

ABPTRFE

American Board of Physical Therapy
Residency & Fellowship Education

Description of Fellowship Practice: Sports Division 1

August, 2023

Table of Contents

I. Type of Program	1
II. Required Qualifications for Admissions	1
III. Learning Domain Expectations	1
A. Knowledge Areas of Sports Division 1 Practice	1
B. Professional Competencies of Sports Division 1 Physical Therapists.....	2
C. Practice Expectations of Sports Division 1 Physical Therapists.....	5
IV. Practice Settings	8
V. Patient Populations	9
VI. Medical Conditions	9

DFP Sports Division 1

Preamble

The American Board of Physical Therapy Residency & Fellowship Education, a board-appointed group of the American Physical Therapy Association, has created the following “Description of Fellowship Practice” to reduce unwarranted curriculum variability; provide fellows minimum consistency in learning experiences for that area of practice; and streamline the accreditation process for reporting.

This DFP is the product of collaborative work by ABPTRFE and the American Board of Physical Therapist Specialties through the practice analysis for subspecialty validation.

While all programs are required to meet the comprehensive curriculum and program requirements as outlined within “ABPTRFE Quality Standards for Clinical Physical Therapist Residency and Fellowship Programs,” the purpose of the DFP is to 1. Establish a consistent curriculum expectation for fellowship programs within the same area of practice. 2. Provide consistency in program reporting for accreditation processes. The DFP allows flexibility for programs to incorporate additional learning experiences unique to the program’s environment that are beyond the minimum standard expectations.

The DFP for each fellowship area will undergo revalidation at least once every 10 years. The process for revalidation will be a collaborative process with ABPTS.

I. Type of Program

Sports Division 1 is a clinical area of practice.

II. Required Qualifications for Admissions

The related areas of practice for sports division 1 is orthopaedics and sports.

III. Learning Domain Expectations

A fellowship program must have a curriculum inclusive of the learning domains identified within that area’s current validated analysis of practice.

A. Knowledge Areas of Sports Division 1 Practice

1. Human Anatomy and Physiology as Related to Sports Division 1 Conditions
 - Summarize the effects that variations within these domains have on Division I athletes.
 - Categorize typical anatomical and physiologic characteristics of the Division I athlete that are unique to their sports (e.g., humeral retroversion in baseball, VO2 max in soccer).
 - Categorize typical anatomic changes and physiological characteristics of the Division I athlete that are different from other levels of competition (e.g., strength, power, endurance).

- Analyze the impact of anatomic variability on physical performance and injury risk factors in Division I athletes.
 - Analyze the impact of concurrent medical conditions (e.g., sickle cell) on physical performance and injury risk in Division I athletes.
2. Movement Science as Related to Sports Division 1 Conditions
 - Analyze the biomechanics of sport-specific movements that result in superior athletic performance seen in Division I athletes.
 - Interpret principles of motor learning and control related to sport-specific skill acquisition in Division I athletes.
 3. Pathology/Pathophysiology as Related to Sports Division 1 Conditions
 - Analyze injury epidemiology (incidence, prevalence) in Division I sports compared to other levels of competition (recreational, club, high school, Division II/III sports).
 - Analyze the specific physical functional requirements of a broad range of Division I sports (e.g., aerobic endurance, range-of-motion, strength/power).
 - Analyze the effect of typical training and competition demands on injury rehabilitation and prevention in Division I athletes.
 - Analyze the effect of the typical pathomechanics that may result from the high volume of training and competition required of Division I athletes.
 - Determine the risk factors for overtraining unique to Division I sports.
 4. Medical and Surgical Considerations as Related to Sports Division 1 Conditions
 - Explain the role of advanced imaging (e.g., MRI, CT) in the differential diagnosis of sports injuries, given the higher utilization of these modalities in Division 1 athletics compared to other levels of competition.
 - Analyze the impact of disease/injury processes on the Division I athlete's ability to perform and clearance recommendations for timeline and safe return to play.
 - Explain the clinical decision-making regarding timing of surgery, rehabilitation progression, and return to sport criteria for the common surgical procedures performed on Division I athletes.
 - Analyze the clinical decision-making regarding timing of procedure, rehabilitation progression, and return to sport criteria for the common medical procedures (e.g., injections, orthobiologics).
 - Analyze the physiologic effects and potential adverse effects for the pharmacologic agents commonly prescribed to Division I athletes.
 5. Health and Wellness as Related to Sports Division 1 Conditions
 - Analyze the nutritional and recovery requirements unique to the high training and competition volume of Division I athleticism.
 - Analyze and interpret the signs/symptoms typically seen in Division I athletes that require referral to a physician/specialist (e.g., eating disorders, substance abuse, psychological disorders).
 - Analyze psychological issues relating to performance and injury in collegiate, Division I athletes compared to other levels of competition.
 - Explain NCAA guidelines and the potential effects of performance enhancing substances.

B. Professional Competencies of Sports Division 1 Physical Therapists

1. Critical Inquiry
The sports division 1 physical therapist must be able to:

- Analyze literature regarding prevention, diagnosis, treatment, and prognosis in the Division I athlete population.

2. Medical Management

The sports division 1 physical therapist must be able to:

- Interpret signs and symptoms of common non-musculoskeletal conditions that typically affect the Division I athlete, and refer to the most appropriate provider (i.e., dietician, psychologist, sports medicine physician, etc.).
- Assist in designing and administering pre-participation physical examinations for the purpose of screening for and recognizing medical conditions or injuries that are tailored to the physical and mental characteristics of Division I athletes.
- Develop and/or modify rehabilitation guidelines for medical/surgical interventions commonly utilized in Division I athletes (e.g., surgery, orthobiologics, etc.).
- Explain the most appropriate frequency/duration of visits based on the nature of the injury, time available to the athlete, and facilities available at the university.
- Analyze the impact of the unique physical and physiological adaptations that contribute to elite performance in the Division I athlete but may result in neuromusculoskeletal and medical pathology.
- Interpret and implement emergency care, management, transport, and referral (as appropriate) for injuries and illnesses that occur more frequently in Division I athletes than other athlete populations.
- Analyze the physiologic effects and mechanisms of action of ergogenic aids and pharmacologic therapies typically used by Division I athletes and refer to medical providers when appropriate.
- Apply decision-making algorithms and models to clinical practice related to Division I athletics.

3. Communication

The sports division 1 physical therapist must be able to:

- Communicate with a NCAA compliance officer regarding the student athlete (i.e., eligibility, access to resources, permissible/impermissible benefits, etc.).
- Appropriately respond to questions about the health and well-being and participation status of patients under your care from people who are outside of the patient's immediate circle (i.e., questions from media, agents, general public, etc.).
- Explain and apply appropriate communications with other entities within Division I Athletic Department:
 - Academics.
- Appropriately communicate patient progressions, problems, or other considerations within the HIPPA and FERPA Guidelines to:
 - Parents of college age athletes with appropriate consent.
 - Sport position coaches.
 - Sport head coaches.
 - Certified Athletic Trainer (ATC).
 - Strength and conditioning specialists.
 - Physicians or other providers.
 - Equipment managers.
- Effectively build relationships through direct contact with ancillary service providers to ensure prompt service and open lines of communication.
- Assist in the coordination of care for both domestic and international patients while they are in their home state and/or country i.e., communicate with the athlete's local healthcare providers.
- Communicate with physician and/or athletic training referral sources regarding patient progressions to ensure continuity of care.
- Communicate with patients and sports medicine team both during normal working hours and outside of normal working hours in order to demonstrate the urgency that is expected in a Division I sports program.
- Refer to and communicate with ancillary service providers:

- Registered dietician/sports nutritionist.
- Sports psychologist/psychiatrist/mental health professional.
- Certified strength and conditioning specialist.
- Family/Internal medicine physician.
- Orthopedic surgeon.
- Certified Athletic Trainer (ATC).
- Physician extender (e.g., physician assistant, nurse practitioner, etc.).

4. Administrative

The sports division 1 physical therapist must be able to:

- Interpret and implement medical autonomy as it relates to providing care for Division I student-athletes without bias and/or influence from outside entities such as coaches, parents, administrators and sports agents.
- Interpret and implement NCAA and institutional insurance coverage requirements for Division I student-athletes.
- Interpret and implement their role in the medical redshirt and medical hardship decision-making process in the Division I setting.
- Explain and apply HIPAA and FERPA regulations pertaining to the release of medical and performance information as it pertains to media releases, intercollegiate transfers, external medical consultations, professional sports organizations and the general public.
- Identify and implement key recommendations of relevant governing bodies as they relate to medical care of the Division I student-athlete. These include, but are not limited to NCAA, NCAA SSI, NATA, etc.
- Explain medical/legal/ethical issues unique to Division I athletics.
- Analyze the on-site emergency response requirements and procedures unique to NCAA and Division I athletics.
- Explain the organization and structure of the typical Division I sports medicine team (e.g., nurse practitioner, sports medicine-trained physicians, and orthopedic surgeons) that is on-site on a regular basis as compared to other levels of competition.
- Articulate knowledge of the legal limitations regarding scope of practice and restrictions of licensure in relation to interstate or international travel.
- Demonstrate leadership in managing change and improving health care systems for Division I student-athletes as demonstrated by attending or presenting at local, state or national professional meetings, holding an officer position, SIG membership, organizing journal club, etc.
- Explain and identify the prevention, response, accountability, and recovery procedures in the NCAA and institutional handbook regarding all acts of sexual harassment including, but not limited to Title IX and The Clery Act.

5. Travel Management/Constraints

The sports division 1 physical therapist must be able to:

- Educate and provide recommendations on issues affecting the health, well-being, and performance of Division I student-athletes regarding sleep, nutrition, lifestyle choices, academics, travel, etc. to student athletes, coaches, parents, staff, administrators.
- Educate healthcare providers working in the Division I setting on strategies to develop and maintain a healthy life-work balance, in relation to hours worked, weekends, holidays, travel, and expectations.
- Demonstrate the ability to effectively manage student-athlete scheduling (rehabilitation, other medical appointments, etc.) to account for the multiple responsibilities of the Division I student-athlete (i.e., classes, tutors, meetings, sports performance sessions, practices, competitions, travel etc.).

6. Resources

The sports division 1 physical therapist must be able to:

- Explain how and when to work with physicians to prioritize surgical procedures in the Division I setting.
- Identify campus-based/local resources for gender-specific issues and build relationships with practitioners to allow for the ability to get athlete's early access.
- Utilize sports science/sports performance facilities and incorporate these into your prevention, screening, and rehabilitation program design.
- Critically evaluate emerging technologies (wearables, sports science, biotechnology) in regards to their use in the Division I setting.

C. Practice Expectations of Sports Division 1 Physical Therapists**Examination****1. History**

- Interpret history of athlete's major complaint(s) regarding severity, chronicity, impairment, activity limitations, participation restrictions, level of irritability, previous therapeutic interventions, and emotional response to current clinical situation.

2. Systems Review

- Perform, implement, interpret systems review to assess physiologic and anatomic status of body systems (e.g., cardiovascular/pulmonary, integumentary, musculoskeletal, neuromuscular, cognition and communication abilities).

3. Tests and Measures

Select and perform tests and measures that are comprehensive, consistent with history and systems review, appropriately sequenced and have acceptable measurement properties (high specificity/sensitivity) to verify or refute working diagnosis, including:

- Aerobic capacity/endurance.
- Anthropometric characteristics (e.g., body composition, body dimensions, height, weight, girth, and edema).
- Arousal, attention and cognition (e.g., assessment of g-factors that influence motivation levels, levels of consciousness).
- Assistive and adaptive devices (e.g., assessment of appropriateness, alignment and fit, safety).
- Circulation (e.g., pulses, vertebral artery examination, screen for circulatory abnormalities).
- Cranial nerve integrity.
- Peripheral nerve integrity.
- Environmental considerations (e.g., weather, altitude, venue conditions).
- Assessment of sports specific biomechanics (e.g., kinetic, kinematic, and task analysis).
- Gait and locomotion (e.g., running and walking analysis).
- Static and dynamic balance (e.g., sport specific movements).
- Skin characteristics (e.g., color, texture, moisture, body temperature).
- Wound assessment (e.g., abrasions, lacerations, incisions).
- Signs of inflammation.
- Characteristics of infections (e.g., bacteria, fungal, viral).

- Joint integrity and mobility (e.g., assessment of subnormal joint mobility including passive range of motion, joint play movements, and response to manual provocation).
- Motor function (e.g., motor control and motor learning).
- Muscle performance (e.g., instrumented and non-instrumented strength, power, and endurance assessments, sport-specific functional muscle testing).
- Neural assessment (e.g., neural limb tension tests).
- Orthotic protective and supportive devices (e.g., assessment of appropriateness, remediation of impairment, athletic equipment alignment and fit, safety).
- Pain, fear avoidance, and kinesiophobia assessment.
- Posture (e.g., body or body segment(s) structure, alignment, changes in different positions, body contours).
- Range of motion including muscle length.
- Reflex integrity (e.g., assessment of normal and pathological reflexes).
- Sensory integration (e.g., assessment of appropriate, dexterity, integration of somatosensory visual and vestibular systems).
- Neurological cognitive testing and return to activity.

4. Reexamination

- Administer additional tests and measures as necessary based on changes in patient/client condition.

Evaluation

- Evaluation and interpret data from history, systems review (e.g., identify relevant data, prioritize impairments, assess patient's needs, motivation, and goals).
- Evaluate and interpret data from the examination (correlate history/systems review with test and measures; consider intervening factors such as stage or irritability of condition and psychosocial factors).
- Incorporate data from ancillary testing (e.g., imaging, labs, electrophysiological studies).
- Using hypothetico-deductive reasoning, develop working diagnosis including nature of complaint, probable cause, anatomical structures involved, stage of condition, and possible contraindications for physical therapy intervention.

Diagnosis

- Organize data into recognized clusters, syndromes, or pathoanatomical categories, based on the examination.

Prognosis

- Explain appropriateness of physical therapy intervention, including need for referral to other health care professional.
- Establish a prognosis including the expected level of improvement in function and the amount of time needed to reach that level.
- Establish plan of care. Select and prioritize specific interventions based on impairments and activity limitations or participation restrictions.
- Respond to emerging data from examinations and interventions by modification and redirection of intervention.
- Select appropriate outcome measures to determine short and long-term responses to intervention.
- Determine the extent of injury and possible sequelae to appropriately determine whether the athlete has the ability to continue participation without incurring further injury:

- Cervical, thoracic, and lumbar spine injuries.
- Head and facial injuries (e.g., concussion, eye, maxillofacial, ear).
- Environmental injuries (cold, heat, altitude, lightning).
- Musculoskeletal (e.g., fractures, dislocations).
- Integumentary (e.g., lacerations, abrasions, nail bed injuries).
- Genitourinary (e.g., direct trauma).
- Implement functional tests to determine athlete's ability and readiness to return to desired activity including the interpretation and impact of the results.

Intervention

1. Rehabilitation and Return to Activity

- Implement interventions based upon the evaluation of an athlete's physiologic condition, type and stage of injury, repair/recovery process and specific sport requirements.
- Patient/client education on diagnosis, prognosis, intervention, responsibility, and self-management within plan of care.
- Therapeutic exercise instruction to improve muscle performance, joint mobility, muscle length, and aerobic capacity/endurance.
- Motor function training (e.g., balance, coordination and agility training, body mechanics and postural stabilization, gait, and locomotion training).
- Muscle performance training (e.g., strength, power, and endurance training).
- Aerobic capacity/endurance conditioning and reconditioning.
- Manual therapy techniques, including:
 - Joint mobilization (e.g., accessory movement: glides, distraction).
 - Passive range of motion.
 - Soft tissue instrument assisted mobilization (e.g., therapeutic massage, connective tissue massage, deep friction, cross friction massage).
- Electrotherapeutic modalities.
- Physical agents (e.g., Thermotherapy, hydrotherapy, mechanical devices).
- Implement performance-based functional progression programs to determine an athlete's ability and readiness to return to desired activity.
- Supportive and protective devices (e.g., taping and bandaging).

2. Injury Prevention and Epidemiology

- Participate in the planning and administration pre-participation physical examinations for the purpose of screening for medical conditions or injuries which might affect or preclude the athletes' participation.
- Prescribe and conduct preventive conditioning programs (in season and off season) based upon the individual athlete's needs and specific sport.
- Educate athletes, coaching staff, administration, and family members on injury prevention (e.g., concussion, environment-related injuries).
- Inspect practice and competition venues for potential safety risks.
- Educate athletes, coaches, family members, and administration on issues related to transmission and prevention of infectious agents.
- Interpret growth and maturation issues related to sports participation (e.g., types of injuries sustained, injury management, guidelines for safe participation).

3. Emergency and Safety Precautions

- Analyze injuries and illnesses that require medical intervention, and/or provide emergency care, management, transport, and referral for the following conditions:
 - Cervical, thoracic, and lumbar spine injuries.
 - Head and facial injuries (e.g., concussion, eye, maxillofacial, ear).
 - Environmental injuries (e.g., cold, heat, altitude, lightning).
 - Musculoskeletal (e.g., fractures, dislocations).
 - Abdominal organ injury (e.g., spleen rupture, liver laceration).
 - Pulmonary conditions (e.g., pneumothorax, hemothorax, status asthmaticus).
 - Cardiovascular (e.g., dysrhythmias, sickle cell, hypertrophic cardiomyopathy).
 - Anaphylaxis.
 - Integumentary (e.g., lacerations, abrasions, nail bed injuries).
 - Genitourinary (e.g., testicular torsion, direct trauma).
- Perform effective safety precaution procedures.

4. Fluid and Electrolyte Replacement

- Educate and counsel on macro and micronutrients and dietary supplements:
 - Educate, counsel, and recommend appropriate nutrition strategies for pre, during and post training or competition.
 - Educate and counsel on management of nutritional deficiencies and disordered eating.
- Educate, counsel, and recommend appropriate hydration and electrolyte replacement strategies for pre, during, and post training or competition.

5. Non-Emergent Medical Conditions

- Implement management and return to play recommendations for athletes presenting with integumentary disorders (e.g., dermatitis, fungal, viral, or bacterial infections).
- Educate athletes, coaches, and administrators on issues related to the Triad and RED-S.
- Implement recommendations on lifestyle and activity modifications for athletes with Triad and RED-S.
- Educate athletes, coaches, and administrators on sports participation and issues related to the genitourinary system (e.g., pregnancy, post-partum, pelvic health).
- Identify and facilitate referral and care for athletes with gynecological issues such as birth control, pregnancy, menstrual issues, etc.

Outcomes

- Design and implement appropriate measures to support return to activity.
- Implement sport-specific testing criteria to determine athlete's readiness to return to participation.
- Recommend level of athlete sports participation based on results of sport specific testing.
- Implement remediation of athlete's sports and 4 living activity limitation and participation restrictions based on best available evidence and athletic variables (e.g., history, diagnosis, complications, sporting activity).

IV. Practice Settings

The clinical curriculum of all accredited fellowship programs must include a variety of practice settings, as noted below. A fellow should experience a minimum of 5% of patient-care practice hours within each setting based on the minimum patient-care practice hours outlined within "ABPTRFE Quality Standards for Clinical Physical Therapist Residency and Fellowship Programs."

If a fellowship program is unable to provide each participant with an opportunity to engage in patient care activities within these settings, the program must provide additional learning opportunities (e.g., observation, didactic, journal club, research) related to patient care within these settings for the minimum required hours noted above.

The minimum required practice settings for sports division 1 fellowship programs is:

- Outpatient facility.
- Athletic venue coverage/Training room facility.

V. Patient Populations

The clinical curriculum of all accredited fellowship programs must include a variety of patient populations, as noted below, specific to age. A fellow should experience a minimum of 5% of time in each patient population based on the minimum patient-care practice hours outlined within “ABPTRFE Quality Standards for Clinical Physical Therapist Residency and Fellowship Programs.”

If a fellowship program is unable to provide each fellow with an opportunity to engage in patient care activities within these populations, the program must provide additional learning opportunities (e.g., observation, didactic, journal club, research) related to patient care within these populations for the minimum required hours noted above.”

The minimum required patient populations for sports division 1 fellowship programs are:

- Pediatrics (0-21 years of age).
- Adults (22-59 years of age).

VI. Medical Conditions

The clinical curriculum of all accredited fellowship programs must include a variety of medical conditions associated with the program’s area of practice (see list below).

If a fellowship program is unable to provide each fellow with an opportunity to engage in patient care activities within most of these conditions, the program must provide additional learning opportunities (e.g., observation, didactic, journal club, research) related to patient care within these conditions.

Programs must use the ABPTRFE template located on the [ABPTRFE website](#) when submitting documentation to ABPTRFE.

Integumentary System

- Abrasions, lacerations, skin disorders.

Nervous System

- Brachial plexus neuropathy (e.g., burner, stinger).
- Concussion.
- Neural impingements (e.g., thoracic outlet syndrome, carpal tunnel, Guyon’s canal entrapment, peroneal nerve entrapment, tarsal tunnel syndrome).
- Cervical radiculopathy.
- Lumbar radiculopathy.

Musculoskeletal System

- Acute/emergency injury.
- Ankle/foot fracture.
- Ankle/foot tendinopathies.

- Ankle/foot ligamentous injuries.
- Plantar fasciitis.
- Other disorders of lower leg, ankle/foot (e.g., MTP joint dysfunction).
- Knee fracture.
- Knee ligamentous injuries.
- Knee tendinopathies.
- Meniscal pathology.
- Patellofemoral dysfunction.
- Other disorders of the knee.
- Hamstring injury.
- Femoroacetabular impingement.
- Hip fracture.
- Hip labral tear.
- Sacroiliac dysfunction (e.g., arthropathy, instability).
- Other disorders of the hip and thigh.
- Wrist, hand, finger fracture.
- Wrist, hand, finger instability (e.g., subluxation/dislocation, ligamentous).
- Wrist, hand, finger tendinopathies.
- Other disorders of the wrist and/or hand.
- Elbow/forearm fracture.
- Elbow instability (e.g., subluxation/dislocation, ligamentous).
- Elbow tendinopathies.
- Other disorders of the elbow and forearm.
- Rotator cuff tear.
- Shoulder labral pathology.
- Shoulder complex/arm fracture.
- Shoulder instability (e.g., subluxation/dislocation, ligamentous).
- Shoulder impingement.
- Other disorders of the shoulder complex (e.g., scapulohumeral dysfunction).
- Cervical disc pathologies (e.g., DDD, protrusion, herniation).
- Cervical instability.
- Cervical sprain/strain.
- Other disorders of cervical spine.
- Lumbar disc pathologies (e.g., DDD, protrusion, herniation).
- Lumbar instability.
- Lumbar sprain/strain.
- Lumbar spondylosis/spondyloisthesis.
- Arthropathy of spinal facet joint (e.g., facet dysfunction).
- Other disorders of lumbar spine.
- Other disorders of the pelvic girdle.
- Thoracic sprain/strain.
- Other disorders of the thoracic spine.
- Cervicogenic headaches.
- Rib dysfunctions.
- Sprain (cervical/thoracic/lumbar).
- Hypermobility of joint (e.g., benign joint hypermobility syndrome).
- Fractures (e.g., stress reactions/fractures/long bone fractures).
- Other muscle strain.
- Chronic pain syndromes (e.g., complex regional pain syndrome).

Last Updated: 12/21/2023

Contact: resfel@apta.org