

Physical Therapists and Direction Of Mobilization/Manipulation:

An Educational Resource Paper

PRODUCED BY THE APTA PUBLIC POLICY, PRACTICE, AND PROFESSIONAL AFFAIRS UNIT

SEPTEMBER 2013



American Physical Therapy Association

PHYSICAL THERAPISTS AND DIRECTION OF MOBILIZATION/MANIPULATION

INTRODUCTION

This white paper outlines the importance of upholding and promoting compliance with the current American Physical Therapy Association (APTA) position on Procedural Interventions Exclusively Performed by Physical Therapists. This position impacts all aspects of the physical therapy profession, including clinical practice, regulation, licensure, and education. Historical and supporting information related to Procedural Interventions Exclusively Performed by Physical Therapists address the patient safety, practice, education, and legislative/regulatory implications of this position on the physical therapy profession.

BACKGROUND

Since 1998, APTA's *Guide to Physical Therapist Practice*¹ has defined mobilization/manipulation as "a manual therapy technique comprised of a continuum of skilled passive movements that are applied at varying speeds and amplitudes, including a small amplitude/high velocity therapeutic movement." To achieve a common language for describing this area of the physical therapist's scope of practice, the terms "thrust" and "nonthrust" manipulation were established to replace the previous terms "manipulation" and "mobilization," respectively. The APTA *Manipulation Education Manual for Physical Therapist Professional Degree Programs* further defines *thrust manipulation* as a "high velocity, low amplitude therapeutic movement within or at the end range of motion" and *nonthrust* as manipulations that do not involve thrust.² These definitions emphasize that these procedures are applied on a *continuum*, which requires ongoing examination and evaluation to determine how to proceed along the continuum with modification of speed, amplitude, and direction of forces for optimal clinical outcomes.

In response to longstanding concerns expressed by the American Academy of Orthopaedic Manual Physical Therapists (AAOMPT) that physical therapist assistants (PTAs) were receiving instruction in and administering mobilization/manipulation, a skill set requiring ongoing examination and evaluation, AAOMPT adopted the following positions at the 1998 AAOMPT membership business meeting:

1. *Any joint manipulation/mobilization techniques into a restricted or painful range should be performed by the physical therapist and not delegated to supportive personnel including physical therapist assistants.*
2. *The AAOMPT is opposed to the teaching of joint manipulation/mobilization to all supportive personnel including physical therapist assistants.*

The AAOMPT leadership collaborated with the Orthopaedic

Section and APTA Board of Directors in bringing similar motions to the APTA House of Delegates. As a result, the APTA House of Delegates (House) heard discussion in 1999 and in 2000 passed the position statement: Procedural Interventions Exclusively Performed by Physical Therapists (HOD P06-00-30-36),³ which states the following (emphasis added):

The physical therapist's scope of practice as defined by the American Physical Therapy Association *Guide to Physical Therapist Practice* includes interventions performed by physical therapists. These interventions include procedures performed exclusively by physical therapists and selected interventions that can be performed by the physical therapist assistant under the direction and supervision of the physical therapist.

Interventions that **require immediate and continuous examination and evaluation throughout the intervention** are performed exclusively by the physical therapist. Such procedural interventions within the scope of physical therapist practice that are **performed exclusively by the physical therapist** include, but are not limited to,

- **spinal and peripheral joint mobilization/manipulation**, which are components of manual therapy, and
- sharp selective debridement, which is a component of wound management.

The support statement for this position presented to the House stated: "the Association should delineate those interventions which, due to their clinical complexity and the sophistication of judgment required to perform them, precludes delegation to paraprofessionals or others. This position is consistent with the House of Delegates' endorsed *Guide to Physical Therapist Practice* and *A Normative Model of Physical Therapist Education*."

This position statement did not represent a change in philosophy for the association.⁴ APTA policies and positions have long maintained that the physical therapist assistant's scope of work did not include examination, evaluation, diagnosis, and prognosis. Those elements of practice are to be performed exclusively by the physical therapist.^{4,5,6,7} The purpose of the position was to more clearly specify which interventions should never be directed to the physical therapist assistant due to their inherent requirements for skill and ongoing clinical decision making.

In 2002, in collaboration between AAOMPT, the Orthopaedic Section, and the APTA Board of Directors, the House adopted a position statement addressing clinical continuing education, Clinical Continuing Education for Individuals Other Than Physical Therapists and Physical Therapist Assistants.⁸

Physical therapist assistants may participate in continuing education that includes and teaches subject matter and interventions that differ from the description of entry-level skills as described in *A Normative Model of Physical Therapist Assistant Education*. Physical therapist assistants may use the interventions taught in continuing education only as consistent with the American Physical Therapy Association [policies, positions, guidelines, standards, and the Code of Ethics] and under the direction and supervision of the physical therapist.

During the 2005 AAOMPT Business meeting, AAOMPT membership voted to adopt the APTA House positions on delegation and continuing education. These positions have remained in place within AAOMPT and APTA for over 10 years to enhance patient safety and treatment effectiveness.

There are also legislative and regulatory reasons for these positions that cannot be underestimated. For example, health professions such as chiropractic that would like to limit physical therapists' scope of practice in mobilization/manipulation can bolster their argument by pointing out that physical therapists may potentially instruct and direct skilled procedures to supportive personnel. APTA has been able to argue successfully in legislative and regulatory battles with chiropractic that physical therapists have the education and training in professional physical therapist education to effectively and safely provide mobilization/manipulation. It is easy to demonstrate that the master of physical therapy (MPT) and doctor of physical therapy (DPT) degrees compare favorably to the doctor of chiropractic (DC) degree in time, scope, and content to effectively train manual therapy practitioners. Conversely, PTA education results in a technical degree and is not comparable to MPT, DPT, or DC education. Acting outside this position not only magnifies liability for the physical therapist but also places the physical therapist profession at risk of being challenged or of losing manipulation as part of the physical therapist scope of practice when physical therapy is criticized in legislative hearings for delegating mobilization/manipulation.

In summary, these consensus-based positions provide important clarity relevant to best clinical practice including patient safety, education, and regulatory and legislative arenas. These positions clarify the practice competency and latitude within the scope of practice for the physical therapist and constraints within the scope of work that can be directed to the PTA.

RATIONALE FOR THE CURRENT POSITION

Immediate and Continuous Examination and Evaluation

Procedural Interventions Exclusively Performed by Physical Therapists is based on the principle that "immediate and continuous examination and evaluation," critical components of clinical reasoning, are inherent to the effective and safe provision of joint mobilization/manipulation. It is understood that the implementation of these procedures may produce new findings that must be evaluated simultaneously as the interventions are implemented. Hence, examination, evaluation, clinical reasoning, and intervention are continuous and immediate.

Although many physical therapy tests and measures as well as interventions are performed at the body systems and functions, activity, and participation levels, there are elements of selected physical therapy procedures that require careful evaluation of tissue/organ and patient response. For these interventions, body systems and functions response usually are qualitatively measured by observation or palpation, applied clinical cues clinicians use as decision points to continue or adjust the treatment. The data gathered through the observations or palpations often are supplemented with the patient's subjective reports.

In some physical therapy interventions, the treatment can be divided into distinct phases, gathering data on new findings produced during provision of the intervention, evaluating the data, and using clinical decision making to determine the appropriate action of continuing, reducing, or progressing further intervention. PTAs, working under the direction and supervision of a physical therapist, are generally expected to respond to any negative patient responses immediately to ensure patient safety. In contrast, PTAs generally are expected to continue or modify treatment in the presence of a non-negative response to treatment only within the boundaries established in advance by the physical therapist.

However, joint mobilization/manipulation is an example of an intervention that does not easily lend itself to being segmented into distinct sequential phases of evaluation and implementation. Clinical judgments about the amount of force to apply to create or progress an arthrokinematic change cannot be made on a "stop-evaluate-decide-proceed" linear time sequence. The implementation of the procedure, by its very nature, produces new findings that must be evaluated simultaneously as the intervention is implemented. Examination, evaluation, intervention, and clinical decision making are inseparable in the performance of mobilization/manipulation.

The essential arthrokinematic motion applied to the joint in mobilization/manipulation is not under voluntary control of the patient, and the practitioner must produce this motion through skilled manual techniques.^{9,10} This skill requires a detailed understanding of joint surface anatomy and kinesiology and a continuous use of examination with clinical decision making to modulate

the technique throughout the treatment session.^{9,11} The negative responses to application of mobilization/manipulation techniques may include but are not be limited to worsening and/or peripheralization of symptoms, tissue damage, promotion of inflammation leading to chronic pain and/or proliferation of scar tissue, spinal or joint instability, and neurovascular compromise. Failure to properly evaluate responses during the course of examination or intervention could result in adverse responses from the intervention, ranging from increased pain and deformity, to loss of function, to death.¹²⁻¹⁹

Since the safe application of mobilization/manipulation requires the practitioner to apply an advanced understanding of arthrokinematic principles simultaneously with ongoing examination, evaluation, and clinical decision making during the intervention, the PTA would not be an appropriate provider. In 2007, the APTA's Departments of Education, Accreditation, and Practice produced a "Problem Solving Algorithm Utilized by PTAs in Patient/Client Intervention." The application of mobilization (nonthrust manipulation) requires dedicated consistent monitoring and evaluation of the patient/client response. The algorithm clearly indicates that evaluation is not among the controlling assumptions of PTA practice.²⁰ This is in contrast to osteokinematic range-of-motion interventions in which patients have more voluntary control and are within the PTAs' scope of work.

Efficacy and Effectiveness of Mobilization/Manipulation

Published peer-reviewed research on the efficacy and effectiveness of mobilization/manipulation interventions provided by physical therapists has repeatedly demonstrated the effectiveness of such interventions for a variety of conditions and regions of the body.²¹⁻³⁰ However, there are no research studies available that address the efficacy of the practice of mobilization/manipulation provided by PTAs. Therefore, it cannot be assumed that a similar level of effectiveness of manual therapy interventions can be produced when the mobilization/manipulation is directed to PTAs.

Legal and Safety Implications of the Current Position

At least 35 state practice acts are silent on the issue of direction of mobilization/manipulation to the PTA. Even so, there is a liability risk when physical therapists choose to practice contrary to the current APTA position on delegation of mobilization/manipulation procedures to PTAs. According to Welk, "A clinically inappropriate decision to direct physical therapy services increases the PT's risk of professional liability claim. It is important to realize that while APTA policies may in fact require more than the absolute legal requirements of state or federal law, a court still may look to APTA policy in a professional liability action to determine if a physical therapist acted within an acceptable standard of care in delegating physical therapy services."³¹

If injury occurs at the hands of a PTA performing mobilization/manipulation procedures in these states, the standard of care may be determined by APTA policy. The current policy will make it difficult

to defend the practice of a PT who directed a PTA to perform these procedures. According to Welk, "In the unfortunate event that a professional liability claim arises that includes issues of delegation, the supervising PT will be required to support the delegation decision. This can put the PT in a difficult if not impossible position if the delegation decision was not in compliance with the state practice act and/or APTA policies, or was inconsistent with what a reasonable PT would have done under similar circumstances"³¹

The analysis also indicates risk for injury when a PTA performs mobilization/manipulation techniques. It reports that the top 3 severities by allegation claims related to PTAs 2001–2010 were:

1. Improper use of equipment
2. Improper management over the course of treatment
3. Improper performance of manual therapy³²

In addition, CNA found that failure to monitor the patient during treatment accounted for the highest percentage of PTA claim.³² To protect the public, state physical therapy licensing boards should consider adopting regulations consistent with the APTA position on Procedural Interventions Exclusively Performed by Physical Therapists.

CHALLENGES TO THE CURRENT POSITION

At the 2006 APTA House, the Texas Chapter delegation proposed RC-12, which would have rescinded Procedural Interventions Exclusively Performed by Physical Therapists. At the motion's presentation to the 2006 House, the parliamentary procedure "object to consideration" was made and sustained by more than the 2/3 votes required to sustain the motion. This was a strong endorsement by the 2006 APTA House in support of the current position.

In spring 2012, the Federation of State Boards of Physical Therapy (FSBPT) published the results of its recent PT and PTA practice analyses.³³ FSBPT conducts surveys every 5 years to develop the blueprints for both the PT and PTA national examinations. Of note were 2 items in the manual therapy intervention category that had previously not been included on the PTA exam but did meet the threshold in this survey administration:

- Item 62, Perform peripheral mobilization/manipulation (non-thrust)
- Item 64, Perform spinal mobilization/manipulation (non-thrust)

An item equivalent to item 62 reached threshold in the 2006 survey, but the FSBPT exam policy committee decided against recommending that this content be added to the exam, a determination the FSBPT Board accepted. In the 2011 survey process, the policy committee recommended that these items appear on the exam, resulting in a decision by the FSBPT Board to include them on the content outline.

The item numbers related to peripheral and spinal mobilization/manipulation reached the critical threshold of 25% of the respondents indicating they performed the activity, and so these items are now eligible to appear on the exam. Of additional note is the frequency with which these respondents reported performing these items. The frequency reported for Item 62 (peripheral) is 1.26 (1 = “a few times a year” and 2 = “once a month”). The frequency reported for Item 64 (spine) is 0.78 (0 = “never” and 1 = “a few times a year”).³³

On September 6, 2012, the Commission on Accreditation of Physical Therapy Education (CAPTE), the national accreditation organization for physical therapist and physical therapist assistant education programs, released a statement regarding the inclusion of mobilization in PTA curricula, which was amended on November 7, 2012, to read (emphasis added):

PTA Education and Peripheral Joint Mobilization

As the preferred extender of physical therapy services, physical therapist assistants (PTAs) are educated and licensed to deliver physical therapy interventions within the plan of care designed by the physical therapist (PT). To safely and effectively fulfill this role, the PTA must possess knowledge of the rationale for all components of the treatment plan as directed by the physical therapist. The Commission on Accreditation in Physical Therapy Education (CAPTE) believes that the knowledge of the entry-level PTA should include the rationale for manual therapy procedures such as soft tissue and non-thrust joint mobilization techniques. Furthermore, the Commission believes that it is not inappropriate to train PTAs to perform soft tissue mobilization or to manually assist the PT in the delivery of peripheral joint mobilization procedures (ie, assist with patient positioning, stabilization, or grade 1-2 movements). CAPTE does not support the inclusion of educational objectives or learning experiences in the entry-level PTA curriculum that are intended to prepare the PTA to perform grades 3-5 (thrust) procedures.

CAPTE is responsible for ensuring that all accredited programs meet a minimum set of educational standards in physical therapy. CAPTE's recognition agencies (the US Department of Education and the Council for Higher Education Accreditation) require that all accrediting agencies have independent authority, free from interference by sponsoring organizations, for their decisions related to standards and to the accreditation status of programs. As such, APTA did not have a role in the decision by CAPTE on this issue. CAPTE's statement is about curricular content only; it does not address the appropriateness of the PT in directing and supervising the PTA in the application of such techniques. Further, it does not require that physical therapist assistant education programs include this content; it does, however, open programs that include the content to increased scrutiny by CAPTE regarding the quality of relevant student outcomes.

Prior to the September 2012 statement, CAPTE documents were quite clear and consistent with APTA policy in that only physical therapist training included didactic, psychomotor, and clinical training in thrust and nonthrust mobilization/manipulation for the spine and extremities. The design and implementation of physical therapist professional education curriculum are supported by both *A Normative Model for Physical Therapist Professional Education* and the CAPTE Evaluative Criteria for Accreditation of Education Programs for the Preparation of Physical Therapists. Both the normative model and CAPTE evaluative criteria are specific that both thrust and nonthrust manipulation techniques are taught exclusively in *physical therapist* professional education programs^{34,35} *A Normative Model for Physical Therapist Assistant Education* and the CAPTE evaluative criteria for PTA education exclude the examination and evaluation skills and the interventional skills required for safe and effective implementation of mobilization/manipulation.

In response to the above FSBPT and CAPTE actions, APTA President Paul Rockar provided the following statement in a September 18, 2012, letter to APTA component leaders: “As the organization that represents physical therapists, physical therapist assistants, and students, APTA creates and communicates professional standards to which members should aspire. The current standard for the intervention of manual therapy is in part expressed in the APTA House of Delegates position on the issue of delegation of joint mobilization/manipulation to PTAs, which remains in place and unaffected” As noted in Rockar's letter, APTA holds firm to its support of the Position on Procedural Interventions Exclusively Performed by Physical Therapists.

At its April 2013 meeting, CAPTE rescinded its statement PTA Education and Peripheral Joint Mobilization. At the same meeting CAPTE adopted a new position paper titled Expectations for the Education of Physical Therapists and Physical Therapist Assistants Regarding Direction and Supervision,³⁶ which states the following (emphasis added):

CAPTE expects educational programs to prepare PT students to determine those components of interventions that may be directed to the physical therapist assistant. These considerations should include the level of skill and training required to perform the procedure, the level of experience/advanced competency of the individual PTA, the practice setting in which the procedure is performed, and the type of monitoring needed to accurately assess the patient's response to the intervention. In addition, acuity and complexity of the patient's condition and other clinical factors should be considered when directing PTAs to safely and competently perform any intervention. CAPTE also expects PTA educational programs to prepare PTA students to recognize components of interventions that are beyond their scope of work. (see PTA Criteria 3.3.2.10 through 3.3.2.12)

Likewise, CAPTE expects education programs for the PTA to select the appropriate depth and breadth of knowledge and skill needed to perform interventions that are consistent with the PTA's responsibilities. These skills not only include specific intervention procedures but also the data collection skills needed to monitor and assess a patient's response to an intervention. These data collection skills are outlined in the evaluative criteria. Regardless of the relative simplicity or complexity of the procedure itself, **CAPTE also believes that those interventions which require more extensive foundational knowledge, manual skill, and/or complex monitoring than a PTA is educated to provide should only be performed by the physical therapist.**

SUMMARY

This white paper provides an historical overview and clear rationale for upholding and promoting the APTA position on Procedural Interventions Exclusively Performed by Physical Therapists (HOD P06-00-30-36). This issue has an impact on all aspects of the physical therapy profession including clinical practice, education, patient safety, and regulatory and legislative arenas. APTA has concluded that, based on education, efficacy, and safety, it is inappropriate for a physical therapist to direct the manual therapy procedures of mobilization/manipulation to the PTA under any circumstances. Further, beyond the specific interventions of mobilization/manipulation, any procedure within physical therapist practice that requires immediate and continuous examination and evaluation throughout the intervention should not be directed to the PTA.

As the principal membership organization representing and promoting the profession of physical therapy,³⁷ APTA encourages state licensing boards to establish rules, regulations, or position statements congruent with the position on Procedural Interventions Exclusively Performed by Physical Therapists.

REFERENCES

1. *Guide to Physical Therapist Practice*. Revised 2nd ed. Alexandria, VA: American Physical Therapy Association; 2003.
2. *APTA Manipulation Education Manual for Physical Therapist Professional Degree Programs*. Alexandria, VA: APTA Manipulation Task Force; 2004.
3. APTA House of Delegates. Procedural Interventions Exclusively Performed by Physical Therapists. (HOD P06-00-30-36.) Alexandria, VA: American Physical Therapy Association; 2000.
4. APTA House of Delegates. Briefing Paper RC 12-06-1. Alexandria, VA: American Physical Therapy Association; 2006.
5. APTA House of Delegates. Direction and Supervision of the Physical Therapist Assistant. HOD P06-05-18-26. Alexandria, VA: American Physical Therapy Association; 2005.
6. APTA House of Delegates. Continuing Education for the Physical Therapist Assistant. HOD P06-01-22-23. Alexandria, VA: American Physical Therapy Association; 2001.
7. APTA Board of Directors. Minimum Required Skills of Physical Therapist Assistant Graduates at Entry-level. BOD G11-05-09-18. Alexandria, VA: American Physical Therapy Association; 2005.
8. APTA House of Delegates. Clinical Continuing Education for Individuals Other Than Physical Therapists and Physical Therapist Assistants. HOD P06-02-26-49. Alexandria, VA: American Physical Therapy Association; 2002.
9. Maitland GD. *Peripheral Manipulation*. London: Butterworth; 1984.
10. Kaltenborn FM. *The Spine Basic Evaluation and Mobilization Techniques*. Oslo, Norway: Olaf Norlis Bokhandel; 1964.
11. Olson KA. *Manual Physical Therapy of the Spine*. St Louis, MO: Saunders, Elsevier; 2009.
12. Hurwitz EL, Morgenstern H, Vassilaki M, Lu-May C. Frequency and clinical predictors of adverse reactions to chiropractic care in the UCLA neck pain study. *Spine*. 2005;30(13):1477-1484.
13. Rivett DA. The vertebral artery and vertebrobasilar insufficiency. In: Bouling JD, Jull GA. *Greive's Modern Manual Therapy, The Vertebral Column*. Third ed. London: Elsevier Churchill Livingstone; 2004:257-273.
14. DiFabio RP. Manipulation of the cervical spine: risks and benefits. *Phys Ther*. 1999;79(1):50-65.
15. Rivett DA, Milburn P. A prospective study of complications of cervical spine manipulation. *J Manual Manip Ther*. 1996;4:166-170.
16. Haldeman S, Kohlbeck FJ, McGregor M. Risk factors and precipitating neck movements causing vertebrobasilar artery dissection after cervical trauma and spinal manipulation. *Spine*. 1999;24:785-94.
17. Hurwitz EL, Aker PD, Adams AH, Meeker WC, Shekelle PG. Manipulation and mobilization of the cervical spine: a systematic review of the literature. *Spine*. 1996;21:1746-1760.
18. Bronfort G, Haas M, Evans R L, Bouter LM. Efficacy of spinal manipulation and mobilization for low back pain and neck pain: a systematic review and best evidence synthesis. *Spine J*. 2004; 4(3):335-356.
19. Danish Institute for Health Technology Assessment. *Low Back Pain: Frequency, Management and Prevention From a Health Technology Perspective*. Copenhagen: Health Technology Assessment (HTA) Database; 1999.
20. *A Normative Model of Physical Therapist Assistant Education: Version 2007*. Alexandria, VA: American Physical Therapy Association; 2007.
21. Bang MD, Deyle GD. Comparison of supervised exercise with and without manual physical therapy for patients with shoulder impingement syndrome. *JOSPT*. 2000;30(3):126-137.
22. Bergman GJ, Winters J, Croesier KH, Pool JM, Jong B, et al. Manipulative therapy in addition to usual medical care for patients with shoulder dysfunction and pain: a randomized, controlled trial. *Ann Intern Med*. 141(6):432-9; 2004.
23. Cleland JA, Fritz JM, Kulig K, Davenport TE, et al. Comparison of the effectiveness of three manual physical therapy techniques in a subgroup of patients with low back pain who satisfy a clinical prediction rule: a randomized clinical trial. *Spine*. 2009;34(25):2720-2729.
24. Deyle GD, Henderson NE, Matelkel RL, et al. Effectiveness of manual physical therapy and exercise in osteoarthritis of the knee: a randomized controlled trial. *Ann Intern Med*. 2000;132(3):173-181.
25. Deyle GD, Allison SC, Matekel RL, et al. Physical therapy treatment effectiveness for osteoarthritis of the knee: a randomized comparison of supervised clinical exercise and manual therapy procedures versus a home exercise program. *Phys Ther*. 2005;85(12):1310-1317.
26. Hoeksma HL, Dekkar J, Ronday HK, et al. Comparison of manual therapy and exercise in osteoarthritis of the hip: a randomized clinical trial. *Arthritis and Rheumatism*. 2004;51(5):722-729.
27. Hoving JL, Koes BW, de Vet HCW, et al. Manual therapy, physical therapy, or continued care by a general practitioner for patients with neck pain: a randomized controlled trial. *Ann Intern Med*. 2002;136:713-722.
28. Walker MJ, Boyles RE, Young BA, et al. The effectiveness of manual physical therapy and exercise for mechanical neck pain: a randomized clinical trial. *Spine*. 2008;33(22):2371-2378.
29. Whitman JM, Flynn TW, Childs JD, et al. A comparison between two physical therapy treatment programs for patients with lumbar spinal stenosis: a randomized clinical trial. *Spine*. 2006;31(22):2541-2549.
30. Vermeulen HM, Rozing PM, Obermann WR, Cessie SL, Vlieland TPMV. Comparison of high-grade and low-grade mobilization techniques in the management of adhesive capsulitis of the shoulder: randomized controlled trial. *Phys Ther*. 2006;86(3):355-68.
31. Welk P. Considerations for physical therapy service delegation. *PT: Magazine of Physical Therapy*. 2008;16(11):18-21.
32. CNA HealthPro Physical Therapy Closed Claims Analysis, Part One, 2001-2010. www.cna.com/vcm_content/CNA/internet/Static%20File%20for%20download/Risk%20Control/Medical%20Services/PhysicalTherapyLiability2001-2010-01-2012.pdf. Accessed April 15, 2013.
33. *Analysis of Practice for the Physical Therapy Profession: Entry-Level Physical Therapist Assistants*. Alexandria, VA: Federation of State Boards of Physical Therapy; 2011.
34. *A Normative Model of Physical Therapist Professional Education: Version 2004*. Alexandria, VA: American Physical Therapy Association; 2004.
35. *Evaluative Criteria for Accreditation of Education Programs for the Preparation of Physical Therapists*. Alexandria, VA: Commission on Accreditation of Physical Therapy Education; 2013.
36. *Expectations for the Education of Physical Therapists and Physical Therapist Assistants Regarding Direction and Supervision*. Alexandria, VA: Commission on Accreditation of Physical Therapy Education; 2013.
37. APTA House of Delegates. Mission Statement of APTA. HOD P06-93-05-05. Alexandria, VA: American Physical Therapy Association; 1993.