

Examination Blueprint Development Report

Canadian Athletic Therapist Association

September 2020 (Amended July, 2021)
Confidential



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The nature of some of the information contained in this report requires that it be treated as a confidential document. As a result, this document should not be distributed to any other persons or organization.

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Executive Summary

The Canadian Athletic Therapists Association (CATA) is an organization devoted to the health care of Canadians. Certified athletic therapists, in cooperation with performance enhancement personnel and members of the health care delivery team, play an integral role in providing service to maximize the performance and welfare of all Canadians.

Concurrent with the execution of this role, athletic therapists work to nurture an attitude of positive health. The scope of practice of a certified athletic therapist starts with in-depth knowledge, education, and training in the human musculoskeletal system, exercise physiology, biomechanics, and basic emergency care.

In 2020, CATA developed a new competency profile, which consists of 165 competencies, grouped in one of the following seven categories:

1. Athletic Therapist Expert;
2. Professional;
3. Collaborator;
4. Communicator;
5. Scholar;
6. Leader; and
7. Health Advocate.

The specific competencies for each competency category are presented in Appendix A.

This report provides an overview of the process used to develop the Blueprint for the new CATA National Certification Examination (NCE). The examination blueprint is presented in Appendix C.

Introduction

The Canadian Athletic Therapists Association (CATA) is an organization devoted to the health care of Canadians. Certified Athletic Therapists, in cooperation with performance enhancement personnel and members of the health care delivery team, are an integral part of a total service to maximize the performance and welfare of all Canadians. Concurrent with the execution of this role, the Athletic Therapist nurtures an attitude of positive health.

The scope of practice of a Certified Athletic Therapist starts with the in-depth knowledge, education and training in the areas of the human musculoskeletal system, exercise physiology, biomechanics, and basic emergency care.

In 2020, CATA developed a new competency profile, which includes seven competency categories, comprising a total of 165 competencies¹. The competency categories are as follows:

1. **Athletic Therapist Expert:** As health care professionals, athletic therapists apply knowledge and specialized skills to provide acute care, assessment, rehabilitation, and make return to sport/activity decisions to enhance performance for physically active individuals;
2. **Professional:** As Professionals, athletic therapists are committed to supporting the health and well-being of active Canadians through high standards of ethical practice. Athletic therapists practice effectively by balancing professional and personal responsibilities. Athletic therapists represent the athletic therapy profession through patient care and by demonstrating integrity in various field, clinical, and academic environments;
3. **Collaborator:** As Collaborators, athletic therapists work with health care professionals and other stakeholders to provide athletic therapy expertise for physically active individuals;
4. **Communicator:** As Communicators, athletic therapists gather and manage relevant information from patients and others, including coaches, family, and health care professionals, to guide injury prevention, assessment, and rehabilitation practices. Essential information is shared with patients and pertinent personnel to facilitate return to sport/activity;

¹ Note that YAS was not involved in the development of the new CATA competency profile.

5. **Scholar:** As Scholars, athletic therapists demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others. Athletic Therapists evaluate and use evidence-informed practice to guide decision-making. Athletic Therapists contribute to scholarship to benefit health outcomes, access and efficiency of healthcare, and the profession of athletic therapy;
6. **Leader:** As Leaders, athletic therapists embrace their distinct role in clinical and field environments and contribute to advancing the quality and efficiency of patient care in their activities as clinicians, administrators, scholars, and/or teachers through consultative processes; and
7. **Health Advocate:** As Health Advocates, athletic therapists contribute their expertise to inspire individuals to achieve better health through promoting active living, including injury prevention, and facilitating their return to sport, activity, work, and/or play when injury arises. Athletic therapists strive to understand the needs of their patients and speak on behalf of these patients, when necessary, to benefit health outcomes.

The specific competencies for each competency category are presented in Appendix A.

This report provides an overview of activities and results for the development of CATA written examination blueprint.

Exam Blueprint Development Process

Competency Rating Process

A CATA exam blueprint committee, comprising five senior CATA professionals from all areas of the profession was established to provide subject matter expert advice in the development of the exam blueprint. The committee was briefed on all stages of the CATA exam blueprint development process and reviewed the recommended exam blueprint before it was presented to the CATA BOD for approval. The examination development committee comprised the following CATA professionals:

- Glen Bergeron;
- Jacqueline Camley;
- Loriann Hynes;
- Michael Robinson; and
- Jason White.

Online survey administration

The newly-developed CATA competency profile was submitted for review via an online survey to a practicing Athletic Therapists from across Canada. Survey respondents were asked to rate the extent to which each competency was 1) **Necessary** for entry-to-practice CATAs to have, 2) **Important** for successful performance of an entry-level AT, as well as 3) how **Frequently** are entry-level ATs expected to engage in each competency.

Necessity was evaluated through a 'yes' or 'no' response, with 'yes' indicating that the entry-to-practice CATA will be required to demonstrate the listed competency, and 'no' indicating that the entry-to-practice CATA will not be required to demonstrate the competency (Brannick & Levine, 2002). Competencies rated less than 70% were reviewed by exam blueprint committee for inclusion in the exam blueprint.

Importance for successful performance of an entry level AT was assessed using a four-point scale (1 = *minimally important*, 2 = *somewhat important*, 3 = *important*, 4 = *critically important*). Frequency was rated using a four-point scale (1 = *less than once a month*, 2 = *at least once a month*, 3 = *at least once a week*, 4 = *at least once a day*).

Importance and frequency ratings were used to determine weights assigned to competency categories, which were then used to develop the examination blueprint. In determining the weights, a composite score of importance and frequency rating was developed using the formula: Composite = (Importance x .80) + (Frequency + .20).²

Finally, demographic information was also collected from survey respondents.

Competency Survey Results

Demographics of survey respondents

A total of 768 ATs completed or partially completed the online survey. Of these, 115 reported having 1 to 2 years of experience practicing as an CATA, 147 reported having 3 to 5 years of experience, 165 reported having 6 to 10 years of experience, 91 reported having 11 to 15 years of experience, 67 reported having 16 to 20 years of experience, 48 reported having 21 to 25 years of experience, and 50 reported having more than 25 years of experience practicing as a CATA (86 respondents did not indicate years of experience). In terms of education, 528 reported having an undergraduate degree, 96% reported having a master's degree, 12% reported having a doctorate (education was missing for 102 respondents).

Eighty-six respondents reported British Columbia as the province in which they conduct their practice, 94 reported Alberta, 13 reported Saskatchewan, 115 reported Manitoba, 248 reported Ontario, 123 reported Quebec, 6 reported New Brunswick, 11 reported Nova Scotia, 2 reported Prince Edward Island, 2 reported Newfoundland, 1 reported Northwest Territories, and 22 reported outside Canada where they conduct their practice.

One hundred and forty-three respondents reported they work in an university setting, 177 in a private agency, 41 in a public agency, 334 as an independent contractor, 123 as a clinic owner, 26 in a partnership/association, 78 in professional sport, and 249 in amateur/varsity/high-school sorts. In describing their clientele, 2 respondents reported they primarily work with children, 100 reported teenagers, 309 reported adults, 11 reported seniors, and 260 reported all ages (87 respondents did not indicate their clientele).

² Note that several versions of the importance and frequency formulae were explored in calculating the composite score and the examination committee decided upon on the current one.

Survey analysis

Of the 165 competencies, 146 were rated as necessary for entry-to-practice CATAs to have by at least 70% of the respondents. The 19 competencies that were received a necessity rating of less than 70% were reviewed by the exam blueprint committee. Of these 19 competencies, the exam blueprint committee rated all of them as necessary for entry-level practice as a AT. As such, all 165 are deemed required for entry-level ATs, and included in the exam blueprint.

Necessity, importance, and frequency ratings provided by the survey respondents are listed for each competency in Appendix B. The combined importance and frequency ratings for the 165 competencies were used to determine weights assigned to competency categories, which were then used to develop a corresponding examination blueprint.

CATA Exam Blueprint

A fundamental component of a formal approach to examination development is a thorough description of the content domain being measured. The CATA competencies outlined in this document define the content domain requirements for the development of the examination.

Two important issues when developing a credentialing examination involve the concept of reliability and validity. Reliability in testing is defined as the degree to which test results are consistent over repeated measurements using the same assessment approach (Pedhazur & Schmelkin, 1991). In other words, a reliable instrument will consistently make the same judgment regarding a candidate's ability.

Validity is defined as "the evaluative judgment of the degree to which empirical evidence and theory rationale support the adequacy and appropriateness of inferences and actions based on test scores" (Messick, 1989). The validity of credentialing tests is based primarily upon content validity or how well the content of an examination reflects the concepts it is intended to measure as outlined in the examination blueprint. Indeed as stated in the Standards for Educational and Psychological Testing:

"The content domain to be covered by a credentialing test should be defined clearly and justified in terms of the importance [obtained through the *importance* rating on the competency rating survey] of the content for credentialing-worthy

performance in an occupation or profession. A rationale and evidence should be provided to support the claim that the knowledge or skills being assessed are required [obtained through the *necessity* rating on the competency rating survey] for credential-worthy performance in that occupation and are consistent with the purpose for which the credentialing program was instituted.” (Standard 11.13, pp 181-182).

Examination items are developed according to the established examination blueprint. Items are reviewed and edited at various stages of the item development process by subject matter experts who have been trained in developing high-quality test items. Thus, the validity of the CATA exam is established using a content validation process, and the exam blueprint is designed to ensure that the competencies required of entry-to-practice CATAs are adequately assessed in the exam. This approach ensures that inferences made from the exam are valid (i.e., successful CATA examinees should perform effectively as entry-to-practice CATAs).

Examination Blueprint

In total, there are seven competency categories and 165 competencies required of entry-to-practice CATAs. Each of the competency categories contains a different number of specific competencies that vary by the level of importance and frequency of use for entry-to-practice CATAs.

To ensure that the examination places an appropriate emphasis on the knowledge, skills, and behaviours expected of an entry-level CATA, competency categories have been weighted in terms of their relative importance based on the mean importance and frequency for each competency within the category (see Table 1). The examination blueprint committee recommended a higher weighting be assigned to Importance rating compared to the Frequency rating. To this end, the Importance rating received a weighting of .8 and the Frequency rating received a rating of .2³. These weightings were based on information gleaned from the competency rating survey. This classification will serve as a guideline during examination construction and validation.

³ The formula used to calculate each Competency is: Competency Rating = Importance rating (.8) + Frequency rating (.2)

Table 1. CATA examination weightings by competency framework category

Competency Category	Number deemed necessary for entry-level (percentage of overall competencies)	Weight ⁴ (Standard Deviation) ⁵	Percentage on Examination
AT Expert	35 (21%)	.24 (.02)	22 - 26%
Professional	20 (12%)	.12 (.01)	11 - 13%
Collaborator	25 (15%)	.14 (.01)	13 - 15%
Communicator	23 (14%)	.16 (.01)	15 - 17%
Scholar	15 (9%)	.07 (.01)	6 - 8%
Leader	17 (10%)	.10 (.01)	9 - 11%
Health Advocate	30 (18%)	.17 (.01)	16 - 18%

⁴ To obtain the competency category weight, the competency rating for each competency in each competency category was summed to obtain the sum for each category. Note that for the SUM function, data were required in at least 90% of the competencies in order for the case to be included in the analyses. For example, the Expert competency category includes 35 competencies, and only cases that had data for 32 of these 35 competencies were included in the SUM function. This value was then divided by the overall total competency rating across competency categories, which becomes the weight assigned to each competency category. This value is the basis on which items are chosen for the CATA exam.

⁵ Standard Deviation is a measure used to quantify the amount of variation there is in a set of data values. In a normal distribution, about 68% of the scores are within one standard deviation of the mean, and is a useful metric to help determine the range for the percentage of items on the exam. For the CATA exam, one standard deviation was used to determine the range for the percentage of items on the exam.

CATA Exam Guidelines

In addition to the specifications related to the competencies, other variables must be considered during the development of the CATA exam. These variables are categorized as structural or contextual variables (see Appendix C).

Structural Variables

Structural variables include those characteristics that determine the general design and appearance of the examination. They define the length of the examination, the expectations for establishing and maintaining the standard, the format/presentation of the examination questions (i.e., multiple-choice format), and any specific functions related to the examination questions (e.g., to measure a competency within the cognitive domain).

- 1. Examination Length and Format:** The CATA NCE will consist of 200 objective questions (i.e., multiple-choice) that meet the blueprint guidelines. With 165 specific competencies (grouped under seven competency categories), an examination of this length is sufficient to make both reliable and valid decisions about a candidate's readiness to perform effectively as a CATA.
- 2. Question Presentation:** The multiple-choice questions will be presented as independent or case/scenario-based questions. Independent questions are stand-alone four-option, multiple choice items that contain all the necessary information to answer the question. Scenario-based questions consist of a set of approximately three to five questions that are associated with a more detailed, athletic therapy scenario. In general, the exam should consist of 50% independent and 50% scenario-based questions.
- 3. Cognitive Levels:** To ensure that competencies measure different levels of cognitive ability, each question on the CATA exam should be classified into one of three categories adapted from Bloom's Taxonomy of Cognitive Abilities (Bloom, Engelhart, Furst, Hill, & Kratwohl, 1956)⁶. Specifically, each question is categorized into one of the following levels.

⁶ Classification system was modified from Bloom (1956).

Knowledge/Comprehension

This level combines the ability to recall previously learned material and to understand its meaning. It includes such mental abilities as knowing and understanding definitions, facts and principles, and interpreting data (e.g., knowing certain CATA procedures or guidelines).

Application

This level refers to the ability to apply knowledge and learning to new or practical situations. It includes applying rules and principles to clients (e.g., applying relevant athletic therapy procedures to a specific case).

Critical Thinking

The third level deals with higher-level thinking processes. It includes the ability to judge the relevance of data, to deal with abstractions and to solve problems (e.g., identifying athletic therapy guidelines to treat a client). The AT should be able to identify cause-and-effect relationships, distinguish between relevant and irrelevant data, formulate valid conclusions and make judgments concerning the needs of clients.

Based on these definitions, the recommended distribution of questions by cognitive level is provided in Table 2.

Table 2. Distribution of questions by cognitive level

Cognitive Level	Percentage of Questions on the CATA Exam
Knowledge/Comprehension	Maximum of 15%
Application	Minimum of 50%
Critical Thinking	Minimum of 35%

4. **Standard Setting:** The standard setting cut-score or pass mark is set in reference to the content and the difficulty of the examination questions. The pass mark should be set by a panel of content experts (i.e., the CATA Exam Committee) from across Canada using the modified-Angoff standard setting method. Based on this process, an

appropriate pass mark is set at a minimum performance level expected of a competent entry-level CATA.

Contextual Variables

Contextual variables qualify the content domains by specifying the CATA context in which the exam questions will be set. Although it is recommended to include items on the NCE from each of the following two categories, contextual variables will not be used when developing the exam (i.e., there will not be a requirement to have items that deal with all body parts and injury types on the exam).

1. Body Part: to include the following;

- Abdomen
- Ankle
- Cervical Spine
- Elbow
- Foot
- Forearm
- Wrist
- Hand
- Head/Face
- Hip/Pelvis
- Knee
- Lumbar Spine
- Shin
- Shoulder
- Thigh/Groin
- Thoracic Spine
- Thorax
- Upper Arm

2. Injury Type: to include the following;

- Direct Trauma
- Indirect Trauma
- Medical Condition
- Post Surgical
- Overuse

Conclusions and Recommendations

The CATA Examination Blueprint is the product of a collaborative effort between Yardstick Assessment Strategies Inc. and representative Athletic Therapists employed within the various sectors across Canada. This process has resulted in a compilation of the competencies required of the effective entry-level CATA and of the guidelines that determined how the competencies will be assessed on the CATA exam. A summary of these guidelines can be found in Appendix C in the Summary Chart Guidelines.

It is recognized that the role of CATA may continue to evolve over time. As this occurs, the exam blueprint developmental process (i.e., both the competencies and the test development guidelines) may require revisions so that it accurately reflects the scope of practice, and the roles and responsibilities of the entry-level Athletic Therapist.

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Appendix A: CATA Competency Framework

Athletic Therapy Expert

- 1.1 Describe and differentiate the physiological and pathophysiological responses to inflammatory and non-inflammatory conditions and the influence of these responses on the design, implementation, and progression of a rehabilitation program.
- 1.2 Compare and contrast variations in healing and the physiological response to injury and across the lifespan.
- 1.3 Employ techniques and procedures for neuromusculoskeletal (NMSK) evaluation of common athletic injuries/illnesses including: a) a history, b) observation, c) functional testing (active, passive, isometric/resisted), d) special tests, and e) palpation.
- 1.4 Interpret the findings of a NMSK evaluation using a differential diagnosis strategy.
- 1.5 Identify urgent health conditions (red flags) that require immediate attention and take appropriate action.
- 1.6 Formulate a clinical impression based on the NMSK evaluation.
- 1.7 Identify and prioritize therapeutic goals and objectives with the patient including a) control of pain and/or swelling, improvement of b) strength, c) endurance, d) power, e) flexibility and joint range of motion, f) proprioception and coordination, g) neuromuscular control h) postural control and stability/balance, and i) maintenance of cardiorespiratory fitness, j) establishment of core stability, k) psychological considerations, l) injury protection and tertiary prevention m) functional testing and sport-specific progressions, n) return to sport/activity considerations, and o) development of a home program.
- 1.8 Construct a comprehensive, evidence-informed rehabilitation program based on the NMSK evaluation by selecting rehabilitative exercises, therapeutic modalities, and manual therapy techniques that address therapeutic goals and objectives.
- 1.9 Evaluate rehabilitation progress and adapt to findings for optimal care.
- 1.10 Assess the patient prior to operating therapeutic modalities for indications and contraindications associated with modalities from the following categories: a) electrical, b) mechanical, and c) thermal.
- 1.11 Appropriately and safely apply therapeutic modalities.
- 1.12 Appropriately and safely utilize exercise equipment.
- 1.13 Perform manual therapy techniques consistent with your rehabilitation program.
- 1.14 Develop and complete a discharge plan.

- 1.15 Execute emergency action plans to facilitate efficient patient care.
- 1.16 Detect life-threatening conditions by performing an effective primary assessment that includes: a) a scene survey, b) spinal and/or other required stabilization, c) level of responsiveness (previously level of consciousness in First Responder), and assessment of: d) airway, e) breathing, f) circulation, g) deadly bleeds, and h) pulse oximetry.
- 1.17 Recognize when emergency medical services are necessary for patient care based on the primary assessment.
- 1.18 Activate emergency medical services efficiently for patient care.
- 1.19 Employ life-saving techniques in pre-hospital care according to current Canadian Red Cross Professional Responder standards and provincial legislation.
- 1.20 Remove sports equipment, as necessary, for emergency procedures.
- 1.21 Perform a secondary assessment according to the Canadian Red Cross Professional Responder scope of practice including: a) a history, b) head to toe assessment/physical exam, c) vitals, d) ongoing monitoring, and e) patient care.
- 1.22 Differentiate between normal and abnormal vital signs to guide assessment and treatment, as appropriate.
- 1.23 Triage individuals in emergency and non-emergency situations.
- 1.24 Provide patient assistance with medications according to Canadian Red Cross Professional Responder scope of practice and provincial legislation.
- 1.25 Provide appropriate patient care for non-immediate life-threatening injuries and conditions according to Canadian Red Cross Professional Responder standards and provincial legislation.
- 1.26 Make a secondary transport decision based on your secondary assessment findings.
- 1.27 Evaluate if the injured patient should be referred to a physician for a medical examination.
- 1.28 Perform a sideline evaluation to determine if there is potential for same-day return to activity/sport for the athlete.
- 1.29 Facilitate functional testing for potential return to activity by: a) applying taping and wrapping techniques, b) fabricating or using padding or bracing devices, and/or c) fitting regulated protective equipment to the athlete.
- 1.30 Appropriately fit and modify protective equipment to maintain safety standards (for example, CSA).
- 1.31 Analyze sport-specific skills and movement patterns required by an athlete/patient and develop appropriate functional tests to evaluate potential for return to sport/activity.

- 1.32 Evaluate the functional effectiveness of taping techniques and/or equipment modifications to facilitate safe return to sport/activity for the athlete/patient.
- 1.33 Use evidence-informed criteria and appropriate outcome measures to make return to activity/sport decisions based on functional testing.
- 1.34 Modify taping and wrapping techniques or equipment as necessary to facilitate safe return to sport/activity for the athlete/patient.
- 1.35 Prevent, screen, evaluate, manage, and treat concussions.

Professional

- 2.1 Perform professional responsibilities according to ethical, moral, and provincial/territorial legal parameters.
- 2.2 Practice according to the CATA Code of Ethics and Professional Conduct, Bylaws, and standards.
- 2.3 Prioritize professional duties when managing multiple patients, competing needs, and/or available resources.
- 2.4 Establish professional therapeutic relationships with patients.
- 2.5 Recognize the dependent relationship of a patient to the Certified Athletic Therapist and establish professional boundaries.
- 2.6 Share health information (verbally, in writing, and/or electronically) with patients and others on a need-to-know basis according to provincial/territorial legislation to ensure patient privacy and confidentiality.
- 2.7 Document patient health information (in writing and/or electronically) according to organizational standards and provincial/territorial legislation to ensure patient privacy and confidentiality.
- 2.8 Use documentation and/or effective processes to facilitate patient referral.
- 2.9 Use an information management system to maintain medical records and ensure compliance with provincial/territorial legislation.
- 2.10 Comply with manufacturer, institutional, and provincial/territorial/federal inspection, maintenance, and safety standards to operate therapeutic modalities and rehabilitation equipment.
- 2.11 Manage time and priorities effectively to balance career, inclusive of self-care.
- 2.12 Maintain personal health and wellness to meet practice demands.
- 2.13 Explain the process of obtaining and maintaining national and/or provincial/territorial certification.
- 2.14 Maintain certification by accumulating continuing education units (CEUs) and possessing current CPR certification.

- 2.15 Implement a planned approach to maintain competence across all seven athletic therapy roles.
- 2.16 Reflect on personal competence and integrate external feedback to create a professional development plan that promotes lifelong learning.
- 2.17 Evaluate the need for mentorship and/or collegial support for professional development.
- 2.18 Identify the implications of provincial/territorial health care regulation.
- 2.19 Identify important historical events, milestones, and the influential contributions of leaders in the development of the athletic therapy profession in Canada.
- 2.20 Describe the role and function of the CATA and all regional chapters and their importance to the profession.

Collaborator

- 3.1 Describe the role of the athletic therapist within the context of the health care system.
- 3.2 Work with physicians and other health care professionals to manage differences and resolve conflicts.
- 3.3 Determine when findings from the NMSK evaluation warrant physician referral.
- 3.4 Collaborate with physicians to confirm injury diagnoses (for example, using laboratory studies and/or diagnostic imaging).
- 3.5 Collaborate with a physician in the implementation of a return to sport/activity protocol for the athlete/patient with a concussion.
- 3.6 Use the appropriate patient/client care pathway(s) to facilitate interprofessional medical care.
- 3.7 Demonstrate effective handovers to pre-hospital and hospital personnel for patient safety and continuity of care.
- 3.8 Differentiate the responsibilities of the athletic therapist from other pre-hospital and hospital-based care providers, including: emergency medical technicians/paramedics, nurses, physician assistants, sport medicine physicians, and orthopedic surgeons.
- 3.9 Collaborate with orthopedic surgeons regarding post-operative care.
- 3.10 Facilitate the use of medications prescribed by physicians and pharmacists to ensure continuity of care.
- 3.11 Contribute as a valuable team member on an athletic therapy staff.
- 3.12 Negotiate overlapping and shared responsibilities, in multidisciplinary settings, with other health care professionals to prevent misunderstandings related to scope of

- practice, including: physicians, physiotherapists, chiropractors, occupational therapists, massage therapists, and others.
- 3.13 Integrate complementary care by referring to other health care professionals when optimal for the athlete/patient to return to sport/activity.
 - 3.14 Engage in shared decision-making as an effective medical team member with other athletic therapists, physicians and/or additional health care professionals during event coverage.
 - 3.15 Plan and implement components of a comprehensive injury/illness prevention program with relevant stakeholders, including: a) physical examinations and screening procedures (physicians), b) conditioning (strength and conditioning coaches, certified exercise physiologists), c) fitting and maintenance of protective equipment (equipment managers), d) application of bracing and prosthetic devices (orthotists, pedorthists, podiatrists), and e) control of risk factors (sport organizations, administrators, and coaches).
 - 3.16 Collaborate with strength and conditioning coaches, certified exercise physiologists, kinesiologists, and certified personal trainers to administer and interpret standard tests, protocols, and pre-screening procedures to assess cardiorespiratory fitness, body composition, flexibility, strength, balance, power, speed, agility, and endurance.
 - 3.17 Identify health services, community health agencies, and community-based psychological and social services to support patients through personal health and social issues.
 - 3.18 Identify common signs and symptoms related to mental health concerns, behavioural/emotional disorders, stress, substance abuse, and interpersonal conflict.
 - 3.19 Employ appropriate protocol for patient referral to health, psychological, or social services based on recognition of signs and symptoms.
 - 3.20 Recognize and acutely manage psychological and emotional responses to a critical incident and refer affected parties to mental health care professionals, as necessary.
 - 3.21 Adapt, where appropriate, a rehabilitation or conditioning program based on collaboration with mental health care professionals including (sport) psychologists, psychiatrists, counsellors, and social workers.
 - 3.22 Act as an effective liaison between athletes, coaches, health care professionals, parents, and other stakeholders.
 - 3.23 Work with team personnel, including coaches, and the team dietician/nutritionist to plan good nutrition and diet for sport/activity and injury rehabilitation.
 - 3.24 Work collaboratively with organization administrators and staff members regarding the operation of athletic therapy programs and services.

3.25 Collaborate with health care professionals to provide specialized care for individuals with physical and/or intellectual disabilities.

Communicator

- 4.1 Use effective communication strategies (i.e., cultural competence, situational awareness, and timeliness) to build rapport and trust with the patient.
- 4.2 Use communication strategies to facilitate effective patient care.
- 4.3 Employ empathy, respect, and compassion as part of a patient-centred approach to communication.
- 4.4 Adapt their communication approach to situational context.
- 4.5 Inquire about and explore the patient's beliefs, values, preferences, context, and expectations.
- 4.6 Facilitate non-judgmental discussions with the patient, considering cultural context.
- 4.7 Detect, interpret, and respond appropriately to the patient's verbal and non-verbal cues for effective communication.
- 4.8 Actively listen and adapt to the individualized needs and goals of each patient.
- 4.9 Explain the rationale for a return to sport/activity decision to the patient, team personnel (including coaches), and family.
- 4.10 Use counselling strategies (i.e., guide, advise, and/or rationalize) to help the patient make informed decisions regarding their health care.
- 4.11 Use communication skills that help the patient and their family make informed decisions regarding their health care while ensuring confidentiality and privacy.
- 4.12 Recognize when the values, biases, or perspectives of the athletic therapist, the patient, physicians, or other health care professionals may have an impact on the quality of care.
- 4.13 Employ diplomacy, tact, and discretion to manage emotionally charged conversations and conflicts.
- 4.14 Use appropriate terminology to effectively communicate findings to the patient and relevant stakeholders including the patient's family.
- 4.15 Use appropriate history-taking skills to effectively gather relevant patient information.
- 4.16 Obtain relevant information from bystanders and the patient's family for patients with altered levels of consciousness.
- 4.17 Use communication tools and electronic technologies effectively and responsibly.
- 4.18 Provide patient education to facilitate healthy lifestyle behaviours.

- 4.19 Provide patient education for ergonomic principles and their relationship to the prevention of illness and injury.
- 4.20 Demonstrate and provide patient education for warmup and stretching techniques to promote safe participation in sport/activity.
- 4.21 Demonstrate, educate, and counsel for correct and safe exercise performance.
- 4.22 Educate patients to develop self-management and self-treatment skills for initial injury management and to facilitate therapeutic goals.
- 4.23 Demonstrate effective written communication skills (i.e., clear, concise, and organized).

Scholar

- 5.1 Describe and differentiate between quantitative, qualitative, and mixed-methods research designs.
- 5.2 Find best available evidence to answer a clinical question in athletic therapy practice by identifying key concepts and using appropriate keywords, subject headings, and limits to search relevant databases.
- 5.3 Critically appraise research design, statistical analyses, and levels of evidence to interpret and evaluate research that informs athletic therapy practice.
- 5.4 Use standard criteria or developed scales to critically appraise the structure, rigour, and overall quality of research studies for integration into athletic therapy practice.
- 5.5 Incorporate best available evidence into decision-making for injury prevention, assessment, management, and rehabilitation.
- 5.6 Identify risk factors, causes, and types of injuries related to sport/activity based on contemporary epidemiological data.
- 5.7 Interpret best available evidence (for example, reliability, sensitivity, specificity) to select NMSK evaluation and diagnostic procedures.
- 5.8 Integrate subjective clinical outcome measures (for example, generic, disease-specific, region-specific, and health-related quality of life measures) in athletic therapy practice.
- 5.9 Integrate objective clinical outcome measures (for example, functional and instrument-based testing) in athletic therapy practice.
- 5.10 Integrate clinical practice guidelines in athletic therapy practice.
- 5.11 Regularly reflect on their use of evidence in athletic therapy practice for lifelong learning and professional improvement.
- 5.12 Educate health care professionals based on contemporary evidence and innovation related to athletic therapy practice.

- 5.13 Recognize knowledge gaps in professional encounters, and explore or generate focused questions that contribute to the practice of athletic therapy and health care delivery.
- 5.14 Contribute to the improvement of athletic therapy practice and/or health care through knowledge creation, knowledge translation, and practice integration through ethical research and/or scholarly endeavours.
- 5.15 Follow ethical protocols (i.e., Tri-Council Policy Statement 2 [TCPS 2]) when conducting research.

Leader

- 6.1 Provide leadership in athletic therapy practice.
- 6.2 Promote and advocate for the athletic therapy profession.
- 6.3 Promote the value of athletic therapy services.
- 6.4 Educate colleagues, students, patients, the public, insurance companies, government entities, and other health care professionals about the roles, responsibilities, academic preparation, and scope of practice of athletic therapists.
- 6.5 Identify and address contemporary issues and problems confronting athletic therapy practice and health care.
- 6.6 Foster a culture that promotes patient safety including adapting systems and services based on adverse events.
- 6.7 Facilitate a safe learning environment for professionals and developing professionals.
- 6.8 Integrate mentorship for professionals and developing professionals into practice.
- 6.9 Support the professional development of others for quality improvement of athletic therapy practice and services.
- 6.10 Conduct business practices in accordance with CATA, local, provincial/territorial, and federal governing laws, policies and procedures.
- 6.11 Develop and implement administrative policies and procedures to facilitate athletic therapy services.
- 6.12 Develop and continually review a comprehensive emergency action plan.
- 6.13 Orient, coordinate, and manage personnel in a variety of professional domains.
- 6.14 Facilitate cooperation among administrators, coaches, athletic therapists, health care professionals, parents, and patients/athletes/clients.
- 6.15 Manage equipment, supplies, and resources in a cost-effective manner.
- 6.16 Evaluate, mitigate, and manage risks in athletic therapy practice.
- 6.17 Contribute to the improvement of health care delivery at all levels.

Health Advocate

- 7.1 Champion the health needs of patients.
- 7.2 Develop, implement, and evaluate to improve disease prevention and health promotion strategies utilizing best practices.
- 7.3 Employ health promotion strategies that align with Occupational Health and Safety standards to prevent and control the spread of infectious diseases.
- 7.4 Advocate for good nutrition, regular exercise, and healthy lifestyle habits for health maintenance, performance enhancement, and disease prevention.
- 7.5 Evaluate contemporary nutrition and dietary intake recommendations and explain how to perform a basic dietary analysis.
- 7.6 Evaluate prevailing nutrition and/or lifestyle misconceptions and fads.
- 7.7 Evaluate changes in dietary requirements that occur based on health status, age, and activity level, and provide guidance or refer where appropriate.
- 7.8 Advocate for good nutrition to facilitate optimal healing and tissue repair.
- 7.9 Recognize and compare general and adverse effects of commonly used dietary supplements.
- 7.10 Evaluate healthy weight management methods and strategies.
- 7.11 Recognize, support, and refer an individual with an eating disorder.
- 7.12 Promote the World Anti-Doping Agency (WADA) guidelines for pharmaceuticals and nutraceutical products (supplements, ergogenics, and herbal remedies) that facilitate recovery, function, and performance.
- 7.13 Facilitate and/or conduct doping control programs in compliance with WADA to protect athlete health and to ensure fair play.
- 7.14 Develop, implement, and evaluate to improve injury prevention programs utilizing best practices.
- 7.15 Facilitate safe participation for all populations in sport/activity through preparticipation screening for medical conditions, diseases, and injury risk factors.
- 7.16 Appraise the patient's readiness for participation based on sport/activity requirements.
- 7.17 Advocate for the patient when identified sport/activity risks could compromise the patient's health.
- 7.18 Advocate for the athlete when coaching method(s), sport demands, and/or conditioning technique(s) could potentially compromise the athlete's health and wellness
- 7.19 Integrate guidelines and practices associated with preventing sudden death during physical activity into athletic therapy practice.

- 7.20 Construct an effective heat illness prevention program.
- 7.21 Assess weight loss and hydration status to evaluate an individual's ability to participate in sport/activity in a hot, humid environment.
- 7.22 Manage environmental risks to promote athlete and patient health.
- 7.23 Apply prophylactic techniques to promote primary injury prevention (for example, taping).
- 7.24 Recognize and support psychosocial and emotional responses to trauma and modified activity that may affect the rehabilitation process.
- 7.25 Apply behavioural change theory in rehabilitation to educate, motivate, lead, and inspire patients.
- 7.26 Apply psychological techniques that can be used to motivate the patient during injury rehabilitation and to facilitate safe return to sport/activity.
- 7.27 Describe pharmacokinetic and pharmacodynamic principles related to commonly used prescription and non-prescription drugs, and performance-enhancing substances.
- 7.28 Recognize and describe how pharmacokinetics and pharmacodynamics of commonly used pharmaceutical and nutraceutical products may impact health and/or physical activity.
- 7.29 Describe and compare common drug administration routes.
- 7.30 Describe how common pharmacological agents influence pain and healing and integrate this information into your rehabilitation program.

Appendix B: CATA Competency Rating

Competency	Necessity Mean Yes = 1 No = 0	Importance Mean (SD) 1 to 4 scale	Frequency Mean (SD) 1 to 4 scale
Athletic Therapy Expert			
Describe and differentiate the physiological and pathophysiological responses to inflammatory and non-inflammatory conditions and the influence of these responses on the design, implementation, and progression of a rehabilitation program.	.98	3.22 (.67)	3.25 (.80)
Compare and contrast variations in healing and the physiological response to injury and across the lifespan.	.87	2.73 (.80)	2.65 (.96)
Employ techniques and procedures for neuromusculoskeletal (NMSK) evaluation of common athletic injuries/illnesses including: a) a history, b) observation, c) functional testing (active, passive, isometric/resisted), d) special tests, and e) palpation.	.99	3.88 (.36)	3.83 (.43)
Interpret the findings of a NMSK evaluation using a differential diagnosis strategy.	.98	3.56 (.63)	3.58 (.68)
Identify urgent health conditions (red flags) that require immediate attention and take appropriate action.	.99	3.81 (.46)	2.72 (1.09)
Formulate a clinical impression based on the NMSK evaluation.	.98	3.48 (.64)	3.63 (.62)
Identify and prioritize therapeutic goals and objectives with the patient including a) control of pain and/or swelling, improvement of b) strength, c) endurance, d) power, e) flexibility and joint range of motion, f) proprioception and coordination, g) neuromuscular control h) postural control and stability/balance, and i) maintenance of cardiorespiratory fitness, j) establishment of core stability, k) psychological considerations, l) injury protection and tertiary prevention m) functional testing and sport-specific progressions, n) return to sport/activity considerations, and o) development of a home program.	.99	3.63 (.54)	3.74 (.53)

Construct a comprehensive, evidence-informed rehabilitation program based on the NMSK evaluation by selecting rehabilitative exercises, therapeutic modalities, and manual therapy techniques that address therapeutic goals and objectives.	.98	3.53 (.59)	3.60 (.62)
Evaluate rehabilitation progress and adapt to findings for optimal care.	.98	3.31 (.63)	3.41 (.68)
Assess the patient prior to operating therapeutic modalities for indications and contraindications associated with modalities from the following categories: a) electrical, b) mechanical, and c) thermal.	.99	3.53 (.68)	3.39 (.80)
Appropriately and safely apply therapeutic modalities.	.98	3.53 (.67)	3.40 (.81)
Appropriately and safely utilize exercise equipment.	.98	3.39 (.66)	3.59(.64)
Perform manual therapy techniques consistent with your rehabilitation program.	.95	3.22 (.72)	3.60 (.63)
Develop and complete a discharge plan.	.86	2.73 (.78)	2.40 (.85)
Execute emergency action plans to facilitate efficient patient care.	.98	3.50 (.68)	1.98 (1.01)
Detect life-threatening conditions by performing an effective primary assessment that includes: a) a scene survey, b) spinal and/or other required stabilization, c) level of responsiveness (previously level of consciousness in First Responder), and assessment of: d) airway, e) breathing, f) circulation, g) deadly bleeds, and h) pulse oximetry.	.99	3.87 (.38)	1.99 (1.07)
Recognize when emergency medical services are necessary for patient care based on the primary assessment.	.99	3.83 (.42)	1.83 (1.00)
Activate emergency medical services efficiently for patient care.	.99	3.71 (.54)	1.64 (.95)
Employ life-saving techniques in pre-hospital care according to current Canadian Red Cross Professional Responder standards and provincial legislation.	.98	3.74 (.58)	1.52 (.91)
Remove sports equipment, as necessary, for emergency procedures.	.96	3.27 (.77)	1.47 (.83)

Perform a secondary assessment according to the Canadian Red Cross Professional Responder scope of practice including: a) a history, b) head to toe assessment/physical exam, c) vitals, d) ongoing monitoring, and e) patient care.	.99	3.49 (.65)	1.75 (.95)
Differentiate between normal and abnormal vital signs to guide assessment and treatment, as appropriate.	.98	3.53 (.66)	1.69 (.92)
Triage individuals in emergency and non-emergency situations.	.88	2.99 (.92)	1.58 (.91)
Provide patient assistance with medications according to Canadian Red Cross Professional Responder scope of practice and provincial legislation.	.80	2.56 (1.01)	1.38 (.74)
Provide appropriate patient care for non-immediate life-threatening injuries and conditions according to Canadian Red Cross Professional Responder standards and provincial legislation.	.98	3.19 (.69)	2.07 (.98)
Make a secondary transport decision based on your secondary assessment findings.	.94	2.91 (.85)	1.68 (.84)
Evaluate if the injured patient should be referred to a physician for a medical examination.	.98	3.31 (.68)	2.33 (.90)
Perform a sideline evaluation to determine if there is potential for same-day return to activity/sport for the athlete.	.99	3.59 (.55)	2.88 (.84)
Facilitate functional testing for potential return to activity by: a) applying taping and wrapping techniques, b) fabricating or using padding or bracing devices, and/or c) fitting regulated protective equipment to the athlete.	1.00	3.46 (.61)	3.02 (.86)
Appropriately fit and modify protective equipment to maintain safety standards (for example, CSA).	.73	2.44 (.89)	1.79 (.90)
Analyze sport-specific skills and movement patterns required by an athlete/patient and develop appropriate functional tests to evaluate potential for return to sport/activity.	.96	3.14 (.71)	2.77 (.82)

Evaluate the functional effectiveness of taping techniques and/or equipment modifications to facilitate safe return to sport/activity for the athlete/patient.	.99	3.16 (.69)	2.84 (.84)
Use evidence-informed criteria and appropriate outcome measures to make return to activity/sport decisions based on functional testing.	.95	3.19 (.68)	2.73 (.84)
Modify taping and wrapping techniques or equipment as necessary to facilitate safe return to sport/activity for the athlete/patient.	.96	3.07 (.69)	2.68 (.87)
Prevent, screen, evaluate, manage, and treat concussions.	.98	3.75 (.49)	2.54 (.88)
Professional			
Perform professional responsibilities according to ethical, moral, and provincial/territorial legal parameters.	.99	3.67 (.56)	3.69 (.76)
Practice according to the CATA Code of Ethics and Professional Conduct, Bylaws, and standards.	1.00	3.74 (.49)	3.79 (.62)
Prioritize professional duties when managing multiple patients, competing needs, and/or available resources.	.88	3.03 (.75)	3.20 (.94)
Establish professional therapeutic relationships with patients.	.98	3.45 (.65)	3.76 (.61)
Recognize the dependent relationship of a patient to the Certified Athletic Therapist and establish professional boundaries.	.98	3.47 (.61)	3.49 (.88)
Share health information (verbally, in writing, and/or electronically) with patients and others on a need-to-know basis according to provincial/territorial legislation to ensure patient privacy and confidentiality.	.96	3.35 (.71)	3.16 (.94)
Document patient health information (in writing and/or electronically) according to organizational standards and provincial/territorial legislation to ensure patient privacy and confidentiality.	.99	3.63 (.55)	3.81 (.55)
Use documentation and/or effective processes to facilitate patient referral.	.85	2.78 (.81)	2.44 (.91)

Use an information management system to maintain medical records and ensure compliance with provincial/territorial legislation.	.84	3.04 (.88)	3.37 (1.00)
Comply with manufacturer, institutional, and provincial/territorial/federal inspection, maintenance, and safety standards to operate therapeutic modalities and rehabilitation equipment.	.89	2.98 (.83)	2.42 (1.22)
Manage time and priorities effectively to balance career, inclusive of self-care.	.88	3.26 (.81)	3.23 (.95)
Maintain personal health and wellness to meet practice demands.	.92	3.24 (.78)	3.30 (.89)
Explain the process of obtaining and maintaining national and/or provincial/territorial certification.	.87	2.41 (.93)	1.52 (.83)
Maintain certification by accumulating continuing education units (CEUs) and possessing current CPR certification.	.96	3.04 (.78)	1.31 (.67)
Implement a planned approach to maintain competence across all seven athletic therapy roles.	.73	2.40 (.81)	1.47 (.76)
Reflect on personal competence and integrate external feedback to create a professional development plan that promotes lifelong learning.	.80	2.57 (.83)	1.63 (.83)
Evaluate the need for mentorship and/or collegial support for professional development.	.80	2.45 (.85)	1.48 (.68)
Identify the implications of provincial/territorial health care regulation.	.81	2.51 (.85)	1.46 (.77)
Identify important historical events, milestones, and the influential contributions of leaders in the development of the athletic therapy profession in Canada.	.46	1.62 (.72)	1.08 (.36)
Describe the role and function of the CATA and all regional chapters and their importance to the profession.	.69	2.02 (.84)	1.21 (.56)
Collaborator			

Describe the role of the athletic therapist within the context of the health care system.	.97	3.06 (.75)	2.40 (.97)
Work with physicians and other health care professionals to manage differences and resolve conflicts.	.90	2.95 (.75)	2.15 (.91)
Determine when findings from the NMSK evaluation warrant physician referral.	.99	3.43 (.59)	2.56 (.84)
Collaborate with physicians to confirm injury diagnoses (for example, using laboratory studies and/or diagnostic imaging).	.88	2.91 (.77)	2.12 (.81)
Collaborate with a physician in the implementation of a return to sport/activity protocol for the athlete/patient with a concussion.	.92	3.23 (.75)	2.11 (.84)
Use the appropriate patient/client care pathway(s) to facilitate interprofessional medical care.	.87	2.77 (.74)	2.10 (.83)
Demonstrate effective handovers to pre-hospital and hospital personnel for patient safety and continuity of care.	.81	2.63 (.89)	1.50 (.74)
Differentiate the responsibilities of the athletic therapist from other pre-hospital and hospital-based care providers, including: emergency medical technicians/paramedics, nurses, physician assistants, sport medicine physicians, and orthopedic surgeons.	.87	2.58 (.87)	1.61 (.86)
Collaborate with orthopedic surgeons regarding post-operative care.	.84	2.88 (.77)	1.71 (.79)
Facilitate the use of medications prescribed by physicians and pharmacists to ensure continuity of care.	.48	1.98 (.91)	1.40 (.72)
Contribute as a valuable team member on an athletic therapy staff.	.97	3.30 (.70)	3.36 (.95)
Negotiate overlapping and shared responsibilities, in multidisciplinary settings, with other health care professionals to prevent misunderstandings related to scope of practice, including: physicians, physiotherapists, chiropractors, occupational therapists, massage therapists, and others.	.86	2.94 (.82)	2.38 (1.06)

Integrate complementary care by referring to other health care professionals when optimal for the athlete/patient to return to sport/activity.	.91	2.86 (.74)	2.13 (.82)
Engage in shared decision-making as an effective medical team member with other athletic therapists, physicians and/or additional health care professionals during event coverage.	.93	3.06 (.71)	2.24 (.92)
Plan and implement components of a comprehensive injury/illness prevention program with relevant stakeholders, including: a) physical examinations and screening procedures (physicians), b) conditioning (strength and conditioning coaches, certified exercise physiologists), c) fitting and maintenance of protective equipment (equipment managers), d) application of bracing and prosthetic devices (orthotists, pedorthists, podiatrists), and e) control of risk factors (sport organizations, administrators, and coaches).	.84	2.84 (.83)	2.04 (.98)
Collaborate with strength and conditioning coaches, certified exercise physiologists, kinesiologists, and certified personal trainers to administer and interpret standard tests, protocols, and pre-screening procedures to assess cardiorespiratory fitness, body composition, flexibility, strength, balance, power, speed, agility, and endurance.	.83	2.69 (.84)	1.99 (.95)
Identify health services, community health agencies, and community-based psychological and social services to support patients through personal health and social issues.	.72	2.50 (.83)	1.56 (.76)
Identify common signs and symptoms related to mental health concerns, behavioural/emotional disorders, stress, substance abuse, and interpersonal conflict.	.90	2.99 (.80)	1.81 (.92)
Employ appropriate protocol for patient referral to health, psychological, or social services based on recognition of signs and symptoms.	.85	2.84 (.84)	1.30 (.84)
Recognize and acutely manage psychological and emotional responses to a critical incident and refer affected parties to mental health care professionals, as necessary.	.84	2.88 (.84)	1.54 (.82)
Adapt, where appropriate, a rehabilitation or conditioning program based on collaboration with mental health care professionals	.78	2.60 (.82)	1.46 (.78)

including (sport) psychologists, psychiatrists, counsellors, and social workers.			
Act as an effective liaison between athletes, coaches, health care professionals, parents, and other stakeholders.	.94	3.16 (.80)	2.69 (1.01)
Work with team personnel, including coaches, and the team dietician/nutritionist to plan good nutrition and diet for sport/activity and injury rehabilitation.	.79	2.70 (.83)	1.99 (1.00)
Work collaboratively with organization administrators and staff members regarding the operation of athletic therapy programs and services.	.82	2.68 (.81)	1.99 (.95)
Collaborate with health care professionals to provide specialized care for individuals with physical and/or intellectual disabilities.	.76	2.56 (.82)	1.46 (.77)
Communicator			
Use effective communication strategies (i.e., cultural competence, situational awareness, and timeliness) to build rapport and trust with the patient.	.97	3.45 (.66)	3.64 (.70)
Use communication strategies to facilitate effective patient care.	.98	3.42 (.63)	3.71 (.62)
Employ empathy, respect, and compassion as part of a patient-centred approach to communication.	.99	3.53 (.61)	3.76 (.58)
Adapt their communication approach to situational context.	.95	3.18 (.73)	3.41 (.82)
Inquire about and explore the patient's beliefs, values, preferences, context, and expectations.	.81	2.72 (.88)	2.89 (1.02)
Facilitate non-judgmental discussions with the patient, considering cultural context.	.87	2.91 (.91)	2.87 (1.13)
Detect, interpret, and respond appropriately to the patient's verbal and non-verbal cues for effective communication.	.94	3.27 (.69)	3.47 (.81)

Actively listen and adapt to the individualized needs and goals of each patient.	.98	3.50 (.61)	3.67 (.61)
Explain the rationale for a return to sport/activity decision to the patient, team personnel (including coaches), and family.	.99	3.48 (.59)	3.10 (.74)
Use counselling strategies (i.e., guide, advise, and/or rationalize) to help the patient make informed decisions regarding their health care.	.82	2.85 (.77)	2.68 (.95)
Use communication skills that help the patient and their family make informed decisions regarding their health care while ensuring confidentiality and privacy.	.95	3.15 (.68)	2.78 (.93)
Recognize when the values, biases, or perspectives of the athletic therapist, the patient, physicians, or other health care professionals may have an impact on the quality of care.	.89	2.93 (.79)	2.46 (1.07)
Employ diplomacy, tact, and discretion to manage emotionally charged conversations and conflicts.	.89	3.14 (.80)	2.33 (1.07)
Use appropriate terminology to effectively communicate findings to the patient and relevant stakeholders including the patient's family.	.98	3.17 (.69)	3.02 (.89)
Use appropriate history-taking skills to effectively gather relevant patient information.	.99	3.60 (.58)	3.60 (.64)
Obtain relevant information from bystanders and the patient's family for patients with altered levels of consciousness.	.98	3.47 (.68)	1.78 (1.01)
Use communication tools and electronic technologies effectively and responsibly.	.89	2.83 (.82)	3.06 (1.02)
Provide patient education to facilitate healthy lifestyle behaviours.	.90	2.85 (.82)	2.81 (.99)
Provide patient education for ergonomic principles and their relationship to the prevention of illness and injury.	.90	2.82 (.77)	2.67 (.94)
Demonstrate and provide patient education for warmup and stretching techniques to promote safe participation in sport/activity.	.99	3.16 (.66)	3.11 (.80)

Demonstrate, educate, and counsel for correct and safe exercise performance.	.98	3.33 (.66)	3.37 (.80)
Educate patients to develop self-management and self-treatment skills for initial injury management and to facilitate therapeutic goals.	.95	3.14 (.67)	3.15 (.80)
Demonstrate effective written communication skills (i.e., clear, concise, and organized).	.97	3.15 (.73)	3.42 (.81)
Scholar			
Describe and differentiate between quantitative, qualitative, and mixed-methods research designs.	.59	1.95 (.85)	1.39 (.65)
Find best available evidence to answer a clinical question in athletic therapy practice by identifying key concepts and using appropriate keywords, subject headings, and limits to search relevant databases.	.84	2.47 (.84)	1.76 (.81)
Critically appraise research design, statistical analyses, and levels of evidence to interpret and evaluate research that informs athletic therapy practice.	.69	2.25 (.90)	1.49 (.68)
Use standard criteria or developed scales to critically appraise the structure, rigour, and overall quality of research studies for integration into athletic therapy practice.	.58	2.04 (.86)	1.44 (.67)
Incorporate best available evidence into decision-making for injury prevention, assessment, management, and rehabilitation.	.96	3.02 (.70)	2.58 (.98)
Identify risk factors, causes, and types of injuries related to sport/activity based on contemporary epidemiological data.	.82	2.62 (.82)	2.02 (.95)
Interpret best available evidence (for example, reliability, sensitivity, specificity) to select NMSK evaluation and diagnostic procedures.	.83	2.60 (.84)	2.05 (.95)
Integrate subjective clinical outcome measures (for example, generic, disease-specific, region-specific, and health-related quality of life measures) in athletic therapy practice.	.66	2.17 (.86)	1.84 (.97)
Integrate objective clinical outcome measures (for example, functional and instrument-based testing) in athletic therapy practice.	.87	2.65 (.83)	2.37 (1.01)

Integrate clinical practice guidelines in athletic therapy practice.	.96	2.96 (.72)	2.89 (1.02)
Regularly reflect on their use of evidence in athletic therapy practice for lifelong learning and professional improvement.	.85	2.71 (.82)	1.89 (.85)
Educate health care professionals based on contemporary evidence and innovation related to athletic therapy practice.	.70	2.45 (.81)	1.60 (.75)
Recognize knowledge gaps in professional encounters, and explore or generate focused questions that contribute to the practice of athletic therapy and health care delivery.	.71	2.39 (.88)	1.59 (.76)
Contribute to the improvement of athletic therapy practice and/or health care through knowledge creation, knowledge translation, and practice integration through ethical research and/or scholarly endeavours.	.61	2.30 (.90)	1.41 (.68)
Follow ethical protocols (i.e., Tri-Council Policy Statement 2 [TCPS 2]) when conducting research.	.78	2.79 (1.05)	1.52 (.98)
Leader			
Provide leadership in athletic therapy practice.	.74	2.70 (.87)	2.59 (1.16)
Promote and advocate for the athletic therapy profession.	.93	3.17 (.80)	2.81 (1.03)
Promote the value of athletic therapy services.	.96	3.28 (.73)	2.97 (.95)
Educate colleagues, students, patients, the public, insurance companies, government entities, and other health care professionals about the roles, responsibilities, academic preparation, and scope of practice of athletic therapists.	.88	3.09 (.78)	2.47 (.98)
Identify and address contemporary issues and problems confronting athletic therapy practice and health care.	.68	2.56 (.88)	1.83 (.88)
Foster a culture that promotes patient safety including adapting systems and services based on adverse events.	.90	2.91 (.84)	2.33 (1.08)

Facilitate a safe learning environment for professionals and developing professionals.	.77	2.78 (.91)	2.31 (1.14)
Integrate mentorship for professionals and developing professionals into practice.	.65	2.51 (.91)	1.82 (.92)
Support the professional development of others for quality improvement of athletic therapy practice and services.	.76	2.67 (.86)	1.85 (.90)
Conduct business practices in accordance with CATA, local, provincial/territorial, and federal governing laws, policies and procedures.	.94	3.27 (.80)	3.08 (1.12)
Develop and implement administrative policies and procedures to facilitate athletic therapy services.	.70	2.59 (.89)	2.16 (1.13)
Develop and continually review a comprehensive emergency action plan.	.97	3.27 (.81)	1.85 (.84)
Orient, coordinate, and manage personnel in a variety of professional domains.	.47	2.14 (.89)	1.67 (.88)
Facilitate cooperation among administrators, coaches, athletic therapists, health care professionals, parents, and patients/athletes/clients.	.88	2.84 (.83)	2.44 (1.01)
Manage equipment, supplies, and resources in a cost-effective manner.	.75	2.44 (.81)	2.01 (.92)
Evaluate, mitigate, and manage risks in athletic therapy practice.	.93	3.03 (.80)	2.55 (1.09)
Contribute to the improvement of health care delivery at all levels.	.85	2.85 (.87)	2.52 (1.15)
Health Advocate			
Champion the health needs of patients.	.93	3.09 (.78)	3.08 (.99)
Develop, implement, and evaluate to improve disease prevention and health promotion strategies utilizing best practices.	.79	2.70 (.86)	2.33 (1.10)

Employ health promotion strategies that align with Occupational Health and Safety standards to prevent and control the spread of infectious diseases.	.87	3.03 (.91)	2.86 (1.21)
Advocate for good nutrition, regular exercise, and healthy lifestyle habits for health maintenance, performance enhancement, and disease prevention.	.94	2.93 (.78)	2.84 (.96)
Evaluate contemporary nutrition and dietary intake recommendations and explain how to perform a basic dietary analysis.	.58	2.11 (.82)	1.69 (.85)
Evaluate prevailing nutrition and/or lifestyle misconceptions and fads.	.67	2.18 (.83)	1.70 (.82)
Evaluate changes in dietary requirements that occur based on health status, age, and activity level, and provide guidance or refer where appropriate.	.67	2.19 (.82)	1.58 (.77)
Advocate for good nutrition to facilitate optimal healing and tissue repair.	.95	2.80 (.73)	2.43 (.91)
Recognize and compare general and adverse effects of commonly used dietary supplements.	.68	2.25 (.83)	1.73 (.80)
Evaluate healthy weight management methods and strategies.	.70	2.26 (.81)	1.69 (.76)
Recognize, support, and refer an individual with an eating disorder.	.92	3.03 (.84)	1.44 (.78)
Promote the World Anti-Doping Agency (WADA) guidelines for pharmaceuticals and nutraceutical products (supplements, ergogenics, and herbal remedies) that facilitate recovery, function, and performance.	.86	2.79 (.91)	1.70 (.88)
Facilitate and/or conduct doping control programs in compliance with WADA to protect athlete health and to ensure fair play.	.63	2.42 (.98)	1.35 (.69)
Develop, implement, and evaluate to improve injury prevention programs utilizing best practices.	.93	3.00 (.72)	2.31 (.94)

Facilitate safe participation for all populations in sport/activity through preparticipation screening for medical conditions, diseases, and injury risk factors.	.93	3.03 (.76)	1.98 (.96)
Appraise the patient's readiness for participation based on sport/activity requirements.	.96	3.14 (.74)	2.52 (.96)
Advocate for the patient when identified sport/activity risks could compromise the patient's health.	.97	3.28 (.74)	2.35 (.99)
Advocate for the athlete when coaching method(s), sport demands, and/or conditioning technique(s) could potentially compromise the athlete's health and wellness	.97	3.34 (.69)	2.24 (.99)
Integrate guidelines and practices associated with preventing sudden death during physical activity into athletic therapy practice.	.91	3.23 (.86)	1.78 (.99)
Construct an effective heat illness prevention program.	.92	3.07 (.83)	1.62 (.87)
Assess weight loss and hydration status to evaluate an individual's ability to participate in sport/activity in a hot, humid environment.	.82	2.83 (.87)	1.82 (1.02)
Manage environmental risks to promote athlete and patient health.	.95	2.89 (.80)	2.08 (1.02)
Apply prophylactic techniques to promote primary injury prevention (for example, taping).	.99	3.30 (.67)	3.15 (.84)
Recognize and support psychosocial and emotional responses to trauma and modified activity that may affect the rehabilitation process.	.90	2.90 (.76)	2.26 (1.01)
Apply behavioural change theory in rehabilitation to educate, motivate, lead, and inspire patients.	.72	2.52 (.87)	2.25 (1.01)
Apply psychological techniques that can be used to motivate the patient during injury rehabilitation and to facilitate safe return to sport/activity.	.79	2.66 (.79)	2.38 (.98)
Describe pharmacokinetic and pharmacodynamic principles related to commonly used prescription and non-prescription drugs, and performance-enhancing substances.	.55	2.07 (.87)	1.56 (.77)

Recognize and describe how pharmacokinetics and pharmacodynamics of commonly used pharmaceutical and nutraceutical products may impact health and/or physical activity.	.64	2.20 (.85)	1.58 (.78)
Describe and compare common drug administration routes.	.59	1.88 (.84)	1.38 (.65)
Describe how common pharmacological agents influence pain and healing and integrate this information into your rehabilitation program.	.84	2.47 (.80)	1.97 (.89)

Appendix C: CATA Examination Blueprint

STRUCTURAL VARIABLES	
Examination length	200 questions
Item presentation and format	Format: Multiple-choice questions Presentation: Scenario-based questions and independent questions
COGNITIVE LEVEL	
Knowledge/Comprehension	Approximately 15%
Application	Approximately 50%
Critical Thinking:	Approximately 35%
COMPETENCY CATEGORIES AND WEIGHTING	
Athletic Therapist Expert	22 - 26%
Professional	11 - 13%
Collaborator	13 - 15%
Communicator	15 - 17%
Scholar	6 - 8%
Leader	9 - 11%
Health Advocate	16 – 18%

CONTEXTUAL VARIABLES				
Body Part	Abdomen Ankle Cervical Spine Elbow Foot	Forearm Wrist Hand Head/Face Hip/Pelvis	Knee Lumbar Spine Shin Shoulder	Thigh/Groin Thoracic Spine Thorax Upper Arm
Injury Type	Direct Trauma Indirect Trauma Medical Condition Overuse Post Surgical			