

## **VNATA 2021 Preliminary Educational Program**

*Listed Alphabetically*

### **A Clinical Guide To Pitching Mechanics and Kinetic Chain Deficits: How To Integrate Both Into a Comprehensive Program**

Domain: I, II, IV

Skill Level: Advanced

CEU: 1 Category A

*Stephen Thomas, PhD, ATC*

Pitching is the fastest and most stressful motion the human body can produce. These large and repetitive forces lead to motion, strength, structural deficits throughout the body, which can alter normal mechanics. These compensations are often missed since performance is not initially affected; however, the athlete is often at an increased risk of injury. As a clinician, it is essential to understand “normal” mechanics and the best way to assess them without sophisticated motion analysis systems. In addition, clinicians need to know the components of a thorough kinetic chain assessment and most importantly how to integrate both into a comprehensive program.

At the end of this session, attendees will be able to:

1. Analyze pitching mechanics without sophisticated technology.
2. Assess and identify the common the kinetic chain deficits in the baseball player.
3. Develop and implement a comprehensive exercise program that integrates both pitching mechanics and kinetic chain deficits.

### **A Team Approach to Emergency Planning in the Secondary School: Where We Are and Strategies to Advance**

Domain: I

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*Samantha Scarneo-Miller, PhD, ATC, LAT*

The socio-ecological framework conceptualizes the need for involvement from multiple stakeholders to facilitate widespread community buy-in for the adoption of a best practice. The secondary school provides a unique setting for several stakeholders to improve emergency planning efforts. The purpose of this presentation will be to describe the current landscape of emergency action plan adoption in United States secondary schools as reported by athletic trainers, athletic directors, school nurses and coaches (e.g., interpersonal and organizational levels). We will then explore strategies for athletic trainers to utilize to facilitate adoption and implementation of these proactive plans using a team approach.

At the end of this session, attendees will be able to:

1. Describe the current adoption of emergency action plans in the secondary school setting by stakeholder group.

2. Apply the socio-ecological framework to enhancing emergency action plan adoption and implementation.
3. Identify new stakeholders to engage with emergency planning in the secondary school setting.

### **Addressing Sympathetic Overload for Injury Recovery**

Domain: I, II, IV

Skill Level: Essential

Theme: Mental Wellness

CEU: 1 Category A

*Veronica Dilzer, ATC*

As research connects the mental state of patients to positive outcomes, it is hard to deny the mind-body connection. The emotional and mental part of injury may be hard for clinicians to address if patients are unable to consciously address these responses. Physical injury and its concomitant components cause systemic, sympathetic responses in the body. This presentation will explore the stress response in relationship to the subconscious physical representation of emotional and mental reactions to injury. Attendees will learn application of assessment and interventions that address the mental and emotional responses to stress in order to restore optimal healing capacity.

At the end of this session, attendees will be able to:

1. Develop an understanding of the basics of the systemic response to injury and how it affects the body on a physical, chemical, emotional and mental level.
2. Comprehend how physical injury alters the systemic homeostasis of the body as it relates to the nervous and adrenal systems.
3. Identify the most appropriate treatment for addressing neural overload.

### **All About the Regulations: Dietary Supplements in Sports**

Domain: V

Skill Level: Essential

Theme: Ergogenic Aids

CEU: 1 Category A

*Jackie Buell, PhD, RDN, CSSD, ATC*

*Chris Kolba, PhD, PT, CSCS*

Athletic trainers are often put in the position of helping athletes better understand and consider dietary supplements. This session will focus on how athletic trainers can educate the athlete on the regulations surrounding supplements from the FDA to sport governing bodies. As well, the forum will present the most popular supplements athletes are using in an effort to refresh the ATC's knowledge for sharing. Easy to access resources will be shared (reviewed).

At the At the end of this session, attendees will be able to:

1. Help athletes understand the lack of regulation of dietary supplements by the FDA
2. Apply at least three resources for exploring the legality and safety of dietary supplements
3. List at least three current dietary supplement trends and their efficacy.

## **An Update on Therapeutic Modalities: How Should they be used?**

Domain: IV

Skill Level: Essential

CEU: 1 Category A

*Lisa Jutte, PhD, ATC*

*Blaine Long, PhD, AT, ATC*

The use of therapeutic modalities should complement the healing process and be dependent upon a clinician's therapeutic treatment goals. Without a complete understanding of the healing process the impact therapeutic modalities have on patients can be misused or ignored, hindering treatment outcomes. This forum will address common therapeutic modalities used in clinical practice in order to grasp a better understanding of how they influence the healing process.

At the end of this session, attendees will be able to:

1. Summarize current knowledge related to the theoretical basic for how common therapeutic modalities work.
2. Summarize current knowledge related to how common therapeutic modalities influence healing.
3. Identify opportunities within their organization that could be refined to better incorporate therapeutic modalities into their treatment strategies.

## **Are You Engaged? Concussion Management With Low Socioeconomic Status Stakeholders**

Domain: I, II, V

Skill Level: Advanced

CEU: 1 Category A

*Tamerah Hunt, PhD, ATC*

*Melissa Kay, PhD, LAT, ATC*

Concussion evaluation and management relies heavily on uniting all stakeholders to create a culture of safety in low SES communities. Unfortunately, barriers such as cultural and community mistrust of clinicians can create delays in early recognition and management of concussion, ultimately resulting in poor outcomes. Understanding the impact of SES on community engagement and concussion outcomes will enhance trust and gain stakeholder support in tense community climates. Societal level change will be dictated by engagement strategies involving all stakeholders to support targeted guidance and interventions that improve outcomes following concussive injury.

At the end of this session, attendees will be able to:

1. Develop a point of communication that is built on trust to enhance engagement and support to enhance recovery outcomes following concussion.
2. Discuss the resistance to medical care following concussion in low SES populations amidst current community climates.
3. Apply strategies to engage low SES community stakeholders during concussion evaluation and management.

## **Benchmarking Your Organization's Critical Incident Response Plan and Your Role as an Athletic Trainer**

Domain: I, III, V

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*Ralph Castle, PhD, LAT, ATC, NREMT*

Today's athletic trainer is seen as the initial line of defense when it comes to athletic injuries; however given the diversity in athletic trainer job settings it is imperative that critical incident response plans are interdisciplinary and comprehensive in nature. Critical incident response must address all types of catastrophic injury must be expanded to include multiple patients and take "all hazard approach" including natural and man-made events. The goals of the session are: identify contemporary components of critical incident response; evaluate current practices to address practice gaps with stakeholders; and develop strategies for developing, implementing, rehearsing, reviewing, and documenting implementation.

At the end of this session, attendees will be able to:

1. Identify and analyze contemporary components of emergency action plans utilized in developing and implementing comprehensive policies and procedures.
2. Analyze and implement continual quality improvement processes to address stakeholder educational and practice gaps that may occur in the delivery of prehospital emergency care.
3. Evaluate current accepted prehospital emergency standards of care with existing organizational procedures and protocols to modify and implement to ensure efficient interdisciplinary healthcare delivery.

## **Best Practices and Current Care Concepts in Prehospital Care of the Spine-Injured Athlete: Part Two- Spine Injury in Sport Group**

Domain: III

Skill Level: Essential

Theme: Emergency Planning/Response

CEU: 1 Category A

*Ron Courson, ATC, PT, NRAEMT*

*Glenn Henry, MA, EMT-P*

As a part two to the two part series being proposed by the Spine Injury in Sport Group (SISG): Evidence Based Practice in Prehospital Care of the Spine-Injured Athlete in American Football: The Delphi Process, this presentation will focus on the conclusions and recommendations of the best practices document, discussing how the recommendations will impact the EAP planning process and the ATs clinical skill development. There will also be a presentation of a skills video that can serve as an educational resource for training.

At the end of this session, attendees will be able to:

1. Summarize best practices in transfer and equipment removal techniques of the spine injured athlete.

2. Develop and employ a prehospital care protocol for the spine injured athlete that meets best practice standards for their respective institution.
3. Develop a Medical Time Out protocol for their respective institution.
4. Apply best practices in equipment removal and transfer techniques of the spine injured athlete.

### **Body Dysmorphic Disorder, Eating Disorder Risk, and Dietary Supplement Use in Physically Active Populations**

Domain: I, II

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 EBP

*Toni Torres-McGehee, PhD, SCAT, ATC*

Western society strives for the perfect appearance and a “fit” body, which has become synonymous with the perception of increased performance. However, this is difficult to achieve due to the possibility of increased risk of mental health disorders, engagement of pathogenic behaviors (e.g., vomiting, excessive exercise,) and/or the use of dietary supplement (e.g., diuretics, laxatives, creatine, amino acids, steroids, thyroid hormones). Identification of feeding and eating disorder risk and body dysmorphia is critical and athletic trainers need to be aware of types of dietary supplements commonly used, which in turn may be detrimental to a patient’s health.

At the end of this session, attendees will be able to:

1. Identify signs and symptoms for body image dissatisfaction, body dysmorphia, and feeding and eating disorders.
2. List predisposing risk factors and pathogenic behaviors associated with body image dissatisfaction, body dysmorphia, and feeding and eating disorders.
3. Describe potential physical performance and mental health effects, harms, and regulation of certain dietary supplements known to be associated with body image dissatisfaction, body dysmorphia, and eating disorders.

### **Cheating...Who Cares? Why ATs Should Be Concerned With Doping**

Domain: II

Skill Level: Essential

Theme: Ergogenic Aids

CEU: 1 Category A

*Robert Kersey, PhD, ATC*

Athletic trainers (AT) are ideally suited to provide an evidence-based education regarding doping. Individuals of all ages and from all walks, misuse these so-called ergogenic agents for performance gains, physique development, and/or body image enhancement. While doping efficacy varies, misuse can cause negative health consequences. ATs must prioritize patient health, which may not directly coincide with performance. There is a duty to understand, educate, manage, and refer patients involved with and/or considering doping. This presentation highlights 1) current doping trends, 2) the involvement rationale for AT and other healthcare professionals, and 3) potential related health concerns

At the end of this session, attendees will be able to:

1. Summarize prevalence trends related to these illicit substances and/or techniques
2. Validate the rationale for healthcare professionals' concern with doping
3. Evaluate the evidence for possible doping health concerns

### **Concussion Rehabilitation for Adolescent Athletes: What Feasible Methods Can Athletic Trainers Implement To Improve Outcomes?**

Domain: IV

Skill Level: Advanced

CEU: 1 EBP

*David Howell, PhD, ATC*

Epidemiological evidence suggests a 2-3x greater risk of sustaining a musculoskeletal injury following a concussion for athletes, relative to those who did not experience a concussion. While this phenomenon has been documented across adolescent and adult populations, the reasons and potential rehabilitative strategies have not been identified. Additionally, the implementation/feasibility of individualized aerobic exercise training outside of a research laboratory has not been reported. This presentations will explore ways to implement individualized rehabilitation programs for adolescents with concussion.

At the end of this session, attendees will be able to:

1. Describe existing literature and theory underlying the utility and benefit aerobic exercise and neuromuscular training rehabilitation programs among adolescents with concussion.
2. Summarize potential factors that contribute to persistent post-concussion symptom development, and increased injury risk after concussion.
3. Describe ways to intervene in a feasible manner using methods aimed to improve recovery outcomes, and reduce risk of injury after returning to play post-concussion.

### **CPC and Specialty Certification: A BOC Update**

Domain: V

Skill Level: Essential

CEU: 1 Category A

*Susan McGowen, ATC,*

*Michael Hudson, PhD, LAT, ATC*

In 2020, the BOC provided information on the framework of Continuing Professional Certification (CPC) and components of the three pillars of the framework: 1) Professionalism, 2) Life-long Learning and 3) Practice Performance. In the past year, the BOC has wrapped up the pilot programs and have begun discussions on the vision and future for CPC 1.0. The presentation will explore the results of the pilot projects and provide a brief summary of where we are today and how it affects Athletic Trainers. One of the outcomes expected of CPC is professional growth, including the ability to become a specialist. In June 2021, the BOC will be nearing the first administration of the first specialty certification in orthopedics. The latter part of this presentation will paint a picture of how an Athletic Trainer can become an orthopedic specialist.

At the end of this session, attendees will be able to:

1. Examine the outcomes of the 2020 pilot projects for CPC
2. Summarize the status of the CPC long-term project and next steps
3. Explain how to become certified as an Orthopedic Specialist

### **Creating Credibility With a Quality Patient Report: Communicating With EMS Providers To Improve Inter-Professional Relationships**

Domain: II

Skill Level: Essential

Theme: Emergency Planning/Response

CEU: 1 Category A

*Edward Strapp, ATC, NRP, FP-C*

*Darryl Conway, MA, AT, ATC*

Our words and our actions during an emergency event are unfortunately our first interactions with many local EMS providers. It is imperative that these actions and words not only paint a good picture of the events and patient care, but they are vital to create credibility as health care providers. It is well established that provider confidence is often created based on turn over reports at all levels, and it is no different for Athletic Trainers working with EMS providers, team physicians and other physicians.

At the end of this session, attendees will be able to:

1. Identify critical components to an effective patient transfer of care report.
2. Recognize the importance of creating credibility with actions and words.
3. Summarize critical elements to creating quality inter-professional relationships.

### **Cultural Competence in the Profession of Athletic Training: Anti-Racism and Patient Allyship**

Domain: V

Skill Level: Essential

CEU: 1 Category A

*Jeffrey Kawaguchi, ATC, PT*

Culture, language, lifestyle, and disease states all have considerable impact on how the patients access and respond to health care services. Additionally, healthcare practitioners' backgrounds will mold their own attitudes and beliefs. For these reasons, athletic trainers should be exposed to the viewpoints that can potentially differ greatly from their own, and learn how to accept and value them, as a part of their clinical practice.

At the end of this session, attendees will be able to:

1. Describe the 5 levels of cultural competence
2. Assess cultural factors that influence the individual's, family's, and community's orientation to the health care system in the United States.
3. Identify areas of potential conflict between health care providers and a patient's cultural beliefs and values, and explain selected cultural factors that could affect the relationship between healthcare providers and patients.
4. Use knowledge of health-related cultural/ethnic beliefs, values, and practices to design a plan of care for culturally and ethnically diverse populations.

## **Current Trends in Sports Medicine: Heat Illness, Dry Needling and Stim Assisted Strength**

Domain: I, III, IV

Skill Level: Advanced

CEU: 1 Category A

*Roberto Cardona, ATC*

*Michael Thomas, ATC*

*Kyle Davis, ATC*

This presentation is a combination of three current trends in the NFL sports medicine departments to optimize care for athletes. Heat illness tips, tricks and management will enlighten attendees on caring for an athlete during a health related episode. The second portion of the presentation will dive into techniques of dry needling and its uses. The final portion of the presentation will look at stimulation assisted strength training and how it can help optimize activation, strength and recovery of your athletes.

At the end of this session, attendees will be able to:

1. Review tips & tricks used in the NFL for trouble shooting a heat illness while on and off the practice field.
2. Understand how Dry Needling is used on a day to day basis within an NFL Athletic Training Room.
3. Prescribe stim assisted exercises while still achieving load for muscle growth.
4. Understand how to continue to utilize stim strength programs well after an athlete has graduated from the rehab phase.

## **Dealing With the Catastrophic Injury and/or Death of a Student-Athlete: The Critical Role of the Athletic Trainer**

Domain: III

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Russ Richardson, EdD, ATC-L*

Research indicates that there is an increased incidence of mental health issues in student-athletes. Consequently there needs to be an enhanced awareness, understanding, and preparedness for an athletic trainer to manage catastrophic conditions facing these patients. In addition, strategies must be considered and developed to facilitate the healing process not only for the patient but for all of those affected by the adverse incident.

At the end of this session, attendees will be able to:

1. Link the importance of emergency action planning to mental health strategies to mitigate the impact of catastrophic injuries and/or death of a student-athlete.
2. Understand the psychological implications of those affected by a catastrophic incident.
3. Understand the role of Athletic Trainers in managing these adverse incidents.
4. Summarize the guidance and structure in developing Mental Health Emergency Action Plans (MHEAP) and Catastrophic Incident Management Plans (CIMP).

## **Defeating the Stigma: Getting Patient Buy-In for Psychological Rehabilitation and Mental Health Care**

Domain: IV

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Shelby Baez, Ph.D, ATC, ATC*

*Marc Cormier, PhD*

Integrating psychological interventions and seeking mental health care for patients after sports-related injury can improve pertinent patient-reported and functional outcomes. However, there are stigmas associated with such interventions and seeking mental health care, especially within athletic populations. This forum will discuss how to improve stakeholder buy-in for implementation of psychological interventions during sports-related rehabilitation while offering recommendations to overcome stigma concomitant with seeking mental health care in athletic populations. Attendees will learn how to discern when patient needs are outside of their scope of practice, be challenged to develop mental health referral plans, and develop appropriate mental health referral networks.

At the end of this session, attendees will be able to:

1. Identify methods to increase patient buy-in in implementing psychological interventions within the scope of athletic training clinical practice
2. Identify the different competencies of and the expectations for collaboration with mental health providers
3. Implement successful referrals to mental health providers when the condition is out of the scope of athletic training clinical practice

## **Diabetic Emergencies: A Scientific and Practical Approach To Managing the Diabetic Athlete in the Prehospital Setting**

Domain: I, II, III

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*David Berry, PhD, AT, ATC*

When diabetic emergencies occur, athletic trainers must manage these situations until medical services arrive. Understanding the current scientific evidence and roles and interrelatedness of emergency diabetic planning and the equipment necessary to manage the situation is paramount. Failure to provide reasonable and appropriate care due to a lack of requisite knowledge or equipment may be cause for negligence. This session examines the evidence for, application of, and interrelatedness of diabetic emergency management including: (1) a compressive assessment (2) glucometer utilization, (3) oral glucose administration, (4) glucagon (IM) administration, (5) dextrose administration (IV), and (6) case-based scenarios in the prehospital setting.

At the end of this session, attendees will be able to:

1. Discuss the knowledge/skills associated with the administrative and risk management aspects of planning for prehospital diabetic emergencies.

2. Examine and discuss the current scientific guidelines and treatment recommendations regarding prehospital diabetic management of the ill patient.
3. Identify and discuss the most current evidence for the use of and the interrelatedness of emergency diabetic planning in the prehospital setting.
4. Compare and contrast the roles, characteristics, and advantages /disadvantages for using glucometers, oral glucose, glucagon, and dextrose (IV) in the prehospital setting.
5. Examine how and when to employ and execute a comprehensive diabetic care plan.

### **Documenting Your Skilled Health Care To Get Paid**

Domain: V

Skill Level: Advanced

CEU: 1 Category A

*Steve Allison, LAT, ATC, CEAS*

Concise and complete documentation is the paramount in demonstrating worth and value in every setting within the athletic training profession, but is often a weak spot for practitioners. This session will give an AT tools needed to have successful documentation that satisfies standards for payers, compliance, and professional responsibility. It will demonstrate the importance of quality documentation that aligns with Medicare standards in coding and billing, along with painting a skilled picture of appropriate patient care notes. With proper documentation ATs can successfully gain reimbursement, justify salaries, and increase effective intra-professional communication and provide greater patient outcomes and satisfaction.

At the end of this session, attendees will be able to:

1. Prepare ATs to better align their documentation with Medicare standards
2. Educate ATs on proper documentation standards for successful evaluation for worth, value and potential reimbursement.
3. Educate ATs on proper documentation to support billing codes
4. Identify barriers to reimbursement that are a result of incomplete or improper documentation
5. Interpreting health care documentation standards to apply to AT practices

### **Effect of Sleep on Athletic Performance and Well-Being**

Domain: I, II, IV

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 EBP

*Meeta Singh, MD*

*Ben Potenziano, MEd, ATC*

The idea that in any sport, health and success requires a planned approach to training and recovery is widely embraced across the health care community. Whereas, healthy adults are recommended 7-9 hours of sleep each night, athletes are often taught to aim for 9-10 hours of sleep. Coaches and athletes rate sleep as critical to optimal performance but the reality is that athletes are not getting enough sleep. Athletes face a number of obstacles that can reduce the likelihood of obtaining proper sleep, such as training and competition schedules, travel, stress, academic demands, and overtraining. Given the

above evidence, it becomes vital that athletic trainers stay abreast of the sleep related health issues in elite players and of the best evidence for guiding care and interventions for these sleep issues in the players. This important issue is not part of traditional athletic training education, and this gap mirrors the gap that is faced by the medical community at large when it comes to sleep science. Explain the overall educational need for this program and identify one specific practice gap. What is the gap between available evidence and current clinical practice? There may be gaps in knowledge, competency and/or performance. Why is it important to close this gap? Include citations within the paragraph where appropriate to support your position. Specific gaps are not needed for each topic. Please include citations. (~ 100 words) The idea that in any sport, health and success requires a planned approach to training and recovery is widely embraced across the health care community. Whereas, healthy adults are recommended 7-9 hours of sleep each night, athletes are often taught to aim for 9-10 hours of sleep. Coaches and athletes rate sleep as critical to optimal performance but the reality is that athletes are not getting enough sleep. Athletes face a number of obstacles that can reduce the likelihood of obtaining proper sleep, such as training and competition schedules, travel, stress, academic demands, and overtraining. Given the above evidence, it becomes vital that athletic trainers stay abreast of the sleep related health issues in elite players and of the best evidence for guiding care and interventions for these sleep issues in the players. This important issue is not part of traditional athletic training education, and this gap mirrors the gap that is faced by the medical community at large when it comes to sleep science.

At the end of this session, attendees will be able to:

1. Describe the effects of sleep loss on athletic performance.
2. Identify sleep related health issues in athletes.
3. Implement intervention strategies to assist athletes with sleep issues.

### **Emergency Response To Joint Dislocation Reduction Techniques**

Domain: III

Skill Level: Essential

Theme: Emergency Planning/Response

CEU: 1 Category A

*Mike Diede, PhD, ATC*

Joint dislocations are a small but important percentage of athletic injuries encountered by AT's. Using the management of joint dislocation position statement (2019), I will discuss and practice hands on techniques. Growing evidence points toward early reduction of dislocations contributing to better outcomes and reduced secondary injury. AT's need to know and practice various reduction techniques. Understanding the techniques, with accompanying names, facilitates discussions with supervising physicians and other medical professionals. I will review diagnostic techniques to determine dislocation and to rule out comorbidities. I will explain and show techniques for the fingers, elbow, shoulder, hip, PF and ankle.

At the end of this session, attendees will be able to:

1. The lecture will provide participants with specific intervention strategies to discuss and implement with the health care team.

2. At the conclusion of the program, participants will be able to distinguish when joint relocation is appropriate and when it is not.
3. At the conclusion of the lecture, participants will determine differences in reduction techniques and recognize the appropriateness of each.
4. Participants will learn specific reduction/ relocation techniques according to anatomical structures involved.

### **Emergency Skill Consideration for the Athletic Trainer Working in Rural and Remote Settings**

Domain: III

Skill Level: Essential

Theme: Emergency Planning/Response

CEU: 1 Category A

*Valerie Moody, PhD, LAT, CSCS*

*Mark Hoffman, PhD, ATC*

Athletic trainers are well versed in emergency planning and providing acute care for injuries and illnesses; however, traditionally this care is provided in urban centers where advanced care and resources are readily available. With more ATs working in rural or remote locations, new challenges arise in the emergency response to an injury or illness. Rural communities often lack equipment and resources needed for emergency response, as well as access to higher levels of health care due to geographical constraints. This presentation focuses on the use of an incident command structure to facilitate a coordinated emergency response, triaging patients, transportation challenges, and how the role of an AT may change in an emergency when working in a rural or remote setting. We will also discuss the emergency skill set an AT needs to be adequately prepared to work in this unique environment

At the end of this session, attendees will be able to:

1. Describe the incident command structure and triage.
2. Explain the role of the AT in emergency response and how it might shift between rural and remote settings.
3. Identify the emergency skill set needed to be adequately prepared to work in rural and remote settings.
4. Understand how transport resources differ in rural and remote settings.

### **Energy Drinks & Other Caffeinated Products: Any Evidence To the Hype?**

Domain: I

Skill Level: Essential

Theme: Ergogenic Aids

CEU: 1 Category A

*Matthew S. Ganio, PhD*

Almost every athlete consumes caffeine in some form every day. Athletic trainers need to know the facts on athletes' caffeine consumption. Specifically, athletic trainers need to know the legal amount of caffeine that can be consumed. They need to be able to identify any benefit of athletes' consuming caffeinated products, such as enhancing performance. Another aspect that needs to be examined is the \$50+ billion Energy Drink industry that profits from this population. This research examined what

current regulatory bodies say about caffeinated products and also provide evidence for if or how they will improve an athlete's performance. The purpose of the research is to provide innovative research that will give athletic trainers knowledge to implement into their practice. Likewise, misnomers and myths will be discussed.

At the end of this session, attendees will be able to:

1. Identify the current regulatory bodies stance on caffeinated products and what level of consumption is legal.
2. Describe the effect of caffeine on different types of performance.
3. Appraise the additional ingredients that are in Energy Drinks and how they effect performance.
4. Discuss the timing and dosing of caffeine products that can lead to maximal performance .
5. Describe the considerations related to sleep, hydration, and cognitive outcomes that are associated with caffeine use.

### **Enhancing Health and Safety for Secondary School Athletics: Grants, Initiatives, and Resources from the Korey Stringer Institute**

Domain: V

Skill Level: Advanced

CEU: 1 Category A

*Douglas Casa, PhD*

*Christianne Eason, PhD, LAT, ATC*

*Rebecca Stearns, PhD, ATC*

*Robert Huggins, PhD, LAT, ATC*

This presentation will inform athletic trainers of options available to aid their care of student-athletes in the secondary school setting. The Korey Stringer Institute has developed four programs designed to collaborate with other sports medicine and healthcare professionals to provide the best information available to: 1) conduct surveillance of catastrophic injuries and illness (NCCSIR), 2) track and improve communication and increase research within the profession (ATLAS), 3) increase access to secondary school medical care (InnovATe), and 4) health and safety best practices in the secondary school (TUFSS).

At the end of this session, attendees will be able to:

1. understand National Center for Catastrophic Sport Injury Research (NCCSIR).
2. understand the Athletic Trainer and Services (ATLAS).
3. unerstand the InnovATe program.
4. understand to Team Up For Sports Safety (TUFSS).

### **Exploring the Emotional Response of Cultural Biases: Fostering an Environment for Inclusivity, Justice and Equity in the Athletic Training Facility**

Domain: I, III, V

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Lovie Tabron, MS, LAT, ATC, CCISM*

*Kysha Harriell, PhD, ATC, LAT*

Athletic trainers come into contact with patients/student-athletes from a multitude of backgrounds, cultures, and communities. While athletic trainers do not have formal education in counseling, it is commonplace for the athletic trainer to serve as a safe space during non-traditional school hours. Hence, making it important for the athletic trainer to recognize the need for psychological care for athletes/patients who display signs of emotional distress related to cultural biases. Cultural bias distress presents the same as any other stress; the key is determining that the stress is caused by cultural bias and the best practices for formulating a plan of action. This presentation will demonstrate how to appropriately recognize emotional distress perpetuated by cultural bias and how to formulate an inclusive plan of care.

At the end of this session, attendees will be able to:

1. Explain the necessity and importance of an inclusive, just, and equitable AT clinic.
2. Recognize signs of emotional distress caused by cultural bias/stigma.
3. Evaluate an individual for emotional distress related to cultural bias/stigma and formulate an appropriate plan of care.

### **Extending Our Own Career: How To Take Care of the Athletic Trainer's Mental Health and Wellness**

Domain: V

Skill Level: Essential

Theme: Mental Wellness

CEU: 1 Category A

*Stephanie Singe, PhD, ATC, FNATA*

*Christianne Eason, PhD, LAT, ATC*

The athletic training prioritized research agenda includes a push to develop solutions to improve work-life balance. Despite reports that working as an athletic trainer can provide great personal and professional rewards, the reliance student-athletes and patients can have on their athletic trainer has the potential to stimulate the occurrence of work-life imbalance and job burnout. Recognizing sources of conflict and developing strategies that can improve coping and work-life balance and reduce job burnout for athletic trainers can have a direct positive impact on their performance as a health care provider, parent, spouse, or friend. Gender differences have been reported in perceptions of stress and the impact it can have on one's own personal well-being.

At the end of this session, attendees will be able to:

1. Identify the organizational factors that can contribute negatively or positively to one's mental health and wellness
2. Discuss gender differences among perceptions of stress, management strategies, and implications on health, wellness, and work life balance
3. Examine the individual aspects to mental health and wellness and how they contribute increased levels of stress
4. Pinpoint possible strategies for individuals in their own systems to help mitigate the negative impact that work and life stress can have on the individual to decrease role overload/burnout and enhance patient care and overall well-being of the athletic trainer

## **Global Pandemic COVID-19: Mental Health Resources for Front Line Health Care Workers**

Domain: I

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Lovie Tabron, MS, LAT, ATC, CCISM*

*James Wilson, LAT, ATC, CCISM*

Athletic trainers are health care workers on the front lines of many medical emergencies with no exception given to COVID-19. Many athletic trainers were shifted to new duties which might have included exposing them to a potentially life threatening illness, witnessing the burden placed on families and patients faced with the illness, limited access to personal protective equipment while working, or losing their job due to the cessation of sports all of which can cause a great deal of emotional and physical distress. This presentation will focus on defining the meaning of group/peer support, explaining the benefit of group/peer support during a pandemic, and how to devise a plan/access group/peer support.

At the end of this session, attendees will be able to:

1. Demonstrate the need and benefits of peer support during a crisis.
2. Assess a group/peer for signs of emotional distress caused by COVID-19.
3. Formulate a plan of action to provide or gain access to group/peer support.

## **Heat Stroke Management: Overcoming Barriers To Cool First, Transport Second**

Domain: III

Skill Level: Essential

Theme: Emergency Planning/Response

CEU: 1 Category A

*Rebecca Lopez, PhD, LAT, ATC*

*Samantha Scarneo-Miller, PhD, ATC, LAT*

Athletic trainers (ATs) and other clinicians are not utilizing the best practices(i.e. cool first, transport second) for the prehospital treatment of exertional heat stroke (EHS). Inadequate cooling or a delay in treatment can lead to a fatal EHS. The purpose of this presentation is to discuss facilitators and barriers to cooling first, transporting second. Perceived barriers include lack of education/training, lack of an accurate diagnosis, and absence of administrative support. Facilitators for adopting this skill include a state mandate, enhanced perceived benefits, and having peers properly diagnosis EHS and cool before transport. Strategies to overcome common challenges will be presented.

At the end of this session, attendees will be able to:

1. Summarize the literature on common facilitators and barriers to cool first, transport second for the management of exertional heat stroke.
2. Identify and summarize the knowledge and behaviors of clinicians as it relates to performing cool first, transport second.
3. Develop strategies to overcome challenges faced for the implementation of this best practice in their clinical setting.

## **Hot Topics In Sports Nutrition: Expert Dietitian Panel**

Domain: I

Skill Level: Advanced

Theme: Ergogenic Aids

CEU: 1 Category A

*Dana White, MS, ATC, RD*

*Jennifer Doane, MS, RD CSSD, ATC*

*Katie Knappenberger, MS, RD, CSSD, ATC*

Regardless of the athletic populations served and/or practice settings, Athletic trainers (ATs) find that their athletes require care for nutrition-related conditions. This panel of sports dietitians will share their areas of expertise and facilitate a conversation with the audience about some of the hottest topics in sports nutrition including the dangers of low energy availability, supplement evaluation and nutrition for the injured athlete. This session will be presented by dual credentialed clinicians that are members of both NATA and The Sports, Cardiovascular, and Wellness nutrition group (SCAN), a dietetic practice group of the Academy of Nutrition and Dietetics.

At the end of this session, attendees will be able to:

1. Define the role of the sports dietitian in the sports medicine team.
2. Understand the risks of low energy availability in athletes.
3. Develop strategies to better evaluate dietary supplements or athletes for various settings and levels.
4. Recognize the specific nutrient needs pertaining to optimal healing of an injured athlete.

## **Implementing an Emergency Action Plan for Mental Health Illness**

Domain: I, III

Skill Level: Essential

Theme: Mental Wellness

CEU: 1 Category A

*Ginger Gilmore-Childress, DBH, MEd, ATC/LAT*

This presentation will describe how to implement an emergency action plan (EAP) for mental health illness in an athletic setting. Specifically, this lecture will describe the NATA and NCAA guidelines for mental health illnesses such as depression and suicide. An emphasis will be placed on athlete mental health care identification, recognition, and referral to appropriate level of treatment. In addition, follow-up care for athletes suffering from a mental health illness will also be discussed.

At the end of this session, attendees will be able to:

1. Implement emergency action plan for mental health illnesses
2. Identify mental health illnesses
3. Describe follow-up care for mental health illnesses

## **Improving Hydration During Sport and Physical Activity: Habitual Fluid Intake and the Role of Hydration Supplements**

Domain: I, IV

Skill Level: Essential

Theme: Ergogenic Aids

CEU: 1 EBP

*William Adams, PhD, ATC, ATC*

Debate exists about optimal fluid intake recommendations during exercise for athletes. Additionally, numerous food additives (e.g., sodium), supplements (e.g., glycerol), and products exist claiming to improve hydration but may have little to no effect or be banned by sport organizations. In this presentation, current fluid intake recommendations during sport/physical activity and current evidence on hydration supplementation in sport and physical activity will be discussed. Following this presentation, Athletic Trainers will better understand proper fluid intake recommendations and be able to optimize the hydration practices in their clinical settings.

At the end of this session, attendees will be able to:

1. Describe current recommendations for fluid intake in athletes.
2. Describe the effects of underhydration on human health and performance.
3. Compare the effectiveness of various beverage supplements on improving hydration status during sport and physical activity.

## **Instrument-Assisted Soft-Tissue Mobilization: New Research and Updated Clinical Standards**

Domain: IV

Skill Level: Essential

CEU: 1 Category A

*Scott Cheatham, PhD, DPT, ATC*

Instrument assisted soft-tissue mobilization (IASTM) is a popular myofascial compression intervention used by sports medicine professionals. The last few years have seen a rapid growth in research and changes in the way the treatment is administered. This presentation will provide an evidence based update on scientific concepts and best clinical practices for IASTM. Updated clinical standards will also be discussed that include IASTM description, indications, precautions, contraindications, tool hygiene, safe treatment, and assessment. Treatment strategies for common musculoskeletal conditions will also be discussed. This presentation is for the sports medicine professional who desires an evidence based update of IASTM.

At the end of this session, attendees will be able to:

1. Discuss the latest scientific theories and best practices for IASTM.
2. Describe updated evidence based clinical standards for IASTM
3. Discuss strategies for including IASTM as part of a comprehensive treatment strategy for various musculoskeletal conditions.

## **Lessons Learned From COVID-19: Policy Implementation**

Domain: V

Skill Level: Essential

CEU: 1 Category A

*Jim Zachazewski, ATC, PT, DPT*

*Michael Belanger, ATC, PT, MSPT*

COVID-19 brought about change in the culture and the delivery of health care in the athletic training environment. Policy implementation as it relates to infection control and return to play from infection/quarantine were the key pillars to controlling the spread of infection and preventing catastrophic consequence of returning to high level athletic activity. We will discuss the key factors and challenges to successful implementation of policies and procedures regarding management of COVID-19 that include communication with the key stakeholders, managing the evolving federal and state guidelines, fundamental education needed to break the chain of infection, and managing the work flow of the Athletic Health Care Center.

At the end of this session, attendees will be able to:

1. Review and explain appropriate policy making process and associated decisions
2. Describe strategies for addressing and overcoming challenges
3. Identify barriers to implementation of new policy

## **Mental Wellness and Disparities in Ethnically Diverse Populations**

Domain: I, III, V

Skill Level: Essential

Theme: Mental Wellness

CEU: 1 Category A

*Kevin Jenkins, Ph. D.*

*Chantelle Green, PsyD, ATC, LAT*

When discussing mental wellness amongst ethnically diverse populations, race and ethnicity are two key factors in the pursuit and provision of services.<sup>1</sup> In addition to the stigma surrounding mental health, ethnically diverse populations face additional discrimination, stress due to racial and cultural expectations and decreased access to culturally competent care in mental healthcare systems.<sup>1,2</sup> Athletic populations in particular face unique barriers when seeking mental health services due to additional stigma surrounding sports participation.<sup>3</sup> It is vital that athletic trainers understand how discrimination affects patient experience, in order to reduce disparities in health care, and provide more culturally competent care.<sup>4</sup>

At the end of this session, attendees will be able to:

1. Recognize the influence of race and ethnicity on mental health and wellness
2. Describe disparities in mental wellness in ethnically diverse populations
3. Identify barriers to mental wellness recognition and treatment in ethnically diverse populations
4. Summarize approaches to minimize mental wellness disparities in ethnically diverse populations

## **Mind the Gap! Updating Recommendations To Keep Members Informed**

Domain: V

Skill Level: Essential

CEU: 1 Category A

*Johna Register-Mihalik, PhD, LAT, ATC*

*Steve Broglio, PhD, ATC*

The Pronouncements Committee is responsible for supporting the development of position statements which clinicians use to support evidence-based clinical decision making. To maximize the benefit of recommendations to clinical practice, understanding the structure of statements is important. As new and critical clinical evidence becomes available, efforts are made to get timely recommendations to members. An example is the creation of gap statements which fill an immediate need for updating existing recommendations. The concussion position gap statement will be highlighted as an example of this type of statement and key information concerning best practice updates in concussion management will be presented.

At the end of this session, attendees will be able to:

1. Discuss the clinical utility of NATA position statements
2. Describe the necessity of gap statements to provide immediate recommendation updates
3. Define updated guidelines related to concussion management

## **More Than Just Words: Intersectional Microaggressions and the Journey To Eliminate Cultural Barriers To Patient Care**

Domain: I, V

Skill Level: Advanced

CEU: 1 Category A

*Karlita Warren, PhD, ATC*

*Candace Lacayo, PhD, ATC*

In healthcare, microaggressions have been defined as implicit discrimination in healthcare settings. Microaggressions experienced in healthcare settings have the potential to develop negative physical and mental health outcomes for patients; consequently, contributing to perpetuated health disparities. Historically, microaggression research and its deleterious effects on health are typically focused on a single identity of the patient such as race/ethnicity. Intersectionality and microaggression experiences may potentially compound harmful patient outcomes. There is a need for athletic training clinicians to recognize intersectionality of multiple identities that may be affected by microaggressions experienced during patient care and their impact on patients with multiple identities.

At the end of this session, attendees will be able to:

1. Describe how subtle forms of discrimination may be influenced by more than one social identity
2. Analyze the intersections of race/ethnicity, gender, sexuality, religion, age, ability, and social class in patient care
3. Examine the impact intersectional microaggressions may have on patient care
4. Execute strategies to eliminate intersectional microaggressions as a barrier to healthcare

## **Myofascial Decompression (Cupping)**

Domain: IV

Skill Level: Advanced

CEU: 1 Category A

*Ashley Doozan, ATC*

According to Cage, et al, while the majority of athletic trainers did not view cupping therapy as necessary to their clinical practice, the majority did use the tool in their weekly practice. The relationship between actual knowledge and pursuit of continuing education suggestion that continuing education may improve knowledge of cupping therapy.

At the end of this session, attendees will be able to:

1. Understand skin and fascia properties and their interface with the musculoskeletal system
2. Demonstrate an understanding of trigger points, common referral pain patterns, and fascial lines
3. Be able to integrate myofascial decompression into current practice to help improve outcomes for patients who do not have any contraindications.

## **Network Connectivity Problems: Exploring the Link Between Mental Wellness and Neurophysiological Function After ACL Injury**

Domain: I, II, IV

Skill Level: Advanced

CEU: 1 Category A

*Julie Burland, PhD, ATC, CSCS*

*Adam Lepley, PhD, ATC*

Injury to the anterior cruciate ligament (ACL) has detrimental effects on long-term health. Alterations in strength and neural activity are factors that contribute to rehabilitation failure after ACL reconstruction (ACLR); however, psychological deficits such as fear-avoidance, self-efficacy and clinical depression also hinder rehabilitative success and diminish mental wellness. Recent evidence shows that underlying neurophysiological impairments observed following ACLR are associated with psychological dysfunction. The goal of the proposed session is to provide the most up-to-date evidence regarding neurophysiological reorganization following ACLR, how these impairments are linked to psychological health after injury, and how clinicians can best intervene to improve outcomes.

At the end of this session, attendees will be able to:

1. Recognize underlying neurophysiological impairments that are common following ACL reconstruction, and how they influence clinical outcomes.
2. Apply techniques to help identify neurophysiological and psychological function during patient assessment.
3. Distinguish between different psychological responses following ACL reconstruction, including pain-avoidance, fear-avoidance, self-efficacy and learned helplessness
4. Evaluate the relationship between neurophysiological impairments and psychological outcomes, and how this interaction influences patient care.

5. Implement the most novel, and evidence-based treatment strategies to target neural and psychological alterations following ACL reconstruction.

### **Patients From Christian, Muslim and Atheist Backgrounds Walk Into the Athletic Training Facility: Best Practices for Interfaith Etiquette in Patient Care**

Domain: I, II, IV, V

Skill Level: Essential

CEU: 1 Category A

*Megan Granquist, PhD, ATC*

*Sarah Cook, PhD, ATC*

Patients' worldviews are diverse and athletic trainers' knowledge of interfaith concepts is essential in providing quality, culturally-competent care that considers the whole patient. Therefore, this session will focus on how athletic trainers, as healthcare professionals, interact with and provide treatment with consideration of patients' religious, spiritual, and secular identities. Specifically, this session will: include a discussion of religious and spiritual practices with a focus on diet, clothing, and medical treatment; provide practical strategies for delivering holistic patient care; identify ways for athletic trainers to enhance their interfaith literacy; and offer guidance for seeking additional resources.

At the end of this session, attendees will be able to:

1. Describe basic interfaith concepts related to patient care in athletic training.
2. Explain how athletic trainers can incorporate an awareness of interfaith concepts into professional practice.
3. Identify strategies to provide treatment based on patients' religious/spiritual practices.

### **Preventing Sudden Death in Exertional Conditions in Sport**

Domain: III

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*Rod Walters, DA, ATC*

The incidence of non-traumatic deaths in intercollegiate and interscholastic sports centers around football, though they are evident in other sports as well. These crisis provide an opportunity to review best practices for the prevention of sudden death in athletics programs. Common elements that can contribute to indirect deaths include the following: • Implementation and attention to both acclimatization and conditioning principles including adherence to sport-specific and physiologically sound practices • Development, training and implementation of Emergency Action Plans (EAPs); and • Provision of oversight of all sponsored activities with appropriate athletic healthcare providers.

At the end of this session, attendees will be able to:

1. Review exertional conditions including hyponatremia, heat stroke, sickling, and rhabdomyolysis.
2. Explore the literature for best practices related to the recognition and diagnostic testing to guide intervention planning.

3. Describe the selection and procedures for evidence-based management strategies to prevent sudden death for exertional conditions.

### **Prevention & Treatment Strategies So You Don't get Hamstrung by Hamstring Injuries**

Domain: IV

Skill Level: Essential

CEU: 1 Category A

*Brandon Schmitt, DPT, ATC*

*Takumi Fukunaga, DPT, SCS, ATC, CSCS*

Hamstring injuries are among the most common soft tissue injuries in sports. Further hamstring injuries have a high recurrence rate of nearly one in three in some sports. As a result, athletic trainers need to understand how to successfully implement primary and secondary (i.e. rehabilitative) measures to reduce the rate of hamstring injury and reinjury. Therefore, this session we focus on best practices for 1) prevention programs to reduce the rate of hamstring injuries and 2) treatment strategies to that minimize risk of reinjury while returning athletes to participation efficiently.

At the end of this session, attendees will be able to:

1. Understand the hamstring injury reduction program efficacy and implementation best practices.
2. Understand the important of lengthened state hamstring strength and how to address it in the rehabilitation of hamstring injury.
3. Develop a comprehensive rehabilitation program to facilitate return to sport to the highest performance level possible as quickly as possible while minimizing risk of reinjury and time until return to sport.

### **Racial Disparities and Inequalities in Health Care**

CEU: 1 Category A

Domain: I

Skill Level: Essential

*Kysha Harriell, PhD, ATC, LAT*

This presentation describes health inequalities inherent to health care in the United States of America. This presentation will examine the social determinates of health mostly responsible for unfair and avoidable differences in health status between racial and ethnic groups. This presentation will discuss the role of bias, racism, and discrimination in healthcare, share terminology, and resources relevant to healthcare equity, and provide suggestions for improvement.

At the end of this session, attendees will be able to:

1. Critically reflect on the racial biases prevalent in healthcare
2. Identify factors that contribute to bias, discrimination, and systemic racism in healthcare
3. Develop an appreciation for cultural differences, cross-cultural communication, and social responsibility
4. Identify resources for self-reflection and to increase cross-cultural skills improve health equity

## **Recognizing & Managing a Potentially Suicidal Patient**

Domain: I

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Jennifer Ostrowski, PhD, LAT, ATC*

Mental illness is common in the United States with 6.8% of adults and 12.8% of adolescents experiencing a major depressive episode each year. Increased time demand of athletics, pressure to perform, pain and injury are risk factors for developing mental illness. Athletic trainers report feeling underprepared to handle mental health crises. Signs of distress or impaired functioning are not always obvious, therefore athletic trainers should be educated about warning signs and risk factors for depression, suicidal ideation, and non-suicidal self-injury. This presentation will provide strategies for approaching someone with your concerns, initiating mental health referral, and proven self-help strategies.

At the end of this session, attendees will be able to:

1. Describe the prevalence of depression in US adult and youth populations
2. Identify risk factors and warning signs of mental health problems, including depression, suicidal ideation, and non-suicidal self-injury.
3. Apply a mental health action plan to individuals in crisis and non-crisis situations
4. Recommend evidence-based professional, peer, and self-help resources.

## **Scope of Practice: Incorporating Standing Orders To Encourage Responsible Practice**

Domain: V

Skill Level: Essential

CEU: 1 Category A

*Kevin Stalsberg, MS, ATC*

*Ciara Ashworth, ATC*

A recent survey developed and deployed by the NATA Professional Responsibility in Athletic Training (PRAT) committee indicated that the membership found scope of practice to be a significant issue in athletic training today. How can the athletic trainer incorporate new clinical skills and practice responsibly within the scope of practice? This presentation will focus on continuing education and standing orders to ensure that responsible practice stays within the scope of practice. Furthermore, the athletic trainer will learn how to minimize the risk of liability.

At the end of this session, attendees will be able to:

1. Synthesize legal, ethical, regulatory and practice standard issues that concern athletic trainers today, such as staying within your scope of practice and adhering to professional standards.
2. Define scope of practice and how it can vary from state to state.
3. Explore how implementing the use of standing orders can assist with scope of practice in your setting and minimize the risk of liability.

## **Shoulder Instability in the Youth Athlete: Clinical and Surgical Management**

Domain: I, II, IV

Skill Level: Advanced

CEU: 1 Category A

*Jay Albright, MD*

*Jordan Teboda, MS, LAT, ATC*

Glenohumeral instability in the youth athlete is a prevalent condition that can affect the long-term functionality of the shoulder joint as well as impact athletic performance and participation. Due to the complexity of the developing shoulder joint in pediatric patients, considerations to preserving the long-term health of articular surfaces and joint stability should be carefully assessed. While surgical intervention can address the static stability of the shoulder joint, methods for restoring and ultimately improving dynamic stability should always remain atop the list of priorities when treating youth athletes.

At the end of this session, attendees will be able to:

1. At the conclusion of the program, participants will identify and treat glenohumeral instability in the pediatric population based on the current evidence and best practice
2. Participants will learn criteria for surgical intervention and how surgical timing impacts youth participation in athletics, with examples provided by specific case studies.
3. Participants will examine surgical techniques and outcomes, along with post-operative rehabilitation protocols.

## **Social Determinants of Health and the Impact on the Health & Well-Being of LGBTQ+ Patients**

Domain: I, IV, V

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Jennifer Sturtevant, MBA, LAT, ATC*

*Sean Rogers, DAT, ATC*

The purpose of this presentation is to explore the relationship(s) between Social Determinants of Health and the overall health and wellbeing of LGBTQ+ patient populations. During this presentation, participants will be exposed to case scenarios that illustrate the impact that Social Determinants of Health can have on a patient's mental and physical health. Furthermore, this presentation will discuss psychosocial conditions experienced by the LGBTQ+ community while simultaneously exploring etiology.

At the end of this session, attendees will be able to:

1. Describe the Social Determinants of Health model and how it relates to Athletic Trainers
2. Identify the correlation between Social Determinants of Health, Health and Healthcare Disparities, and positive and negative patient outcomes
3. Discuss current events, laws, and legislation that impact LGBTQ+ Community
4. Examine case studies involving mock patients who have had various impacts to their Social Determinants of Health

## **Social Determinants of Health: Impact on Mental Wellness**

Domain: I

Skill Level: Essential

Theme: Mental Wellness

CEU: 1 Category A

*Kelsey Picha, PhD, ATC*

Social determinants of health (SDH) are conditions in which people live, learn, work, and age. Social factors (i.e. neighborhood, education, and early childhood experiences), when negative, have been found to contribute to chronic stress and lead to mental health disorders. Athletic trainers are positioned to identify and intervene on SDH during patient interactions and understanding of these factors requires attention. This presentation will introduce foundational concepts of SDH and their impact on mental wellness, discuss the role of athletic trainers in SDH identification and evaluation, and provide resources for athletic trainers to support inclusion of SDH in the care process.

At the end of this session, attendees will be able to:

1. Identify the impact social determinants of health have on patient health and mental wellness.
2. Appreciate the role of athletic trainers in identifying and evaluating negative SDH impact on patients' mental wellness.
3. Navigate and use available resources to support identification and evaluation of SDH in clinical practice.

## **Taking Your Emergency Planning to the Next Level: Safe Sports Network's Implementation of a "Drop the Dummy" Program in the Secondary School Setting**

Domain: I, III, V

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*Amy Hollingworth, ATC, LAT*

Emergency action plans (EAPs) that are well-designed and rehearsed with each athletic team provide responders with an organized approach to managing emergencies.<sup>2,3,5</sup> Annual rehearsals can maintain emergency response skills at a high level of competency and decrease response time and knowledge decay.<sup>3,5</sup> "Drop the Dummy" (DTD) is one way to rehearse EAPs. DTD is conducted by an objective, knowledgeable observer who places a manikin on the playing surface thus activating the emergency response team, then assesses and debriefs performance. Safe Sports Network implemented DTD in 2015 and performs drills annually for over 100 athletic teams.

At the end of this session, attendees will be able to:

1. Develop emergency response teams and gain stakeholder buy-in.
2. Implement 'Drop the Dummy' drills to practice emergency action plans.
3. Evaluate/Critique EAP rehearsal(s) and provide feedback to the emergency response team to improve organization and effectiveness.

## **The Athletic Trainer Role: How Comprehensive Collaboration Between Health Care Professions Can Assist in Better Outcomes During a Mass Casualty Event**

Domain: III

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*Laura Hepple, ATC, BDLS, CES*

200-million disaster deaths have occurred worldwide in the last century. Health care professionals should all have a universal strategy for the effective management of mass casualty incidence. BLS knowledge teaches us how to deal with day-to-day emergencies and provide the best care for each individual patient. However, knowing how to apply this knowledge to do the greatest good for the greatest number of potential survivors and becoming part of an efficient mass casualty intervention team without notice will minimize morbidity and mortality. This lecture will provide knowledge of types, interventions, and best practices for dealing with mass casualty once initial danger has been removed. With the unfortunate increasing number of mass death related incidents happening in the US every year this knowledge could allow providers to save many lives in the future.

At the end of this session, attendees will be able to:

1. Implement universal triage protocol in response to mass casualty event.
2. Recognize different types of mass casualty event.
3. Develop methods to respond to a mass casualty event following sort, assess, life-saving intervention and transfer protocol.
4. Review mass casualty response after an event has occurred and evaluate its efficiency.
5. Label patients as needed with tags to show severity of injury and level of triage, intervention and transfer required.

## **The Effectiveness of Diet, Nutritional Supplements and Physical Activity Versus Medications for the Treatment of ADHD**

Domain: I, IV

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 EBP

*Dawn Weatherwax, ATC, RD, CSSD, LD*

Attention-deficit hyperactivity disorder (ADHD) is one of the most common neurodevelopmental conditions in children. ADHD is typically addressed using medication, psychotherapy, behavioral therapy, or a combination. However, researchers recommend a multimodal approach to pediatric ADHD treatment. The use of nutritional supplements in the treatment of ADHD has been on the rise and many use some form of complementary medicine to address this condition. However, it is unclear how effective these alternative treatments are to traditional medication and psychotherapy. This lecture will examine evidence comparing the effectiveness of medication, diet, supplementation, and physical activity in the treatment of ADHD.

At the end of this session, attendees will be able to:

1. Describe the effectiveness of traditional medication for controlling ADHD symptoms and signs in children.
2. Discuss whether exercise is as effective as medication for controlling ADHD symptoms and signs in children.
3. Discuss whether dietary supplements (e.g., mineral supplements, Omega-3) are as effective as medication for controlling ADHD symptoms and signs in children.

### **The Global Challenges of COVID-19: Opportunities for Prioritizing Psychological Resources and Recovery Methods**

Domain: I, III

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 Category A

*Tadhg MacIntyre, PhD CPsychol, HPC Reg. Psychol, AASP Fellow*

Traditional accounts of athlete recovery and rest will be advanced by sharing emerging scientific perspectives on the role of mental rest and psychological recovery. At the core of this approach is the fundamental premise that mental health and well-being are everybody's business. From sports performers to athletic trainers, all sports stakeholders have been impacted and responded in diverse ways to the challenges presented by the global pandemic. An evidence-based account of the benefits of emphasizing a recovery mindset will be presented. The future potential of this approach to the management of more predictable seasonal challenges will be discussed.

At the end of this session, attendees will be able to:

1. Describe the effect of COVID-19 on sports stakeholders.
2. Explain how psychological resources are implemented to effectively manage mental health.
3. Discuss the necessity to implement mental health recovery methods in the return to sports protocol in the midst of the COVID-19 pandemic.

### **The Relationship Between Concussion and Depression in Athletes**

Domain: I

Skill Level: Essential

Theme: Mental Wellness

CEU: 1 Category A

*Lindsey Keenan, PhD, ATC*

This presentation will explore the multifaceted connections between depression and concussion in athletes. Depression is recognized as a psychological symptom related to sport concussion; however, we have only started to understand this relationship. There may be a causal pathophysiological response to concussion through which depression results, while research also suggests depression occurs secondary to removal from play. For the healthcare provider, understanding the role of depression as a potential risk factor for protracted recovery or subsequent concussion injury, as well as the relationship between depression and neurocognitive performance, is imperative in order to provide appropriate concussion management in patient care.

At the end of this session, attendees will be able to:

1. Identify the multifaceted relationships between depression and concussion, including risk factors and the effects on concussion battery testing
2. Examine signs and symptoms of depression as exhibited by athletes who have sustained a concussion
3. Discuss differences in management strategies including depression screenings for the health and wellness of athletes who have sustained a concussion

### **Training From the Inside Out: A Comprehensive Training Approach for Trunk Proprioception and Musculoskeletal Control**

Domain: I

Skill Level: Advanced

CEU: 1 Category A

*Thomas Palmer, PhD, ATC, CSCS\*D*

Proximal synergy or the ability to actively control the pelvis, spine and trunk has been reported to increase the risk of injury and effect sport performance. The distinct biomechanical contributions of these proximal segments have been well documented regarding injury and function however there is ambiguity among training techniques used to determine effective productivity of the proximal segments. There is a need for more concise evidence supported training guidelines and techniques that take into account the biomechanical synergy of the proximal segments. This module will provide outcomes data and proven methodology for clinical field training for the pelvis, spine, and trunk.

At the end of this session, attendees will be able to:

1. Present psychometric data and recommendations from the literature.
2. Describe appropriate training techniques.
3. Direct specific training initiatives that identify and target potential deficits in spinal stability, active pelvis and trunk control.

### **Understanding the Emergency Medical Services Response: Preparing To Work Together**

Domain: III

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 Category A

*Rebecca Hirschhorn, PhD, ATC, NRAEMT*

Working together with emergency medical services (EMS) is continuously emphasized in athletic training education and position statements relating to emergent conditions; however, the structure of local EMS services and their protocols vary considerably across the United States. The purpose of this presentation is to review the levels of prehospital care providers (i.e., emergency medical technician (EMT), advanced EMT, paramedic) and their skills based on the National Registry of EMTs, types of EMS responses (e.g., tiered response), characteristics and configurations of EMS systems, event planning considerations, and literature examining EMS provider-athletic trainer perceptions and relationships.

At the end of this session, attendees will be able to:

1. Describe the differences between the EMT, advanced EMT, and paramedic prehospital care provider levels.

2. Distinguish between different emergency medical service types (i.e., fire department based, private, governmental non-fire, hospital, other).
3. Develop a venue-specific emergency action plan in conjunction with local emergency medical services considering agency type, local response and provider protocols.
4. Identify and create opportunities for interprofessional training and education between local athletic trainers and emergency medical services providers.

### **Upper Extremity PNF Techniques**

Domain: IV, V

Skill Level: Essential

CEU: 1 Category A

*Michael Higgins, PhD, ATC, PT*

The focus of functional training is to improve movement and is based on a balance of mobility and stability. This balance requires effective proprioceptive communication between the muscles and joints. If there isn't a balance of mobility and stability, then movement patterns will be dysfunctional. The dysfunction many times can be related to a disruption in the neuromuscular system. Improving this system through the use of PNF techniques should then create more effective movements. Competency Gap: The ability to effectively (when and how) implement PNF techniques for each patient and pathology to improve the neuromuscular system's effectiveness in coordinating movement, is important for clinicians to understand.

At the end of this session, attendees will be able to:

1. Understand the therapeutic theories and concepts, as well as the indications and contraindications, regarding the application of proprioceptive neuromuscular facilitation techniques.
2. Identify patients with diagnoses that would benefit from PNF techniques for the upper extremity.
3. Create a comprehensive rehabilitation program that includes the use of upper extremity PNF techniques.

### **Using Cognitive Loading To Enhance Ankle Sprain Rehabilitation**

Domain: IV

Skill Level: Advanced

CEU: 1 Category A

*Christopher Burcal, PhD, ATC*

*Terry Grindstaff, PhD, PT, ATC*

Ankle sprains are the most common musculoskeletal injury sustained during sport and physical activity. Current treatment strategies focus on the local tissues, often at the expense of the neuromuscular consequences. The addition of cognitive loading, and other techniques, force the patient to actively overcome additional challenges that help to restore neuromuscular control and enhance rehabilitation outcomes.

At the end of this session, attendees will be able to:

1. Summarize key factors that providers should consider when integrating cognitive loading into ankle sprain rehabilitation.
2. Identify opportunities within their organization that could be refined to better incorporate cognitive loading activities.
3. List cognitive loading tasks that could be used during rehabilitation.

### **Utilization of Epidemiological Data To Create Heat Policies and Reduce Risk Rates**

Domain: I, III, V

Skill Level: Advanced

Theme: Emergency Planning/Response

CEU: 1 EBP

*Bud Cooper, PhD, ATC*

*Yuri Hosokawa, PhD, ATC,*

Currently most sports organizations use a national model to guide policy making as it pertains to extreme weather environments. Recent research has shown that there is a need for either regional or statewide environmental evaluation in order to best provide the basis for pertinent policy development. It has been shown that differing regions of the country have a varied environmental profile and therefore what the impact may be as it influences exertional heat illness risk. Pending

At the end of this session, attendees will be able to:

1. Explain the basic principles of environmental heat assessment and its impact on human thermoregulation
2. Describe variables that must be considered when making policy changes for exercise in hot weather environments
3. Describe whether WBGT values are affected by athletic playing surface or not.

### **Utilizing Emotional Intelligence in Your Clinical Practice**

Domain: V

Skill Level: Advanced

Theme: Mental Wellness

CEU: 1 EBP

*Lisa Kluchurosky, M.Ed., AT, ATC*

Now more than ever, the importance of team-based healthcare to achieve best patient outcomes has become more widely recognized, shaping models of care as well as some reimbursement models. Athletic trainers need to be able to function at a higher level as part of a team in order to deliver the best care to their patients and meet the growing demands of healthcare. This is becoming more important as the athletic training profession expands into new roles within healthcare working with a broader spectrum of the active population. To achieve this, communication, collaboration and the ability to build relationships are key. Emotional Intelligence (EQ) is a tool that can greatly enhance and influence thoughts and decisions that ultimately impact care provided to patients. Additionally, some of the literature makes a correlation between higher levels of emotional intelligence and communication, constructive conflict resolution, improved individual and team performance and patient safety. Finally, EQ has been shown to improve job performance, stress management, and a greater sense of accomplishment and satisfaction of positively impacting patients.

At the end of this session, attendees will be able to:

1. Define the Emotional Intelligence (EI) model and associated competencies
2. Describe the importance of applying various strategies to fit the situation and people involved
3. Identify personal strategies for incorporating emotional intelligence to influence clinical care

### **Vision, Neurocognition and Dual-Tasking: Implications for Lower Extremity Injury Rehabilitation**

Domain: IV

Skill Level: Advanced

CEU: 1 Category A

*Adam Rosen, PhD, ATC*

*Christopher Burcal, PhD, ATC*

In common ligament injuries such as ankle sprain and ACL tears, recent research has also found discrepancies in visual utilization and neurocognitive function. Altered sensorimotor feedback and processing may influence reinjury in individuals with a history of lower extremity injury. Evidence suggests traditional rehabilitation protocols may be inadequate due to high injury rates. But how do athletic trainers introduce these elements into rehabilitation protocols? This session will provide guidance for the clinician how to implement visual and sensory reweighting, neurocognitive training and dual-tasking throughout rehabilitation and return to play decision making.

At the end of this session, attendees will be able to:

1. Understand the available evidence of the role of vision, neurocognition and dual-tasking in relation to lower extremity injuries.
2. Modify exercises to challenge patients to reweight sensory functions to improve patient-reported outcomes.
3. Develop rehabilitation protocols which utilize visual and cognitive inputs in the management of lower extremity injuries.

### **What To Do Before Shots Are Fired: Designing an Emergency Action Plan for an Active Shooter Incident at Your Institution**

Domain: I, III, V

Skill Level: Essential

Theme: Emergency Planning/Response

CEU: 1 EBP

*Edward Strapp, ATC, NRP, FP-C*

Emergency action plans (EAP) are crucial to increase the odds of survival during an active assailant event. Standard lock down and shelter in place strategies may not always be the best option for Athletic Trainers (AT). What happens during the school day is different than when AT typically work with patients (i.e., after 3 pm and weekends). EAP for large group environments (e.g., sporting events) require evidence-based trauma management strategies and the use of citizen response algorithms for the greatest survivability. Perceived challenges such as budget, equipment constraints, and training must be explored and addressed with practical solutions.

At the end of this session, attendees will be able to:

1. Describe characteristics of shooters.
2. Discuss how emergency action plans can be updated to prepare for active shooter situations.
3. Describe evidence-based prevention strategies for active assailant event response.
4. Explain how differences between the classroom settings and athletic environments significantly alter the required response to those building an Emergency Action Plan.

## **Free Communication Educational Programming**

### **Free Communication Oral Presentation: Socio-Cultural Examination in Patient-Centered Care**

Domain: I, II, IV, V

CEU: 1 Category A

Relationship Between Racial Identity and Concussion Care-Seeking Behaviors in Collegiate Student-Athletes

*Anthony Cosby, LAT, ATC, University of North Carolina at Chapel Hill*

#### **\*\* Pre-Professional/Professional Student Award Winner\*\***

Preliminary Investigation between Race as a Social Determinant of Health and Symptom Endorsement Following a Sport-Related Concussion

*Claire Brewer, University of Alabama*

Understanding Foundational Patterns of Concussion History and Nondisclosure Between Black/African American and White College Athletes

*Jessica Wallace, PhD, LAT, ATC, University of Alabama*

The Relationship Between Socioeconomic Status, Race/Ethnicity and Access to Athletic Trainers in Public Secondary Schools

*Eliza Barter, DAT, LAT, ATC, Indiana State University*

Secondary School Socioeconomic Status and Athletic Training Practice Characteristics

*Hannah Robison, MS, LAT, ATC, Indiana University Bloomington*

Athletic Trainer Awareness and Needs as Providers for Transgender Student-Athletes

*Daniel Walen, DAT, AT, ATC, Indiana State University*

The Impact of Non-Native English Speaking Patients and Support Systems on Patient Care Delivery

*Brea Stanton, ATC, Indiana State University*

Athletic Trainers' Viewpoints of Patient-Centered Care

*Carly Wilson, MS, ATC, University of South Carolina*

Health Literacy Levels of Collegiate Student-Athletes

*Jodee Roberts, LAT, ATC, Indiana State University*

Ethnocultural Empathy in Athletic Training Students

*Kim Evans, LAT, ATC, Idaho State University*

At the conclusion of this session, attendees will be able to:

1. Explain the effects of social determinants of health on injury evaluation and reporting.
2. Describe the socio-cultural characteristics in the secondary school setting.
3. Summarize the impact of socio-culture factors in health care delivery.

**Free Communication Oral Presentations: Pediatric Athletes and Concussion: Yes They Are Different Than Adults**

Domain: I, II, IV

CEU: 1 Category A

Pediatric Athletes and Concussion: Yes They Are Different Than Adults

*Shane Caswell, PhD, ATC, George Mason University*

Exploring the Effect of Family History of Anxiety on Clinical Outcomes in Adolescents with Sport-Related Concussion

*Chelsea Frascoia, MS, ATC, LAT, University of Arkansas*

Post-Concussion Visio-Vestibular Function in the Private Secondary School Setting

*Patricia Roby, PhD, ATC, Center for Injury Research and Prevention, The Children's Hospital of Philadelphia*

**\*\* Established Career Award Winner\*\***

Test-Retest Reliability of the Concussion Quality of Life-Youth Patient-Report Outcome Measure (Version 1)

*Tamara Valovich McLeod, PhD, ATC, FNATA, A.T. Still University*

Children with Attention-Deficit/Hyperactivity Disorder Endorse Poorer Health-Related Quality of Life Than Their Counterparts

*Elizabeth Washington, ATC, George Mason University*

Assessing the Acute Effects of Concussion in Middle School Children with the Child SCAT5

*Patricia Kelshaw, PhD, LAT, ATC, University of New Hampshire*

Concussion Rates in U.S. Middle School Athletes from the 2015-2016 to 2019-2020 School Years

*Samantha Hacherl, ATC, George Mason University*

Can Baseline Concussion Symptoms Predict Severity of Depression in Adolescent Athletes?

*Ashley Gray, DAT, LAT, ATC, Mt. Moravian College*

Comparison of Sideline Performance of the Child SCAT5 Between Concussed and Non-Concussed Middle School Athletes

*Nicholas Erdman, PhD, LAT, George Mason University*

At the conclusion of this session, attendees will be able to:

1. Examine performance of pediatric athletes on clinical measures of sport-related concussion.
2. Review the incidence of sport-related concussion in pediatric athletes

## **Free Communication Oral Presentations: Therapeutic Interventions for Ankle and Knee Injuries**

Domain: II, IV

CEU: 1 Category A

The Impact of Treatment Characteristics on Self-Reported Function at the Time of Return-to-Play Following an Ankle Sprain Injury: A Report from the Athletic Training Practice-Based Research Network  
*Ashley Marshall, PhD, ATC, Appalachian State University*

Changes in Patient-Reported Outcome Measures Following Varied Interventions in Patients With Chronic Ankle Instability  
*Cameron Powden, PhD, ATC, University of Indianapolis*

Differential Acute Effects of Whole Body and Local Muscle Vibration on Loading Rates During Walking in Individuals With Anterior Cruciate Ligament Reconstruction  
*Derek Dewig, MA, ATC, University of North Carolina at Chapel Hill*

Two-Week Joint Mobilization Intervention Did Not Change Ankle Sagittal Biomechanics During Walking in Individuals With CAI  
*Jaeho Jang, MA, ATC, University of North Carolina at Chapel Hill*

Verbal Feedback Delivered During a Multi-Component ACL Injury Prevention Program Produces Mixed Effects on Lower Extremity Biomechanics  
*Lauren Hawkinson, MA, ATC, University of North Carolina at Chapel Hill*

An Objectively Monitored 4-Week Home Exercise Plan Improves Single Leg Hop Performance after ACL Reconstruction  
*Thomas Birchmeier, MS, ATC, CSCS, Michigan State University*

Effect of Externally-Focused Versus Internally-Focused Instructions on Dynamic Knee Valgus During a Single-Leg Squat  
*Katelyn Gilday, MS, ATC, Valparaiso University*

Plantar Massage Alters Visual Reliance During Static Stance in those with Chronic Ankle Instability  
*Mary Spencer Cain, PhD, ATC, University of North Carolina at Chapel Hill*

The Effects of Blood Flow Restriction on Muscle Activation During Dynamic Balance Exercises in Individuals With Chronic Ankle Instability  
*Michael Burkhardt, MS, Bluefield College*

Two Weeks of Plantar Massage Treatments Do Not Change Frontal Plane Ankle Kinematics in those With Chronic Ankle Instability  
*Kimmery Migel, PT, DPT, OCS, University of North Carolina at Chapel Hill*

At the conclusion of this session, attendees will be able to:

1. Summarize current treatment approaches for knee and ankle injuries.
2. Utilize best evidence to support treatment interventions for knee and ankle injuries.

**Free Communication Oral Presentations: Living Your Best Life as an Athletic Trainer: Professional Development and Quality of Life**

Domain: II, IV

CEU: 1 Category A

Athletic Trainer Resilience During the COVID-19 Pandemic

*Kenneth Games, PhD, LAT, ATC, Indiana State University*

Athletic Trainers' Familiarity with and Perceptions of Athletic Training Scope of Practice

*Nydia Cabra, DAT, LAT, ATC, A.T. Still University*

**\*\* Early-Career Award Winner\*\***

Athletic Trainers' Perceptions of and Experiences with Unlearning in Clinical Practice

*Alicia Lacy, PhD, ATC, A.T. Still University*

Burnout and Commission of Medical Errors in Secondary School Athletic Trainers

*Leslie Oglesby, PhD, LAT, ATC, University of Southern Mississippi*

Continuing Education Using Infographics Improves the Knowledge and Practice of the Social Determinants of Health

*Kathryn Downs, ATC, University of South Carolina*

Hanging Tough: The Relationship Between Coping Strategies and Increased Workload in Secondary School Athletic Trainers

*Andrew Gallucci, PhD, LAT, ATC, Baylor University*

Professional Quality of Life: An Examination of Compassion Fatigue and Compassion Satisfaction in Athletic Trainers

*Tina Riordan, MS, LAT, ATC, Springfield College*

Psychological Ownership In Athletic Training

*Justin Young, LAT, ATC, Indiana State University*

The Lived Clinical Experiences of Expatriate Athletic Trainers

*Emily Mulkey, ATC, University of Pittsburgh*

Work-Addiction Risk in Athletic Trainers and Its Relationship to Work-Life Conflict and Burnout

*Timothy Gilgallon, LAT, ATC, University of Connecticut*

At the conclusion of this session, attendees will be able to:

1. Explain methods to promote professional development.
2. Explore issues that affect quality of life for athletic trainers.

## **Free Communication Oral Presentations: Evidence-Based Management of Overhead Athletes**

Domain: I, II, IV

CEU: 1 Category A

Evidence-Based Management of Overhead Athletes

*Kevin Laudner, PhD, ATC, University of Colorado Colorado Springs*

Descriptive Report of Injuries Sustained by Secondary School Baseball Players Categorized by Level of Community Socioeconomic Status

*Matthew Moreau, MS, ATC, A.T. Still University*

### **\*\* Post-Professional Advanced Clinical Track Student Award Winner\*\***

The Epidemiology of Injuries in Middle School Baseball Between the 2015/16 and 2018/19 School Years

*Kennedy Dewey, ATC, Georgia Mason University*

A Rare Humeral Shaft Fracture During Baseball Pitching

*Arianna Bakst, Marist College*

Early Sport Specialization Linked to Upper Extremity Injuries and Throwing Arm Function in Collegiate Baseball Players

*Jason Croci, MS, ATC, EMT, Adrian College*

Repair of an Avulsion Fracture of the Rotator Cuff Tendon in a Collegiate Lacrosse Player

*Kelly Lumpkin, PhD, LAT, ATC, Liberty University*

The Acute Effect of Pitching on Range of Motion, Strength and Muscle Architecture

*Nicholas Mirabito, MS, LAT, ATC, Temple University*

Effects of Standard and Underweight Baseballs on Thoracolumbar Contralateral Flexion and Ball Velocity in Youth Baseball Pitchers

*Allison Susa, MS, LAT, ATC, University of Minnesota Duluth*

Neuromuscular Function of the Upper Extremity Musculature in Individuals with a History of Glenohumeral Labral Repair

*Katsumi Takeno, PhD, AT, ATC, University of North Georgia*

At the conclusion of this session, attendees will be able to:

1. Describe injury characteristics in overhead athletes.
2. Summarize adaptations in overhead athletes physical characteristics.
3. Understand considerations for management of unique conditions in overhead athletes.

## **Free Communication Oral Presentations: Moving the Needle on Concussion Evaluation Techniques**

Domain: I, II, IV

CEU: 1 Category A

Moving the Needle on Concussion Evaluation Techniques

*Scott Piland, PhD, ATC, University of Southern Mississippi*

Symptom Provocation During Early-Stage Concussion Rehabilitation: A Randomized Trial of Two Protocols in Professional, Collegiate/University and Interscholastic Athletes

*Johna Register-Mihalik, PhD, LAT, ATC, University of North Carolina at Chapel Hill*

The Association Between Sensation-Seeking Behaviors and Concussion-Related Knowledge, Attitudes and Perceived Norms Among Collegiate Student-Athletes

*Christine Callahan, MS, University of North Carolina at Chapel Hill*

The Association of Sleep Symptoms and Concussion Recovery in Collegiate Athletes

*Catherine Donahue, MEd, ATC, University of Virginia*

Performance on the Concussion Balance Test (COBALT) is Indicative of Time to Recovery in Athletes Following Sports-Related Concussion

*Carolina Quintana, PhD, ATC, University of Kentucky*

The Effects of Concussion on Quantity and Quality of Sleep

*Taren Bone, MS, LAT, ATC, Marshall University*

The Effects of the COVID-19 Pandemic on ImPACT Performance in Collegiate Athletes

*Thomas Newman, PhD, ATC, University of Virginia*

Frequency and Magnitude of Rotational Impacts in Collegiate Football Players

*Kimberly Hill, MS, ATC, Marshall University*

Examining Somatosensory and Neuromuscular Function Throughout Concussion Recovery: A Preliminary Study

*Landon Lempke, PhD, LAT, ATC, University of Georgia*

At the conclusion of this session, attendees will be able to:

1. Discuss emerging and novel techniques for the evaluation of sport-related concussion.
2. Identify clinical outcomes that may contribute to recovery from sport-related concussion.

## **Free Communication Oral Presentations: Tactical Athletes Injury Reporting and Perceptions**

Domain: I, II, IV

CEU: 1 Category A

Tactical Athletes Injury Reporting and Perceptions

*Kenneth Cameron, PhD, MPH, ATC, John A Feagin Jr. Sports Medicine Fellowship, Keller Army Hospital*

The Effects of mTBI Lifetime Incidence on Cortical Thickness in Special Operations Force Combat Soldiers  
*Jacob Powell, MS, LAT, ATC, University of North Carolina at Chapel Hill*

Factors Associated With Musculoskeletal Injury in Military Officers During a Six-Month Officer Training Course

*Amelia Barrett, MS, ATC, Henry M. Jackson Foundation, Consortium for Health and Military Performance*

Air Force Special Warfare Personnel's Perceptions of Musculoskeletal Injury Reporting

*Kristen Neitz, MS, LAT, ATC, U.S. Army Research Institute of Environmental Medicine*

Dietary Supplement Use in U.S. Service Members During Secondary Training

*Alexandria Gregory, Henry M. Jackson Foundation, Consortium for Health and Military Performance*

U.S. Army Soldiers Who Do Not Seek Medical Care for Musculoskeletal Injuries Prior to Deployment: Survey Findings from an Infantry Battalion

*Kymerli Mathis, MS, LAT, ATC, U.S. Army Research Institute of Environmental Medicine*

Rucksack Palsy in a Military Cadet Soccer Athlete: A Case Report

*Jessica Naclerio, Marist College*

A Qualitative Study of the Perceptions and Expectations Impacting Concussion Care Among Reserve Officer Training Corps Cadets

*Brittany Ingram, MA, LAT, ATC, University of North Carolina at Chapel Hill*

At the conclusion of this session, attendees will be able to:

1. Describe injury epidemiology and reporting factors in tactical athletes.
2. Understand military personnel perceptions of reporting injuries.

## **Free Communication Oral Presentations: Emergency Planning and Catastrophic Injury**

Domain: I, III, IV, V

CEU: 1 Category A

Emergency Planning and Catastrophic Injury

*Rebecca Stearns, PhD, ATC, PES, University of Connecticut*

Surveillance of Catastrophic Sport and Exercise-Related Injury and Illness Among Middle School, High School and College Athletes, 2013-14 Through 2018/19

*Kristen L Kucera, PhD, MSPH, ATC, University of North Carolina at Chapel Hill*

Athletic Directors Report of Exertional Heat Illness Policies and Procedures in U.S. High Schools

*Samantha Scarneo-Miller, PhD, LAT, ATC, West Virginia University*

Access, Engagement and Experiences With Critical Incident Response Resources

*Karen Holmes, ATC, Indiana State University*

Stakeholder and Policy Related Factors Associated with Implementation of the NATA-IATF Heat Acclimatization Guidelines

*Aliza Nedimyer, MA, LAT, ATC, University of North Carolina at Chapel Hill*

Proximal Peroneus Longus Degloving Injury in a Women's Soccer Player: Level 4 CASE Study

*Haden Maloney, ATC, Xavier University*

Acute Traumatic Thyroid Cartilage Fracture in Men's Lacrosse: Level 4 CASE Study

*Jessica Barrett, PhD, ATC, Springfield College*

A Comparison of Change in Body Mass, Urine Color and Urine Specific Gravity to Determine Hydration Status During College Football Preseason

*Tina Claiborne, PhD, ATC, CSCS, Adrian College*

Epidemiology of Patients Presenting to Emergency Departments in the U.S. With Football-Related Injuries, 2006-2019

*Tamara Carlisle, MA, LAT, ATC, A.T. Still University*

At the conclusion of this session, attendees will be able to:

1. Describe injury characteristics in emergency and catastrophic injuries.
2. Describe management strategies in emergency and catastrophic injuries.
3. Understand policies and guidelines for emergency and catastrophic injuries.

## **Free Communication Oral Presentations: Quality of Life After Lower Extremity Injury**

Domain: I, III, IV

CEU: 1 Category A

Quality of Life After Lower Extremity Injury

*Carrie Docherty, PhD, LAT, ATC, Indiana University*

A Comparison of Subjective and Objective Measures in Adolescents and Young Adults with Lateral Ankle Sprain History

*Katherine Bain, ATC, PT, University of Kentucky*

Pain is a Common Experience in High-School Runners but Does Not Influence Performance or Workload

*David Bazett-Jones, PhD, ATC, CSCS, University of Toledo*

Balance Self-Efficacy Mediates The Relationship Between Injury-Related Fear And Disability In Individuals With Chronic Ankle Instability

*Ashley Suttmilller, MEd, ATC, Old Dominion University*

Differences in Anthropometrics and Patient-Reported Outcomes Based on the Number of Ankle Sprains Sustained

*Adam Rosen, PhD, ATC, University of Nebraska at Omaha*

Use of a Patient Generated Outcome Measure to Identify Those Symptoms and Activities of Greatest Importance to Collegiate Athletes

*Jennifer Tinsley, MS, LAT, ATC, University of Kentucky*

Using the International Classification of Functioning, Disability and Health to Compare Patient-Generated Concerns With Those Encompassed in Common Sports-Related Patient-Reported Outcome Measures

*Jennifer Howard, PhD, LAT, ATC, Appalachian State University*

Change in Physical Activity Level Predicts Knee-Related Quality of Life 6 Months After ACL Reconstruction

*Christopher Kuenze, PhD, ATC, Michigan State University*

Pain Catastrophizing is Associated with Knee-Related Quality of Life in Individuals with a History of Anterior Cruciate Ligament Reconstruction

*Francesca Genoese, MS, LAT, ATC, Michigan State University*

At the conclusion of this session, attendees will be able to:

1. Describe the effects of patient-reported outcome symptoms and quality of life on lower extremity function.
2. Implement patient-reported outcome measures in the evaluation of patients with lower extremity injury.

**Free Communication Oral Presentations: Developing the Future Athletic Trainer: Strategies and Issues in Education and Clinical Education**

Domain: I, IV

CEU: 1 Category A

Racial and Ethnic Disparities on BOC Exam Performance: 2017-2018 to 2019-2020 Exam Periods

*William Adams, PhD, ATC, University of North Carolina at Greensboro*

Athletic Training Student Core Competency Professional Behavior Implementation Between Immersive and Non-Immersive Experiences: A Report from the AATE Research Network

*Bailey Jones, MSAT, ATC, Old Dominion University*

Overview of 2020 Admissions Data Across Post-Baccalaureate Athletic Training Programs

*Amy Brugge, EdD, LAT, ATC, Minnesota State University at Mankato*

Professional Master's Athletic Training Students' Career Influences: A Convergent Mixed-Methods Study

*Ryan Nokes, PhD, ATC, Rocky Mountain University of Health Professions*

Athletic Training Program Directors' and Professional Students' Educational Experiences for Delivering Transgender Patient Care

*Erica Schulman, SCAT, ATC, University of South Carolina*

Athletic Training Student Self-Assessment of Anxiety: Completing Clinical Coursework Amidst the COVID-19 Pandemic

*Samantha Scott, MS, ATC, Springfield College*

Clinical Education Coordinators Selection and Deselection Criteria for Clinical Education Experiences

*Jennifer Benedict, DAT, AT, ATC, Indiana State University*

Identifying Self-Authorship and Developmentally Effective Experiences Among Professional Masters Athletic Training Students

*Sarah Myers, PhD, MEd, ATC, Georgia College and State University*

Integration of Interprofessional Education in Athletic Training Clinical Education

*Sharon Feld, ATC, Ball State University*

Racial Microaggressions During Clinical Education Experiences of Professional Master's Athletic Training Students

*Zuri Greene-Johnson, University of Lynchburg*

At the conclusion of this session, attendees will be able to:

1. Summarize various educational techniques used in athletic training education.
2. Explain how the techniques can improve education and clinical practice.

**Free Communication Oral Presentations: I'm Certified- Now What? Strategies for Transition to Practice**

Domain: IV

CEU: 1 Category A

I'm Certified- Now What? Strategies for Transition to Practice

*Lindsey Eberman, PhD, LAT, ATC, Indiana State University*

Factors Influencing Athletic Trainers to Pursue Residency Training

*Daniel Dobrowolski, LAT, ATC, Indiana State University*

Multi-Stakeholder Perceptions of Young Professionals' Integration During Role Transition

*Ashley Thrasher, EdD, LAT, ATC, Western Carolina University*

Multi-Stakeholder Perspectives of Organizational Aspects Affecting Transition to Practice for Newly Credentialed Athletic Trainers

*Sarah Lyons, MS, ATC, PES, Stanford Sports Medicine*

The Impact of Onboarding During Transition to Practice for Newly Credentialed Athletic Trainers

*Stacy Walker, PhD, ATC, FNATA, Ball State University*

Practice-Based Research Experiences of Doctor of Athletic Training Degree Graduates

*Matthew Rivera, DAT, LAT, ATC, Indiana State University*

Athletic Training Students' Perceptions of Translating Knowledge from Classroom to Clinical Practice

*Cailee Welch Bacon, PhD, ATC, A.T. Still University*

Personality Characteristics, Skills and Program Preparation that Facilitate or Impede Transition to Practice: Multi-Stakeholder Perspectives

*Tricia Kasamatsu, PhD, ATC, California State University, Fullerton*

Developing and Assessing Clinical Reasoning in Athletic Training Residency Education

*Dyllan Hofmann, DAT, LAT, ATC, Indiana State University*

At the conclusion of this session, attendees will be able to:

1. Explain how current trends in AT development affects clinical practice.
2. Explore obstacles and opportunities for early career athletic trainers.

## **Free Communication Oral Presentations: Lower Extremity Muscle and Cartilage Imaging**

Domain: II

CEU: 1 Category A

Pre-Operative Femoral Cartilage Ultrasound Echo-Intensity Associates with Patient-Reported Outcomes at One Year Following Anterior Cruciate Ligament Reconstruction

*Matthew Harkey, PhD, ATC, Michigan State University*

Ultrasound Assessment of Femoral Cartilage Thickness after Anterior Cruciate Ligament Reconstruction: A Longitudinal and Case Control Study

*Caroline Lisee, PhD, ATC, University of North Carolina at Chapel Hill*

Ultrasound Measures of Talofibular Interval Length is Different Between Individuals With and Without Chronic Ankle Instability

*Danielle Torp, MS, ATC, University of North Carolina at Charlotte*

Hop Biomechanics Associate with Greater Talar Cartilage Deformation Following a Dynamic Loading Protocol in Those with Chronic Ankle Instability

*Kyeontak Song, PhD, ATC, University of Kentucky*

Short-Term Impact of Volleyball Workout on Knee Cartilage Thickness

*Hsin-Min Wang, PhD, National Changhua University of Education*

The Effect of Anterior Cruciate Ligament Reconstruction on Circulating Biomarkers of Muscle Hypertrophy and Atrophy

*Soo Jin Kim, Inha University*

Rapid Onset Chondrolysis and Osteoarthritis Following Anterior Cruciate Ligament Reconstruction: Level 4 CASE Study

*Cynthia Wright, PhD, ATC, Whitworth University*

Quadriceps Muscle Quality is Associated With Strength But Not Walking Gait Biomechanics Following Anterior Cruciate Ligament Reconstruction

*Christopher Johnston, PhD, LAT, ATC, High Point University*

Hamstrings Muscle Morphology After Anterior Cruciate Ligament Reconstruction: A Systematic Review and Meta-Analysis

*David Sherman, DPT, ATC, University of Toledo*

At the conclusion of this session, attendees will be able to:

1. Summarize current findings related to muscle size, muscle quality, and cartilage structure in patients with lower extremity injury.
2. Describe contemporary clinically relevant approaches to muscle and cartilage imaging in patients with lower extremity injury.

## **Free Communication Oral Presentations: Neural Outcomes & LE Injury**

Domain: I

CEU: 1 Category A

Changes in Knee Joint Loading in Individuals with Anterior Cruciate Ligament Reconstruction Across Times

*Shiho Goto, PhD, ATC, Texas Health Sports Medicine*

Inefficient Visual Cortex Activation Is Associated With Postural Control Deficits in Anterior Cruciate Ligament Reconstruction Patients

*Yangmi Kang, MS, ATC, New Mexico State University*

Examining the Dynamic Complexity of the Quadriceps Following Anterior Cruciate Ligament Reconstruction

*Steven Davi, MS, ATC, University of Connecticut*

Individuals with Chronic Ankle Instability Have Lower Motor Cortex Interhemispheric Structural Connectivity Compared to Healthy Controls

*Phillip Gribble, PhD, ATC, FNATA, University of Kentucky*

Altered Corticospinal Excitability During Single-leg Balance Following Acute Ankle Sprain

*Joosung Kim, MS, ATC, University of Miami*

Assessment of Quadriceps Corticomotor and Spinal-Reflexive Excitability in Individuals with a History of Anterior Cruciate Ligament Reconstruction: A Systematic Review and Meta-Analysis

*Justin Rush, MS, ATC, University of Toledo*

Influence of Whole-Body Vibration on Hamstrings Neuromuscular Function in Healthy Individuals

*Cale Chaltron, MS, AT, ATC, University of Toledo*

The Effects of 72 Hours of Dynamic Ankle Immobilization on Neural Excitability

*Jasmine Cash, MS, Medical University of South Carolina*

The Impact of Differential Knee Laxity on Brain Activation During Knee Joint Loading

*Kyoungyoun Park-Braswell, PhD, ATC, Indiana Wesleyan University*

External Focus of Attention Influences Brain Activity Associated with Single Limb Balance Performance

*Nathan Vorst, Paderborn University*

At the conclusion of this session, attendees will be able to:

1. Summarize neural changes occurring post lower extremity injury.
2. Describe strategies to mitigate neural changes following lower extremity injury.

## **Free Communication Oral Presentations: Postural Control and Movement Quality**

Domain: I

CEU: 1 Category A

Countermovement Jump Performance Differences in Females With and Without History of Anterior Cruciate Ligament Construction

*Naoko Giblin, PhD, ATC, University of Wisconsin-La Crosse*

Neurocognitive Function Influences Dynamic Postural Stability Strategies In Collegiate Athletes

*Ke'La Porter, LAT, ATC, CSCS, University of Kentucky*

Trunk and Lower Extremity Kinematic and Kinetic Characteristics of Good and Poor Movers During a Double-Leg Squat Assessment

*Timothy Mauntel, PhD, ATC, Womack Army Medical Center*

Balance Differences on the Star Excursion Balance Test and the Dynamic Leap and Balance Test in Healthy and Patellofemoral Pain Individuals

*Susan Saliba, PhD, ATC, FNATA, University of Virginia*

Single-Leg Hop Anthropometric Threshold is More Sensitive Than a Limb Symmetry Threshold Following a Lower Extremity Injury

*Janet Simon, PhD, AT, ATC, Ohio University*

Effects of Virtual Reality on Postural Stability During a Dynamic Transition Task

*Jacob Bendixen, MS, LAT, ATC, Georgia Southern University*

Movement Errors Improve Between Age Groups in Children

*Emma Zuk, MS, ATC, University of Connecticut*

Relationships Between Lumbopelvic Function and Patient-Reported Outcomes in Individuals with Chronic Ankle Instability

*Sunghoon Chung, MS, ATC, Old Dominion University*

Running Gait Biomechanics in Females with Chronic Ankle Instability and Ankle Sprain Copers

*Rachel Koldenhoven Rolfe, PhD, ATC, Texas State University*

Hamstrings Stiffness and Strength Associate With Hamstrings-to-Quadriceps Co-Activation During Jump Landing Tasks

*Ben Morse, MS, AT, ATC, University of Toledo*

At the conclusion of this session, attendees will be able to:

1. Explain how balance deficits are associated with lower extremity conditions.
2. Explore issues of movement patterns associated with functional activities.

## **Free Communication Oral Presentations: Restoring Function in ACL-R Patients**

Domain: IV

CEU: 1 Category A

Anterior Cruciate Ligament Repair Using the InternalBrace™ Ligament Augmentation Technique

*Sara Barker, Marist College*

Biomechanical Underloading During Gait is Linked to Less Physical Activity in Individuals with Anterior Cruciate Ligament Reconstruction

*Brian Pietrosimone, PhD, ATC, University of North Carolina at Chapel Hill*

### **\*\* Post-Professional Terminal Degree Student Award Winner\*\***

Disagreement in Pass Rates Among Different Components of Return to Sports Test Batteries After ACLR

*Xavier Thompson, MS, ATC, University of Virginia*

Single Stage Revision ACL Reconstruction With Quadriceps Tendon Autograft, Lateral Meniscus Transplant and Osteochondral Allograft Transplantation in a 27-year-old Male: Level 3 Case study

*Hannah Copenhaver, LAT, ATC, OTC, Vail Summit Orthopedics*

The Influence of Self-Reported Function on Lower Extremity Energy Absorption in ACL Reconstructed Individuals

*Meredith Decker-Hamm, PhD, LAT, ATC, University of Texas at Arlington*

Unique Cause of Anterior Knee: Level 3 CASE Study

*Meagan Hanley, ATC, The Steadman Clinic*

Predicting ACL Reinjury From Return-to-Activity Assessments at 6 Months Post-Surgery: A Prospective Cohort Study

*Stephan Bodkin, PhD, ATC, University of Colorado Anschutz Medical Campus*

Single Leg Hop Performance in Individuals with Anterior Cruciate Ligament Reconstruction: Should We Consider the Journey Rather than the Outcome?

*Grant Norte, PhD, ATC, CSCS, University of Toledo*

Single-Leg Triple Hop Propulsion Strategies in Females With and Without a History of ACL Reconstruction

*Colin Mulligan, MA, ATC, Oregon State University*

Trunk and Lower Extremity Biomechanics During Two Single-Leg Landing Tasks in Individuals With Anterior Cruciate Ligament Reconstruction

*Erika Zambarano, MS, AT, ATC, University of Toledo*

At the conclusion of this session, attendees will be able to:

1. Summarize the restoration of function after an ACL reconstruction.
2. Explain how physically active individuals move and function after an ACL reconstruction and how this may impact other aspects of health.

## **Free Communication Oral Presentations: Sport Injury Epidemiology and Treatment Services**

Domain: I

CEU: 1 Category A

The Epidemiology of Injuries in Middle School Wrestling Between the 2015/16 and 2019/20 School Years  
*Patrick Fleming, ATC, George Mason University*

Associations Between Injury and Sport Specialization Behaviors in Youth Basketball  
*Eric Post, PhD, ATC, Indiana State University*

Descriptive Epidemiology of Acute and Overuse, Time-Loss and Non-Time-Loss Lateral Ankle Sprains and Health Care Utilization in Collegiate Student-Athletes  
*Cathleen Brown Crowell, PhD, ATC, Oregon State University*

Descriptive Epidemiology of Lower Extremity Acute and Overuse, Time-Loss and Non-Time-Loss Injuries in Collegiate Student-Athletes  
*Michael Soucy, Oregon State University*

The Relationships Between Early Sports Specialization, Overuse Injuries and Health-Related Quality of Life in Throwing Athletes  
*Cassidy Evans, MS, A.T. Still University*

Injury and Treatment Characteristics of Sport-Specific Injuries from 2013-2020: A Report from the Athletic Training Practice-Based Research Network  
*Kenneth Lam, ScD, ATC, A.T. Still University*

Injury History Profile of Hip Impingement in NCAA sports: 2009/10-2019/20  
*Adrian Boltz, MS, Datalys Center for Sports Injury Research and Prevention*

Attitudes Towards Injury Prevention Program Participation Differ Based on Sport  
*Hollye Robinson, Mercer University*

The Association of High School Sport Participation and Injury History in Collegiate Club Sport Athletes  
*Kevin Biese, MA, LAT, ATC, University of Wisconsin-Madison*

Current Practices in Acute Musculoskeletal Injury Care: A National Survey of Athletic Trainers  
*Tyler Beauregard, MS, ATC, CSCS, Ohio State University*

At the conclusion of this session, attendees will be able to:

1. Describe current trends in sport-specific injuries.
2. Summarize general treatment approaches for sport-related injuries.

## **Free Communication Oral Presentations: The Concussion Experience: Management and Recovery**

Domain: I

CEU: 1 Category A

The Concussion Experience: Management and Recovery

*Julianne Schmidt, PhD, ATC, University of Georgia*

History of Sport-Related Concussion Negatively Influences Knee Self-Efficacy in Individuals with a History of ACL Reconstruction

*Shelby Baez, PhD, ATC, Michigan State University*

Collegiate Beach Volleyball Athlete Diagnosed Concussion Turns to Three Level Cervical Disc Herniation

*Danica Hahn, Florida International University*

Returning to the Higher Education Classroom Following Concussion

*Tom Bowman, PhD, ATC, University of Lynchburg*

The Influence of Timing of Reporting and Clinic Presentation on Concussion Recovery Outcomes: A Systematic Review and Meta-Analysis

*Mitchell Barnhart, MS, ATC, A.T. Still University*

Undergraduate Students' Experience Returning to Academics After Concussion

*Allyssa Memmini, MS, ATC, University of Michigan*

Association Between Symptom Clusters at Initiation of a Return-to-Activity Protocol and Time to Return to Unrestricted Activity After Concussion in U. S. Service Academy Cadets

*Michael Aderman, ATC, Keller Army Hospital*

Concussion Incidence in NCAA sports: 2014/15-2018/19

*Avinash Chandran, PhD, Datalys Center for Sports Injury Research and Prevention*

Returning after Concussion in Collegiate Student-Athletes: The Academic Experience

*Abigail Bretzin, PhD, ATC, University of Pennsylvania*

At the conclusion of this session, attendees will be able to:

1. Summarize various presentations of typical and atypical management and recovery patterns of concussion.
2. Understand the best evidence to examine contributing modifiers for recovery following concussion.