# The Development, Implementation, and Value of the Athletic Training Milestones for Assessing Progressive Clinical Behaviors

Hollie Walusz, MA, ATC \*; Eric Sauers, PhD, ATC, FNATA†; Mark Laursen, MS, ATC \*; Forrest Pecha, MS, ATC‡ \*Boston University, Boston, MA; †A.T. Still University, Meza, AZ; ‡Steamboat Orthopaedic and Spine Institute, Steamboat Spring, CO

#### **Content Focus**

Vitality of The Profession, Health Professions Education

#### Correspondence

235 N Billerica Rd, Tewksbury, MA 01876 E-mail: hjwalusz@bu.edu

#### Reference

Walusz H, Sauers E, Larsen M, Pecha F. The development, implementation, and value of the athletic training milestones for assessing progressive clinical behaviors. *Clin Pract Athl Train.* 2024;7(2): 5-11. https://doi.org/10.31622/2024/0007.02.2.

#### **Author Characteristics**

Hollie Walusz currently serves as a Head Athletic Trainer for Boston University and has served as the Residency Program Director since 2016. She has been a preceptor for professional programs, faculty in a baccalaureate program and professional program, is affiliate faculty in a DAT program, affiliate faculty in a Neurology fellowship program, and is core faculty and program director for a Commission on Accreditation of Athletic Training Education (CAATE)-accredited Orthopedic residency program. She has seen the impact of the AT Milestones first-hand across all levels of AT education as well as use for professional growth. Hollie speaks nationally regarding the use of the AT Milestones in athletic training. Additionally, Hollie speaks nationally regarding residency and fellowship training as a catalyst to advance the profession. She serves as the Chair of the Residency and Fellowship Council for the CAATE and was previously the Chair of the Residency and Fellowship Standards Committee for the CAATE.

Dr. Eric L. Sauers is a tenured Full Professor and Dean of the College for Healthy Communities at A. T. Still University in Santa Maria, California. He served the CAATE for 11 years in numerous roles, including as President, Vice President, and Commissioner. Dr. Sauers has published numerous peer-reviewed scientific articles and given numerous state, regional, national, and international presentations related to his research and scholarship.

Mark Laursen currently serves as the Residency and Fellowship Director for the CAATE and as an Adjunct Clinical Associate Professor at Boston University. From 2008 until 2022, Mark served Boston University as the Director of Athletic Training Services and as a Clinical Associate Professor in Boston University's Sargent College of Health and Rehabilitation Sciences.

Forrest Pecha serves as the Clinical Outreach Director at Steamboat Orthopaedic and Spine Institute in Steamboat Springs, Colorado, and Medical Coordinator for Steamboat Springs Winter Sports Club. Previously, he was the Program Director for the Athletic Training Residency at both St. Luke's Sports Medicine in Boise, ID and at Emory Sports Medicine in Atlanta, GA. Forrest has served the profession through the CAATE, BOC, and NATA for over 20 years. He was one of the founders of Athletic Trainers in the Physician Practice Society (ATPPS), past President of the ATPPS Board of Directors, and past commissioner for the CAATE.

#### COMMENTARY

#### Background

The development of the Athletic Training Milestones (AT Milestones)  $^{(0)}$  (**Appendix 1**) began as an effort to enhance and facilitate the assessment of learners in athletic training residency programs. However, during the development process, it became apparent that they could have much greater utility for the profession if they were developed to assess progressive clinical behaviors of learners, throughout the continuum of learning, from professional-level training through specialist and subspecialist training. The AT Milestones were developed to facilitate the observation and assessment of clinical behaviors across the six general core competencies adapted from the Accreditation Council for Graduate Medical Education (ACGME)<sup>2,3</sup> and the

eight specialty areas identified by the Commission on Accreditation of Athletic Training Education (CAATE).<sup>4</sup> The authors designed the AT Milestones based closely upon the ACGME Milestones to provide a mechanism to allow mentors, peers, and other healthcare providers to assess an individual's clinical behavior in one, more, or all of the competency areas. To date, the authors have completed the AT Milestones for all six ACGME core competencies and five of the eight specialty areas. The specialty areas were developed in collaboration with clinicians who have specialty content expertise in one or more of the respective specialty areas.

#### Development

The AT Milestones levels of progression were derived from the Dreyfus model of skill acquisition. The Dreyfus model is a five-stage model of skill acquisition frequently cited in the healthcare education literature that plots one's progression through a series of five levels: novice, advanced beginner, competent, proficient, and expert.<sup>5</sup> Specifically, the model suggests that learners progress from rigid adherence to rules and procedures (novice) to a largely intuitive mode of operation that relies heavily on deep, implicit knowledge (expert). The ACGME recommends this model for curriculum planning for residency training programs.<sup>6</sup> The AT Milestones have adopted the Institute of Medicine criteria for quality care, which involves delivering safe, timely, effective, efficient, equitable, and patient-centered care (STEEP).<sup>7</sup> The authors utilized the theoretical framework outlined by Dreyfus and the ACGME general competencies model, in which specific milestones have been developed for all medical specialties. In completing this work, the authors looked specifically at milestones from Family Medicine, Internal Medicine, Physical Medicine and Rehabilitation, Orthopaedic Surgery, Emergency Medicine, and both Orthopaedic Sports and Sports Medicine specialties to develop and adapt specific milestone narratives for athletic training practice.<sup>8-14</sup>

This framework, in combination with the vision towards competency-based education (CBE) in medicine and competency-based developmental outcomes, led to the completion of the AT Milestones. CBE is a fundamentally flexible and outcome-centric educational framework that removes time-based constraints and focuses on the learner.<sup>15,16</sup> CBE is an innovative advance in higher education that organizes content or delivery according to competencies, what a learner knows and can manage, and allows one to use experiences, skills, and knowledge to complete the training needed to pursue their goals.<sup>13</sup> CBE in medical education, was an approach to designed to prepare physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs.<sup>16</sup>

The AT Milestones expand on these efforts to identify and achieve outcomes for teaching and learning in athletic training. Competency-based assessment is formative, aiming to monitor how one is learning, thinking, and applying knowledge.<sup>15</sup> It is important to remember that competence is not fixed, and anyone can move forward or slide backward on the continuum based on how intentional the learner is in integrating the competencies into practice. One intentional addition to the AT Milestones was the inclusion of 'Critical Deficiencies.' Not all medical specialties include this anchor in their Milestones, but Internal Medicine does, and the authors considered their inclusion important for communicating to a learner what behaviors may negatively impact patient safety or represent unacceptable practice.<sup>17</sup>

Perhaps one of the most valuable and unique features of the AT Milestones, compared to those developed in medicine and other healthcare professions, is the inclusion of milestones (observed behaviors) consistent with an early learner (Levels 1 and 2), someone ready for unsupervised practice (Level 3), someone who has completed specialty training (Level 4), and aspirational behaviors emblematic of a clinical expert (Level 5), which should represent the continuum of an athletic trainer's career (**Table 1**). Significant time was spent discussing what observed patient care behaviors were necessary for someone to complete a professional program and practice athletic training unsupervised (Level 3). Similarly, significant time was spent discussing the progression from generalist to specialist and how those behaviors should change with additional education and training (Level 4). These discussions were not based on formal documents such as the CAATE Standards or the BOC Practice Analysis, but rather on the author's significant combined expertise in athletic training, healthcare, and education to represent a 'preferred state.' Instead, they are independent of other prescribed expectations and seek to articulate a shared vision for highly competent athletic training practice to which we hope all educators and clinicians aspire. Each competency and sub-competency, along with every milestone at every one of the five levels, is subject to scrutiny. Over time, we hope that researchers and clinical specialists in each area may debate and challenge the assumptions within the AT Milestones and they will be iteratively enhanced through ongoing analysis.

#### Implementation

Formative and summative assessment alongside clear and constructive feedback are essential to a learner's growth and development. Traditional exams and checklists often miss the integral behaviors and assessment of skills encompassed within a comprehensive competency-based tool. Kak, et al. found that written tests are probably the furthest from, and the weakest predictor of, actual job performance, whereas job samples are among the best predictors of job performance in healthcare.<sup>18</sup> Job samples, with periodic appraisals by supervisors, peers, and self, require both observation and evaluation and are used to infer competence.<sup>18</sup>

The goal of a formative assessment is to monitor learning and provide feedback that can be used to improve performance. Studies have shown that programs that deeply invest in training, simulation, supervision, and frequent feedback may result in a marked shortening of training.<sup>19,20</sup> The AT Milestones can be used in this manner via multiple established time points throughout a program and, subsequently, the clinical performance across the span of the clinician's education or training, encompassing the entire continuum of learning. In our own use, we have found more meaningful assessments and subsequent debriefing sessions open a dialogue for forward progression and opportunities for the individual user. Through the programmatic quality improvement process, feedback from faculty and learners alike have denoted the AT Milestones improve in the quality of formative feedback, establish transparent criteria that limits bias or confusion in scores because of established benchmarks, and provide a more accurate way to capture the totality of the learner's transfer of knowledge, skills, and abilities to patient care and working within a healthcare system. In our experience, the AT Milestones have offered the faculty and learners easily identifiable criteria and thresholds for a given score, allowing for consistency of grading amongst users, and allows the program to tailor teaching and learning to the needs of each learner. Leach described the treatment of the patient as an art, denoting the importance of finding harmony between biomedical knowledge, technology, and a patient-facing approach to healthcare to improve patient care.<sup>21</sup> The AT Milestones allow for the assessment of clinical behaviors in an ongoing and consistent basis and allow for the development of individualized learner plans with specific examples of what one does well and areas of opportunity for growth as it relates to patient care across a broad spectrum of healthcare competencies.

It is essential to use a summative assessment mechanism to evaluate learning so the program can feel confident that the learner has met the threshold expectation for the type of program they are progressing through (professional, residency, fellowship, doctoral) or for the time and space they are in relative to continuing professional development. By tying together foundational knowledge both scientifically and in the practice of athletic training, the AT Milestones allow for evaluation of one's ability to apply all they have learned to the patient, quantify readiness to practice, and ultimately produce highly competent/proficient clinicians to meet the healthcare needs of the public. In addition, the capacity of the AT Milestones to facilitate

this summative assessment in athletic training education further implicates their use in both professional and post-professional athletic training education. We have also found that the AT Milestones can be used as a summative evaluation, providing both the learner and the program (or other relevant parties) clarity in expectations upon program completion. Additionally, evidence supports the tool as having excellent content validity for the general competency milestones, indicating the AT Milestones can be used to assess an athletic trainer's or athletic training student's progression of independent knowledge, skill, and behavior acquisition.<sup>22</sup>

When implementing the AT Milestones, consideration should be given to how to best analyze, synthesize, and deliver information garnered from the tool in addition to training on how to use the tool, frequency of use, and selection of individuals performing the assessment. In physician education, Milestones are typically used every 3-6 months,<sup>2,3</sup> so it is important to use the tool in conjunction with other measures to supplement multisource feedback. The orthopedic residency and neurology fellowship programs at Boston University use the tool in multiple ways across four time points. It first serves as a training tool on expectations of foundational core competencies and specialty competencies within the residency and fellowship programs upon hire. It is then used for self-assessment as a mode of exposure to and training of the tool early in the program for formative discussions. This is followed by self-assessment, peer assessment, and clinical faculty assessment at both mid-experience (for formative feedback) and end of the experience as a summative assessment tool. The final element is to determine who is doing the assessment. It is important to develop a Clinical Competency Committee (CCC) made up of those who mentor and observe the learner's practice and behaviors in a clinical capacity on an ongoing and consistent basis.<sup>23</sup> Depending on the size of the learner groups being assessed, the literature suggests the CCC be a minimum of 3 individuals, but ideally made up of 5 to 7 people.<sup>23</sup> The role of the members of the CCC is to create accountability that graduates will provide safe, high-quality care to patients and maintain the standards of the healthcare system.

#### Value

Detailed and immediate feedback to healthcare providers about their competence helps them learn and improve performance.<sup>18</sup> The primary authors of the AT Milestones believe that they are a valuable tool to assess and provide feedback about progressive clinical behaviors to ensure competence at graduation from a professional program and upon completion of specialty or subspecialty training. Regardless of where an individual is within their professional development, the AT Milestones provide explicit examples of clinical competence at increasing levels, including aspirational milestones, for every competency area. In this way, the authors have also found that the AT Milestones are useful to practicing athletic trainers for self-assessment and reflection on one's growth and continued professional development.

The AT Milestones have been found to have content validity<sup>22</sup> and serve as a feasible assessment<sup>24</sup> across a broad spectrum of education. The AT Milestones have also recently been used to assess didactic components of a Doctor of Athletic Training (DAT) program, for learning activities such as quality improvement projects and case presentations. There is also preliminary evidence of the use of the AT Milestones in professional education.<sup>24</sup> Future work examining the value of the AT Milestones in different types of programs and for various purposes is warranted. However, a significant benefit of the AT Milestones is that they are based on the same theoretical model as the medical milestones, which have a rich and growing research base to support their use.<sup>25</sup>

Perhaps more importantly, the AT Milestones serve as a reflective tool that can help capture where the athletic trainer has started and identify their current depth and breadth of knowledge, skills, attitudes, and behaviors in each of the respective competencies and sub-competencies. In this sense, the tool can subsequently provide a map of what the learner needs to continue to grow and develop in a particular

area. The narrative descriptors within each performance level outline a framework of observable behaviors and other attributes required to build individualized professional growth plans. These narratives can help guide planning and continuing development along the continuum and progression of learning throughout one's career. Multiple studies cite the importance of self-reflection,<sup>26-28</sup> so using that in conjunction with valid feedback is a sound approach to building a plan for continued professional growth and to amplify learning.

By providing a tool for assessing progress and defining global athletic training competencies within the healthcare system, we believe that educators can be aided in producing competent and proficient clinicians who can better treat the public and subsequently advance the athletic training profession. We, as clinical educators, should all strive to be lifelong learners who are able to ensure we, too, are continually developing our clinical expertise. The AT Milestones provide added value to the profession in the form of a valid instrument to assess competence and growth both within athletic training education and across the continuum of professional practice, ultimately advancing and promoting growth and change in the profession.

### REFERENCES

- 1. Athletic Training Milestones Project. AT Milestones Website. https://www.atmilestones.com. 2018 ©
- 2. Accreditation Council for Graduate Medical Education. Milestones Resources. https://www.acgme.org/milestones/resources
- 3. Accreditation Council for Graduate Medical Education. The Milestones Guidebook. https://www.acgme.org/globalassets/milestonesguidebook.pdf
- 4. CAATE Approved Residency Specialty Areas. CAATE Website. <u>https://caate.net/Programs/Residency-Fellowship</u>
- 5. Dreyfus and Dreyfus. A five-stage model of the mental activities involved in directed skill acquisition. Unpublished Report, University of California, Berkely, 1980.
- 6. Batalden P, Leach D, Swing S, Dreyfus H, Dreyfus S. General competencies and accreditation in graduate medical education. *Health Aff.* 2002;21(5):103-111. doi:10.1377/hlthaff.21.5.103
- 7. Six Domains of Healthcare Quality. Agency for Healthcare Research and Quality. https://www.ahra.gov/talkingguality/measures/six-domains.html
- 8. Accreditation Council for Graduate Medical Education. Milestones Resources. Family Medicine Milestones. <u>https://www.acgme.org/globalassets/PDFs/Milestones/FamilyMedicineMilestones.pdf</u>
- Accreditation Council for Graduate Medical Education. Milestones Resources. Internal Medicine Milestones. <u>https://www.acgme.org/globalassets/PDFs/Milestones/InternalMedicineMilestones.pdf</u>
- Accreditation Council for Graduate Medical Education. Milestones Resources. Orthopaedic Sports Medicine Milestones. <u>https://www.acgme.org/globalassets/PDFs/Milestones/OrthopaedicSportsMedicineMilestones.pdf</u>
- 11. Accreditation Council for Graduate Medical Education. Milestones Resources. Sports Medicine Milestones. <u>https://www.acgme.org/globalassets/PDFs/Milestones/SportsMedicineMilestones.pdf</u>
- 12. Accreditation Council for Graduate Medical Education. Milestones Resources. Physical Medicine and Rehabilitation Milestones. <u>https://www.acgme.org/globalassets/pdfs/milestones/pmrmilestones.pdf</u>
- 13. Accreditation Council for Graduate Medical Education. Milestones Resources. Emergency Medicine Milestones. <u>https://www.acgme.org/globalassets/PDFs/Milestones/EmergencyMedicineMilestones.pdf</u>
- 14. Accreditation Council for Graduate Medical Education. Milestones Resources. Orthopaedic Surgery Milestones.

https://www.acgme.org/globalassets/PDFs/Milestones/OrthopaedicSurgeryMilestones.pdf

- 15. Mace KL, Bacon CEW. The Future of Health Professions Education: Considerations for Competency-Based Education in Athletic Training. *Athl Train Educ J.* 2019;14(3):215-222. doi:10.4085/1403215
- Frank JR, Mungroo R, Ahmad Y, Wang M, De Rossi S, Horsley T. Toward a definition of competencybased education in medicine: a systematic review of published definitions. *Med Teach*. 2010;32(8):631-637. doi:10.3109/0142159X.2010.500898
- Kinnear B, Bensman R, Held J, O'Toole J, Schauer D, Warm E. Critical Deficiency Ratings in Milestone Assessment: A Review and Case Study. Acad Med. 2017;92(6):820. doi:10.1097/ACM.00000000001383
- 18. Kak N, Burkhalter B, Cooper MA. Measuring the competence of healthcare providers. Oper Res Issue Pap. 2001;2(1):1-28.
- 19. Ten Cate O, Hart D, Ankel F, et al. Entrustment Decision Making in Clinical Training. Acad Med. 2016;91(2):191. doi:10.1097/ACM.0000000000001044
- 20. Ten Cate O. A primer on entrustable professional activities. Korean J Med Educ. 2018;30(1):1-10. doi:10.3946/kjme.2018.76
- 21. Leach DC. Changing education to improve patient care. Postgrad Med J. 2008;84(994):437-441. doi:10.1136/qhc.100054
- 22. Welch Bacon CE, Anderson BE, Cavallario JM, Van Lunen BL, Eberman LE. Content Validation of the Athletic Training Milestones: A Report from the Association for Athletic Training Education Research Network. J Athl Train. 2023;58(5):483-487. doi:10.4085/1062-6050-0332.22
- 23. Accreditation Council for Graduate Medical Education. Clinical Competency Committee Guidebook. https://www.acgme.org/globalassets/acgmeclinicalcompetencycommitteeguidebook.pdf
- 24. Welch Bacon CE, Anderson BE, Cavallario JM, Van Lunen BL, Eberman LE. Perceptions and use of the athletic training milestones in education: A report from the AATE research network. Clin Pract Athl Train. 2024;7(2): 11-26. https://doi.org/10.31622/2024/0007.02.3.
- 25. Accreditation Council for Graduate Medical Education. Research and Reports. https://www.acgme.org/milestones/research/
- 26. Koshy K, Limb C, Gundogan B, Whitehurst K, Jafree DJ. Reflective practice in health care and how to reflect effectively. *IJS Oncol.* 2017;2(6):e20. doi:10.1097/IJ9.0000000000000020
- 27. Winkel AF, Yingling S, Jones AA, Nicholson J. Reflection as a Learning Tool in Graduate Medical Education: A Systematic Review. J Grad Med Educ. 2017;9(4):430-439. doi:10.4300/JGME-D-16-00500.1
- Carraccio C, Englander R, Gilhooly J, et al. Building a Framework of Entrustable Professional Activities, Supported by Competencies and Milestones, to Bridge the Educational Continuum. Acad Med. 2017;92(3):324. doi:10.1097/ACM.00000000001141
- 29. Carraccio CL, Benson BJ, Nixon LJ, Derstine PL. From the Educational Bench to the Clinical Bedside: Translating the Dreyfus Developmental Model to the Learning of Clinical Skills. Acad Med. 2008;83(8):761. doi:10.1097/ACM.0b013e31817eb632
- 30. Meier AH, Gruessner A, Cooney RN. Using the ACGME Milestones for Resident Self-Evaluation and Faculty Engagement. J Surg Educ. 2016;73(6):e150-e157. doi:10.1016/j.jsurg.2016.09.001
- 31. Nodine T r. How did we get here? A brief history of competency-based higher education in the United States. J Competency-Based Educ. 2016;1(1):5-11. doi:10.1002/cbe2.1004
- 32. Park YS, Zar FA, Norcini JJ, Tekian A. Competency Evaluations in the Next Accreditation System: Contributing to Guidelines and Implications. *Teach Learn Med.* 2016;28(2):135-145. doi:10.1080/10401334.2016.1146607

33. Potts JR. Assessment of Competence: The Accreditation Council for Graduate Medical Education/Residency Review Committee Perspective. Surg Clin. 2016;96(1):15-24. doi:10.1016/j.suc.2015.08.008

#### Appendix 1: Athletic Training Milestones Template.

The diagram below presents the standardized structure for each competency, sub-competency, and milestone with interpretations for each of the six levels of performance. In addition, each sub-competency is cross-referenced back to a specific ACGME sub-competency in parentheses after the sub-competency is stated. For each assessment period (defined by the end-user), an individual's performance on the milestones for each sub-competency will be indicated by:

- selecting the level of milestones that best describes the individual's performance in relation to the milestones or,
- selecting the "Critical Deficiencies" option

Critical Deficiencies	Level 1	Level 2	Level 3	Level 4	Level 5
			(Ready for Unsupervised Practice)	(Ready for Advanced Practice)	(Aspirational)
Behaviors are not within the spectrum of developing competence Significant deficiency in learner performance	What are the expectations for a beginning learner?	What are the milestones for a learner who has advanced beyond beginner, but is not performing at a level sufficient for unsupervised practice? What should the learner be able to do well at this point in their training?	What does a graduate of a professional program look like? What additional knowledge, skills, and attitudes have they obtained? Are they ready for BOC certification?	What does a graduating resident look like? What additional knowledge, skills, and attitudes have they obtained? Are they ready for specialty certification?	What does clinical expertise look like? What are stretch goals to encourage continued progression towards mastery?
Comments:				· · · · · · · · · · · · · · · · · · ·	

Selecting a response box in the middle of a level implies that milestones in that level and in lower levels have been substantially demonstrated.

Selecting a response box on the line in between levels indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher level(s).

#### Table 2: Athletic Training Milestones.

#### **GENERAL COMPETENCIES:**

#### **Patient-Care and Procedural Skills**

Athletic trainers must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Critical Deficiencies	Leve	el 1		Level 2	(Re	Level 3 ady for Unsup Practice)	ervised	(Ready	Level 4 y for Advanced Prac	ctice)	,	Level 5 Aspirational
Is insensitive to differences related to culture, ethnicity, gender identify, race, age, and religion in the patient/caregiver encounter Is unwilling to modify care plan to account for a patient's unique characteristics, needs, and goals	Is sensitive to basic awaren differences re culture, ethni identify, race, religion in the patient/careg encounter Requires assis modify care p account for a unique charae needs, and go	ess of elated to city, gender age, and e viver stance to lan to patient's cteristics,	each pa charact and goa culture identify person Modifie accoun unique needs,	o fully understar atients unique ceristics, needs als based upon , ethnicity, gend , religion, and al preference es care plan to t for a patient's characteristics, and goals with success	acc unio anc pat App care for cha	ognizes and ounts for the que characte needs of the ent/caregive ropriately m plan to acce patient's uni racteristics, n goals	eristics e er nodifies ount que	intera differe patier charae Role n respec uniqu	nodels professio actions to negotia ences related to nt's unique cteristics or need nodels consister ct for patient's e characteristics a, and goals	ate a ds nt	guidelin profess interact negotia related unique needs, Develop policies to supp patient	ional tions to te differences to a patient's characteristics, and goals ps organizational and education port respect for 's unique ceristics, needs,
		] [										

Patient-Care and Procedural Skills (PC-2): Patient-Centered Care: Demonstrates humanism and cultural competency. (Family
Medicine PROF-3)

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 Aspirational
Fails to demonstrate appropriate compassion, respect, and empathy Has difficulty recognizing the impact of culture on health and health behaviors Exhibits resistance to improving cultural competence	Consistently demonstrates compassion, respect, and empathy Recognizes impact of culture on health and health behaviors	Displays a consistent attitude and behavior that conveys acceptance of diverse individuals and groups, including diversity in gender, age, culture, race, religion, disabilities, sexual orientation, and gender identity Elicits cultural factors from patients and families that impact health and health behaviors in the context of the biopsychosocial model Identifies own cultural framework that may impact patient interactions and decision-making	Incorporates patients' beliefs, values, and cultural practices in patient care plans Identifies health inequities and social determinants of health and their impact on individual and family health Anticipates and develops a shared understanding of needs and desires with patients and families; works in partnership to meet those needs	Demonstrates leadership in cultural competence, understanding of health disparities, and social determinants of health Advocates for the rights of vulnerable patients / patient populations Recognizes and addresses lack of patient- centeredness in colleagues/peers	Develops organizational policies and education to support the application of these principles in the practice of athletic training Generates and disseminates new knowledge in humanism and cultural competence
Comments:					

	-	): Diagnosis and Manage (s). (Internal Medicine P		synthesizes essential an	d accurate information		
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)		
Does not collect accurate historical data Does not use physical exam to confirm history Relies exclusively on documentation of others to generate own database or differential diagnosis Fails to recognize patients' central clinical problems Fails to recognize potentially life threating problems	Inconsistently able to acquire accurate historical information in an organized fashion Does not perform an appropriately thorough physical exam or misse key physical exam findings Does not seek or is overly reliant on secondary data Inconsistently recognizes patients' central clinical problem or differential diagnose	Seeks and obtains data from secondary sources when needed Consistently performs accurate and appropriately thorough physical exams Uses collected data to define a patient's central clinical problem(s)	Acquires accurate histories from patients in an efficient, prioritized and hypothesis- driven fashionPerforms accurate physical exams that are targeted to the patient's complaintsSynthesizes data to generate a prioritized differential diagnosis and problem listEffectively uses history and physical examination skills to minimize the need for further diagnostic testing	Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis Identifies subtle or unusual physical exam findings Efficiently utilizes all sources of secondary data to inform differential diagnosis Role models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing	Publishes clinical case reports on unique clinical problems Collaborates in practice- based research efforts to gather, aggregate, and synthesize patient data to enhance diagnostic and management efforts Generates and disseminates new knowledge pertaining to diagnoses and management		
Comments:							

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to perform a thorough physical examination Fails to seek feedback or guidance on the accuracy and thoroughness of physical examination Performs physical examination procedures that are contraindicated and create increased patient discomfort or risk	Performs a general physical exam Requires prompting to perform a thorough physical examination including all necessary elements (e.g., medical, neurologic)	Performs a physical exam that assists in functional assessment (e.g., may include balance, gait, cognition, neurologic, or musculoskeletal assessments) Performs excessive physical examination using unwarranted techniques	Performs a relevant, accurate comprehensive disorder-specific physical exam Modifies exam to accommodate the patient's impairments and minimize discomfort Efficiently performs a hypothesis-driven and targeted physical exam that drives clinical decision making across	Efficiently performs a hypothesis-driven and targeted physical exam that drives clinical decision making for complex cases Identifies and correctly interprets subtle or atypical physical findings Rapidly focuses on the presenting problem and elicits key information from the exam in a prioritized and efficient fashion Models and teaches exam	Efficiently produces a focused and prioritized physical examination accounting for rare conditions Streamlines physical examination for maximal cost- effectiveness and minimal patient burden
		Begins to identify normal and pathologic findings	a spectrum of ages, impairments, and clinical settings	skills in complex patients	

Patient-Care and Procedural Skills (PC-5): Diagnosis and Management: Diagnostic Evaluation. (Physical Medicine and Rehabilitation PC-3) This includes:

- Differential diagnosis of primary and secondary conditions
- Appropriate studies (e.g., laboratory, imaging, neuropsychological)
- Functional assessments

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to develop an appropriate list of differential diagnoses Uncertain of which diagnostic studies are appropriate for common medical conditions Fails to recognize when medical referral is necessary	Identifies appropriate diagnostic studies for common medical conditions Identifies reasonable diagnosis for common medical conditions	Produces a differential diagnosis for common medical conditions Recommends appropriate diagnostic studies for common medical conditions Inconsistently interprets diagnostic study results	Develops a comprehensive differential diagnosis, including less common conditions Orders appropriate diagnostic studies for common medical conditions Appropriately prioritizes the sequence and urgency of diagnostic testing Correctly interprets diagnostic study results and appropriately pursues further testing or specialist input Appropriately integrates functional assessment measures into overall evaluation	Efficiently produces a focused and prioritized differential diagnosis across a spectrum of ages and impairments and for complex conditions Orders diagnostic testing based on cost effectiveness and likelihood that results will influence clinical management	Efficiently produces a focused and prioritized differential diagnosis accounting for rare conditions Streamlines testing for maximal cost- effectiveness and minimal patient burden

### Comments:

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Care plans are consistently inappropriate or inaccurate Does not react to situations that require urgent or emergent care Does not seek additional guidance when needed	Inconsistently develops an appropriate care plan Inconsistently seeks additional guidance when needed	Recognizes patients requiring urgent or emergent care Seeks additional guidance and/or consultation as appropriate	Consistently develops and implements appropriate care plan Appropriately modifies care plans based on patient's clinical course, additional data, and patient preferences	Recognizes patient presentations that deviate from common patterns and require complex decision-making Manages complex acute and chronic patients Role models and teaches complex and patient- centered care	Develops customized, prioritized care plans for the most complex patients incorporating diagnostic uncertainty and cost effectiveness principles Serves as a regional consultant for complex patients

	Procedural Skills (PC ternal Medicine PC-		gement: Manages patient	s with progressive resp	oonsibility and
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Cannot advance beyond the need for direct supervision in the delivery of patient care Cannot manage patients who require urgent or emergent care Does not assume responsibility for patient management decisions	Requires direct supervision to ensure patient safety and quality care Provides inconsistent preventative care Inconsistently provides comprehensive care for single or multiple diagnoses	Requires indirect supervision to ensure safety and quality care Provides appropriate preventive care Provides comprehensive care for single or multiple diagnoses Under supervision, provides appropriate care for medically complex patients Initiates management plans for urgent or emergent care	Independently manages patients who have a broad spectrum of clinical disorders including undifferentiated syndromes Seeks additional guidance and/or consultation as appropriate Appropriately manages situations requiring urgent or emergent care	Manages unusual, rare or complex disorders Effectively supervises the management decisions of the athletic health care team Serves as a preceptor capable of recognizing and assessing milestone achievement in athletic training students and residents Recognizes and promotes clinical expertise in peers and implements policy to ensure patients are seen by appropriate members of the team	Serves as a clinical care leader supervising multiple clinicians in a coordinated, team- based manner Contributes to the development and refinement of models of education that promote progressive responsibility and independence
Comments:					

## **Patient Care and Procedural Skills**

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. This individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

## **Medical Knowledge**

Athletic trainers must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social- behavioral sciences, as well as the application of this knowledge to patient care.

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to demonstrate the capacity for medical knowledge improvement Fails to self-reflect and recognize personal limitations in medical knowledge	Demonstrates the capacity to improve medical knowledge through targeted study	Uses the Commission on Accreditation of Athletic Training Education (CAATE) curricular content and Board of Certification (BOC) Maintenance of Competence framework to further guide his or her education Demonstrates capacity to assess and act on personal learning needs	Demonstrates appropriate medical knowledge to care for both individual patients and patient populations Recognizes the limitations of their medical knowledge and a willingness to continue to advance their medical knowledge across their career Passes the BOC examination	Successfully completes a CAATE accredited residency program Passes a Board of Athletic Training Specialties (BATS) specialty examination Collaborates to produce clinical pathways and engage in practice-based research to inform best practices for patient care Demonstrates life-long learning through continual self-assessment and continuing education focused on maintenance of contemporary medical knowledge	Generates and disseminates new medical knowledge Leads the development of clinical pathways for the delivery of high quality, affordable health care Coordinates practice- based research to inform best practices for patient care

Medical Knowledge	e (MK	-2): Kno	wledg	ge of	<sup>i</sup> diag	gnosti	c test	ting	and	proc	edures	. (Inte	rnal N	/ledicine	e MK-1	)			
Critical Deficiencies		Level	1			Level	2		(Re	ady for	e <b>vel 3</b> r Unsuper actice)	vised	(Rea	Leve dy for Adva		ctice)		Level 5 (Aspirational	)
Lacks foundational knowledge to apply diagnostic testing and procedures to patient care Chooses inappropriate diagnostic tests or procedures that place the patient at risk or pose a safety hazard	diagr proce appro Unde diagr proce but c expla Does the c prob	rtain of v nostic tes edures ar opriate erstands v nostic tes edures to an not ac not unde oncepts o ability an ormance acteristic:	ts and e which ts and perfore lequate erstand of pre-to d test	ly	inter diagr accur Neec unde conc prob perfo chara Minin unde ratio assoc	nsistent prets b nostic tr rately Is assist rstand epts of ability a prmanc acterist mally rstands nale an ciated v non edures	tance the pre-to and te tics s the nd risk with	est est	basic accur Unde conce proba perfo chara Fully ration assoc	diagr rately erstan epts o ability orman acteris under nale a ciated	ds the f pre-te r and tes ce stics rstand tl nd risks	sts st it he	diagr Antic for p inter tests Teacl risks comr antic comp	prets com lostic test ipates and oreting di and proc nes the ra associate non proce ipates po plications orming pro	d accourd biases of agnostic edures tionale d with edures a tential when	nts when and nd	diagno proce trainin Pursu and e	luces innovati ostic testing a dures in athle ng es knowledge merging diagr and procedure	nd tic of new postic
					]					[					]				
Comments:																			

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 Aspirational	
Lacks appropriate	Demonstrates knowledge	Demonstrates knowledge of	Synthesizes scientific	Synthesizes and	Generates and	
foundational	of the basic sciences of	basic sciences applied to	knowledge in managing	applies scientific	disseminates new	
knowledge in the basic	athletic training	athletic training in patients	common medical	knowledge in complex	basic science	
sciences	Demonstrates knowledge	of all ages	conditions	medical conditions	knowledge	
Knowledge is limited to	of anatomy and	Demonstrates basic science	Integrates basic and	Possesses the	Introduces	
traditional athletic	physiology related to	knowledge foundational to	clinical science	scientific,	innovation from the	
populations (e.g.,	growth, development,	prevention, rehabilitation,	knowledge of	socioeconomic, and	basic sciences to	
college and secondary	and aging	and management	pathophysiology, tissue	behavioral knowledge	advance athletic	
school aged) without			healing, and treatment	required to	training	
appropriate			interventions in return-	successfully		
understanding of			to-activity decisions	incorporate basic and	Possesses the	
anatomy and				clinical science to	scientific	
physiology across the			Demonstrates	diagnose and treat	socioeconomic and	
ifespan			knowledge of factors	uncommon,	behavioral	
			associated with risk of	ambiguous, and	knowledge required	
			injury, including age,	complex conditions	to successfully	
			gender, and disability		incorporate basic and clinical science	
			Demonstrates both		to diagnose and	
			basic science and		treat uncommon,	
			clinical knowledge of		ambiguous, and	
			the details of tissue		complex conditions	
			healing and cellular			
			physiology across the			
			lifespan in selecting			
			treatment options			

#### Comments:

Copyright © 2018-2023 All rights reserved. The copyright owners grant third parties the right to use the Athletic Training Milestones on a non-exclusive basis for educational purposes.

## Medical Knowledge

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

### **Practice-Based Learning and Improvement**

Athletic trainers must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

Practice-Based Learning and Improvement (PBLI-1): Evidence-Based Practice: Locates, appraises, and assimilates evidence from scientific studies related to the patients' health problems. (Family Medicine PBLI-1)

Critical Deficiencies	Level 1	Level 2	Level 3	Level 4	Level 5
			(Ready for Unsupervised Practice)	(Ready for Advanced Practice)	(Aspirational)
Unable to locate appropriate evidence related to the patients' health problems to help direct care Unable to categorize and interpret the strength of a research study	Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning Categorizes the design of a research study	Identifies pros and cons of various study designs, associated types of bias, and patient-centered outcomes Formulates a searchable question from a clinical question Evaluates evidence- based point-of-care resources	Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines Critically evaluates information from others, including colleagues, experts, and sales representatives, as well as patient-delivered information Incorporates principles of evidence-based care and information mastery into	Roles models evidence- based practice and information mastery techniques Holds peers accountable to practice in an evidence- based manner Identify important clinical questions and information gaps	Engages in implementation science to support the rapid dissemination and adoption of evidence into clinical practice Develops and/or implements evidence- based practice guidelines to improve system performance Develops organizational policies and education to support the implementation of evidence-based practice
			clinical practice		
Comments:					

Copyright © 2018-2023 All rights reserved. The copyright owners grant third parties the right to use the Athletic Training Milestones on a non-exclusive basis for educational purposes.

Practice-Based Learning and Improvement (PBLI-2): Quality Improvement: Improves systems in which th	e athletic trainer provides
care. (Family Medicine PBLI-3)	

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to recognize the key STEEEP (safe, timely, effective, efficient, equitable, patient-centered) elements of quality health care Unable to accurately describe the system of care in which they are working Unable to identify quality gaps in their own health systems	Understands the key elements of quality health care (STEEEP) Recognizes the importance of measuring the end results of health care in order to adequately assess health care quality Begins to identify potential gaps in quality care	Recognizes inefficiencies, inequities, variation, and quality gaps in health care delivery Identifies potential gaps in quality care and identifies potential contributing factors within the system Recognizes the importance of developing quality improvement teams	Assesses available health care outcomes data to compare their results to expected results within the system Uses a systematic improvement method (e.g., Plan-Do-Study- Act [PDSA] cycle) to address an identified area of improvement Compares care provided by self and practice to internal and external standards, identifies areas for improvement, and implements change in their practice.	Establishes protocols for continuous review and comparison of practice procedures and outcomes and implementing changes to address areas needing improvement Uses an organized method, such as a registry, to assess and manage population health Performs multi-cycle quality improvement initiatives to improve health care quality	Role models continuous quality improvement of personal practice, as well as larger health systems or complex projects, using advanced methodologies and skill sets Generates and disseminates new knowledge to advance effective strategies for improving systems in which athletic trainers provide care
Comments:	· ·		· · ·		

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Disregards own clinical performance data Demonstrates no inclination to participate in or even consider the results of quality improvement efforts	Limited awareness of or desire to analyze own clinical performance data Nominally participates in a quality improvement projects Not familiar with the principles, techniques, or importance of quality improvement	Analyzes own clinical performance data and identifies opportunities for improvement Participates in a quality improvement project Understands common principles and techniques of quality improvement and appreciates the responsibility to assess and improve care	Analyzes own clinical performance data and actively works to improve performance Actively engages in quality improvement initiatives Demonstrates the ability to apply common principles and techniques of quality improvement to improve care	Actively monitors clinical performance through various data sources Leads quality improvement projects Utilizes common principles and techniques of quality improvement to continuously improve care	Demonstrates professional leadership in promoting performance audits for quality improvement using clinical data monitoring Generates and disseminates new knowledge to advance performance audits for quality improvement using clinical data monitoring

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Unwilling to self-reflect upon one's practice or performance Not concerned with opportunities for learning and self- improvement	Inconsistently self- reflects upon one's practice or performance and inconsistently acts upon those reflections Misses opportunities for learning and self- improvement	Regularly self-reflects upon one's practice or performance and identifies areas to improve practice Inconsistently acts upon opportunities for learning and self- improvement Recognizes the value of critical reviews and morbidity and mortality conferences (M and Ms) for learning and self- improvement	Regularly self-reflects upon one's practice or performance and maximizes practice improvement Recognizes sub-optimal practice or performance as an opportunity for learning and self- improvement Actively engages in critical reviews and morbidity and mortality conferences (M and Ms) to support learning and improvement in self and others	Role models self-reflective practice and monitoring practice improvement Holds peers accountable for failures to recognize opportunities for improvement Leads critical reviews and morbidity and mortality conferences (M and Ms) to support learning and self-improvement in others	Demonstrates professional leadership regarding self-reflective practice and monitoring practice performance Generates and disseminates new knowledge to advance self-reflective practice and monitoring practice performance

### **Practice-Based Learning and Improvement**

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

### **Interpersonal and Communication Skills**

Athletic trainers must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Critical Deficiencies	Level 1	Level 2	Level 3	Level 4	Level 5
			(Ready for Unsupervised Practice)	(Ready for Advanced Practice)	(Aspirational)
Ignores patient preferences for plan of care Makes no attempt to engage patient in shared decision- making Routinely engages in antagonistic or counter-therapeutic relationships with patients and caregivers	Engages patients in discussions of care plans and respects patient preferences when offered by the patient, but does not actively solicit preferences Attempts to develop therapeutic relationships with patients and caregivers but is often unsuccessful Defers difficult or ambiguous conversations to others	Engages patients in shared decision making in uncomplicated conversations Requires assistance facilitating discussions in difficult or ambiguous conversations Requires guidance or assistance to engage in communication with persons of different socioeconomic and cultural backgrounds	Identifies and incorporates patient preference in shared decision making across a wide variety of patient care conversations Quickly establishes a therapeutic relationship with patients and caregivers, including persons of different socioeconomic and cultural backgrounds Incorporates patient- specific preferences into plan of care	Role models effective communication and development of therapeutic relationships in both routine and challenging situations Models culturally competent communication and establishes therapeutic relationships with persons of diverse socioeconomic backgrounds	Demonstrates professional leadership in promoting effective communication with patients and caregivers Generates and disseminates new knowledge to advance effective communication with patients and caregivers

Interpersonal and Co (Family Medicine C-2	•	ICS-2): Communicate	es effectively with pat	ients, families, stakehold	lers, and the public.
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Demonstrates disrespectful communication with patients, families, stakeholders, or the public Fails to recognize physical, cultural, psychological, and social barriers to communication Unable to establish rapport and facilitate patient-centered information exchange	Recognizes that respectful communication is important to quality care Identifies physical, cultural, psychological, and social barriers to communication Uses the medical interview to establish rapport and facilitate patient-centered information exchange	Matches modality of communication to patient needs, health literacy, and context Organizes information to be shared with patients and families Participates in life- altering discussions and delivery of bad news Negotiates a visit agenda with the patient, and uses active and reflective listening to guide the visit	Educates and counsels patients and families in disease management and health promotion skills Engages patients' perspectives in shared decision making Recognizes non-verbal cues and uses non- verbal communication skills in patient encounters Effectively communicates difficult information, such as life-altering discussions, delivery of bad news, acknowledgement of errors, and during episodes of crisis	Role models patient- centeredness and integrates all aspects of patient care to meet patients' needs Role models effective communication with patients, families, stakeholders, and the public Engages community partners to educate the public	Demonstrates professional leadership in promoting effective communication with patients, families, stakeholders, and the public Generates and disseminates new knowledge to advance effective communication with patients, families, stakeholders, and the public
Comments:					

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Utilizes	Uses unidirectional	Inconsistently engages	Consistently and	Role models and teaches	Demonstrates
communication	communication that	in collaborative	actively engages in	collaborative	professional leadership
strategies that	fails to utilize the	communication with	collaborative	communication with the	in promoting effective
hamper collaboration	wisdom of the team	appropriate members	communication with all	health care team to	communication in
and teamwork		of the team	members of the team	enhance patient care,	interprofessional teams
	Resists offers of			even in challenging	
Verbal and/or non-	collaborative input	Inconsistently employs	Verbal, non-verbal, and	settings and with	Generates and
verbal behaviors		verbal, non-verbal, and	written communication	conflicting team member	disseminates new
disrupt effective	Exhibits defensive	written communication	consistently acts to	options	knowledge to advance
collaboration with	behaviors within the	strategies that facilitate	facilitate collaboration		effective communication in
team members	health care team	collaborative care	with the team to		interprofessional teams
			enhance patient care		
Comments:					

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Health records are absent or missing significant portions of important clinical data Health records are disorganized and inaccurate Health records are not completed in a timely manner Privacy of health records is not adequately maintained Fails to recognize the criticality of appropriate utilization and completion of health records	Health records are organized and accurate but are superficial and miss key data or fail to communicate clinical reasoning Health records are completed in a timely manner Privacy of health records is of prime importance	Health records are organized, accurate, comprehensive, and effectively communicate clinical reasoning Health records are succinct, relevant, and patient specific	Health records are organized and complete from patient intake to discharge, documenting all patient interactions, a thorough history and physical examination, daily treatment notes, referrals, and discharge summary Health records capture patient-rated outcomes Health records adhere to all state and federal guidelines	Health records serve as a primary means of data collection and aggregation for the ongoing assessment of quality of care Role models and teaches importance of organized, accurate and comprehensive health records that are succinct and patient specific	Demonstrates professional leadership in promoting the appropriate utilization and completion of health records Generates and disseminates new knowledge to advance appropriate utilization and completion of health records

### Interpersonal and Communication Skills

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

## Professionalism

Athletic trainers must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Demonstrates lack of professionalism Places personal values ahead of professional values Fails to exhibit appropriate honesty, integrity, and respect to patients and team members	Defines professionalism Knows the basic principles of medical ethics Recognizes that conflicting personal and professional values exist Demonstrates honesty, integrity, and respect to patients and team members	Recognizes own conflicting personal and professional values Knows institutional and governmental regulations for the practice of athletic training	Recognizes that athletic trainers have an obligation to self- discipline and to self- regulate Engages in self- initiated pursuit of excellence Embraces the professional responsibilities of being an athletic trainer Practices to the full scope of education and training and formal privileging within a health system	Demonstrates leadership and mentorship in applying shared standards and ethical principles, including the priority of responsiveness to patient needs above self-interest across the health care team Develops institutional and organizational strategies to protect and maintain these principles	Demonstrates professional leadership in promoting professionalism with patients and caregivers Generates and disseminates new knowledge to advance effective strategies for instilling professionalization in others

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Lacks empathy and compassion for patients and caregivers Disrespectful in interactions with patients, caregivers, members of the interprofessional team, and stakeholders Sacrifices patient needs in favor of own self-interest Blatantly disregards respect for patient privacy and autonomy	Inconsistently demonstrates empathy, compassion and respect for patients and caregivers Inconsistently demonstrates responsiveness to patients' and caregivers' needs in an appropriate fashion Inconsistently considers patient privacy and autonomy	<ul> <li>patients, caregivers, and members of the interprofessional team, even in challenging situations</li> <li>Is available and responsive to needs and concerns of patients, caregivers, and members of the interprofessional team to ensure safe and effective care</li> </ul>	Demonstrates empathy, compassion, and respect to patients and caregivers in all situations Anticipates, advocates for, and proactively works to meet the needs of patients and caregivers Demonstrates a responsiveness to patient needs that supersedes self- interest Positively acknowledges input of members of the interprofessional team and incorporates that input into plan of care as appropriate	Role models compassion, empathy, and respect for patients and caregivers Role models appropriate anticipation and advocacy for patient and caregiver needs Fosters collegiality that promotes a high-functioning interprofessional team Teaches others regarding maintaining patient privacy and respecting patient autonomy	Demonstrates professional leadership in promoting professionalism with patients, caregivers, members of the interprofessional team, and stakeholders Generates and disseminates new knowledge to advance effective strategies for professionalism with patients, caregivers, members of the interprofessional team, and stakeholders

			(Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Is unreliable in completing patient care responsibilities or assigned administrative tasks Shuns responsibilities expected of an athletic training professional	Completes most assigned tasks in a timely manner but may need multiple reminders or other support Accepts professional responsibility only when assigned or mandatory Documents and reports clinical and administrative information truthfully Maintains patient confidentiality	Attends to responsibilities and completes duties as required Identifies appropriate channels to report unprofessional behavior Recognizes professionalism lapses in self and others Completes assigned professional responsibilities without the need for reminders Consistently recognizes limits of knowledge and asks for assistance	Presents themselves in a respectful and professional manner Completes administrative and patient care tasks in a timely manner in accordance with local practice and/or policy Reports professionalism lapses using appropriate reporting procedures Willingness to assume professional responsibility regardless of the situation or consequences Prioritizes multiple competing demands in order to complete tasks and responsibilities in a timely and effective manner	Role models prioritizing multiple competing demands in order to complete tasks and responsibilities in a timely and effective manner Assists others to improve their ability to prioritize multiple, competing tasks Negotiates professional lapses of the athletic health care team Exhibits self-awareness, self-management, social awareness, and relationship management Helps implement organizational policies to sustain athletic training as a profession	Models professional conduct placing the needs of each patient above self-interest Demonstrates the highest degree of professional conduct and accountability that others seek to emulate

Professionalism (PROF-4): Exhibits integrity and ethical behavior in professional conduct. (Internal Medicine PROF-4 - Modified)								
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)			
Dishonest in clinical interactions, documentation, research, or scholarly activity Refuses to be accountable for personal actions Does not adhere to basic ethical principles Blatantly disregards formal policies or procedures	Honest in clinical interactions, documentation, research, and scholarly activity. Requires oversight for professional actions Has a basic understanding of ethical principles, formal policies and procedures, and does not intentionally disregard them	Demonstrates accountability for the care of patients Adheres to ethical principles for documentation, follows formal policies and procedures, acknowledges and limits conflict of interest, and upholds ethical expectations of research and scholarly activity Begins to reflect on personal professional conduct	Honest and forthright in clinical interactions, documentation, research, and scholarly activity Demonstrates integrity, honesty, and accountability to patients, society and the profession Identifies and responds appropriately to lapses of professional conduct among peer group	Actively manages challenging ethical dilemmas and conflicts of interest Regularly reflects on personal professional conduct Assists others in adhering to ethical principles and behaviors including integrity, honesty, and professional responsibility	Role models integrity, honesty, accountability, and professional conduct in all aspects of professional life Demonstrates professional leadership in promoting integrity and ethical behavior in professional conduct Generates and disseminates new knowledge to advance integrity and ethical behavior in professional conduct			
Comments:	Comments:							

## Professionalism

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

## Systems-Based Practice

Athletic trainers must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Ignores a risk for error within the system that may impact the care of a patient Ignores feedback and is unwilling to change behavior in order to reduce the risk for error	Does not recognize the potential for system error Makes decisions that could lead to error which are otherwise corrected by the system or supervision Resistant to feedback about decisions that may lead to error or otherwise cause harm	Recognizes the potential for error within the system Identifies obvious or critical causes of error and notifies supervisor accordingly Recognizes the potential risk for error in the immediate system and takes necessary steps to mitigate that risk Willing to receive feedback about decisions that may lead to error or otherwise cause harm	Identifies systemic causes of medical error and navigates them to provide safe patient care Activates formal system resources to investigate and mitigate real or potential medical error Reflects upon and learns from own critical incidents that may lead to medical error	Advocates for system leadership to formally engage in quality assurance and quality improvement activities Advocates for safe patient care and optimal patient care systems Teaches others regarding the importance of recognizing and mitigating system error	Demonstrates professional leadership in promoting patient safety Generates and disseminates new knowledge to advance effective strategies for promoting patient safety Viewed as a leader in identifying and advocating for the prevention of medical error

Copyright © 2018-2023 All rights reserved. The copyright owners grant third parties the right to use the Athletic Training Milestones on a non-exclusive basis for educational purposes.
Systems-Based Pra	ctice (SBP-2): Patient	Safety: Emphasizes pat	ient safety. (Family Me	dicine SPB-2)	
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Ignores medical errors Fails to understand that medical errors vary widely across settings and between providers Ignores the importance of team- based care in ensuring patient safety	Understands that medical errors affect patient health and safety and that their occurrence varies across settings and between providers Understands that effective team-based care plays a role in patient safety	Recognizes medical errors when they occur, including those that do not have adverse outcomes Understands the mechanisms that cause medical errors Understands and follows protocols to promote patient safety and prevent medical error Participates in effective and safe hand-offs and transitions of care	Uses current methods of analysis to identify individual and system causes of medical errors common to athletic training Develops individual improvement plan and participates in system improvement plans that promote patient safety and prevent medical errors Performs effective and safe hand-offs and transitions of care	Consistently engages in self-directed and practice improvement activities that seek to identify and address medical errors and patient safety in daily practice Fosters adherence to patient care protocols amongst team members that enhance patient safety and prevent medical errors	Leads self-directed and system improvement activities that seek to continuously anticipate, identify, and prevent medical errors to improve patient safety in all practice settings, including the development, use, and promotion of patient care protocols and other tools
Comments:					

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Ignores cost issues in the provision of care Demonstrates no effort to overcome barriers to cost- effective care	Lacks awareness of external factors (e.g., socio-economic, cultural, literacy, insurance status) that impact the cost of health care and the role that external stakeholders (e.g., providers, suppliers, financers, purchasers) have on the cost of care Recognizes the costs associated with the provision of athletic training services, even when they aren't being billed for / reimbursed	Recognizes that external factors influence a patient's utilization of health care and may act as barriers to cost- effective care Possesses an incomplete understanding of cost- awareness principles for a population of patients (e.g., screening tests) Does not consider limited health care resources regarding diagnostic or therapeutic interventions	Consistently works to address patient specific barriers to cost-effective care Advocates for cost- conscious utilization of resources Incorporates cost- awareness principles into standard clinical judgments and decision- making, including screening tests Minimizes costs associated with unnecessary diagnostic and therapeutic tests	Teaches patients and healthcare team members to recognize and address common barriers to cost- effective care and appropriate utilization of resources Actively participates in initiatives and care delivery models designed to overcome or mitigate barriers to cost-effective high quality care	Demonstrates professional leadership in promoting cost- effective athletic training services Generates and disseminates new knowledge to advance cost-effective athletic training services Develops best practice guidelines for the provision of cost- effective care Develops organizational policies and education to support cost- effective care

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Refuses to recognize the contributions of other interprofessional team members Frustrates team members with inefficiency and errors Disregards need for communication at time of transition Does not respond to request of caregivers in other delivery systems	Understands that quality patient care requires coordination and teamwork, and participates as a respectful and effective team member Identifies roles of other team members but does not recognize how/when to utilize them as resources Frequently requires reminders from team to complete athletic training responsibilities Inefficient transitions of care lead to unnecessary expense or risk to a patient (e.g., duplication of tests, reinjury)	Understands the roles and responsibilities of all team members but uses them ineffectively Participates in team discussions when required but does not actively seek input from other team members Communication with future caregivers is present but with lapses in pertinent or timely information	Understands the roles and responsibilities of and effectively partners with, all members of the team Actively engages in team meetings and collaborative decision- making Proactively communicates with past and future care givers to ensure continuity of care	Integrates all members of the team into the care of patients, such that each is able to maximize their skills in the care of the patient Viewed by other team members as a leader in the delivery of high quality care Coordinates care within and across health delivery systems to optimize patient safety, increase efficiency, and ensure high quality patient outcomes Anticipates needs of patient, caregivers, and future care providers and takes appropriate steps to address those needs	Demonstrates professional leadership in promoting safe and effective transitions of care within and across health delivery systems as part an interprofessional team Generates and disseminates new knowledge to advance interprofessional team- based care

Critical Deficiencies	Level 1		Level 2		Level 3 (Ready for Unsuper Practice)	vised	(Read	Level 4 ly for Advanced	Practice)	(4	Level 5 Aspirational)
Refuses to recognize social context and environmental impact on individual and community health Ignores how a	Recognizes social contex and environment, and how a community's public policy decisions affect individual and community health	athlef impac health Lists v comm chara resou	vays in which nunity cteristics and rces affect the	n ca th p U o ca e n	dentifies specific ommunity charact nat impact specific atients' health Inderstands the pr f conducting a ommunity strengt eeds assessment	rocess	athlet praction health based educa policies and ev	Collaborates with other athletic training practices/systems, public health, and community- based organizations to educate the public, guide policies, and implement and evaluate community initiatives		in comm and poli improve patient commun Generat	onal leadership nunity education cy change to health of and nities
community's public policy decisions affect individual and community health			n of patients a nunities	nu			Role models active involvement in community education and policy change to improve health of patient and communities		knowled commu and poli	lge in hity education cy change to health of and	
							]				

Systems-Based Pra C-4)	actice (SBP-6): Health In	nformation Technolog	gy: Utilizes technology	to optimize communicat	ion. (Family Medicine
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to recognize the effects of technology on information exchange and the athletic trainer/patient relationship Ignores the ethical and legal implications of using technology to communicate in health care	Recognizes effects of technology on information exchange and the athletic trainer/patient relationship Recognizes the ethical and legal implications of using technology to communicate in health care	Ensures that clinical and administrative documentation is timely, complete, and accurate Maintains key patient- specific databases, such as problem lists, medications, health maintenance, chronic disease registries	Effectively and ethically uses technology in a manner which enhances communication and does not interfere with the appropriate interaction with the patient Ensures transitions of care are accurately documented, and optimizes communication across systems and continuums of care Stays current with technology to improve communication with patients, other providers, and systems	Uses comprehensive multi-media communication strategies to enhance patient care Uses technology to optimize continuity care of patients and transitions of care Uses technology to adapt systems for improving communication with patients, other providers, and systems	Demonstrates professional leadership in utilizing technology to optimize communication Generates and disseminates new knowledge in utilizing technology to optimize communication
Comments:					

### **Systems-Based Practice**

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

### **SPECIALTY COMPETENCIES:**

#### Orthopaedics

Athletic trainers must demonstrate the ability to conduct an appropriate diagnostic evaluation to define each patient's clinical problem and to effectively manage increasingly complex patient problems.

Orthopaedics (Ortho-1): Diagnostic Evaluation: Gathers and synthesizes essential and accurate information (history, physical exam, lab work, imaging studies, neuropsychological testing, functional assessment measures, etc.) to define each patient's clinical problem(s).

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to identify	Perform a relevant	Demonstrates both	Demonstrates	Appropriately prioritizes the	Efficiently produces a
appropriate	patient history	basic science and	knowledge of factors	urgency and sequencing of	focused and prioritized
diagnostic tests		clinical knowledge of	associated with risk	diagnostic testing	orthopaedic examination
	Performs a basic	the details of tissue	of injury, including,		accounting for rare
Fails to accurately	physical examination	healing and cellular	age, gender, and	Utilizes clusters of diagnostic	conditions
identify appropriate		physiology across the	disability	tests and evaluates complex	
differential diagnoses	Recognizes normal	lifespan		conditions with or without co-	Serves as a consultant
	movement patterns		Accurately and	morbidities and recognizes	for rare and/or complex
Fails to identify		Performs a regional	efficiently diagnoses	atypical presentations	orthopaedic patients
deviations from the	Demonstrates	orthopaedic exam	common, non-		
normal course of	knowledge of	with appropriate	complex,	Recognizes appropriate	Demonstrates
orthopaedic	common orthopaedic	diagnostic selective	orthopaedic	differentials that include non-	professional leadership
conditions	conditions	tissue tests	conditions	orthopaedic conditions that	in orthopaedic diagnostic
				present as orthopaedic	evaluation
		Recognize source of	Recognizes the need	conditions	
		abnormal movement	for and recommends		Generates and
		patterns and	appropriate plain	Recommends and interprets	disseminates new
		structures	films/radiographs	advanced orthopaedic imaging,	knowledge to advance
				such as MSUS, MRI, and CT	orthopaedic diagnostic
		Applies clinical rules	Accurately interprets		evaluation
		for diagnostics (such	plain	Educates others to improve	
		as Ottawa Ankle,	films/radiographs	their orthopaedic diagnostic	
		Canadian C-spine)		evaluation knowledge and	
				skills	

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)	
Inappropriate	Participates in	Synthesizes	Effectively manages	Effectively manages	Effectively manages rare	
management places	patient management	information gathered	common, non-complex	complex orthopaedic	conditions	
patient at risk	being conducted by	to guide patient care	orthopaedic conditions	conditions with or without		
	other appropriately			co-morbidities	Serves as a consultant for	
Care plans are	qualified providers	Consistently develops	Appropriately modifies		rare and/or complex	
consistently		appropriate care plan	care plans based on	Develops customized,	orthopaedic patients	
inappropriate or	Demonstrates		patient's clinical course,	prioritized care plans for		
inaccurate	knowledge of basic	Protects patient from	additional data, and	the most complex patients,	Demonstrates	
	care plans for	further injury and	patient preferences	incorporating diagnostic	professional leadership in	
Fails to refer when	common orthopaedic	understands the		uncertainty and cost	orthopaedic	
appropriate	conditions	implications of activity	Performs patient	effectiveness principles	management	
		on recovery time	education regarding			
Fails to measure the	Inconsistently	,	long-term consequences	Patient advocate for	Generates and	
end-results of care	develops an	Performs patient	of orthopaedic	maximizing long-term	disseminates new	
	appropriate care plan	education regarding	conditions	health-related quality of	knowledge to advance	
Fails to inform patient		their condition and		life (HRQOL)	orthopaedic	
of long-term health	Participates in	corresponding care	Appropriately applies		management	
consequences	patient education	plan	criteria for safe return to	Care plan extends beyond	5	
·	' regarding the nature	•	activity and participation	return to safe activity to	Develops best practice	
	of their condition	Initiates management		maximize participation	guidelines for developing	
	and corresponding	plans for urgent or	Appropriately manages		orthopaedic care plans	
	care plan	emergent care	situations requiring	Educates others to improve		
			urgent or emergent care	their orthopaedic		
		Demonstrates		management knowledge		
		knowledge of	Recognizes	and skills		
		treatment options of	complications in			
		operative and non-	operative and non-	Demonstrates knowledge		
		operative	operative management	of controversies in		
		management of	of orthopaedic	operative and non-		
		orthopaedic	conditions	operative management of		
		conditions		orthopaedic conditions		
		conditions.				

## Orthopaedics

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

# **Behavioral Health**

Athletic trainers must demonstrate the ability to appropriately assess and recognize each patient's clinical problem and to effectively manage behavioral health problems.

Behavioral Health (BH-1): Assessment and recognition of conditions, that include, but are not limited to, suicidal ideation, depression, anxiety disorder, psychosis, mania, eating disorders, and attention deficit disorders.

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Fails to recognize	Demonstrates	Identifies common	Recognizes the need for	Recognizes complex	Serves as a consultant for
behavioral health	knowledge of	behavioral health	and recommends	conditions with or without	complex behavioral health
concerns in patients	common behavioral health conditions	conditions	appropriate behavioral health assessments	co-morbidities, and atypical presentations	patients
Fails to recognize an		Identifies at risk			Demonstrates
at-risk or in crisis	Performs a relevant	patients and	Demonstrates both	Accurately identifies at-risk	professional leadership in
patient	patient history	populations	basic science and	populations and is able to	behavioral health
			clinical knowledge of	intervene early in the	
Fails to intervene on	Identifies common	Recognizes	behavioral health	process	Generates and
behalf of an at-risk or	characteristics of at	appropriate	conditions		disseminates new
in crisis patient	risk or in crisis	behavioral responses		Recognizes different	knowledge to advance
	patients	to life events	Accurately interprets	presentations, sequelae,	behavioral health
Fails to identify			behavioral health	and prognoses of	
appropriate	Inconsistently seeks	Recognizes the need	assessments	behavioral health	
assessment measures	additional guidance	to intervene on behalf		conditions across the	
	when needed	of an at-risk or in crisis	Accurately identifies	lifespan	
Fails to identify		patient	common, non-complex,		
deviations from the			behavioral health	Appropriately prioritizes	
normal course of		Seeks additional	conditions	the urgency and	
behavioral health		guidance, consultation		sequencing of behavioral	
conditions		and/or referral as	Establishes a network of	health assessments	
		appropriate	behavioral health		
			professionals	Educates others to improve	
				their behavioral health	
				knowledge and skills	
Comments:					

Critical Deficiencies	Level 1	Level 2		Level 3 ady for Unsuper Practice)	rvised		-evel 4 Advanced Pra	actice)		vel 5 rational)
Fails to recognize need for referral Fails to refer when appropriate management places patient at further risk or in crisis	Activates emergency action plan in a suspected behavioral health crisis Participates in patient management being conducted by other appropriately qualified providers Adheres to all institutional/facility behavioral health policies	Demonstrates knowledgeof basic care plans for common behavioral health conditionsRecognizes when referration is needed and when a situation is emergent/non-emergentUnderstands when an individualized behaviorat health care team needs be developedPerforms patient education regarding behavioral health conditionsInitiates and recomment appropriate management plans for urgent or emergent care of behavioral health conditions	behave synth gathe care Effect comm behave I Comm team imple plan Appro situat or em ds Recog health Able t and si popul and lo conse health Devel behave	active member of ioral health car esizes informati red to guide par ively manages ion, non-comple- ioral health cor nunicates with of and participates mentation of th opriately manag ions requiring u ergent care gnizes common lications in beha o conditions to educate patie acteholders of a ations on preve- ong-term quences of beh o conditions ops and implem vioral health EAI policies govern vioral health cor	e team u ion e tient N ex N hditions P kecare c s in the n he care E t s in the n he care E t s in the n he care c s in the n he care c s in the n he care c t t s in the n he care c he care c s in the n he care c t t s in the n he care c s in the n he care c s in the n he care c t t he care c he	Demonstrate use of psycho and their into effects Manages day consideration health patier Patient advo long-term he of life (HRQC Educates oth their knowle managing be conditions Within a pati identify indiv behavioral he develops mo behavioral he team policy, contracts)	ent populati ridual and gre alth needs a re advanced ealth policies	cations d side ioral imizing quality ve s in lth on, oup and	behavioral he Generates and new knowled the managem	of behavioral ons professional management of alth conditions d disseminates ge to advance ent of alth conditions practice the of behavioral
									1	

## **Behavioral Health**

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in training. He/she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

### Pediatrics

Athletic trainers must demonstrate the ability to conduct an appropriate diagnostic evaluation to define each pediatric patient's clinical problem and to effectively manage increasingly complex pediatric patient problems.

Pediatrics (Peds-1): Diagnostic Evaluation: Gathers and synthesizes essential and accurate information (history, physical exam, lab work, imaging studies, neuropsychological testing, and functional assessments) to define each pediatric patient's clinical problem(s).

conditions unique to the pediatric patientpatient h including developmFails to identify appropriate pediatric diagnostic testsPerforms physical eFails to accurately identify appropriateDemonst knowledge	ng growth and pmental	Demonstrates clinical knowledge of pediatric growth and development Demonstrates	Practice) Demonstrates knowledge of factors associated with risk of injury, including, age, gender, and disability Performs a regional pediatric	Appropriately prioritizes the urgency and sequencing of diagnostic testing Utilizes clusters of diagnostic	Efficiently produces a focused and prioritized pediatric examination accounting for rare conditions
Fails to identify deviations from the normal course of pediatric conditions		knowledge of basic science of tissue healing, cellular physiology, and physis physiology in pediatrics Applies clinical rules for diagnostics (such as Pediatric Ottawa Ankle, PECARN Head Trauma Rules, Canadian C-spine)	orthopaedic exam with knowledge of the growth plate locations and appropriate diagnostic tests Accurately diagnoses common, non-complex, pediatric conditions Accurately recommends and interprets appropriate plain films/radiographs, recognizing the importance of comparison views to evaluate physis injury Recognizes appropriate pediatric differentials that include asthma, Diabetes (Type 1 and 2), anaphylaxis, syncope, congenital and acquired heart disease, exercise, dehydration,	tests and evaluates complex conditions with or without co- morbidities, and recognizes atypical presentations Recognizes appropriate differentials that include non- orthopaedic conditions that present as orthopaedic conditions in the pediatric patient Respects cumulative radiation effects in pediatric patients and recommends and interprets advanced pediatric orthopaedic imaging, such as MSK US, MRI, and CT Educates others to improve their pediatric diagnostic evaluation knowledge and	Serves as a consultant for rare and/or complex pediatric patients Demonstrates professional leadership in pediatric diagnostic evaluation Generates and disseminates new knowledge to advance pediatric diagnostic evaluation
			supplements, and medication side effects	skills	

<b>Critical Deficiencies</b>	Level 1	Level 2	Level 3	Level 4	Level 5
			(Ready for Unsupervised Practice)	(Ready for Advanced Practice)	(Aspirational)
Inappropriate management places patient at risk Care plans are consistently inappropriate or inaccurate Fails to refer when appropriate Fails to measure the end-results of care Fails to inform patient and family/caregiver of long-term health consequences	Participates in pediatric patient management being conducted by other appropriately qualified providers Demonstrates knowledge of basic care plans for common pediatric conditions Inconsistently develops an appropriate care plan Participates in pediatric patient and family/caregiver education regarding the nature of their condition and	Synthesizes information gathered to guide pediatric patient care Consistently develops appropriate care plan Protects pediatric patient from further injury and understands the implications of activity, overuse injury, and physis injury on recovery time Performs pediatric patient and family/caregiver education regarding their condition and corresponding care plan Demonstrates knowledge	Practice)Effectively managescommon, non-complexpediatric conditionsAppropriately modifies careplans based on patient'sclinical course, additionaldata, and patient andfamily/caregiverpreferencesEducates family and patientregarding long-termconsequences of pediatricconditionsAppropriately appliescriteria for safe return toactivity and participationAppropriately manages	Effectively manages complex pediatric conditions with or without co-morbidities such as asthma, allergy, diabetes, heart disease, seizures etc. Develops customized, prioritized care plans for the most complex patients, incorporating diagnostic uncertainty and cost effectiveness principles Care plan extends beyond return to safe activity to maximize participation and long term health Educates others to improve their pediatric patient management knowledge and skills	Effectively manages rare conditions Serves as a consultant for rare and/or complex pediatric patients Demonstrates professional leadership in pediatric condition management Generates and disseminates new knowledge to advance pediatric condition management Develops best practice guidelines for developing pediatric condition care plans
	condition and corresponding care plan	Demonstrates knowledge of treatment options of operative and non- operative management of pediatric conditions	situations requiring urgent or emergent care Recognizes complications in operative and non- operative management of pediatric conditions Educates patient and family regarding medication side effects (prescribed, OTC, and supplements).	SKIIIS Demonstrates knowledge of controversies in operative and non-operative management of pediatric conditions	

Comments:					

## **Pediatrics**

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in their education and training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

# **Primary Care**

Athletic trainers must demonstrate the ability to conduct an appropriate diagnostic evaluation to define each patient's clinical problem and to manage increasingly complex primary care problems.

Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)
Failure to understand patients personal healthcare needs	Demonstrates general knowledge of personal healthcare needs	Identifies appropriate history and symptomatology of common conditions	Recognizes the need and selects appropriate diagnostic studies used to evaluate common medical	Appropriately prioritizes the urgency and sequencing of diagnostic testing	Publishes peer-reviewed scientific work related to medical issues
(comprehensive medicine)	across all systems Able to identify	Identifies relationships between involved	conditions (e.g., EKG, pulmonary function test, laboratory results, PHQ2,	Recommends and interprets advanced diagnostic studies used to evaluate common and	Possesses the scientific, socioeconomic, and behavioral knowledge
Fails to identify knowledge of systems involved based on patient	pertinent information to guide patient care	systems in common medical conditions Demonstrates	radiographs, vestibular oculomotor motor screen) Correctly interprets	complex medical conditions Utilizes clusters of diagnostic tests and evaluates complex	required to diagnose and treat uncommon, ambiguous, and complex medical conditions
presentation Fails to identify deviations from the	Demonstrates knowledge of pathophysiology of common medical	knowledge of diagnostic testing to evaluate medical conditions	diagnostic study results and appropriately pursues further testing or specialist input	conditions with or without co- morbidities, and recognizes atypical presentations	Efficiently produces a focused and prioritized general medical examination
normal course of systems functioning	conditions	Demonstrates both basic science and clinical knowledge of the details	Synthesizes knowledge of condition(s) and effect on	Integrates knowledge of conditions (common and complex), systems, and	accounting for rare conditions Serves as a consultant for
		of disease process and natural course of illness	system(s), and vice versa, to develop differential diagnoses.	interactions to arrive at diagnosis	rare and/or complex primary care patients
			Accurately and efficiently diagnoses common, non- complex, medical conditions	Educates others to improve their primary care diagnostic evaluation, knowledge, and skills	Generates and disseminates new knowledge to advance primary care diagnostic evaluation

Critical Deficiencies	Level 1	Level 2		Level 3 Ready for Unsuper Practice)	vised		Level 4 ly for Advanced Pra	ctice)		Level 5 (Aspirational)
Fails to intervene	Participates in patient	Recognizes the need f		ropriately manag	-	•	nents advanced			vely manages rare
correctly with patients	management being	urgent care	situ	ations requiring u	urgent	interve	entions for situation	ons	medic	al conditions
personal healthcare	conducted by other		car	2		requiri	ng urgent care			
needs	appropriately qualified	Synthesizes information								as a consultant for
	providers	gathered to guide		urately and effici			vely manages			nd/or complex primary
Inappropriate		patient care		nages patients wi			mon and/or com		care p	atients
management places	Demonstrates		con	imon, non-comp	lex,	medica	al conditions with	or		
patient at risk	knowledge of basic	Develops appropriate	me	dical conditions		withou	it co-morbidities			orates with other
	care plans for common	care plans							expert	s to advance medical
Care plans are	general medical		Ide	ntifies and		Demor	nstrates knowledg	e of	manag	gement
consistently	conditions	Protects patient from		ommends approp	oriate		y and participation	า		
inappropriate or		further injury and		sultation and/or		0	nes for complex		Demo	nstrates professional
inaccurate	Inconsistently develops	understands the		rral of patients w	vith	medica	al conditions		leader	ship in primary care
	an appropriate care	implications of activity	/ me	dical conditions					manag	gement
Fails to refer when	plan	on recovery time				Recom	imends appropria	te		
appropriate			Der	nonstrates know	ledge	medica	ation(s) based on	clinical	Gener	ates and disseminates
	Participates in patient	Performs patient	of a	ctivity and		course	and individual ris	k	new ki	nowledge to advance
Fails to measure the	education regarding	education regarding	par	icipation guideli	nes for	factors	5		primai	ry care management
end-results of care	the nature of their	their condition and	con	nmon medical						
	condition and	corresponding care	con	ditions		Identif	ies common signs	and	Develo	ops best practice
Fails to inform patient of	corresponding care					sympto	oms of medication	ı	guidel	ines for developing
long-term health	plan	Demonstrates	Арр	ropriately modifi	ies	and/or	<sup>-</sup> substance abuse		primai	ry care plans
consequences		knowledge of treatme	nt plai	of care based of	n					
	Demonstrates	options of operative a	nd clin	cal course and		Educat	es others to impr	ove		
	knowledge of the role	non-operative	ind	vidual risk factor	s	their n	nedical manageme	ent		
	of medications and	management of medi	cal			knowle	edge and skills			
	substances	conditions	Rec	ognizes complica	tion in					
			ope	rative and non-						
		Identifies common	ope	rative manageme	ent of					
		medication and	me	dical conditions						
		substance use and								
		misuse	Rec	ognizes appropri	ate					
			me	lication and subs	stance					
			use	for specific cond	itions					
			and	identifies multip	le					
			dru	g interactions						

### **Primary Care**

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Conditional on Improvement

#### Rehabilitation

Athletic trainers must demonstrate the ability to conduct an appropriate assessment to define each patient's clinical problem and to implement

effective rehabilitation strategies for increasingly complex patient problems.

Critical Deficiencies	Level 1	Level 2	Level 3	Level 4	Level 5
			(Ready for Unsupervised Practices)	(Ready for Advanced Practice)	(Aspirational)
Fails to identify	Perform a relevant	Demonstrates both	Demonstrates	Appropriately prioritizes	Efficiently produces a
appropriate diagnostic	patient history	basic science and	knowledge of factors	the urgency and	focused and prioritized
tests		clinical knowledge of	associated with risk of	sequencing of diagnostic	rehabilitative examination
	Performs a basic	tissue healing and	injury and disease,	testing	accounting for rare
Fails to accurately	physical examination	cellular physiology	including age, gender		conditions
identify appropriate		across the lifespan	and disability	Utilizes clusters of	
differential diagnoses	Assesses the patient			diagnostic tests and	Serves as a consultant for
	perspective including	Identifies precautions	Recognizes the need for	evaluates complex	rare and/or complex
Fails to re-assess at	goals & values	and contraindications	and recommends	conditions with or without	rehabilitation patients
appropriate intervals		to rehabilitation	appropriate diagnostic	co- morbidities, and	
	Recognizes normal		tests (e.g., labs,	recognizes atypical	Demonstrates
Fails to identify	movement patterns	Assesses patient's	imaging)	presentations	professional leadership in
deviations from the		overall health-related			rehabilitative diagnostic
normal course of care	Demonstrates	quality of life	Accurately interprets	Demonstrates ability to	evaluation
	knowledge of body		diagnostic tests	analyze abnormal	
	systems and basic	Identifies abnormal		movement patterns and	Generates and
	pathology	and adaptive	Recognizes the impact	identify causation	disseminates new
		movement patterns	of specific conditions on		knowledge to advance
			the whole person (e.g.,	Educates others to improve	rehabilitative diagnostic
		Recognizes need to re-	psychologic,	their rehabilitation	evaluation
		assess based on	physiologic)	diagnostic evaluation	
		healing and function		knowledge and skills	
			Recognize source of		
			abnormal and adaptive		
			movement patterns and		
			structures	<u> </u>	

Rehabilitation (R-2): Management: Effectively manages the rehabilitation of patients with increasingly complex conditions.							
Critical Deficiencies	Level 1	Level 2	Level 3 (Ready for Unsupervised Practice)	Level 4 (Ready for Advanced Practice)	Level 5 (Aspirational)		
Inappropriate	Participates in	Synthesizes	Effectively manages	Effectively manages	Effectively manages		
management places	patient management	information gathered	common, non-complex	uncommon and/or complex	patients with rare		
patient at risk	being conducted by other appropriately	to guide patient care	conditions	patient conditions with or without co-morbidities	conditions		
Care plans are	qualified providers	Consistently develops	Appropriately modifies		Serves as a consultant for		
consistently		appropriate care plan	care plans based on	Develops customized,	rare and/or complex		
inappropriate or	Demonstrates		patient's clinical course,	prioritized care plans for	rehabilitation cases		
inaccurate	knowledge of basic	Protects patient from	additional data (e.g.,	the most complex patients,			
	rehabilitation	further injury and	PROs, CROs), and	incorporating diagnostic	Demonstrates		
Fails to identify	principles	understands the	patient preferences	uncertainty and cost	professional leadership in		
appropriate patient		implications of activity		effectiveness principles	rehabilitation		
progress	Participates in	on recovery time	Performs patient		management		
	patient education		education regarding	Patient advocate for			
Fails to refer when	regarding the nature	Addresses	long-term	maximizing long-term	Generates and		
appropriate	of their condition and	foundational	consequences of injury	health-related quality of life	disseminates new		
	corresponding care	movement	or disease	(HRQOL)	knowledge to advance		
Fails to measure the	plan	dysfunction as part of			rehabilitation		
end-results of care		intervention	Appropriately applies	Care plan extends beyond	management		
	Describes basic		criteria for safe return	return to safe activity to			
Fails to inform patient	impairments, activity	Implements systems-	to activity and	maximize participation	Develops best practice		
of long-term health	limitations, and	based rehabilitation	participation		guidelines for developing		
consequences	participation	strategies		Effectively manages the	rehabilitation care plans		
	restrictions resulting		Prescribes commonly	whole person (e.g.,			
	from disease or	Identify when referral	used assistive and	psychologic, physiologic)			
	injury	to others will expedite	adaptive devices and				
		care	strategies	Effectively leads or directs			
				interdisciplinary care team			
		Performs patient	Considers the whole				
		education regarding	person (e.g.,	Educates others to improve			
		their condition and corresponding care	psychologic,	their rehabilitation			
			physiologic) in the care	management, knowledge			
		plan	plan	and skills			

## Rehabilitation

The individual is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in training. The individual is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice (or advanced practice for residency programs) that includes the delivery of safe, timely, effective, efficient, equitable, and patient-centered care.

