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# Current Concepts in Occupational Health: Role of Physical Therapists in Occupational Health

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### **PREFACE**

The purpose of this document is to provide an overview of the history, knowledge, and professional roles of physical therapists in the broad field of occupational health. This document is retitled and represents an update, replacing "PHYSICAL THERAPIST IN OCCUPATIONAL HEALTH GUIDELINES" that was adopted by the Academy of Orthopaedic Physical Therapy (AOPT) on July 11, 2011. The target audience includes all health care professionals, administrative, and regulatory stakeholders who may find it beneficial to be aware of the full scope of physical therapist's knowledge and skills in maintaining the health and functional ability of workers. This document will also guide physical therapists interested in fostering system improvements that incorporate the value of physical therapy services in the occupational health space.

Hyperlinks are provided to underlined text to access information on other websites about key regulations, best practice examples, or interpretive guidance. An electronic pdf version of this document with active hyperlinks is available at: <a href="https://www.orthopt.org/content/special-interest-groups/occupational-health/current-concepts-in-occ-health">https://www.orthopt.org/content/special-interest-groups/occupational-health/current-concepts-in-occ-health</a>.

# **INTRODUCTION**

Occupational health, as defined by the <u>World Health Organization</u>, is a multidisciplinary activity aimed at the protection and promotion of the health of workers. This approach considers an individual's physical, mental, and social well-being, general health, and personal development. Regulatory compliance in the United States for all aspects of health and safety in the workplace is led by the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH). Occupational health is a specialized area for physical therapy practice that requires continuing education to develop advanced competencies in prevention, evaluation, and management of injuries and illnesses that affect the health and activity participation of workers.

Human movement is central to worker health and productivity. The 2013 House of Delegates of the American Physical Therapy Association (APTA) adopted a new vision stating that optimizing human movement represents the core professional identity for the physical therapy profession.<sup>2</sup> This vision challenges all physical therapists to monitor an individual's movement system across the lifespan, to diagnose dysfunction, and to prevent or reduce impairments and restrictions that limit participation in work and other lifestyle activities. This APTA vision is reflected in the OHSIG's 2020 vision to "Lead the world in optimizing movement, musculoskeletal health, and work participation from hire to retire."

Physical therapists (PTs) fulfill a vital role in delivery of occupational health services because they focus on optimizing movement to promote activity-participation that influences sustained worker productivity. PTs are doctoral trained and versatile healthcare professionals who examine, evaluate, and diagnose movement impairments, and prescribe safe therapeutic interventions for individuals of all ages and settings to:

- improve ability to move functionally,
- reduce or manage pain,
- facilitate job or lifestyle accommodations, and/or
- alleviate disability.

PTs deliver effective care to improve quality of life through prescribed physical activity, hands-on care, patient education, and program development consultation. PTs collaborate with physicians, other healthcare providers, fitness professionals, insurance professionals, case

managers, safety professionals, risk professionals, and human resource professionals. PTs use their knowledge of disease, signs and symptoms, mechanisms of injury, outcomes and prognosis, treatment response, and relevant individual and environmental factors to arrive at a differential diagnosis, quantify movement impairments, clarify functional limitations, and improve work and lifestyle participation.

# PHYSICAL THERAPY EDUCATION ADVANCES

The goal of physical therapy education is to develop clinicians who use scientific evidence, clinical expertise, and client preferences to optimize patient/client outcomes. Currently, the curriculum in PT education programs include differential diagnosis, understanding pharmaceutical and radiological considerations and identifying red flags to determine when it is necessary to refer to the appropriate healthcare providers. Consistent with the increasing depth of the physical therapy body of knowledge, entry-level PT education transitioned from certificate programs to bachelor's degree, then to master's, and finally to the professional doctorate (DPT). The DPT degree is reflective of the extensive education and training of today's PTs. To be licensed to practice physical therapy, the candidate must pass a national examination. Eligibility to sit for the examination requires that the candidate's DPT degree was granted by a program accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). The DPT curriculum prepares PTs for triage and primary care duties such as differential diagnosis, referral for imaging, medication impacts, and identification of abnormal findings that warrant referral to physicians and other healthcare providers.

The PT in occupational health has professional and ethical responsibilities to remain current through lifelong learning and professional development through the pursuit of advanced knowledge, skills, and abilities general to healthcare and physical therapy as well as specific to occupational health. PTs may choose to complete a residency or fellowship to gain experience or become board-certified in clinical specialty areas of practice accredited through the <a href="Merican Board of Physical Therapy Specialties">American Board of Physical Therapy Specialties</a>. Along with advancements to physical therapist education, came legislative and practice act updates throughout state jurisdictions. Over time, all 50 states and the District of Columbia have allowed for direct access to PT

services. Direct access affords consumers of healthcare services access to PT services as an entry point into the healthcare system.

The Model Practice Act (MPA) is the preeminent standard and tool available for revising and modernizing state PT practice acts and Workers' Compensation rules that differ between state jurisdictions.<sup>3</sup> The expertise of PTs in examination and evaluation as entry-point healthcare practitioners is well described in the Guide to Physical Therapist Practice: "Physical therapists engage in an examination process that includes taking the individual's history, conducting a standardized systems review, and performing selected tests and measures to identify potential and existing movement-related disorders. The data gathered during history taking, including answers to review of systems questions, enables the physical therapist to generate diagnostic hypotheses and select specific tests and measures to identify and characterize signs, symptoms, and risk of movement dysfunctions. To establish the individual's specific diagnosis, prognosis, and plan of care through the evaluation process, physical therapists synthesize the collected examination data and determine whether the potential or existing disorders to be managed are within the scope of physical therapist practice."

### HISTORY OF PHYSICAL THERAPY IN OCCUPATIONAL HEALTH

# Credentialing for Primary Care of Musculoskeletal Disorders in the US Military Service

The origins of physical therapy are in occupational health and can be traced back to Sweden where, in the early 1800s, rigorous methods of physical training ("medical gymnastics") of military recruits and rehabilitation of injured soldiers by a trained cadre of professional therapists emerged.<sup>4</sup> These methods spread to Great Britain as a PT profession emerged to treat injured soldiers and members of the public in the 1890s. Likewise, in the United States, the PT profession was born in response to a dire need to rehabilitate American soldiers injured during World War I.

The military setting also presented the first opportunity for PTs to serve as primary healthcare workers. In the early 1970s, the roles and responsibilities for PTs were greatly expanded to entry-point healthcare practitioners when orthopedic surgeons struggled to manage the high volume of nonsurgical cases in addition to their surgical caseloads. Military

PTs received additional training to be credentialed for an expanded role as primary care providers for military workers with musculoskeletal disorders. This entry point role in military settings includes the ordering of diagnostic imaging and lab tests; prescribing medications; managing referrals to other practitioners, prescribing duty limitations; and performing electromyographic and nerve conduction studies.<sup>5</sup>

# **Converging Specialty Roles in Occupational Health**

Traditionally, orthopaedic PTs have been the primary physical therapy providers within occupational health because the majority of workplace injuries involve the musculoskeletal system. However, work participation barriers are priorities that must be addressed in the care of other patient groups as well, such as those with developmental, cardiopulmonary, neurologic, and oncologic conditions. For example, cancer survivors have a vital need for services to properly match their possibly altered post-cancer abilities with the workplace. Older workers are at risk for non-occupational health conditions such as cardiopulmonary disorders that may impact work participation. Thus, PTs who practice in occupational health in a variety of settings often collaborate and coordinate care with physical therapists in other specialties to maximize the profession's ability to enhance work-participation across the entire working lifespan.

# Growth of the Occupational Health Special Interest Group (OHSIG)

The need for performance-based functional evaluation was identified in the 1980s by state workers' compensation programs that required accurate information about worker functional capacities and limitations to expedite return to work. In 1991, APTA established the Industrial Rehabilitation Advisory Council (IRAC) to classify the levels of work rehabilitation to accurately reflect contemporary practice, standardize terminology, and address the needs of patients/clients, providers, regulators, and payers. The APTA Board of Directors adopted initial practice guidelines for Work Conditioning and Work Hardening in 1992.

The Occupational Health Special Interest Group (OHSIG) was formed as the first specialty group in the AOPT in 1993. From that point on, the OHSIG has been a resource for professionals, professional organizations, and regulatory agencies related to population health

and productivity of the workforce. The OHSIG mission is to empower members to excel in occupational health. The OHSIG is involved in collaborative initiatives that include sharing evidence-based guidelines for practice, contributing to multi-professional initiatives, and advocating for regulatory improvements. An evidence-based Work Rehab Clinical Practice Guideline will soon replace the consensus-based version of <u>ADVANCED WORK REHABILITATION</u> GUIDELINES.

# **KNOWLEDGE REQUIRED FOR OCCUPATIONAL HEALTH SERVICES**

# **Critical Inquiry and Evidence-Based Practice**

Critical inquiry is a key knowledge area in occupational health practice as the PT may be asked to answer questions about activities and tasks associated with a specific injury or broader health or injury trends in a workplace. This data is critical for leadership communication and awareness to support program financing needed for hazard controls, return to work programming, and employee wellness. The PT in occupational health must possess the analytical skills to use data related to injuries and employee health to provide information and insight into potential causative or associative factors impacting workers. For this reason, PTs in occupational health have up-to-date knowledge of scientific evidence regarding risks, incidence, causative factors, biomechanics, ergonomics, and biopsychosocial components associated with musculoskeletal injuries. Critical inquiry as part of the PT's clinical evaluation and interventions with patients primarily involves the use of sound clinical reasoning in the application of evidence-based physical therapy practice for individual care or population health interventions. PTs in occupational health also have the opportunity to use critical inquiry to influence systems improvements that contribute to the scientific body of knowledge through applied research and published clinical commentary.

# **Functional Implications of Health Conditions**

<u>Work-related musculoskeletal (MSK) disorders are associated with high costs</u> to employers from absenteeism, lost productivity, and increased health care, disability, and workers' compensation costs. Therefore, PTs working with this population should possess a

solid foundation of evaluation and management of MSK disorders. PTs practicing in occupational health should also be trained and prepared to work with individuals who present with a broad range of non-occupational health conditions, functional limitations, and work participation barriers. Therefore, competence in identifying a wide range of body systems' disorders (such as neurological, cardiovascular, endocrine, and pulmonary) is necessary for PTs to effectively treat this population.

Understanding how the MSK system is impacted by systemic disorders will improve the PT's ability to evaluate and manage altered functional movement. This synthesis of the patient's presentation will facilitate implementation of safe therapeutic interventions to optimize movement and safe work participation. PTs are prepared for entry-level practice with an extensive clinical education that covers a broad range of settings and complex health conditions. As curriculum in PT programs includes understanding the interconnectivity of the body systems and the MSK system, PTs are prepared to function as an initial point of entry into the healthcare system and to manage functional activity progression after injury or illness.

# **Job Analysis and Ergonomics**

Physical therapists who engage with employers to prevent injuries and disability due to MSK disorders require advanced training and/or credentialing to analyze job demands and implement Elements of Ergonomics Programs that are recommended by the Centers for Disease Control and Prevention (CDC)<sup>6</sup> and other agencies. In gathering and examining evidence for workplace MSK disorders to determine whether symptoms are work-related, PTs use ergonomic assessment tools to identify injury risk factors such as injury-prone postures, forceful exertions, repetitive motions, contact stresses, and vibration. The goal is to fit the work task or physical work environment to the capacities of the worker. This follows a prevention-through-design approach and the NIOSH Hierarchy of Controls within a workplace safety culture that is supported by top-down leadership.

PTs in occupational health acquire additional knowledge and training in the objective measurement and analysis of job demands and MSK risk factors, as contained in the Dictionary of Occupational Titles (DOT), the Bureau of Labor Statistics (BLS) Occupational Requirements

<u>Survey</u>, and ergonomic risk assessments. A PT's understanding of posture and movement disorders helps them identify awkward and sustained postures that can contribute to injury.

# Social, Industrial, and Commercial Systems

PTs in occupational health may interact with a variety of stakeholders to assist with worker/client management or to develop workplace programs. Interaction also occurs in obtaining financial and managerial support for workplace safety and health programs. PTs may also be asked to facilitate an interactive process between the worker and management to implement accommodations that support remaining at work or returning to work. Claims management and treatment authorization often follow a different process for work-related injuries than for non-occupational health conditions. Larger employers may contract directly with occupational health professionals for on-site services, whereas smaller employers may establish preferred provider relationships with community-based medical, therapy, or case-management providers.

# **Science of Population Health**

Occupational health physical therapy requires a population health perspective. Population health is a broad approach focused on understanding the conditions and factors that influence the health of populations over lifetimes. Edington et. al. suggest that as the number of health risks and negative health behaviors increases, employee health costs also increase. PTs have the expertise to work with populations to improve overall health and avoid preventable health conditions. These roles may include education, intervention, research, advocacy, and consultation in the workplace or clinic to meet the profession's vision of optimizing movement to improve the human experience. For example, a workplace may seek consultation regarding changes to workplace procedures or design to address the health of an entire department or workplace "population."

Program development must consider this population's social determinants of health, which are non-medical factors in the environments in which people are born, live, learn, work, play, worship, and age, all of which can impact a wide range of health, functioning, and quality-of-life outcomes and risks.<sup>8</sup> NIOSH has embraced the importance of addressing the social

determinants of health through its <u>Total Worker Health® initiative</u>. Total Worker Health is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with the promotion of injury and illness-prevention efforts to advance worker well-being.

# **Occupational Health and Safety Regulations**

Occupational health practice requires interaction, collaboration, and strategic planning with stakeholders as well as familiarity with laws and regulations that govern workplace safety, health, and job accommodation. The <u>General Duty Clause from the OSHA Act of 1970</u> requires that, in addition to compliance with hazard-specific standards, all employers provide a work environment "free from recognized hazards that are causing or are likely to cause death or serious physical harm." Compliance necessitates a clear understanding of service expectations during examinations, interventions, or other consultations to support:

- Federal or state-specific Workers' Compensation Insurance Programs,
- Short- and long-term disability insurance programs,
- Family and Medical Leave Act,
- Social Security Administration Disability Programs,
- Regulations that protect against employment discrimination (based on age, sex, race, disability) [enforced by EEOC, etc.],
- Safety regulations (OSHA accident reporting, first aid),
- Workforce Innovation and Opportunity Act (WIOA), and
- Health Insurance Portability and Accountability Act (HIPAA)

Regulations that impact occupational health services are further described in <u>Current Concepts</u> in <u>Occupational Health: Regulatory Compliance</u>.

### **Business Management of Occupational Health Services**

As healthcare and disability costs rise, physical therapy occupational health consultants are a valuable asset for employers seeking to reduce these costs. This is accomplished with early assessment and measures to reduce MSK disorders and improve overall worker health and fitness. A classic example of "lean" improvements achieved with physical therapy at the

entry point of care is the Intel-led Healthcare Marketplace Collaborative model that reduced the care duration of lower back pain.<sup>9</sup>

The PT must be aware of business processes and possess skills to effectively execute occupational health practice requirements. For example, the therapist develops and maintains corporate and institutional clients, prepares detailed business or professional service proposals, provides consultative services, performs needs-analysis, defines work products, targets work-related outcomes, and writes reports detailing critical findings, and strategic recommendations. Additionally, PTs participate with employers and other stakeholders in the development of financial models that demonstrate a positive return on investments in worker safety, health, and disability programs.

The occupational health PT has training and experience in initiating stakeholder dialog and meetings to set the stage for a systems approach to program implementation. Development of solutions for employers necessitates a review of claims history, costs, and OSHA logs, and identification of strengths and weaknesses of existing programs. The PT consultant must be able to present solutions to employers as a formal written proposal.

### AREAS OF PRACTICE WITHIN OCCUPATIONAL HEALTH

Physical therapists in occupational health provide prevention, wellness, and therapy care directly to individual workers, and consult in multiple areas:

### **Workforce Health Promotion**

The PT in occupational health delivers <a href="health promotion services">health promotion services</a> related to employer-based programs, injury prevention, ergonomic solutions, wellness initiatives, work accommodations, and chronic disease management. A main objective of workplace-based services is timely delivery of prevention, intervention, and education strategies to reduce group health and workers' compensation costs and related time loss, absenteeism, and presenteeism while increasing overall health, well-being, sustainability, and productivity of the workforce and their families. The PT diagnoses movement system dysfunctions and related findings that put the worker at risk for MSK disorders. Although these services are usually administered at the

workplace, it may be necessary to establish access at a nearby clinic or through telehealth, to support employees who work unusual shifts or from home or remote sites.

# **Workplace Ergonomic Program Consultation**

PTs deliver a range of services to support employer-based ergonomic programs in a variety of settings. Ergonomic programs are designed to improve worker comfort and well-being by identifying and correcting ergonomic risk factors for MSK disorders. An emerging need addressed by ergonomic programs is design compliance with <a href="CDC guidelines">CDC guidelines</a> for the COVID-19 pandemic. Employers often use safety committees to address ergonomic concerns in their workplace, with PTs serving as committee members and subject matter experts.

Ergonomic tests and measures are performed to examine the environment, site, tools, equipment, materials, machinery, workflow, production processes and requirements, physical demands, physical stressors, and task rotation. Ergonomic interventions include administrative controls (coaching in job-specific exercises or safe work methods) and engineering controls (tools and equipment) to mitigate specific risks and hazards. Clinicians examine workers with MSK complaints and analyze job demands to investigate causality and diagnose movement dysfunctions. They administer appropriate measures in accordance with OSHA first aid regulations and guidelines for safe therapeutic care.

# **Functional Job Analysis and Employment Exams**

PTs in occupational health assess job activity demands to clarify performance expectations for workers, promote workplace interventions that ensure safety, and design and administer functional employment examinations. Job analysis is an important first step to ensure that MSK risks have been reduced to the extent feasible by safety controls. Examiners validate the physical demands for essential job functions and criteria for job qualifications before administering a functional employment screen of new hires or injured workers to ensure suitable work assignments. PTs perform objective physical fitness tests to assess baseline health status and prescribe suitable physical activity as a component of functional employment exams.

Job analysis may be done as an early intervention to investigate MSK injury claims or to engage the worker and supervisor in an interactive process to facilitate remain-at-work or

return-to-work with workplace interventions such as transitional work or job modifications. For example, the Ohio Bureau of Workers' Compensation (BWC) established special billing codes for PTs to perform an ergonomic study or functional job analysis as <a href="remain at work or return to">return to</a> work services. Job analysis is a major component of <a href="Ohio BWC's Transitional Work Grants">Ohio BWC's Transitional Work Grants</a> <a href="Program">Program</a> to help injured workers remain at work or return to work by identifying suitable transitional work.

Several states recognize PTs' expertise in using these analyses and exams in the management of injured workers. For example, the Washington State Labor and Industries is a leading workers' compensation insurer in best practices that seek to prevent needless work disability. According to RCW 51.32.090 (4)(b), the injured worker or his or her legal representative is entitled to a job analysis to support job-specific care and Ability-to-Work Assessments. This process leverages and respects the expertise of physical or occupational therapists who render care or conduct a functional capacity evaluation to review an employer's Job Analysis (F252-072-000) and certify whether the worker may be released to full duty, return to work with job modifications, is temporarily unable to perform the job, or is permanently restricted from performing the physical activities as described on the job analysis.

In some states, PTs are eligible providers who may become credentialed as Certified Medical Examiners to perform Department of Transportation (DOT) Physical Examinations of Commercial Truck Drivers in accordance with rules and guidelines that have been established by the Federal Motor Carrier Safety Administration (FMCSA). The purpose of a DOT Physical Examination is to determine and certify a driver's medical fitness for duty. Examiners educate and refer drivers for further evaluation if an undiagnosed or worsening medical problem is suspected. The responsibilities of Medical Examiners are further described in CFR Title 49, Chapter II Subpart E §391.43 Medical examination; certificate of physical examination.

### **Entry Point Care for Workers with Job Participation Barriers**

This area of practice involves early intervention, acute care, and disability management of workers who are unable to perform a specific job due to MSK, developmental, cardiovascular, pulmonary, neurologic, oncologic, or other impairments. PTs serve a vital role in managing employees who have work participation barriers. When an injury happens to an employee, a PT

performs a wide array of evaluation, triage, and intervention techniques as soon as that injury occurs. In states where the law allows direct access to physical therapy care, a PT can typically assess the injury immediately and make appropriate injury management recommendations.

Provision of services at the job site expedites the triage process. Treatment for specific health conditions to improve the employee's ability to perform necessary job demands occurs at the job site (onsite physical therapy and transitional work) or more traditional settings. The PT uses their training and education in exercise prescription to match interventions to specific job demands to enhance productivity. If the prognosis is poor for return to most recent employment, PTs collaborate with vocational specialists to make legally-required accommodations and/or recommendations for return to appropriate job options.

The PT in occupational health may have the opportunity to not only identify and assess prognostic indicators in both the individual and the workplace setting but also to create actions for change at each level. This necessitates the ability to navigate the work environment and its stakeholders to communicate actionable plans and motivate change. This may involve education on the expected course or duration of a given condition that may be informed by various published guides such as <a href="ODG by MDG">ODG by MDG</a> and <a href="MDGuidelines">MDGuidelines</a>. PTs are able to assist a workplace in updating their approaches to improve an injured worker's prognosis for return to work. Examples include instituting transitional work practices that support stay at work or early return to modified duties.

The CPT codes typically reported by PTs of billing services rendered may not always be sufficient to describe interventions provided for workers with work performance barriers. The Ohio BWC recognized this and established special codes for on-site transitional work services that are provided by a physical or occupational therapist at the workplace with a focus on using the injured worker's functional work tasks to progress the worker to a target job. More information on this topic is contained in Current Concepts in Occupational Health: Managing an Acute Injury that Limits Work Participation.

# **Rehab Programs for Workers with Complex Health Behaviors**

There is a long list of <u>non-musculoskeletal factors</u> that, when present, indicate a less desirable prognosis and contribute to variable recovery patterns in patients with similar

conditions.<sup>11</sup> The biopsychosocial nature of illness dictates that the comorbidities such as depression and anxiety, poor social support structures, financial difficulties, and medical issues like diabetes and heart disease may all impact the presentation and course of a given illness affecting a person's work performance.<sup>12</sup> Additionally, the workplace would be considered part of the social milieu and would include factors such as job satisfaction, relationships with coworkers and those in positions of authority, changes in employment status, and specific workplace approaches to issues like approaches toward the handling of injured workers and return to work. There may also be larger societal factors at play such as issues of justice, discrimination, and disparities in opportunity or access to care.<sup>13</sup>

Complex cases involving workers often require advanced work rehabilitation designed to address physical, behavioral, and vocational needs that include other medical and workplace stakeholders. Such workers require more in-depth examination and evaluation with functional testing as well as communication and coordination with other stakeholders. The treatment plan involves multiple components and stratification of care. PTs help workers to cope effectively and recover function during structured intensive programs that are work-focused and include work-place interventions when appropriate. Work rehabilitation uses various therapeutic interventions including activity coaching to emphasize the role of the worker and work activities. More information on this topic is contained in OHSIG's Advanced Work Rehabilitation Guidelines.

An emerging area of practice for PTs serving public schools is incorporating occupational health concepts to prepare students with developmental and other disabilities for successful transition to community-based employment. The Workforce Innovation and Opportunity Act (2015) specifies 4 types of employment: competitive, integrated employment; supported employment; customized employment and nonintegrated employment. Physical therapists practicing in public school settings perform evaluations of a student's physical abilities to identify work-related strengths and barriers to work, make recommendations for activities that will increase vocational task performance, and consult and collaborate with educators and vocational specialists within Individualized Educational Programs (IEPs) that support the acquisition of needed skills and transitions to gainful employment. These programs can take place in the school and community, ideally using a population health model supported by PTs.

# **Functional Capacity Evaluation and Impairment Ratings:**

PTs in occupational health provide Functional Capacity Evaluation (FCE) services that may be job-specific or exploratory to support job search for any suitable occupation. More information about FCE is contained in <a href="Current Concepts in Functional Capacity Evaluation: A">Current Concepts in Functional Capacity Evaluation: A</a>
<a href="Best Practices Guideline">Best Practices Guideline</a>. An FCE is "a comprehensive performance-based medical assessment of an individual's physical and/or cognitive abilities to safely participate in work and other major lifestyle activities." A "job-specific" FCE is performed when the worker has an option to return to work in a specific job with or without accommodation, whereas an "any occupation" FCE is done to support job search or eligibility for disability benefits.

An FCE is usually administered as a stand-alone evaluation with components that include an intake interview, medical records review, physical examination, and validated functional testing that reflects consideration and understanding of job-specific demands and limiting health conditions. Greater expertise and complexity are necessary to perform a stand-alone FCE than for physical capacity tests to measure functional progress in response to physical therapy. For example, the Oregon Workers' Compensation Division rules describe 3 levels of evaluation and require insurers to select a PT or occupational therapist from a credentialed <u>Director's List of Authorized IME Providers</u>.

Objective findings from an FCE that is performed to address work disability issues may also be used to determine an anatomical rating of impairment when workers reach a functional plateau during recovery that is termed "maximum medical improvement." PTs undergo training and credentialing to determine impairment ratings. The 6th edition of the AMA Guides to the Evaluation of Permanent Impairment defines an impairment rating as "consensus-derived percentage of loss of activity reflecting severity for a given health condition, and the degree of associated limitations in ADLs." Activities of daily living refer to basic self-care activities such as feeding, bathing, personal hygiene, and dressing. The main consideration during an impairment exam is to determine relationships between established diagnoses, level of impairment severity, and functional performance. AMA Guides methodology in its current form does not address the severity of an injured worker's occupation disability resulting from their impairments. AMA Guides impairment ratings are used to calculate financial compensation

without regard to impact on ability to work, resulting in claims of unfairness by workers who experience job loss. A job/occupation match method using the results of a best-practice FCE has been proposed to remedy these concerns.<sup>16</sup>

### **SUMMARY**

PTs are versatile, doctoral-trained health practitioners who are qualified to serve in a variety of practice roles and settings to optimize worker safety, health, and productivity. Workers benefit from early access to PTs as entry-point practitioners who possess the clinical skills to work with individuals and populations having a broad range of health conditions, functional limitations, and work participation barriers. PTs offer a unique and practical emphasis on functional diagnosis and prescription of suitable physical activity and safe therapeutic interventions to support worker safety and productivity from hire to retire.

### **REFERENCES**

- World Health Organization. Occupational health: A manual for primary healthcare workers. World Health Organization; 2002.
   <a href="https://apps.who.int/iris/bitstream/handle/10665/200733/dsa191.pdf?ua=1">https://apps.who.int/iris/bitstream/handle/10665/200733/dsa191.pdf?ua=1</a>. Accessed November 11, 2020. [Full Text]
- Sahrmann SA. The human movement system: our professional identity. *Phys Ther*.
   2014;94(7):1034-1092. [Full Text]
- Federation of State Boards of Physical Therapy. The model practice act for physical therapy. Sixth Edition Version 6.1. Revised 2020. <a href="https://www.fsbpt.org/Free-Resources/Regulatory-Resources/Model-Practice-Act">https://www.fsbpt.org/Free-Resources/Regulatory-Resources/Model-Practice-Act</a>. Accessed November 11, 2020. <a href="https://www.fsbpt.org/Free-Resources/Regulatory-Resources/Model-Practice-Act">https://www.fsbpt.org/Free-Resources/Regulatory-Resources/Model-Practice-Act</a>. Accessed November 11, 2020. <a href="https://www.fsbpt.org/Free-Resources/Model-Practice-Act">https://www.fsbpt.org/Free-Resources/Regulatory-Resources/Model-Practice-Act</a>. Accessed November 11, 2020. <a href="https://www.fsbpt.org/Free-Resources/Model-Practice-Act">https://www.fsbpt.org/Free-Resources/Model-Practice-Act</a>. Accessed November 11, 2020.
- 4. Hansson N, Ottosson A. Nobel Prize for Physical Therapy? Rise, Fall, and Revival of Medico-Mechanical Institutes. *Phys Ther*. 2015;95(8): 1184–1194. [Full text]
- Moore JH, Goffar SL, Teyhen DS, Pendergrass TL, Childs JD, Ficke JR. The role of U.S. military physical therapists during recent combat campaigns. *Phys Ther*. 2013;93(9):1268-1275. doi: 10.2522/ptj.20120136. Epub 2013 May 2. [Full Text]

- U.S. Department of Health and Human Services. Elements of ergonomics programs. 2017. <a href="https://www.cdc.gov/niosh/topics/ergonomics/ergoprimer/default.html">https://www.cdc.gov/niosh/topics/ergonomics/ergoprimer/default.html</a>. Accessed
   <a href="https://www.cdc.gov/niosh/topics/ergonomics/ergoprimer/default.html">November 11, 2020. [Full Text]</a>
- 7. Edington DW, Pitts JS, Schultz AB. Health as an economic strategy: special emphasis on the workplace. *Analytic Review*. 2014:330-335.[Full Text]
- 8. Braveman P, Gottlieb L. The social determinants of health: it's time to consider the causes of the causes. *Public Health Rep.* 2014;129:19–31. [Full Text]
- 9. McDonald PA, Mecklenburg RS, Martin LA. The employer-led health care revolution. Harv Bus Rev 2015;93(708):38-50, 133. [Full Text]
- 10. Allison S, Wickstrom R. The role of the physical therapist to promote fitness-for-duty of commercial drivers. *Orthop Phys Ther Pract*. 2020;32(3):162-166. [Full Text]
- Artus M, Campbell P, Mallen CD, Dunn KM, van der Windt DA. Generic prognostic factors for musculoskeletal pain in primary care: a systematic review. *BMJ Open*.
   2017;7(1):e012901. doi: 10.1136/bmjopen-2016-012901. [Full Text]
- 12. Kamper SJ, Apeldoorn AT, Chiarotto A, et al. Multidisciplinary biopsychosocial rehabilitation for chronic low back pain: cochrane systematic review and meta-analysis. *BMJ*. 2015;350:h444. doi: 10.1136/bmj.h444. [Full Text]
- 13. D'Anna LH, Hansen M, Mull B, Canjura C, Lee E, Sumstine S. Social discrimination and health care: a multidimensional framework of experiences among a low-income multiethnic sample. Soc Work Public Health. 2018;33(3):187-201. doi: 10.1080/19371918.2018.1434584. Epub 2018 Feb 9. [Full Text]
- Office of Special Education and Rehabilitative Services. A transition guide to post secondary education and employment for students and youth with disabilities. Revised May, 2017.
  - https://www2.ed.gov/about/offices/list/osers/transition/products/postsecondary-transition-guide-2017.pdf. Accessed November 11, 2020. [Full Text]
- 15. Rondinelli R, Genovese E, Katz R, et al. Guides to the evaluation of permanent impairment. 6th ed. American Medical Association; 2007.
- 16. Allison S, Wickstrom R. Differentiating between anatomic impairment and occupational disability. *Orthop Phys Ther Practice*. 2019;31(4):234-237. [Full Text]