

Chapter 15

Athletic Training

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OBJECTIVES

After studying this chapter, the student should be able to

1. Explain the role and function of the certified athletic trainer.
2. Explain the historical development of athletic training as a profession.
3. Describe the educational preparation and certification required for athletic trainers.
4. Summarize the estimated earning and career potential of certified athletic trainers.
5. Identify resources for additional information on the role of athletic trainers.

INTRODUCTION

An athlete who tells you the training is always easy and always fun simply hasn't been there. Goals can be elusive, which makes the difficult journey all the more rewarding.

Alberto Salazar, American sprinter, (1958–)

Sports medicine is a generic term that encompasses multiple disciplines. Among these disciplines, you can find physicians, athletic trainers, physical therapists, exercise physiologists, emergency medical technicians, biomechanists, nutritionists, podiatrists, massage therapists, and sport psychologists. While each of these professions has a specific role to play within the sports medicine team, collectively, these individuals will be more successful working together to provide an optimal environment for safe, healthy, maximal sport performance. The sports medicine healthcare team helps both sports teams and individual athletes to prevent injuries (primary prevention),

detect injuries (secondary prevention), and provide rehabilitation of sports injuries (tertiary prevention). Athletic trainers function within all three levels of prevention, and of all these professionals, frequently having the most regular contact with the athlete. The role of the athletic trainer is expanding beyond the sports arena to provide skills to physically active individuals of all ages.

What Is a Certified Athletic Trainer?

Certified athletic trainers (ATCs) are medical experts who specialize in the prevention, assessment, emergency care, treatment, and rehabilitation of injuries and illnesses that occur to athletes and the physically active. The American Medical Association recognizes Athletic Training as an allied healthcare profession. As part of a complete healthcare team, the ATC works under the direction of a licensed physician and in cooperation with other healthcare providers, athletic administrators, coaches, and parents. They provide a critical link between school-based sports programs and the medical community in implementing healthcare programs. In addition, athletic trainers are a valuable resource to educate and counsel athletes in the prevention of chronic diseases and degenerative injuries through life-long activity-related fitness and health education. The ATC specializes in six professional practice areas or domains: prevention; clinical evaluation and diagnosis; immediate care; treatment, rehabilitation, and reconditioning; organization and administration; and professional responsibility. A typical day for an athletic trainer may include the following tasks:

- Preparing an athlete for practices or competition, including taping, bracing, and bandaging
- Evaluating injuries to determine management and possible referral to other healthcare providers
- Developing and implementing treatment, rehabilitation, and reconditioning programs
- Completing administrative tasks such as injury and treatment documentation, ordering supplies, submitting insurance reimbursement forms, and communicating with coaches, parents, and other healthcare providers.

The Beginning of Athletic Training

Athletic training has roots dating back to ancient Greece where athletics was an important part of Greek culture. Individuals called Paidotribes (boy-rubber) and Aleittes (anointer) suggest that massage played an important role in athletic per-

formance. The medical gymnastae (trainers) were said to possess ideas of the effect of diet, rest, and exercise on the development of the body. Hippocrates, the “father of modern medicine,” and his student Claudius Galen often advised their patients to exercise in the gymnasia as a means of recovering from their ills.

As sport began to reemerge in society during the late 19th century, few individuals recognized the need for medical care for injured athletes. Athletes, their coaches, teammates, and spectators often managed their own injuries and the injuries of team members. In 1869, Rutgers and Princeton introduced the sport of football to the American scene. As a result of 18 deaths and 159 serious injuries in 1905, President Roosevelt was threatening to abolish football as an intercollegiate sport. This spurred a few educational institutions to hire individuals whose duties included those of athletic trainer (although usually not exclusively).

The early “trainers” were mainly responsible for carrying water jugs, acting as team managers, and providing an occasional massage. These trainers typically worked independently and rarely shared ideas with others. Upon graduating from the University of Illinois in 1914 with a degree in physical education, Samuel E. Bilik enrolled in medical school. The Illini hired Bilik to serve as a part-time athletic trainer, thus changing the norm. Bilik published his first book, *Athletic Training*, two years later and soon began teaching intensive summer courses for athletic trainers that supported using sound, logical, physiological, and scientific facts to practice medicine with athletes. Other progress during this time must be credited to the Cramer brothers, Charles (“Chuck”) and Frank, who founded the Cramer Chemical Company, which furnished supplies to training rooms throughout the country. After traveling with the US Olympic team in 1932, the brothers wanted to share what they had learned, so they set up a series of traveling workshops and began publishing *The First Aider*, a newsletter with practical practice tips for the fledgling Athletic Training profession. *The First Aider* gave athletic trainers insight into the latest athletic training methods, provided a forum for the exchange of ideas regarding the conditioning and training of athletes, the discussion of training room problems, and the care and treatment of minor injuries in athletics.

A few prominent individuals realized that if they started working together, sharing ideas, and supporting each other, perhaps the profession would have an opportunity to grow and develop. Organization on the national level could provide a collective voice on matters of mutual concern, set minimum standards of practice, and serve as a forum for the exchange of ideas. The first attempt to organize an association for athletic trainers occurred at the Drake Relays in Des Moines, Iowa during the spring of 1938. Unfortunately, only those athletic trainers with teams participating in the competition were able to attend. Just as the first National Athletic Trainers’ Association (NATA) was beginning to take shape, the United States began mobilizing its forces for

World War II. Athletic trainers went from preparing boys for athletic competition to conditioning men for armed service. As the war evolved, the organization struggled with financial and logistical challenges. Regional bickering and accusations of athletic trainers “keeping” their best secrets to themselves abounded. By the end of the war, the first NATA was no longer around.

Despite the failure of the first attempts at organizing the profession, those earlier attempts set the foundation for what would become one of the fastest growing professional organizations in the country. During the late 1940s, unity began to reemerge in the form of regional and conference-based athletic training organizations. It was quickly identified that if athletic training was to develop into a full-fledged profession, a national association must be established to set and enforce recognizable and respectable standards of practice and care. On June 24 and 25, 1950, The Cramer Chemical Company sponsored what is considered the first National Athletic Trainers Clinic in Kansas City, Missouri. From this meeting emerged the foundation of the National Athletic Trainers’ Association in the form of an elected a board of directors, a purpose for the association, and classes of membership. Generously, the Cramer Chemical Company continued to underwrite the expenses of the NATA, allowing for growth without concern of financial support.

William E. “Pinky” Newell’s appointment as executive secretary of NATA in 1956 coincided with numerous milestones. Under Newell’s tenure, the profession established a journal of scholarly research and discourse (1956), adopted a code of ethics (1957), aligned itself with numerous organizations including the National Collegiate Athletic Association (1957), and approved a model curriculum for athletic training of students (1959). Advocating education, Newell helped elevate the profession to a level of competence and effectiveness such that in 1967 the AMA recognized the NATA as a professional organization worthy of the “support” of the medical community.

In 1956, Arthur Dickinson colorfully described the evolution of the athletic trainer. In a speech to the American Association of Health, Physical Education, and Recreation, he said:

the word “trainer” has stuck like a bloody tick from the time racehorses demanded a valet, who slept in the stables and probably shared part of the horse’s menus. Following this, the boxing profession broke out with a rash of handlers—men who appeared at the ringside with a bucket and sponge and hurled meaningless advice to the toiling gladiators, and later slapped them when they got on the rubbing table after the bout. These also were called trainers. Universities and colleges . . . figured that if racehorses and boxers could stand up under the treatment meted out by these characters, why wouldn’t it be good for the football team? So, they lowered

themselves socially and hired these chaps who left the ringside and stables in droves. So much chewing tobacco was sprayed on the dressing room walls of our institutions that Congress nearly went into an extra session to pass laws preventing such things. . . . Soon, college presidents, tiring of having men on the staff who signed the payroll with an X, demanded at least an 8th grade diploma. Thus, education took a gigantic step forward. (Ebel, 1999).

The proposed curriculum model of 1959 was to have accelerated the development of athletic training education programs by colleges and universities. By 1970, four schools had submitted their curricula for approval by the NATA. The 1970s also saw the emergence of licensing of athletic trainers by states in which they practiced, and the demise of the “men only” profession as women’s sports and interest in the profession grew. Accelerating the development of athletic training programs coincided with the implementation of a national certifying exam in 1971. While this exam created controversy among its relatively “trade” trained members, it was a necessary step for the association to achieve its goal of respected credentials consistent with other allied healthcare providers. To sit for this exam, candidates had to complete required course work, gain practical experience under the direct supervision of a NATA athletic trainer, and complete requirements for a bachelor’s degree. The certification examination and ATC credential remained the responsibility of the NATA Board of Certification committee until 1989. At that time, the Board of Certification (BOC) became an independent, nonprofit organization. This independence assures the public that athletic trainers have achieved a minimal level of competency through the certification exam and have continued to meet requirements for certification through continuing education courses. From humble beginnings, the association has expanded to encompass a global membership totaling nearly 30,000, plus a full-time executive director and staff. Today, members serve as leaders for the association, which has more than 30 committees working together to help advance the profession.

Where Do Athletic Trainers Work?

Athletic Trainers can be found working almost anywhere people are physically active. Some of these work environments are described in the following.

Secondary Schools

Administrators and parents recognize the value of qualified medical professionals in keeping today’s young athletes safe. Many athletic trainers are able to find

employment in both private and public secondary schools. In 1998, the American Medical Association recommended, “those high schools with athletic programs provide the services of a certified athletic trainer for their athletes” (NATA, 2006). High school athletic trainers may also teach classes at the school or may be employed through a clinic or hospital to provide outreach care.

Colleges and Universities

There is tremendous variability in the different positions available at colleges and universities. Smaller institutions may hire athletic trainers with the expectation that they wear many different hats, including part-time teacher, athletic trainer, and administrator. Larger institutions typically hire many athletic trainers who are employed clinically by the athletic department and may or may not have any teaching responsibilities. These athletic trainers work daily with athletic teams and athletes. Institutions with accredited athletic training education programs may hire ATCs to teach athletic training classes, supervise athletic training students, and/or conduct research related to athletic training areas of interest. These athletic trainers may or may not have clinical responsibilities.

Professional Sports

While employment in this setting is often desired, there are very few opportunities available. The growth of professional sport opportunities for women is creating parallel growth opportunities within the athletic training profession. Athletic trainers working in professional sports work year-round conducting off-season rehabilitation, conditioning, and prevention programs.

Sports Medicine Clinics

Athletic trainers working in sports medicine clinics have the opportunity to work with different healthcare providers and a diverse patient population. Roles may vary from acting as a physician extender provider, providing rehabilitation care, doing outreach care at a local high school, developing marketing and promotional tools, working in community outreach and education, and providing possible special event medical coverage.

Military

The US Military is one of the fastest growing employment markets within athletic training. Athletic trainers may provide health care for one of the military school sports teams, work in on- and off-base fitness and wellness

centers, be a part of the healthcare team for active duty service people, and/or work with new recruit readiness preparation programs.

Industrial and Corporate

Athletic trainers are often hired by large corporations to work with physicians and other healthcare providers in delivering employee fitness programs, performing ergonomic assessments, serving as first responders to emergencies, and overseeing rehabilitation and return to work reconditioning programs for injured employees.

Hospitals

Athletic trainers may work directly with occupational health physicians, performing ergonomic assessments, conducting employee wellness programs, providing in- and out-patient rehabilitation, or managing/operating hospital-based fitness centers.

Health Clubs

Using their knowledge in nutrition, injury prevention, and rehabilitation, athletic trainers may design fitness and wellness programs for clients or work in the areas of risk management and performance enhancement.

Performing Arts

Athletic trainers work with performing artists to ensure proper conditioning, flexibility, and rehabilitation following injury. The Radio City Rockettes, Blue Man Group, and Cirque du Soleil™ all employ ATCs.

Olympic Sports

The US Olympic Committee employs approximately 25 full-time athletic trainers at its various Olympic training centers throughout the United States. In addition, athletic trainers are selected through a competitive process to provide care to teams in various international competitions. Individual national governing bodies may also have short-term positions available for special competitions. These positions are largely volunteer, but provide memorable experiences.

Additional work settings may include youth, recreational, and amateur sports teams, government, and law enforcement. While these settings do not employ a lot of athletic trainers, they are certainly areas of potential growth

and represent the diversity into which athletic trainers are employable. New areas of employment continue to emerge as athletic trainers educate the public about their diversity of expertise.

Minimum Education/Certification Requirements for Athletic Trainers

To become a certified athletic trainer, students must complete degree requirements from an accredited athletic training education program and pass a national certification exam and/or meet state accrediting agency requirements. After completing certification requirements, many students continue to pursue an advanced degree. In fact, 70% of athletic trainers have earned graduate degrees in athletic training and related fields.

Athletic training education programs, an academic major or the equivalent, are accredited by the Commission on the Accreditation of Allied Health Education Programs (CAAHEP) via the Joint Review Committee-Athletic Training (JRC-AT) and lead to a bachelor's or master's degree. A list of CAAHEP Accredited Curriculum Programs can be found at <http://www.caahep.org/programs.asp>. However, athletic training certification programs transitioned to a new, independent accreditation process in July 2006. The Commission on the Accreditation of Athletic Training Education (CAATE) then became the certifying agency. Programs already granted accreditation under the old process will be honored until their re-accreditation date, at which time they must demonstrate requisite changes to meet the CAATE standards. Prospective athletic training students should ask questions about their school's program to assure the new standards are being met.

Educational content is based on cognitive (knowledge), psychomotor (skill), affective competencies (professional behaviors), and clinical proficiencies (professional, practice-oriented outcomes). Athletic training students receive formal instruction in the following specific subject matter areas:

Foundation Courses:

- Human physiology
- Human anatomy
- Exercise physiology
- Kinesiology/biomechanics
- Nutrition
- Therapeutic modalities
- Acute care of injury and illness

- Statistics and research design
- Strength training and reconditioning.

Professional Courses—Content Areas:

- Risk management and injury/illness prevention
- Pathology of injury/illness
- Assessment of injury/illness
- General medical conditions and disabilities
- Therapeutic exercise: rehabilitation techniques
- Healthcare administration
- Weight management and body composition
- Psychosocial intervention and referral
- Medical ethics and legal issues
- Pharmacology
- Professional development and responsibilities.

In addition, students are required to complete a minimum of two years of academic clinical education. Using a competency-based approach, students are instructed and evaluated by Approved Clinical Instructors. These clinical experiences should occur in a variety of settings to expose students to different work environments. Possible venues include

- College and university athletic training rooms or health centers
- Industrial settings
- Secondary schools
- Hospitals
- Professional sports
- Olympic sports
- Sports medicine and physical therapy clinics
- Any other setting employing a certified athletic trainer.

Typically, undergraduate students can expect to complete general education and prerequisite athletic training courses during their first one–two years in an accredited athletic training education program. Most programs requires a formal application into the athletic training program and are competitive based on grades, previous experiences, letters of recommendation, and a formal interview. Many upper-level athletic training classes combine traditional classroom learning with laboratory, clinical, and “hands on” learning opportunities. This is a good major for students who tend to learn not only from reading, but also from “doing.”

Athletic training students, who have completed requirements for graduation from an accredited program, are then eligible to take a certification exam

administered by the Board of Certification, Inc. (BOC). The certification exam covers a variety of topics within the six domains of practice listed earlier in this chapter. Most of today's practicing athletic trainers completed an exam which included a written portion with multiple choice questions, a practical exam where students demonstrated their psychomotor proficiency, and a written simulation test consisting of situations designed to approximate real-life decision making and the ability to resolve cases similar to those an athletic trainer might encounter in actual practice. Beginning in Spring 2006, the BOC certification exam will be delivered electronically and integrate all components of the exam—written, written simulation, and practical—into a single format. This exam will assess the candidate's knowledge with regard to the many skills and procedures required for higher-level critical thinking.

The Education Council serves as the NATA's voice in matters related to athletic training education. The council is specifically responsible for facilitating continuous quality improvement in entry-level, graduate, and continuing athletic training education. This committee has an ongoing responsibility for determining educational competencies (content) required of entry-level athletic training programs. A quick look at the history of athletic training education suggests that as the scope of practice has broadened over the years, so too has the number and type of competencies being taught to entry-level athletic trainers.

Another topic of interest regarding the future of athletic training education is the exploration of the development of Certificates of Advanced or Added Qualification (CAQs). This type of specialty education would result in an advanced preparation beyond that of an entry-level certified athletic trainer.

Athletic training educators are also debating whether to increase the entry level of education to that of a master's degree. Physician assistant, physical, and occupational therapy programs have all moved to this model. The question remains—should athletic training move to a similar model? A recent task force studied this question and unanimously recommended to leave the entry level as an undergraduate degree rather than raise it to a master's degree. However, research regarding this move continues to progress and the decision will most likely be revisited in the near future. As it stands, there are entry-level graduate programs that are similar to undergraduate athletic training education programs as well as accredited graduate athletic training education programs which emphasize advanced qualifications within athletic training.

Once athletic training students pass the certification examination demonstrating sufficient knowledge within each of the six domains, they use the designation "ATC." This credential is an entry-level credential which ensures high standards of professional practice and is required by most employers. In addition to the BOC credential, athletic trainers usually must also meet individual state licensing requirements. To determine if these

added requirements apply, certified athletic trainers are encouraged to check with the states in which they practice (<http://www.bocatc.org/atc/STATE/>). Often, state accrediting agencies accept the ATC credential as sufficient.

Because athletic training is a constantly evolving profession, certified athletic trainers must complete continuing education requirements set by the Board of Certification in order to retain their certification. These requirements include

- Completion and reporting of 75 continuing education units, including recertification in CPR at least once in each three-year term. Continuing education units are awarded for various activities, such as attending educational meetings, publishing manuscripts in professional journals, giving an educational presentation to colleagues or the public, or the completion of course work relative to the field of athletic training. Additional information can be obtained by visiting the Board of Certification Web site: <http://www.bocatc.org/atc/CE/REP0305/>.
- Adherence to the BOC Standards of Professional Practice.

The purposes of these requirements are to ensure that ATCs continue to

- Obtain current professional development information
- Explore new knowledge in specific content areas
- Master new athletic training-related skills and techniques
- Expand approaches to effective athletic training
- Further develop professional judgment
- Conduct professional practice in an ethical and appropriate manner

While the technical requirements to become an athletic trainer are well defined, personality impacts professional success. Though not inclusive, the following personality traits (*italicized*) are traits a prospective athletic trainer should consider before pursuing a career in athletic training:

Athletic trainers need to have a *love of sports*. While professional athletes may make large salaries, the trickle-down effect to the support staff, including the athletic training staff, is not typically a reason athletic trainers cite as a reason to pursue the profession. Athletic trainers often find themselves assigned to work with sports for which they have no background, but because of their general love of sports, they are extremely satisfied with their jobs. A love of sports is also necessary under different work conditions, for example, when the climate isn't so pleasant. Athletes and athletic trainers are outside or inside in all types of weather competing and practicing. If you don't love what you are doing, you probably won't stay in the profession very long.

A typical day in the athletic training clinical setting may also be physically demanding. Often times, athletic trainers must carry coolers of ice and water, remove an injured athlete from the playing field, work nontraditional

hours (long days), or assist athletes performing functional sport activities through a rehabilitation program. *Good physical conditioning and stamina* assure that the athletic trainer is not fatigued and capable of performing their job responsibilities despite being tired.

Both *written and oral communication skills* are critical for success in athletic training. A review of athletic trainers' daily activities brings this to life. In a typical day, an athletic trainer may have to talk with a salesperson about supplies and equipment for their facility, submit a daily injury report to the coaching staff so they are aware of athletes available for practice, document daily treatment and rehabilitation activities in patient charts, educate athletes about their injuries, provide treatment or rehabilitation exercises, refer an athlete to a physician (phone referral), and perhaps teach a new skill to a student. And this is only a brief example of the role communication skills play in the daily life of an ATC.

Athletic Trainers are also bound by a "code of ethics." *Ethical behavior* assures high-quality health care; protects the rights, welfare, and dignity of the public; and presents a standard of behavior that all members should strive to achieve. The NATA Code of Ethics can be found at <http://www.nata.org/about/codeofethics.htm>.

Intellectual curiosity helps athletic trainers achieve success by allowing them to be open and receptive to learning new ideas and techniques. It is impossible to expect all athletic trainers to practice in the exact same fashion. Many times, the actual practice of athletic training is an art based on sound scientific principles. Injuries present and respond differently from what textbooks teach and guidelines suggest. Having the curiosity to pursue different treatment options, and the realization that it is impossible to know everything, helps keep the profession of athletic training exciting. Closely paralleling intellectual curiosity is the ability to adapt to a situation. Not all athletic trainers work in the perfect environment with every possible piece of equipment available to them. High school athletic trainers often provide excellent care on small budgets simply because they are able to adapt to their situation by using a creative approach to problem solving. By simply asking the question, "How can I do this?" rather than stating "I cannot do this," athletic trainers achieve tremendous results.

The *ability to empathize* with an injured athlete as they struggle through physical pain and often psychological depression is critical. Understanding that injury may mean the end of a season, the loss of a game, a change in personal identity, or perhaps the end of a career, goes a long way in developing an athlete's trust. Often times, this requires digging deep into psychological healing skills to help the athlete to see that it is not the end, but rather a bump in the road. A *sense of humor* is one tool which may be valuable in successfully treating injured athletes. Humor can also help athletic trainers survive long days at work, often in challenging environments.

Roles of the National Professional Organization/Association

The National Athletic Trainers' Association (NATA) is a not-for-profit organization dedicated to advancing, encouraging, and improving the athletic training profession. It accomplishes this by supporting and representing the profession through public awareness, education, and research. The National Athletic Trainers' Association's roles within the profession closely follow the purposes outlined in the bylaws.

- 1. To enhance the quality of health care for the physically active.** The credential of ATC assures the public that the individual has met minimal standards to provide quality care to the physically active.
- 2. To advance the profession of athletic training through education and research in the prevention, evaluation, management, and rehabilitation of injuries.** Some of the activities that help the association achieve this goal include:
 - Publishing the *Journal of Athletic Training*. This journal features peer-reviewed scientific articles written by experts in the field.
 - Sponsoring regional and national educational seminars.
 - Supporting the NATA Research and Education Foundation in awarding scholarships, research grants, and continuing education opportunities.
 - Initiation of the development of the World Federation of Athletic Trainers and Therapists. This group is a coalition of national organizations of healthcare professionals in the fields of sport, exercise, injury/illness prevention, and treatment.
- 3. To safeguard and advance the interests of its members by presenting the professions' viewpoints, concerns, and other important information to the media and to appropriate legislative, administrative, regulatory, and private sector bodies, and by developing a working relationship with appropriate governmental and private sector not-for-profit and for-profit entities.** This role is accomplished by some of the following activities:
 - Writing and publishing position statements. While not binding documents, these statements serve as a guideline for appropriate professional practice. These can be found at <http://www.nata.org/publicinformation/position.htm>.

- Hiring legal consultants and legislative lobbyists to protect the interests of the profession and professional organization in state and national laws.
 - Sponsoring, encouraging, and assisting members with opportunities to meet local politicians and representatives.
 - Monitoring the news for stories, both positive and negative, to promote and protect the interests of its members.
 - Developing, distributing, and encouraging activities to promote the profession. (March is NATA month.)
4. **To advance members' levels of knowledge through the collection, interpretation, and dissemination of information on subjects appropriate to the profession.** In addition to the *Journal of Athletic Training*, the NATA publishes
- The *NATA News* (monthly) to communicate mainly key administrative issues to members in a timely fashion.
 - An e-Blast newsletter to communicate time-sensitive information and alert members to new developments that may require their immediate action or can increase the credibility and awareness of the profession, and to remind members of upcoming events and deadlines.
 - A salary survey of its members. The membership is surveyed yearly and the results are made available in an electronic database.

In addition, the national association offers members NATA-sponsored group liability, disability, medical, and life insurance, as well as discounted auto insurance, financial planning, and travel-related services. An online database for job searching is available as is an online membership directory and access to professional book and literature review services.

Estimated Salary/Earnings by Work Environment

The NATA surveys its membership on a regular basis to identify trends within the profession. The most recent NATA salary survey (conducted in 2004) indicated that athletic trainers work in very diverse settings. The average number of hours worked per week is 54. In addition to the salaries listed, most respondents list that their employer offered and paid part of their health insurance, dental insurance, and retirement plan costs. The salary of an athletic trainer depends on experience and job responsibilities. The median annual earnings of athletic trainers were \$33,940 in 2004 (BLS, 2006).

Years of experience, level of education (BS, MS, PhD), and geographic regions may impact potential salary. Also, some positions may only be 9- or 10-month positions, allowing the athletic trainer to earn additional income in other positions should they desire.

The Future of Athletic Training

Athletic training has been on a moderate to fast growth rate since tracking began in 1974. Membership has grown from about 4,500 members in 1974 to over 31,000 in 2005, an increase of over 600%. Taking a conservative estimate of a 30% growth rate, athletic training should see an increase of about 7,000 new positions by 2012. However, because of the flexibility of athletic trainers to work within other healthcare positions, job growth within healthcare services must also be considered. An aging population and longer life expectancies are factors driving up the demand for qualified healthcare providers. Further, this aging population and medical community recognize the impact physical activity has on living longer, healthier, more independent, and productive lives. One thing to be certain about is that as long as people are participating in sports, injuries will occur, and the demand for qualified healthcare providers to evaluate, treat, and manage these injuries will continue to be necessary. Athletic trainers are the ideal professionals to deliver high-quality health care to a wide range of individuals.

Challenges Facing the Profession

In contrast to the early athletic trainers who kept their trade secrets to themselves, the profession of athletic training has expanded into a well-educated, international network, with individuals working together to achieve quality health care for physically active individuals. What started as a profession in athletics has grown to a profession in health care that is expanding to a global frontier. Despite this growth, the profession continues to face an identity crisis. Athletic trainers are often misperceived as “personal trainers” or “coaches” or “massage therapists.” A change in name has been explored as one possible solution to the dilemma, yet a change in name is likely to create more confusion and undo much of the hard work of the leaders in the profession to date.

Reimbursement for services provided continues to be an ongoing struggle within the profession. Currently, the insurance industry and legislative bodies often consider athletic trainers as second-tier service providers. That is, they don't often recognize that athletic trainers are capable healthcare providers

and fail to reimburse companies using athletic trainers to provide health care. Until this issue is resolved, growth and professional respect will continue to be stifled. Numerous other governmental affairs issues also provide a challenge to the profession of athletic training. However, the leadership of the NATA is working hard to protect the interests of its members and keep the profession on a path of growth and development.

A Day in the Life of an Athletic Trainer

During a college football game, a wide receiver took a lateral blow to the head by an oncoming defensive tackle. The injury occurred in the middle of the field immediately after the wide receiver caught a 27-yard pass. He was soundly hit on the left side of the head by the opponent's helmet, forcing a whiplash mechanism to occur before he fell to the ground. The player was lying on the ground in an unconscious state as the head athletic trainer came to the field. The head athletic trainer had responsibility for the primary management of the athlete on the field and focused on stabilizing the head. The assistant athletic trainer performed the primary survey and summoned the emergency medical technicians (EMTs) to the field with the spine board. The primary survey found that the athlete was regaining consciousness and that airway, breathing, and circulatory status were all satisfactory. The EMTs assisted the athletic training staff in log rolling the athlete on the spine board, paying careful attention to stabilization of the head, spine, torso, and pelvis at all times because the presence or absence of a cervical fracture or dislocation had not been confirmed. Once secured on the spine board, the athlete was loaded on the ambulance and taken to the emergency room by the EMTs, accompanied by the assistant athletic trainer.

Immediately upon arrival to the emergency room, radiographs of the cervical spine, magnetic resonance imaging (MRI) of the brain and spinal cord, and a computed axial tomography (CAT) scan of the cervical spine were obtained by the radiologist. The results of each of these were negative. The emergency room doctor examined the athlete after being briefed by the assistant athletic trainer on the mechanism of injury, history, and the initial assessment. The athlete remained in the hospital for the rest of the night for periodic neurological evaluations, conducted by registered nurses and emergency room doctors to assess changes in the athlete's sensory and motor function.

The athletic trainer scheduled an appointment with the team neurosurgeon and neuropsychological team, who conducted a complete history, physical, and neurological examination. The athlete was diagnosed with a cerebral concus-

sion. As a part of the team's concussion program, the athletic trainer and neuropsychologist administered a concussion screening to compare the results with the baseline screening that had been administered five months prior.

After 48 hours, the athlete's sensory, motor, and cognitive tests were within normal limits and his chief complaint was muscular soreness in the neck and shoulders from the whiplash mechanism. The athletic trainer developed a treatment and rehabilitation program to assist this athlete in regaining cervical range of motion and strength. An appointment with the team's massage therapist was also scheduled for the next day.

Once the athlete was asymptomatic at rest, the team doctor gave clearance for a heavily monitored functional progression program to begin. The athletic trainer designed a light exercise program consisting of non-sport-specific aerobic activity (stationary bike) and sport-specific activities (throwing a football). The athletic trainer and doctor monitored the athlete carefully during this stage of progression. Gradually the level of intensity and perceived exertion was increased. As he advanced and continued to be symptom free, communication about return to competition increased between the athlete, coaches, parents, athletic trainer, and doctor. Once the athlete felt confident and comfortable with his level of function and was asymptomatic at rest, exertion, and with contact, he was able to return to play for the remainder of the season.

SUMMARY

Athletic training has evolved from a male-only profession without well-defined standards of practice or educational requirements, to a diverse profession, recognized by the American Medical Association, with rigorous academic preparation, national certification, and state practice requirements. The knowledge and skills possessed by athletic trainers proves their skills as healthcare providers in a wide variety of practice settings, not just in athletics. It is anticipated that the profession will continue to grow in numbers and opportunities as more people are exposed to the advantages and capabilities of these providers.

ADDITIONAL RESOURCES

National Athletic Trainers Association	http://www.nata.org
NATA Foundation (research and scholarships)	http://www.natafoundation.org
Board of Certification (how to become and stay certified)	http://www.bocatc.org

Joint Review Committee— Education programs	http://www.jrc-at.org/index.html
Education Council (initial and continuing education)	http://www.nataec.org/
World Federation of Athletic Trainers and Therapists	http://www.wfatt.org/
Employment (jobs, salaries)	http://www.nata.org/employment/ index.htm
State accrediting agencies	http://www.bocatc.org/atc/STATE/
NATA Code of Ethics	http://www.nata.org/about/ codeofethics.htm
<i>Journal of Athletic Training</i>	http://www.nata.org/jat/
American College of Sports Medicine	http://www.acsm.org/

DISCUSSION QUESTIONS

The following section contains study questions to stimulate student thinking/comprehension of the profession.

1. List and describe three specific activities an athletic trainer would perform within each of the six practice domains.
2. Select five different work settings for athletic trainers. Then list three reasons you would like working in these settings and two reasons you would *not* like working in this setting.
3. How does the profession of athletic training differ from personal training?
4. What role does sharing knowledge play in the development of a profession?
5. What role(s) did the Cramer Company play in the development of athletic training?
6. Why was a certification exam developed for athletic trainers?
7. Use the NATA Web site to find out who, in addition to Gatorade®, are current major sponsors of the NATA.
8. What general type of courses should high school students take to prepare them for an athletic training major program?
9. To sit for the Board of Certification Exam, what criteria must an applicant complete?
10. Examine your own personal skill set. Explain why you feel athletic training would or would not be a good fit for you.

11. March is National Athletic Training month. Describe three public relations activities you could implement to promote the profession of athletic training in your school community.
12. The World Federation of Athletic Trainers and Therapists (WFATT) is a coalition of national organizations of health professionals in sport, exercise, injury/illness prevention, and treatment. In addition to the United States (through the NATA), what other countries are represented in the coalition?
13. If a law were to be enacted stating that only physical therapists could provide rehabilitation services in doctors' offices, how would the practice of athletic training be impacted? What role(s) does the NATA play in protecting against such legislation?
14. Once an athletic training student has completed degree requirements for a bachelor's degree, describe steps they can take to increase their employment prospects.
15. Discuss the pros and cons of changing the entry-level requirements for certification to a master's degree.
16. In what year was the first national certification examination given?
17. In what year was the current NATA founded?

REFERENCES

- Bureau of Labor Statistics, US Department of Labor, Occupational Outlook Handbook, 2006–2007 Edition, Athletic Trainers, on the Internet at <http://www.bls.gov/ocos294.htm> (visited Nov. 28, 2006).
- Ebel, R. G. (1999). *Far beyond the shoe box—Fifty years of the National Athletic Trainers' Association*. New York: Forbes Publishing.

