This document outlines the proposed changes and updates to the Athletic Trainer Scope of Practice in Connecticut based on the Education and Preparation of an Athletic Trainer.

Connecticut Athletic Trainers' Association

Scope of Practice Report

Submitted by: CATA Governmental Affairs

Introduction

The Connecticut Athletic Trainers' Association (CATA) greatly appreciates the opportunity to submit this scope report to the Connecticut Department of Public Health. This report will demonstrate the impact Athletic Trainers (ATs) can have on access to healthcare in Connecticut, the education and training of ATs, and proposed updates to the athletic training scope of practice. The proposed updates to the AT scope of practice will allow Athletic Trainers to practice to the full extent of their education and training. Additionally, it will improve healthcare for the residents of Connecticut, lower the rising costs of healthcare and improve patient outcomes.

For many years the Connecticut Athletic Trainers' Association has been highly involved with various legislative issues impacting the health and safety of students, student-athletes, and other members of the public in Connecticut. The CATA has worked closely with the Public Health Committee, Education Committee, and Committee on Children and many individual legislators including but not limited to; Sen. Martin Looney, Sen. Betsy Ritter, Sen. Terry Gerratana, Rep. Susan Johnson, Rep. Andrew Fleischmann, Rep. Janice Giegler, Rep. Themis Klarides, Rep. Diana Urban, among others. The CATA has been a leading advocate for legislation requiring AEDs in schools, concussion awareness and safety, improved access to emergency medications for students needing epi-pens, inhalers, and glucagon, and improved awareness of sudden cardiac arrest.

It is our hope that this scope report outlines the abilities, education and training of an AT and that the Department of Public Health will select the Athletic Trainer Scope of Practice for review. Please forward any questions to:

- James Doran, MS, ATC – CATA President james.doran@ctathletictrainers.org 860-486-0481
- Eleni Diakogeorgiou, MBA, ATC – Chair, CATA Governmental Affairs eleni.diakogeorgiou@ctathletictrainers.org 203-365-4475
- Gary Morin, PhD, ATC-CATA Board of Directors moring1@southernct.edu 203-392-6089

Thank you for your time and consideration.

Connecticut Athletic Trainers' Association

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CH 1: Plain language description of the request

Introduction

The request for updating the Connecticut athletic training (AT) practice act (Connecticut General Statutes 375a) is primarily a result of the evolution of the profession. With the addition of standardized educational competencies and the accreditation of educational programs, the current scope of practice and statutory language in Connecticut is outdated. The Connecticut Athletic Trainers' Association (CATA) would like to thank all the individuals involved in the initial licensing of ATs in the state including CATA members and leaders at the time, the Department of Public Health and the many legislators who support the AT profession.

Current Statutory Language

The current AT practice act was written in the 1990's, passed by the General Assembly in 2000, and enacted by the Department of Public Health in 2006. At the time the current practice act was written and subsequently passed, the profession was in the process of reform to ensure consistency of the educational process for ATs. The main result of this education reform was that all ATs must graduate from an accredited institution in order to sit for the Board of Certification Examination, a prerequisite for licensure in all states except Texas. More detailed information regarding the accreditation of athletic training education programs, educational competencies and the Board of Certification examination follow in later chapters. In addition to educational reform, many states have since updated their athletic training practice acts, and many more are now in the process, in order to ensure ATs can practice to the full extent of their education and training. More information regarding other states and the practice of athletic training is further detailed in this scope of practice report and specifically in Chapter 12.

Over the past 15-20 years, athletic training has evolved from a field that existed primarily to provide health care to professional, collegiate and secondary school athletes, to a profession providing care to a wide range of physically active individuals in various settings. ATs today commonly use their skills to provide services to individuals in fields as diverse as the performing arts, U.S. military, NASA, public safety (e.g., police and firefighters), and to those who work in industrial settings.[1] More information regarding the education and competencies of an AT can be found in Chapter 6 of this scope of practice report.

Although the current Connecticut AT practice act language was written in order to allow ATs to treat athletes, and individuals who have comparable injuries, this is often not the case because of confusion among employers about the statute. As a result, Athletic Trainers in Connecticut are limited in their ability to practice to the full extent of their education and training. This in turn has led to fewer employment opportunities in the state for ATs. According to the NATA Career Center there have been 13 AT positions in Connecticut posted from January – June 2014, compared to 41 in Massachusetts. In the most recent five-year period, three of Connecticut's five athletic training education programs reported an average of 54% of AT graduates leaving the state for employment or educational opportunities. For more information regarding statistics and the economic impact of the AT scope of practice, please refer to Chapter 9 of this scope of practice report.

Primary Areas of Concern

The primary areas the Connecticut Athletic Trainers' Association (CATA) would like to address with this scope of practice update are:

1) Remove the confusion about whom ATs may treat by substituting the word "individual" for the word "athlete" in the statutory language.
    a. Outcome:
        i. This change will allow ATs to practice to the full extent of their education and training, and allow them to treat patients in other areas rather than strictly athletic populations. This will improve the public's access to physical medicine and rehabilitation, create jobs for ATs in the state, help retain graduates of state Athletic Training Education Programs (ATEPs), and draw more AT professionals to the state.
        ii. Removes the existing ambiguity of ATs serving in multiple professional settings through the use of different titles. ATs are already employed by privately-owned physical therapy practices to serve non-athletic patient populations. ATs are also employed as conditioning experts for several workplace settings. In these roles they offer their expertise as injury prevention experts, but are prevented by statute from serving as 'athletic trainers'. The requested changes in the legislation would codify existing practice and expand the use of ATs in serving at these settings through the legal recognition of ATs working in non-athletic settings. Finally, the requested legislation will afford greater access to rehabilitation services for musculoskeletal injuries for youth and recreational athletes, industrial employees and post-rehabilitation patients.
2) Clarify the ability of ATs to manage medical conditions other than injuries. ATs regularly work with patients with chronic diseases and are some of the leading researchers in concussion and exertional heat illness. ATs are also broadly trained and skilled in the recognition and management of many other medical conditions, including but not limited to exertional sickling, rhabdomyolysis, asthma, diabetes, heat stroke, and other conditions that may be exacerbated by physical activity. ATs are also trained to manage patients who have medical conditions that require activity modifications of some nature. Furthermore, ATs are recognized in Connecticut statutes as health care providers for concussion, sudden cardiac care, and epi-pen, asthma inhaler, and glucagon administration in schools in the state.
    a. Outcome:
        i. Allows a broader population access to health care professionals who can safeguard those patients before, during, and after physical exertion.

More detailed information regarding specific changes and limitations in the athletic training practice act please refer to Chapter 12.

References:

1. National Athletic Trainers' Association. Practice Settings for the Athletic Trainer. http://www.nata.org/athletic-training/job-settings

CH 2: Public Health & Safety

This chapter outlines the public health and safety benefits that the requestor believes will occur if the request is implemented and, if applicable, a description of any harm to public health and safety if it is not implemented

Public Health and Safety Benefits

ATs are health care professionals who collaborate with physicians and allied health care professionals to provide health care particularly in the area of musculoskeletal injury. ATs provide services in the domains of prevention, emergency care, clinical assessment, therapeutic intervention and rehabilitation of injuries.[1] Athletic training is approved by the American Medical Association (AMA) for inclusion in the Health Professions Career and Education Directory. The Connecticut Athletic Trainers' Association (CATA) urges and fully supports updating the AT scope of practice to reflect ATs skills and full breadth of education and knowledge. Updating the scope of practice directly supports public health and safety in four critical ways:

- 1. Will allow full access to ATs to all athletes and individuals in terms of acute and emergency care of medical conditions related to or exacerbated by physical activity,
- 2. Will allow ATs to provide necessary rehabilitative care to individuals by highly qualified professionals ,
- 3. Will allow ATs to provide conditioning and wellness programs to non-athletes in the prevention of workplace injury and
- 4. Clarify the role of the AT in caring for illnesses related to an athlete's or individual's role in physical activity.

Acute and Emergency Services

The current statute (CGS Chapter 375a, Sec. 20-65f) limits athletic trainers to the care of athletes who are regular participants in sports or recreational activities with regular defined as participating in activities "not less three times per week." This limitation is *unique* to Connecticut in that it is the only state that defines how many times someone must participate in order to be considered an athlete, and unfortunately can prevent ATs from providing necessary acute and/or emergency care to several groups of individuals.

Youth athletes, perhaps the most vulnerable to injury of all of the athletic populations, often practice less than the required minimum three days per week. Radelet et al. noted injury rates between 1 and 1.7 for every 100 athletes playing youth sports in youth across all sports.[1] Fourteen percent of the injuries in football were considered serious requiring immediate medical care.[1] Adirim and Chang noted that children are prone to sport injury due to a large surface area to mass ratio, and possess joint cartilage that is not fully mature. The authors also noted that with an earlier focus on specific sports, children are at greater risk for overuse injuries.[2] As a result the authors felt qualified medical personnel be available at all sporting events.[2] The current statute, as written, prevents an AT from providing care to these injured individuals as these youths do not satisfy the legal requirements of being an athlete. Requested changes in the scope of practice will permit the AT to be available at those sports that do not meet the "three day a week" requirement, thereby providing qualified medical care for our children.

The current statute affects ATs employed in the workplace. Although limited by the current statute, a few ATs are employed in the workplace, normally under a different work title. The requirement that ATs work only with athletes prevents them from providing acute care at these workplace settings. This has proven to be an issue at least once in the state. In one workplace setting, an employee was injured, but the AT, despite trained in

emergency care, was forced to ignore the needs of this individual due to restrictions placed on the AT. Clearly, early medical assistance can be rendered by the AT and will provide workers immediate access to care. The requested changes in the licensure law would permit an AT to be employed as an AT in different workplace settings and apply all of the knowledge and skills that are within her/his professional preparation. Subsequently, ATs employed to prevent workplace injury may provide onsite emergency medical care potentially preventing a catastrophic situation or applying the same skills used on the field with injured athletes to limit the secondary damage common to acute musculoskeletal injury. Additionally, ATs can provide evaluations and treatment for non-emergency situations in the workplace setting as well helping decrease time lost at work for employees and lowering healthcare costs in general. More detailed information regarding the return on investment of an AT in the workplace can be found in Chapter 9.

Rehabilitative Care

ATs are well-qualified to provide rehabilitative services to injured athletes and individuals, particularly in the area of musculoskeletal injury. ATs are the experts in providing early treatment in the care of acute trauma. Furthermore, due to their extensive experience in athletics, ATs are highly experienced in functional and movement-specific exercise. ATs are involved in the rehabilitation of multi-million dollar per year athletes, and with the proposed change in scope of practice, ATs would be able to extend this care to the physically active individuals and workers. A greater role in rehabilitation would be extremely beneficial in the care of Connecticut's citizens. The requested changes in the scope of practice would permit ATs to apply their expertise beyond the athlete for those patients who are referred by a health care provider. Changes in the statute would assist the private and hospital rehabilitation practices that employ athletic trainers as the AT would be able to provide care for a wider patient base. An expanded presence of ATs in the post-rehabilitation realm will allow individuals released from physical therapy practices and are not yet fully recovered opportunities for continued care. Individuals released from therapy following the exhaustion of insurance coverage typically rely on personal trainers to continue their recovery and return to participation. Unlike ATs, personal trainers often have minimal training, such as a home study or online course, and are not regulated by the state. The expanded scope of practice would permit ATs, who are well-educated in injury assessment and rehabilitation skills to care for individuals who do not qualify as athletes under Connecticut law. As a result, the quality of care for all citizens can be improved with the increased access to quality rehabilitative care.

Prevention of Workplace Injuries

Athletic training is the only allied health profession that has historically acknowledged injury prevention as a professional educational domain. Injury and illness prevention have been reinforced in athletic training curriculums through the inclusion of courses such as exercise physiology, nutrition, strength / conditioning, and biomechanics throughout the history of athletic training education. The expansion of the ATs skills beyond the athletic setting could be extremely beneficial in preventing musculoskeletal conditions across the general population, particularly in the workplace setting.

Increased access to the workplace setting would allow ATs to apply their knowledge and professional skills in preventing workplace injury. Nationally, ATs have already demonstrated their ability to effectively reduce workplace related injury at such global corporations as Boeing, Delta Airlines, Kimberly-Clark and UPS. In Connecticut, a very limited number of athletic trainers are successfully employed in the industrial setting, albeit under a different title and in a restricted role. The requested changes in professional practice would allow an expansion of AT employment in the workplace setting across the multiple corporations housed in Connecticut. As a result, employer costs in workmen's compensation, and hiring replacement employees would be reduced assisting in the financial viability of the various companies. Application of prevention skills can assist the employee in limiting disability due to acute and chronic conditions such as low back pain.

Clarifying the Role of the AT in Caring for Illness

The current AT statute does not acknowledge the daily role the AT has in caring for the various medical conditions. Reference to illness care by the AT can be found in statutes regarding concussion, sudden cardiac emergencies and the administration of an epi-pen in public schools, but the AT licensure law does not address the ATs role with these and other conditions. ATs routinely manage patients who have allergies, asthma, diabetes and other medical conditions. The AT is involved in these cases, often carrying out the recommended plan of the athlete's treating physician. Additionally, ATs are responsible for providing care for acute manifestations of the athlete's conditions. The proposed changes to the practice act address current AT practice in managing and providing care for patients with medical conditions.

The proposed language which appropriately reflects the education and training of the AT, will enable ATs to effectively manage illnesses and other emergent conditions under the direction of a physician. ATs will be permitted to administer the physician's orders in the care of an acute illness or condition, without the apparent restrictions created by current law. The intent is NOT to have athletic trainers diagnose and develop a plan of treatment for ill individuals, but to be able to follow through on the expectations of the patient's treating physician.

Potential Harm to Public Health and Safety Without Implementation

The amount of potential harm is equal to the current situation in Connecticut. The current statute prevents the AT from applying acute care to individuals who are not defined as an athlete. As a result, vulnerable populations that could benefit from the professional skill and experience of an AT are not able to receive such care. Youth and recreational athletes, participating less than 3 days per week, are being "treated" by a parent volunteer on the sidelines, a teammate or a bystander when acutely injured, few of these individuals qualified to do so. Although emergency medical technicians can play a role, even these personnel do not possess the same knowledge base of an AT. These 'non-athletes' are not permitted to receive the care that is expected of the high school or college athlete and may suffer the physical consequences without the availability of AT at the sporting event. Changes in the statute cannot guarantee the presence of an AT at a sporting event, but would at least permit the AT when present to provide appropriate medical intervention.

In terms of rehabilitation, the current restrictions affect the recovery of citizens across Connecticut. Not all individuals should be referred to ATs, particularly those with co-morbidities which would require referral to other rehabilitation specialists. However, changes in the law would permit otherwise healthy people to receive qualified care from an AT for musculoskeletal injuries. The increased availability of qualified rehabilitation professionals to the general public would help prevent rehabilitation being provided by untrained individuals. In some cases personal trainers are providing rehabilitation in the form of injury recovery and post-rehabilitation programs. Most of a personal trainer's education is measured in hours not years and are not licensed health care providers. ATs possess a four-year degree, have successfully passed a nationally-recognized board examination and are licensed to practice in Connecticut, but are NOT permitted to provide rehabilitative services to non-athletes. The requested change in the AT scope of practice law is needed to protect the public from receiving care from unqualified individuals.

Failure to enact the requested changes will limit the ability of individuals to extensively employ ATs to prevent injuries at the workplace setting. Reducing the availability of Connecticut's corporations to hire personnel educated in preventing injury may harm business viability. The Health Care Cost Institute (www.healthcostinstitute.org) states that rising health care spending is injuring economic growth. The American Medical Association notes that the cost of healthcare is rising rapidly. Connecticut's premium rate in 2007 for workman's compensation was the 14th highest in the nation (www.cga.ct.gov/2007/rpt/2007-R-

0173.htm). Clearly the escalating health care costs must be addressed with preventing injuries and illnesses representing the best option.

Finally, enactment of the requested language changes will ensure that ATs are permitted to carry out the medical orders of a physician in the management of common medical conditions. The current statute only acknowledges the ATs role in caring for athletic injuries. The role of ATs is only partially identified in other statutes and requires clarification. Under the direction of a physician or other health care provider, ATs assist in the management of several general medical conditions in a manner not fully recognized under current statutes, and therefore serve in an ambiguous situation.

References:

1. Radelet, M., Lephart, s. Rubinstein, E., Myers, J. Survey of the injury rate for children in community sports, Pediatrics 110,3,2002
2. Adirim, T., Cheng, T. Overview of Injuries in the Young Athlete, Sports Medicine 33, 1, 75-81,2003

CH 3: Public Access to Healthcare

This chapter outlines the Impact this request will have on public access to healthcare in the state of Connecticut.

Impact on Public Access to Healthcare

Expanding the current athletic training scope of practice to appropriately reflect the current educational competencies as well as proficiencies set forth by the National Athletic Trainers Association Executive Committee on Education (NATA-ECE), will increase public access to healthcare in the state of Connecticut. These competencies and proficiencies are outlined in Chapter 6: Education and Training of the scope of practice report.

Updating the scope of practice will allow Athletic Trainers (ATs) to:

- Utilize all of their skills and expertise that reflect their educational training and certification
- Expand job opportunities in health care settings within Connecticut that will permit ATs to serve a larger population, not just those defined as an athlete
- Be able to serve the general population of physically active individuals in areas where ATs have a professional area of expertise

We believe the preferred updates clarify the current athletic training scope of practice to reflect the training and examination requirements, and will lead to increased health care for the residents of Connecticut. The new statutory language will encompass all skill sets ATs can perform, including services not only to the "athletic" population, but also the "general" population. According to Sam Gold, Service Line Strategy Advisor and Senior Analyst for the Advisory Board Company (www.advisoryboard.com)[1] in a presentation titled, *Expand Orthopedic Presence with Sports Medicine*, it was recommended that healthcare should expand the traditional roster of providers to enable a program of conservative care. Increasing a provider's scope of coverage will increase patient access to healthcare professionals. Healthpeople.gov[2] states the current US health care system will see an influx of patients in 2014 because many will become insured for the first time. Healthpeople.gov outlines issues including. [2]

- Increasing and measuring access to appropriate, safe, and effective care, including clinical preventive services.
- Decreasing disparities and measuring access to care for diverse populations, including racial and ethnic minorities and older adults.
- Increasing and measuring access to safe long-term and palliative care services and access to quality emergency care.

Athletic Trainers are well positioned to be an integral part of a school-based community health care model. ATs can assist primary care givers who provide health care during the school day (Nurses (APRNs) for example) by functioning as an extension of the healthcare model during after school hours for athletics, but also for other school activities and those not participating in sport.

The Athletic Trainer as a Qualified Healthcare Provider

ATs are trained in the areas of prevention, wellness, and treatment of injuries and illnesses. Many hospitals are adding ATs to their staff as an extension of the physician, positioned in the community institutions to provide not only health and wellness services but educational services as well. Often the AT is the only healthcare professional many of these children and families see. Throughout their training, ATs receive experiential

learning to "provide efficient and effective health care and educational services."[3] The AT profession has evolved from caring only for the athletic population, to the care of the general population.[4,5] As demonstrated by National Athletic Trainers' Association (NATA) member statistics, ATs are employed in a variety of venues including: clinic, industry, and hospitals.[6] May 2014 statistics from the NATA Governmental Affairs Committee show that 32.67% of NATA members work in non-traditional AT settings including but not limited to: business/sales/marketing, occupational health, fitness and performance, military and unemployed.[7] Furthermore, clarification of the athletic training scope of practice will increase the access and timeliness to qualified and appropriate healthcare providers to the public.

References:

1. Gold, S. Expanding Orthopedic Presence with in Sports Medicine – Blog. www.advisoryboard.com **post available upon request**

2. Healthpeople.gov

3. Laurent TG, Bradney DA. Leadership behaviors of athletic training leaders compared with leader in other fields. *J Athl Train*.2007;42(1):120-125.

4. Delforge GD, Behneke RS. The history and evolution of athletic training education in the United States. *J Athl Train*.1999;34(1):53-61.

5. Lockard CB. Athletic Trainers: Providing healthcare for athletes of all kinds. *Occupational Outlook Quarterly*.2005;38-41.

6. National Athletic Trainers' Association. Job settings. http://www.nata.org/athletic-training/job-settings. Retrieved June 11, 2014.

7. National Athletic Trainers' Association – Governmental Affairs: Member Information. http://members.nata.org/members1/documents/membstats/2014-05.htm

CH 4: Summary of federal and state laws

This chapter outlines the federal and state laws that govern Athletic Trainers in the United States of America.

Introduction/Overview

As health care providers it is crucial that ATs are licensed and regulated to ensure proper care is being rendered to the public. Forty-nine states have enacted statutes regulating athletic training practice. Forty-three states plus the District of Columbia govern the practice of ATs through licensure: Colorado, Hawaii, Minnesota, Oregon and West Virginia govern through Registration. South Carolina governs by Certification. All of these states except Colorado and West Virginia have the three pillars of licensure: a defined scope of practice, title protection, and a disciplinary process for violations of the act. California currently has no regulation and no title protection, but California has made several efforts to gain statutory recognition with the most recent bill strongly supported by that state's legislature. Please see Chapter 10 for more detailed information.

States Requiring Registration

With regards to Registration as a means of regulation, Colorado, Hawaii, Minnesota, Oregon and West Virginia all require proof of graduation from an accredited Athletic Training Education Program at a college or university as well as successful completion of the Board of Certification Examination for Athletic Trainers. All prohibit non-registered persons from practicing athletic training.

States Requiring Certification

With regards to Certification as a means of regulation, South Carolina manages AT credentials differently, requiring that applicants for Certification must pass the Board of Certification (BOC) examination. In addition, they must also provide an athletic training curriculum certified transcript, or they must show proof of a B.S. degree in physical or corrective therapy with a minor in physical education or health as well as a basic athletic training course and two years of experience directly supervised by a Certified Athletic Trainer, or, they must prove that they have earned a four year college degree with appropriate academic courses as well as proof of completion of two years directly supervised by a Certified Athletic Trainer.

Licensure

With regards to licensure, all remaining states require successful completion of an accredited Athletic Training Education Program as deemed by the Commission of Accreditation in Athletic Training Education (CAATE), as well as Board of Certification (BOC) examination in order to apply for licensure. The only exception is Texas, which allows individuals to apply for licensure without proof of successful completion of Board of Certification examination. Texas allows four methods of qualification for state licensure, (a) apprenticeship, (b) Board of Certification examination and/or out of state licensee, (c) baccalaureate or post-baccalaureate degree in physical therapy with minor in physical education or health and completion of a basic Athletic Trainer course or (d) proof of graduation from a CAATE- accredited Athletic Training Education Program.

Athletic Training Practice Acts in New England

Information regarding athletic training practice acts specific to this region of the nation can be found in great detail in chapter 12. Additionally, further clarification on AT state practice acts across the country can be found in the appendix in this chapter which highlights each state and their current statutory language.

References:

All information cited in this section was borrowed from all the state practice acts and athletic training state association websites in addition to the following websites:

Board of Certification Inc. State Regulation Section. http://www.bocatc.org/state-regulation/map

National Athletic Trainers' Association. http://www.nata.org/state-practice-acts

CH 5: Current State Statute

This chapter outlines the current Athletic training practice act in the State of Connecticut

Current Statute

Connecticut General Statutes
Chapter 375a
Athletic training

Sec. 20-65f. Definitions. As used in this chapter:
(1) "Athletic training" means the application or provision, with the consent and under the direction of a health care provider, of (A) principles, methods and procedures of evaluation, prevention, treatment and rehabilitation of athletic injuries sustained by athletes, (B) appropriate preventative and supportive devices, temporary splinting and bracing, physical modalities of heat, cold, light massage, water, electric stimulation, sound, exercise and exercise equipment, (C) the organization and administration of athletic training programs, and (D) education and counseling to athletes, coaches, medical personnel and athletic communities in the area of the prevention and care of athletic injuries. For purposes of this subdivision, "health care provider" means a person licensed to practice medicine or surgery under chapter 370 of the general statutes, chiropractic under chapter 372 of the general statutes, podiatry under chapter 375 of the general statutes or naturopathy under chapter 373 of the general statutes;
(2) "Athletic injury" means any injury sustained by an athlete as a result of such athlete's participation in exercises, sports, games or recreation requiring strength, agility, flexibility, range of motion, speed or stamina, or any comparable injury that prevents such athlete from participating in any such activities;
(3) "Athlete" means any person who is a member of any professional, amateur, school or other sports team, or is a regular participant in sports or recreational activities, including, but not limited to, training and practice activities, that require strength, agility, flexibility, range of motion, speed or stamina. For purposes of this subdivision, "regular" means not less than three times per week;
(4) "Standing orders" means written protocols, recommendations and guidelines for treatment and care, furnished and signed by a health care provider specified under subdivision (1) of this section, to be followed in the practice of athletic training that may include, but not be limited to, (A) appropriate treatments for specific athletic injuries, (B) athletic injuries or other conditions requiring immediate referral to a licensed health care provider, and (C) appropriate conditions for the immediate referral to a licensed health care provider of injured athletes of a specified age or age group.
(5) "Commissioner" means the Commissioner of Public Health.

Sec. 20-65g. License required for practice and use of title. (a) Except as provided in section 20-65i, no person may practice athletic training unless such person is licensed pursuant to section 20-65j.
(b) No person may use the title "licensed Athletic Trainer" or make use of any title, words, letters or abbreviations indicating or implying that such person is licensed to practice athletic training unless such person is licensed pursuant to section 20-65k.

Sec. 20-65h. Referral to licensed health care provider. (a) Each person who practices athletic training under standing orders shall make a written or oral referral to a licensed health care provider of any athlete who has an athletic injury whose symptoms have not improved for a period of four days from the day of onset, or who has any physical or medical condition that would constitute a medical contraindication for athletic training or that may require evaluation or treatment beyond the scope of athletic training. The injuries or conditions requiring a referral under this subsection shall include, but not be limited to, suspected medical emergencies or illnesses, physical or mental illness and significant tissue or neurological pathologies.

(b) Each person who practices athletic training, but not under standing orders, may perform initial evaluation and temporary splinting and bracing of any athlete with an athletic injury and shall, without delay, make a written or oral referral of such athlete to a licensed health care provider. The limitations on the practice of athletic training set forth in this subsection shall not apply in the case of any athlete that is referred to such person by a licensed health care provider, provided such practice shall be limited to the scope of such referral.

Sec. 20-65i. Exceptions to licensing requirement. A license to practice athletic training shall not be required of: (1) A practitioner who is licensed or certified by a state agency and is performing services within the scope of practice for which such person is licensed or certified; (2) a student intern or trainee pursuing a course of study in athletic training, provided the activities of such student intern or trainee are performed under the supervision of a person licensed to practice athletic training and the student intern or trainee is given the title of "Athletic Trainer intern", or similar designation; (3) a person employed or volunteering as a coach of amateur sports who provides first aid for athletic injuries to athletes being coached by such person; (4) a person who furnishes assistance in an emergency; or (5) a person who acts as an Athletic Trainer in this state for less than thirty days per calendar year and who is licensed as an Athletic Trainer by another state or is certified by the Board of Certification, Inc., or its successor organization.

Sec. 20-65j. Qualifications for licensure. Licensure by endorsement. a) Except as provided in subsections (b) and (c) of this section, an applicant for a license to practice athletic training shall have:
(1) A baccalaureate degree from a regionally accredited institution of higher education, or from an institution of higher learning located outside of the United States that is legally chartered to grant postsecondary degrees in the country in which such institution is located; and (2) current certification as an Athletic Trainer by the Board of Certification, Inc., or its successor organization.
(b) An applicant for licensure to practice athletic training by endorsement shall present evidence satisfactory to the commissioner (1) of licensure or certification as an Athletic Trainer, or as a person entitled to perform similar services under a different designation, in another state having requirements for practicing in such capacity that are substantially similar to or higher than the requirements in force in this state, and (2) that there is no disciplinary action or unresolved complaint pending against such applicant.
(c) Prior to April 30, 2007, the commissioner shall grant a license as an Athletic Trainer to any applicant who presents evidence satisfactory to the commissioner of (1) the continuous providing of services as an Athletic Trainer since October 1, 1979, or (2) certification as an Athletic Trainer by the Board of Certification, Inc. or its successor organization.

Sec. 20-65k. License to practice athletic training. Fees. (a) The commissioner shall grant a license to practice athletic training to an applicant who presents evidence satisfactory to the commissioner of having met the requirements of section 20-65j. An application for such license shall be made on a form required by the commissioner. The fee for an initial license under this section shall be one hundred and ninety dollars.
(b) A license to practice athletic training may be renewed in accordance with the provisions of section 19a- 88, as amended, provided any licensee applying for license renewal shall maintain certification as an Athletic Trainer by the Board of Certification, Inc. , or its successor organization. The fee for such renewal shall be two hundred dollars.
(c) The department may, upon receipt of an application for athletic training licensure, accompanied by the licensure application fee of one hundred ninety dollars, issue a temporary permit to a person who has met the requirements of subsection (a) of section 20-65j, except that the applicant has not yet sat for or received the results of the athletic training certification examination administered by the Board of Certification, Inc., or its successor organization. Such temporary permit shall authorize the permittee to practice athletic training under the supervision of a person licensed pursuant to subsection (a) of this section. Such practice shall be limited to those settings where the licensed supervisor is physically present on the premises and is immediately available to render assistance and supervision, as needed, to the permittee. Such temporary permit shall be valid for a period not to exceed one hundred twenty calendar days after the date of completion

of the required course of study in athletic training and shall not be renewable. Such permit shall become void and shall not be reissued in the event that the permittee fails to pass the athletic training certification examination. No permit shall be issued to any person who has previously failed the athletic training certification examination or who is the subject of an unresolved complaint or pending professional disciplinary action. Violation of the restrictions on practice set forth in this section may constitute a basis for denial of licensure as an Athletic Trainer.

Sec. 20-65l. Regulations. Administration within available appropriations. The commissioner may adopt regulations, in accordance with chapter 54 of the general statutes, to carry out the provisions of this chapter. The commissioner shall administer the provisions of this chapter within available appropriations.

Sec. 20-65m. Disciplinary Action. Grounds. The Department of Public Health may take any action set forth in section 19a-17 of the general statutes if a person issued a license pursuant to section 20-65k of the general statutes, as amended by this act, fails to conform to the accepted standards of the Athletic Trainer profession, including, but not limited to, the following: Conviction of a felony; fraud or deceit in the practice of athletic training; illegal, negligent, incompetent or wrongful conduct in professional activities; emotional disorder or mental illness; physical illness including, but not limited to, deterioration through the aging process; abuse or excessive use of drugs, including alcohol, narcotics or chemicals; wilful falsification of entries into any patient record pertaining to athletic training; misrepresentation or concealment of a material fact in the obtaining or reinstatement of an Athletic Trainer license; or violation of any provisions of chapter 375a of the general statutes, or any regulation adopted under said chapter
375a. The Commissioner of Public Health may order a license holder to submit to a reasonable physical or mental examination if the license holder's physical or mental capacity to practice safely is the subject of an investigation. The commissioner may petition the superior court for the judicial district of Hartford to enforce such order or any action taken pursuant to section 19a-17 of the general statutes. Notice of any contemplated action under said section 19a-17, the cause of the action and the date of a hearing on the action shall be given and an opportunity for hearing afforded in accordance with the provisions of chapter
54 of the general statutes.

Proposed Changes

Sec. 20-65f. Definitions. As used in this chapter:

(1) "Athletic training" means the application or provision, (A) with the consent and under the direction of a health care provider, of(I)CLINICAL EVALUATION AND ASSESSMENT (ii) MANAGEMENT AND EMERGENCY CARE, TREATMENT, DISPOSITION, AND REHABILITATION OF ACUTE AND CHRONICATHLETIC INJURIES (III) THE APPLICATION OF PHYSICAL AGENTS OF HEAT, COLD, LIGHT, ELECTRIC STIMULATION, MANUAL THERAPY TECHNIQUES, AQUATIC THERAPY, SOUND, THERAPEUTIC EXERCISE OR OTHER AGENTS AS PRESCRIBED BY A HEALTH CARE PROVIDER ~~principles, methods and procedures of evaluation, prevention, treatment and rehabilitation of athletic injuries sustained by athletes, (B) appropriate preventative and supportive devices, temporary splinting and bracing, physical modalities of heat, cold, light massage, water, electric stimulation, sound, exercise and exercise equipment~~,(B)ILLNESS RECOGNITION (i) THAT IS ACCOMPANIED BY REFERRAL TO AND (ii) MANAGED AT THE DIRECTION OF A HEALTH CARE PROVIDER (C) THE APPLICATION OR PROVISION OF APPROPRIATE PREVENTATIVE AND SUPPORTIVE DEVICES, TEMPORARY SPLINTING, BRACING AND CASTING (D) the organization and administration of athletic training programs, (E) education and counseling to athletes, coaches, medical personnel and THE community in the area of the prevention and care of athletic injuries. AND (F) INJURY PREVENTION AND WELLNESS

CARE SERVICES THAT ARE DEVELOPED AND APPLIED TO ASYMPTOMATIC INDIVIDUALS.

For purposes of this subdivision, "health care provider" means a person licensed to practice medicine or surgery under chapter 370 of the general statutes, chiropractic under chapter 372 of the general statutes, podiatry under chapter 375 of the general statutes or naturopathy under chapter 373 of the general statutes;

(2) "Athletic injury" means any injury sustained by an athlete as a result of (A) AN INDIVIDUAL'S ~~such athlete's~~ participation in exercise, sports, games or recreational ACTIVITIES, OR (B) AN INDIVIDUAL WITH A COMPARABLE INJURY WHO HAS BEEN DETERMINED TO BE OTHERWISE HEALTHY AND ASYMPTOMATIC BY A HEALTH CARE PROVIDER ~~. requiring strength, agility, flexibility, range of motion, speed or stamina, or any comparable injury that prevents such athlete from participating in any such activities;~~

~~(3) "Athlete" means any person who is a member of any professional, amateur, school or other sports team, or is a regular participant in sports or recreational activities, including, but not limited to, training and practice activities, that require strength, agility, flexibility, range of motion, speed or stamina. For purposes of this subdivision, "regular" means not less than three times per week;~~

(3) "ILLNESS MEANS ANY DISEASE, DISORDER, SICKNESS OR AFFLICTION (A) THAT ARISES FROM OR IS A MANIFESTATION OF AN INDIVIDUAL'S PREPARATION FOR, PARTICIPATION IN, OR POST-RECOVERY IN EXERCISE, SPORTS GAMES OR RECREATIONAL ACTIVITIES, OR (B) OTHER CONDITIONS THAT MAY REQUIRE IMMEDIATE INTERVENTION BY THE ATHLETIC TRAINER DURING, PRIOR TO OR FOLLOWING AN INDIVIDUAL'S PARTICIPATION IN SUCH ACTIVITIES, UNDER THE CONSENT AND DIRECTION OF A HEALTH CARE PROVIDER. SUCH CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO EMERGENT SITUATIONS RELATED TO CARDIORESPIRATORY, THERMOREGULATION, MUSCULOSKELETAL, NEUROVASCULAR, AND ENDOCRINE SYSTEMS. ILLNESS DOES NOT INCLUDE ANY CONDITION THAT IS BEYOND THE SCOPE OF EDUCATION AND TRAINING OF AN ATHLETIC TRAINER.

(4) "WELLNESS CARE' MEANS SERVICES RELATED TO RISK MANAGEMENT AND INJURY PREVENTION, INCLUDING BIOMECHANICS, CONDITIONING, FLEXIBILITY, NUTRITION, STRENGTH TRAINING AND FITNESS.

(5) "WITH THE CONSENT AND UNDER THE DIRECTION OF A HEALTH CARE PROVIDER" MEANS (A) A WRITTEN PRESCRIPTION FROM A HEALTH PROVIDER FOR TREATMENT OF A SPECIFIC INDIVIDUAL, OR (B) THE ISSUANCE OF WRITTEN STANDING ORDERS THAT ARE FOLLOWED IN THE PRACTICE OF ATHLETIC TRAINING WHILE UNDER THE OVERSIGHT AND DIRECTION OF A HEALTH CARE PROVIDER.

(6) "WRITTEN Standing orders" means ~~written~~ protocols, recommendations ~~and~~ OR guidelines for treatment and care OF INDIVIDUALS PARTICIPATING IN PROFESSIONAL, AMATEUR, OR SCHOOL SPORTS OR RECREATIONAL ACTIVITIES THAT ARE (A) furnished and signed by a health care provider specified under subdivision (1) of this section, ~~to be~~ (B) followed ~~in the practice of athletic training~~ BY AN ATHLETIC TRAINER WHILE UNDER THE CONSENT AND DIRECTION OF A HEALTH CARE PROVIDER, (C) ANNUALLY REVIEWED AND RENEWED BY THE HEALTH CARE PROVIDER AND ATHLETIC TRAINER TO ENSURE QUALITY PATIENT CARE, AND (D) PROVIDE FOR AVAILABILITY OF COMMUNICATION BETWEEN THE HEALTH CARE PROVIDER AND THE ATHLETIC TRAINER. WRITTEN STANDING ORDERS SHALL ~~that may~~ include, but ARE not ~~be~~ limited to, (i) DELINEATION OR A PREDETERMINED PLAN FOR EMERGENCY SITUATIONS, (ii)

APPROPRIATE TREATMENTS FOR SPECIFIC INJURIES OR OTHER MEDICAL CONDITIONS, (iii) TREATMENT AND MANAGEMENT OF CONCUSSIONS, AND (iv) CONDITIONS NECESSITATING THE IMMEDIATE REFERRAL TO A HEALTH CARE PROVIDER OF INDIVIDUALS OR (v) ANY CONDITION THAT IS BEYOND THE ATHLETIC TRAINER'S SCOPE OF PRACTICE ~~(A) appropriate treatments for specific athletic injuries, (B) athletic injuries or other conditions requiring immediate referral to a licensed health care provider, and (C) appropriate conditions for the immediate referral to a licensed health care provider of injured athletes of a specified age or age group~~.

(5) "Commissioner" means the Commissioner of Public Health.

Sec. 20-65g. License required for practice and use of title. (a) Except as provided in section 20-65i, no person may practice athletic training unless such person is licensed pursuant to section 20-65j. (b) No person may use the title "licensed athletic trainer" or make use of any title, words, letters or abbreviations indicating or implying that such person is licensed to practice athletic training unless such person is licensed pursuant to section 20-65k.

Sec. 20-65h. Referral to licensed health care provider. (a) Each person who practices athletic training under standing orders shall make a written or oral referral to a licensed health care provider of any athlete who has an athletic injury whose symptoms have not improved for a period of four days from the day of onset, or who has any physical or medical condition that would constitute a medical contraindication for athletic training or that may require evaluation or treatment beyond the scope of athletic training. ~~The injuries or conditions requiring a referral under this subsection shall include, but not be limited to, suspected medical emergencies or illnesses, physical or mental illness and significant tissue or neurological pathologies.~~

(b) Each person who practices athletic training, but not under standing orders, ~~may perform initial evaluation~~ SHALL BE LIMITED TO PROVIDING ACUTE MANAGEMENT AND EMERGENCY CARE ~~and temporary splinting and bracing~~ of any athlete with an athletic injury. ~~and shall, without delay, make a written or oral referral of such athlete to a licensed health care provider.~~ The limitations on the practice of athletic training set forth in this subsection shall not apply in the case of any INDIVIDUAL ~~athlete~~ that is referred to such person by a licensed health care provider, provided such practice shall be limited to the scope of such referral.

Sec. 20-65i. Exceptions to licensing requirement. A license to practice athletic training shall not be required of: (1) A practitioner who is licensed or certified by a state agency and is performing services within the scope of practice for which such person is licensed or certified; (2) a student intern or trainee pursuing a course of study in athletic training, provided the activities of such student intern or trainee are performed under the supervision of a person licensed to practice athletic training and the student intern or trainee is given the title of "athletic trainer intern", or similar designation; (3) a person employed or volunteering as a coach of amateur sports who provides first aid for athletic injuries to athletes being coached by such person; (4) a person who furnishes assistance in an emergency; or (5) a person who acts as an athletic trainer in this state for less than thirty days per calendar year and who is licensed as an athletic trainer by another state or is certified by the Board of Certification, Inc., or its successor organization.

Sec. 20-65j. Qualifications for licensure. Licensure by endorsement. a) Except as provided in subsections (b) and (c) of this section, an applicant for a license to practice athletic training shall have: (1) A baccalaureate OR A GRADUATE degree from a regionally accredited institution of higher education, or from an institution of higher learning located outside of the United States that is legally chartered to grant postsecondary degrees in the country in which such institution is located; and (2) current certification as an athletic trainer by the Board of Certification, Inc. , or its successor organization.

(b) An applicant for licensure to practice athletic training by endorsement shall present evidence satisfactory to the commissioner (1) of licensure or certification as an athletic trainer, or as a person entitled to perform similar services under a different designation, in another state having requirements for practicing in such capacity that are substantially similar to or higher than the requirements in force in this state, and (2) that there is no disciplinary action or unresolved complaint pending against such applicant.

(c) Prior to April 30, 2007, the commissioner shall grant a license as an athletic trainer to any applicant who presents evidence satisfactory to the commissioner of (1) the continuous providing of services as an athletic trainer since October 1, 1979, or (2) certification as an athletic trainer by the Board of Certification, Inc. , or its successor organization.

Sec. 20-65k. License to practice athletic training. Fees. (a) The commissioner shall grant a license to practice athletic training to an applicant who presents evidence satisfactory to the commissioner of having met the requirements of section 20-65j. An application for such license shall be made on a form required by the commissioner. The fee for an initial license under this section shall be one hundred and ninety dollars.

(b) A license to practice athletic training may be renewed in accordance with the provisions of section 19a-88, as amended, provided any licensee applying for license renewal shall maintain certification as an athletic trainer by the Board of Certification, Inc., or its successor organization. The fee for such renewal shall be two hundred dollars.

(c) The department may, upon receipt of an application for athletic training licensure, accompanied by the licensure application fee of one hundred ninety dollars, issue a temporary permit to a person who has met the requirements of subsection (a) of section 20-65j, except that the applicant has not yet sat for or received the results of the athletic training certification examination administered by the Board of Certification, Inc., or its successor organization. Such temporary permit shall authorize the permittee to practice athletic training under the supervision of a person licensed pursuant to subsection (a) of this section. Such practice shall be limited to those settings where the licensed supervisor is physically present on the premises and is immediately available to render assistance and supervision, as needed, to the permittee. Such temporary permit shall be valid for a period not to exceed one hundred twenty calendar days after the date of completion of the required course of study in athletic training and shall not be renewable. Such permit shall become void and shall not be reissued in the event that the permittee fails to pass the athletic training certification examination. No permit shall be issued to any person who has previously failed the athletic training certification examination or who is the subject of an unresolved complaint or pending professional disciplinary action. Violation of the restrictions on practice set forth in this section may constitute a basis for denial of licensure as an athletic trainer.

Sec. 20-65l. Regulations. Administration within available appropriations. The commissioner may adopt regulations, in accordance with chapter 54 of the general statutes, to carry out the provisions of this chapter. The commissioner shall administer the provisions of this chapter within available appropriations.

Sec. 20-65m. Disciplinary Action. Grounds. The Department of Public Health may take any action set forth in section 19a-17 of the general statutes if a person issued a license pursuant to section 20-65k of the general statutes, as amended by this act, fails to conform to the accepted standards of the athletic trainer profession, including, but not limited to, the following: Conviction of a felony; fraud or deceit in the practice of athletic training; illegal, negligent, incompetent or wrongful conduct in professional activities; emotional disorder or mental illness; physical illness including, but not limited to, deterioration through the aging process; abuse or excessive use of drugs, including alcohol, narcotics or chemicals; wilful falsification of entries into any patient record pertaining to athletic training; misrepresentation or concealment of a material fact in the obtaining or

reinstatement of an athletic trainer license; or violation of any provisions of chapter 375a of the general statutes, or any regulation adopted under said chapter

375a. The Commissioner of Public Health may order a license holder to submit to a reasonable physical or mental examination if the license holder's physical or mental capacity to practice safely is the subject of an investigation. The commissioner may petition the superior court for the judicial district of Hartford to enforce such order or any action taken pursuant to section 19a-17 of the general statutes. Notice of any contemplated action under said section 19a-17, the cause of the action and the date of a hearing on the action shall be given and an opportunity for hearing afforded in accordance with the provisions of chapter 54 of the general statutes.

CH 6: Education & Training

This chapter outlines all current education, training, examination requirements and relevant certification requirements applicable to the profession of Athletic training

Introduction

All ATs must graduate from a nationally accredited Athletic Training Education Program and pass a national certification examination sponsored by the Board of Certification Inc. (BOC) which is the only national certifying agency for ATs. The BOC examination is the primary requirement for state licensure across the United States, including Connecticut. The BOC is accredited by the National Commission for Certifying Agencies (NCCA). The Institute for Credentialing Excellence, which establishes the NCCA standards, also accredits certifying/licensure examinations for the American Academy of Nurse Practitioners Certification Program, American Board for Occupational Health Nurses, and the American Physical Therapy Association.

Prior to sitting for the BOC certification examination, all examinees must successfully complete an accredited entry-level Athletic Training Education Program at the masters or baccalaureate level. Entry-level accreditation is maintained by the Commission on Accreditation of Athletic Training Education (CAATE) which establishes necessary standards. CAATE is sponsored by The American Academy of Family Physicians (AAFP), The American Academy of Pediatrics (AAP), the American Orthopedic Society for Sports Medicine (AOSSM) and the National Athletic Trainers' Association (NATA). The following programs in Connecticut are currently accredited by CAATE: Central Connecticut State University, Sacred Heart University, Southern Connecticut State University, Quinnipiac University and the University of Connecticut. All five universities offer the athletic training program at the undergraduate level.

Educationally, all accredited programs align their academic curriculum with the professional competencies established by the National Athletic Trainers' Association Executive Committee on Education (NATA-ECE). All CAATE accredited programs must ensure that they teach students and focus on **all of the competencies** set forth by the NATA-ECE. The appendix in this chapter outlines all of those competencies.

The NATA-ECE establishes the minimum requirements or *professional competencies* for a student's professional education and is made of a panel of experts for each of eight clinical practice content areas. These clinical practice content areas include:

- Evidenced- Based Practice
- Prevention and Health Promotion
- Clinical Examination and Assessment
- Acute Care of Injury and Illness
- Therapeutic Interventions
- Psychosocial Strategies and Referral
- Healthcare Administration
- Professional Development and Responsibility

Evidenced-Based Practice

The content area of evidenced-based practice incorporates 14 distinct competencies. The use of evidenced-based practice is currently emphasized throughout the health care system and it is designed to improve patient outcomes. This emphasis is consistent with almost all allied health and medical programs, making athletic training consistent with all similar professions.

Prevention and Health Promotion

Prevention and Health Promotion in many ways define the athletic training profession. ATs have historically been educated to prevent the occurrence or reoccurrence of injury or illness in clients and patients. This piece of the profession makes the Athletic Trainer a valuable part in preventing workplace injury. Forty-nine (49) specific competencies in the athletic training curriculum are focused on preventing injury and illness, many of which are not included as part of any other allied health profession educational program.

No allied health professional can be considered well-prepared to be involved in wellness education or training without a sound understanding of nutrition. ATs are required to demonstrate proficiency in nutrition and its application in maintaining a healthy lifestyle (Professional Competencies [PC]: PHP-32-47). ATs are expected to educate clients and patients on healthy eating habits across the life spectrum and in different levels of health and recognize the need for referral when education and intervention by professions who are experts in nutrition is warranted. Additionally, ATs are educated on identifying and managing through referrals eating disorders (PC: PHP-46, 47) and issues related to the use/abuse of performance enhancing and recreational drugs (PC: PHP – 48, 49). Four of the five accredited institutions in Connecticut require at least one nutrition course with three of the institutions requiring at least 6 credits in nutrition, including applied nutrition.

In addition, institutions offering athletic training education must instruct their students in the promotion of fitness. The entry-level Athletic Trainer is expected to perform fitness testing in the areas of body composition, flexibility, muscular strength, power, speed, agility, endurance, posture and ergonomics (PC: PHP-19, 26). The entry-level Athletic Trainer is educated to assess an individual's readiness for physical activity and then design a fitness program that meets the individual needs of the client and/or patient(PC: PHP-27, PHP-28, PHP-29, PHP-30, PHP-31). The five institutions sponsoring athletic training meet these national requirements through the inclusion of several courses within each of their respective curriculums. All five universities require specific courses in exercise physiology, biomechanics *and* applied courses in strength and conditioning, more than any other allied health care profession.

Additionally, the entry-level Athletic Trainer receives professional instruction in areas of health and wellness across the lifespan. The entry-level Athletic Trainer is expected to know and implement techniques to prevent Occupational disease transmission (PC: PHP- 7), and environmental illnesses (PC: PHP-10-13, 18). The entry-level Athletic Trainer is capable of monitoring blood glucose levels and asthma symptoms to make decisions on participation status and referral (PC: PHP-15, 16). Moreover, the entry-level Athletic Trainer is expected to understand and observe for conditions that can lead to sudden death during physical activity such as cardiac issues, traumatic brain injury, hyponatremia, exertional sickling, and anaphylactic shock. (PC: PHP 17 a-l). All five Connecticut institutions require essential coursework in medical issues fulfilling this requirement.

As a result, the Athletic Trainer is well-educated in the area of injury and illness prevention and health promotion. With the need to prevent injury and illness in the workplace or in individuals, the ATs can be a vital component of an overall prevention program. ATs are well-suited to help reduce health care costs and time lost due to injury.

Clinical Examination and Assessment

ATs are educated in the assessment of injuries and chronic conditions. Current educational requirements necessitate the entry-level Athletic Trainer to identify risk factors that could affect physical activity across the lifespan (PC: CE-3-5). In addition, the Athletic Trainer is educated on identifying disabilities that may affect the patient/client's ability to perform activity in her/his life (PC: CE-7, 9). As a result the Athletic Trainer is instructed to identify if a co-morbid condition exists which can adversely affect participation in physical activity and properly refer to another health care professional trained in treating these types of conditions.

The Athletic Trainer learns the importance of a medical history and the importance of identifying underlying conditions that may necessitate referral (PC: CE-13). As part of athletic training practice, education in acute and emergency care is part of the normal education process. Unlike similar allied health professions, ATs are taught to handle specific emergencies that can occur daily. ATs are taught to provide emergency medical care and can react accordingly.

In learning to perform a clinical examination, entry-level ATs are expected to be educated to perform functional assessments and selective tissue testing techniques. Beyond the orthopedic assessment techniques, the Athletic Trainer is expected to be proficient in the assessment of basic neurological, respiratory, cardiovascular/circulatory and abdominal injury and pathology (PC: CE 20f-20m). ATs are expected to interpret their findings and determine the nature of the pathology, then manage the conditions as necessary to include referral (PC: CE-21, 22).

Acute Care of Injuries and Illnesses

Athletic training clinical practice involves providing immediate care to individuals with injuries, illnesses and/or potentially life threatening conditions. Therefore, ATs must be proficient in evaluating, identifying and managing these conditions. This athletic training knowledge skill set is unique among similar allied health professions.

Athletic training education includes instruction on dealing with acute life-threatening conditions. The Athletic Trainer is able to assess vital signs, evaluate the findings and differentiate between normal and abnormal conditions (PC: AC-6, 7). Based on her/his findings, the entry-level Athletic Trainer has been educated to manage these conditions with airway adjuncts, CPR/AED, oxygen administration, cervical stabilization devices, spine boards, immobilization devices, asthma inhalers, and lesser therapeutic agents including epi-pens and glucagon injectors. (AC- 8-35). The appendix of this chapter includes position statements published by the NATA regarding Diabetic Emergencies, Disordered Eating, Sport Related Concussion, and Psychosocial Interventions.

ATs are able to identify the signs, intervention techniques and return to participation criteria for various physical conditions. Moreover, ATs are considered some of the foremost experts on concussion and environmental conditions such as hyperthermia. ATs are well-trained to deal with most acute medical conditions.

Therapeutic Interventions

ATs are taught a variety of methods to rehabilitate injuries and conditions. They are instructed on the pathophysiology of the healing process among different age groups and its application to employing treatment techniques (PC: TI-1-5, 7, 8). ATs are educated on treating pain (TI-2, 3). Through knowledge of surgical techniques, education in the pathophysiology of healing and exercise techniques, and considerable clinical experience, ATs are well-educated in the rehabilitation of orthopedic injury (TI-6).

As part of this educational process, the athletic training students are instructed to be able to assess patients in order to identify specific indications and contraindications while devising therapeutic interventions and develop plans for return to participation (TI-11, 12). In conducting therapeutic interventions ATs are expected to be able to employ therapeutic modalities such as ultrasound, electric stimulation, laser, short-wave diathermy and a variety of manual techniques, to facilitate healing, pain reduction and improved mobility. (TI- 13, 14, 15). For more detailed information please see the 5th Edition Education Competencies as outlined by the Professional Education Committee (now the NATA-ECE) n the Appendix of this chapter.

Psychosocial Interventions

ATs are educated in dealing with the emotional needs of their patients and clients. Entry-level ATs are expected to be able to identify patients in need of mental healthcare, including but not limited to disordered eating and other psychological concerns and refer them to the appropriate health professional (PS-12, 13). This is enabled through learning of the various mental health care providers such as psychiatrists, counselors, and social workers (PS-11). Please see Appendix for position statements on Mental Health and Disordered Eating published by the National Athletic Trainers' Association.

Chapter 6: Appendix A _ Position Statements Regarding Diabetes, Disordered Eating, Psychosocial Intervention and Sport Related Concussion:

This appendix highlights position and consensus statements relevant to this section of the document and highlights some of the education and expertise possessed by Athletic Trainers. For a full list of position statements and publications by the NATA please visit: http://www.nata.org/membership/membership-benefits/athletic-training-publications

Diabetes, Disordered Eating, Psychosocial Intervention and Sport Related Concussion

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Diabetes

Journal of Athletic Training 2007; 42(4):536–545

position statement

National Athletic Trainers' Association Position Statement: Management of the Athlete with Type 1 Diabetes Mellitus

Carolyn C. Jimenez, PhD, ATC*; Matthew H. Corcoran, MD, CDE†; James T. Crawley, MEd, PT, ATC‡; W. Guyton Hornsby, Jr, PhD, CDE ; Kimberly S. Peer, Eddy, LATC¶; Rick D. Philip, MBA, MEd, ATC#; Michael C. Riddell, PhD**

*West Chester University, West Chester, PA; †Lehigh Valley Hospital, Allentown, PA; ‡Dominican College, Orangeburg, NY; West Virginia University, Morgantown, WV; ¶Kent State University, Kent, OH; #Animas Corp, West Chester, PA; **York University, Toronto, ON

Abstract

Objective: To present recommendations for the certified athletic trainer in the management of type 1 diabetes in the athlete.

Background: In managing diabetes, the most important goal is to keep blood glucose levels at or as close to normal levels as possible without causing hypoglycemia. This goal requires the maintenance of a delicate balance among hypoglycemia, euglycemia, and hyperglycemia, which is often more challenging in the athlete due to the demands of physical activity and competition. However, effectively managing blood glucose, lipid,

and blood pressure levels is necessary to ensuring the long-term health and well-being of the athlete with diabetes.

Recommendations: These recommendations are intended to provide the certified athletic trainer participating in the management of an athlete with type 1 diabetes mellitus with the specific knowledge and problem-solving skills needed. Athletic trainers have more contact with the athlete with diabetes than most members of the diabetes management team do and so must be prepared to assist the athlete as required.

Full Text: **http://www.nata.org/sites/default/files/MgmtOfAthleteWithType1DiabetesMellitus.pdf**

Disordered Eating

Journal of Athletic Training 2008; 43(1):80–108

g by the National Athletic Trainers' Association, Inc. www.nata.org/jat

position statement

National Athletic Trainers' Association Position Statement: Preventing, Detecting, and Managing Disordered Eating in Athletes

Christine M. Bonci, MS, ATC*; Leslie J. Bonci, MPH, RD, LDN, CSSDt; Lorita R. Granger, ATC`; Craig L. Johnson, PhD‰;

Robert M. Malina, PhD, FACSM*I; Leslie W. Milne, MD"; Randa R. Ryan, PhD*; Erin M. Vanderbunt, MS, ATC#

*The University of Texas at Austin, Austin, TX; 3The University of Pittsburgh Medical Center, Pittsburgh, PA; 4University of California at Los Angeles, Los Angeles, CA; 1Laureate Psychiatric Hospital, Tulsa, OK; ITarleton State University, Stephenville, TX; "Massachusetts General Hospital, Boston, MA; #Paradise Valley Community College, Phoenix, AZ

Abstract:

Objective: To present recommendations for the prevention, detection, and comprehensive management of disordered eating (DE) in athletes.

***Background*:** Athletes with DE rarely self-report their symptoms. They tend to deny the condition and are often resistant to referral and treatment. Thus, screenings and interventions must be handled skillfully by knowledgeable professionals to obtain desired outcomes. Certified athletic trainers have the capacity and responsibility to play active roles as integral members of the health care team. Their frequent daily interactions with athletes help to facilitate the level of medical surveillance necessary for early detection, timely referrals, treatment follow-through, and compliance.

***Recommendations*:** These recommendations are intended to provide certified athletic trainers and others participating in the health maintenance and performance enhancement of athletes with specific knowledge and problem-solving skills to better prevent, detect, and manage DE. The individual biological, psychological, sociocultural, and familial factors for each athlete with DE result in widely different responses to intervention strategies, challenging the best that athletics programs have to offer in terms of resources and expertise. The complexity, time intensiveness, and expense of managing DE necessitate an interdisciplinary approach representing medicine, nutrition, mental health, athletic training, and

athletics administration in order to facilitate early detection and treatment, make it easier for symptomatic athletes to ask for help, enhance the potential for full recovery, and satisfy medicolegal requirements. Of equal importance is establishing educational initiatives for preventing DE.

FullText: **http://www.nata.org/sites/default/files/PreventingDetectingAndManagingDisorderedEating.pdf**

Sport Related Concussion

Journal of Athletic Training 2014;49(2):245–265 doi: 10.4085/1062-6050-49.1.07

position statement

National Athletic Trainers' Association Position Statement: Management of Sport Concussion

Steven P. Broglio, PhD, ATC*; Robert C. Cantu, MD†; Gerard A. Gioia, PhD‡; Kevin M. Guskiewicz, PhD, ATC, FNATA, FACSM§; Jeffrey Kutcher, MD*; Michael Palm, MBA, ATC||; Tamara C. Valovich McLeod, PhD, ATC, FNATA¶

*University of Michigan, Ann Arbor; †Department of Surgery, Emerson Hospital, Concord, MA; ‡Division of Pediatric Neuropsychology, Children's National Medical Center, Washington, DC; §Department of Exercise and Sport Science, University of North Carolina, Chapel Hill; ||Athletico Physical Therapy, Oak Brook, IL; ¶Athletic Training Program, A.T. Still University, Mesa, AZ

Abstract:

Objective: To provide athletic trainers, physicians, and other health care professionals with best-practice guidelines for the management of sport-related concussions.

Background: An estimated 3.8 million concussions occur each year in the United States as a result of sport and physical activity. Athletic trainers are commonly the first medical providers available onsite to identify and evaluate these injuries.

Recommendations: The recommendations for concussion management provided here are based on the most current research and divided into sections on education and prevention, documentation and legal aspects, evaluation and return to play, and other considerations.

Full Text: ***http://www.nata.org/sites/default/files/Concussion_Management_Position_Statement.pdf***

Journal of Athletic Training 2013;48(5):716–720 doi: 10.4085/1062-6050-48.4.13

consensus statement

Inter-Association Recommendations for Developing a Plan to Recognize and Refer Student-Athletes With Psychological Concerns at the Collegiate Level: An Executive Summary of a Consensus Statement

Timothy L. Neal, MS, ATC (Chair)*; Alex B. Diamond, DO, MPH†; Scott Goldman, PhD‡; David Klossner, PhD, LAT, ATC§; Eric D. Morse, MD, DFAPAjj; David E. Pajak, MBA, DRM, ARM*; Margot Putukian, MD, FACSM¶; Eric F. Quandt, JD#; John P. Sullivan, PsyD; Cory Wallack, PhD*; Victor Welzant, PsyD††**

*Syracuse University, NY; †Vanderbilt University, Nashville, TN; ‡University of Arizona, Tucson; §National Collegiate Athletic Association, Indianapolis, IN; jjCarolina Performance, Raleigh, NC; ¶Princeton University, NJ; #Scharf Banks Marmor, LLC, Chicago, IL; **Clinical & Sports Consulting Services, Providence, RI; ††The International Critical Incident Stress Foundation, Inc, Ellicott City, MD

Purpose: The full range of mental health concerns found in the general student population can also be seen in student-athletes attending a university or college. The National Athletic Trainers' Association formed a work group for the purpose of establishing recommendations on developing a plan for the recognition and referral of collegiate student-athletes with psychological concerns.

Full Text: http://www.nata.org/sites/default/files/PsychologicalConcerns.pdf

Introduction

This document is to be used as a guide by administrative, academic, and clinical program personnel when structuring all facets of the education experience for students. Educational program personnel should recognize that the Competencies are the ***minimum requirements*** for a student's professional education. Athletic training education programs are encouraged to exceed these minimums to provide their students with the highest quality education possible. In addition, programs should employ innovative, student-centered teaching and learning methodologies to connect the classroom, laboratory and clinical settings whenever possible to further enhance professional preparation.

The acquisition and clinical application of knowledge and skills in an education program must represent a defined yet flexible program of study. Defined in that knowledge and skills must be accounted for in the more formal classroom and laboratory educational experience. Flexible in that learning opportunities are everywhere. Behaviors are identified, discussed, and practiced throughout the educational program. Whatever the sequence of learning, patient safety is of prime importance; students must demonstrate competency in a particular task before using it on a patient. This begins a cycle of learning, feedback, refinement, and more advanced learning. Practice with concepts by gaining clinical experience with real life applications readies the student for opportunities to demonstrate decision-making and skill integration ability, Clinical Integrated Proficiencies (CIP). CIPs are designed to measure of real life application. Students should be assessed in their performance of CIPs on actual patients. If this is not possible, standardized/simulated patients or scenarios should be used to measure student proficiency.

Also, inherent in this document is the understanding that a comprehensive basic and applied science background is needed for students to develop appropriate levels of professional competence in the discipline-specific knowledge and skills described in this document.

All facets of the educational programs must incorporate current knowledge and skills that represent best practice. Programs must select such content following careful review of the research literature and consideration of the needs for today's entry-level practitioner. Because the knowledge within a profession is dynamic, information regarding current best practice is fluid and requires on-going examination and reflection.

Summary of Major Changes included in 5th Edition

- The 12 content areas of the previous edition have been reorganized into 8 to eliminate redundancies and better reflect current practice.
  - The pathology content area was eliminated, and these competencies are addressed throughout other content areas.
  - The risk management/prevention and nutritional considerations content areas were combined to form the new **Prevention and Health Promotion (PHP)** content area. This change was made to reflect the current emphasis on prevention and wellness across health care and the lifespan.
  - The orthopedic clinical exam/assessment and medical conditions/disabilities content areas were combined to form the **Clinical Examination and Assessment (CE)** content area. This change was made to emphasize that athletic trainers use one standard clinical examination model that changes based on the findings and needs of the patient.
  - The therapeutic modalities, conditioning and rehabilitative exercise and pharmacology content areas were combined to form one content area that incorporates all aspects of **Therapeutic Interventions (TI)**.
  - A new content area was added to provide students with the basic knowledge and skills related to **Evidence-Based Practice (EBP).** The importance of using EBP concepts and principles to improve

patient outcomes is being emphasized throughout the health care system and is reflected within this new content area.

- The **Acute Care (AC)** content area has been substantially revised to reflect contemporary practice.
  - The addition of skill in assessing rectal temperature, oxygen saturation, blood glucose levels, and use of a nebulizer and oropharyngeal and nasopharyngeal airways reflects recommendations of NATA position statements that are published or in development.
- The content areas now integrate knowledge and skills, instead of separate sections for cogni- tive and psychomotor competencies. The action verb used in each competency statement identifies the expected outcome. In some places, knowledge is the expectation and not skill acquisition. For example, acute care competency #9 (AC-9) requires that athletic training students be knowledgeable about the various types of airway adjuncts including oropharyn- geal airways (OPA), nasopharyngeal airways (NPO) and supraglottic airways. However, the accompanying skill competency AC-10 does not require skill acquisition in the use of the supraglottic airways.
- The **Clinical Integration Proficiencies (CIP)**, which are ideally assessed in the context of real patient care, have been removed from the individual content areas and reorganized into a separate section. This reorganization reflects clinical practice and demonstrates the global nature of the Proficiencies. For example, rather than just assessing students' ability to examine a real patient in a real clinical setting, the new CIPs require that students demonstrate the ability to examine and diagnose a patient, provide appropriate acute/emergent care, plan and implement appropriate therapeutic interventions, and make decisions pertaining to safe return to participation. This approach to student assessment better reflects the comprehensive nature of real patient care.

Comparison of the Role Delineation Study/Practice Analysis, 6th Ed and the Competencies

The Role Delineation Study/Practice Analysis, 6th ed (RDS/PA) of the Board of Certification serves as the blue print for the certification examination. As such, the Competencies must include all tasks (and related knowledge and skills) included in the RDS/PA. Working with the BOC, we compared the RDS/PA with this version of the Competencies and can confidently state that the content of the RDS /PA is incorporated in this version.

5th Edition Competencies — Project Team Members

Professional Education Council: **Lou Fincher**, EdD, ATC- Chair

David W. Carr, PhD, ATC; **Ron Courson**, ATC, PT, NREMT; **Jolene Henning**, EdD, ATC;

Marsha Grant-Ford, PhD, ATC; **Luzita Vela**, PhD, ATC; **Alice Wilcoxson**, PhD, ATC, PT

Risk Management & Injury Prevention Team Leader: **Lou Fincher**	**Orthopedic Clinical Assessment & Assessment** Team Leader: **Jolene Henning**	**Medical Conditions & Disabilities** Team Leader: **David Carr**
Doug Casa, PhD, ATC, FACSM *University of Connecticut*	**Sara Brown**, MS, ATC *Boston University*	**Micki Cuppett**, EdD, ATC *University of South Florida*
Paula Maxwell, PhD, ATC *James Madison University*	**Wes Robinson**, ATC *University of Maryland*	**Randy Cohen**, ATC, DPT *University of Arizona*
	Jim Schilling, PhD, ATC, CSCS *University of Southern Maine*	**Doug Gregory**, MD, FAAP *Suffolk, VA*
	Chad Starkey, PhD, ATC *Ohio University*	**Katie Walsh**, EdD, ATC *East Carolina University*

Acute Care of Injuries & Illnesses	Therapeutic Modalities/Conditioning Rehabilitative Exercise	Pharmacology
Team Leader: **Ron Courson**	Team Leaders: **Luzita Vela** & **Marsha Grant Ford**	Team Leader: **David Carr**
Dean Crowell, MA, ATC, NREMT-B *Athens Ortho Clinic*	**Craig Denegar**, PhD, ATC, PT *University of Connecticut*	**Micki Cuppett**, EdD, ATC *University of South Florida*
Gianluca Del Rossi, PhD, ATC *University of South Florida*	**Lennart Johns**, PhD, ATC *Quinnipiac University*	**Doug Gregory**, MD, FAAP *Suffolk, VA*
Michael Dillon, ATC *University of Georgia*	**Ken Knight**, PhD, ATC, FACSM *Brigham Young University*	**Joel Houglum**, PhD *South Dakota State University*
Jim Ellis, MD *Greenville, SC*	**Sayers John Miller**, PhD, ATC, PT *Pennsylvania State University*	**Greg Keuter**, ATC *SportPharm*
Francis Feid, Med, MS, ATC, CRNA *Pittsburgh, PA*	**Mark Merrick**, PhD, ATC *Ohio State University*	**Diedre Leaver Dunn**, PhD, ATC *University of Alabama*
Kevin Guskiewicz, PhD, ATC *UNC-Chapel Hill*	**Cindy Trowbridge**, PhD, ATC, LAT *University of Texas – Arlington*	
Glen Henry, MS, NREMT-P *Athens Technical College*	**Craig Voll**, ATC *Purdue University*	
MaryBeth Horodyski, EdD, ATC *University of Florida*		
Jim Kyle, MD *Morgantown, WV*		
Robb Rehberg, PhD, ATC, NREMT *William Paterson University*		
Erik Swartz, PhD, ATC *University of New Hampshire*		

Psychosocial Intervention & Referral	Nutritional Aspects of Injuries & Illnesses	Health Care Administration
Team Leader: **Alice Wilcoxson**	Team Leader: **Alice Wilcoxson**	Team Leader: **Jolene Henning**

Megan D. Granquist, PhD, ATC *University of La Verne* **J. Jordan Hamson-Utley**, PhD, ATC *Weber State University* **Laura J. Kenow**, MS, ATC *Linfield College* **Diane Wiese-Bjornstal** *University of Minnesota*	**Leslie Bonci**, RD, MPH, LDN *University of Pittsburgh* **Tina Bonci**, ATC *University of Texas* **Rachel Clark**, RD, CSSD *Purdue University* **Paula Sammarone Turocy**, EdD, ATC *Duquesne University* **Dawn Weatherwax-Fall**, RD, CSSD, LD, ATC, CSCS *Sports Nutrition 2Go!* **Ingrid Skoog**, RD, CSSD *Oregon State University*	**Kathy Dieringer**, EdD, ATC *Sports Med, Denton* **Linda Mazzoli**, MS, ATC, PTA *Cooper Bone & Joint Institute* **Rich Ray**, EdD, ATC *Hope College* **James Shipp**, MA, ATC *Towson University*
Professional Development Team Leader: **Marsha Grant-Ford**	**Evidence-Based Practice** Team Leader: **Luzita Vela**	
Bill Biddington, EdD, ATC *California University of Pennsylvania*	**Craig Denegar**, PhD, ATC, PT *University of Connecticut* **Todd Evans**, PhD, ATC *University of Northern Iowa* **Jay Hertel**, PhD, ATC *University of Virginia* **Jennifer Hootman**, PhD, ATC *Centers for Disease Control & Prevention* **Lori Michener**, PT, PhD, ATC, SCS *Virginia Commonwealth University* **John Parsons**, PhD, ATC *AT Still University* **Eric Sauers**, PhD, ATC, FNATA *AT Still University* **Bonnie Van Lunen**, PhD, ATC *Old Dominion University*	

Foundational Behaviors of Professional Practice

These basic behaviors permeate professional practice and should be incorporated into instruction and assessed throughout the educational program.

Primacy of the Patient

- Recognize sources of conflict of interest that can impact the client's/patient's health.
- Know and apply the commonly accepted standards for patient confidentiality.
- Provide the best healthcare available for the client/patient.
- Advocate for the needs of the client/patient.

Team Approach to Practice

- Recognize the unique skills and abilities of other healthcare professionals.
- Understand the scope of practice of other healthcare professionals.
- Execute duties within the identified scope of practice for athletic trainers.
- Include the patient (and family, where appropriate) in the decision-making process.
- Work with others in effecting positive patient outcomes.

Legal Practice

- Practice athletic training in a legally competent manner.
- Identify and conform to the laws that govern athletic training.
- Understand the consequences of violating the laws that govern athletic training.

Ethical Practice

- Comply with the NATA's *Code of Ethics* and the BOC's *Standards of Professional Practice*.
- Understand the consequences of violating the NATA's *Code of Ethics* and BOC's *Standards of Professional Practice*.
- Comply with other codes of ethics, as applicable.

Advancing Knowledge

- Critically examine the body of knowledge in athletic training and related fields.
- Use evidence-based practice as a foundation for the delivery of care.
- Appreciate the connection between continuing education and the improvement of athletic training practice.
- Promote the value of research and scholarship in athletic training.
- Disseminate new knowledge in athletic training to fellow athletic trainers, clients/patients, other healthcare professionals, and others as necessary.

Cultural Competence

- Demonstrate awareness of the impact that clients'/patients' cultural differences have on their attitudes and behaviors toward healthcare.
- Demonstrate knowledge, attitudes, behaviors, and skills necessary to achieve optimal health outcomes for diverse patient populations.
- Work respectfully and effectively with diverse populations and in a diverse work environment.

Professionalism

- Advocate for the profession.
- Demonstrate honesty and integrity.
- Exhibit compassion and empathy.
- Demonstrate effective interpersonal communication skills.

Evidence-Based Practice (EBP)

Evidence-based practitioners incorporate the best available evidence, their clinical skills, and the needs of the patient to maximize patient outcomes. An understanding of evidence-based practice concepts and their application is essential to sound clinical decision-making and the critical examination of athletic training practice.

Practicing in an evidence-based manner should not be confused with conducting research. While conducting research is important to the profession of athletic training, developing the ability to conduct a research project is not an expectation of professional education. This section focuses on the knowledge and skills necessary for entry-level athletic trainers to use a systematic approach to ask and answer clinically relevant questions that affect patient care by using review and application of existing research evidence. One strategy, among others, is to use a five-step approach: 1) creating a clinically relevant question; 2) searching for the best evidence; 3) critically analyzing the

evidence; 4) integrating the appraisal with personal clinical expertise and patients' preferences; and 5) evaluating the performance or outcomes of the actions. Each competency listed below is related to such a systematic approach and provides the building blocks for em- ploying evidence-based practice. Other specific evidence-based practice competencies have also been included in appropriate content areas.

All items listed in parentheses (eg) are intended to serve as examples and are not all encompassing or the only way to satisfy the competency.

Knowledge and Skills

EBP-1. Define evidence-based practice as it relates to athletic training clinical practice.

EBP-2. Explain the role of evidence in the clinical decision making process.

EBP-3. Describe and differentiate the types of quantitative and qualitative research, research components, and levels of research evidence.

EBP-4. Describe a systematic approach (eg, five step approach) to create and answer a clinical question through review and application of existing research.

EBP-5. Develop a relevant clinical question using a pre-defined question format (eg, PICO= Patients, Intervention, Comparison, Outcomes; PIO = Patients, Intervention, Outcomes).

EBP-6. Describe and contrast research and literature resources including databases and online critical appraisal libraries that can be used for conducting clinically-relevant searches.

EBP-7. Conduct a literature search using a clinical question relevant to athletic training practice using search techniques (eg, Boolean search, Medical Subject Headings) and resources appropriate for a specific clinical question.

EBP-8. Describe the differences between narrative reviews, systematic reviews, and meta- analyses.

EBP-9. Use standard criteria or developed scales (eg, Physiotherapy Evidence Database Scale [PEDro], Oxford Centre for Evidence Based Medicine Scale) to critically appraise the structure, rigor, and overall quality of research studies.

EBP-10. Determine the effectiveness and efficacy of an athletic training intervention utilizing evidence-based practice concepts.

EBP-11. Explain the theoretical foundation of clinical outcomes assessment (eg, disablement, health-related quality of life) and describe common methods of outcomes assessment in athletic training clinical practice (generic, disease-specific, region-specific, and dimension-specific outcomes instruments).

EBP-12. Describe the types of outcomes measures for clinical practice (patient-based and clinician-based) as well as types of evidence that are gathered through outcomes assessment (patient-oriented evidence versus disease-oriented evidence).

EBP-13. Understand the methods of assessing patient status and progress (eg, global rating of change, minimal clinically important difference, minimal detectable difference) with clinical outcomes assessments.

EBP-14. Apply and interpret clinical outcomes to assess patient status, progress, and change using psychometrically sound outcome instruments.

Prevention and Health Promotion (PHP)

Athletic trainers develop and implement strategies and programs to prevent the incidence and/or severity of injuries and illnesses and optimize their clients'/patients' overall health and qual- ity of life. These strategies and programs also incorporate the importance of nutrition and physical activity in maintaining a healthy lifestyle and in preventing chronic disease (eg, diabetes, obesity, cardiovascular disease).

Knowledge and Skills

General Prevention Principles

PHP-1. Describe the concepts (eg, case definitions, incidence versus prevalence, exposure assessment, rates) and uses of injury and illness surveillance relevant to athletic training.
PHP-2. Identify and describe measures used to monitor injury prevention strategies (eg, injury rates and risks, relative risks, odds ratios, risk differences, numbers needed to treat/harm).
PHP-3. Identify modifiable/non-modifiable risk factors and mechanisms for injury and illness.

PHP-4. Explain how the effectiveness of a prevention strategy can be assessed using clinical outcomes, surveillance, or evaluation data.
PHP-5. Explain the precautions and risk factors associated with physical activity in persons with common congenital and acquired abnormalities, disabilities, and diseases.
PHP-6. Summarize the epidemiology data related to the risk of injury and illness associated with participation in physical activity.

Prevention Strategies and Procedures

PHP-7. Implement disinfectant procedures to prevent the spread of infectious diseases and to comply with Occupational Safety and Health Administration (OSHA) and other federal regulations.
PHP-8. Identify the necessary components to include in a preparticipation physical examination as recommended by contemporary guidelines (eg, American Heart Association, American Academy of Pediatrics Council on Sports Medicine & Fitness).
PHP-9. Explain the role of the preparticipation physical exam in identifying conditions that might predispose the athlete to injury or illness.
PHP-10. Explain the principles of the body's thermoregulatory mechanisms as they relate to heat gain and heat loss.
PHP-11. Explain the principles of environmental illness prevention programs to include acclimation and conditioning, fluid and electrolyte replacement requirements, proper practice and competition attire, hydration status, and environmental assessment (eg, sling psychrometer, wet bulb globe temperatures [WBGT], heat index guidelines).
PHP-12. Summarize current practice guidelines related to physical activity during extreme weather conditions (eg, heat, cold, lightning, wind).
PHP-13. Obtain and interpret environmental data (web bulb globe temperature [WBGT], sling psychrometer, lightning detection devices) to make clinical decisions regarding the scheduling, type, and duration of physical activity.
PHP-14. Assess weight loss and hydration status using weight charts, urine color charts, or specific gravity measurements to determine an individual's ability to participate in physical activity in a hot, humid environment.
PHP-15. Use a glucometer to monitor blood glucose levels, determine participation status, and make referral decisions.
PHP-16. Use a peak-flow meter to monitor a patient's asthma symptoms, determine participation status, and make referral decisions.
PHP-17. Explain the etiology and prevention guidelines associated with the leading causes of sudden death during physical activity, including but not limited to:
PHP-17a. Cardiac arrhythmia or arrest

PHP-17b. Asthma

PHP-17c. Traumatic brain injury

PHP-17d. Exertional heat stroke

PHP-17e. Hyponatremia

PHP-17f. Exertional sickling

PHP-17g. Anaphylactic shock

PHP-17h. Cervical spine injury

PHP-17i. Lightning strike

PHP-18. Explain strategies for communicating with coaches, athletes, parents, administrators, and other relevant personnel regarding potentially dangerous conditions related to the environment, field, or playing surfaces.

PHP-19. Instruct clients/patients in the basic principles of ergodynamics and their relationship to the prevention of illness and injury.

Protective Equipment and Prophylactic Procedures

PHP-20. Summarize the basic principles associated with the design, construction, fit, maintenance, and reconditioning of protective equipment, including the rules and regulations established by the associations that govern its use.

PHP-21. Summarize the principles and concepts related to the fabrication, modification, and appropriate application or use of orthotics and other dynamic and static splints.

PHP-22. Fit standard protective equipment following manufacturers' guidelines.

PHP-23. Apply preventive taping and wrapping procedures, splints, braces, and other special protective devices.

Fitness/Wellness

PHP-24. Summarize the general principles of health maintenance and personal hygiene, including skin care, dental hygiene, sanitation, immunizations, avoidance of infectious and contagious diseases, diet, rest, exercise, and weight control.

PHP-25. Describe the role of exercise in maintaining a healthy lifestyle and preventing chronic disease.

PHP-26. Identify and describe the standard tests, test equipment, and testing protocols that are used for measuring fitness, body composition, posture, flexibility, muscular strength, power, speed, agility, and endurance.

PHP-27. Compare and contrast the various types of flexibility, strength training, and cardiovas- cular conditioning programs to include expected outcomes, safety precautions, hazards, and contraindications.

PHP-28. Administer and interpret fitness tests to assess a client's/patient's physical status and readiness for physical activity.

PHP-29. Explain the basic concepts and practice of fitness and wellness screening.

PHP-30. Design a fitness program to meet the individual needs of a client/patient based on the results of standard fitness assessments and wellness screening.

PHP-31. Instruct a client/patient regarding fitness exercises and the use of muscle strengthening equipment to include correction or modification of inappropriate, unsafe, or danger- ous lifting techniques.

General Nutrition Concepts

PHP-32. Describe the role of nutrition in enhancing performance, preventing injury or illness, and maintaining a healthy lifestyle.

PHP-33. Educate clients/patients on the importance of healthy eating, regular exercise, and general preventative strategies for improving or maintaining health and quality of life.

PHP-34. Describe contemporary nutritional intake recommendations and explain how these recommendations can be used in performing a basic dietary analysis and providing appropriate general dietary recommendations.

PHP-35. Describe the proper intake, sources of, and effects of micro- and macronutrients on performance, health, and disease.

PHP-36. Describe current guidelines for proper hydration and explain the consequences of improper fluid/electrolyte replacement.

PHP-37. Identify, analyze, and utilize the essential components of food labels to determine the content, quality, and appropriateness of food products.

PHP-38. Describe nutritional principles that apply to tissue growth and repair.

PHP-39. Describe changes in dietary requirements that occur as a result of changes in an individual's health, age, and activity level.

PHP-40. Explain the physiologic principles and time factors associated with the design and planning of pre-activity and recovery meals/snacks and hydration practices.

PHP-41. Identify the foods and fluids that are most appropriate for pre-activity, activity, and recovery meals/snacks.

Weight Management and Body Composition

PHP-42. Explain how changes in the type and intensity of physical activity influence the energy and nutritional demands placed on the client/patient.

PHP-43. Describe the principles and methods of body composition assessment to assess a client's/patient's health status and to monitor changes related to weight management, strength training, injury, disordered eating, menstrual status, and/or bone density status.

PHP-44. Assess body composition by validated techniques.

PHP-45. Describe contemporary weight management methods and strategies needed to support activities of daily life and physical activity.

Disordered Eating and Eating Disorders

PHP-46. Identify and describe the signs, symptoms, physiological, and psychological responses of clients/patients with disordered eating or eating disorders.

PHP-47. Describe the method of appropriate management and referral for clients/patients with disordered eating or eating disorders in a manner consistent with current practice guidelines.

Performance Enhancing and Recreational Supplements and Drugs

PHP-48. Explain the known usage patterns, general effects, and short- and long-term adverse effects for the commonly used dietary supplements, performance enhancing drugs, and recreational drugs.

PHP-49. Identify which therapeutic drugs, supplements, and performance-enhancing substances are banned by sport and/or occupational organizations in order to properly advise clients/patients about possible disqualification and other consequences.

Clinical Examination and Assessment (CE)

Athletic trainers must possess strong clinical examination skills in order to accurately assessment and effectively treat their patients. The clinical examination is an on-going process, repeated to some extent each time the patient is treated. The development of these skills requires a thorough understanding of anatomy, physiology, and biomechanics. Athletic trainers must also apply clini- cal-reasoning skills throughout the physical examination process in order to assimilate data, select the appropriate assessment tests, and formulate a differential assessment.

The competencies identified in this section should be considered in the context of the compe- tencies identified in other domains. For example, the knowledge and skills associated with acute care and therapeutic interventions, while applicable for this domain, are not repeated here.

The clinical examination process is comprehensive and may include a review of the systems and regions identified below based on the patient's relevant history and examination findings. Con- sideration must also be given to the

patient's behavioral and cognitive status and history; competencies addressing this content area are included elsewhere.

Systems and Regions

a. Musculoskeletal
b. Integumentary
c. Neurological
d. Cardiovascular
e. Endocrine
f. Pulmonary
g. Gastrointestinal
h. Hepatobiliary
i. Immune
j. Renal and urogenital
k. The face, including maxillofacial region and mouth
l. Eye, ear, nose, and throat

Knowledge and Skills

CE-1. Describe the normal structures and interrelated functions of the body systems.

CE-2. Describe the normal anatomical, systemic, and physiological changes associated with the lifespan.

CE-3. Identify the common congenital and acquired risk factors and causes of musculoskeletal injuries and common illnesses that may influence physical activity in pediatric, adolescent, adult, and aging populations.

CE-4. Describe the principles and concepts of body movement, including normal osteokinematics and arthrokinematics.

CE-5. Describe the influence of pathomechanics on function.

CE-6. Describe the basic principles of diagnostic imaging and testing and their role in the diagnostic process.

CE-7. Identify the patient's participation restrictions (disabilities) and activity limitations (functional limitations) to determine the impact of the condition on the patient's life.

CE-8. Explain the role and importance of functional outcome measures in clinical practice and patient health-related quality of life.

CE-9. Identify functional and patient-centered quality of life outcome measures appropriate for use in athletic training practice.

CE-10. Explain diagnostic accuracy concepts including reliability, sensitivity, specificity, likelihood ratios, prediction values, and pre-test and post-test probabilities in the selection and interpretation of physical examination and diagnostic procedures.

CE-11. Explain the creation of clinical prediction rules in the assessment and prognosis of various clinical conditions.

CE-12. Apply clinical prediction rules (eg, Ottawa Ankle Rules) during clinical examination procedures.

CE-13. Obtain a thorough medical history that includes the pertinent past medical history, underlying systemic disease, use of medications, the patient's perceived pain, and the history and course of the present condition.

CE-14. Differentiate between an initial injury evaluation and follow-up/reassessment as a means to evaluate the efficacy of the patient's treatment/rehabilitation program, and make modifications to the patient's program as needed.

CE-15. Demonstrate the ability to modify the diagnostic examination process according to the demands of the situation and patient responses.

CE-16. Recognize the signs and symptoms of catastrophic and emergent conditions and demonstrate appropriate referral decisions.

CE-17. Use clinical reasoning skills to formulate an appropriate clinical assessment for common illness/disease and orthopedic injuries/conditions.

CE-18. Incorporate the concept of differential assessment into the examination process.

CE-19. Determine criteria and make decisions regarding return to activity and/or sports participation based on the patient's current status.

CE-20. Use standard techniques and procedures for the clinical examination of common injuries, conditions, illnesses, and diseases including, but not limited to:

CE-20a. history taking

CE-20b. inspection/observation

CE-20c. palpation

CE-20d. functional assessment

CE-20e. selective tissue testing techniques / special tests

CE-20f. neurological assessments (sensory, motor, reflexes, balance, cognitive function) **CE-20g.** respiratory assessments (auscultation, percussion, respirations, peak-flow) **CE-20h.** circulatory assessments (pulse, blood pressure, auscultation)

CE-20i. abdominal assessments (percussion, palpation, auscultation)

CE-20j. other clinical assessments (otoscope, urinalysis, glucometer, temperature, opthalmoscope)

CE-21. Assess and interpret findings from a physical examination that is based on the patient's clinical presentation. This exam can include:

CE-21a. Assessment of posture, gait, and movement patterns

CE-21b. Palpation

CE-21c. Muscle function assessment

CE-21d. Assessment of quantity and quality of osteokinematic joint motion

CE-21e. Capsular and ligamentous stress testing

CE-21f. Joint play (arthrokinematics)

CE-21g. Selective tissue examination techniques / special tests

CE-21h. Neurologic function (sensory, motor, reflexes, balance, cognition)

CE-21i. Cardiovascular function (including differentiation between normal and abnormal heart sounds, blood pressure, and heart rate)

CE-21j. Pulmonary function (including differentiation between normal breath sounds, percussion sounds, number and characteristics of respirations, peak expiratory flow)

CE-21k. Gastrointestinal function (including differentiation between normal and abnormal bowel sounds)

CE-21l. Genitourinary function (urinalysis)

CE-21m. Ocular function (vision, ophthalmoscope)

CE-21n. Function of the ear, nose, and throat (including otoscopic evaluation)

CE-21o. Dermatological assessment

CE-21p. Other assessments (glucometer, temperature)

CE-22. Determine when the findings of an examination warrant referral of the patient.

CE-23. Describe current setting-specific (eg, high school, college) and activity-specific rules and guidelines for managing injuries and illnesses.

Acute Care of Injuries and Illnesses (AC)

Athletic trainers are often present when injuries or other acute conditions occur or are the first healthcare professionals to evaluate a patient. For this reason, athletic trainers must be knowledgeable and skilled in the evaluation and immediate management of acute injuries and illnesses.

The competencies identified in this section should be considered in the context of the competencies identified in other domains. For example, the knowledge and skills associated with the process of examination and documentation, while applicable for this domain, are not repeated here. Likewise, the knowledge and skills associated with the administrative and risk management aspects of planning for an emergency injury/illness situation are not repeated here.

Knowledge and Skills

Planning

AC-1. Explain the legal, moral, and ethical parameters that define the athletic trainer's scope of acute and emergency care.
AC-2. Differentiate the roles and responsibilities of the athletic trainer from other pre-hospital care and hospital-based providers, including emergency medical technicians/ paramedics, nurses, physician assistants, and physicians.
AC-3. Describe the hospital trauma level system and its role in the transportation decision-making process.

Examination

AC-4. Demonstrate the ability to perform scene, primary, and secondary surveys.

AC-5. Obtain a medical history appropriate for the patient's ability to respond.

AC-6. When appropriate, obtain and monitor signs of basic body functions including pulse, blood pressure, respiration, pulse oximetry, pain, and core temperature. Relate changes in vital signs to the patient's status.
AC-7. Differentiate between normal and abnormal physical findings (eg, pulse, blood pressure, heart and lung sounds, oxygen saturation, pain, core temperature) and the associated pathophysiology.

Immediate Emergent Management

AC-8. Explain the indications, guidelines, proper techniques, and necessary supplies for removing equipment and clothing in order to access the airway, evaluate and/or stabilize an athlete's injured body part.
AC-9. Differentiate the types of airway adjuncts (oropharygneal airways [OPA], nasopharyngeal airways [NPA] and supraglottic airways [King LT-D or Combitube]) and
their use in maintaining a patent airway in adult respiratory and/or cardiac arrest.

AC-10. Establish and maintain an airway, including the use of oro- and nasopharygneal airways, and neutral spine alignment in an athlete with a suspected spine injury who may be wearing shoulder pads, a helmet with and without a face guard, or other protective equipment.
AC-11. Determine when suction for airway maintenance is indicated and use according to accepted practice protocols.
AC-12. Identify cases when rescue breathing, CPR, and/or AED use is indicated according to current

accepted practice protocols.

AC-13. Utilize an automated external defibrillator (AED) according to current accepted practice protocols.

AC-14. Perform one- and two- person CPR on an infant, child and adult.

AC-15. Utilize a bag valve and pocket mask on a child and adult using supplemental oxygen.

AC-16. Explain the indications, application, and treatment parameters for supplemental oxygen administration for emergency situations.

AC-17. Administer supplemental oxygen with adjuncts (eg, non-rebreather mask, nasal cannula).

AC-18. Assess oxygen saturation using a pulse oximeter and interpret the results to guide decision making.

AC-19. Explain the proper procedures for managing external hemorrhage (eg, direct pressure, pressure points, tourniquets) and the rationale for use of each.

AC-20. Select and use the appropriate procedure for managing external hemorrhage.

AC-21. Explain aseptic or sterile techniques, approved sanitation methods, and universal precautions used in the cleaning, closure, and dressing of wounds.

AC-22. Select and use appropriate procedures for the cleaning, closure, and dressing of wounds, identifying when referral is necessary.

AC-23. Use cervical stabilization devices and techniques that are appropriate to the circumstances of an injury.

AC-24. Demonstrate proper positioning and immobilization of a patient with a suspected spinal cord injury.

AC-25. Perform patient transfer techniques for suspected head and spine injuries utilizing supine log roll, prone log roll with push, prone log roll with pull, and lift-and-slide techniques.

AC-26. Select the appropriate spine board, including long board or short board, and use appropriate immobilization techniques based on the circumstance of the patient's injury.

AC-27. Explain the role of core body temperature in differentiating between exertional heat stroke, hyponatremia, and head injury.

AC-28. Differentiate the different methods for assessing core body temperature.

AC-29. Assess core body temperature using a rectal probe.

AC-30. Explain the role of rapid full body cooling in the emergency management of exertional heat stroke.

AC-31. Assist the patient in the use of a nebulizer treatment for an asthmatic attack.

AC-32. Determine when use of a metered-dose inhaler is warranted based on a patient's condition.

AC-33. Instruct a patient in the use of a meter-dosed inhaler in the presence of asthma- related bronchospasm.

AC-34. Explain the importance of monitoring a patient following a head injury, including the role of obtaining clearance from a physician before further patient participation.

AC-35. Demonstrate the use of an auto-injectable epinephrine in the management of allergic anaphylaxis. Decide when auto-injectable epinephrine use is warranted based on a patient's condition.

AC-36. Identify the signs, symptoms, interventions and, when appropriate, the return-to-participation criteria for:

AC-36a. sudden cardiac arrest

AC-36b. brain injury including concussion, subdural and epidural hematomas, second impact syndrome and skull fracture

AC-36c. cervical, thoracic, and lumbar spine trauma

AC-36d. heat illness including heat cramps, heat exhaustion, exertional heat stroke, and hyponatremia

AC-36e. exertional sickling associated with sickle cell trait
AC-36f. rhabdomyolysis

AC-36g. internal hemorrhage

AC-36h. diabetic emergencies including hypoglycemia and ketoacidosis
AC-36i. asthma attacks

AC-36j. systemic allergic reaction, including anaphylactic shock
AC-36k. epileptic and non-epileptic seizures
AC-36l. shock

AC-36m. hypothermia, frostbite **AC-36n.** toxic drug overdoses **AC-36o.** local allergic reaction

Immediate Musculoskeletal Management

AC-37. Select and apply appropriate splinting material to stabilize an injured body area.

AC-38. Apply appropriate immediate treatment to protect the injured area and minimize the effects of hypoxic and enzymatic injury.
AC-39. Select and implement the appropriate ambulatory aid based on the patient's injury and activity and participation restrictions.

Transportation

AC-40. Determine the proper transportation technique based on the patient's condition and findings of the immediate examination.
AC-41. Identify the criteria used in the decision-making process to transport the injured patient for further medical examination.
AC-42. Select and use the appropriate short-distance transportation methods, such as the log roll or lift and slide, for an injured patient in different situations.

Education

AC-36. Instruct the patient in home care and self-treatment plans for acute conditions.

Therapeutic Interventions (TI)

Athletic trainers assess the patient's status using clinician- and patient-oriented outcome measures. Based on this assessment and with consideration of the stage of healing and goals, a therapeutic intervention is designed to maximize the patient's participation and health-related quality of life.

A broad range of interventions, methods, techniques, equipment, activities using body movement, and medications are incorporated into this domain. These interventions are designed to enhance function by identifying, remediating, and preventing impairments and activity restrictions (functional limitations) to maximize participation. Rehabilitation is conducted in a wide variety of settings (eg, aquatic, clinic) with basic and contemporary equipment/modalities and on a wide range of patients with respect to age, overall health, and desired level of activity. Therapeutic interventions also include the use of prescription and nonprescription medications. For this reason, the athletic trainer needs to be knowledgeable about common prescription and nonprescription drug indications, adverse reactions, and interactions.

The competencies identified in this section should be considered in the context of the competencies identified in other content areas. For example, the knowledge and skills associated with the process of examination and documentation, while applicable for this content area, are not included here.

Therapeutic interventions include:

- Techniques to reduce pain
- Techniques to limit edema
- Techniques to restore joint mobility
- Techniques to restore muscle extensibility
- Techniques to restore neuromuscular function
- Exercises to improve strength, endurance, speed, and power
- Activities to improve balance, neuromuscular control, coordination, and agility
- Exercises to improve gait, posture, and body mechanics
- Exercises to improve cardiorespiratory fitness
- Functional exercises (eg, sports- or activity-specific)
- Exercises which comprise a home-based program
- Aquatic therapy
- Therapeutic modalities
  - superficial thermal agents (eg, hot pack, ice)
  - electrical stimulation
  - therapeutic ultrasound
  - diathermy
  - therapeutic low-level laser and light therapy
  - mechanical modalities
    - traction
    - intermittent compression
    - continuous passive motion
    - massage
    - biofeedback
- Therapeutic medications (as guided by applicable state and federal law)

Knowledge and Skills

Physical Rehabilitation and Therapeutic Modalities

TI-1. Describe and differentiate the physiological and pathophysiological responses to inflammatory and non-inflammatory conditions and the influence of these responses on the design, implementation, and progression of a therapeutic intervention.

TI-2. Compare and contrast contemporary theories of pain perception and pain modulation.

TI-3. Differentiate between palliative and primary pain-control interventions.

TI-4. Analyze the impact of immobilization, inactivity, and mobilization on the body systems (eg, cardiovascular, pulmonary, musculoskeletal) and injury response.

TI-5. Compare and contrast the variations in the physiological response to injury and healing across the lifespan.

TI-6. Describe common surgical techniques, including interpretation of operative reports, and any resulting precautions, contraindications, and comorbidities that impact the selection and progression of a therapeutic intervention program.

TI-7. Identify patient- and clinician-oriented outcomes measures commonly used to recommend activity level, make return to play decisions, and maximize patient outcomes and progress in the treatment plan.

TI-8. Explain the theory and principles relating to expected physiological response(s) during and following therapeutic interventions.

TI-9. Describe the laws of physics that (1) underlay the application of thermal, mechanical,

electromagnetic, and acoustic energy to the body and (2) form the foundation for the development of therapeutic interventions (eg, stress-strain, leverage, thermodynamics, energy transmission and attenuation, electricity).

TI-10. Integrate self-treatment into the intervention when appropriate, including instructing the patient regarding self-treatment plans.

TI-11. Design therapeutic interventions to meet specified treatment goals.

TI-11a. Assess the patient to identify indications, contraindications, and precautions applicable to the intended intervention.

TI-11b. Position and prepare the patient for various therapeutic interventions.

TI-11c. Describe the expected effects and potential adverse reactions to the patient.

TI-11d. Instruct the patient how to correctly perform rehabilitative exercises.

TI-11e. Apply the intervention, using parameters appropriate to the intended outcome.

TI-11f. Reassess the patient to determine the immediate impact of the intervention.

TI-12. Use the results of on-going clinical examinations to determine when a therapeutic intervention should be progressed, regressed or discontinued.

TI-13. Describe the relationship between the application of therapeutic modalities and the incorporation of active and passive exercise and/or manual therapies, including therapeutic massage, myofascial techniques, and muscle energy techniques.

TI-14. Describe the use of joint mobilization in pain reduction and restoration of joint mobility.

TI-15. Perform joint mobilization techniques as indicated by examination findings.

TI-16. Fabricate and apply taping, wrapping, supportive, and protective devices to facilitate return to function.

TI-17. Analyze gait and select appropriate instruction and correction strategies to facilitate safe progression to functional gait pattern.

TI-18. Explain the relationship between posture, biomechanics, and ergodynamics and the need to address these components in a therapeutic intervention.

TI-19. Identify manufacturer, institutional, state, and/or federal standards that influence approval, operation, inspection, maintenance and safe application of therapeutic modalities and rehabilitation equipment.

TI-20. Inspect therapeutic equipment and the treatment environment for potential safety hazards.

Therapeutic Medications

TI-21. Explain the federal, state, and local laws, regulations and procedures for the proper storage, disposal, transportation, dispensing (administering where appropriate),
and documentation associated with commonly used prescription and nonprescription medications.

TI-22. Identify and use appropriate pharmaceutical terminology for management of medications, inventory control, and reporting of pharmacological agents commonly used in an athletic training facility.

TI-23. Use an electronic drug resource to locate and identify indications, contraindications, precautions, and adverse reactions for common prescription and nonprescription medications.

TI-24. Explain the major concepts of pharmacokinetics and the influence that exercise might have on these processes.

TI-25. Explain the concepts related to bioavailability, half-life, and bioequivalence (including the relationship between generic and brand name drugs) and their relevance to the patient, the choice of medication, and the dosing schedule.

TI-26. Explain the pharmacodynamic principles of receptor theory, dose-response relationship, placebo effect, potency, and drug interactions as they relate to the mechanism of drug action and therapeutic effectiveness.

TI-27. Describe the common routes used to administer medications and their advantages and disadvantages.

TI-28. Properly assist and/or instruct the patient in the proper use, cleaning, and storage of drugs commonly delivered by metered dose inhalers, nebulizers, insulin pumps, or other parenteral routes as prescribed by the physician.

TI-29. Describe how common pharmacological agents influence pain and healing and their influence on various therapeutic interventions.

TI-30. Explain the general therapeutic strategy, including drug categories used for treatment, desired treatment outcomes, and typical duration of treatment, for the following common diseases and conditions: asthma, diabetes, hypertension, infections, depression, GERD, allergies, pain, inflammation, and the common cold.

TI-31. Optimize therapeutic outcomes by communicating with patients and/or appropriate healthcare professionals regarding compliance issues, drug interactions, adverse drug reactions, and sub-optimal therapy.

Psychosocial Strategies and Referral (PS)

Athletic trainers must be able to recognize clients/patients exhibiting abnormal social, emotional, and mental behaviors. Coupled with recognition is the ability to intervene and refer these individ- uals as necessary. Additionally, athletic trainers appreciate the role of mental health in injury and recovery and use interventions to optimize the connection between mental health and restoration of participation.

Knowledge and Skills

Theoretical Background

PS-1. Describe the basic principles of personality traits, trait anxiety, locus of control, intrinsic and extrinsic motivation, and patient and social environment interactions as they affect patient interactions.

PS-2. Explain the theoretical background of psychological and emotional responses to injury and forced inactivity (eg, cognitive appraisal model, stress response model).

PS-3. Describe how psychosocial considerations affect clinical decision-making related to return to activity or participation (eg, motivation, confidence).

PS-4. Summarize and demonstrate the basic processes of effective interpersonal and cross-cultural communication as it relates to interactions with patients and others involved in the healthcare of the patient.

PS-5. Summarize contemporary theory regarding educating patients of all ages and cultural backgrounds to effect behavioral change.

Psychosocial Strategies

PS-6. Explain the importance of educating patients, parents/guardians, and others regarding the condition in order to enhance the psychological and emotional well-being of the patient.

PS-7. Describe the psychological techniques (eg, goal setting, imagery, positive self-talk, relaxation/anxiety reduction) that the athletic trainer can use to motivate the patient during injury rehabilitation and return to activity processes.

PS-8. Describe psychological interventions (eg, goal setting, motivational techniques) that are used to facilitate a patient's physical, psychological, and return to activity needs.

PS-9. Describe the psychosocial factors that affect persistent pain sensation and perception (eg, emotional state, locus of control, psychodynamic issues, sociocultural factors, personal values and beliefs) and identify multidisciplinary approaches for assisting patients with persistent pain.

PS-10. Explain the impact of sociocultural issues that influence the nature and quality of healthcare received (eg, cultural competence, access to appropriate healthcare providers, uninsured/underinsured patients,

insurance) and formulate and implement strategies to maximize client/patient outcomes.

Mental Health and Referral

PS-11. Describe the role of various mental healthcare providers (eg, psychiatrists, psychologists, counselors, social workers) that may comprise a mental health referral network.

PS-12. Identify and refer clients/patients in need of mental healthcare.

PS-13. Identify and describe the basic signs and symptoms of mental health disorders (eg, psychosis, neurosis; sub-clinical mood disturbances (eg, depression, anxiety); and personal/social conflict (eg, adjustment to injury, family problems, academic or emotional stress, personal assault or abuse, sexual assault or harassment) that may indicate the need for referral to a mental healthcare professional.

PS-14. Describe the psychological and sociocultural factors associated with common eating disorders.

PS-15. Identify the symptoms and clinical signs of substance misuse/abuse, the psycho- logical and sociocultural factors associated with such misuse/abuse, its impact on an individual's health and physical performance, and the need for proper referral to a healthcare professional.

PS-16. Formulate a referral for an individual with a suspected mental health or substance abuse problem.

PS-17. Describe the psychological and emotional responses to a catastrophic event, the potential need for a psychological intervention and a referral plan for all parties affected by the event.

PS-18. Provide appropriate education regarding the condition and plan of care to the patient and appropriately discuss with others as needed and as appropriate to protect patient privacy.

Healthcare Administration (HA)

Athletic trainers function within the context of a complex healthcare system. Integral to this func- tion is an understanding of risk management, healthcare delivery mechanisms, insurance, reim- bursement, documentation, patient privacy, and facility management.

Knowledge and Skills

HA-1. Describe the role of the athletic trainer and the delivery of athletic training services within the context of the broader healthcare system.

HA-2. Describe the impact of organizational structure on the daily operations of a healthcare facility.

HA-3. Describe the role of strategic planning as a means to assess and promote organizational improvement.

HA-4. Describe the conceptual components of developing and implementing a basic business plan.

HA-5. Describe basic healthcare facility design for a safe and efficient clinical practice setting.

HA-6. Explain components of the budgeting process including: purchasing, requisition, bidding, request for proposal, inventory, profit and loss ratios, budget balancing, and return on investments.

HA-7. Assess the value of the services provided by an athletic trainer (eg, return on investment).

HA-8. Develop operational and capital budgets based on a supply inventory and needs assessment; including capital equipment, salaries and benefits, trending analysis, facility cost, and common expenses.

HA-9. Identify the components that comprise a comprehensive medical record.

HA-10. Identify and explain the statutes that regulate the privacy and security of medical records.

HA-11. Use contemporary documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members.

HA-12. Use a comprehensive patient-file management system for appropriate chart documentation, risk management, outcomes, and billing.

HA-13. Define state and federal statutes that regulate employment practices.

HA-14. Describe principles of recruiting, selecting, hiring, and evaluating employees.

HA-15. Identify principles of recruiting, selecting, employing, and contracting with physicians and other medical and healthcare personnel in the deployment of healthcare services.

HA-16. Describe federal and state infection control regulations and guidelines, including universal precautions as mandated by the Workplace Safety and Health Adminis- tration (OSHA), for the prevention, exposure, and control of infectious diseases, and discuss how they apply to the practicing of athletic training.

HA-17. Identify key regulatory agencies that impact healthcare facilities, and describe their function in the regulation and overall delivery of healthcare.

HA-18. Describe the basic legal principles that apply to an athletic trainer's responsibilities.

HA-19. Identify components of a risk management plan to include security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.

HA-20. Create a risk management plan and develop associated policies and procedures to guide the operation of athletic training services within a healthcare facility to include issues related to security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.

HA-21. Develop comprehensive, venue-specific emergency action plans for the care of acutely injured or ill individuals.

HA-22. Develop specific plans of care for common potential emergent conditions (eg, asthma attack, diabetic emergency).

HA-23. Identify and explain the recommended or required components of a pre-participa- tion examination based on appropriate authorities' rules, guidelines, and/or recommendations.

HA-24. Describe a plan to access appropriate medical assistance on disease control, notify medical authorities, and prevent disease epidemics.

HA-25. Describe common health insurance models, insurance contract negotiation, and the common benefits and exclusions identified within these models.

HA-26. Describe the criteria for selection, common features, specifications, and required documentation needed for secondary, excess accident, and catastrophic health insurance.

HA-27. Describe the concepts and procedures for revenue generation and reimbursement.

HA-28. Understand the role of and use diagnostic and procedural codes when documenting patient care.

HA-29. Explain typical administrative policies and procedures that govern first aid and emergency care.

HA-30. Describe the role and functions of various healthcare providers and protocols that govern the referral of patients to these professionals.

Professional Development and Responsibility (PD)

The provision of high quality patient care requires that the athletic trainer maintain current com- petence in the constantly changing world of healthcare. Athletic trainers must also embrace the need to practice within the limits of state and national regulation using moral and ethical judgment. As members of a broader healthcare community, athletic trainers work collaboratively with other healthcare providers and refer clients/patients when such referral is warranted.

Knowledge and Skills

PD-1. Summarize the athletic training profession's history and development and how current athletic training practice has been influenced by its past.

PD-2. Describe the role and function of the National Athletic Trainers' Association and its influence on the profession.

PD-3. Describe the role and function of the Board of Certification, the Commission on Accreditation of Athletic Training Education, and state regulatory boards.

PD-4. Explain the role and function of state athletic training practice acts and registration, licensure, and certification agencies including (1) basic legislative processes for the implementation of practice acts, (2) rationale for state regulations that govern
the practice of athletic training, and (3) consequences of violating federal and state regulatory acts.

PD-5. Access, analyze, and differentiate between the essential documents of the national governing, credentialing and regulatory bodies, including, but not limited to, the NATA *Athletic Training Educational Competencies*, the BOC *Standards of Professional Practice*, the NATA *Code of Ethics*, and the BOC *Role Delineation Study/Practice Analysis*.

PD-6. Explain the process of obtaining and maintaining necessary local, state, and national credentials for the practice of athletic training.

PD-7. Perform a self-assessment of professional competence and create a professional development plan to maintain necessary credentials and promote life-long learning strategies.

PD-8. Differentiate among the preparation, scopes of practice, and roles and responsibilities of healthcare providers and other professionals with whom athletic trainers interact.

PD-9. Specify when referral of a client/patient to another healthcare provider is warranted and formulate and implement strategies to facilitate that referral.

PD-10. Develop healthcare educational programming specific to the target audience (eg, clients/patients, healthcare personnel, administrators, parents, general public).

PD-11. Identify strategies to educate colleagues, students, patients, the public, and other healthcare professionals about the roles, responsibilities, academic preparation, and scope of practice of athletic trainers.

PD-12. Identify mechanisms by which athletic trainers influence state and federal healthcare regulation.

Clinical Integration Proficiencies (CIP)

The clinical integration proficiencies (CIPs) represent the synthesis and integration of knowledge, skills, and clinical decision-making into actual client/patient care. The CIPs have been reorgan- ized into this section (rather than at the end of each content area) to reflect their global nature. For example, therapeutic interventions do not occur in isolation from physical assessment.

In most cases, assessment of the CIPs should occur when the student is engaged in real client/pa- tient care and may be necessarily assessed over multiple interactions with the same client/patient. In a few instances, assessment may require simulated scenarios, as certain circumstances may occur rarely but are nevertheless important to the well-prepared practitioner.

The incorporation of evidence-based practice principles into care provided by athletic trainers is central to optimizing outcomes. Assessment of student competence in the CIPs should reflect the extent to which these principles are integrated. Assessment of students in the use of Founda- tional Behaviors in the context of real patient care should also occur.

Prevention & Health Promotion

CIP-1. Administer testing procedures to obtain baseline data regarding a client's/patient's level of general health (including nutritional habits, physical activity status, and body composition). Use this data to

design, implement, evaluate, and modify a program specific to the performance and health goals of the patient. This will include instruct- ing the patient in the proper performance of the activities, recognizing the warning signs and symptoms of potential injuries and illnesses that may occur, and explaining the role of exercise in maintaining overall health and the prevention of diseases. Incor- porate contemporary behavioral change theory when educating clients/patients and associated individuals to effect health-related change. Refer to other medical and health professionals when appropriate.

CIP-2. Select, apply, evaluate, and modify appropriate standard protective equipment, taping, wrapping, bracing, padding, and other custom devices for the client/patient in order to prevent and/or minimize the risk of injury to the head, torso, spine, and extremities for safe participation in sport or other physical activity.

CIP-3. Develop, implement, and monitor prevention strategies for at-risk individuals (eg, persons with asthma or diabetes, persons with a previous history of heat illness, persons with sickle cell trait) and large groups to allow safe physical activity in a variety of conditions. This includes obtaining and interpreting data related to potentially hazardous environmental conditions, monitoring body functions (eg, blood glucose, peak expiratory flow, hydration status), and making the appropriate recommendations for individual safety and activity status.

Clinical Assessment & Assessment/Acute Care/Therapeutic Intervention

CIP-4. Perform a comprehensive clinical examination of a patient with an upper extremity, lower extremity, head, neck, thorax, and/or spine injury or condition. This exam should incorporate clinical reasoning in the selection of assessment procedures and interpre- tation of findings in order to formulate a differential assessment and/or assessment, determine underlying impairments, and identify activity limitations and participation restrictions. Based on the assessment data and consideration of the patient's goals, provide the appropriate initial care and establish overall treatment goals. Create and implement a therapeutic intervention that targets these treatment goals to include, as appropriate, therapeutic modalities, medications (with physician involvement
as necessary), and rehabilitative techniques and procedures. Integrate and interpret various forms of standardized documentation including both patient-oriented and clinician-oriented outcomes measures to recommend activity level, make return to play decisions, and maximize patient outcomes and progress in the treatment plan.

CIP-5. Perform a comprehensive clinical examination of a patient with a common illness/condition that includes appropriate clinical reasoning in the selection of assessment procedures and interpretation of history and physical examination findings in order to formulate a differential assessment and/or assessment. Based on the history, physical examination, and patient goals, implement the appropriate treatment strategy to include medications (with physician involvement as necessary). Determine whether patient referral is needed, and identify potential restrictions in activities and participa-tion. Formulate and communicate the appropriate return to activity protocol.

CIP-6. Clinically evaluate and manage a patient with an emergency injury or condition to include the assessment of vital signs and level of consciousness, activation of emergency action plan, secondary assessment, assessment, and provision of the appropriate emergency care (eg, CPR, AED, supplemental oxygen, airway adjunct, splinting, spinal stabilization, control of bleeding).

Psychosocial Strategies and Referral

CIP-7. Select and integrate appropriate psychosocial techniques into a patient's

treatment or rehabilitation program to enhance rehabilitation adherence, return to play, and overall outcomes. This includes, but is not limited to, verbal motivation, goal setting, imagery, pain management, self-talk, and/or relaxation.

CIP-8. Demonstrate the ability to recognize and refer at-risk individuals and individuals with psychosocial disorders and/or mental health emergencies. As a member of the manage- ment team, develop an appropriate management plan (including recom- mendations for patient safety and activity status) that establishes a professional helping relationship with the patient, ensures interactive support and education, and encourages the athletic trainer's role of informed patient advocate in a manner consistent with current practice guidelines.

Healthcare Administration

CIP-9. Utilize documentation strategies to effectively communicate with patients, physicians, insur- ers, colleagues, administrators, and parents or family members while using appropriate ter- minology and complying with statues that regulate privacy of medical records. This includes using a comprehensive patient-file management system (including diagnostic and proce- dural codes) for appropriate chart documentation, risk management, outcomes, and billing.

CH 7: Existing Relationships

This chapter outlines the impact this scope of practice change will have on existing relationships in the healthcare realm

Athletic Trainers (ATs) are health care professionals who collaborate with physicians and other health care providers to provide preventative services, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions. Nationally, athletic trainers provide their services to patients and clients, to include athletes, military personnel, performing artists, laborers and other individuals suffering from conditions similar to athletic injuries.

Athletic Trainers education and preparation fall within 8 domains: Evidence Based Practice, Prevention and Health Promotion, Clinical Examination and Diagnosis, Acute Care of Injury and Illness, Therapeutic Interventions, Psychosocial Strategies and Referral, Healthcare Administration, and Professional Development and Responsibility.[1] Students wanting to become athletic trainers must earn a degree from an accredited athletic training curriculum. Accredited programs include formal instruction in areas such as injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, therapeutic modalities, and nutrition. Classroom learning is enhanced through clinical education experiences. More than 70 percent of athletic trainers nationwide hold at least a master's degree.[1] Athletic Trainers are required to pass a National Board of Certification[1] examination and obtain a license from the Department of Public Health to practice in the state of Connecticut.

Physicians

- **Athletic training relationship**: Athletic trainers currently work closely with physicians to provide medical care to their patients. Our current practice act requires that ATs work under standing orders or through a direct referral of a physician, which will not change with the scope of practice change. In fact, the suggested language reaffirms our commitment to the physician / athletic trainer relationship and strengthens standing order requirements. Physician direction, either through the standing orders process or through a direct referral, will provide guidance as to the care of athletes in need of athletic training care. Patients from settings beyond the athletic realm will require a direct referral from a health provider, who has the expertise to rule out the co-morbidities that may require the individual to be referred to another rehabilitative practitioner.

  In some cases, athletic trainers are expected to practice without physician supervision as in the case of sporting events. The suggested language permits athletic trainers to provide healthcare services including initial evaluation and diagnosis, often in emergent situations, providing acute injury/illness management, and coordinate the necessary referrals to ensure the primacy of the health care provider.

The AT role in physician offices has expanded, as certain physicians have noted the value having an AT on staff. Hajart, et al.[4] stated that athletic trainers provide value to a medical practice through their skills in triage, taking patient histories, performing musculoskeletal evaluations, providing instructions on exercise prescription, rehabilitation, and general patient education. Research has indicated the positive impact ATs have in physician productivity by increasing the number of patients seen in orthopedic physician offices by 15-30% and freeing up the time of other providers (physician assistants, nurse practitioners) to work in their autonomous role, within their scope.[4,5] In addition to role of athletic trainers in assisting with patient preparation, athletic trainers have been involved with brace fitting and casting. Other Athletic Trainers have assisted patient care through instruction of home exercise programs and patient education.

- **Revised scope effects**: Changes to the current scope of practice will require athletic trainers to work more closely with physicians in terms of standing orders by mandating a more consistent review of physician guidelines and patient care. The expanded ability of athletic trainers to work in the physician's office will increase orthopedic physician productivity and patient outcomes by assisting physicians in their medical practices.

Physical Therapists

- **Athletic training relationship**: ATs are employed in a variety of settings working often alongside physical therapists in rehabilitation facilities. The scope of practice for athletic training and physical therapy do overlap to some extent, mostly in the domain of treatment and rehabilitation of musculoskeletal injuries. However the overlap doesn't mean each profession could take on the other's role since our training and coursework do diverge. Often, physical therapy practices provide AT outreach services to many high schools in the state of CT: Companies include but are not limited to, Select Physical Therapy, Eastern Rehabilitation Network, Preneta Physical Therapy and more. The clinic assumes the hiring, benefits, liability etc. of employing the AT, who then provides the service to the contracted secondary school. Often, due to the limited number of ATs at the schools, ATs refer their athletes to the clinic for rehabilitative services where they communicate with the physical therapists about the care needed for the athlete in regards to rehabilitation. ATs often work collaboratively with physical therapists following a patients' surgical intervention, providing additional care, beyond what is covered by insurance. Similar to the physical therapists scope of practice, ATs also evaluate the function of and use of therapeutic exercise and rehabilitation of injuries, establish rehabilitation programs, treatment planning, and modality use for the purpose of preventing, correcting, or alleviating an injury. Furthermore, ATs are required to pass a National Board of Certification[1] examination for Athletic training and obtain a license from the Department of Health to practice in

the state of Connecticut, complete continuing education, as are physical therapists.

- **NATA and APTA Settlement**: In the past the NATA and American Physical Therapy Association (APTA) have had what is perceived as a "turf battle" due to the overlapping domains in the professions. In 2009 the NATA and APTA reached a settlement regarding the practice of AT and its similarities and differences with physical therapy. In some regards Athletic Training and Physical Therapy do overlap in some domains, including: treatment and rehabilitation and evaluation and assessment. Athletic Training and Physical Therapy also differ in many ways. For instance Athletic Trainers do not rehabilitate injuries involving but not limited to: burn victims or stroke patients. Appendix A in this chapter highlights the APTA and NATA settlement. According to the joint statement of cooperation: "The APTA and the NATA acknowledge that physical therapists and athletic trainers are health care professionals authorized to provide interventions within their scope of practice as defined by applicable state law and, within that scope, to the extent of their individual educational/training competencies. The scopes of practice of the two professions overlap to some extent. The education, qualifications and training of the two professions are different. The patients and conditions treated and interventions performed by PTs and ATs are often different. The professional education of both physical therapists and athletic trainers calls for competence in some forms of manual therapy, on which physical therapists and athletic trainers are tested by their certification/licensure examinations."[6]
- **Revised scope effects**: Changes to the current scope of practice will allow athletic trainers to practice within the full realm of their domains, both on the field and in the clinic. These changes would help athletic trainers care for patients as part of a comprehensive team of healthcare providers improving access and enhancing healthcare for Connecticut's citizens. The proposed language will assist many orthopedic physical therapy practices by enlarging the patient pool that athletic trainers can provide care. Physical therapy practice will be aided with the presence of athletic trainers in the clinic, who would be free to apply their strengths in acute care and functional progression in late-stage rehabilitation. Current practice restricts athletic trainers primarily to athletes, which represents only a part of the typical patient load. In conclusion, the new language will assist physical therapy practices that hire athletic trainers by permitting the athletic trainer to assist in the care of all orthopedic cases, not just those incurred by athletes.

Nurses

- **Athletic training relationship**: Athletic trainers work with nurses in public and private secondary schools, medical offices, hospitals, and industrial settings. Nurses and athletic trainers collaborate to identify actual or potential health problems, provide supportive and restorative care, and collaborate and implement the total health care regimen. Nurses also work under the direction, or oversight, of a licensed physician and may execute orders issued by the physician, similar to standing orders, as long as it does not exceed the practitioner's scope of practice. Advanced practice registered nursing practice is similar to athletic training in that they may treat changes in health status, as long as it does not violate the scope of practice. However, APRNs may dispense and administer medical therapeutics and corrective measures and may request, sign for, receive and dispense drugs in the form of professional samples, where athletic trainers may dispense common over the counter medications as outlined in the standing orders provided by the supervising licensed health care provider.
- **Revised scope effects**: Changes to the scope of practice should not interfere, inhibit, or alter the current relationship with nurses in the Connecticut. The only potential change is unrelated to the proposed scope of practice changes, and instead relates to recent legislative changes regarding advanced practice registered nurses. As advanced practice registered nurses are now permitted to function independently of physicians, it is probable that they will be able to refer patients to athletic trainers, similar to health care providers.

Workplace Settings

- **Athletic training relationship**: Athletic trainers may work with Occupational Therapists (OTs) in rehabilitation clinics, hospitals, and medical offices. Occupational Therapists and athletic trainers are similar in that they evaluate, plan, and implement programs which address physical injury and illness. However, the OT's focus is on task oriented activities to prevent or correct physical or emotional deficits beyond what an athlete would experience. They too may implement specific exercises and treatment techniques which address physical performance at work and address activities of daily living.
- **Revised scope effects**: Changes in the scope of practice act may enhance the delivery of preventive medicine to the companies within Connecticut. By expanding the scope of practice to patients and clients beyond the athlete. Both professions can collaborate to provide improved preventive care to Connecticut's industrial workforce. The injury prevention skills of athletic trainers and their educational background in exercise physiology, biomechanics, fitness assessment and weightlifting techniques should complement the skills of Occupational Therapists to decrease injury / illness rates in workers. Consequently there should

be reduced work-time loss, decreased workman's compensation insurance costs, and improved viability of business in the state.

Chiropractors

- **Athletic training relationship**: Athletic trainers may be supervised by a chiropractor through the execution of agreed standing orders as per the current scope of practice. Similar to the physician extender relationship, enjoyed by certain physicians within Connecticut, chiropractic practitioners employ athletic trainers to assist in their practice. Chiropractors can analyze, diagnose, and treat the human body by mechanical and electrical modalities, and prescribe exercise. They specialize in the chiropractic adjustment and manipulation, which is not performed amongst athletic trainers. Athletic trainers may perform manual therapies and have some overlap in techniques, but do not employ manipulation techniques common to chiropractic medicine. Both chiropractors and athletic trainers administer first aid. Furthermore, Athletic Trainers are required to pass a National Board of Certification[1] examination for Athletic Training (www.bocatc.org) and obtain a license from the Department of Health to practice in the state of Connecticut, complete continuing education as are chiropractors.
- **Revised scope effects**: Changes to the scope of practice should not interfere, inhibit, or alter the current healthcare delivery system. In fact, the suggested language should facilitate the employment of athletic trainers by chiropractors, similar to employment of athletic trainers as physician extenders. An enhanced role of athletic trainers with the chiropractic profession should assist patient outcomes by combining the strengths of both professions.

Dietitian-Nutritionists

- **Athletic training relationship**: Athletic trainers are educated in basic nutrition concepts under the Prevention and Health Promotion domain[2]. This provides the AT with a foundation to provide basic nutrition assessment, give recommendations regarding healthy eating habits, role in nutrition and healing, and identify potential pathologic behaviors/conditions Athletic trainers often refer patients to nutritionists who are in need of more detailed nutritional assessment or counselling. Nutritionists also execute orders from physicians for dietary assessment of patients, similar to athletic trainers. Athletic trainers and nutritionists work together to implement a comprehensive management protocol complete with well-defined policies and procedures that facilitate early detection, accurate assessment, and treatment of patients demonstrating unhealthy lifestyle behaviors. Furthermore, Athletic Trainers are required to pass a National Board of Certification[1] examination for Athletic Training (www.bocatc.org) and obtain a

license from the Department of Health to practice in the state of Connecticut, complete continuing education, as are nutritionists.

- **Revised scope effects**: Changes to the scope of practice should not interfere, inhibit, or alter the current healthcare delivery system.

References

1. Exam Eligibility for Athletic training. Board of Certification website. http://www.bocatc.org/candidates/exam-eligibility. Accessed June 11, 2014.
2. Athletic training Educational Competencies, 5th Edition, Released 2011. National Athletic Trainer's Association website. http://www.nata.org/education/education-resources. Accessed June 11, 2014.
3. About Athletic training. National Athletic training Association website. http://www.nata.org/athletic-training Accessed on June 10, 2014.
4. Hajart AF, Pecha F, Hasty M, et al. The Financial Impact of an Athletic Trainer Working as a Physician Extender in Orthopedic Practice. *Practice Management.* Jan-Feb 2014 pgs. 25-254.
5. Pecha F, Xerogeanes JW, Pero KG, Himes ME, Mines BA. Comparison of the effect of medical assistants versus certified ATs on patient volumes and revenue generation in a sports medicine practice. *Sports Health: A multidisciplinary Approach.* Published online 17 Jan 2013.
6. National Athletic Trainers Association and American Physical Therapy Association Joint Settlement and Agreement. September 2009. http://www.apta.org/Media/Releases/APTA/2009/24/

Chapter 7 Appendix_NATA & APTA Settlement

The National Athletic Trainers' Association, Inc.
And

The American Physical Therapy Association

JOINT STATEMENT ON COOPERATION

The National Athletic Trainers' Association, Inc. ("NATA") and the American Physical Therapy Association ("APTA") have agreed to settle their legal dispute pending in the United States District Court for the Northern District of Texas, Dallas Division.

This Joint Statement on Cooperation arises from an effort by both Associations to work together to resolve differences through dialogue and mutual cooperation

The Associations

The NATA is the international professional membership association for athletic trainers ("ATs").

The NATA has more than 30,000 members. The NATA's mission is to enhance the quality of health care provided by certified athletic trainers and to advance the athletic training profession. Information about athletic training and the education, licensure, and certification of ATs is available on the NATA website, www.nata.org.

The APTA is the national association for licensed physical therapists ("PTs") and physical therapy assistants ("PTAs"). It has over 70,000 members. The mission of the APTA is to further the role of the physical therapy profession in the prevention, diagnosis, and treatment of movement dysfunction and the enhancement of the physical health and functional abilities of members of the public. Information about physical therapy and the education, licensure, and specialist certification of PTs is available on the APTA website, www.apta.org.

The Litigation

The members of the NATA and the APTA share a dedication to improving the health, functioning, and well-being of their patients and clients. Over the years, these two organizations have cooperated at times on certain public policy issues, but they have also disagreed on other issues.

In early 2008, the NATA sued the APTA, alleging it had violated the antitrust laws and seeking injunctive and other relief. The APTA denies any factual basis for these allegations and contends NATA's claims lack any merit. The federal district court in Dallas denied APTA's request to dismiss the case, finding that NATA could maintain claims for declaratory and injunctive relief. The Court also stated, however, that NATA could not seek damages from APTA. Instead of continuing the legal dispute, the two sides have decided to enter into a settlement agreement and to issue this Joint Statement.

Qualifications of Physical Therapists and Athletic Trainers

The APTA and the NATA acknowledge that physical therapists and athletic trainers are health care professionals authorized to provide interventions within their scope of practice as defined by applicable state law and, within that scope, to the extent of their individual educational/training competencies. The scopes of practice of the two professions overlap to some extent. The education, qualifications and training of the two professions are different. The patients and conditions treated and interventions performed by PTs and ATs are often different. The professional education of both physical therapists and athletic trainers calls for competence in some forms of manual therapy, on which physical therapists and athletic trainers are tested by their certification/licensure examinations.

Non-Exclusive Procedures

The APTA's longstanding position is that the term "physical therapy" should be used to characterize health care services only when those services are provided by a licensed PT or by a PTA acting under the direction and supervision of a licensed PT. The NATA recognizes that CPT codes 97001 and 97002 (physical therapy evaluation and physical therapy re-evaluation) are used to denote services provided by a licensed PT.

The NATA's position is that the term "athletic training" should be used to characterize health care services only when those services are provided by a licensed and/or certified athletic trainer. The APTA recognizes that CPT codes 97005 and 97006 (athletic training evaluation and athletic training re-evaluation) are used to denote services provided by a licensed and/or certified AT.

The NATA and the APTA both believe that the current Physical Medicine and Rehabilitation codes other than 97001, 97002, 97005 and 97006 are not exclusive to any one particular health care profession.

PTs are not the "exclusive" providers of manual therapy. Further, depending on individual qualifications and certification and state regulations, ATs are qualified to perform certain forms of manual therapy.

Legal Scope of Practice

The APTA and the NATA agree their members should practice within their respective licensed or regulated scopes of practice. The NATA and the APTA agree that the appropriate legal scope of practice for their respective members, as for any profession, is determined by legislatures and regulatory bodies. Both NATA and APTA agree it is a priority to protect the public from harm, and to compete ethically in the marketplace.

Access to Continuing Education

With respect to continuing education programs offered by PTs or PTAs, the APTA has agreed to clarify its existing policy on continuing clinical education for non-- PTs. The policy adopted by the APTA House of Delegates applies only to PTs and PTAs and says that they should identify the target audiences for continuing education programs and that course materials should indicate course content is not intended for use by participants outside the scope of their license or regulation. The policy also says that, in order to protect the public, physical therapists should not teach elements of physical therapy patient/client management to "individuals who are not licensed or otherwise regulated."

Because athletic trainers in the vast majority of states are licensed or otherwise regulated, this part of the policy does not apply to teaching ATs in those states where they are licensed or otherwise regulated. The House of Delegates policy does not require PTs to make determinations concerning the scope of practice of individuals who practice other professions.

The APTA and several APTA Chapters are continuing education providers approved by the National Athletic Trainers' Association Board of Certification, Inc. ("BOC"). The Associations agree that PTs and ATs are free to refrain from teaching certain content to any audience if they determine that the content is not appropriate for the audience, including, but not limited to, because someone lacks the requisite education and training.

The Professions

NATA states: ATs gain professional qualifications after: 1) graduation from a bachelor's or master's academic program accredited by the Commission on Accreditation of Athletic Training Education ("CAATE"); and 2) passing a national exam administered by the BOC, the independent credentialing body for the athletic training profession. The BOC certification program is accredited by the National Commission for Certifying Agencies ("NCCA"). Certified athletic trainers are required to obtain 75 hours of continuing education every three years. Athletic trainers are licensed, registered, and/or exempt from licensure in the statutes of 47 states. Athletic

trainers serve patients through injury and illness prevention, clinical evaluation and diagnosis, appropriate interventions, management, and treatment of emergency, acute and chronic medical conditions, and rehabilitation.

- APTA states: PTs gain professional qualifications by: 1) graduating from a master's or doctoral academic program accredited by the Commission on Accreditation in Physical Therapy Education, which is recognized by the U.S. Department of Education; and 2) passing the national physical therapy licensure examination administered by the Federation of State Boards of Physical Therapy ("FSBPT") for all fifty states. PTs provide clinical examination and evaluation, diagnoses, appropriate interventions and rehabilitation to individuals of all ages who have impairments, limitations in activities or participation, or changes in physical function or health status resulting from injury, disease, or other causes, and they provide prevention and health promotion and wellness services.

Truth in Advocacy

The NATA and the APTA agree that decisions about which professionals should be deemed qualified to provide particular services and which services provided by such professionals should be reimbursed by insurers and public programs are issues to be decided in the marketplace by consumers, insurers, federal and state legislatures, policy makers, and, in the case of athletic trainers (as dictated by state law), physicians. Thus, each Association and its individual members are free, like other citizens, to make truthful statements and to express their opinions about their professions or about others within the health care marketplace. That being said, statements made by the APTA and the NATA about PTs and ATs should not mislead consumers, insurers, physicians, or the public, and neither organization will make false or deceptive statements, including false or deceptive statements about qualifications of PTs or ATs. Specifically, neither organization will make false or misleading statements referring to PTs or ATs as "non-qualified," "unqualified," "not qualified," or any variation of these terms. Nothing in this Joint Statement shall be construed to impede the rights of either the APTA or the NATA to conduct all lawful activities, and make all lawful statements. Members and representatives of the APTA and the NATA should respect the rights, knowledge and skills of the other profession and compete honestly and ethically in the heal!h care .. marketplace.

Mutual Cooperation

The APTA and the NATA acknowledge many PTs and ATs have established productive, mutually respectful and collaborative relationships. Such cooperation should be fostered. The APTA and the :KATA will commit, at the level of the two national associations, to confer periodically on issues of common interest and discuss inter- professional disputes.

Inter-Association Communication

The NATA and the APTA agree to candidly discuss areas of friction between the organizations and identify issues on which the organizations can lawfully and appropriately work together to improve the health, functioning, and well-being of the communities they serve, including

their patients and clients.

This Joint Statement is hereby signed on this 22ND day of September, 2009

R. Scott Ward

President of APTA

Signature did not copy over to this document. Please view in original via link below.

http://www.apta.org/uploadedFiles/APTAorg/Media/Releases/APTA/2009/NATAJointStatement.pdf

By NATA:

Marjorie J. Albohm, MS, ATC
President
National Athletic Trainers' Association, Inc.

CH 8: Economic Impact of Athletic Trainers in the State of Connecticut

This chapter outlines the economic impact the change in the Athletic training scope of practice will have on the state of Connecticut. Outlined throughout is an introduction to Athletic training, Job Settings and Education of Athletic Trainers, Connecticut Demographics based on Athletic Trainers in the state and Return on Investment Data.

Introduction

As the Connecticut Athletic Trainers' Association (CATA) proposes changes to the current scope of practice for Athletic Trainers (ATs) practicing in the State of Connecticut, the organization has two main goals:

- 1. To allow ATs to practice to their fullest potential and utilize all of their skills gained during their education and training, thus providing the utmost in care to State of Connecticut residents

- 2. To increase jobs and benefit the overall economy in the State of Connecticut.

The Athletic Trainer as a Healthcare Provider[1]

The American Medical Association (AMA) granted athletic training its official recognition as an allied health profession in 1990. This recognition allowed the accreditation of entry-level academic programs. Following AMA recognition the American Hospital Association established Uniform Billing codes for athletic training that became effective in 2000. Subsequently, in 2000, the AMA granted Current Procedural Terminology (CPT) codes for athletic training evaluation and re-evaluation. As with all other health care professionals, ATs may apply for a National Provider Identifier (NPI) number as assigned by the Centers for Medicare & Medicaid Services.

The designations allocated by these professional organizations/governmental agencies acknowledge that ATs fulfill the standards necessary to deliver health care within the accepted scope of practice and educational preparation of the practitioner.

6th edition BOC Role Delineation Study[1] and 5th Edition Competency Highlights[1, 2]

As outlined in previous chapters, candidates for certification as an entry-level Athletic Trainer must satisfy all the requirements of an Athletic Training Education Program (ATEP) that is accredited by the Commission on Accreditation of Athletic Training Education (CAATE) and hold an undergraduate degree or master's degree from a CAATE-accredited program. These candidates must then demonstrate

their competency by passing a national certification examination that is administered by the Board of Certification (BOC).

Scope of Practice Change Request

The minor changes to the scope of practice will allow ATs to utilize all of their skills, allow ATs to practice in a variety of settings and ultimately increase jobs in Connecticut as well as benefit the overall economy.

ATs work in a multitude of settings which include: [1,3]

- Public and private secondary schools
- Colleges and universities
- Professional sports teams
- Sports medicine clinics
- Health clubs
- Hospitals
- Emergency Departments
- Physicians' Offices
- Public Service Organizations such as the Military
- Corporate and Industrial health programs

Currently in the State of Connecticut

Athletic Training Education

There are 5 accredited Athletic training Education Programs in the State of Connecticut and many of these students are pursuing their careers outside of the State in order to be able to utilize all of their skills. The 5 institutions include, Central Connecticut State University (CCSU), Quinnipiac University (QU), Sacred Heart University (SHU), Southern Connecticut State University (SCSU), and The University of Connecticut (UConn).

Statistics from CT Universities

UCONN:[4] The University of Connecticut reported graduating 48 students with a Bachelor of Science in athletic training from 2008-2011. Of those 48 students only 1 student remained in the state to pursue a job: thus 98% of their graduating classes are leaving CT to find jobs. All of the other students travel far distances in order to fulfill Graduate Assistantship positions, intern positions and various other positions.

SCSU:[5] Southern Connecticut State University reported graduating 28 students with a Bachelor of Science in athletic training in the past 3 years. Of those 28 students, 35% of them pursued other careers, graduate assistantships, full time jobs and other positions in athletic training outside of the state.

SHU:[6] Sacred Heart University graduated 24 students from 2009-2011 and have also retained some data on where these students have gone and what professional paths they have taken. Of

the 24 students; 58% of students pursue a graduate degree in another major, 30% of students leave the state of CT and 12% is unknown.

Current Athletic Training Jobs in Connecticut[7,8]

The data being reported below is borrowed from the National Athletic Trainers' Association (NATA) and the CATA. Numbers reported below are those ATs and AT students who are members of the NATA.

Connecticut Demographics:	**2014**	**2011**
• First Year AT	24	
• Athletic Trainer	366	417
• Retired Athletic Trainer	12	13
• Student Graduates	49	12
• Undergraduate Students	117	88
• Honorary	1	
• Associate	5	

Job Setting (Certified Regular):				
• Amateur/Recreational/Youth Sports		1		1
• Business/Sales/Marketing		1		4
• Clinic		64		80
• College/University		128		116
• Health/Fitness/Sports/Performance Enhancement Clinics/Clubs		8		7
• Hospital		11		8
• Independent Contractor		12		18
• Industrial/Workplace/Corporate	13		11	
• Other		31		22
• Professional Sports		5		6
• Secondary School		110		100
• Unemployed		8		7
• Retired		12		13

Summary:

Most ATs working in the state of CT are in a traditional setting. As noted about 11% of CT's athletic training population is either unemployed or has left their setting blank. Approximately 4% of ATs are working in non-traditional or emerging settings which conclude that the change in the scope of practice can open more of these non-traditional settings creating more jobs in the state, reducing health care costs and improving the overall economy. Additionally, when looking at the demographic data from 2011, one can see that the number of "Athletic Trainer's (from the CT Demographics Chart) has decreased, additionally, fewer ATs are working in clinic settings, primarily either as a result of underutilization of their skills in that setting, and/or clinics eliminating AT positions because of perceived limitations of allowable AT practice.

Non Traditional Settings and the Return on Investment for CT Companies [1,3,8,9,10,11,12,13,14]

Currently the scope of practice for ATs is being interpreted in a manner where ATs cannot practice to their fullest education and training. These settings include: Physical Therapy/Sports Medicine Clinics, Industrial and Corporate Settings, and Physician's Offices. Although there are

some ATs in CT working in these settings there are so many more that would employ ATs with the change in the statute.

Emergency Departments and Physician Office Settings: [9]

The ATs in this setting facilitate cost effective care and improve efficiency of the medical team.

• Decreased physician time commitment
• Decreased patient wait times and improved access to care
• ATs triage minor injuries allowing the physicians and nurses to attend to the more critical patients

A U.S. Consumer Safety Commission report shows:

• Sports injuries among baby boomers increased by 33% from 1991-1998
• There were about 276,000 hospital emergency room-treated injuries to persons 35-54 in 1991 compared to more than 365,000 in 1998

Physician Office Setting: [9]

In 2006, the National Electronic Injury Surveillance System (NEISS) reported over half a million injuries just for basketball. Another two million injuries were associated with bicycling, football, and other sports. The increase in utilization of the emergency rooms for sports/activity related injuries increases demands on the medical staff, especially physicians and nurses resulting in longer wait times and less staffing for critical patients.

In this setting, the ATs provide:

• Immediate treatment reducing the risk of chronic injury
• Musculoskeletal injury triage
• Evaluation of the patient, recommendation for care and treatments as an extension of the physician
• Patient education related to the condition, prevention and immediate treatment
• Home going information to promote self-management of the condition and to restore independent activities of daily living
• Instruction on the use of durable medical equipment such as braces, splints, and crutches/canes
These services increase physician efficiency and provide prompt access for a greater number of patients.

Outpatient Rehabilitation [9,10]

ATs are licensed in Connecticut to provide physical medicine and rehabilitation according to their practice act. According to the demographic data of CT ATs, almost 20% [8] of ATs work in a clinic setting and are not being utilized to their full capacity as they are restricted in the clinic. Connecticut ATs working in a clinic are often contracted out to local high schools and work in a traditional setting. When an AT is contracted for less than a 40 hour work week, the remainder of their time is spent in a clinic. In some situations clinics utilize Athletic Trainers to work as aides

and assistants to front desk personnel instead of utilizing their full education due to some current restrictions with in the clinical setting. It is well documented[7] that there is a shortage of therapy providers nationwide, resulting in longer wait times for access to care and more chronic illness/ailment as a result:

• ATs provide a cost effective, viable solution to fill that shortage that is straining our healthcare system

• ATs are a resource to provide consumers with the services they need to resume healthy, productive lives and reduce the risk of chronic injury and recurrence

• Demographic trends reflect that the population is living longer and are remaining more active in their later years

• A Bureau of Labor Statistics study showed that injuries related to athletic activities of middle aged adults were the result of 488 million days of restricted work in 2002. [15]

All of these measures aid in cost containment and overall stress on the healthcare system. ATs have demonstrated integral contributions to the healthcare market in this setting.

Athletic Trainers in the Workplace [8]

According to the CATA demographic information of the Athletic Trainers that listed "other" for their job setting, 13 further detail their job description as being in the workplace. Companies such as Work Fit, Inc., the Industrial Athlete, NEPTS, On-Site Innovations, Concentra and Insite Health are some of the companies listed as employing these ATs. Although ATs are employed in this setting they are severely limited to only providing preventative care which is only one domain of AT. Additionally in some instances their title is not Athletic Trainer and they are functioning in a different capacity. When working to the fullest extent of their education and training Athletic Trainers can benefit the workplace greatly as outlined below. The change in the athletic training scope of practice can bring some of the below listed information to fruition for Connecticut.

Benefits of the AT in a workplace setting [9,11,12,13,14]

According to the NATA's national manager for business development, currently 5 states have workers compensation carriers who recognize the AT as a healthcare provider's. Ohio's workers compensation for instance recognizes Athletic Trainers as qualified health care providers and reimburses directly for their services.

Concentra's Athletic Health Specialist (WAHS) program employs ATs and Physical Therapists.[11] The company believes that by employing conditioning programs, injury screenings, and health and fitness improvement strategies, its incidence of lost workdays were reduced by more than half and associated workers' compensation costs decreased significantly. [11]

Within the first year of the program: [11]

- WAHS prevented 289 urgent care visits

- Saving over $900,000 ($3,250 typical cost per case), according to the company's safety manager.

Ergonomics Plus[12] is a company that is focused on workplace injury prevention and hires ATs which they contract to warehouses and industrial corporate companies. Some of their clients include: [12]

- General Electric
- Amazon
- Schneider Electric
- DuPont
- Grainger

The Industrial Athlete, Inc.[13] also hires ATs and reported that their Sports Medicine Model had lower costs (approximately 1/3 that of traditional medicine) yet had higher quality care resulting in better outcomes. The Industrial Athlete provides ATs on site, supervised by corporate management and physician teams, to any industry that is in need of controlling medical costs. They provide companies with: [13]

- Injury Prevention
- On-site Rehabilitation
- On- site emergency care

The Return on Investment of an AT [1,3,9,11,12,13, 14]

- Of companies that kept return on investment (ROI) data, 100 percent reported a positive ROI with more than 80 percent indicating a ROI of $3 or more for every $1 invested.

- More than 85 percent of companies reported that both the number and costs of work-related injuries decreased by at least 25 percent.

- More than 90 percent of respondents indicated employee days away from work decreased by 25 percent or more at their company.

- Almost half of the companies had their emergency room costs reduced by 50 percent or more.

- More than 50 percent of surveyed companies reported a decrease in costs associated with workplace injuries.

- Of these companies, 35 percent reported a decrease in costs of more than 50 percent.

Of the companies that tracked their return on investment: [14]

- 2 (7.7%) reported a ROI of $1
- 3 (1.5%) reported a ROI of $2

- 3 (11.5%) reported a ROI of $3
- 6 (23.1%) reported a ROI of $3 - $5
- 6 (23.1%) reported a ROI of $5 - $7
- 6 (23.1%) reported a ROI of more than $7

Healthcare Costs [14]

Of respondents that followed their healthcare costs:

- 45 percent reported that the Athletic Trainer made an impact on healthcare costs within 6 months.
- 100 percent reported that the Athletic Trainer made an impact on healthcare costs within 1 year.

The US Bureau of Labor Statistics [15]

The Bureau of Labor Statistics (BLS) projects a 30 percent increase in Athletic training jobs in the next 8 years. The BLS recognizes that ATs can work in multiple settings with multiple types of people, including young children, athletes and the older population. Additionally the BLS reports that:

> "Insurance and workers' compensation costs have become a concern for many employers and insurance companies, especially in areas where employees are often injured on the job. For example, military bases hire ATs to help train military personnel in how to properly lift items or to create training programs aimed at keeping injury rates down. More insurance companies are recognizing ATs as healthcare providers and are reimbursing the cost of an Athletic Trainer's services." [15]

Connecticut Business and Industry Association[14]

In 2009 the Connecticut Business and Industry Association (CBIA) reported a survey on CT Companies. They reported the breakdown of companies in CT in 2009 with a projected growth in the next few years:

- 30% manufacturing
- 17% from the service sector
- 15% professional services
- 7% nonprofit associations
- 7% wholesale trade
- 6% construction
- 6% insurance and finance
- 5% retail
- 7% other industry sectors

Judging by the percentages of companies in CT there is a high potential of growth for ATs to help reduce healthcare costs, especially in work related industries such as manufacturing, construction and other industry sectors.

Highlights

- Due to an ATs skill in biomechanical assessment, OSHA recognizes the Athletic Trainer as having the skills to function as an ergonomics consultant. [13]
- ATs cannot practice to their fullest potential in CT
- There are many potential jobs to create in CT by utilizing an AT
- Millions of dollars can be saved in companies by using an AT able to practice fully
- Millions of dollars can be saved in healthcare costs due to an ATs specialization in the area of Prevention [2,14]
- Return on Investment: [14]
    - Of companies that kept return on investment (ROI) data, 100 percent reported a positive ROI with more than 80 percent indicating a ROI of $3 or more for every $1 invested.

References:

1. Board of Certification Inc. www.bocatc.org
2. NATA Education Committee. (2010, December). *Athletic training Educational Competencies, 5th Edition.* Retrieved from National Atheltic Trainers Association: http://www.nata.org/sites/default/files/5th-Edition-Competencies-2011-PDF-Version.pdf
3. National Athletic Trainers' Association. www.nata.org
4. Mazzerolle, S. The University of Connecticut. Program Director, Undergraduate Athletic training Education. Stephanie.mazzerolle@uconn.edu
5. Morin, G. Southern Connecticut State University. Program Director, Athletic training Education. Moring1@southernct.edu
6. Samdperil, G. Sacred Heart University. Program Director, Athletic Training Education Program. samdperilg@sacredheart.edu
7. National Athletic Trainers' Association – Demographic Information. Available through and with permission from NATA Legislative Affairs Chair, Judy Pulice. judyp@nata.org
8. Connecticut Athletic Trainers' Association – Demographic Information. Available through and with permission from CATA President, James Doran. James.doran@uconn.edu
9. OATA. (2010). *The Role of the Ohio Licensed Athletic Trainers: Their Value Perspective in a Changing Healthcare Landscape* . Retrieved from Ohio Athletic Trainers Association:http://www.oata.org/documents/resources/The_Role_of_the_Athletic_Trainer__A_A615E784DE7E1.pdf

10. Albohm MJ, Wilkerson GB. An outcomes assessment of care provided by certified Athletic Trainers. *Journal of Rehabilitation Outcomes Measure* 1999; 3 (3):51-56.)
11. Longman, M. (2009, June 24). *Athletic Health Specialists Bring Better Health to Workplace.* Retrieved from Concentra, Inc.:

http://www.concentra.com/archive/2009/athletic-health-specialist-bring-better-health-to-workplace.aspx

12. Middlesworth, M. (2012). *Workplace Athletic Trainers for Workplace Athletes.* Retrieved from Ergonomics Plus: Health and Safety: http://www.ergo-plus.com/healthandsafetyblog/safety-culture/workplace-athletic-trainers-for-workplace-athletes/
13. The Industrial Athlete, Inc. http://www.theindustrialathlete.com/page/background
14. Halls, C. Executive Summary: Athletic Trainers provide return on investment and decreased injuries in occupational work settings. NATA.org. Accessed March 30, 2011.
15. Blum Shapiro: The Connecticut Business and Industry Association. 2009 Survey Results of Connecticut Companies. http://www.ctcda.com/Customer-Content/WWW/CMS/files/Survey%20Reports/2009-BlumShapiroSurvey.pdf
16. Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2012-13 Edition,* Athletic Trainers, on the Internet at http://www.bls.gov/ooh/healthcare/athletic-trainers.htm (visited *December 03, 2012*)

CH 9: Healthcare Professions Directly Impacted

This chapter outlines the healthcare professions that will be directly impacted by this scope of practice change. The CATA has the utmost respect for all healthcare professions and hope the scope of practice change will increase access and healthcare provided to CT residents will increase drastically. The update will also improve the job market for Athletic Trainers' in the state of Connecticut, helping to retain the graduates of the five AT education programs in the state. Additionally, the efforts taken by the CATA to meet with and discuss the nature of this change with all the listed parties are outlined in this document.

Profession	Projected impact on profession	Nature of impact	Efforts by athletic training
Physicians	• Increased communication • Improved healthcare • Improved collaboration • Improved comprehensive care • Optimization of patient care	Positive	Meeting requested via email with President of Orthopedic Association of CT Lobbyist Meetings with Pediatrics and Family Practice Physicians Met with orthopedic physician of OSM in Trumbull, CT who is a member of the CMAS who is in support of the athletic training scope of practice update Met with orthopedic physician in March of 2014 of Ortho Associates of Hartford who is a member of CMAS and who is in support of the athletic training scope of practice Initial meeting with chair of CMAS on 8/5 with follow meeting to be discussed and scheduled Various ATs are meeting with orthopedic physicians across the state.
Nurses	• Increased communication • Improved comprehensive care	Positive	Nurses Association Meetings

	• Improved health care • Optimization of patient care		
Physical Therapists	• Collaboration of healthcare professionals for the optimization of patient care • Improved comprehensive care for physical medicine and rehabilitation mainly in the area of musculoskeletal injuries • Perceived that ATs would take jobs from PTs "turf battle", however each profession is uniquely trained in overlapping competencies and proficiencies of rehabilitation	Positive	Met on 7/11/14 with Director of Doctor of Physical Therapy Program at the University of Connecticut Met on 7/28/14, with Regional Sports Medicine Director of Select Physical Therapy, the largest outpatient rehabilitation company in CT CPTA CATA Meeting will be scheduled for mid-September
Occupational Therapists	• Change allows us to better address unhealthy lifestyle behaviors, and allows collaboration if necessary • The impact is seen as neutral due to the differences in the scope of an Athletic Trainer and an Occupational Therapist • An Athletic Trainer would be seen providing prevention and wellness in the workplace as well as other services in their education and training	Neutral	OT Association and CATA meeting will be scheduled for mid-September
Dietitians-Nutritionists	• We work well with dieticians & Nutritionists, we don't anticipate any changes and will continue to refer to the proper healthcare provider • ATs are educated on the recognition of disordered eating and work with and refer athletes to nutritionists when the issue is outside of the scope of an AT	Neutral	
Chiropractors	• Chiropractors will be able to hire ATs in their offices in order to provide care alongside them in turn improving healthcare, increasing communication and collaboration between healthcare providers and improving comprehensive care for CT residents	Positive	Meeting to be scheduled with chiropractor who has held positions on the CT Chiropractic Association (meeting for late August)

CH 10: The Ability to Practice to the Full Extent of the Athletic Trainers' Education and Training

The professional domains of athletic training include: (1) injury/illness prevention and wellness, (2) clinical evaluation and assessment, (3) immediate and emergency care, (4) treatment and rehabilitation and (5) organizational and professional health and well-being.[1] As such athletic training is one of the few, if not the only allied professions to stress the importance of injury prevention. ATs have demonstrated their ability to provide the emergency care on thousands of athletic fields across the nation and have demonstrated success in rehabilitating various injuries and managing illnesses. ATs are recognized nationally for their role in the injury prevention and care of concussions and exertional heat illnesses, among other conditions.

ATs have traditionally been known for the care of athletic populations including youth and interscholastic players to elite professionals. However, the skyrocketing costs of injuries across the United States, [2] have highlighted the value of ATs serving non-athletic populations, especially in workplace and Physical Medicine and Rehabilitation (PM & R) settings. ATs are employed nationally in various industries applying preventive wellness care, onsite injury assessment, treatment, and rehabilitation. ATs are also serving other physically active populations that include the U.S. military, performing arts, law enforcement and firefighters, and members of the general public.[3]

In turn, athletic training education has evolved in response to this growth in patient population. All athletic training students receive extensive education in domains listed in the first paragraph of this chapter and throughout the scope of practice report. ATs are taught to recognize illnesses, and often deal with medical conditions such as asthma, diabetes, concussions, allergic reactions and common illnesses like the flu. The education and skill of the Athletic Trainer is well-adapted to provide care for most sectors of the population.

Unfortunately, the current state practice act significantly restricts ATs in Connecticut from providing care to populations who could greatly benefit from their unique skills and services. The limitation in the current practice act prevents ATs from using their knowledge and expertise in domains other than injury prevention at the workplace. It prevents the Athletic Trainer from applying the same skills afforded to elite athletes to other physically active populations such as performing artists, law enforcement officers, firefighters, military, and some youth athletes.

Additionally, the current law does not recognize the ability of the AT to care for illnesses despite the need to care for them on a daily basis. The next section of this chapter will go into further detail about the specific limitations placed due to the current language in the athletic training scope of practice.

The proposed scope of practice bill clarifies the Athletic Trainer's ability to apply their skills to prevent injury and improve wellness. Prevention is a major component of an Athletic Trainer's education and is reinforced by courses in injury prevention, wellness/health, biomechanics, exercise physiology and strength/conditioning. American businesses are negatively affected by the spiraling healthcare costs. Several companies have recognized the need to reduce these costs by reducing workplace injury – some of these companies are listed in Chapter 9. Companies have looked to ATs to serve this need, and in Connecticut it occurs in a very limited basis. The proposed scope of practice bill permits ATs to legally develop preventive programs for companies such as Pratt and Whitney, Hamilton Standard, and other similar companies to the fullest extent of their training with subsequent reductions in their healthcare costs.

The proposed changes in the athletic training scope of practice will permit ATs to evaluate and treat individuals with comparable conditions as those incurred by athletes. The scope of practice will focus on the type of injury and not who suffered it, permitting ATs to apply the same quality of care that has been administered to elite athletes on a wider population. These changes will assist many orthopedic rehabilitation clinics by allowing ATs to provide care for the clinic's entire patient population, not just the individuals who participate in sports.

The scope of practice changes will finally define and recognize the significant role ATs play in recognizing and dealing with illness. Current practice requires ATs to provide acute care and manage many non-orthopedic conditions such as asthma, concussions, and other conditions common to the athletic population. ATs are educated in recognizing illness and managing certain conditions common to an athletic population. Connecticut law already recognizes the role of the AT in managing certain acute conditions such as concussions, asthma and diabetes, but only as part of a public school system.[4,5,6] The current law does not acknowledge this role outside of a school, and it is of concern for many ATs in practice settings other than public schools. Therefore the proposed language does not infer upon the Athletic Trainer any additional scope of practice, but only codifies current practice.

Equally important, the proposed scope of practice changes will reinforce the standing orders of the AT and the direction they receive from the physician signing those orders. The new language places new requirements on the use of standing orders mandating an annual review and better communication between the Athletic Trainer and physician. The proposed language better delineates the necessary guidelines that should be included in the standing orders to include concussion management, emergency management and referral. The proposed language requires that a licensed health care provider (e.g., the provider signing standing orders or a prescription for rehabilitative services) determine the patient is free of co-morbidities that would preclude an Athletic Trainer from providing care to a patient.

The requested changes in language will also recognize the existence of pre-professional (entry-level) Master's degree programs in athletic training. Current language recognizes the need for license applicants to have a baccalaureate degree. However, there has been a growth of Master's degree programs in athletic training at the entry-level. Proposed language will acknowledge the graduates of these programs.

Finally, the proposed scope of practice changes will assist in correcting a typographical error that is present in current licensure law. Presently ATs are restricted to 'light massage'. The original proposed bill called for a comma after light, but was dropped inadvertently during the legislative process. The original intent was to recognize the use of modalities such as lasers (light) in the athletic training setting, as well as massage. Unfortunately the missing comma allows for "light massage," limiting athletic training practice.

> 1.1. Employment limitations

ATs in Connecticut are significantly limited in the patient and client population that they can care for by the definition of athlete in the current athletic training scope of practice. As previously mentioned CT is the only state that has a definition of athlete with a specific amount of times an individual must participate in activity before they are considered an athlete. Connecticut's regulations are outdated in comparison to many of the more recent legislative acts enacted nationally. As such it is important to update the current scope of practice to reflect the latest trends and the enhanced value of the Athletic Trainer in serving 'non-athletic' but physically active populations. The proposed changes will permit ATs to take a more active role in applying preventive techniques, assessment and treatment in work- place settings, effectively reducing health care costs and improving business viability.

The primary restriction encountered by practicing ATs is the limited patient population. ATs are restricted to caring for athletes. In a situation unique to Connecticut, the term athlete itself, is defined which further restricts an Athletic Trainer's scope of care. The strict limitation imposed on athletic training practice represents the older traditional model of athletic training, reflective of the time in which the practice act was written. Current athletic training education is more inclusive of a wider population, but current law does not permit the Athletic Trainer to fully care for this wider patient population.

The three day requirement in defining an athlete has an effect on athletic training practice. Several youth sports do not meet four days per week, so those athletes would be precluded from the care of an Athletic Trainer. This contrasts the recognition of ATs at the state level for their role in injury prevention and care. Athletic Trainers and the Connecticut Athletic Trainers' Association have worked closely with many legislators and athlete safety advocates on issues concerning automatic external defibrillators (AEDs), helped pass one of the first concussion bills in the nation as well as heavily assisted with updating this bill recently, worked on and assisted with the recent passing of the sudden cardiac arrest bill and are constantly working to improve the safety of the Connecticut residents. ATs have been selected by the legislature to serve on a task force to identify best practices in concussion injuries occurring in youth sports, yet may not be allowed to offer their care on the field at the time of injury.

The current scope of practice prevents ATs from providing immediate and rehabilitative care to those individuals who can truly benefit from our expertise. Military, firefighters, industrial workers and even dance companies clearly demonstrate "the strength, agility, flexibility, range of motion, speed or stamina" characterized by the athlete definition in the current licensure laws. However, the requirement of where the individual participates ("regular participant in sports or recreational activities"), and how many times per week they participate, makes these individuals fall outside of the scope of care for ATs, despite a similarity of injury.

Another limitation of the current licensure law is its failure to recognize the role ATs have in dealing with acute and chronic illnesses and medical conditions. Acute conditions frequently arise and require immediate assistance by the Athletic Trainer; these include diabetic emergencies, respiratory issues such as asthma, allergic reactions, seizures and sudden cardiac emergencies. The existing law does not account for such emerging conditions, although the AT has significant education and training in these areas as addressed in Chapter 6, which places the Athletic Trainer in a potentially difficult situation – choosing to come to the rescue of a person in need versus the state-mandated restriction to care for injuries only. Connecticut statutes recognize a role for the Athletic Trainer in caring for these emerging conditions, providing for ATs to administer medications such as glucagon, epi-pens and asthma inhalers, but only for ATs employed at a high school.

> 1.2. Places ATs work around the country

Workplace Settings

ATs are employed in locations outside of the 'athletic setting.' One of the fastest areas of professional opportunities is the industrial setting. ATs are hired to develop preventive programs to reduce onsite work injuries and healthcare costs. Zimmerman[7] noted a 54% decrease in workman's compensation claims at a Michigan plant with the introduction of fitness program initiated by trained personnel. NASA and the Kennedy Space Center employ ATs and rehabilitative technicians to develop programs to prevent onsite workplace injury and exercise programs that will help overcome bone and muscle atrophy incurred during space flight. Boeing, Delta Airlines and Kimberly-Clark employ ATs in preventive and on-site injury management roles.[8] Robinette described a program at UPS, using a multidisciplinary team including ATs and ergonomic specialists that provided preventive education, injury intervention and post-rehabilitative expertise.[9] The program significantly reduced healthcare costs by 60%, with an 85% reduction in annual injury rates. AT positions have increased across the United States with companies like Workfit Inc., Welltrail and The Industrial Athlete developing injury prevention programs.

The performing arts have seen a dramatic rise in the employment of ATs. The Radio City Rockettes maintains several ATs on their staff providing acute and rehabilitative care. The Cirque du Soleil and similar acrobatic circuses have ATs serving with their shows. ATs are serving with ballet companies such as the Cincinnati Ballet and multiple dance organizations through the Harkness Center in New York City. ATs also provide care for cast members at Disneyland through an agreement with a local hospital. ATs are becoming commonplace working with our military. The Naval Base in San Diego, houses a sports medicine center which

employs ATs. ATs serve in the naval base near Norfolk (VA), Fort Bragg (NC), with the U.S. Army and Marines, and with branches of U.S. Special Forces (e.g., Navy SEALS).

State Licensure Laws

Nationally, several states have given statutory recognition to a larger scope of practice for the Athletic Trainer, Georgia recognizes the Athletic Trainer's ability to provide care for an athletic injury that occurs to a person as a result of "any activities requiring physical strength, agility, flexibility, range of motion, speed or stamina without respect to where or how the injury occurs". It should be noted that unlike Connecticut, the patient population is not limited to 'athlete'. Furthermore, Indiana notes the presence of ATs in "a clinic accessible to the general public…" in identifying the need for referrals from a licensed health care professional.

In Michigan, athletic training means "…the clinical evaluation and assessment of an individual for an injury and illness…" not limiting the scope of practice to athletes. Ohio does not mention "athlete" in defining the scope of athletic training. Ohio law defines athletic training as the "practice of prevention, recognition, and assessment of an athletic injury…" Later in the law, athletic injuries are defined as an injury "that affects the individual's participation or performance in sports … or other activity that requires physical strength, agility, speed…" Once again the scope does not require ATs to care only for athletes. Pennsylvania permits an Athletic Trainer to provide services to a "physically active person under the care of a physician, dentist or podiatrist.

Nebraska recognizes the presence of ATs in an "outpatient medical facility' without identifying a specific patient population. Virginia and Wisconsin permit an Athletic Trainer to treat an individual incurring 'a substantially similar injury or condition resulting from occupational activity" to include the rehabilitation of these under the direction of a health care provider.

Locally, Vermont defines athletic training as "the application of principles and methods of conditioning, the prevention, immediate care, and treatment of athletic or orthopedic injuries within the scope and training." Similar to wording in the proposed Connecticut scope of practice change request, Vermont permits ATs to provide care "to athletes or the physically active who have an athletic or orthopedic injury and have been determined by a physician's examination to be free of an underlying pathology that would affect treatment."

> 1.3. Athletic Training Education Programs in the State

Currently, Connecticut has five undergraduate Athletic Training Education Programs as outlined in earlier chapters. The schools include, 3 state schools: Central Connecticut State University, Southern Connecticut State University, and the University of Connecticut and 2 private institutions: Sacred Heart University and Quinnipiac University. Retention statistics can be found in Chapter 9 of this scope of practice report.

References

1. Board of Certification, Inc. www.bocatc.org
2. Health Care Cost Institute. www.heatlhcostinstitute.org/about
3. National Athletic Trainers' Association. http://www.nata.org/athletic-training/job-settings
4. CT Statutes: Chapter 169 Sec 10-212a. http://www.cga.ct.gov/2011/pub/chap169.htm#Sec10-212a.htm
5. CT Statutes Chapter 166 10-149c. http://www.cga.ct.gov/2011/pub/chap166.htm#Sec10-149c.htm
6. CT Public Act (2014) PA 14-93. http://www.cga.ct.gov/2014/act/pa/pdf/2014PA-00093-R00SB-00229-PA.pdf.
7. Zimmerman, GR. Industrial Medicine and the Athletic Trainer: Cost-Effectiveness in the Non-traditional Setting. *Journal of Athletic Training.* 1993; (28)3
8. Value Model of the Certified Athletic Trainer in the Workplace Setting. June 23, 2003. Document available upon request.*
9. Robinette, Z. Training the Industrial Athlete: Fitness Training at UPS. Journal of Workplace Health & Safety. 2007; 76: 34-38.