

Physical Therapist Practice and The Movement System

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Introduction

APTA's vision for the profession calls us all to action as physical therapists to transform society by using our skills, knowledge, and expertise with the movement system to optimize movement, to promote health and wellness, to mitigate the progression of impairments, and to prevent additional disability.

Physical therapists (PTs) are too often identified by what we do, not by what we know as professionals. Although public recognition for physical therapist practice methods and outcomes is essential, understanding that PTs achieve these outcomes through clinical reasoning and practice that emanates from a distinct body of knowledge is crucial to our professional identity. Defining and promoting the movement system as the core construct that integrates this body of knowledge is no small task. Although the scientific literature addresses human movement in multiple broad and detailed configurations, the actual description of the anatomic structures and interrelated physiologic functions of movement have not yet been described as a system.

While we have defined and published the [Physical Therapist Patient/Client Management Model](#), which is informed by the International Classification of Functioning, Disability, and Health and uses terminology consistent with the World Health Organization's language of ability and disability, we still are missing a common framework to describe the movement system. As a first step to address this challenge, the American Physical Therapy Association (APTA) House of Delegates (House) in 2013 adopted a new vision for the profession along with 8 guiding principles.

The new vision challenges the profession to fulfill our commitment to society and focuses our identity on defining, promoting, and integrating the movement system as the core of who we are and what we do. APTA's Vision for the Profession is "Transforming society by optimizing movement to improve the human experience." Along with this vision statement, the House passed guiding principles to articulate how the profession and society will look when the vision is achieved. A complete description of the vision and the guiding principles can be found here: <http://www.apta.org/Vision>.

The first guiding principle, "Identity," states the following:

Identity: The physical therapy profession will define and promote the movement system as the foundation for optimizing movement to improve the health of society. Recognition and validation of *the movement system [emphasis added]* is essential to understand the structure, function, and potential of the human body. The physical therapist will be responsible for evaluating and managing an individual's movement system across the lifespan to promote optimal development; diagnose impairments, activity limitations, and participation restrictions; and provide interventions targeted at preventing or ameliorating activity limitations and participation restrictions. The movement system is the core of physical therapist practice, education, and research.

The APTA Board of Directors (Board) recognized that before we can integrate consistent application of the movement system in physical therapist practice, education, and research, we must agree on a definition of the concept. The Board therefore convened a work group to develop that definition. After careful consideration of various theoretical, linguistic, and conceptual possibilities, the work group decided on a 2-part definition of "movement system," which the Board modified and adopted.

DEFINITION OF THE MOVEMENT SYSTEM

The movement system is the term used to represent the collection of systems (cardiovascular, pulmonary, endocrine, integumentary, nervous, and musculoskeletal) that interact to move the body or its component parts.

PHYSICAL THERAPIST PRACTICE AND THE MOVEMENT SYSTEM

Human movement is a complex behavior within a specific context.

- Physical therapists provide a unique perspective on purposeful, precise, and efficient movement across the lifespan based upon the synthesis of their distinctive knowledge of the movement system and expertise in mobility and locomotion.
- Physical therapists examine and evaluate the movement system (including diagnosis and prognosis) to provide a customized and integrated plan of care to achieve the individual's goal-directed outcomes.
- Physical therapists maximize an individual's ability to engage with and respond to his or her environment using movement-related interventions to optimize functional capacity and performance.

This new definition, and companion description of the relationship of the movement system to PT practice, standardizes the conceptual framework of the movement system and provides us with a common understanding of the parameters of our existing knowledge base. Such a commonly understood definition also can be recognized by other health care professionals who identify and refer individuals with pathologic disorders impacting human movement, and by patients and clients who will benefit from physical therapist services. By further articulating the PT's unique role in diagnosing and managing risk of and intervention for movement system disorders, we advance toward standardized management methods that reduce unwarranted variations in practice. In turn, we achieve consistent positive outcomes for specific diagnoses and enhance the value of the services we provide.

The physical therapist's role is distinctive in that we are educated to systematically evaluate movement behavior and underlying impairments in the context of an individual's function and performance. The PT identifies the root cause of movement dysfunction through the identification of single or multiple system impairments, as well as compensatory strategies that may interfere with optimal movement. Using this information, the PT provides a customized and integrated plan of care to achieve the individual's goal-directed outcomes.

Basic requirements of a movement system practitioner are:

1. In depth, integrative knowledge of the movement system and its component elements (anatomical structures and physiological functions)
2. The ability to evaluate and diagnosis movement dysfunction in the clinical setting (using observation, instruments, or both)
3. The ability to identify physical impairments across various body systems (eg, integumentary, musculoskeletal, cardiorespiratory, neurological, endocrine, genitourinary) that may be contributing to dysfunctional movement, such as muscle weakness, limited joint range of motion, limited oxygen exchange, or impaired motor control
4. The ability to design an intervention program to address underlying impairments as well as the movement dysfunction itself

How will this impact practice?

Human health and quality of life depend on the ability to move skillfully and efficiently. Furthermore, coordinated movement is critical for people to accomplish meaningful goals.

Physical therapy is an inherently integrative profession. At its core, the education of the physical therapist is interdisciplinary and encompasses the study of normal and dysfunctional movement. This is done at the molecular, cellular, tissue, organ, system, and whole-person levels. As such, by using movement-related interventions targeted at these levels to optimize functional capacity and performance, the physical therapist maximizes an individual's ability to engage with and respond to his or her environment.

As a movement system practitioner, the PT has the expertise to examine, diagnose, and treat all elements of this system to produce a meaningful change in an individual's movement behavior and physical function. The PT uses his or her integrative knowledge to establish a plan of care to maximize physical performance of people of all ages, pathologies, or levels of physical function.

How will this impact education?

To fully integrate the movement system into physical therapist practice we must incorporate it into all didactic curricula, clinical education, and professional continuing education, and it must be a required component of the Commission on Accreditation in Physical Therapy Education (CAPTE) accreditation standards. This will require collaborative partnerships between APTA, the American Council on Academic Physical Therapy (ACAPT), academic program directors, the Education Section of APTA, clinical educators, faculty members, and representatives from CAPTE.

Academic Curricula

We should develop curricular models to help academic programs review their curricula to emphasize the centrality of the movement system throughout professional education. However, it is important to emphasize that this process does not necessarily mean a total restructuring of the curriculum. To help faculty in adapting their curricula, we should create development opportunities in multiple formats to ensure that all programs are using a common framework and language. Templates for history, systems review, and examination, as well as recorded case studies that represent the lifespan, should be developed and shared across all academic programs. APTA, ACAPT, and the Education Section should partner to develop the needed resources, to reduce the burden on academic programs and their faculties.

Clinical Education

The clinical component of professional education also must integrate the concepts of the movement system to help students translate their gained knowledge into clinical practice. Clinical instructors will need to recognize the movement system as the foundation of practice, and educating them in applying the movement system to practice will be critical to success. APTA, ACAPT, and the Education Section should partner to develop continuing education modules that give clinical instructors the tools they need.

Accreditation

To standardize the education of future physical therapy clinicians across the country, it is critical that accreditation standards be revised to incorporate the movement system into the curriculum. While APTA is unable to directly influence the CAPTE accreditation process and standards, CAPTE does

periodically accept feedback on potential revisions to its standards. Since the profession has adopted the movement system as the foundation for physical therapist education, practice, and research, stakeholders should provide comments to CAPTE suggesting that its standards incorporate the concepts of the movement system.

Implications for Research

Adoption of a movement system perspective will help us more systematically establish lines of research to expand and enhance the body of knowledge at the core of physical therapist practice. Specifically, we will delineate a body of knowledge regarding human performance mediated by the movement system.

Widespread adoption of the movement system definition will enable collaborative research opportunities for discovery and innovation.

Relevance of the Movement System to Society and Our Profession

Consumers are seeking value for their health spending, and they now can access physical therapist services in all 50 states without referral. Based on the scientific foundation and academic preparation underlying our approach to analysis of the movement system, we offer a specific and distinct professional service through the application of our clinical skills. This focus allows us to direct attention and resources in practice, education, and research toward efforts that support and advance our role in managing human movement while reducing variation in practice and education.

Promotion of the physical therapists' expertise in diagnosing and treating movement impairments will have profound impact on the health of the public by fostering a more active population, returning patients and clients to participation in life, and reducing the consumption of unnecessary, high-cost medical procedures. To make this a reality, the profession must develop a common language to describe our diagnostic process and our management of the movement system. This common language will enable communities internal and external to the profession to communicate more effectively about the complexity of optimal movement.

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