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Testimony on SB 456 "An Act Concerning Student Athletes and Concussions"

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I am a primary care sports medicine physician affiliated with Middlesex Hospital. My primary practice is located in Old Saybrook. Chief among my clinical activities is the management of sports-related concussion. I work primarily with high school athletes involved in collision or contact sports. I serve as the football team physician for Haddam-Killingworth High School and serve as concussion consultant for no less than 5 Connecticut shoreline high schools. My qualifications include Certified ImPACT Consultant which reflects training in the interpretation of the most commonly applied computer-based neurocognitive test used in the management of concussion. To date I have managed over 250 cases of acute concussion. I am a charter member of the Connecticut Concussion Task Force and was instrumental in the development of a new high school-based teaching module on concussion, primarily designed to educate the student-athlete. I have lectured widely on concussion in both academic and public settings.

I find this bill to be vitally important in that it serves to acknowledge concussion, or mild traumatic brain injury (mTBI), as a significant injury which requires a uniform approach to treatment in order to maximally protect the injured athlete from serious clinical sequelae. Over the past decade it has been demonstrated repeatedly through several well-designed clinical studies that even a "bell-ringer" (a perceived mild concussion) can significantly impact cognition and pose significant risk of morbidity if not properly managed. We have discovered through research the necessity of allowing a concussion to fully resolve, through enforced rest of both brain and body, before the athlete can be safely returned to play or to the classroom. The injured brain is more vulnerable to repeat injury and prolonged recovery. Premature return to play in a setting of an unresolved concussion can result in persistent disabling symptoms (termed post-concussion syndrome when symptoms continue 30 days post-injury) or in the rare but catastrophic entity known as second-impact syndrome, a devastating brain injury which has a 50% mortality rate. We now possess the means to not only recognize acute concussion when it occurs but to also gauge its severity through the application of a symptom scale, physical examination and objective neurocognitive testing.

Only through the comprehensive education of coaching personnel can acute concussion be properly recognized on the playing field. Per enforcement of the protocol proposed in SB 456 this in turn would lead to removal of the athlete from the game or practice and hence prevent risk of further injury as described above. The Connecticut Concussion Task Force, in alliance with the CIAC, has developed the necessary training modules to achieve the goals stated in the bill. We in the Task Force firmly believe that through baseline comprehensive education and subsequent periodic refresher courses, coaches will possess the means to consistently recognize acute concussion and hence maximally protect the injured athlete from further injury by removing the athlete from play. Thereafter return to play is granted only if cleared by a licensed health care professional trained in the management of sports-related concussion.

Please consider the following as an example of what may happen to a student-athlete whose concussion injury has been mismanaged. This is one of my actual cases involving an athlete who had been referred to me after suffering multiple concussions. One of the key take home points is the fact that the clinical consequences could have been readily prevented had the athlete and coaching staff been educated on concussion management.

J.R. is a sixteen-year-old high school junior who plays linebacker on the varsity football team. He is an honor student with sights on attending an Ivy League university. Over the past several years he reports having sustained several "bell-ringers" which typically result in transient dizziness and confusion, lasting seconds to minutes. He never thought it important to mention to his coaches thinking that it was a normal part of the game. The coaches, lacking education in recognition of the signs and symptoms of concussion, did not express any concern. He continued to play, both ways in fact, without ever resting or missing a game. He was referred to me by his pediatrician after presenting with a complaint of chronic headache and fatigue coupled with the fact that his grades were dropping. Evaluation with neurocognitive testing revealed significant impairment in verbal memory, thought-processing speed and reaction time. Any exertional effort, be it physical or mental, exacerbated his headache. Only after prolonged enforced cognitive and physical rest, which included staying out of school for 1 month, did he eventually recover. He had been symptomatic for 9 months, a fact which greatly impacted his quality of life in every conceivable way.

Having a mandate through SB 456 would prevent the aforementioned scenario from occurring. I fully support the institution of this vital bill.

Respectfully submitted,

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