.

Available Web-based Opinions on Intramuscular Manual Therapy

Jurisdiction	Opinion on Intramuscular Manual Therapy
Arizona	http://www.gemtinfor.com/physical-therapy/assets/files/arizona_letter.pdf
Colorado	<p>A physical therapist must have the knowledge, skill, ability, and documented competency to perform an act that is within the physical therapist’s scope of practice.</p> <ol style="list-style-type: none"> 1. Completion of a minimum of 46 hours face-to-face IMS/Dry needling course study 2. Two years of practice as a licensed physical therapist <p>http://www.dora.state.co.us/physical-therapy/rules.pdf</p>
Maryland	http://www.gemtinfor.com/physical-

¹² Model Practice Act for Physical Therapy, p. 59.

¹³ Florida Statute. Chapter 468. Physical Therapy Practice.

	therapy/assets/files/State_TDN_acceptance_letters/maryland.pdf
New Hampshire	http://www.gemtinfor.com/physical-therapy/assets/files/State_TDN_acceptance_letters/new_hampshire.pdf
New Mexico	http://www.gemtinfor.com/physical-therapy/assets/files/State_TDN_acceptance_letters/new_mexico.pdf
Nevada	http://www.gemtinfor.com/physical-therapy/assets/files/Nevada_Denial.pdf
Ohio	http://www.gemtinfor.com/physical-therapy/assets/files/Ohio_Dry_Needling_Letter.pdf
Virginia	Dry needling is an advanced skill requiring minimum of 54 hours of continuing ed. http://www.gemtinfor.com/physical-therapy/assets/files/State_TDN_acceptance_letters/Virgina_TDN_Letter.pdf
Wyoming	http://www.gemtinfor.com/physical-therapy/assets/files/State_TDN_acceptance_letters/2010_02_02_16_07_49.pdf

Intramuscular manual therapy is also accepted as being within the scope of physical therapy practice in many countries, including Australia, Belgium, Canada, Chile, Denmark, Ireland, the Netherlands, New Zealand, Norway, South Africa, Spain, and the United Kingdom, among others.

The Question of Acupuncture

Currently, some overlap exists between the physical therapy and acupuncture professions which can be demonstrated both in law and in practice. The Oregon statute definition of the practice of acupuncture includes many treatment interventions also found in the Federation of State Boards' **Physical Therapy Model Practice Act**. Additionally, the American Physical Therapy Association **Guide to Physical Therapist Practice** includes many of the procedural interventions listed in the Oregon acupuncture practice definition such as therapeutic exercise, manual therapy techniques including massage, electrotherapeutic modalities, physical agents and mechanical modalities.¹⁴

"Acupuncture" includes the treatment method of moxibustion, as well as the use of electrical, thermal, mechanical or magnetic devices, with or without needles, to stimulate acupuncture points and acupuncture meridians and to induce acupuncture anesthesia or analgesia.

(b) The practice of acupuncture also includes the following modalities as authorized by the Oregon Medical Board:

- (A) Traditional and modern techniques of diagnosis and evaluation;**
- (B) Oriental massage, exercise and related therapeutic methods;¹⁵**

"Practice of physical therapy" means:

- 1. Examining, evaluating and testing individuals with mechanical, physiological and developmental impairments, functional limitations, and disabilities or other health and movement-related conditions in order to determine a diagnosis, prognosis and plan of treatment intervention, and to assess the ongoing effects of intervention.**
- 2. Alleviating impairments, functional limitations and disabilities by designing, implementing and modifying treatment interventions that may include, but are not limited to: therapeutic exercise, functional training in self-care and in home, community or work integration or reintegration, manual therapy including soft tissue and joint mobilization/manipulation, therapeutic massage, prescription, application and, as appropriate, fabrication of assistive, adaptive, orthotic, prosthetic, protective and supportive devices and equipment, airway clearance techniques, integumentary protection and repair techniques, debridement and wound care, physical agents or**

¹⁴ Guide to Physical Therapist Practice. 2nd ed. Phys Ther. 2001, 81:9-744.

¹⁵ Oregon Revised Statutes. Chapter 677 – Regulation of Medicine, Podiatry and Acupuncture. 677.757 Definitions. 2009.

modalities, mechanical and electrotherapeutic modalities, and patient-related instruction.¹⁶

Acupressure is a complementary medicine technique derived from acupuncture. In acupressure physical pressure is applied to acupuncture points by the practitioner's hand, elbow, or with various devices. Clinically, physical therapists often utilize sustained, direct pressure for the relief of trigger points and pain.

The accepted premise must be that overlap occurs amongst professions. The question for the State Board should only be whether or not intramuscular manual therapy is within the scope of practice of physical therapy, not determining whether it is part of acupuncture.

PTs using intramuscular manual therapy:

- do not and cannot claim to practice acupuncture,
- do not use acupuncture traditional Chinese medicine theories, meridian acupoints and terminology,
- do not use acupuncture diagnosis like tongue and pulse

As demonstrated in the definition of the practice of acupuncture from the Oregon statute, needle techniques are only a piece of the acupuncturist's full scope of practice. It is not the specific individual procedures, but the totality of a scope which defines a profession. Acupuncturists and physical therapists continue to have unique scopes of practice even with the overlap of some of the treatment techniques. It is completely reasonable for the acupuncture profession to want to protect the title and term *acupuncturist* or *acupuncture* as much as physical therapy profession protects *physical therapist* and *physical therapy*. Qualified, competent physical therapists that perform intramuscular manual therapy should not hold themselves out as providing acupuncture services. Qualified, competent acupuncturists instructing a client in traditional, oriental exercise should not hold themselves out as a physical therapist. Protection of titles and terms are important from a public protection stand point in that people need to be clear as to the qualifications of their practitioner of choice as well as his/her profession.

Historical Basis and Education (as of Feb 2010)

Although for a different purpose, physical therapists have a historical basis for needle insertion with the practice of EMG and NCV testing. At this time, law in 46 states would allow PTs to perform needle electromyography and nerve conduction velocity testing.¹⁷ Although the language and requirements vary, California, Florida, Kentucky, Missouri, New Hampshire, Oklahoma, Pennsylvania, Washington, and West Virginia have specific protection in statute for physical therapists to perform EMGs. North Carolina and Texas utilize administrative rule to authorize PTs to perform EMGs. An opinion from the Kentucky board specifically addresses EMG by fine wire insertion and affirms that these tests are within the scope of a physical therapist.¹⁸ South Carolina also has a statement regarding performance of needle EMG.¹⁹ The law in Oklahoma specifically defines the practice of physical therapy to include invasive and noninvasive techniques.

"Physical therapy" means the use of selected knowledge and skills in planning, organizing and directing programs for the care of individuals whose ability to function

¹⁶ The Model Practice Act for Physical Therapy. A Tool for Public Protection and Legislative Change. 4th edition. Federation of State Boards of Physical Therapy. 2006.

¹⁷ American Physical Therapy Association. State Affairs memorandum on review of EMG in the States.

¹⁸ <http://www.pt.ky.gov/NR/rdonlyres/4D460291-23A1-43E3-AFF3-DEE7506DF149/0/Electromyography.pdf>

¹⁹ <http://www.llr.state.sc.us/POL/PhysicalTherapy/index.asp?file=PT%20Positions/electro.htm>

is impaired or threatened by disease or injury, encompassing preventive measures, screening, tests in aid of diagnosis by a licensed doctor of medicine, osteopathy, chiropractic, dentistry or podiatry, or a physician assistant, and evaluation and invasive or noninvasive procedures with emphasis on the skeletal system, neuromuscular and cardiopulmonary function, as it relates to physical therapy.²⁰

At this time, intramuscular manual therapy is not being taught in most entry level physical therapy programs with the exception of Georgia State University. Several other universities, including Mercer University, the University of St. Augustine for Health Sciences, and the Ola Grimsby Institute are considering adding intramuscular manual therapy to the curriculum of both the advanced and entry level educational programs. Intramuscular manual therapy is already included in the Mercer University physical therapy residency program. Internationally, intramuscular manual therapy is being taught at many universities. In most educational programs for physical therapists, the needling technique is learned in conjunction with evaluation of the myofascial trigger points and used as a part of the patient’s overall treatment plan.

The Commission on Accreditation of Physical Therapy Education (CAPTE) criteria requires the physical therapist professional curriculum to include content and learning experiences in the behavioral, biological and physical, and clinical sciences necessary for initial practice of the profession.²¹ The entry level curriculum must demonstrate inclusion of many topics which should provide a strong foundation to the understanding and performance of intramuscular manual therapy such as anatomy/cellular biology, physiology, neuroscience, pathology, pharmacology; study of systems including cardiovascular, pulmonary, integumentary, musculoskeletal, and neuromuscular; communication, ethics and values, teaching and learning, clinical reasoning, and evidence-based practice.

Intramuscular manual therapy education purposefully does not include the basic tenets of acupuncture training such as Chinese medicine philosophy, meridians, *qi*, or diagnosis via tongue inspection, as the technique and its rational have no basis in oriental medicine. Intramuscular manual therapy is based primarily on the work of Dr. Janet Travell, a pioneer in trigger point research and treatment. According to the World Health Organization’s **Guidelines on Basic Training and Safety in Acupuncture**, the basic study of acupuncture should include:²²

- Philosophy of traditional Chinese medicine, including but not limited to concepts of *yin-yang* and the five phases.
- Functions of *qi*, blood, mind, essence and body fluids, as well as their relationship to one another.
- Physiological and pathological manifestations of *zang-fu* (visceral organs) and their relationship to one another.
- Meridians and collaterals, their distribution and functions.
- Causes and mechanisms of illness.

Overwhelmingly, physical therapists are getting instruction in intramuscular manual therapy through continuing education. The following is a partial list of common continuing education courses offered on the topic:

Course Title	Education Sponsor	Website`	Description
Trigger Point Dry Needling Level 1	Therapy Concepts	http://www.therapyconceptsinc.com/events.php#2	This three day course introduces Trigger Point Dry Needling as an intervention for treating a variety of diagnoses. In the Level I course participants are

²⁰ State Of Oklahoma Physical Therapy Practice Act. Title 59 O.S., Sections 887.2

²¹ Commission on Accreditation for Physical Therapy Education. Accreditation Handbook. Effective January 1, 2006; revised 5/07, 10/07, 4/09 p. B28-B29.

²² **Guidelines on Basic Training and Safety in Acupuncture.** World Health Organization. 1996. Pages 7-8.

			introduced to the theory and physiology of myofascial trigger points, and the history of dry needling. Anatomy of each muscle will be reviewed, including the trigger points and their corresponding referral patterns. The muscle groups included in the level I course are the cervical and lumbar spine, hip, lower extremity, shoulder and forearm. This course be limited to 20 participants and attendees will need to provide a current CV with continuing education courses listed, and a copy of their license, in order to be considered for participation in this course. All participants must have a minimum of 2 years of experience.
Trigger Point Dry Needling Level 2	Therapy Concepts	http://www.therapyconceptsinc.com/events.php#2	This three day course is a continuation of the Level 1 course and consists of a combination of lecture, testing, demonstration and a large amount of hands-on laboratory sessions. This course will address the anterior neck, head and face, thoracic spine and rib cage, hand, foot and other more challenging musculature. Get the full course description by clicking on the link below. NOTE: the Friday portion of the course will be held from 12 noon until 8 pm, the Saturday and Sunday portion will be from 8 am to 5 pm. All three days will have meal breaks that are on your own.
Systemic Integrative Dry Needling Course Pain Management, Sports and Trauma Rehabilitation		http://www.dryneedlingcourse.com/dry_needling_course.htm	100 hour home study and 3-day very intensive very practical seminar
Trigger Point Dry Needling Level I Training	GEMt – Global Education for Manual therapists	http://www.gemtinfo.com/physical-therapy/Trigger-Point-Dry-Needling-Level-I-Training/page17.html	An introductory course for evaluation and treatment of neuromyofascial pain and dysfunction present in the acute and chronic population. Instruction will include evaluation and application of dry needling of neuromyofascial trigger points for musculature which is considered appropriate at the introductory level of training. This three day course (27.5 contact hours) consists of a combination of lecture, testing, demonstration and a large amount of

			hands-on laboratory sessions. Trigger point dry needling (TDN), will be presented as a tool to evaluate and treat the neuromuscular system. Both the Gunn and Travell & Simons' techniques will be discussed and demonstrated. Supporting research will be presented and discussed. Treatment safety will be evaluated throughout the course.
Dry Needling Level 2 Training	Global Education for Manual therapists	http://www.gemtinfor.com/physical-therapy/Trigger-Point-Dry-Needling-Level-I-Training/page17.html	An advanced course which builds upon the techniques learned in the Level I course. Participants are required to take the introductory Level I course and fulfill specific requirements prior to becoming eligible for this course. Topics to be covered include advanced musculature and extensive techniques, application of techniques for specific diagnoses, and further review of supporting research.
Dry Needling	Myopain Seminars	www.myopainseminars.com	Multiple level seminars on dry needling. 104 hours of training, followed by theoretical and practical examinations

Intramuscular Manual Therapy Evidence-based Practice:

There are numerous scientific studies to support the use of dry needling for a variety of conditions.²³ Supporting textbooks include:

- Dommerholt J, Huijbregts PA, Myofascial trigger points: pathophysiology and evidence-informed diagnosis and management Boston: Jones & Bartlett 2011
- *The Gunn approach to the treatment of chronic pain.* Gunn, C.C., Second ed. 1997, New York: Churchill Livingstone.
- *Travell and Simons' myofascial pain and dysfunction; the trigger point manual.* Simons, D.G., J.G. Travell, and L.S. Simons, 2 ed. Vol. 1. 1999, Baltimore: Williams & Wilkins.

A literature search regarding intramuscular manual therapy or dry needling yields extensive results. Numerous research studies have been performed and published in a variety of sources. In addition to the references contained in this paper, the following is just a small sample:

- Dommerholt, J., O. Mayoral, and C. Gröbli, *Trigger point dry needling.* J Manual Manipulative Ther, 2006. **14**(4): p. E70-E87.
- Lewit, K., *The needle effect in the relief of myofascial pain.* Pain, 1979. **6**: p. 83-90.
- Intramuscular Stimulation (IMS) - The Technique By: C. Chan Gunn, MD (<http://www.istop.org/papers/impspaper.pdf>)

²³ Dommerholt, J., O. Mayoral, and C. Gröbli, *Trigger point dry needling.* J Manual Manipulative Ther, 2006. **14**(4): p. E70-E87.

- Dommerholt, J., *Dry needling in orthopedic physical therapy practice*. Orthop Phys Ther Practice, 2004. **16**(3): p. 15-20.
- 42. Baldry, P.E., *Acupuncture, Trigger Points and Musculoskeletal Pain*. 2005, Edinburgh: Churchill Livingstone.
- Dommerholt, J. and R. Gerwin, D., *Neurophysiological effects of trigger point needling therapies*, in *Diagnosis and management of tension type and cervicogenic headache*, C. Fernández de las Peñas, L. Arendt-Nielsen, and R.D. Gerwin, Editors. 2010, Jones & Bartlett: Boston. p. 247-259.
- Simons, D.G. and J. Dommerholt, *Myofascial pain syndrome - trigger points*. J Musculoskeletal Pain, 2007. **15**(1): p. 63-79.
- Furlan A, Tulder M, Cherkin D, Tsukayama H, Lao L, Koes B, Berman B, Acupuncture and Dry-Needling for Low Back Pain: An Updated Systematic Review Within the Framework of the Cochrane Collaboration. Spine 30(8): p. 944-963, 2005.
- White A, Foster NE, Cummings M, Barlas P, Acupuncture treatment for chronic knee pain: a systematic review. Rheumatology (Oxford) 46(3): p. 384-90, 2007.
- Chu, J., et al., *Electrical twitch obtaining intramuscular stimulation (ETOIMS) for myofascial pain syndrome in a football player*. Br J Sports Med, 2004. **38**(5): p. E25.

Typically the literature refers to dry needling or acupuncture, and in some cases specifically looks at the effectiveness of acupuncture and dry needling, suggesting indeed that a difference exists.²⁴ Overall, the literature suggests and supports intramuscular manual therapy as a safe, effective, viable treatment option for patients.

Public Protection

Intramuscular manual therapy has been practiced by physical therapists for over 20 years with minimal numbers of adverse effects reported. The most common side effects include post-needling soreness and minor hematomas. The Federation of State Boards of Physical Therapy's Examination, Licensure, and Disciplinary Database (ELDD) has no entries in any jurisdiction of discipline for harm caused by intramuscular needling performed by physical therapists.

Many American providers of intramuscular manual therapy, with multiple course providers in Europe, have established a voluntary web-based registry for reporting adverse effects. This registry currently includes two reports of pneumothoraces, a severe autonomic response of one patient, but no other "severe" side effects.²⁵ Additionally, the literature does not report serious injury or harm from intramuscular needling performed by a physical therapist.

Conclusion

Returning to the four tenets from ***Changes in Healthcare Professions Scope of Practice: Legislative Considerations*** on which to base scope of practice decisions and summarizing the information above, it appears that there is a historical basis, available education and training as well as an educational foundation in the CAPTE criteria, and supportive scientific evidence for including intramuscular manual therapy in the scope of practice of physical therapists. The education, training and assessment within the profession of physical therapy include the

²⁴ Furlan A, Tulder M, Cherkin D, Tsukayama H, Lao L, Koes B, Berman B, Acupuncture and Dry-Needling for Low Back Pain: An Updated Systematic Review Within the Framework of the Cochrane Collaboration. Spine 30(8): p. 944-963, 2005.

²⁵ Dummerholt, J., Unpublished data. January 2010.

knowledge base and skill set required to perform the tasks and skills with sound judgment. It is also clear; however, that intramuscular manual therapy is not an entry level skill and should require additional training.

When considering the scope of practice decision, the regulatory environment in each jurisdiction will vary dramatically. However, recognizing that intramuscular manual therapy is not an entry level skill, the jurisdictional boards that are authorized to develop rules related to determining if an intervention is within scope of practice must determine the mechanisms for determining that a physical therapist is competent to perform the task. To ensure public protection the board should also have sufficient authority to discipline any practitioner who performs the task or skill without proper training, incorrectly, or in a manner that might likely harm a patient.