

Spring 2016

Pertinacity Volume 2 Issue 1

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Recommended Citation

Korey Stringer Institute. Pertinacity. Apr 2016. <https://opencommons.uconn.edu/pertinacity/2>

PERTINACITY

The Stories of KSI

2015 Spring, volume 1, issue 1

KOREY STRINGER INSTITUTE

CATCH-ON, The Benchmark Study

Youth Sport Governing Bodies Meeting

Collaborative Solutions for Safety in Sport



CATCH-ON- Collaboration for Athletic Training Coverage at High Schools: an Ongoing National Survey



Launch of the Youth Sport Safety Governing Bodies meeting



Launch of the Collaborative Solutions for Safety in Sport

UConn
UNIVERSITY OF CONNECTICUT

KSI
Korey Stringer Institute
UNIVERSITY OF CONNECTICUT
Preventing sudden death in sport

KOREY STRINGER INSTITUTE- Providing first-rate information, education, research, assistance and advocacy to protect athletes, soldiers, and laborers.



Dr. Douglas Casa giving a heat lab session at the University of Southern Mississippi in the Fall of 2014.

THE ROAD TO HERE ; THE ROAD AHEAD



The amazing Marie Curie once said, “I was taught that the way of progress is neither swift nor easy”. Given that she is the only person in history to win a Nobel Prize in two different scientific disciplines, and the only female to ever win two Nobel Prizes, the quote takes on even greater relevance. I chant a section of her quote, “neither swift nor easy,” over and over in my head hundreds of times a day. Starting a not-for-profit from scratch was a much bigger undertaking than I could have ever imagined (and I thought it would be brutally hard when I started!!!), but every ounce of the effort over the past 6.5 years since the idea first took shape has taken KSI to where it is now.

KSI celebrated its’ 5th Anniversary on April 23, 2015. There was no big fanfare on that day; just business as usual for the 12 employees and 35 volunteers as everyone continues to work towards the goal of preventing sudden death in sport and physical activity. We are thankful and honored to have the opportunity that was first conceived in late 2008 when Korey’s widow- Kelci Stringer, agent- James Gould, and their lawyer Paul DeMarco approached me with an idea on how best to honor the legacy of a husband and dear friend. With this initial idea and the support of the NFL and Gatorade, the scope of KSI’s evolutionary potential began to take shape.

In this first issue of our KSI Newsletter, you will get a glimpse of the incredible activities of KSI. I often get credit for many of these accomplishments, but I stand on the shoulders of the incredible KSI workforce, our dedicated corporate and educational partners, and the friends around the country who have embraced what we are doing, thereby helping to catapult KSI into national consciousness when it comes to health and safety issues for athletes, soldiers and laborers. The only credit I can take is that I assembled the team, because trust me, they have done the heavy lifting. Since we began, I think the most thrilling part of this wild ride has been to see the need for an organization like KSI. We filled a niche that can serve society and make things better across a huge swath of the population.

So, when you see KSI on your caller ID or social media feed, please take a listen to what we are doing. I invite you to get involved; interact with us on social media, provide advice and wisdom on current issues at hand, and donate if you can (we are a not-for-profit after all, so we need to grovel occasionally). The modus operandi of KSI has been to build the team to take on the challenge, so we welcome your partnership and support. I have a favorite word that I have rarely shared with many people: pertinacity. It is defined as the stubborn pursuit of a goal, never giving up, never giving in, never letting up, and seeing a task through to the end. That is the story of KSI on the road to here and I hope the story we continue to write on the road ahead. Combining our strength certainly allows for more potential to accomplish big things, and KSI has never backed down from a big challenge.

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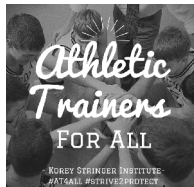
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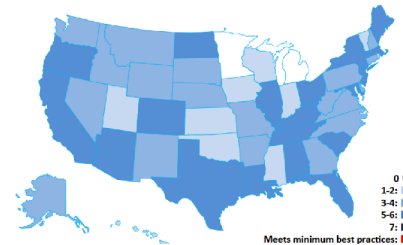
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BENCHMARK STUDY ON ATHLETIC TRAINING COVERAGE AT HIGH SCHOOLS

CATCH ON- COLLABORATION FOR ATHLETIC TRAINING COVERAGE AT HIGH SCHOOLS:

AN ONGOING NATIONAL SURVEY- PUBLIC SCHOOLS

BY RIANA PRYOR, MS, ATC, DIRECTOR OF RESEARCH

The Korey Stringer Institute took on the task of determining the employment status of athletic trainers in public secondary schools in the United States. The goal was to determine the presence of appropriate medical services for student athletes in the high school setting. We were up for the challenge and contacted over 15,000 schools to receive an astounding 57% response rate!

This study was recently published in the [March issue of the Journal of Athletic Training](#) and has already garnered national attention for policy change.

A follow-up study was also completed, surveying all private schools, and data will be released at the National Athletic Trainers' Association National Meeting this coming June.

State	Response Rate (n)	Percent Schools with Full Time Athletic Trainers	Percent Schools with Part Time Athletic Trainers
United States	57%	37%	31%
Alabama	32% (113)	35%	38%
Alaska	56% (84)	0%	4%
Arizona	43% (89)	43%	19%
Arkansas	55% (103)	16%	15%
California	44% (428)	26%	25%
Colorado	46% (131)	24%	34%
Connecticut	69% (96)	33%	50%
Delaware	100% (27)	44%	56%
D.C.	100% (7)	86%	14%
Florida	52% (225)	49%	27%
Georgia	31% (115)	45%	27%

State	Response Rate (n)	Percent Schools with Full Time Athletic Trainers	Percent Schools with Part Time Athletic Trainers	State	Response Rate (n)	Percent Schools with Full Time Athletic Trainers	Percent Schools with Part Time Athletic Trainers
Hawaii	59% (24)	100%	0%	New Mexico	36% (48)	40%	10%
Idaho	61% (82)	17%	26%	New York	49%	27%	36%
Illinois	55%	32%	39%	North Carolina	53%	50%	22%
Indiana	62%	55%	36%	North Dakota	48% (75)	7%	36%
Iowa	54%	16%	49%	Ohio	60%	45%	53%
Kansas	56%	19%	43%	Oklahoma	98%	9%	13%
Kentucky	52%	43%	21%	Oregon	54%	14%	30%
Louisiana	99%	20%	42%	Pennsylvania	89%	72%	30%
Maine	54% (56)	25%	45%	Rhode Island	55% (24)	17%	46%
Maryland	61%	21%	41%	South Carolina	54%	54%	29%
Massachusetts	60%	44%	30%	South Dakota	63%	12%	25%
Michigan	51%	31%	34%	Tennessee	38%	41%	31%
Minnesota	54%	17%	53%	Texas	48%	62%	14%
Mississippi	31% (75)	29%	45%	Utah	44% (53)	30%	30%
Missouri	51%	20%	29%	Vermont	48% (27)	33%	11%
Montana	51% (88)	9%	31%	Virginia	74%	70%	19%
Nebraska	61%	13%	59%	Washington	84%	21%	25%
Nevada	35% (30)	17%	27%	West Virginia	41% (46)	46%	37%
New Hampshire	68% (56)	34%	30%	Wisconsin	66%	36%	48%
New Jersey	100%	91%	10%	Wyoming	68% (45)	24%	24%

PRYOR RR, CASA DJ, VANDERMARK LW, ET AL. ATHLETIC TRAINING SERVICES IN PUBLIC SECONDARY SCHOOLS: A BENCHMARK STUDY. J ATHL TRAIN. 2015;50(2):156-162.

ATHLETIC TRAINING (AT) SERVICES IN PUBLIC SECONDARY

	AT Services in Public Secondary Schools
Full Time AT Services	37% (3,145/8,509)
Coverage Every Afternoon	55% (4,075/8,509)
Total AT Services	70% (5,930/8,509)
% Athletes with Access to AT services	86% (2,394,284/2,787,595)

Alicia Pike, Assistant Director of Youth Sport Safety will present the private school data at the poster session at the National Athletic Trainers' Association 66th Clinical Symposia & AT Expo at St. Louis, MO. The title of the presentation is "Athletic Training Services in Private Secondary Schools" and will be presented on June, 24th 2015.

ATHLETIC TRAINING (AT) SERVICES BY SCHOOL SIZE

Student Enrollment	Have AT Services	Do Not Have AT Services	Full Time AT Services
< 100 students	22% (119/550)	78% (431/550)	5% (6/123)
≥ 100 students	74% (5,322/7,166)	26% (1,844/7,166)	56% (2,979/5,309)
≥ 200 students	78% (5,061/6,453)	22% (1,392/6,453)	58% (2,948/5,045)
≥ 300 students	81% (4,716/5,789)	19% (1,073/5,789)	61% (2,875/4,697)
≥ 400 students	84% (4,383/5,226)	16% (843/5,226)	63% (2,756/4,361)
≥ 500 students	86% (4,027/4,702)	14% (675/4,702)	65% (2,603/4,003)

Korey Stringer Institute will be presenting on the following research findings at the American College of Sports Medicine (ACSM) 62nd Annual Meeting in San Diego, CA, and National Athletic Trainers' Association (NATA) 66th Clinical Symposia & AT Expo in St. Louis, MO.

ACSM POSTER PRESENTATIONS:

- "Relationship of Pacing, Body Temperature, and Body Mass Loss on Performance During a Road Race" Adams WM, Hosokawa Y, Belval LN, Huggins RA, Stearns RL, Torres CA, Casa DJ.
- "Perceptual without performance benefits of cooling modalities for equipment-laden, hyperthermic exercising individuals" Adams EL, Pryor RR, Hyde JL, Adams WM, Vandermark LW, Huggins RA, Pryor LJ, Stearns RL, Casa DJ.
- "Influence of Intermittent Hand Cooling and Fluid Replacement on Inflammatory Cytokines During Uncompensable Heat" Huggins RA, Adams WA, Bartley JM, Munoz CX, Pryor JL, Vandermark LW, Stearns RL, Casa, DJ.
- "Wet Bulb Globe Temperature Thermometer and National Weather Service Readings on Various Sports Surfaces" Pryor RR, Pryor JL, Casa DJ.
- "Comparison of Rectal and Gastrointestinal Temperature Devices for Monitoring Passive Cooling in Road Race Runners" Hosokawa Y, Torres CA, Adams EL, Adams WM, Beltz EM, DuPont WH, Lee EC, Sheldon LN, Stearns RL, Casa DJ.
- "Whole Body Washdown Sweat Electrolyte Analysis and Storage Methods" Stearns RL, Casa DJ, Belval LN, Huggins RA, Pryor RR.
- "The Effects of a Neuromuscular Training Program in an Aquatic Environment on Landing Technique" Scarneo SE, Root HJ, Martinez JC, Denegar CR, Mazerolle SM, Casa DJ, Aerni GA, DiStefano LJ. *This study is from University of Connecticut Human Performance Lab: Division of Injury Prevention

NATA ORAL COMMUNICATION PRESENTATIONS:

- "An Exertional Heat Stroke Survivor's Return to Running: An Integrated Approach on the Treatment, Recovery, and Return-to-Activity" Adams WM, Hosokawa Y, Huggins RA, Mazerolle SM, Casa DJ
- "Gastrointestinal Temperature of Runners Immediately Post an 11.3km Warm Weather Road Race" Hosokawa Y, Torres CA, Attanasio SM, Pike AA, Pryor RR, Root HJ, Scarneo SE, Stearns RL, Vandermark LW, VanScoy RM, Casa DJ.
- "The Effects of a Neuromuscular Training Program in an Aquatic Environment on Landing Technique" Scarneo SE, Root HJ, Martinez JC, Denegar CR, Mazerolle SM, Casa DJ, Aerni GA, DiStefano LJ. *This study is from University of Connecticut Human Performance Lab: Division of Injury Prevention

NATA POSTER PRESENTATIONS:

- "Athletic Training Services in Private Secondary Schools" Pike AM, Pryor RR, Vandermark LW, Adams EL, Scarneo SE, Hosokawa Y, Fontaine GJ, Hunter EN, Mazerolle SM, Casa DJ.
- "Medical Injuries and Illnesses at an Ironman Triathlon Competition" Stearns RL, Adams EL, Adams WM, Earp JE, Hosokawa Y, Viola TA, Casa DJ.
- "Examining the Benefits of Prior Heat Exposure on Race Day Performance Using a Heat Stress Score Ratio" Torres CA, Hosokawa Y, Huggins RA, Stearns RL, Lee EC, Pryor JL, Casa DJ.

DATABASE FOR CATASTROPHIC, FATAL, & NEAR-FATAL ATHLETIC INJURIES

BY REBECCA STEARNS, PHD, ATC, VICE PRESIDENT OF OPERATIONS AND EDUCATION

In the midst of a summer that revealed a consistent rate of sudden deaths in athletes, a new mandate affecting all college athletes from the NCAA was announced. The [NCAA revealed](#) that as of August 2014 all member schools are required to report any catastrophic injuries incurred by their student-athletes. This is in support of a new comprehensive and accurate reporting structure to capture such instances. The need for accurate injury incidence information has come from the crucial role this information plays to guide policies for health and safety in sport. Previously the NCAA has depended on outside researchers such as the University of North Carolina's National Center for Catastrophic Sports Injury Research database (NCCSIR). The NCAA and the NCCSIR has partnered to enhance this reporting system. The

NCCSIR now includes three divisions:

- The University of North Carolina, which oversees traumatic injuries including head, neck and spine injuries
- The University of Connecticut, which oversees exertional injuries including heat-related injuries, asthma and sickle cell trait
- The University of Washington, which oversees cardiac injuries

NCCSIR has provided an online reporting system to expedite and streamline reporting. This system also includes reporting that is available for all organized sport levels (not just collegiate sports). This can be found at: sportinjuryreport.org. We highly encourage any bystanders or witnesses to report cases of fatal or near-fatal incidences (that have occurred in the last year or that occur in the future) to enhance this database.

The hope with all of these new reporting systems is that such information can help to support health and safety initiatives targeting the causes of sudden death in sport and shed light on new preventative measures that can be taken. As the NCAA chief medical officer Dr. Brian Hainline recently said in an interview regarding a push to mandate screening athletes at higher risk of cardiac death, "Concussions have overshadowed everything. Why aren't we talking about death?" We ask that you join the NCAA and the NCCSIR, and help spread the word to report catastrophic injury cases in order to help us push for continued health and safety initiatives that will ultimately save our athlete's lives. Pledge your support on social media by using the hashtag [#ReportSportInjury](#)

SPOTLIGHT

THE SPOTLIGHT SERIES WILL FEATURE THE PEOPLE OF THE KSI, AND THOSE WHO SHARE AND REPRESENT THE PASSION OF THE KSI.



REBECCA LOPEZ PHD, ATC

MEDICAL & SCIENCE ADVISORY BOARD KOREY STRINGER INSTITUTE

Could you tell us about yourself?

I am a first generation Cuban-American, born and raised in Miami. I worked as an athletic trainer in Miami-Dade County High Schools for several years; this is where I gained an interest in exertional heat illnesses and hydration for athletes. After gaining my master's degree at FIU, I began my quest to merge the research on heat illness and hydration with clinical application in all settings where there is a risk of exertional heat illness. From there, I pursued my PhD at the University of Connecticut to continue my research in this area. Currently, I am an Assistant Professor at the University of South Florida and Director of the Post-Professional Graduate Athletic Training Program. I am on the Medical & Science Advisory Board for the Korey Stringer Institute, and I am currently serving as Secretary for the Athletic Trainers' Association of Florida.

Could you tell us about your first involvement/interaction with the Korey Stringer Institute?

I first became involved with the Korey Stringer Institute when I was finishing my doctoral work at UConn; KSI was just being developed during my last year at UCONN. Once I left UCONN, I was asked to be on the Medical & Science Advisory board for KSI.

In what ways has KSI impacted you?

KSI has impacted me in a very positive way. Although I am working in Tampa, Florida, KSI and their relationships with the faculty, staff and other medical advisory board members have allowed me to continue my line of research in the prevention of sudden death in sport settings. Through various research projects, presentations, and other collaborations, KSI provides an avenue for those of us with similar interests to work together to improve athlete safety. The KSI website is also a great means of education for athletes, coaches, and other athletic trainers; I am constantly referring others to KSI for their expertise and educational materials—it provides a way to get the information out to those that need it the most.



HERBERTO CALVES

BOARD OF ADVISORS KOREY STRINGER INSTITUTE

Could you tell us about yourself?

I am the Senior Vice President of Marketing & Product Development for the Sports Division of EB Brand, and I lead the product development and marketing initiatives for their fitness monitor and exercise equipment businesses. From 2006-2012, I was the VP of Marketing at TIMEX and oversaw the TIMEX IRONMAN and TIMEX EXPEDITION businesses, working closely with them to better understand the sport and the athletes' needs.

Could you tell us about your first involvement/interaction with the Korey Stringer Institute?

My interaction involvement with KSI is focused around helping the organization build awareness for its work. I serve on the Marketing committee and have been involved with KSI since its first year. I first engaged Doug Casa and the KSI team when I was at Timex as a way to partner in our efforts to improve overall athlete performance through the use of Timex's various fitness monitors. I saw the potential of the partnership to not only improve safety and performance of endurance sports athletes but also for team sports through Timex's partnership with the NY GIANTS at that time.

In what ways has KSI impacted you?

I have learned quite a bit from Doug and the work of KSI over the years and have realized that the work of KSI is critical to not only improve safety and, subsequently, performance around high profile team sports but also to further the importance of an active lifestyle in a safe and effective way. The work of KSI is closely linked to fighting the obesity epidemic in this country. Inactivity is at an all time high in the US and when the portion of the population that is active - team or individual sport participants - make headlines because of a safety concern or tragedy, it only undermines all the effort being put in to improve the health and activity level of our population. This is true for ages but I am particularly moved and motivated by what we can do for America's children - to teach them that you can be active and have fun being healthy and active in a safe way. This does not have to come in the form of team sports but also from activities such as hiking, running, biking, walking, or simply playing outdoors. The obesity epidemic with kids in America is truly heartbreaking because it is the fault of America's adults. It is our responsibility to change it. This is so important for self esteem, mental health, success in school, and more!

GARRETT FONTAINE KOREY STRINGER INSTITUTE VOLUNTEER EXERCISE SCIENCE STUDENT , UNIVERSITY OF CONNECTICUT

Could you tell us about yourself?

Growing up in a small town in central New Hampshire I was inspired by my father, Brian Fontaine, to pursue a career in medicine and by my childhood mentor, Jim Vanier, to always help others. During my time at UCONN I have aided people through the Korey Stringer Institute, Colleges Against Cancer, Relay for Life, and the Pre-Medical Society. I believe a doctor is someone who does all they can with the gifts and talents he or she has to help and heal others as a friend. My dream is to someday work as a primary care physician (MD) and public health professional (MPH), focusing on health and wellness through exercise, nutrition, and maintaining a healthy lifestyle. In order to prepare for this challenge, I am working towards my bachelors in Exercise Science from the Kinesiology Department here at UCONN.

Could you tell us about your first involvement/interaction with the Korey Stringer Institute?

During my freshmen orientation at UCONN I became interested in doing research in the Kinesiology Department. As I searched the pages of the department faculty, I came across Dr. Douglas Casa's page and found myself intrigued by his work with athlete safety in the heat. After reading through some of his research, I emailed Dr. Casa, asking if I could help with his research as an undergraduate research assistant. I am extremely fortunate that Dr. Casa agreed to let me help him, despite my lack of experience. In my first semester I was fortunate to work under Riana Pryor in the CATCH-ON study. I immediately became enthralled with my work as it afforded me the opportunity to do research and gain experience interacting with subjects from all across the United States.

In what ways has KSI impacted you?

In the fall of 2012, when I began my work as an undergraduate research assistant at KSI, I have worked on 6 different research projects. Working in KSI, surrounded by Dr. Casa and other individuals who deeply care about others, has significantly my desire and determination to someday practice medicine. Additionally, KSI has afforded me the opportunity to see the practical application of the material that I have learned in the classroom. For this reason, KSI has provided me with an enriched education that I would not have been able to receive at any other university.



Throughout the academic year, KSI provides independent study and research opportunities for undergraduate students. We had over thirty students during the Spring semester of 2015.

YOUTH SPORTS SAFETY GOVERNING BODIES MEETING



Chris Valletta, co-founder of the Mission AthleteCare, was the keynote speaker for the meeting.



Dr. Jason Mihalik from the Matthew Gfeller Center, University of North Carolina at Chapel Hill, presented current best-practice and topics on sports-related concussions.



On January 22nd and 23rd, KSI was joined by leaders within youth sport national governing bodies (NGBs) at the National Football League (NFL) Headquarters in New York City holding the first annual Youth Sport Safety Governing Bodies (YSSGB) meeting. The meeting was sponsored by OneBeat CPR + AED, Kestrel, and Mission AthleteCare and hosted by the NFL. The purpose of this two-day meeting was to bring together the top youth sport NGBs together to discuss policies and considerations to make sports safer. Present at this year's meeting included 9 different NGBs: US Tennis Association, USA Football, US Soccer, US Lacrosse,

BY SAMANTHA SCARNEO, MS, ATC, DIRECTOR OF YOUTH SPORT SAFETY

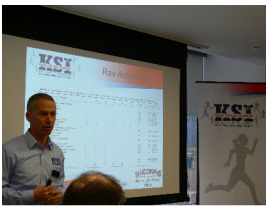
USA Wrestling, USA Track and Field, USA Hockey, MLB Digital Academy, and the US Olympic Committee. The focus of this year's meeting was to educate the attendees on different safety considerations: heat illness, sports-related concussions, cardiac conditions, and emergency action planning.

The first day of the meeting ("Kestrel Heat Stress Tracker Day"), focused on Heat Illness Considerations, presented by Chief Operating Officer of KSI, Dr. Douglas Casa, and Sports-Related Concussions, presented by Dr. Jason Mihalik. Both Dr. Casa's and Dr. Mihalik's presentations sparked some great comments and dialogue from all in

attendance. Coaching education and certifications were the main topics of interest during Thursday's conversations; including how the different NGBs have already implemented educational programs and obstacles that were experienced by other NGBs who have yet to instrument one. For example, USA Football shared their structure of educational program where they train and educate 'Master Trainer' who can subsequently educate their peers in the local area ("Train the Trainer" framework). USA Hockey spoke on their SafeSport program, where coaches are required to complete a set of educational course to receive coaching certificate.

'BE **PROACTIVE**, NOT REACTIVE.'

'IF YOU WANT TO GO FAST, GO ALONE. IF YOU WANT TO GO FAR, GO TOGETHER.'



Dr. Douglas Casa presented heat safety policies including proper prevention, treatment, and management of exertional heat stroke, environmental monitoring, hydration, and heat acclimatization.



Korey Stringer Institute staff from left: Robert Huggins, Yuri Hosokawa, Samantha Scarneo, Douglas Casa, Rebecca Stearns, John Jardine.

The second day of the meeting (“OneBeat CPR + AED Day”), focused on Cardiac Conditions, presented by Dr. Fred Brennan, and Emergency Action Plans, presented by Dr. Robert Huggins. These presentations also focused on the importance of sports-specific pre-participation exam (PPE) and ways to ensure athlete’s safety from the planning stage (“be proactive, not reactive!”). Dr. Brennan eluded to the importance of a comprehensive and uniform PPE before sports participation. In order to have a good idea of athlete’s health history and assess the athletes’ readiness to safely participate in the athletics, a comprehensive PPE is imperative piece of

information that can identify athletes who may be at-risk. Additionally, uniformity in PPEs will allow the athlete’s health history to be shared across sports, which would be beneficial in multi-sport athletes, or for sport tournament and camp hosts who may have had limited access to participant’s medical record traditionally.

The goal of this first annual YSSGB meeting was to integrate top youth sport NGBs together to discuss safety policies and strategies to implement them to ensure youth sport safety. With the raising awareness and societal concerns over sports related safety issues, sports NGBs are continuing to add more emphasis on

protecting the health and safety of athletes. The ability to ensure that all athletes, amongst all sports, receive the best and safest environment to participate in their sports will be a goal that we continue to strive for. The ability to bring together these top personnel within their respective organizations to discuss these topics was unheard of and never done before. While each of us is doing our best to get there, we need to now work together to accomplish the goal. We believe that our first meeting allowed the NGBs to establish a ground to continue our discussion to make sports safer. “If you want to go fast, go alone. If you want to go far, go together.”



Nine different youth sport national governing bodies were represented at the 1st annual Youth Sport Safety Governing Bodies meeting: US Tennis Association, USA Football, US Soccer, US Lacrosse, USA Wrestling, USA Track and Field, USA Hockey, MLB Digital Academy, and the US Olympic Committee.

MISSION HEAT SAFETY PLEDGE

BY LESLEY VANDERMARK, MS, ATC, ASSISTANT DIRECTOR OF RESEARCH

The [Mission-KSI Heat Safety Pledge](#) for high schools is well underway! We have had over 15 schools qualify, with several more applications in the works. Get your school on the list to get some great cooling products from [Mission AthleteCare](#)!

Congratulations to Marshwood High School in Maine, which was the first school accepted. We have also accepted schools from Alabama, Arkansas, District of Columbia, Florida, Maine, Maryland, Massachusetts, New Jersey, North Carolina, Ohio, Tennessee, and Texas. A little background on the [Heat Safety Pledge](#): Mission AthleteCare prides itself on creating the best athletic environment for performance and safety. As part of that goal, they wanted to find a way to reward schools for upholding appropriate policies for heat safety. Mission wants to donate \$1 Million of product to schools nationwide who are striving to keep athletes safe.

And this is where KSI comes in. Mission masterminds, with the help of KSI of course, devised the [Heat Safety Pledge](#), 6 pillars aimed at safety while exercising in the heat. We feel that these are the 6

key areas that help high schools athletes perform at their best and stay safer while exercising in the heat.

Pillar 1: Thermometer A wet bulb globe thermometer is on site at school and used to determine activity modifications based on environmental conditions. It is school policy to modify work to rest cycles based on environmental conditions.

Pillar 2: Certification All coaching staff is certified in first aid, cardiopulmonary resuscitation and the use of an automated external defibrillator. Additionally, education is provided related to preventing sudden death in sport.

Pillar 3: Athletic Trainer An athletic trainer is employed at your school and is on-site during practices and events.

Pillar 4: Emergency Action Plan A specific emergency action plan for each athletic facility has been developed where sports games and practices occur. This plan is reviewed with the healthcare team every year.

Pillar 5: Heat Acclimatization Guidelines School has adopted nationwide high school preseason heat acclimatization guidelines set

forth by the National Athletic Trainers' Association.

Pillar 6: Water Stations/Body Cooling Adequate water is available and placed at various stations around the athletic fields for all sports. At water stations, body cooling is standard practice. This can be as simple as encouraging players to remove equipment during rest breaks as using ice/cold towels.

Some of the pillars of the heat safety pledge require little funding, [emergency action plans](#) for example; and can be implemented right away! Appropriate heat acclimatization is regulated by some state athletic associations, so if your state meets the [KSI heat acclimatization standards](#), you already satisfy one of the pillars. But even in states without good guidelines, appropriate heat acclimatization procedures cost no money and can prevent heat illness. On the same note, we're talking to **YOU** high school athletic trainers, your employment helps satisfy one pillar as well. What a way to get some much needed supplies for your school! Take a look at the [Heat Safety Pledge](#) today to see if your high school qualifies.

HEAT ACCLIMATION STUDY

BY ELIZABETH ADAMS, BS, ASSISTANT DIRECTOR OF ELITE ATHLETE HEALTH AND PERFORMANCE

Strenuous physical activity in hot, humid environments places individuals at great risk for heat-related illnesses and exertional heat stroke. Annually, many individuals, such as athletes, occupational workers, and soldiers suffer from these conditions. Heat acclimation is, perhaps, the most effective way to mitigate these exertional heat illnesses, as well as improve performance in the heat.

What is heat acclimation? The improved ability to exercise in a hot environment due to physiological adaptations that occur over a period (10-14 days) of repeated exposures to exercise-heat stress.

Physiological adaptations of heat acclimation:

- Improved cardiovascular function
- Increased plasma volume
- Increased stroke volume
- Decreased heart rate
- Improved ability to dissipate heat
- Increased sweat rate
- Earlier onset of sweat
- Decreased concentration of NaCl in sweat

Overall, these adaptations lead to a decreased core body temperature during exercise.

What we know #1: Many heat illnesses occur on the day after a long, novel heat stress. For example, day 2 of preseason football practice following a day 1 two-a-day practice.

What we do not know #1:

- What is the driving physiological mechanism?
- Does heat acclimation help to prevent this occurrence?

What we know #2: Heat acclimation adaptations are transient and will disappear in 1-3 weeks if heat exposure is not maintained.

What we do not know #2:

- Does an intermittent heat exposure intervention help to mitigate heat acclimation decay and thus maintain adaptations?

What we know #3: Body cooling during exercise in the heat helps to mitigate rise in core body temperature.

What we do not know #3:

- How does heat acclimation effect cooling rate during and after exercise?

Recently, our research team has completed a large heat acclimation study in order to answer these unknown questions. Our hope is to further the scientific knowledge and provide a more comprehensive understanding of heat acclimation with the ultimate goal of keeping all athletes safe.

YOUTH SPORT SAFETY SUMMIT

BY SAMANTHA SCARNEO, MS, ATC, DIRECTOR OF YOUTH SPORT SAFETY

On Monday March 2, 2015, Sam Scarnео, Director of Youth Sport Safety, attended the 6th annual Youth Sport Safety summit in Dallas, TX. Presently, the Youth Sport Safety Alliance has 206 members. The overall arching mission of the youth sport safety alliance is to collectively recognize and make an effort to improve youth sport safety. This year's conference featured a talk from Dr. James Andrew's as the keynote speaker. Dr. Andrew's talk circulated around many aspects of youth safety but in particular ulnar collateral ligament, or tommy john ligament, surgery in youth athletes. Dr. Andrew's specified youth athletes should not be throwing until fatigue and that typically true UCL injuries in the youth population are few and far between. The significant increase in the prevalence of tommy john surgery in youth athletes has been, in his opinion, unnecessary surgeries. Additionally, Dr. Andrews stressed the importance of athletic trainers at all youth sporting events and that proper recognition and treatment of athletic injuries is a key aspect to improved safety of our youth athletes. This message was echoed

by all presenters within the conference; the importance of proper medical care and the constant communication of the athletic medical team – from the athletic trainers, to team physicians, parents, administrators, nurses, nutritionists, and EMS alike.

Dr. Dawn Comstock also presented recent high school injury rates from the high school RIO prospective study. This study utilizes an online program where certified athletic trainers log into the system and report on injuries including athlete exposure data. Recent research has identified that although the overall rate of injuries in competition is high, that more than half of the injuries sustained by our athletes occur in practice. Additionally, the recent research shows that of all the medical disqualification injuries for a season or a career are often due to a knee injury, with 31.3% of DQs resulting from a knee injury. An interesting finding when evaluating girls and boys lacrosse is that although the rates of concussions are similar, boys lacrosse concussion injuries primarily result from a player-to-player contact whereas girls lacrosse injuries occur

primarily from a player-to-apparatus mechanism. Dr. Comstock attributed this increase in girl's lacrosse from playing apparatus as a possible result from no type of head gear as the girls only wear eye protection and no hard-helmet protection. Increasing youth sport safety is one of the most important factors facing today's generation.

Together we have the ability to improve the safety and wellness for our youth athletes. As the director of youth sport safety for the Korey Stringer Institute, I am proud to say that improved safety for all athletes is a goal we work towards every day. Here at KSI, we are fortunate to have a strong team of invested, passionate, and relentless individuals who everyday strive to improve safety for all athletes regardless of age, and I have to say I am thrilled to be working with each and every one of them.



@jthorntonAT 3/27/15 11:02 AM

"Collaborative solutions for Sports Safety at NFL headquarter in NYC. Best meeting I have ever been associated with....period."

James Thornton- President of the NATA

COLLABORATIVE SOLUTIONS FOR SAFETY IN SPORT

BY ALICIA PIKE, BS, ATC, ASSISTANT DIRECTOR OF YOUTH SPORT SAFETY

On March 26th and 27th, the [National Athletic Trainers' Association](#) (NATA) and [American Medical Society for Sports Medicine](#) (AMSSM) in conjunction with the [Korey Stringer Institute](#) (KSI) and the [National Football League](#) (NFL) hosted the very first “Collaborative Solutions for Safety in Sport” meeting at the NFL Headquarters in New York, NY. This meeting was made possible by the lead sponsors, NATA and AMSSM. Corporate sponsorship was provided by [MISSION AthleteCare](#), [Jones & Bartlett Learning](#), [PRIVIT](#), and [Camelback](#), and supported by KSI and NFL organizations.

We know from years of research that many of the deaths that occur in sport are preventable if best practices for prevention and management are in place. Therefore, the goal of this meeting was to bring together the state high school association leaders and sports medicine advisory committee members and the National Federation of State High School Associations to discuss development and implementation of best practice policies for safety in sport. We are excited to have had representation from all 50 states in one room for this meeting, and provided opportunities for key decision-makers to review and enhance safety policies currently in place in their respective states to reduce risk of sudden death in high school sports.

Chris Valletta, co-founder of MISSION AthleteCare kicked off the meeting with the keynote. The

remainder of this first day involved emphasis on best practices and policy implementation for heat-related illness and cardiac events. Dr. Douglas Casa, Chief Operating Officer of KSI, spoke about the importance of policies including heat acclimatization and wet-bulb globe temperature monitoring that should be in place at every high school, as well as proper recognition (via a rectal thermometer) and treatment (ice water immersion bath) of heat-related illnesses. Regarding cardiac events, Dr. Jonathan Drezner, team physician for the University of Washington and Seattle Seahawks, spoke about the absolute necessity of having AED's readily available at all high schools and competition/practice locations, as well as the importance of regularly practicing emergency action plans and performing monthly checks of AED batteries and pads to ensure they are ready to use in case of an emergency cardiac situation.

The second day began with a keynote address from Dr. Brian Hainline, Chief Medical Officer of the NCAA. Following his speech, Ron Courson, Athletic Director of Sports Medicine at the University of Georgia spoke about emergency action plans and when properly implemented, practiced, and executed, can ultimately save the life of an athlete. To close out the meeting, Dr. Kevin Guskiewicz, Director of the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center in UNC Chapel Hill, spoke about head injuries, including concussions, and the policies that should be

of the student-athletes. Guskiewicz brought home the idea that “This is not an injury that can be managed by a clock, calendar, or cookbook.” Head injuries should be treated on an individual basis, and policies need to be implemented to ensure the athlete is not returning to sport before he/she is physically and cognitively ready.

The meeting was an absolute success for being the first time in history that the key people from each state were together in one room for the same initiative. Great questions, comments, success stories, as well as struggles were brought up from those in attendance. We each face challenges regarding policy development and implementation, but this could be achieved more quickly if we collaborate and work together. With this meeting, the NATA, AMSSM, KSI, and NFL hope to have instilled in the attendees the knowledge and materials the attendees need to return to their respective states and make change happen; change that will follow best practices, change that will ensure athletes are getting the absolute best medical care they deserve, and change that can save a life. “A 2 millimeter difference can make a mile change.” Are you prepared? Do more than care. Think. Act. Make a change. Save a life.

For more resources and information that were shared at the meeting, please visit:

www.SolutionsForAthleteCare.org.



Korey Stringer Institute staff from left: William Adams, Rebecca Stearns, Samantha Scarneo, John Jardine, Douglas Casa, Alicia Pike, Yuri Hosokawa, Lesley Vandermark, Robert Huggins.

"IF A SCHOOL CAN AFFORD TO HAVE SPORT TEAMS, THERE IS NO REASON FOR THE SCHOOL TO NOT HAVE CERTIFIED ATHLETIC TRAINER ON SITE."

"LET THIS BE THE OPPORTUNITY TO IMPLEMENT EVIDENCE BASED POLICY #CSSS #YOUTHSPORTSAFETY"

"IT'S THE MATTER OF BEING PROACTIVE, NOT REACTIVE"

"FAILING TO PLAN IS PLANNING TO FAIL #CSSS #STRIVE2PROTECT"

"COLLABORATION IS THE KEY. THINKING THAT YOU CAN DO THIS ALONE IS CATASTROPHIC. BE INVOLVED!"



@AcuteSportsDoc 3/26/15 2:09PM

"Meeting of the minds in NYC to share ideas to protect youth athletes @TheAMSSM @K_S_Institute @NATA1950 @NFLHealthSafety"

Neha Raukar, MD- RI State Medical Advisory Committee



ELITE ATHLETE TESTING: SOCCER STUDY

BY ANDREA FORTUNATI, BS, ATC, ASSISTANT DIRECTOR OF ELITE ATHLETE HEALTH AND PERFORMANCE

The Korey Stringer Institute has been working with the University of Connecticut Men's Soccer team for the past couple of months performing laboratory research and collecting both performance and field-based data. We have also recently collaborated to work with the Quest Diagnostics to examine the biomarkers that could aid in monitoring of athletes' fatigue level and health status.

The present study is looking at many different variables that may influence performance and health in elite athletes. We have teamed up with Chris West, the Strength and Conditioning coach, who currently uses monitoring devices on the soccer athletes to quantify their training stress and performance. These devices include heart rate and Catapult MinimaxX™ GPS devices to collect data from all team practices, events, and matches this Spring. These devices provide us with information that can detect internal and external stressors as well as the players work loads. The MinimaxX™ units have been a great way to collect data in regards to individual players acceleration, deceleration, velocity, Player Load™ and speed just to name a few. With this information we are able to see progression the players are making through the season.

Players are also performing laboratory tests that include Sweat Electrolyte Analysis examining individual sodium concentrations in the sweat as well

as individual sweat rate, VO2max tests to measure their cardiorespiratory fitness, and performance tests such as the counter-movement vertical jump to quantify changes in strength. Additional tests are done on a consistent basis to collect data for review and interpretation.

Testing will examine the different phases of training throughout the entire soccer season. KSI is very excited to collaborate with the University of Connecticut Men's Soccer team and the Quest Diagnostics, working to prevent injury and improve overall performance in elite athletes.



THE NATA/KSI ATHLETIC TRAINING LOCATIONS AND SERVICES (ATLAS) PROJECT

BY ROBERT HUGGINS, PHD, ATC, VICE PRESIDENT OF RESEARCH AND ELITE ATHLETE HEALTH AND PERFORMANCE

YURI HOSOKAWA, MAT, ATC, DIRECTOR OF COMMUNICATION AND EDUCATION

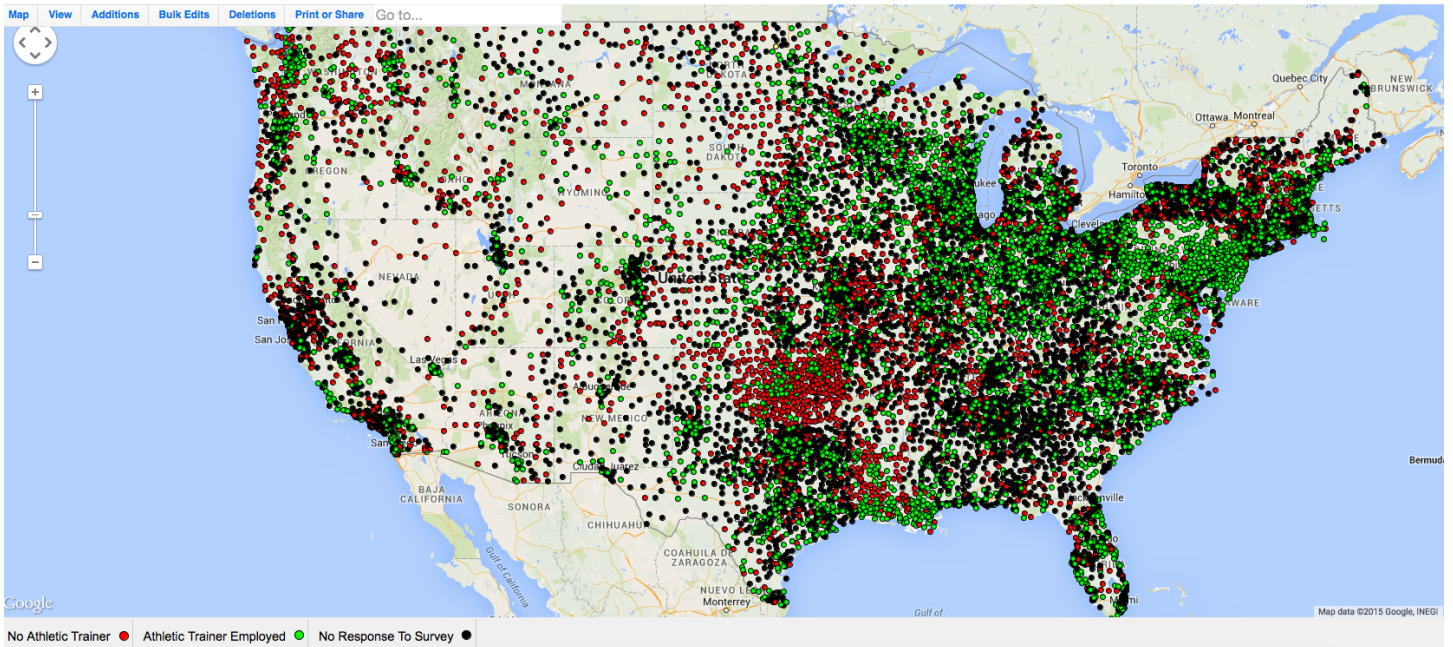
Together with the support of the NATA Secondary Schools Committee, KSI has successfully mapped all of the “[NATA Benchmark Study](#)” results. Using an online program called Zeemaps© by Zee Source, “we at KSI have mapped all of the secondary schools included in the Benchmark Study and you are able to visually see of the schools who responded, which high schools in your state have Athletic Trainers” said Dr. Robert Huggins, Vice President of Research at KSI. “Furthermore, you are able to see the employment status (full time, part time, clinic, etc.) to see if trends exist regionally in your state.”

Currently, under the direction of KSI's Director of Youth Sport Safety, Samantha Scarneo, we are creating our own national database that aligns with the [National Center for Educational Statistics](#) which provides an open-access database with detailed information regarding schools across the U.S., such as number of enrolled students and free lunch status, to

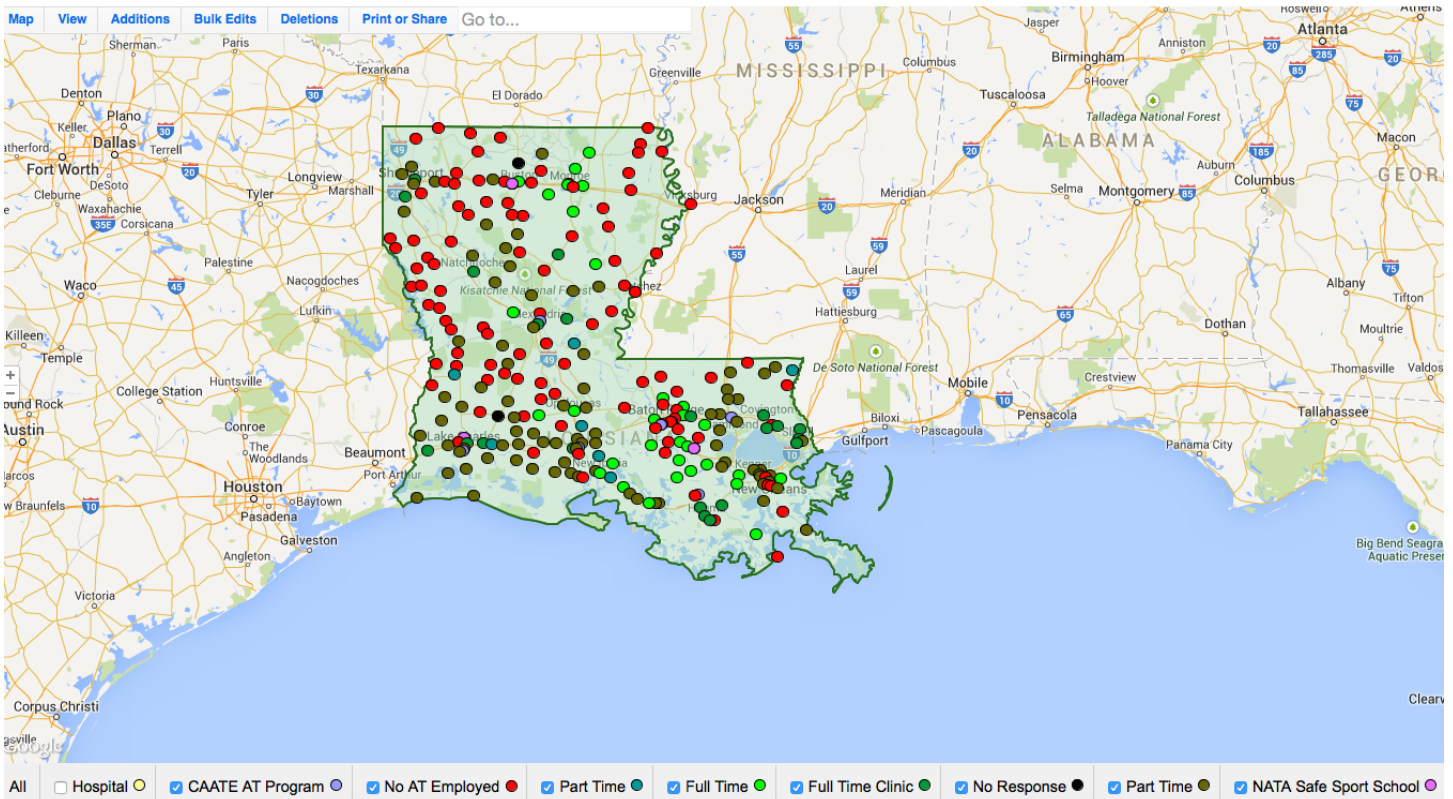
provide more unique information about each school. “We really hope to make this ATLAS database a living and real-time database that Athletic Trainers and state associations can use to get a better picture of where the ATs are in each state and in what capacity they are working currently, so that the NATA can strategically move schools with inadequate AT services to a level that is considered appropriate” said Scarneo.

After KSI mapped the preliminary results in the Fall of 2014, the NATA Secondary School Committee led by their Chair, Larry Cooper MS, ATC, came up with the plan to collaborate and make these maps available to the members. “Our plan is to first confirm and update the results that we have here at KSI from the Benchmark Study, using a pilot state that has already been mapped by the state athletic trainers' association. We also plan to provide a survey link for member ATs to update their school information” Huggins said. “If all goes well, we at KSI are going to

work with the Secondary School Committee and the NATA to develop software that prompts secondary school athletic trainers to update their school's information yearly when logging in to the NATA or BOC website, which will be directly linked to our map.” KSI strongly feels that this information will be invaluable to the states, especially those that are hiring more Athletic Trainers in secondary schools to meet best practices. Moving forward, the database at KSI and the ATLAS map may allow for the NATA to meet its number one goal, which is to have an AT in every secondary school across the country. “This project aligns perfectly with the mission of KSI, which is to provide first-rate information, resources, assistance, and advocacy for the promotion of prevention of sudden death in sport via health and safety initiatives.” Huggins said. “You need to know the current state of employment status of secondary school ATs across the nation before you can implement change and I believe that this project will help do just that.”



The data from the benchmarks study was used to map the availability of athletic training service in public secondary high schools in the U.S. The red circles represent schools with no athletic training services and the green circles represent ones with athletic training services. The black circles indicate that we have no data available in our current database.



The sample map above represents the availability of athletic training services in the state of Louisiana. It is our goal to create a live database on Certified Athletic Trainers in secondary schools across the U.S.

NFL AND KSI PARTNERSHIP

BY ROBERT HUGGINS, PHD, ATC, VICE PRESIDENT OF RESEARCH AND ELITE ATHLETE HEALTH AND PERFORMANCE

As one of the founding members of the Korey Stringer Institute, the National Football League (NFL) continues to support the mission of KSI through various research and philanthropic opportunities with the main goal to improve health and safety nationwide. Just since the start of 2015, the NFL has played host at the NFL Headquarters in New York City to two national meetings centered on assisting KSI in the dissemination of health and safety best-practices at the secondary school and youth sports levels. The first meeting entitled the “[Youth Sports Safety Governing Bodies Meeting](#)” brought together nine influential members in the major youth sports organizations. The second meeting, “[Collaborative Solutions for Safety in Sport](#)”, convened the executive directors and sports medicine committee chairs from the secondary school athletic associations in all 50 states. Both meetings were a tremendous success and if it weren’t for the help of the NFL, NATA, and AMSSM, this meeting would never have occurred.

On a philanthropic front, the NFL has also partnered with the NATA and the Professional Football Athletic Trainers’ Society to fund an initiative focused on improving medical care in the secondary school setting. This initiative was announced during the White House Healthy Kids and Concussion Summit in Washington, DC. by President Obama on May 29th 2014. The NFL Foundation and the NFL Teams have agreed to provide \$1million while the NATA agreed to contribute \$125,000 to place ATs in under-served high schools surrounding the 31 NFL cities. In the first year, 16 of 32 teams have applied to the grant program and it is the hope that the rest of the NFL teams will follow in the 2015-2016 season. During the planning stages, the

KSI played a critical role in not only connecting the NATA with the NFL for this initiative, but also by identifying those schools in the home cities of the teams that lacked Athletic Training coverage using the [online mapping](#) of the [Benchmark Study](#). KSI continues to help support this initiative by serving as the repository for the qualitative questionnaires that are distributed to individuals on the ground such as the Principal, Athletic Director, Athletic Trainer, and Coaches, to identify areas of success and improvement related to the program.

Last and certainly not the least, the NFL has dedicated a large amount of funds to be put towards research endeavors related to quantifying Athletic Training services from an insurance perspective. The goals of this project are to understand the cost spent by high schools and/or school districts on premiums for liability, excess medical coverage, and catastrophic insurance. The theory is that insurance companies who provide coverage to high schools without full time athletic training services, may be paying out a larger amount in claims for rehabilitative costs that could be conducted in house by an Athletic Trainer. Currently, KSI is collecting cost and data information from these insurance providers all across the country to quantify and analyze areas where both the schools/districts and the insurance companies can benefit. We believe that high schools could vastly benefit from hiring an Athletic Trainer from a health and safety perspective as well as monitory standpoint. With the help of the NFL, KSI’s goal is to create a safer environment for secondary school student athletes. We believe that having medical professionals on site (such as ATs) during high school athletic activities is vital to achieve that goal.

CURRENT STATISTICS: AED POLICIES IN SECONDARY SCHOOLS

BY WILLIAM ADAMS, MS, ATC, DIRECTOR OF SPORT SAFETY POLICIES

Basic Facts :

- Sudden cardiac death (SCD) is the leading cause of death in young athletes and is typically due to an undiagnosed structural or electrical cardiovascular disease.
- The incidence of SCD varies, with estimates ranging between 1:45,000 and 1:300,000. A recent study examining NCAA level athletes, discovered that cardiovascular related sudden death represented 72% of fatalities due to exertion within this age group.
- The risk of SCD is higher in males than females (ranging from a 5:1 to a 9:1 ration). African American athletes are also at a higher risk, specifically African American males playing basketball with a recent study showing the incidence in this population being 1:3,000.
- Oftentimes, an athlete that suffers from a structural or electrical cardiovascular disease, the first symptom that presents itself is sudden cardiac arrest. Prompt recognition and treatment using an Automated External Defibrillator (AED) helps minimize the risk of fatality.
- The greatest predictor of survival from sudden cardiac arrest is the time from collapse to defibrillation. Defibrillation with an AED within 3-5 minutes of collapse has been reported to have survival rates ranging from 41-71%, which is over an above the rate of 11% when an AED is not used.

Evidence has supported the use of AEDs in reducing mortality after sudden cardiac arrest. All institutions and venues that sponsor athletic events should have AEDs onsite and located within 1 minute from every location at the institution or venue hosting an athletic event. Using evidence-based scientific evidence (Table 1) allows for the optimal setting to ensure survival.

- 92 percent of states meet the recommendation that individuals with proper training and certification use AEDs under the advice and consent of a physician.
- 50 percent of states meet the recommendation that all athletic trainers, coaches, administrators, school nurses and physical education teachers have access to an AED on school property and at all school sanctioned athletic events/activities.
- 86 percent of states satisfy the recommendation pertaining to individuals being provided annual training and certification in cardiopulmonary resuscitation (CPR) and AED use.
- 66 percent of states comply with the recommendation that AEDs be used only after enacting the EMS system. Another athletic training staff member, coach, athlete or bystander can perform this action.
- 78 percent of states fulfill the recommendation that AEDs be inspected frequently to ensure proper working order. This includes making sure the batteries are charged and wires and electrodes are in good condition.



The map represents the current number of evidence-based minimum best practice policies on the use of AEDs in the secondary school settings that is met by each state.

TABLE 1. EVIDENCE BASED MINIMUM BEST PRACTICES ON THE USE OF AEDS FOR SUDDEN CARDIAC ARREST
1. AEDS ARE TO BE USED UNDER THE ADVICE AND CONSENT OF A PHYSICIAN BY INDIVIDUALS WITH PROPER TRAINING AND CERTIFICATION
2. AED SHOULD BE STORED IN A SAFE PLACE AND EALY ACCESSIBLE
3. ALL ATHLETIC TRAINERS, COACHES, ADMINISTRATORS, SCHOOL NURSES, AND PHYSICAL EDUCATION TEACHERS SHOULD HAVE ACCESS TO AN AED ON SCHOOL PROPERTY AND AT ALL SCHOOL SANCTIONED ATHLETIC EVENTS/ACTIVITIES
4. INSTITUTIONS SPONSERING ATHLETIC EVENTS SHOULD HAVE A AED ON SITE OR ACCESS TO ONE AT EACH ATHLETIC VENUE FOR PRACTICES, GAMES, OR OTHER ATHLETIC EVENTS
5. INDIVIDUALS SHOULD BE PROVIDED ANNUAL TRAINING AND CERTIFICATION IN CARDIOPULMONARY RESUSCITATION (CPR) AND AED USE
6. LOCATION OF AED SHOULD BE WELL MARKED, PUBLICIZED, AND KNOWN AMONG TRAINED STAFF
7. THE AED SHOULD BE USED ONLY AFTER ENACTING THE EMS SYSTEM. ANOTHER ATHLETIC TRAINING STAFF MEMBER, COACH, ATHLETE, OR BYSTANDER CAN PERFORM THIS ACTION
8. AEDS SHOULD BE INSPECTED FREQUENTLY TO ENSURE PROPER WORKING ORDER. THIS INCLUDES MAKING SURE THE BATTERIES ARE CHARGED, AND WIRES AND ELECTRODES ARE IN GOOD CONDION

KOREY STRINGER INSTITUTE

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UNIVERSITY OF CONNECTICUT



KSI FUNDRAISER & GALA



4TH ANNUAL KOREY STRINGER INSTITUTE FUNDRAISER & GALA

NFL HEADQUARTERS, NEW YORK CITY

MAY 7TH 2015, 5:30-8:30PM

The Korey Stringer Institute is excited to announce that we will be holding our 4th Annual KSI Gala. This event will be held at the NFL headquarters in New York City on May 7th, 2015 from 5:30-8:30pm. Here, we will have a cocktail reception followed by KSI Award presentations. This evening will be filled with entertainment, prizes and many of those who have helped the Korey Stringer Institute become what it is today. This institute would not have been able to accomplish half of what it has without the help of our dedicated sponsors, donations, and continued efforts of those involved with KSI. Mark your calendars and join us if you can, or help KSI continue in our efforts by donating to the institute. Give-aways at the Gala will occur every half hour throughout the evening. There will also be a silent auction that includes items such as signed helmets, tickets, jerseys and more! All proceeds from this event will be directed to the University of Connecticut Foundation to benefit the Korey Stringer Institute. The mission of the Korey Stringer Institute is to provide first-rate information, resources, assistance, and advocacy for the promotion of prevention of sudden death in sport via health and safety initiatives. From this event we hope to raise money in order to continue with KSI's goals to serve the needs of active individuals and athletes at all levels — youth, high school, college, professional, people who are physically active, recreational athletes — and those who supervise and care for these individuals. Visit our [website](#) for more information.

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Pertinacity- The Stories of KSI

2015 Spring

Volume 1, Issue 1

Edited by Yuri Hosokawa

UPCOMING EVENTS

MAY

7TH KSI BOARD OF ADVISORS MEETING

NFL Headquarters, New York, NY.

7TH KSI'S 4TH ANNUAL FUNDRAISER GALA

NFL Headquarters, New York, NY.

Featuring tours of the NFL Headquarters, exclusive silent auction items, and presentation of KSI's Lifesaving Awards.

24TH VERMONT CITY MARATHON

Burlington, VT.

KSI will be assisting with medical care of runners.

26TH MEDICAL & SCIENCE ADVISORY BOARD MEETING

San Diego, CA.

26-30TH AMERICAN COLLEGE OF SPORTS MEDICINE ANNUAL MEETING

San Diego, CA.

KSI will be presenting recent research results and will be exhibiting at the Kestrel's expo booth.

JUNE

23-26TH NATIONAL ATHLETIC TRAINERS' ASSOCIATION CLINICAL SYMPOSIA & AT EXPO

St. Louis, MO.

Come visit KSI's booth to learn more about preventing sudden death in sport. Join the passport campaign by KSI, Kestrel, Mission AthleteCare, OneBeat CPR & AED, and Gatorade to win daily and grand prizes!

JULY

26TH IRONMAN LAKE PLACID

Lake Placid, NY.

KSI will be assisting with medical care of runners and conducting a research study.

AUGUST

16TH FALMOUTH ROAD RACE

Falmouth, MA.

KSI will be assisting with medical care of runners and conducting a research study.

OCTOBER

15-16TH NEW ENGLAND ACSM FALL MEETING

Providence, RI.

KSI will be presenting on the current consensus on recovery from exertional heat stroke.

25TH MARINE CORPS MARATHON

Arlington, VA, and Washington D.C.

KSI will be assisting with medical care of runners.

MISSION ATHLETECARE AND KOREY STRINGER INSTITUTE AT THE SPORTS AUTHORITY BASEBALL FIELD DAY



In January and February, members of the KSI staff provided heat safety education to parents and athletes through our corporate partner, Mission AthleteCare. Mission sponsored KSI to attend Sports Authority Baseball Field Days, in association with Cal Ripken Baseball in Florida (Tampa, Orlando, and Ft. Lauderdale) and California (Los Angeles, San Francisco, and San Diego.) We talked with hundreds of parents and coaches about heat safety, hydration, and general sports safety to prepare youth baseball players to perform in the summer heat.

KSI LIFE-SAVING AWARDS

The Korey Stringer Institute is proud to announce the winners of the 2015 Lifesaving Awards. In 2012, the Korey Stringer Institute started recognizing three individuals annually who have made significant contributions in the realm of preventing sudden death in sport. These individuals are leaders in their fields when it comes to making important policy changes to prevent sudden death in sport. The three annual awards are the Lifesaving Research Award, Lifesaving Service Award and the Lifesaving Education Award. Each award recognizes excellence in a given aspect of the Korey Stringer Institute's mission of preventing sudden death in sport.

LIFESAVING RESEARCH AWARD

THIS AWARD RECOGNIZES EXCEPTIONAL DEDICATION AND WORK IN RESEARCH AIMED TO IMPROVE KNOWLEDGE REGARDING PREVENTING SUDDEN DEATH IN SPORT.



ERIK E. SWARTZ, PHD, ATC, FNATA

PROFESSOR AND DEPARTMENT CHAIR OF KINESIOLOGY AT THE UNIVERSITY OF NEW HAMPSHIRE

Dr. Swartz received his PhD in Applied Biomechanics at the University of Toledo. Dr. Swartz' primary research interest focuses on the prevention and care of head and neck injuries in football. Dr. Swartz has received grants from The NATA Foundation, NOCSAE, NFL Charities, and was recently a named a winner of the NineSigma Head Health Challenge II. He has been published in journals such as The American Journal of Emergency Medicine, New England Journal of Medicine, Spine, and The American Journal of Sports Medicine. He serves on the NFL Head Neck and Spine Committee's Subcommittee on Safety Equipment and on the Editorial Boards of the Journal of Athletic Training and Athletic Training and Sports Health Care Journal. Dr. Swartz served as chair of the NATA Position Statement on the Acute Management of the Cervical Spine Injured Athlete. In 2011 he was honored with a Fellows designation in the National Athletic Trainers' Association and in 2015 received the Most Distinguished Athletic Trainer Award, also from the NATA. He and his wife Renee have two children, Evry and Caleb.

LIFESAVING EDUCATION AWARD

THIS AWARD RECOGNIZES EXCEPTIONAL WORK AIMED TO IMPROVE KNOWLEDGE AND EDUCATION IN THE REALM OF PREVENTING SUDDEN DEATH IN SPORT.



LISA WALKER, ATC

NEBO SCHOOL DISTRICT, UT

Lisa Walker, began her athletic training career in 1993 when she graduated from Brigham Young University in Provo, Utah. She has worked as the head athletic trainer at Springville (Utah) High School ever since. Lisa has held numerous positions within the Utah Athletic Trainers' Association, the Rocky Mountain Athletic Trainers' Association, and the National Athletic Trainers Association. She has provided service for the 2002 Winter Olympics in Salt Lake City. She serves on the Sports Medicine Advisory Council of the Utah High School Activities Association, the NATA Secondary Schools Committee and Honors and Awards Committee, and the Strategic Planning Committee. She helped athletic trainers gain recognition as official healthcare providers, passed mandatory heat acclimatization for all athletes, pre-participation exams and concussion policies with the Utah High School Activities Association. Lisa was named to the RMATA Hall of Fame in 2014, the public advocacy award winner by the Board of Certification in 2013, NATA Athletic Trainer Service Award in 2013, NATA Governmental Affairs award in 2006. Her and her husband, David, are the parents of three children.

LIFESAVING SERVICE AWARD

THIS AWARD RECOGNIZES EXCEPTIONAL SERVICE AIMED TO IMPROVE POLICIES AND ADVOCATE FOR THE ADOPTION OF POLICIES IN ORDER TO REDUCE SUDDEN DEATH IN SPORT.



ROBERT J. DAVIS, MD

DIPLOMAT, AMERICAN BOARD OF EMERGENCY MEDICINE

MEDICAL DIRECTOR, EMERGENCY DEPARTMENT AT FALMOUTH HOSPITAL

CO-MEDICAL DIRECTOR, FALMOUTH ROAD RACE

Robert J. Davis, MD, has nearly 20 years of experience as an emergency medicine physician and has been a leader in the development of exertional heat stroke treatment protocol through his 13 years as Co-medical Director of the New Balance Falmouth Road Race. Due to the numbers and severity of exertional heat stroke patients the Falmouth Road Race medical team sees over the course of the 7-mile course, they are trained and experienced in effective treatment methods. Dr. Davis is Medical Director of the Emergency Department at Falmouth Hospital in Falmouth, MA, and is also Medical Director of the Urgent Care Department at Stoneman Outpatient Center in Sandwich, MA. He earned his medical degree at Boston University School of Medicine in 1995 and completed an internship and residency at Rhode Island Hospital in Providence, RI. He was chief resident at Rhode Island Hospital and assistant clinical instructor of medicine at Brown University School of Medicine from 1998-1999. Dr. Davis is a diplomat of the American Board of Emergency Medicine. He is a consulting expert in emergency medicine. He is on the board of directors of Cape Cod Health Network, a physician-hospital organization, and is also on the board of the Cape Cod Health Network ACO. Dr. Davis has won numerous medical awards, including the Daniel L. Savitt Resident Teaching Award and the Gregory D. Jay Resident Research Award from Rhode Island Hospital in 1999, the Certificate of Appreciation for Outstanding Performance in Pediatric Emergency Medicine from Hasbro Children's Hospital in 1999, the Alpha Omega Alpha distinction at Boston University School of Medicine in 1995, and the Falmouth Hospital Trauma Award in 2006.



JOHN J. JARDINE, MD

CHAIRMAN AND CHIEF MEDICAL ADVISOR OF KOREY STRINGER INSTITUTE MEDICAL & SCIENCE ADVISORY BOARD

ATTENDING PHYSICIAN, LANDMARK MEDICAL CENTER

CO-MEDICAL DIRECTOR, FALMOUTH ROAD RACE

John Jardine, MD, is a board certified emergency medicine physician since 2000. He was appointed co-medical director of the Falmouth Road Race in 2002. As co-director, he is involved with the overall coordination of the medical care at the race. Through the history of the race, the medical team has developed protocols for the treatment of exertional heat illness. Dr. Jardine has continued to perfect these protocols and has teamed with KSI to continue research to protect athletes worldwide. He has co-authored two research papers through his experience with medical care at the race. In addition, he has assisted the medical team at the Boston Marathon in the critical care and heat illness treatment areas. Dr. Jardine's start in medicine was in Emergency Medical Services (EMS) as an EMT and then Paramedic in New York State. After 12 years of practicing prehospital medicine, Dr. Jardine earned his medical degree at Downstate Medical School in Brooklyn, New York. He completed residency in emergency medicine at Rhode Island Hospital/Brown University serving as chief resident in his senior year. As an emergency physician, Dr. Jardine directed the medical care for Operation Helping Hand, Massachusetts Governor Romney's temporary relocation of the displaced victims of Hurricane Katrina to Camp Edwards on Cape Cod.

PREVIOUS AWARD RECIPIENTS

KSI LIFESAVING RESEARCH AWARD

Jonathan Drezner, MD (2014), Kevin Guskiewicz, PhD, ATC, FACSM, FNATA (2013), COL Francis O'Connor, MD, MPH (2012)

KSI LIFESAVING SERVICE AWARD

Jason Cates, MS, ATC, LAT (2014), David Csillan, MS, ATC, LAT (2013), Mike Carroll, ATC (2012)

KSI LIFESAVING EDUCATION AWARD

Nick Inzerello (2014), Beth Malon, MS (2013), Ron Courson, ATC, PT, NREMT-1, CSCS (2012)

SPOTLIGHT



RACHEL KATCH, ATC

KSI STAFF

**ASSISTANT DIRECTOR OF
RESEARCH**

**KOREY STRINGER INSTITUTE
ATHLETIC TRAINER**

**ROCKVILLE HIGH SCHOOL
ROCKVILLE, CT**

Could you tell us about yourself?

My name is Rachel Katch, and I am a first year Master's student as well as the Assistant Director of Research at the Korey Stringer Institute. I received my Bachelor of Science degree in Athletic Training from Saginaw Valley State University in Michigan in 2014, and am currently a certified and licensed athletic trainer. My plan is to also earn my Doctor of Philosophy degree from the University of Connecticut, and pursue my career goal of becoming a professor in the athletic training field. On a little more personal note, when there isn't two feet of snow on the ground, I enjoy being outdoors participating in a range of activities from hiking and camping, to riding my motorcycle and quad. In the summer, I enjoy visiting my family and home state of Michigan to go on adventures to the Silver Lake Sand Dunes, as well as the beautiful Pictured Rocks and Mackinac Island to name a few locations. I look forward to what the future has in store, and am blessed to have the amazing people and opportunities life has provided me so far.

Could you tell us about your first involvement/interaction with the Korey Stringer Institute?

I remember my first interaction with the Korey Stringer Institute was when I was in my undergrad. A fellow student and I were in the process of composing a research survey regarding exertional heat illness that would be implemented at an international nursing forum in China, and we were looking to add validity to our survey. Our program director and mentor mentioned the Korey Stringer Institute as well as Dr. Doug Casa as being the leaders in exertional heat illness research, and that they would be a good organization to gain validity from. So we contacted Dr. Doug Casa, and he personally edited and improved our survey to make sure our research was sound. We were very grateful for the assistance, and it opened my eyes for the first time to the Korey Stringer Institute.

In what ways has KSI impacted you?

I must admit, before I attended my first KSI meeting, I can honestly say I knew very little of the behind the scenes of the Korey Stringer Institute. Sitting down at the table, the meeting started and everyone began discussing the various corporate partners, research, health and sport safety initiatives, etc. that KSI has a hand in, and it absolutely blew me away. For such a relatively small organization to make such a big impact on so many levels is inspiring. The passion and drive of each and every person in this organization I believe goes unparalleled when it comes to the advocacy and improvement of preventing sudden death in active individuals. That being said, the Korey Stringer Institute has impacted me by bringing to light all the various deficits we still have in today's active society, and gives me hope that one day due to the constant and progressive actions of this astounding Institute, sudden death due to completely preventable causes may be eradicated.

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ACTIVE INDIVIDUALS.**

THE SPOTLIGHT SERIES WILL FEATURE THE PEOPLE OF THE KSI, AND THOSE WHO SHARE AND REPRESENT THE PASSION OF THE KSI.

Could you tell us about yourself?

I have been working as an athletic trainer in the Division setting since I graduated from UCONN in 2011. I am currently an assistant athletic trainer at Drexel University in Philadelphia, PA. My main sport responsibilities include women's basketball and men's/women's crew. My other responsibilities include overseeing athletic training and work study students, collection of summer medical paperwork, CPR certification, and administrator for online injury documentation software. I still try to stay active in research within the profession by assisting Dr. Mazerolle, Assistant Professor and Director of Entry-Level Athletic Training Education at UCONN, with various projects. Things I enjoy most about athletic training are prevention and immediate care of injuries. I also really love rehabilitation of injuries. My hobbies outside of work include spending time with family/friends, running, reading, and doing anything outdoor.

Could you tell us about your first involvement/interaction with the Korey Stringer Institute?

I started graduate school at UCONN in the fall of 2009. During the fall of 2010, the Korey Stringer Institute (KSI) was born. It was a really exciting and fun adventure to be a part of. One of my main responsibilities during the early development of KSI was to form website content. The main focus of the initial website was about heat illnesses, but we also focused on other ways athletes can die from sport. I helped put together the sudden cardiac death section of the initial website. I also got to be apart of KSI's first booth at the National Athletic Trainers' Association convention in Philadelphia in 2011. This was an incredible experience for two reasons. First, we were able to really kickoff our mission and introduce the website to thousands of athletic trainers. Second, I was able to actually meet Kelsi Stringer. She is an astonishing women, and hearing her passion about and goals for KSI was very encouraging.

In what ways has KSI impacted you?

KSI has definitely impacted me both professionally and personally. Most importantly, it has taught me to bring my knowledge of sudden death in athletes not just to the places I work, but to all the people I interact with professionally. I think KSI has helped me find a niche that other athletic trainers might not even realize exists. Sudden death of athletes is extremely important, and I feel sometimes overlooked by students and young athletic trainers. I think what KSI is doing to help spread the word about heat illnesses is incredible, and I hope someday all schools have athletic trainers because of them. As the Korey Stringer Institute continues to grow, it makes me feel humble that I was able to be apart of something so special and something that is going to help save athlete's lives. I can't thank everyone enough that was involved in the beginnings of KSI, especially Dr. Casa and Rebecca Stearns. They were really the driving force behind the operation. I am very thankful that I was able to have a small hand in the process.



KERRI GAVIN, MA, ATC

**KOREY STRINGER INSTITUTE
FOUNDERS COUNCIL**

**UNIVERSITY OF CONNECTICUT
ALMA MATER, 2011**

**...WHAT KSI IS DOING TO HELP SPREAD THE WORD
ABOUT HEAT ILLNESSES IS INCREDIBLE, AND I HOPE
SOMEDAY ALL SCHOOLS HAVE ATHLETIC TRAINERS**

PERSONAL STORIES

#01: RICHARD DODAKIAN COMPLETED HIS 12TH FALMOUTH ROAD RACE LAST SUMMER. AT THE PREVIOUS FALMOUTH ROAD RACE, HE SURVIVED AN EXERTIONAL HEAT STROKE AFTER IMMEDIATE TREATMENT AT THE MEDICAL TENT.

Sunday morning, August 11, 2013 was a gloriously sunny and dry day in Falmouth, MA. The temperature at 10:00AM was in the 70's and there was zero breeze coming off of the ocean and not a cloud in the sky at Woods Hole Harbor. For those that are unfamiliar with Woods Hole, it is the starting line for the Falmouth Road Race (www.falmouthroadrace.com). 2013 marked the 42nd running of Falmouth and my 11th consecutive time running the 7+ mile course from Woods Hole to Falmouth Heights. Little did I know that my 11th Falmouth was almost my last and could have possibly been my last day alive.

The Falmouth Road Race is a very popular event that has been run every August since 1973. It attracts runners from all over the world and is the feature running event of the summer in New England. The field includes many world class runners and past and present Olympians, but it is really a race for casual and recreational runners to enjoy with family and friends. This year there were over 12,000 runners and wheel chair participants making the field the largest in the races' history. New Balance and the other sponsors do a great job organizing the event and it is really enjoyable to run for casual runners like me. Because the race is run in the heat of the summer, a pretty substantive medical tent is set up at the finish line to treat anybody hurt during the race. I often wondered what went on in the medical tent as I do not know anybody that had ever had to visit it. Unfortunately, I found out firsthand what goes on in the medical tent and how truly awesome the volunteers are that man the tent in Falmouth.

The Falmouth Road Race has become a great tradition for my family and friends over the years. My sister has run Falmouth about 30 times and my wife almost 20 times so my experience with the race goes back a long ways even before I ran the past 11 races. Over the years, more and more family members have joined my wife and sister so now there 10+ of us that participate in the race. See the picture of our race day group. I am in the back row, second from the left with the blue shirt and white hat. After the race we have our traditional meeting place by the backstop of the baseball field near the finish line to talk about our race experiences of the day and then we head to our annual road race barbeque. The barbeque is really a lot of laughs where all the runners in our group and the rest of our family and friends have a few drinks eat like gluttons and talk some smack about our family order of finish. The Falmouth Road Race is really a great reason for all of my family to get together before the summer ends. We have been doing it for many years now and it is a blast.

My personal experience at the Falmouth Road Race this year was a true eye opener. I am 52 years old and in decent shape. I am fortunate enough to be able to still stay very active year round. I still play basketball, softball and run to keep myself in good condition. My body has held up well over the years so running the Falmouth Road Race has never been a problem for me, not until this year.

The past several months have been busy for me and my family. I am an accountant by trade but have focused my profession more on international operations in fiber optics for many years now. I deal

with numerous companies and individuals in Asia on a daily basis. Because of the 12 hour time zone difference between Boston and most of Asia, my work day tends to be quite long. The improvements in communications allow us to work from home at any time, day or night if need be. This is great for work and is necessary to stay competitive. But the added work time for me has replaced a few hours of normal deep sleep time in the early morning. The reason why I mention this is that I believe this reduction in quality sleep time probably contributed to my frightening experience on August 11.

On the day of the race, I followed my normal routine. I woke up around 6AM and took a shower and had my pre-race meal: A bagel with peanut butter and a bottle of water. The only thing different this year was sleep related again. On the Saturday night before the race my family and I went to a family wedding which was really nice. The wedding was late in the afternoon and the reception finished around 11PM. Because I had to run the next morning and I had to drive for 1.5 hours from the wedding to Falmouth after the wedding, I only drank water and some juice at the wedding. Not a drop of alcohol for me on the night before the race. I was hopeful that behaving at the wedding would have helped my running experience on race day. The wedding was great and a lot of fun, but the timing was not conducive to a good night's sleep before race day. I plan on 8+ hours of sleep the night before Falmouth is run but only got 5 hours this year. Another red flag I did not see.

The Falmouth Road Race begins at 10AM and 2013 was no exception. The race started right on time as the sun climbed higher in the sky. My pre-race hydration included drinking a bottle of water with breakfast and another bottle of Gatorade while waiting for the race to start in Woods Hole. Physically, I felt fine before the race began, just the usual butterflies that I feel before I participate in any athletic event. I suppose I was a little tired, but certainly nothing in my mind that would have made me worry or be concerned. My mind was focused on running the race and breaking my goal of one hour. Prior to 2013, the only time I was unable to break 60 minutes was the first year I ran and that year I ran in 60:04. All other years my times were under an hour so my goal was something certainly attainable.

The first approximately 3 miles of the race route at

Falmouth are rolling hills and relatively shady which I personally enjoy the most. The next 3+ miles are pretty flat but very sunny. Sometimes you catch a breeze off of Surf Drive Beach which cools things down a bit but no such luck this year. Not a cloud in the sky and no breeze made the Surf Drive portion of the run torturous for me. Like most runners and humans in general, I do not enjoy running in the heat and burning sun. My preparation for this year's race included about 15-20 runs of 6 miles, but all primarily in the shade and early morning, when the weather was cool and comfortable. I probably could have trained more for the race this year, but I felt confident that I was in good enough shape to run Falmouth and break an hour. In retrospect, by training in conditions that were not similar to the race day weather did not condition my body sufficiently to manage the heat and blistering sun on race day. Just another contributing factor to my ultimate demise that day.

As I progressed through the run I felt pretty hot, but nothing unusual in my mind. I would pick up a sip of water and dump some water on my head at the numerous water stations along the race route. Although I didn't feel thirsty while running, more water would have helped me to cope with the heat of the day. I did not drink enough while running. People, including me, think that running for an hour you don't need to continue to hydrate since it is a pretty short period of time. Well, this just isn't true. Another life lesson for me!

At about the 5.5 mile mark of the race route I remember running past my daughter who was unable to run this year. After that, I remember passing the 10K mark as the crowds were building near the finish line of the race. Unfortunately, the last thing I remember on the race route was passing the 10K mark. My mind blacked out at that point but my body kept running. Around the final corner and up the last hill my body went while my mind was absent. From what I was told, a few more of my family members saw me with a few hundred yards to finish and called out to me but I did not respond. After the race, they told me that I was limping and they thought that maybe I had rolled my ankle while running. They didn't think my condition was anything serious so

they continued to look for more family members as they finished. My ankle was fine, but the limp was from the serious heat stroke that whacked my mind and body.

My body continued down the final hill and under the American flag that waves across the finish line. Thanks to the photographic evidence from Marathon Foto and my official time being registered, it was confirmed that I actually did finish running the entire Falmouth Road Race this year. I have no recollection of finishing. None at all. It appears I ran the last .8 miles and I do not remember a thing! How frightening is that?

The next thing I remembered was being surrounded by 6 or 7 people working frantically trying to cool my body temperature down in the medical tent that is manned at the finish line of the race route. I was awake at that point but my mind was very, very confused. The heat stroke not only does a number on your body, but really messes up your mind too. When I entered the tent my body temperature was 107.7 degrees. The medical team immediately put me in an ice bath and started working to get my temperature down. The team also hooked me up with my first bag of IV fluid of the day. 107.7 is something that the team had not seen very often in the past while treating heat stroke victims. It was a very high temp for the human body to endure. Fortunately enough for me, I had the best team on the planet working on me and they were able to treat me. My mind was working at that point, but not great so I could hear and see how hard the team was working to cool me down. I am extremely lucky that experts in treating exertional heat stroke grace the medical tent at Falmouth. Volunteers from Cape Cod Healthcare and from the Korey Stringer Institute surrounded me and worked very hard to cool my entire body. Before August 11, 2013 I had never heard of the Korey Stringer Institute at the University of Connecticut. I knew of the tragic passing of Korey Stringer, but was unaware that the Institute was founded as a result. In my mind, if the team from the Korey Stringer Institute and from Cape Cod Healthcare did not treat me that day, I could have died, no doubt about it. I would be lying to you if the thought of dying did not cross my mind while being treated in the medical tent.

It took a little time, but my temperature started

coming down out of the danger range where my body could have been permanently damaged. During these 30+ minutes I met Rob Huggins, a final year PHD Student from the Korey Stringer Institute. While others were working on my body, Rob was working on my mind to keep me occupied and conscious. This was a huge part of the treatment for me as Rob tried to keep me calm and kept me informed of what was going on with my treatment. I can tell you that I was not calm and was panicking for sure due to the heat stroke. I was pretty scared too and Rob Huggins' experience and training of treatment of exertional heat stroke helped to saved me.

As my temperature was getting under control, the team decided to remove me from the ice bath. After a few minutes, my temp started climbing again so they decided to throw me back in the ice tub. A few more minutes in the ice tub for the second time and my body temp began to drop pretty quickly so the team removed me again. This time, my body temp continued to drop even after I was out of the tub. I began to shiver uncontrollably so the medical team decided to take me out of the shaded tent and into the hot sunshine on the Falmouth Heights Beach, the same sunshine that led to my heat stroke! How ironic is that? Just to add more problems to the day, I could not warm up on the beach. The volunteers that just worked so hard to cool me down were now trying to warm me up! They are there primarily to treat heat stroke and not low body temperatures.

So, at that point the team made the decision to transport me to the hospital. This was my first and hopefully last ambulance ride. My family did not know where I was so they were not around when the ambulance left the medical tent. In my confusion I was able to tell the medical team my wife Maureen's name and remembered that she was also running the race so they were looking out for her. I did not do myself any favors that I forgot to fill out the emergency contact information on the back of my running bib. I can tell you I will never make that mistake again. I was still pretty confused so Rob Huggins volunteered to go in the ambulance with me and the EMT's on the trip to Falmouth Hospital. Maureen is a nurse practitioner so her instinct kicked in when she could not find me after she finished the race. She decided to check out the medical tent just in



1



2



3



4



5

1. From left: Dr. Rebecca Stearns, Kodi Stringer, Kelci Stringer, Dr. Douglas Casa
2. Korey Stringer Institute field research tent at the race
3. Falmouth Road Race medical tent
4. From left: Dr. Douglas Casa and Dr. John Jardine
5. Over twenty athletic trainers and researchers from the University of Connecticut took part in the 2014 Falmouth Road Race study



case. Unfortunately, her instincts were correct but when she arrived at the tent I had just left in the ambulance.

The EMT's and the ER Staff at Falmouth Hospital gave me two more bags of IV fluid and provided some nice warm heat blankets to get my body temp back to the normal 98.6 degree range. After an hour+ in the ER, my vital signs were all back to normal and my blood work also came back as normal. My mind was also calmed down and back to somewhat normal condition. My wife had made her way to the hospital and had some dry clothes for me to put on when I was discharged a short time later.

I felt really sheepish at that point and bad that I had put my family and the team of unbelievable medical volunteers through such a trying and frightening experience. I was so fortunate that Rob Huggins and the Korey Stringer Institute Team and the volunteers from Cape Cod Healthcare were there to treat me and save me from who knows what fate. I am a pretty lucky guy.

It took a few days of good sleep and hydration for me to get my color back and to feel better. The only lingering affects I felt from the heatstroke and treatment is a little tingly feeling in my forearms which seems to be getting better every day. The heat stroke took a lot out of me but I also learned a lot from such an awful experience. There is not one thing that you can point to that caused my body to overheat, but several contributing factors that culminated in 107.7 degrees body temp and an ambulance ride to the hospital. My new friend Rob Huggins educated me so this will hopefully not happen to me or anybody I know again.

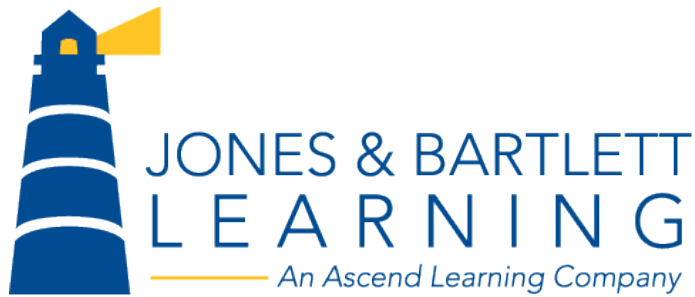
It appears that a lack of quality sleep over a prolonged

period of time was one of the major factors that contributed to my heat stroke. In addition, although I thought I was fully hydrated, I probably was not. I should have drunk more water along the route to maintain some level of hydration on a hot day. Sipping water and dumping some on my head was not enough to save me. Another contributing factor which Rob explained to me was that I have to modify my training regimen. As I mentioned, I did train for the Falmouth Road Race and put in my miles, but my training was done exclusively in cooler, shadier conditions. The weather conditions were sunny and hot on race day with no breeze. If I had trained more in the hot sunshine, my body would have been more acclimated to the heat on race day and maybe I would have avoided heat stroke. I know I will be training longer and in hotter conditions when I prepare for Falmouth in 2014.

I hope this article will also teach anybody that reads it that heat stroke is a very serious affliction and can hit anybody at any time. It doesn't matter if you are in shape or not, young or old, male or female, it can hit you. I never would have expected this to happen to me, but it did. Trust me when I say, you don't want to experience heat stroke. It takes a lot out of your mind and body. If you can learn anything from my experience, you can do things to help prevent your body from overheating and almost shutting down.

I want to thank Mr. Rob Huggins and the Team from the Korey Stringer Institute and also the volunteer team from Cape Cod Healthcare for doing such a great job in treating my heat stroke. If they were not at the medical tent at the Falmouth Road Race on August 11, 2013, I would not be here writing this article for those of you who took the time to read it. *—Richard Dodakian*

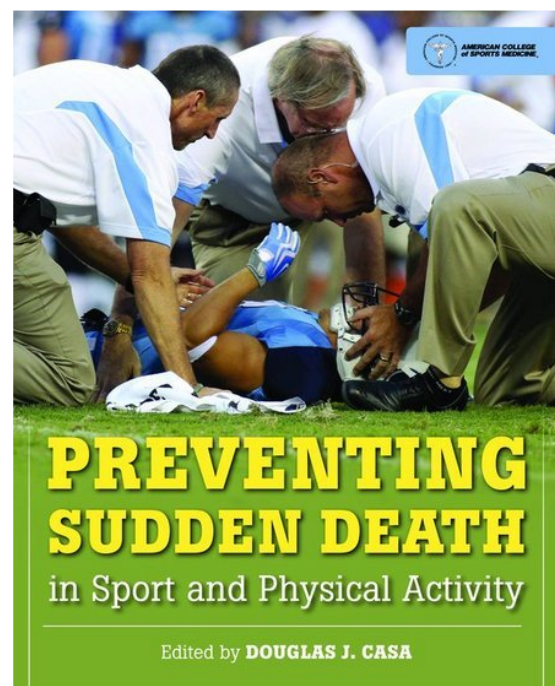
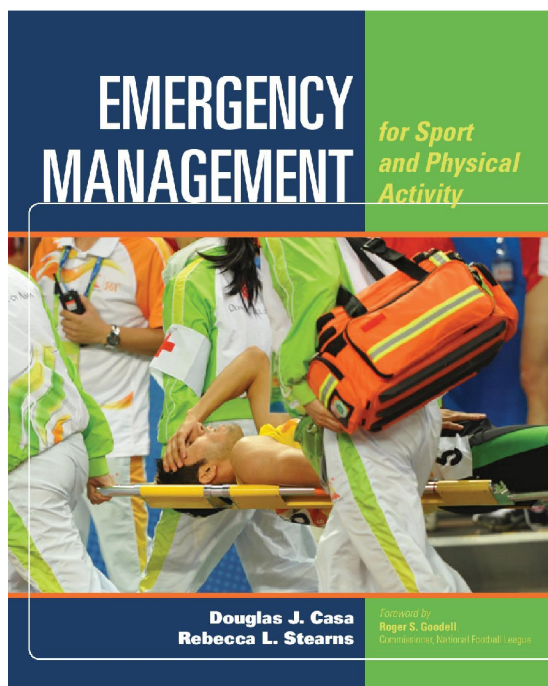
EDUCATIONAL RESOURCES



Rebecca Stearns, Vice President of Operations and Education, and Yuri Hosokawa, Director of Communication and Education, are proud to announce the release of an online Evidence Based Practice Continuing Education Credit learning course this summer. Korey Stringer Institute has worked with the Jones & Bartlett Learning from the initial stages of this project and served as the content expert on the course.

Preventing sudden death in sport has recently come into the spot light with large changes in concussion management, cardiac deaths and drastic increases in exertional heat stroke deaths occurring at all levels. Medical professionals all need to be prepared to handle such emergency scenarios to help reduce the risk of sudden death. This course introduces such information and training unlike any other continuing educational series and includes applying new skills and knowledge in video scenarios that hinge on fast and accurate decision making. These courses are meant to fill the current gap the educational courses being offered. Above all else, it is the hope that these continuing educational courses will lead this area of education with some of the most advanced integration of technology and video simulations that will challenge and teach students in very real scenarios.

Due out this fall, the second edition of the highly rated Preventing Sudden Death in Sport and Physical Activity continues to break ground by offering new elements to this edition including two new chapters which include: “Developing Safety Policies for Organized Sport” and “Sport Law and Sudden Death”, and also breakdown and summary of all the Athletic Training Competencies covered in the book and each chapter that have been set by the Commission on Accreditation of Athletic Training Education.



MILITARY AND INDUSTRY INITIATIVES

The Korey Stringer Institute is working closely within military and industrial settings to enhance the safety of soldiers and laborers. These individuals are faced with environmental and physical stress on daily basis, sometimes more so than the athletes. It is one of our missions to ensure the safety of all physically active population.

LACKLAND AIR FORCE BASE

- KSI has worked with medical staff to develop treatment algorithms for exertional heat illness
- KSI has implemented other policies changes like placing cooling stations around training locations.

FORT BRAGG

- Dr. Casa gave a talk to doctors at Womack Army Medical Center concerning exertional heat stroke care.
- KSI toured the base and reviewed heat policies for special operations training.

FORT BENNING

- Dr. Casa provided a lecture to medics regarding heat stroke care
- KSI helped ensure that medics take rectal temperatures in cases of suspected heat illnesses

INDUSTRY

- KSI continues to have visits from industry leaders in construction to discuss heat policies and help develop.



JOHN JARDINE, M.D.

A LETTER FROM CHIEF MEDICAL ADVISOR AND CHAIRMAN OF MEDICAL & SCIENCE ADVISORY BOARD

I guess you could say I became the Chief Medical Advisor for KSI through a “hands- on” approach. I am formally trained as an Emergency Medicine physician. My first ER job out of residency was in Falmouth Hospital, Falmouth, MA, home to the iconic Falmouth Road Race. Brand new to my job in the summer of 2000, I was asked to volunteer at the race, held the second Sunday every August. By the following year, I was recruited to take over the medical direction of the race from the two retiring 30+ year veterans. Just two years later we treated a record number of heat stroke victims at the race...and I was hooked! I met Doug Casa at the race some years before the formation of KSI. Doug would bring teams of researchers and students to volunteer in the medical tents at the race. Treating heat illness victims with an expert made me realize there was real science involved. I learned about heat illness in medical school, and saw a handful of cases as an ER doctor. Now, after personally treating hundreds of cases, I understand the enthusiasm that the staff at KSI have in the ability to prevent needless deaths and disabilities in athletes. I remember when Korey Stringer died. But each year I pay closer attention to news reports of young athletes dying from heat stroke at football practice or some other outdoor event, and I wonder why? No one who was treated in the medical tent has died at the Falmouth Road Race. Why isn't everyone doing what we do? And so my passion grew. We use the unique opportunities at the Falmouth Road Race to study heat illness: how to prevent it, how to treat it, who is at risk, etc. Heat stroke is 100% survivable if treated quickly and correctly. The team at KSI is inspired to make this a reality for all athletes. And it's more than just heat illness. Head injuries, sudden cardiac death, and exertional sickling can cause sudden death in athletes. Though founded as a result of a death from heat stroke, KSI has branched out to protect athletes from dying needlessly doing what they love. I consider it an honor to serve as Chief Medical Advisor for KSI. It's an opportunity to inspire others while continuing my own learning. I don't have a near-death story like Doug, but I have acquired his passion. As an Emergency Medicine physician, I am looked upon to save lives. I feel fortunate to be involved with a group like KSI who have made it their work to do the same.

...BUT EACH YEAR I PAY
CLOSER ATTENTION TO
NEWS REPORTS OF
YOUNG ATHLETES DYING
FROM HEAT STROKE AT
FOOTBALL PRACTICE OR
SOME OTHER OUTDOOR
EVENT, AND I WONDER

WHY?

OUR MISSION AND ENDEAVOURS COULD NOT HAVE BEEN MADE POSSIBLE WITHOUT OUR CORPORATE PARTNERS. WE ARE GREATLY APPRECIATIVE OF YOUR CONTINUED SUPPORT.



National Football League: The National Football league is a founding partner of the Korey Stringer Institute. The NFL supports multiple player safety initiatives for athletes of all levels. For more information on the NFL's Health and Safety Initiatives, visit [NFL Evolution](#).

Gatorade: Gatorade is a founding partner of the Korey Stringer Institute. Gatorade and the **Gatorade Sport Science Institute** continue to search for and study new and innovative ways to help athletes improve performance by facilitating proper hydration and nutrition.

Camelbak: The mission of Camelbak is to continuously reinvent and forever change the way people hydrate and perform. Visit [Hydrated](#) for useful resources on hydration practice.

Kestrel Pocket Weather Meters by Nielsen-Kellerman: Nielsen-Kellerman is committed to ensuring that people know the weather and environmental conditions that impact their health, safety and bottom line. NK's Kestrel meters are rugged, accurate, fully calibrated, portable, affordable and easy to use. KSI uses these wet bulb globe temperature thermometers to determine environmental conditions during research studies both inside the heat chamber and in field studies. Visit [heatstress.com](#) for resources on physical activity in heat stress.

One Beat CPR & AED: One Beat CPR + AED is one of the largest distributors of defibrillators and accessories in the United States. One Beat CPR + AED offers an expansive line of AED products and accessories. One Beat CPR + AED also offers American Heart Association (AHA) and American Safety Health Institute (ASHI) authorized training certifications. Be prepared to save the life of a teammate, fan, friend, or loved one.

Mission Athletecare: Mission Athletecare has a dual mission. While delivering world-class innovations that meet the unique needs of an athletic lifestyle, Mission also makes an impact off the field of play through the **M Foundation**, which promotes the health and safety of youth athletes, and simultaneously recognizes and awards high school athletes that give back to their community.

SNAPSHOTS

KOREY STRINGER INSTITUTE
MAKING CHANGES EVERYWHERE...!



Dr. Douglas Casa giving a heat lab session at the University of Alabama in the Fall of 2014.



Our newest and youngest additions to the KSI family, Evelyn and Landon.



Rachel VanScoy, Assistant Director of Sport Safety Policies, preparing the participant for the exercise trial in the heat acclimation study.



Dr. John Jardine representing the KSI from Italy. Protecting athletes everywhere!



DOUGLAS CASA, PHD, ATC, FACSM, FNATA

Chief Operating Officer



REBECCA STEARNS, PHD, ATC

Vice President of Operations and Education



ROBERT HUGGINS, PHD, ATC

Vice President of Research and Elite Athlete Health and Performance



RIANA PRYOR, MS, ATC

Director of Research



WILLIAM ADAMS, MS, ATC

Director of Sport Safety Policies



LESLEY VANDERMARK, MS, ATC

Assistant Director of Research



YURI HOSOKAWA, MAT, ATC

Director of Communication and Education



SAMANTHA SCARNEO, MS, ATC

Director of Youth Sport Safety



LUKE BELVAL, BS, ATC

Director of Military and Occupational Safety



ELIZABETH ADAMS, BS

Assistant Director of Elite Athlete Health and Performance



ALICIA PIKE, BS, ATC

Assistant Director of Youth Sport Safety



RACHEL KATCH, BS, ATC

Assistant Director of Research



RACHEL VANSCOY, BS, ATC

Assistant Director of Sport Safety Policies



ANDREA FORTUNATI, BS, ATC

Assistant Director of Elite Athlete Health and Performance



KELCI STRINGER, CO-FOUNDER AND SPOKESPERSON

Co-Founder and spokesperson of the KSI



JAMES GOULD, CO-FOUNDER AND CHAIRMAN OF THE BOARD OF ADVISORS

Managing General Partner, The Walnut Group

Chairman, Management One

Korey's NFL Agent



JOHN JARDINE, MD, CHIEF MEDICAL ADVISOR AND CHAIRMAN OF MEDICAL & SCIENCE ADVISORY BOARD

Attending Physician, Landmark Medical Center

Co-Medical Director, Falmouth Road Race

UConn

UNIVERSITY OF CONNECTICUT

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