ABPTRFE
American Board of Physical Therapy Residency & Fellowship Education

ABPTS
American Board of Physical Therapy Specialties

Description of Specialty Practice: Primary Care

November 2023

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Primary Care Description of Specialty Practice

The Description of Specialty Practice for Primary Care is a product of collaborative work by ABPTS and ABPTRFE. It is based on the 2018 and 2023 validation study.

Acknowledgements

The primary care DRP was prepared by members of phase one and phase two subject matter expert work groups and supported by APTA and APTA Federal Primary Care Special Interest Group.

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Introduction

Specialist Certification

Specialist certification was established to provide formal recognition for physical therapists with advanced clinical knowledge, experience, and skills in a defined area of practice. Certification is achieved through the successful completion of a standardized application and examination process.

Visit the ABPTS website for the History of Specialization in Physical Therapy, as well as the History of Specialization in Primary Care Physical Therapy.

Demographic information specific to the board-certified specialists in primary physical therapy based on the 2018 and 2023 validation study can be found within the published technical report.

Residency Education

Residency education was established to provide physical therapists with formal post-professional learning experiences comprised of a curriculum encompassing the essential knowledge, skills, and responsibilities of an advanced physical therapist within a defined area of practice. The residency program prepares the physical therapist with the requisite knowledge and skill set needed to pass the specialty certification examination following graduation.

Visit the ABPTRFE website for details on residency education opportunities for physical therapists.

Learning Domain Expectations

The Description of Specialty Practice describes contemporary practice of primary care clinical specialists. The DSP is revalidated every eight to 10 years to best reflect current practice. Development of this DSP was based on expert consensus, key guiding reference documents, and practice analysis survey results conducted in 2018 and 2023.

Knowledge for Primary Care Specialty Practice

1. Foundational Sciences
    - Human Anatomy and Physiology
        - Cardiovascular and pulmonary
        - Musculoskeletal
        - Genitourinary
        - Integumentary
        - Gastrointestinal
        - Vestibular
        - Endocrine
    - Movement Science
        - Kinesiology/clinical biometrics
        - Kinematic and kinetic analysis of functional movements, postural control, and gait
        - Ergonomics
        - Locomotion
        - Motor control and learning
        - Effects of movement dysfunctions on multiple body systems, including immediate and long term
        - Interrelationship among social, cognitive, and movement systems
    - Exercise Physiology

    - Consideration of health conditions in exercise prescription
    - Adaptation of exercise interventions for safety and general health/wellness
- Human Growth and Development Across the Lifespan
    - Developmental biomechanics and lifespan changes
    - Physiology of aging
    - Muscle performance development and changes with aging
    - Mental function and changes with aging (e.g., screening for dementia)

2. Behavioral Sciences
    - Biopsychosocial Model
        - Role of biopsychosocial model in relation to primary care practice (e.g., inter-professional management strategies, exam and management strategies that address psychosocial and personal factors)
        - Relationship of pain to disability
        - Influence of the primary care physical therapist's behavior on the patient's behavior and vice versa
        - Fear avoidance behaviors and other negative coping strategies related to pain and loss of function
        - Pain neuroscience education and other patient-centered behavioral pain approaches
        - Appropriate referrals to other pain management healthcare providers
    - Communication Theory
        - Communication and nonverbal language to meet the needs of patients and clients
        - Multidisciplinary medical team communication in the collaborative management and delivery of primary care services
    - Psychology/Psychiatry
        - Common psychiatric symptoms, syndromes, and classifications
        - Effect of psychiatric disease and treatment on cognition, learning, and function
        - Recognition of and referral for psychological health conditions
        - Suicide screening and prevention
        - Psychosocial issues with aging
    - Occupational Health
        - Recognition of occupational and work-related diseases and injuries
        - Support return to work, preserve, and restore working capacity
    - Health Promotion and Disease Prevention
        - Behavior change, stages of change, and readiness for change

    - Theories and practice of behavior change for clinical practice (e.g., cognitive behavior therapy, acceptance commitment therapy, motivational interviewing)
    - Impact of health behaviors on general health, disease risk, and prognosis for specific conditions across the lifespan
    - Principles of prevention and wellness
    - Sleep science
    - Exercise for wellness recommendations (e.g., Health and Human Services, American College of Sports Medicine) on quantity, quality, and mode
    - Recommendations for nutritional needs across the lifespan (e.g., understanding professional organizations and government agencies guidelines and common dietary plans)
    - Nutrition impact on chronic disease
- Sociology/Cultural Competence
    - Cultural competence and sensitivity
- Teaching and Learning Theory (e.g., learning styles, teaching methods, assessment of learning)

3. Clinical Sciences
    - Pathology
        - Immunology
        - Pathokinesiology
        - Signs and symptoms of disease/injury
        - Disease/Injury process and progression
        - Tissue inflammation, healing, response to exercise, and repair
        - Complications and considerations specific to bariatric medicine and obesity
    - Pain Science
        - Central nervous system pain physiology
        - Peripheral nociceptive pain physiology
        - Peripheral neuropathic pain physiology
        - Output mechanisms and expressions (e.g., immune, endocrine, sympathetic, behavioral)
        - Social and psychological impacts related to pain
    - Emergency/Trauma Medicine
        - Triage of acute neurologic and musculoskeletal conditions presenting to emergency/trauma departments
        - Early identification of yellow/red flags
        - Falls risk and safety assessments (including assessment and provision of assistive devices/equipment)

    - Educational subject matter expert for acute neurologic and musculoskeletal conditions
    - Referral for further intervention (e.g., including referral to other specialty care, medical work-up, imaging, social work, further PT services as necessary)
    - Discharge planning
- Medical and Surgical Considerations
    - Medical screening
    - Imaging studies
        - Appropriateness criteria for ordering imaging
        - Integrating results with clinical examination data
        - Applying results in referral/consultation management
    - Laboratory science
        - Screening of lab values
        - Integrating results with clinical examination data
    - Diagnostic tests and measures (e.g., EKG, electrophysiological exams)
    - Pharmacology
        - Pharmacokinetics and pharmacodynamics
        - Pharmacological treatment of comorbidities and common conditions
        - Drug interaction and polypharmacy
        - Evidence and education in regard to supplements
    - Nonsurgical medical interventions (e.g., steroid injections, nerve ablations, medical branch blocks) and implications for primary care physical therapy
    - Surgical and invasive interventions (e.g., laparoscopic arthroscopic procedures, joint arthroplasties, cardiac and vascular procedures) and implications for primary care physical therapy
- Population Health and Epidemiology
    - Epidemiology of chronic disease (e.g., implications for lifespan management, impacts on population health)
    - Recognition of hallmark signs for chronic disease process and ability to make appropriate referral/consultations
- Practice Considerations
    - Systems-based practice (e.g., actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value
    - Principles of physical therapy evaluation and treatment of patients across the lifespan with musculoskeletal, neuromuscular, cardiovascular, pulmonary, integumentary, or cognitive impairments

- Provision of advanced care across the lifespan for patients who self-refer or are referred to physical therapy
- Models of differential diagnosis and clinical reasoning, such as the hypothesis-oriented algorithm for clinicians model or the prospect theory
- Collaboration and coordination throughout the continuum of care

4. Critical Inquiry Principles and Methods
    - Critical appraisal and application of research findings in primary care physical therapy

Professional Roles, Responsibilities, and Values

Professional Behaviors Reflecting the Core Values

The physical therapist practicing as a primary care clinical specialist reflects the core values of a professional, adheres to the highest ethical standards, and pursues continuous learning and development by:

- Practicing ethical decision-making consistent with the APTA Code of Ethics
- Demonstrating appreciation and respect for the physical therapist scope of practice
- Maintaining state-of-the-art knowledge and skills by participating in continuing professional development (e.g., residency education, fellowships, seminars, structured study, journal clubs)
- Practicing ongoing reflection and self-evaluation to identify opportunities for development
- Identifying and prioritizing areas for growth and following through as a lifelong learner through review of research and professional affiliations
- Continuously assessing practice outcomes to validate physical therapist services based on quality, effectiveness, productivity, or service, and being able to identify opportunities for improvement.
- Demonstrating risk management strategies, including informed consent during physical therapy examination and intervention
- Devoting time and effort to effectively recognize and resolve complex problems
- Effectively navigating uncertainty/ambiguity
- Adhering to legally required reporting requirements (e.g., domestic violence, abuse)
- Maintaining a referral base of content experts (medical as well as nonmedical) within the community for patient access
- Maintaining a readily accessible network of interdisciplinary available resources (medical and nonmedical) for consultation and referral
- Maintaining a readily accessible network of available interdisciplinary resources for consultation and referral that are compliant with all regulatory, agency, and time frame requirements.
- Identifying and encouraging interprofessional practice opportunities

- Promoting the rights of the patient to actively participate in their health care management, considering the patient's wishes, goals, attitudes, beliefs, and circumstances
- Remaining current with evolving trends in patient preferences and changes in health policy on international, federal, and local levels

Leadership, Social Responsibility, and Advocacy

The physical therapist practicing as a primary care clinical specialist demonstrates social responsibility, service, and advocacy by:

- Representing primary care physical therapy to other professional organizations
- Maintaining knowledge of current activities of national and international organizations of physical therapy
- Promoting health and quality of life for individuals across the lifespan
- Advocating for patients through direct patient care interventions, education, service, research, legislation, and the development of community resources

Communication

The physical therapist practicing as a primary care clinical specialist demonstrates advanced communication skills by:

- Employing effective communication strategies with individuals across the lifespan, including verbal, nonverbal, and assistive technologies
- Effectively and efficiently communicating findings to the patient or client and health care team
- Using effective communication skills to manage interpersonal relationships judiciously and empathetically
- Effectively managing relationship/practice building
- Empowering individuals in the management of their own health
- Facilitating collaborative interprofessional communication, team management, and transitions of care for patients and clients
- Addressing cultural and/or social issues that affect the plan of care
- Employing communication skills necessary for effective utilization of technology in telephone and video visits (return visits and initial consultations)

Education

The physical therapist practicing as a primary care clinical specialist demonstrates ability to educate others and provide consultation by:

- Mentoring physical therapists, physical therapist assistants, other health care professionals, physical therapist residents, and students by participating in clinical education and research related to primary care physical therapy
- Providing evidence-informed primary care physical therapy educational programs to a variety of audiences, including students, other health care professionals, the public, elected officials, political groups and candidates, and third-party payers

Consultation

The physical therapist practicing as a primary care clinical specialist demonstrates ability to provide consultation and contribute special knowledge or expert opinion in client-based, community, or academic settings, including:

- Clients, clients' families, and other health care professionals (e.g., in-services, support groups, team meetings)

Evidence-Based Practice

The physical therapist practicing as a primary care clinical specialist demonstrates evidence-based practice and critical inquiry by:

- Applying contemporary principles of evidence-based practice and knowledge translation in patient and client management while recognizing the limitations of incorporating evidence into practice.
- Evaluating the efficacy and effectiveness of examination tools, interventions, and technologies based on available evidence.
- Integrating and applying evidence-informed approaches in the presentation of health promotion and preventive care programs
- Recognizing the need for the development of further evidence in primary care practice and the role of research in advancing the body of knowledge in primary care physical therapy
- Recognizing and assessing the risks, benefits, and economics of specific interventions (e.g., including the principle that interventions with little or no evidence for additional benefit, but some increased risk, should be deferred)
- Utilizing advanced knowledge and clinical skills when research questions have not been previously answered
- Utilizing appropriate patient outcome measures to guide patient management and submitting outcomes to a national registry

Clinical Reasoning

The physical therapist practicing as a primary care clinical specialist demonstrates ongoing high-level, effective clinical reasoning to include emphasis on:

- Resource efficiency specific to the patient, as well as the patient's health care system
- Broad levels of hypothesis generation during early subjective examination and development of hypotheses about contributing factors, precautions, contraindications, and management
- Advanced skills in pattern recognition, which drive:
    - Expert prioritization of differential diagnosis and systematic assessment to rule in/out hypotheses
    - Efficient processes to control reasoning in dealing with complex patients with multiple comorbidities
    - Expert exam planning based on appropriate interpretation of subjective examination, including system screening and assessment of pain, sensitivity, and irritability
    - Flexibility and openness in the analytic process using metacognition to respond appropriately to emerging data and changing patient status
    - Collaborative reasoning, which involves the patient in the patient-centered care process
    - Evolving understanding of patient presentation and identifying underlying mechanisms contributing to patient problem(s)
    - Efficient and effective use of algorithms with the ability to avoid (or at least minimize) clinical reasoning errors

Patient Management

The physical therapist practicing as a primary care clinical specialist demonstrates advanced client and patient management across the lifespan and across the continuum of care for patients who self-refer or are referred to physical therapy.

Examination

The physical therapist practicing as a primary care clinical specialist effectively triages patients as the first contact provider at an advanced competency level and demonstrates examination by:

1. History
    - A systematic gathering of data from both the past and present related to why the patient or client is seeking the services of a physical therapist.
        - Patient chief complaint(s), including description of symptoms (e.g., 24-hour behavior, aggravating/easing factors, body chart, onset, pain level)
        - Medical history (e.g., comorbidities, surgical history, family/genetic history, medications/supplements)

- Prior diagnostic testing (e.g., consultations, imaging, labs, neurological testing)
- Previous intervention(s) and response
- Prior level of function, including level of physical fitness and leisure activities
- Psychological function (e.g., memory, reasoning ability, anxiety, depression, morale, and fear-avoidance beliefs)
- Societal role(s) (e.g., worker, student, spouse, grandparent)
- Environmental, social, and economic factors (e.g., physical environment, education, economic stability, social support)
- Health behaviors (e.g., nutrition, physical activity, tobacco use, alcohol use, sleep habits, social habits)
- Patient goals for treatment

2. Systems Review
   - A brief or limited examination of the anatomical and physiological status of the cardiovascular/pulmonary, integumentary, musculoskeletal, and neuromuscular systems, and the communication, affect, cognition, language, and learning style of the patient or client. **(At the clinical specialist practice level, baseline information is not simply collected and reported. The advanced practitioner synthesizes this information and applies it specifically, considering the pathology, signs, and symptoms, and uses it for critical clinical decision-making.)**
     - Multisystem review (e.g., cardiovascular, pulmonary, integumentary, lymphatic, neurological, urogenital, gastrointestinal)
     - Psychological assessment, including depression and suicide screening.
     - Assessment of communication affect, cognition, language, and learning style of the patient or client.
     - Early recognition and management of suspected conditions necessitating referral
     - Prioritization of relevant screening procedures based on health condition, previous tests and interventions, patient history, and observation
     - Appropriate documentation and communication of systems review results as indicated
3. Tests and Measures

   This category includes selection, prioritization, and performance of tests and measures related to and required of specialty practice.
   - Anthropometric measures (e.g., BMI, weight, height, waist circumference)
   - Arousal, attention, and cognition (e.g., arousal and awareness scales, ability to process commands, communication and language barriers, level of consciousness,

motivation, and capacity to participate in intervention, orientation to person, place, time, and situation, and recall ability).

- Circulation (e.g., arterial, venous, lymphatic)
    - Cardiovascular signs, including heart rate, rhythm, and sounds; pressures and flow; and superficial vascular responses (e.g., auscultation, electrocardiography, girth measurement, observations, palpation, sphygmomanometry, ankle/brachial index, perceived exertion scales)
    - Cardiovascular symptoms (e.g., angina, claudication)
    - Differentiation of peripheral edema (e.g., vascular insufficiency, cardiac-associated edema, lymphedema)
    - Physiological responses to position change (e.g., autonomic responses, central and peripheral pressures, heart rate and rhythm, respiratory rate and rhythm, ventilatory pattern)
- Diagnostic testing (e.g., laboratory tests, imaging, ultrasound, electrophysiology testing)
- Dynamic assessment with and without the use of assistive, adaptive, orthotic, or other devices/equipment
    - Activities of daily living performance
    - Balance (e.g., vestibular, proprioceptive, visual)
    - Coordination
    - Gait and locomotion (e.g., functional performance tests, such as gait speed, gait indexes, 6-Min Walk, Timed Up-and-Go)
    - Motor function (e.g., assessment of motor learning and motor control)
    - Movement analysis (e.g., real time observation, video, technology)
    - Safety assessment (e.g., falls-risk assessment, ergonomics)
- Illness behavior assessment (e.g., Screen Assist, Keele STarT Back Screening Tool, depression screen)
- Integumentary assessment (e.g., signs of inflammation, soft tissue swelling/inflammation/infection, wounds, skin cancer screening)
- Joint integrity (e.g., joint mobility assessment to include active and passive range of motion, passive accessory motions, response to manual provocation)
- Lymphatic system function (e.g., girth and volume measurements, palpation, observation of skin texture)
- Musculoskeletal assessment (e.g., muscle performance, endurance, strength, power, muscle tone, fracture screening)
- Neurologic assessment
    - Cranial nerve integrity

    - Neuromechanical assessment (e.g., nerve mobility/neurodynamics)
    - Neuromotor development and sensory integration (e.g., assessment of age-appropriate development, dexterity, coordination, and integration of somatosensory, visual, vestibular systems)
    - Neuromotor screen (e.g., upper and lower motor neuron screens, including tests like Babinski, Hoffman's)
    - Reflex integrity (e.g., including normal and pathological reflexes)
    - Sensory integrity (e.g., assessment of superficial sensation, dermatomes, myotomes, proprioception, kinesthesia)
- Observation (e.g., posture, deformity, symmetry, affect, transfers, motor control)
- Orthotic, protective, prosthetic, and supportive devices (e.g., assessment of appropriateness, use, remediation of impairment, alignment and fit, safety).
- Pain (e.g., assessment using questionnaires, behavioral scales, visual analog scales, and prioritizing exam procedures according to localized versus widespread pain and sensitivity)
- Palpation (e.g., edema, bony landmarks, muscles, tendons, ligaments, presence of abnormal tissue examination, such as masses or deformities, symptom manifestation/modification)
- Pulmonary assessment (e.g., breath sounds/rate, nail clubbing, lung auscultation)
- Soft tissue assessment (e.g., myofascial mobility, pain pressure threshold)
- Special tests specific to working diagnosis are appropriately sequenced and prioritized with acceptable psychometric properties
- Vestibular assessment (e.g., BPPV tests, vestibulo-ocular reflex, oculomotor function, HINTS exam, Dizziness Handicap Inventory)

4. Reexamination
    - Ongoing assessment and reassessment throughout the continuum of care

Evaluation

- Interpreting and integrating data from the examination (considering patient and client goals, stage/irritability of condition, personal and environmental factors) across the ICF domains to determine a diagnosis, prognosis, and plan of care
- Integrating findings from other health care professionals and ancillary testing (e.g., imaging, labs, electrophysiological studies, pulmonary function test results)
- Identifying current, emerging, or potential "yellow" and/or "red flags," which may warrant caution throughout client management, medical referral, or both
- Triaging patients as first contact providers at an advanced competency level

- Linking examination findings to patient or client activity, quality of life, and wellness as established by the ICF
- Determining risk stratification (e.g., risk for chronicity or poor outcome, risk for delayed return to activity/work, suicide risk, depression)

Diagnosis

May include variations or complexities associated with known pathology, identifying contributing factors, hypothesizing links between impairments and functional limitations, skills of differential diagnoses, etc.

- Conducting rapid differential diagnosis and triage of emergent versus nonemergent health conditions
- Continuously refining the working hypothesis (e.g., primary hypothesis, competing hypotheses, complicating factors, such as comorbidity and economic/social factors)
- Using advanced pattern recognition to differentially diagnose by efficiently organizing examination data into recognized clusters or categories
- Avoiding common diagnostic reasoning errors, such as anchoring, confirmation bias, and other sources of medical error

Prognosis

May address variations on age or complexity associated with known pathology, stages of recovery, natural history of condition, disorder, or impairment, etc.

- Establishing a prognosis, including the predicted optimal level of improvement in function and the amount of time needed to reach that level
- Selecting a plan of care to include a referral to another health care professional, physical therapy intervention, or further examination
- Developing a plan of care that prioritizes and links interventions to the working hypothesis and patient and client goals
- Responding to emerging data from examinations and interventions:
    - Assessing response to intervention (changes in signs and symptoms, new symptoms, changes in tissue response, mobility, and function)
    - Interpreting the significance of changes in signs and symptoms as they relate to the plan of care, and modifying or redirecting examination and interventions accordingly (determine relationship between the expected result and actual result, cause of change, relevance of change)

Intervention

1. Coordination, Communication, Documentation

- Communicating effectively with patients and clients, family members, caregivers, practitioners, consumers, payers, and policymakers about health issues
- Discussing rationale for physical therapy examination and intervention procedures, including use of current best evidence, with patients and clients, peer professionals, and payers
- Collaborating as a health care team member and leader to ensure that physical therapy is a part of an appropriate, culturally competent, comprehensive plan for care
- Adapting communication to patient and client needs (e.g., educational/cognitive level, psychosocial needs)
- Completing thorough documentation following guidelines and specific documentation formats required by the practice setting (e.g., communication with payer sources for maximizing treatment services and resources, legal protection of staff, patient, facility)

2. Patient and Client Instruction
   - Providing instruction about diagnosis, prognosis, intervention strategies, and responsibility/self-management within the plan of care
   - Developing mutually acceptable goals
   - Using biopsychosocial and biomedical models
   - Applying pain physiology and dose response
   - Providing instruction on disease prevention and wellness
   - Integrating behavior modification and cognitive-behavioral approaches (mental)
   - Planning for end of episode of care
3. Procedural Interventions
   - Airway clearance techniques (e.g., breathing strategies, manual/mechanical techniques, positioning)
   - Body mechanics training and ergonomic modification counseling
   - Functional training in self-care and in domestic, education, work, community, social, and civic life (e.g., ADL and IADL training, environmental modification recommendations to optimize independence, task-specific functional training, cues and adjustments of faulty biomechanics)
   - Gait training (general, with assistive devices, and with technology)
   - Graded exposure/graded activity
   - Integumentary repair and protection techniques (e.g., managing positioning/postures, orthotic selection, protective and supportive device recommendations, debridement, wound therapy, dressings, modalities)
   - Manual therapy (e.g., soft tissue mobilization, joint mobilization/manipulation, dry needling, lymphatic drainage, visceral therapy)

- Neurological therapy treatment (e.g., task specific neuromuscular reeducation, balance activities, gait training)
- Plan specific type and dosage of home/independent exercise/treatment programs, identifying indications/ contraindications
- Prescription, application and/or fabrication of protective, adaptive, or supportive device or equipment (e.g., orthotics, braces, serial casting, wheelchairs, kinesiotaping)
- Prevention, wellness, and health promotion services
    - Providing culturally appropriate physical therapy services for prevention, health promotion, and fitness and wellness programs to individuals, groups, and communities
    - Promoting health and quality of life for patients and clients by providing information on health promotion, fitness, wellness, disease, impairment, functional limitations, disability, injury prevention, secondary prevention in chronic disease, disability managements and health risks related to age, gender, culture, and lifestyle
    - Providing education, behavior strategies, referral opportunities, and identification of supportive resources for adherence to health care recommendations (e.g., stress management, weight management, nutritional strategies, sleep health, alcohol moderation, substance-free and violence-free living)
- Proprioception training (e.g., repositioning, balance, agility)
- Therapeutic exercise (e.g., aerobic capacity and endurance, motor control and coordination, muscle strengthening and endurance)
    - Vestibular training (e.g., canalith repositioning maneuvers, gaze stabilization exercises)

Outcomes

Include assessment measures and tools related only to advanced clinical practice.

- Assessing remediation of activity and participation limitations, optimization of patient satisfaction, and promotion of primary and secondary prevention.
- Choosing appropriate assessment measures to determine initial and long-term responses to intervention.
- Using applicable, evidence-based outcomes measurement tools/questionnaires/scales (e.g., STarT BACK, Lower Extremity Functional Scale, Timed Up and Go, 6-minute walk test).
- Determining attainment of agreed-upon functional goal(s) and level of patient and client satisfaction.

- Assessing efficacy of resources used to achieve patient outcomes.

Referral/Consultation

- Efficiently recognizing signs and symptoms necessitating urgent referral to physician or emergency medical care.
- Referring and/or consulting with other professionals for further examination as appropriate, based on systems review and medical screening.
- Referring for needs beyond the scope of physical therapy practice.
- Collaborating and coordinating patient management throughout the continuum of care.

Organization and Application of Advanced Specialty Knowledge and Skills to Practice

Introduction

This section uses case scenarios to link practice expectations to knowledge areas. Each scenario explains how a primary care clinical specialist might use specific knowledge, skills, and experience to manage the patient or client case.

The cases and references are presented as examples only, and they are not intended to be all-inclusive. Sample examination questions with a rationale for the correct answers follow each case. The questions were not written to emphasize specific content but rather to provide guidance regarding the integration of knowledge, clinical experience, and scientific evidence expected of the primary care clinical specialists.

Residency programs may include these case reflections to assess resident knowledge at the start and end of the program.

The terminology used in the scenarios includes the Patient-Client Management Model in the APTA Guide to Physical Therapist Practice and the World Health Organization's International Classification of Functioning, Disability and Health (ICF). Familiarity with these models will be helpful when reading each of the cases.

Case Scenario 1

A 60-year-old male patient presents direct access for high-severity right rib and thoracic pain. Symptoms presented one month earlier without apparent injury, but medical attention was sought due to the gradual worsening nature. He is currently experiencing waves of "spasms" intermittently throughout the day. Symptoms are generally worse in the early

afternoon and evening. Any movement, though, particularly forward flexion and deep breaths, increases symptoms. Pain is most intense around the axilla and associated ribs. He reports increased alcohol intake to reduce pain. He has irregular visits to his primary care physician, most recently two months ago. Urodynamics completed and revealed >1000 ng/ml ethyl glucuronide (EtG) and ethyl sulfate (EtS). Blood lab results revealed an A1C of 6% but high levels of direct/total bilirubin and gamma-glutamyl transpeptidase (GGTP).

Past medical history includes depression, alcohol abuse, macrocytosis, hypertension, fatty liver disease, diabetes mellitus (type II). Hospitalized seven years earlier for pancreatitis. Long-term, low-dose opioid user for chronic lower back pain, which is stable. History of asbestos exposure, but stable 5 mm nodule on lung CT completed two months ago. He indicates going to an emergency department the day earlier, where he was prescribed topicals, which have not helped, and was encouraged to visit a physical therapist.

Question 1: Subjectively, what question would be the most useful in ruling up or down a differential diagnosis?

A. Symptom intensity change after meals
B. Specific volume of alcohol consumption
C. Breathing changes
D. Bowel and bladder changes

The correct answer is A.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation Sciences
    - Human anatomy & physiology
        - Cardiovascular and pulmonary
        - Musculoskeletal
        - Genitourinary
        - Integumentary
        - Gastrointestinal
        - Endocrine
- Clinical sciences
    - Pathology
        - Signs and symptoms of disease/injury

        - Disease/injury process and progression
    - Medical and surgical considerations
        - Medical screening
        - Laboratory science
            - Screening of lab values
            - Integrating results with clinical examination data
    - Practice considerations
        - Systems-based practice
        - Models of differential diagnosis and clinical reasoning

There are no overt red flags precluding physical therapy evaluation or treatment but many concerning features, which warrant close evaluation. Current alcohol consumption is important but provided recent lab markers already indicate heavy alcohol use and past medical history would suggest abuse. Breathing changes, such as new shortness of breath, questions about hypoxia, and pain associated with breathing are also useful to assess. However, this is a less likely differential based on his pain location and stable lung CT scan. Bowel and bladder referred pain is a significantly less likely differential based on symptom location and lack of relevant associated past medical history. Cyclic pain association with meals may implicate hepatobiliary involvement, which would raise the clinical likelihood of hepatic and/or biliary referred pain. This makes option A the best answer.

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Subhani, M., et al. (2021). How to interpret and manage abnormal liver blood test results in older people. Br J Hosp Med (Lond). doi: 10.12968/hmed.2021.0114.

Question 2: Which of the following assessments is most suggestive of visceral referred pain with this patient?

A. Abdominal percussion
B. Chest/rib X-rays
C. Murphy's sign
D. Chest/rib X-rays

The correct answer is C.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Cardiovascular and pulmonary
        - Musculoskeletal
        - Genitourinary
    - Movement sciences
        - Effects of movement dysfunctions on multiple body systems
- Clinical sciences
    - Pathology
        - Signs and symptoms of disease/injury
        - Disease/injury process and progression
    - Medical and surgical considerations
        - Medical screening
        - Imaging studies
            - Appropriateness criteria for ordering imaging
            - Integrating results with clinical examination data

Clinical Reasoning

- Resource efficiency specific to the patient, as well as the patient's health care system
- Broad levels of hypothesis generation
- Advanced skills in pattern recognition

Familiarity with abdominal palpation, medical screening, basic gastroenterology, radiology, and orthopedic assessment is necessary to answer this question. X-ray imaging is better for assessing bony injuries and has poor utility with most soft tissues. It could be used to evaluate the lungs. However, the CT performed two months earlier is more accurate and, except in the case of a rare and highly aggressive lesion, would likely be unrevealing if performed again. Though AROM patterns are reported in the literature in cases of visceral referred pain, many pain sources may also present similarly. Thoracic AROM is not significant enough alone to rule in or rule out visceral pain. Abdominal percussion is used to determine the size and density of structures and organs in the abdominal cavity to assess the presence of fluid or air and pain reproduction. This would be useful in corroborating possible ascites and a potentially enlarged liver but is unlikely to reproduce symptoms that might help confirm the diagnosis. While abdominal percussion includes liver/gallbladder percussion, Murphy's sign is a test that suggests cholecystitis and causes a moderate shift in probability, making this the best option. With this, the patient takes a deep breath and holds

while the clinician palpates the R subcostal area. The test is positive if pain is experienced on inspiration, as the gallbladder comes into contact with the clinician's hand.

References

Adedeji, O.A., et al. (1996). Murphy's sign, acute cholecystitis and elderly people. J R Coll Surg Edinb. PMID: 8632396.

Jain, A., et al. (2017). History, Physical Examination, Laboratory Testing, and Emergency Department Ultrasonography for the Diagnosis of Acute Cholecystitis. Acad Emerg Med. doi: 10.1111/acem.13132.

Metra, B.M., et al. (2022). Beyond the Liver Function Tests: A Radiologist's Guide to the Liver Blood Tests. Radiographics. doi:10.1148/rg.210137.

Mills, L.D., et al. (2005). Association of clinical and laboratory variables with ultrasound findings in right upper quadrant abdominal pain. South Med J. doi: 10.1097/01.SMJ.0000129927.88863.65.

Pacheco-Carroza, E.A. (2021). Visceral pain, mechanisms, and implications in musculoskeletal clinical practice. Med Hypotheses. doi: 10.1016/j.mehy.2021.110624.

Singer, A.J., et al. (1996). Correlation among clinical, laboratory, and hepatobiliary scanning findings in patients with suspected acute cholecystitis. Ann Emerg Med. doi: 10.1016/s0196-0644(96)70024-0.

Question 3: Assuming your abdominal and visceral screening is negative for reproduction of symptoms, would it be most appropriate to:

A. Treat
B. Treat and Refer
C. Refer

The correct answer is B.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Cardiovascular and pulmonary
        - Musculoskeletal
        - Gastrointestinal

- Behavioral sciences
    - Health promotion and disease prevention
        - Impact of health behaviors on general health, disease risk, and prognosis for specific conditions across the lifespan
        - Principles of prevention and wellness
- Clinical sciences
    - Pathology
        - Signs and symptoms of disease/injury
        - Disease/injury process and progression
    - Medical and surgical considerations
        - Medical screening
        - Laboratory science
            - Integrating results with clinical examination data
        - Diagnostic tests and measures
    - Practice considerations
        - Systems-based practice
        - Collaboration and coordination throughout the continuum of care

Clinical Reasoning

- Resource efficiency is specific to the patient, as well as the patient's health care system
- Advanced skills in pattern recognition

Patient Management

- Referral/consultation
    - Referring and/or consulting with other professionals for further examination as appropriate, based on systems review and medical screening
    - Referring for needs beyond the scope of physical therapy practice

In this scenario, many factors raise concern for nonmusculoskeletal differential diagnoses: worsening nature, alcoholism, and likelihood for past/current chronic liver disease. However, no clinical feature precludes physical therapy intervention. Additionally, it could also be useful to assess change through the treatment course and to help provide more collaborative care with other care team members. Thus, option B, to treat and refer, is the best selection.

Physical therapists are uniquely poised for wellness and whole-health medicine, considering the time and rapport developed with patients. In this case, it could be beneficial to discuss excessive alcohol consumption and provide resources if he is receptive to reducing his intake. If symptoms don't respond to physical therapy intervention, or if red flag symptoms occur, it

could also be helpful to collaborate with the rest of the patient's care team. Referring the patient to a primary care physician or internist would be helpful in attempting to reasonably rule out visceral causes of the patient's symptoms. However, choosing to refer and not treat would delay appropriate care for this patient, assuming his symptoms are musculoskeletal. In conclusion, the patient has several nonmusculoskeletal concerns, which warrant attention. Providing focused physical therapy treatment but ignoring the patient's depression, alcohol abuse, and potentially liver disease would be a detriment to this patient. Primary care physical therapists should provide a multifaceted whole-health approach.

References

Boissonnault, B., et al. (2020). "Primary Care for the Physical Therapist: Examination and Triage." Third edition. Elsevier.

Case Scenario 2

A 45-year-old female arrives at your primary care physical therapy clinic as a self-referral. She reports a one-month history of urinary leakage with jumping and running and right hip pain of several weeks' duration, which is aggravated with deep squats. She denies clicking, locking, or snapping at the right hip, though she reports that the hip feels tight. Her past medical history is significant for cervical cancer with hysterectomy when she was 41 years old, with no other reported treatment. She indicates having started a high-intensity impact exercise program eight weeks ago, attending five times per week for 60 minutes duration. She reports the ability to stop the flow of urine midstream and no other incidence of urinary incontinence except during her exercise classes. During the initial evaluation, there is weakness at the gluteus medius and transverse abdominus. An internal pelvic floor assessment is not completed due to the patient's request to forgo that aspect of testing. She is tender at the right iliopsoas (abdominal and anterior hip) with a positive FABER, FADIR, and decreased mobility of the iliopsoas. Her symptoms are also provoked with passive and active hip flexion and internal rotation. Sacroiliac joint and lumbar testing do not provoke the right hip pain.

Question 1: Which of the following types of incontinence is the most likely diagnosis?

A. Urge incontinence
B. Stress incontinence
C. Mixed incontinence
D. Functional incontinence

The correct answer is B.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
        - Genitourinary
    - Movement sciences
        - Effects of movement dysfunctions on multiple body systems, including immediate and long-term
- Clinical sciences
    - Pathology
        - Signs and symptoms of disease/injury

Clinical Reasoning

- Advanced skills in pattern recognition

Patient Management

- Examination
    - History
        - Medical history
        - Prior level of function

This patient reports urine loss during episodes of jumping and running exercises. The answer lies in the specialty knowledge and understanding that this is a classic symptom of stress incontinence. The impact of exercise and incidence of urinary incontinence has been studied, with results suggesting that there may be a decrease in the muscle strength and reduced support to the pelvic floor, creating a supportive dysfunction during episodes of increased intra-abdominal pressure. High-impact exercise may further contribute to supportive dysfunction and the incidence of urinary incontinence. There are no other symptoms representing the other types of incontinence.

References

Bo, K., et al. (2001). Prevalence of stress and urge urinary incontinence in elite athletes and controls. Med Sci Sports Exerc. doi: 10.1097/00005768-200111000-00001

Dockter, M., et al. (2007). Prevalence of urinary incontinence: a comparative study of collegiate female athletes and non-athletic control. JWHPT.

Figuers, C.C., et al. (2008). Pelvic floor muscle activity and urinary incontinence in weight-bearing female athletes vs. non-athletes. JWHPT.

APTA, Section on Women's Health, (2000). "The Gynecological Manual."

Question 2: The anterior right hip pain, provoked by hip flexion and internal rotation, decreased hip extension mobility, and with the noted positive special tests, is consistent with which hip dysfunction?

A. Labral tear
B. Quadricep muscle strain
C. Femoral acetabular impingement
D. Gluteus Medius muscle strain

The correct answer is C.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
    - Movement sciences
        - Kinesiology/clinical biomechanics
- Clinical sciences
    - Pathology
        - Signs and symptoms of disease/injury
- Critical inquiry principles and methods
    - Critical appraisal and application of research findings in primary care physical therapy

Evidence-Based Practice

Clinical Reasoning

- Advanced skills in pattern recognition that drive:
    - Expert prioritization of differential diagnosis and systematic assessment to rule in/rule out hypotheses
    - Evolving understanding of patient presentation and identifying underlying mechanisms contributing to patient problem(s)

Patient Management

- Examination
    - History
        - Patient's major complaints
        - Medical history
    - Test and Measures
        - Joint integrity (e.g., joint mobility assessment to include active and passive range of motion, passive accessory motions, response to manual provocation)
        - Musculoskeletal assessment (e.g., muscle performance, endurance, strength, power, muscle tone, fracture screening)
- Evaluation
    - Interpreting and integrating data from examination across the ICF domains to determine diagnosis, prognosis, and plan of care

This patient reports pain during dynamic movements, pain during strength testing, and positive special tests at the hip. Irritability and pain with ROM (flexion, internal rotation) and strength testing combined with positive special tests at the hip without the presence of clicking, snapping, or locking, and with pain located in the anterior hip/pelvis, is consistent with an FAI.

References

Enseki, K., et al. (2014). Nonarthritic hip joint pain. Clinical practice guidelines linked to the International Classification of Functioning, Disability and Health from the Orthopaedic Section of the American Physical Therapy Association. J Orthop Sports Phys Ther.

Montenegro, M.L.L.S., et al. (2008). Physical therapy in the management of women with chronic pelvic pain. Int J Clin Pract.

Travell, J.G., et al. (1992). "Myofascial Pain and Dysfunction: The Trigger Point Manual. The Lower Extremities." Williams & Wilkins.

Question 3: What is the most appropriate initial plan of care?

A. Treat: Initiate treatment for incontinence and FAI
B. Refer: Refer back to primary care provider for further workup
C. Treat and refer: Initiate treatment for incontinence and FAI, communicate findings to gynecologic-oncology provider, and recommend baseline FAI imaging
D. Additional exam information is needed before proceeding

The correct answer is C.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
        - Genitourinary
- Clinical sciences
    - Pathology
        - Signs and symptoms of disease/injury
    - Medical and surgical considerations
        - Imaging studies
            - Appropriateness criteria for ordering imaging

Communication

- Effectively and efficiently communicating findings to the patient or client and health care team

Patient Management

- Evaluation
    - Identifying current, emerging, or potential "yellow" and/or "red flags," which may warrant caution
    - Triaging patients as first contact providers at an advanced competency level
    - Determining risk stratification
- Prognosis
    - Selecting the plan of care to include referral to another health care professional, physical therapy intervention, or further examination
- Referral/consultation
    - Collaborating and coordinating patient management throughout the continuum of care

The primary care clinical specialist must have advanced knowledge in systems screening and the clinical relevance of risk factors and red flags. The specialist must recognize that a personal history of cancer is the number one predictor of active cancer and that younger cancer is often more aggressive. This case warrants, at minimum, collaboration and communication with the gynecologic-oncology provider due to personal prior cancer at age 41. The primary care clinical specialist must also have broad system knowledge beyond musculoskeletal, to include genitourinary, to be able to establish and initiate a plan of care

and physical therapy interventions. It would be appropriate to initiate treatment for incontinence and FAI while concurrently communicating back to the gynecologic-oncology provider and facilitating baseline imaging for suspected FAI.

References

Schmaranzer, F., et al. (2021). Best Practices: Hip Femoroacetabular Impingement. AJR. American Journal of Roentgenology.

Verhagen, A.P., et al. (2017). Most red flags for malignancy in low back pain guidelines lack empirical support: a systematic review. Pain. doi: 10.1097/j.pain.0000000000000998.

Question 4: The patient modifies her high-intensity exercise program and her daily activities as recommended and begins a home exercise program to strengthen the involved muscles. She has been attending physical therapy once a week for six weeks and reports significantly reduced urinary incontinence. Although she has been compliant, she reports continued right hip pain, with minimal change in status. The appropriate next step is which of the following?

A. Progress with trunk, hip, and pelvic strengthening.
B. Pause treatment, encourage rest, including refraining from exercise with return to the clinic in two weeks to reevaluate.
C. Review lack of progress with gynecologic-oncology provider and collaborate with a hip preservation specialist to consider next steps.
D. Continue with the current plan of care, with addition of stretching exercises to her home program

The correct answer is C.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
        - Genitourinary
- Clinical sciences
    - Pathology
        - Tissue inflammation, healing, response to exercise, and repair
    - Medical and surgical considerations
        - Imaging studies

- Appropriateness criteria for ordering imaging

Communication

- Effectively and efficiently communicating findings to the patient or client and health care team

Patient Management

- Examination
    - Reexamination
        - Ongoing assessment and reassessment throughout the continuum of care
- Evaluation
    - Identifying current, emerging, or potential yellow and/or red flags, which may warrant caution throughout client management, medical referral, or both
- Prognosis
    - Responding to emerging data from examinations and interventions
        - Assessing response to intervention
        - Interpreting the significance of change in signs and symptoms, as they relate to the plan of care, and modifying/redirecting examination and interventions accordingly
- Referral/consultation
    - Referring and/or consulting with other professionals for further examination as appropriate
    - Collaborating and coordinating patient management throughout the continuum of care

Following six weeks of therapeutic interventions, including patient participation with the home program with no reported symptomatic improvement of the right hip pain, the most appropriate next course of action is reviewing the case with the gynecologic-oncology provider for their opinion based on prior history of cancer and collaborating with a hip preservation specialist to determine next steps in management of FAI (e.g., possibly injections versus surgery based on patient factors). A primary care clinical specialist does not refer back for further workup without clear communication and recommendations but rather continues to collaborate and guide the team in comprehensive patient management. This includes using advanced knowledge and skill to clearly communicate indicated imaging studies (and specific views) for suspected pathology. In this case, the primary care clinical specialist would communicate recommendations for A/P pelvis, 45deg Dunn views, and false

profile views for further FAI workup. Some may have the ability to order directly, while others will need to communicate and recommend through another health care provider.

References

Goodman, C.C., et al. (2007). "Differential Diagnosis for Physical Therapists Screening for Referral." Saunders, Elsevier.

Case Scenario 3

You are a physical therapist embedded in the primary care team consisting of a primary care provider, an RN, and an LPN in an outpatient clinic. A 64-year-old male patient presents to the primary care physical therapy clinic with a chief complaint of left shoulder pain. His symptoms started insidiously one month ago. He has increased pain with overhead movement and relief of symptoms with his arm resting on his stomach. He has noticed a progressive increase in symptoms when he reaches out to the side and when reaching behind his back to put on his jacket. He is concerned about his health, as he takes care of his 3-year-old and 1-year-old adopted daughters.

Question 1: What additional questions are appropriate to avoid cognitive bias and provide a more complete history of the patient's overall health?

A. What is the patient's pack-year history?
B. Has the patient had any recent shoulder surgeries?
C. How does the patient describe his pain?
D. Does the patient have neck pain or limitations?
E. A and D

The correct answer is E.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
        - Cardiovascular and pulmonary
        - Lymphatic
        - Gastrointestinal

Patient Management

- Examination
    - History
    - Systems review

To answer this question, a primary care clinical specialist must be aware of past medical history beyond musculoskeletal systems. A thorough medical history needs to be taken with a broad range of differential diagnoses in mind, with an end treatment plan in mind to include referral to a specialist, and which specialist should be recommended to the primary care provider.

The beginning portion of the case indicates the patient has a musculoskeletal shoulder injury. To avoid cognitive biases, it is important to understand that left shoulder pain may be indicative of a referred pain pattern of cardiac or other visceral organs. Recent shoulder surgery is important; however, it may contribute to a confirmation bias with less consideration for an additional hypothesis. The description of the patient's pain may be helpful in determining the nature of his injury; however, it does not provide information to complete a thorough history, and other questions should be prioritized in the systems review process to rule up or down other body systems.

References

Croskerry, P., et al. (2013). Cognitive debiasing 2: impediments to and strategies for change. BMJ Quality & Safety.

Question 2: He has an additional history of smoking (30 packs per year), chronic pain, lung surgery, and COVID-19 four months ago. He denies pain at rest. However, he does have difficulty getting comfortable at night due to pain. He denies unexplained weight loss, fever, chills, headaches, numbness, tingling, or bowel and bladder changes. Given the additional information and patient's subjective report, what system is the highest priority and requires further subjective review?

A. Musculoskeletal
B. Cardiopulmonary
C. Central nervous system
D. All the above

The correct answer is B.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
        - Cardiovascular and pulmonary
        - Lymphatic
        - Gastrointestinal
- Clinical sciences
    - Medical and surgical considerations
        - Medical screening
    - Practice considerations
        - Systems-based practice

Clinical Reasoning

- Advanced skill in pattern recognition
    - Expert prioritization of differential diagnosis and systematic assessment to rule in/out hypotheses

Patient Management

- Examination
    - History
    - Systems review

To answer this question, the primary care physical therapist needs to be aware of additional systems that are involved with the area of complaint and referred pain patterns associated with the chief complaint. Information from a complete medical history should be used to formulate an appropriate priority list to guide the examination process.

References

Severin, R., et al. (2020). Outpatient Physical Therapist Attitudes Toward and Behaviors in Cardiovascular Disease Screening: A National Survey. Phys Ther. doi: 10.1093/ptj/pzz042

Question 3: Considering the answer to Question 2, what is the first physical examination procedure that will provide you with the greatest amount of information to rule out the system selected above?

A. Palpation of the soft tissue in the shoulder region
B. Active shoulder range of motion
C. Heart rate, blood pressure, oxygen saturation
D. Heart and lung auscultations

The correct answer is C.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Musculoskeletal
        - Cardiovascular and pulmonary
- Clinical sciences
    - Pathology
    - Medical and surgical considerations
        - Medical screening
    - Practice considerations
        - Systems-based practice

Clinical Reasoning

- Advanced skill in pattern recognition
    - Efficient and effective use of algorithms

Patient Management

- Examination
    - Systems review
        - Prioritization of relevant screening procedures
    - Test and Measures
        - Circulation
- Cardiovascular signs

Additional information from the subjective report should help the primary care clinical therapist narrow the hypothesis pool down to one system, the cardiopulmonary system. The most basic baseline measures can be taken in the clinic and are helpful in screening for cardiology vascular and cardiopulmonary issues, as well as directing examination to more skilled procedures, such as heart and lung auscultations. Musculoskeletal shoulder examination and neurological screening are a low priority at this stage in the examination process.

References

Severin, R., et al. (2020). Blood Pressure Screening by Outpatient Physical Therapists: A Call to Action and Clinical Recommendations. Phys Ther. doi: 10.1093/ptj/pzaa034.

Kotsis, V., et al. (2022). "Clinical Overview: Hypertension, Screening and Prevention." Elsevier: Clinical Key.

Question 4: The following vital signs were obtained: heart rate 81 beats per minute, blood pressure 209/123, oxygen saturation 98%. Considering these findings, what is the next most appropriate step in your plan of care?

A. Continue with shoulder examination because blood pressure of 209/123 is considered normal and not a concern for physical therapy.
B. Call 911 because his blood pressure is dangerously high, as this is a medical emergency, and it is your responsibility to determine the next course of treatment.
C. Discontinue his shoulder examination because blood pressure of 209/123 is abnormal, and instruct the patient to call his primary care provider at a later date.
D. Contact the patient's primary care provider/team immediately and inform them of the patient's vital signs.

The correct answer is D.

To answer this question, the primary care clinical specialist would apply the following concepts from the DSP:

Knowledge Areas of Primary Care Practice

- Foundation sciences
    - Human anatomy & physiology
        - Cardiovascular and pulmonary
- Clinical sciences
    - Pathology
        - Signs/symptoms of disease/injury

Communication

- Effectively and efficiently communicating findings to the patient or client and health care team

Patient Management

- Evaluation
    - Identifying current, emerging, or potential yellow and/or red flags, which may warrant caution
    - Triaging patients as first contact providers at an advanced competency level

    - Determining risk stratification

- Diagnosis
    - Conducting rapid differential diagnosis and triage of emergent versus nonemergent health conditions
    - Avoiding common diagnostic reasoning errors, such as anchoring, confirmation bias, and other sources of medical error

- Prognosis
    - Selecting plan of care to include referral to another health care professional, physical therapy intervention, or further examination

- Referral/consultation
    - Efficiently recognizing signs and symptoms necessitating urgent referral to physician or emergency medical care

The primary care clinical specialist serves as a referral source for other specialists and works as an integrated member of the primary care team. He or she recognizes the value of interdisciplinary treatment and consults/refers appropriately based on examination findings and patient presentation. The primary care clinical specialist recognizes patients on a system level and includes systems review during the examination process to rule out nonmusculoskeletal pathologies.

The primary care clinical specialist must be able to recognize and understand the clinical relevance of abnormal vital signs and be able to coordinate and manage treatments with a primary care team. The patient's vital signs are abnormal, and guidelines by Severin et al. indicate consulting with the primary care physician. This is the most appropriate action to take as the primary care physical therapist within an integrated primary care team. If the patient was having symptoms with these abnormal vital signs, it would be more appropriate to send the patient to the emergency room.

References

Paini, A., et al. (2018). Definitions and Epidemiological Aspects of Hypertensive Urgencies and Emergencies. High Blood Press Cardiovasc Prev. doi: 10.1007/s40292-018-0263-2.

Boissonnault, W.G., et al. (2012). Physical therapists referring patients to physicians: a review of case reports and series. J Orthop Sports Phys Ther. doi: 10.2519/jospt.2012.3890.

Content Weighting for Certification Examination and Residency Curriculum Development

Learning Domain	Content Weighting
Knowledge for Primary Care Specialty Practice • Foundational sciences • Behavioral sciences • Clinical sciences • Critical inquiry principles and methods	**24%**
Professional Roles, Responsibilities, and Values • Professional behaviors reflecting the core values • Leadership, social responsibility, and advocacy • Communication • Education • Consultation • Evidence-based practice • Clinical reasoning	**34%**
Patient Management • Examination • Evaluation • Diagnosis • Prognosis • Intervention • Outcomes • Referral/consultation	**42%**
Total	**100%**

Common Practice Settings of a Physical Therapist Specializing in Primary Care

The minimum required practice settings for primary care are:

- Acute care facility
- Hospital emergency department
- Outpatient facility
- Patient's home/home care

Patient-Care Clinical Hour Curriculum Requirements for Accredited Residency Programs

Each resident is required to complete a minimum of 5% of patient-care clinic hours (75 hours) in each required practice setting, calculated from the minimum patient-care clinic hours defined in the ABPTRFE Quality Standards for Clinical Physical Therapy Residency and Fellowship Programs.

If a residency program cannot provide patient-care clinic hours in one or more required settings, the program must offer alternative learning opportunities — such as observation, didactic instruction, journal clubs, or research activities — equivalent to the minimum required hours for those settings.

Patient Populations Served by a Physical Therapist Specializing in Primary Care

The minimum required patient populations for primary care are:

- Pediatrics (0-21 years of age)
- Adults (22-59 years of age)
- Geriatrics (60 years of age to end of life)

Each resident is required to complete a minimum of 5% of patient-care clinic hours (75 hours) in each required patient population, calculated from the minimum patient-care clinic hours defined in the ABPTRFE Quality Standards for Clinical Physical Therapy Residency and Fellowship Programs

If a residency program cannot provide patient-care clinic hours with one or more of the required populations, the program must ensure that residents engage in alternative learning opportunities — such as observation, didactic instruction, journal clubs, or research activities — equivalent to the minimum required hours for those populations.

Medical Conditions Seen by a Physical Therapist Specializing in Primary Care

Cardiovascular System

Conditions Seen Frequently

- Coronary heart disease
- Hypertensive heart disease
- Hypertension
- Peripheral vascular complications of diabetes

Conditions Seen Occasionally

- Arterial insufficiency
- Cardiac arrythmia/conduction disorders

- Cardiac pacemakers and defibrillators
- Deep vein thrombosis
- Heart failure/valvular disease
- Atherosclerotic disease (coronary atherosclerosis, peripheral arterial occlusive disease, peripheral arterial disease, intermittent claudication)
- Cardiomyopathy
- Ischemic conditions (angina, myocardial infarction, intermediate coronary syndrome)

Conditions Seen Rarely

- Aneurysms (aortic, abdominal)
- Dysrhythmia
- Venous statis (with or without cellulitis)
- Congenital heart defects

Respiratory System

Conditions Seen Frequently

- None

Conditions Seen Occasionally

- Chronic obstructive pulmonary disease
- Chronic restrictive lung disease
- Pneumonia
- Acute upper respiratory infection
- Asthma
- Emphysema
- Influenza

Conditions Seen Rarely

- Lung neoplasm
- Pulmonary embolism
- Pulmonary hypertension / cor pulmonale
- Respiratory failure
- Acute respiratory distress syndrome
- Pulmonary artery hypertension
- Pulmonary edema
- Pulmonary effusion
- Pulmonary fibrosis
- Bronchiectasis
- Bronchitis
- Cystic fibrosis
- Lung abscess

- Pulmonary metastasis
- Paralysis of the diaphragm or hemidiaphragm
- Pneumothorax
- Sarcoidosis
- Neonatal pulmonary conditions
- Sequelae of long-term ventilator use

Endocrine System

Conditions Seen Frequently

- Diabetes

Conditions Seen Occasionally

- Dehydration
- Electrolyte imbalance

Conditions Seen Rarely

- Gastric and bowel neoplasm
- Graft vs. host disease
- Kidney cancer
- Pancreatic cancer
- Stomach cancer
- Thyroid cancer

Lymphatic System

Conditions Seen Frequently

- None

Conditions Seen Occasionally

- Lymphedema

Conditions Seen Rarely

- None

Integumentary System

Conditions Seen Frequently

- None

Conditions Seen Occasionally

- Pressure sores
- Skin tears
- Soft tissue adhesion
- Soft tissue contracture

Conditions Seen Rarely

- Burns

- Neuropathic wounds
- Vascular and lymphatic wounds
- Melanomas
- Rash / dermatologic reaction
- Scleroderma
- Soft tissue extrusion
- Soft tissue sarcoma

Nervous System

Conditions Seen Frequently

- Concussion
- Vestibular disorders
- Radiculopathies (cervical and lumbar)
- Peripheral nerve entrapments (e.g., carpal tunnel syndrome, cubital tunnel syndrome)
- Peripheral Neuropathy
- Gait dysfunctions

Conditions Seen Occasionally

- Alzheimer's disease
- Cerebrovascular accident
- Multiple sclerosis
- Neurocognitive disorders
- Other dementia disease (not Alzheimer's disease)
- Parkinson's disease & syndromes
- Traumatic brain injury
- Brachial plexopathies
- Polyneuropathy
- Spinal cord injury and disorders
- Hemiparesis
- Lumbosacral plexopathies
- Nerve palsies (fascial, spinal accessory, long thoracic)

Conditions Seen Rarely

- Amyotrophic lateral sclerosis
- Brain tumors
- Central nervous system infections
- Central nervous system neoplasms (e.g., glioma, lymphoma, meningioma, craniopharyngioma, pituitary tumor)
- Cerebral disorders (e.g., degenerative cerebellar disorder, cerebellar stroke)
- Cerebral palsy

- Normal pressure hydrocephalus
- Other neuromuscular disorders (e.g., Huntington's disease, myasthenia gravis)
- Multiple myeloma
- Ototoxicity
- Anoxic events

Skeletal System

Conditions Seen Frequently

- Degenerative joint / disc disease
- Spinal stenosis
- Kyphosis / scoliosis
- Fractures / stress fractures
- Osteoarthritis
- Osteoporosis / osteopenia
- Hallux valgus
- Hip labral pathology
- Spinal spondylosis / spondylolisthesis
- Cervicogenic headache
- Femoroacetabular impingement
- Trochanteric bursitis
- Meniscal pathology
- Patellofemoral dysfunction
- Sacroiliac dysfunction
- Shoulder labral pathology
- Shoulder instability
- Arthralgias
- Skeletal and sports injuries in children (Osgood Schlatter, overuse injuries, joint injuries, growth plate injuries, limb injuries)

Conditions Seen Occasionally

- Compression fracture
- Gout / pseudogout
- Elbow Instability (e.g., subluxation / dislocation, ligamentous)
- Temporomandibular joint disorders
- Rib dysfunction
- Rheumatoid arthritis
- Spinal instability
- Shoulder adhesive capsulitis

Conditions Seen Rarely

- Bone metastasis
- Cording /axillary web syndrome
- Osteonecrosis / avascular necrosis
- Osteosarcoma
- Congenital traumatic limb deficiencies
- Juvenile idiopathic arthritic diseases
- Osteogenesis imperfecta
- Torticollis / plagiocephaly
- DISH (diffuse idiopathic skeletal hyperostosis)
- Ankylosing spondyloarthropathy

Muscular System

Conditions Seen Frequently

- Rotator cuff syndromes
- Plantar fasciitis
- Fibromyalgia / chronic pain syndromes
- Myopathy
- Tendinopathies
- Ligamentous injuries
- Spinal sprain or strain
- Piriformis syndrome
- Musculoskeletal dysfunction and pain with pregnancy / postpartum

Conditions Seen Occasionally

- Sarcopenia / muscle wasting

Conditions Seen Rarely

- Polymyalgia rheumatica
- Steroid myopathy

Urinary System

Conditions Seen Frequently

- None

Conditions Seen Occasionally

- Urinary tract infection
- Urinary dysfunction (incontinence, retention, urgency)

Conditions Seen Rarely

- Bladder Cancer

Reproductive System

Conditions Seen Frequently

- Pelvic floor dysfunction / pain

Conditions Seen Occasionally

- Breast cancer
- Prostate cancer

Conditions Seen Rarely

- Cervical cancer
- Ovarian cancer
- Testicular cancer
- Uterine cancer

Involvement of Multiple Systems

Conditions Seen Frequently

- Falls
- Deconditioning
- Persistent pain

Conditions Seen Occasionally

- Amputations
- Cancer-related fatigue
- Infection

Conditions Seen Rarely

- Failure to thrive
- Lupus
- Organ transplant
- Renal failure
- Sepsis
- Anemia
- Colorectal cancer
- Hospice (end of life)
- Leukemia
- Neutropenia
- Palliative Care (end of life)
- Thrombocytopenia
- Complications of prematurity (osteopenia, respiratory distress syndrome, intraventricular hemorrhage, bronchopulmonary dysplasia)
- Complete trisomy 21 (Down syndrome)
- Developmental delay / disabilities
- Genetic syndromes (e.g., Prader-Willi, hemophilia)
- Hematologic conditions

- Idiopathic toe walking

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