

The education of athletic training practitioners, as with other health care professions, must be assessed in a variety of ways in order to assure that quality services are provided to the public. There are three methods in which educational quality and competency are typically assessed: quality of the educational programs themselves (program self-assessment), external specialized accreditation of those educational programs, and external credentialing examinations (excluding state practice acts) that assure the final entry-level competency of the practitioner. Athletic Training uses all three methods in order to assure high-quality, competent practitioners.

Entry-level Athletic Training Education Programs (ATEP) use a medical-based education model to deliver a competency-driven approach in both the classroom and clinical education settings. The content of the Athletic Training Education Competencies and Proficiencies is derived from a semi-annual professional role delineation study with content based on cognitive (knowledge), psychomotor (knowledge and skills), affective (professional behaviors and beliefs), and clinical proficiencies (professional, practice-oriented outcomes). All ATEP's deliver the competencies via classroom, laboratory, and directly supervised clinical practice that are based on student progression through the program (*Board of Certification Athletic Trainer Credentialing Candidate Handbook, 2004; Exam Development and Scoring Information, 2005; Facts About Athletic Trainers, 2004; Standards for the Accreditation of Entry-level Athletic Training Education Programs, 2005*). Although the ATEP content is competency-driven students will receive formal classroom and laboratory instruction in the following general subject matter areas:

- Risk Management and Injury Prevention
- Pathology of Injuries and Illnesses
- Orthopaedic Clinical Examination and Diagnosis
- Medical Conditions and Disabilities
- Acute Care of Injuries and Illnesses
- Therapeutic Modalities
- Conditioning and Rehabilitative Exercise
- Pharmacology
- Psychosocial Intervention and Referral
- Nutritional Aspects of Injuries and Illnesses
- Health Care Administration
- Professional Development and Responsibility

(*National Athletic Trainers Association Education Committee, Athletic Training Educational Competencies, 4th edition*)

Athletic training students must also complete a minimum of two years of academic clinical education and supervised field experience. Students must always be directly supervised and must be instructed and assessed by an Approved Clinical Instructor (ACI) (*Standards for the Accreditation of Entry-level Athletic Training Education Programs, 2005*). The ACI must assess the students' initial proficiency, or ability to perform clinical skills, before the student may apply any skill to a patient in a supervised clinical setting. In addition, the student must receive ongoing formative and summative assessment (by an ACI) of these skills in order to assure that the student is continuing to learn and to improve his/her clinical knowledge and skill over time. All students must, at a minimum, complete clinical education/field experience with activities that involve upper extremity injury/illness, lower extremity injury/illness, equipment intensive high-risk activities which involve protective equipment and trauma, and a general medical intensive rotation (cardiorespiratory, metabolic, infection, etc). (*Standards for the Accreditation of Entry-level Athletic Training Education Programs, 2005*)

It is also very important to understand that the content of any educational program is more important, with regards to patient care, than the level of the degree (i.e. bachelors, masters, or doctorate). The knowledge and clinical skill of the practitioner are important in the health and welfare of the patient, not the degree obtained for the education. With that stated, it must be noted that all Commission on the Accreditation of Athletic Training Education (CAATE) accredited ATEPs must offer a bachelor or masters degree or beyond (*Facts About Athletic Trainers, 2004*). The educational programs for athletic trainers offer high-quality, professionally consistent, competency-based education that produce (documented via program outcomes data) highly competent health care professionals.

Specialized (or programmatic) accreditation is an independent review of the quality (process and outcomes) of ATEPs. Accredited programs are measured by nationally recognized standards (Standards for the Accreditation of Entry Level Educational Programs for the Athletic Trainer) that have been developed by professionals involved in and with the discipline of athletic training. The Standards reflect the minimum quality necessary to prepare individuals entering into athletic training practice. (*Standards for the Accreditation of Entry-level Athletic Training Education Programs, 2005*)

The American Academy of Family Physicians, The American Academy of Pediatrics, the American Orthopaedic Society for Sports Medicine, and the National Athletic Trainers Association (NATA), cooperate to establish the CAATE. The CAATE's purpose is to develop, maintain, and promote appropriate minimum standards of quality for educational programs in Athletic Training.

The Standards for the Accreditation of Entry Level Educational Programs for the Athletic Trainer are used to prepare entry-level athletic trainers and for the development, evaluation, self-analysis, and maintenance of ATEPs. It is the responsibility of each institution to demonstrate compliance with these Standards to the CAATE in order to obtain and maintain recognition as a CAATE accredited Athletic Training Education Program.

All ATEPs must be CAATE accredited in order for the program's graduates to be eligible for the national board examination, which along with individual state practice acts, are the final method of assuring competent and qualified athletic trainers. (*Board of Certification Athletic Trainer Credentialing Candidate Handbook, 2007*)

In athletic training, as with all health care professions, it is imperative that graduates pass a credentialing examination prior to initiating professional practice. This type of examination is necessary to provide a standard of care that will protect the public from harm caused by an incompetent practitioner (*BOC Role Delineation Study, 2004*). The Board of Certification (BOC) examination is the entry-level credentialing examination for athletic trainers in the United States (*BOC Role Delineation Study, 2004*). The results of this examination also are used as the major component of 43 state practice acts (*BOC Athletic Trainer Credentialing Candidate Handbook, 2007*). The credibility of the BOC and of the Certified Athletic Trainer (ATC®) credential is supported by three pillars: the BOC examination itself, the BOC Standards of Practice and Disciplinary process, and the continuing education requirements (75 hours of continuing education every 3 years, plus CPR/AED certification) (*BOC Athletic Trainer Credentialing Candidate Handbook, 2007*).

Questions for the certification exam are prepared by a committee made up of BOC Certified Athletic Trainers (ATCs). Each question is validated by a panel of independent judges in item writing groups, referenced to current resources from the literature on or related to

athletic training and repeatedly edited by ATCs for clarity and content. Questions satisfy the exam specifications of the Role Delineation Study.

Questions are developed to assess the candidate's knowledge on subject matter from the six domains of athletic training:

- Prevention
- Immediate Care
- Clinical Evaluation and Diagnosis
- Treatment, Rehabilitation and Reconditioning
- Organization and Administration
- Professional Responsibility

Each question is also subjected to editing for grammar and technical adequacy by experts from the BOC's testing agency. Thus, content experts write the questions and validates the appropriateness for the exam, and experts in testing review the questions to ensure that the questions perform as intended.

The passing point used by the BOC in its certification exam is a criterion-referenced approach called the Angoff Modified Technique. This technique is currently considered by testing professionals to be one of the most defensible criterion referenced methods available for setting passing points. It relies on the pooled judgments of content experts. For example, in this approach, a group of Certified Athletic Trainers (judges) are asked to judge each item on the exam. The criterion used to judge each item is, "What is the probability that a minimally acceptable candidate will answer this item correctly?" This question prompts the judges to consider a group of minimally acceptable candidates and what proportion of that group will answer each item correctly.

The average of the proportions, or probabilities, is multiplied by the total number of questions on the exam. The result then represents the "minimally acceptable" score. The final passing point for the exam is based on this pooled judgment and the calculation of the standard error of the mean. Item analysis for each question and reliability indexes are also calculated for each section of the exam. Each new exam version is equated to the initial or anchor version to ensure that candidates are not rewarded or penalized for taking different versions of the exam.

Exams are scored by CASTLE Worldwide Inc., a professional testing service that specializes in certification and licensure exams.

Each form of the exam includes field test items that do not count in scoring. Candidates are scored only on those items that have been aligned to the exam specifications of the Role Delineation Study and validated for scoring. The exact point value for each question is determined as a function of the weight assigned to its content category as well as the number of questions in that content category. Scores will be reported on a scale from 200 to 800 with the passing point at 500. (*BOC Athletic Trainer Credentialing Candidate Handbook, 2007*)

The BOC and the BOC certification examination are recognized by the National Commission for Certifying Agencies, and is the only accredited credentialing agency for athletic trainers. (*BOC Athletic Trainer Credentialing Candidate Handbook, 2004*)

In summary, today's Certified Athletic Trainer (ATC®) is highly educated and is extremely well-prepared to act as a reimbursable health care practitioner. The preparation of the ATC® is equal to or actually surpasses other health care professionals. The quality and competency of the educational processes are assured via three methods: program self-assessment and outcomes measures; external accreditation of educational programs (CAATE); and an externally and independently accredited certifying agency (BOC). It is the content, the quality, and the quality assurance processes that assure that the physically active public receives quality health care from a highly-qualified athletic trainer. Thus the preparation of the athletic trainer should be viewed through the same lens as any other health care profession.

#### References:

*Board of Certification Athletic Trainer Credentialing Candidate Handbook* (bocatc.org)

*Exam Development and Scoring Information* (bocatc.org)

*Facts About Athletic Trainers* (nata.org)

*Standards and Guidelines for an Accredited Educational Program for Athletic Trainers* (caate.net)

*National Athletic Trainers Association: Athletic Training Educational Competencies 4th Edition, 2006.*

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## The Educational and Quality Assurance of the Athletic Training Practitioner



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