ATHLETIC TRAINING EDUCATION JOURNAL

www.natajournals.org
ISSN: 1947-380X
DOI: 10.4085/1404245

Globalization of Athletic Training & Therapy

COMMENTARY

International Athletic Training and Therapy: Comparing Partners in the Mutual Recognition Agreement

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Context: The globalization of athletic training and therapy is advancing and professionals have more opportunities to transition to international working environments.

Objective: To compare the American, Canadian, and Irish athletic training and therapy education, accreditation, and certification processes.

Background: The Mutual Recognition Arrangement recognized the equivalency of athletic training and therapy in the United States, Canada, and Ireland, and thereby provides an avenue for nationally credentialed professionals to obtain equivalent credentials in one of the aforementioned countries.

Synthesis: As a comparison, this article demonstrated that there was a commonality among countries, but also highlighted the unique jurisdictional differences that our members should be aware of should they want to transition to partner countries.

Results: We performed a comparative analysis of the education, accreditation, and certification processes among the United States, Canada, and Ireland. Specific differences were noted among supervision methods, clinical education methods, and certification exams. All of these are grounded in the Mutual Recognition Agreement.

Recommendation(s): We recommend that the Mutual Recognition Agreement be held as a basis for future partnerships with other countries.

Conclusion(s): This article provided an overview and highlighted the similarities among academic education, domains, and content areas covered under the Mutual Recognition Agreement among athletic training and therapy programs in the United States, Canada, and Ireland. The education programs, accreditation procedures, and certification systems, although differing in structure, were consistent in delivering content that aligns with the Mutual Recognition Agreement.

Key Words: Athletic training professional programs, athletic therapy education programs, United States, Ireland, Canada

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Full Citation:
Frank EM, O'Connor S, Bergeron G, Gardner G. International athletic training and therapy: comparing partners in the Mutual Recognition Agreement. *Athl Train Educ J.* 2019;14(4):245–254.

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KEY POINTS

- Globalization is a key element in advancing the profession of athletic training and therapy.
- The Mutual Recognition Agreement offers an avenue for its member partners to work internationally while maintaining the high standard of our national organizations.
- There are many commonalities in academic education, domains, and content areas covered in programs as a requirement for inclusion in the Mutual Recognition Agreement; however, jurisdictional differences must be considered.

INTRODUCTION

The first record of the profession of athletic training was documented in 1881 in the United States.[1] The athletic training profession was primarily a "North American phenomenon."[2] However, just under 20 years ago, the National Athletic Trainers' Association (NATA) in the United States determined that globalization of the athletic training profession was an essential factor for the continued growth of the profession.[2] Since then, the profession of athletic training has expanded globally. The purpose of this article is to compare the organizations that provide governance, professional regulations, and academic standards to satisfy an international standard and mutual recognition. These organizations are the United States' Board of Certification (BOC) and Commission on Accreditation of Athletic Training Education (CAATE); the Canadian Athletic Therapists Association (CATA); and the Athletic Rehabilitation Therapy Ireland (ARTI) association.

Each country has its own national organization, certifying body, and accredited programs. In the United States, the national certification body is the BOC, the entity responsible for accrediting professional programs is the CAATE, and the national membership organization is the NATA. In Canada, the entity that certifies athletic therapists and accredits programs at institutions is the Canadian Board of Certification of Athletic Therapy, a division of the CATA. In Ireland, ARTI certifies athletic therapists and accredits educational programs.

The Mutual Recognition Agreement (MRA) is a discretionary arrangement between international organizations of athletic training and therapy (ATT). Each organization is required to meet minimum equivalencies in education, certification, and accreditation and is in force for a predetermined period of time and not automatically renewed. The benefit of the agreement is that it allows certified members from one association to challenge the credentialing examination of a partner organization. This article serves as a resource for other associations who are seeking to join the MRA. It presents an overview and comparison of ATT educational programs, accreditation procedures, and certification systems as part of the MRA, which was established to advance the globalization of the profession.

HISTORY OF THE MRA

The idea for the mutual recognition of international ATT credentials evolved from discussions among the NATA, BOC, CATA, and World Federation of Athletic Training and Therapy (WFATT).[3] Also, the establishment of the North American Free Trade Agreement in 1994 did not include ATT, but it did spark interest between the NATA and the CATA in establishing mutual recognition of their professional credentials. In 1998, the NATA hosted a World Congress on Athletic Training in Dallas, TX, at which time the name for the WFATT association was approved.[4] The first World Congress of the WFATT was held in 2001 in Los Angeles. In 2002, the BOC and the CATA formed the Joint Task Force on Credential Recognition (JTFCR). The recommendation of the JTFCR was:

> *The Joint Task Force on Credential Recognition recommends that the Board of Directors of the Board of Certification and the Canadian Athletic Therapists Association recognize those individuals who have either CAT(C) [Certified Athletic Therapist] or ATC [Athletic Trainer Certified] credentials as eligible to challenge their respective national examinations. It is understood that national immigration laws, state and provincial laws are not controlled by either organization and recognition is only applicable to establishing examination eligibility.*[5]

On June 22, 2005, the MRA was signed in Omaha, Nebraska.[6] At the time, there was no expiry date to the arrangement. In 2012, ARTI requested inclusion in the arrangement.[7] Based on this request, the BOC and the CATA established the Group on Mutual Recognition Arrangements to review the current arrangement and consider a new tripartite agreement.[3] The Mutual Recognition Arrangement was renamed as the MRA and the recommendation that it be a tripartite agreement was approved. The new 5-year agreement, effective January 1, 2015, to December 31, 2020, was signed in Dublin, Ireland, on September 2, 2014, as part of the VIII World Congress of the WFATT.[7–9] The International Mutual Recognition Committee on Athletic Therapy and Training was created to manage the agreement by looking for equivalencies in rigor with the other policies and procedures, including program accreditation, individual certification, governance, and code of ethics. Because the MRA required each member to declare exam pass rates, psychometric standards, and exam blueprints,[3] each member's curriculum needed to meet minimum requirements for theoretical and applied knowledge. Table 1 outlines these minimal requirements, which formed the basis of the MRA. The requirements in the United States are influenced by the 2012 CAATE standards,[10] derived from the fifth edition of the Athletic Training Education Competencies,[11] which are heavily

Table 1. Minimum Theoretical and Applied Knowledge Requirements of a Mutual Recognition Agreement

Risk management and injury prevention (including environmental care)
Acute care (urgent and nonurgent interventions)
Pathology of injuries and illnesses
Orthopaedic clinical examination and diagnosis/assessment (extremities and spine)
General medical conditions examination and diagnosis of medical conditions and disabilities
Human anatomy and physiology
Exercise physiology
Kinesiology/biomechanics
Therapeutic modalities (sample list of modalities)
Rehabilitation and conditioning techniques (extremities and spine, including manual therapies)
Psychosocial intervention and referral
Professional responsibilities and ethical practice
Research- and evidence-informed practice
Pharmacology, drugs, and ergogenic aids (therapeutic and performance enhancing)
Nutrition
Health care administration and management (business principles—knowledge of local rules and health care system)
The ATT educational program shall also include clinical/practical experience opportunities for students, completed under the supervision of a qualified clinical instructor. Clinical/practical experience provides students with the opportunity to practice, refine performance, and further demonstrate mastery of clinical/practical skills.

Abbreviation: ATT, athletic training and therapy.

influenced by the BOC practice analysis.[12] The requirements in Canada for example are influenced by the CATA role delineation study[13] and in Ireland by ARTI's scope of practice.[14] To ensure evolvement and reevaluation, another part of the agreement was to initiate renegotiation discussions beginning in June 2018, in preparation for a new agreement effective January 1, 2021. Other ATT organizations have been invited to consider applying for inclusion in the agreement.[15]

History of MRA Partners

In the United States, a professional is referred to as an athletic trainer (AT) with the ATC credential. An AT is required to practice according to the BOC Standards of Professional Practice,[16] code of ethics,[17] and scope of practice as regulated by individual states.[18] The NATA, which is the professional membership association of ATs in the United States, was founded in 1950.[19] The first athletic training curriculum model was approved by the NATA in 1959, with the first undergraduate athletic training curriculum approved in 1969.[19] In 2006, the CAATE, responsible for the accreditation of athletic training programs in the United States, became independent from the Commission on Accreditation of Allied Health Educational Programs.[20] Since then the profession has continued to expand. Currently in the United States, there are approximately 360 professional athletic training programs, 9 active postprofessional degree programs (8 master's-level and 1 clinical doctoral-level degree program), and 9 active residency programs, with an additional 4 residency programs seeking accreditation.[21] By 2022, all professional athletic training programs are to be at the master's level and grant only master's degrees in athletic training.[22] Until then, undergraduate programs are permitted to "admit, enroll, and matriculate"[22] athletic training students. The athletic training profession and educational programs have evolved over the years and will continue to do so, as evidenced by the mandated transition from a bachelor's degree to a master's degree.[23] The overall number of institutions that will offer a master's-level professional athletic training program in the United States is uncertain at this time because programs may phase out their programs or transition to the graduate level. Furthermore, new programs may develop following the 2020 standards[24] set forth by the CAATE. The 2012 standards[10] that are based on the content areas from the fifth edition of the Athletic Training Education Competencies[11] and the core competencies in the new 2020 standards[24] are compared in Table 2. As of August 2019, CAATE accredited the first international program in Madrid, Spain.

In Canada, the CATA was established in 1965; it is the professional body for awarding the CAT(C) credential in Canada and governs the accreditation of Canada's academic programs.[25] The program accreditation process was established in 1999. Before accreditation, professional training involved an undergraduate degree, which was normally housed in physical education programs, coupled with internship training. There are currently 8 accredited athletic therapy educational programs across 5 of 10 Canadian provinces.[26] The first 2 programs were accredited in 1999 (Sheridan College in Ontario and University of Winnipeg in Manitoba). The most recent program to be accredited in 2018 was a French program at Université du Québec à Trois-Rivières. Additional accredited programs established in Canada are Concordia University (Quebec), York University (Ontario), University of Manitoba (Manitoba), Mount Royal University (Alberta), and Camosun College (British Columbia).

In Ireland, ARTI was founded in 2009 and is the governing body for the Irish Certified Athletic Therapist (CAT) credential and governs the accreditation of Ireland's programs. In Ireland there are currently 3 ARTI-accredited educational undergraduate programs[27] that offer a degree program to earn eligibility to pursue the Irish CAT credential. The first 2 accredited programs, in Dublin City University and Institute of Technology Carlow, were established in 2005 and 2000, respectively, and obtained accreditation in 2009. The third accredited program, in Athlone Institute of Technology, was first established in 2012 and obtained official accreditation in 2014.

Academic Credentials

Each country's educational system is organized differently. Although each country is part of the MRA, the academic credentials differ among the countries.[3] Each country's specific degree options, years of study, and admission/selection procedures are outlined in Table 3. In the United States, students either apply directly to the higher education institution or use the Athletic Training Centralized Application System.[28] In Canada, students have to apply directly to the higher education institution that they want to attend. In Ireland, while in high school, students apply to an indepen-

Table 2. Evolving Professional Education Standards in the United States

Fifth Edition NATA Athletic Training Education Competencies[11] to be Instructed and Evaluated in each CAATE-Accredited Program[10]	New 2020 Curricular Content Standards[a]
Evidence-based practice	Prerequisite coursework and foundational knowledge
Prevention and health promotion	Core competencies:
Clinical examination and diagnosis	Patient-centered care
Acute care of injury and illness	Interprofessional practice and interprofessional education
Therapeutic interventions	Evidence-based practice
Psychosocial strategies and referral	Quality improvement
Health care administration	Health care informatics
Professional development and responsibility	Professionalism
	Patient/client care
	Care plan
	Examination, diagnosis, and intervention
	Prevention, health promotion, and wellness
	Health care administration

Abbreviations: CAATE, Commission on Accreditation of Athletic Training Education; NATA, National Athletic Trainers' Association.

[a] The CAATE adopted the 2020 Standards for Accreditation of Professional Athletic Training Programs on January 9, 2018, with an effective date of July 1, 2020.[24]

dent organization called the Central Applications Office (CAO). Students submit a list of up to 10 programs from any institution in Ireland in their order of preference. Students are then assigned points based on the results of their individual leaving (exit) certificate examination. Each institution, based on the demand for the educational program and minimum places available, sets a minimum cutoff point for each program. Those applicants who meet this cutoff point are then offered a place in the program.

Differences in the educational systems at the secondary and college/university levels do not allow for an internationally

Table 3. Academic Program Credentials and Admission Procedures

Location	Degree Options	Years of Study	Admission/Selection Procedures
United States	Bachelor's degree in athletic training (bachelor of arts, bachelor of science, etc, depending on the institution)[a]	4-y undergraduate program Program credits vary institutionally	Minimum admission standards for selection into the institution Additional standards (eg, prerequisite courses) required for admission into the program
	Master's degree in athletic training (master of arts, master of science, etc, depending on the institution)	2-y graduate program Program credits vary institutionally	
Ireland	Bachelor of science	4-y undergraduate degree program 120 ECTS credits	Admission is through the CAO, which oversees all undergraduate applications to higher education institutions in Ireland. Each institution establishes additional individual program requirements (such as minimum grades in mathematics and/or 1 science subject).
Canada	Bachelor of science Bachelor of kinesiology Bachelor of athletic and exercise therapy Bachelor of applied health sciences–athletic therapy Bachelor of health and physical education Baccalauréat en kinésiologie	4-y undergraduate degree 120 credits	Each institution establishes admission requirements. Additional standards may be required to get into the athletic therapy program.

Abbreviations: CAO, Central Admissions Office; ECTS, European Credit Transfer System.

[a] Bachelor's degree in athletic training is being phased out in 2022.[22]

Table 4. Athletic Therapy and Training Domains in the United States, Canada, and Ireland

Domain	BOC Domains	CATA Domains	ARTI Domains
1	Injury and illness prevention and wellness promotion	Prevention	Prevention
2	Examination, assessment, and diagnosis	Assessment	Neuromuscular evaluation and diagnosis
3	Immediate and emergency care	Intervention	Acute care
4	Therapeutic intervention	Practice management	Treatment, rehabilitation, and reconditioning
5	Health care administration and professional responsibility	Professional responsibility	Professional responsibility and development

Abbreviations: ARTI, Athletic Rehabilitation Therapy Ireland; BOC, Board of Certification; CATA, Canadian Athletic Therapists Association.

standardized curriculum. In order to qualify for the MRA, minimum theoretical and applied knowledge requirements (detailed in Table 1) must be taught.[3] The specific academic coursework to meet these requirements and earn an academic degree is driven and accredited by each country's accrediting body.

INTERNATIONAL DOMAINS OF ATHLETIC THERAPY AND TRAINING

Domains, as established by their respective role delineation process and mandated by each country's credentialing and certifying body, guide the content for the accredited educational programs.[3] Each accreditation and credentialing body has autonomy to create additional competencies and standards, as does each academic program.

In the United States, the BOC conducts a practice analysis that guides the information evaluated on the BOC certification exam. The analysis outlines what the entry-level AT's knowledge, skills, and abilities should be to practice the profession. The BOC domains from the seventh edition practice analysis[12] are provided in Table 4. The CAATE also mandates each educational program to instruct and evaluate the fifth edition Athletic Training Education Competencies[11] as part of the candidate's eligibility to sit for the BOC exam. The 8 content areas[11] are outlined in Table 5 and are compared with the Canadian and Irish content areas.

In Canada, the athletic therapy competencies are separated into cognitive, psychomotor, and affective (attitudes) domains. The Role Delineation Study,[13] conducted by CATA, separates the scope of practice of athletic therapists into 5 functional domains, provided in Table 4. Each candidate who challenges the national certification exam must demonstrate a foundational level of competence in basic and applied behavioral and managerial sciences and research methods.

In Ireland, the ARTI also identifies 5 domains of athletic therapy (Table 4) that must be taught in the accredited programs and are examined in the national exam. Similarly, ARTI requirements for each accredited program also include a comprehensive basic and applied science background, including anatomy, biomechanics, physics, physiology, psychology, and statistics. The domains for both CATA and ARTI are further divided into content areas and are outlined and compared in Table 5.

The MRA identifies each partner's educational program's uniqueness and strengths to ensure individuals are adequately prepared, thereby improving their chance of success on the certification exams. For each country, additional certifications or training may be necessary before obtaining eligibility to sit for a MRA member's ATT certification exam.[29] Various global issues must also be considered, such as work visas and immigration regulations and procedures.[3] From the MRA member's perspective, there are no identified gaps between countries' curricula. Irish students regularly have the opportunity to complete some part of their clinical education in the United States. The US and Canadian exams are theoretical exams administered via computer (United States) or paper (Canadian) methods. The ARTI certification exam includes both a theoretical (paper) and practical component. At this time the members of the MRA are able to manage the number of candidates who want to challenge another country's exam.[3]

As already noted, new competencies and standards are on the horizon for professional athletic training programs in the United States.[23] The CATA will renew and categorize the competencies within a new competency framework later this year in response to the work of a CATA competency framework task force. A comparison between the new and old competency frameworks is shown in Table 6. The new competency framework consists of 7 roles: athletic therapy expert, professional, communicator, collaborator, scholar, leader, and health advocate. Athletic Rehabilitation Therapy Ireland will assess the changes made by other MRA partners as part of the current renegotiations and will subsequently consider adjustments to their competencies.

CLINICAL EDUCATION

In addition to the didactic requirements of each country's curriculum, there are also differences in clinical education. The scope of practice and the nature of employment opportunities greatly influence the context of clinical or practical/field experiences in the United States, Canada, and Ireland. Job placements are largely in high schools, universities, private clinics, or industrial settings.[30] As such, each country's academic program accreditation standards require that clinical education placements expose the student to a wide variety of experiences. The nature of practice (clinical education) in Canada and Ireland also influences the requirements for clinical (eg, sports medicine clinic, private practice clinic) or field placements (eg, sports clubs). Athletic therapists in Canada and Ireland have direct access (without medical referral) to athletes and the general public.[14,31]

Table 5. Academic Requirements for Accredited Programs in the United States, Canada, and Ireland

US Content Areas[a]	Canadian Content Areas	Irish Content Areas
Evidence-based practice	Research methods and statistics	Advancing knowledge Foundational knowledge: statistics
Prevention and health promotion	Prevention of athletic injuries/illness Taping and bracing Strength and conditioning Health	Risk assessment and management Health safety—risks associated with environmental factors
Clinical examination and diagnosis	Assessment of athletic injuries/illness Pathology	Pathology of injury and illnesses Medical conditions and disabilities Subjective evaluation Musculoskeletal evaluation
Acute care of injury and illness	Emergency care Taping and bracing	Acute care of injuries and illnesses
Therapeutic interventions	Rehabilitation principles Therapeutic modalities Therapeutic exercise Pharmacology Adapted physical activity	Therapeutic interventions Conditioning and rehabilitative exercise Pharmacology
Psychosocial strategies and referral	Psychosocial strategies and referral are embedded in a number of areas but not an explicit domain	Psychosocial aspects of injury and rehabilitation
Health care administration	Ethics, professionalism, and cultural competence Business of athletic therapy	Record keeping
Professional development and responsibility	Patient education and advocacy Leadership and communication Indigenization	Professional practice
Foundational knowledge[b]: Biology Chemistry Physics Psychology Anatomy Physiology	Foundational knowledge: Human anatomy Human physiology Exercise physiology Kinesiology/biomechanics Sport and exercise psychology Motor control and learning Food and nutrition	Foundational behaviors of professional practice Foundational knowledge: Anatomy Biomechanics Chemistry Physics Physiology Psychology Nutritional aspects of injury and illnesses

[a] The Commission on Accreditation of Athletic Training Education requires these competencies to be instructed and evaluated by accredited professional athletic training programs.[11]

[b] According to the 2020 standards[24] adopted January 9, 2018.

Treatments are compensated by a variety of insurance plans or on a user-pay basis.[32–34] Private practice in Canada and Ireland provides prevalent employment opportunities. Practical experiences must include access to competitive and recreational athletes, "industrial athletes" (workplace injuries), and other physically active individuals.

Clinical Education in the United States

In the United States, standards for clinical education in CAATE-accredited programs are prescriptive. Qualifications for preceptors, who serve as clinical supervisors, are extensively described.[10,24] They are charged with the direct supervision, instruction, and assessment of knowledge, skills, and clinical abilities of students. Preceptors assess the clinical integration of all skills, including communication and clinical decision-making, during actual, real-time delivery of patient health care. Preceptors in CAATE-accredited programs must be credentialed by a health care agency within the state in which they practice.[10] If the preceptor is a certified AT, the preceptor must be in good standing with the BOC as well as maintaining a current license as an AT in the state. It is required that those clinical experiences of an athletic-training nature be supervised by either a certified AT or a physician.[24] The CAATE now clearly identifies supplemental clinical experiences as those that are supervised by health care providers who are not physicians or ATs.[24] Regardless of the credential they hold, preceptors are expected to receive ongoing interaction and education from the academic program in an effort to further enhance the educational environment and clinical experience.

The CAATE requires that a number of specific elements be present in a clinical education program. The design of the

Table 6. Evolving Canadian Athletic Therapists Association Competencies

Current Competency Domains	New Competency Framework[a]
Prevention	Athletic therapy expert
Recognition and evaluation	Professional
Management, treatment, and disposition	Communicator
Rehabilitation	Collaborator
Organization and administration	Scholar
Education and counseling	Leader
	Health advocate

[a] The Canadian Athletic Therapists Association is currently developing a new competency framework for implementation in 2019.

clinical experience must be such that it facilitates a progression of autonomy to a point at which the student is able to make clinical decisions and apply clinical skills and knowledge independently. Real-time opportunities must be provided for the integration of all skills and knowledge. The clinical experiences within the 2012 Standards for the Accreditation of Professional Athletic Training Programs[10] include very specific patient populations, including team and individual sport populations, equipment-intensive sports, nonsport populations, and nonorthopaedic patient populations. The 2020 CAATE standards for accreditation[24] focus on specific populations such as different life-span groups (pediatric, adult, and geriatric), different genders, and different socioeconomic groups. The standards also specify that varying levels of competitive abilities be included, as well as nonsport activities that may include military or industrial populations. The academic programs can also include simulations or standardized patient encounters as a part of the clinical experiences. Each program must include an immersive-type clinical experience, which is defined by the CAATE as allowing the student to experience "the day-to-day and week-to-week role of an athletic trainer for a period of time identified by the program (but minimally one continuous four-week period)."[24]

In addition, the actual clinical site and the time the student spends at the clinical site are carefully controlled by the CAATE. The program must evaluate each clinical site on a planned and annual basis, with attention being directed toward both the safety of the site and the presence of an appropriate educational environment. The program must also ensure that the experience remains educational in nature, and that a policy is in place that regulates the minimum and maximum number of clinical hours the students can complete, as well as a policy dictating that students are given 1 day a week in which no clinical hours or experiences are required. Students cannot replace staff or receive remuneration aside from financial scholarships. Supervision during clinical education is clearly defined with the CAATE standards. The term *direct supervision* is used and is described by the CAATE as the preceptor being physically present and able to intervene, if needed, to protect the patient. The ratio of students to preceptor is left to the discretion of the program but must be such that the environment is both safe and educational.

Clinical/Field Placement in Canada

In 2018, the CATA made some significant changes to its certification requirements. The previous membership-based supervisory athletic therapists program was discontinued and replaced with an institution-based clinical educator program. A clinical educator should be a current certified athletic therapist and member of the CATA and the regional chapter in the educator's respective province. Allied health care professionals may act as clinical educators provided that they do not provide the student's only experience throughout the program. This clinical educator is not required to be an employee of the academic institution. The educator works with the institution's faculty practicum liaison to complete student evaluations and provide feedback that optimizes student progress and competency development. It is each institution's responsibility to build the clinical educator's capacity for student evaluation and the provision of student formative and summative feedback.

The previous 1200-hour internship requirement was replaced with institutional competency-based evaluations in both field and clinical settings. The number of contact hours is determined by each institution and for each candidate individually based on the time required to demonstrate competency. Clinical and field practice are integrated and sequenced simultaneously with other theoretical and experiential learning in the curriculum. Practicum experiences are initiated early in the student's program and designed to provide the student with sufficient opportunity to develop specific competencies pertaining to the practice of athletic therapy. These experiences assist the student to develop knowledge, skills, and dispositions that progress from introduction to application to entry-level competence. Practicum experiences must provide each student with an exposure to a variety of sports, genders, clinical educators, and clinical and field environments. Supervised clinical practicums must ensure that the clinical educator is readily accessible to students for instruction and guidance. In the clinical setting, the instructor to student ratio cannot exceed 4:1. In a field setting, students may be supervised directly or indirectly, and the ratio must not exceed 8 students to 1 clinical educator. Interprofessional educational opportunities should be part of the practical experience.

Evaluation methods shall include content related to the objectives and competencies described in the curriculum for both didactic and supervised clinical education. Mechanisms should be in place for students to document appropriate learning experiences and curriculum sequencing to develop the competencies necessary for graduation, including appropriate instructional materials, classroom presentations, discussions, demonstrations, supervised clinical and on-field practicums, and other practical evaluations.

Clinical/Field Placement in Ireland

Athletic Rehabilitation Therapy Ireland requires all students to undertake a minimum of 500 supervised clinical hours with the intent that these hours be used to incorporate theory into practice. Supervision is not directly defined by ARTI, but the hours must be supervised under the guidance of suitably qualified and knowledgeable placement supervisors (including but not limited to certified athletic therapists or chartered

Table 7. Accreditation Requirements in the United States, Canada, and Ireland

	United States	Canada	Ireland
Agency	CAATE	CATA	ARTI
Length of accreditation, y	2, 5, or 10	5	5
Program evaluation procedures	Paper submission and possible site visit	Initial site visitation after the submission of an institution self-study	Initial evaluation: paper submission and site visit Reaccreditation: paper submission and possible site visit if required
Level of accreditation	Fully accredited; accredited but on probation; not accredited	No accreditation; 2- to 5-year accreditation with proviso(s); 5-year accreditation; suspension of accreditation; withdrawal of accreditation	Accredited; accredited with recommendations; accredited subject to certain conditions[a]; cognate qualification[b]; not accredited
Annual report	Required	Required	Not required.
Maintenance of accreditation	Through annual report	Annual report is required to include any major changes to the program to which the accreditation committee will determine if an interim review is necessary	If any major changes to the program structure, module/course content, or teaching staff, the institution must provide documents that outline these changes within the accreditation time frame; a review of the accreditation process can also be requested by ARTI

Abbreviations: ARTI, Athletic Rehabilitation Therapy Ireland; CAATE, Commission on Accreditation of Athletic Training Education; CATA, Canadian Athletic Therapists Association.

[a] Mandatory conditions that must be fulfilled in specified time frames and if not accreditation is withdrawn.

[b] Is at the level required but does not cover all competencies, is not an ARTI-accredited course, and graduates must undertake further assessment before applying to become a certified athletic therapist.

physiotherapists). The field and clinical hours are linked to academic credit within individual courses/modules in the academic program and commonly begin in year 2 of the 4-year degree programs. All ARTI-accredited programs include 1 semester of immersive clinical placement. The university housing the education program must have stable agreements with clinical agencies and sports clubs in place. At a minimum, the academic program must have placements with both private clinics and sports clubs/organizations.

Additionally, ARTI requires programs to ensure there is an emphasis on synthesis, integration, and application of the practical skills on actual patients. Students are encouraged to be placed in settings with members of the public and sporting organizations that are outside of the university system. There is an expectation that clinical placement will include critical reflection by the student as a means of improving clinical skill level. No specific assessment procedures are prescribed by ARTI, and the determination as to how to conduct assessment of the clinical experiences is left to each individual institution.

PROGRAM ACCREDITATION PROCEDURES

To ensure compliance with accreditation standards, each program is accredited by an agency. A comparative outline of the accreditation requirements from the 3 countries is presented in Table 7. Table 7 provides information on the length of accreditation, program evaluation procedures, level of accreditation, annual reporting requirement, and information on how to maintain accreditation.

ELIGIBILITY FOR EACH CERTIFICATION EXAMINATION

The BOC regulates the exam requirements in the United States. To be eligible to obtain certification, an individual must earn a degree from a CAATE-accredited athletic training program, provide a current emergency cardiac care card or certification, submit an official academic transcript, and successfully complete the BOC certification exam. The BOC exam consists of 175 computer-based questions that must be completed within 4 hours. The questions are of 2 types: stand-alone items (eg, multiple choice, drag and drop, multiple answer) and focused questions that consist of a scenario with 5 critical questions that relate back to the scenario.[35]

In Canada, the candidate can apply to sit for the CATA written exam upon successfully graduating from one of the CATA-accredited programs; the candidate must have a current first responder and CPR certificate and must have been a member of the CATA for a minimum of 2 years.[36] The candidate must attempt the exam within 2 years after graduation and within 2 years of each unsuccessful attempt. The exam is administered in a variety of cities twice yearly in November and June. The written examination is a 200-item multiple-choice exam, taken in a 3-hour block. An examination timetable is available for candidates so that they can identify their preferred time and location. Note that international candidates applying to the CATA certification exam through the MRA did not have an initial 2-year membership requirement.

In Ireland, a graduate or student in the final semester of an ARTI-accredited program with a current cardiac first responder and emergency first responder certification from the Pre-Hospital Emergency Care Council of Ireland is eligible to sit for the certification exam. A student in the final semester will not obtain credentials until successfully graduating from his or her program. The exam consists of a practical and theoretical component. Up to 115 questions can be included in the theory exam, and questions stem from the domains outlined in Table 4. The practical component is divided into 4 stations, which examine prevention, evaluation, immediate care, and treatment, rehabilitation, and reconditioning.

Once certified with BOC, CATA, or ARTI, individuals wanting to sit for another country's certification exam as part of the MRA were required to satisfy the following eligibility requirements to apply. Candidates eligible to apply for the BOC certification exam are required to have proof that the individual has graduated from an accredited ARTI or CATA program/institution, documentation specific to the individual's certification status within Ireland or Canada, and a completed ARTI or CATA endorsement form.[6,9] Eligible candidates applying to take the ARTI certification exam must demonstrate proof of BOC or CATA certification and documentation of cardiac and emergency first responder certification, and must communicate with ARTI's international liaison officer who is responsible for checking the requirements.[37] As of October 2019, the CATA withdrew from the MRA. (For more information, contact the CATA directly.) To challenge the CATA certification exam, candidates were required to join the CATA as a temporary international candidate (TIC) and show proof of a current certification with BOC or ARTI and a current first responder certificate from an approved provider. Candidates eligible to take the CATA exam had to attempt the exam within 1 year of becoming a TIC member of the CATA and within 2 years after each unsuccessful attempt.[38]

CONCLUSIONS/RECOMMENDATIONS

Globalization is a key element in advancing the profession of ATT. As awareness of the profession grows internationally, there is a need to ensure a minimum standard of knowledge and competency to ensure the best possible prevention and care of injuries to the physically active individual. The vision of the WFATT is "Athletic Training & Therapy will be recognized as an essential part of multidisciplinary healthcare teams worldwide."[39] This will require knowledge of and confidence in this standard by other members of the international health care team.

The MRA offers an avenue for the members of the MRA to work internationally while maintaining the high standards of our national organizations. This article highlights the commonality in academic education, domains, and content areas covered in programs in the United States, Canada, and Ireland as a requirement for inclusion in the MRA. However, there are unique jurisdictional differences between countries that our members should be aware of when transitioning to partner countries. Differing supervision methods, clinical education methods, and certification examinations are noted. Much of the uniqueness is a reflection of the differences in the basic nature of practice settings in the respective countries. Although much of the content knowledge and skill set is comparable, there are still subtle differences in the way each country delivers the academic program. The MRA should be held as a basis for future partnerships with other countries. Expansion of the MRA should be a focus of the current partners with the support of the WFATT. Emerging organizations should be encouraged to review the current MRA standards and develop their academic, certification, and accreditation systems with this international standard in mind.

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