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Testimony provided to the Interim Education Funding and Taxation Committee

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Madam chair and members of the committee, for the record, I am Jeremiah Penn, a family medicine physician with special training in sports medicine.

I would like to thank you for the chance to provide testimony on the topic of sports concussions as it regards to Senate Bill 2281 from the 2011 legislative session. I would first of all like to commend you for taking the important step of putting into place a requirement for concussion management programs with our young athletes. This effort has placed the health of our children at the forefront of athletics, where it most certainly belongs.

Sports concussions are a topic of much deserved priority in our national conversation over the past few years. We have made great strides from the time when “getting your bell rung” was something to be bragged about or laughed off. We are finally beginning to acknowledge the many serious complications that can arise from this all too common injury. I would like to spend my time with you today to address some of the nuances of concussion injury in youth athletes and why I feel the training physicians receive makes them uniquely qualified to manage athletes with concussions.

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It is no understatement to say that our current knowledge about concussions is just the tip of the iceberg. Our management of concussions has changed from initial guidelines proposed by Dr. Robert Cantu in 1986 where concussions were graded on a scale of 1-3 at the time of the injury to 2008 International Conference guidelines which only state that most concussions (80-90%) resolve within 7-10 days but may last longer in children and adolescents. There will likely be new changes next year when the International Conference meets again.

We are recognizing that concussions do not follow a well-defined course but that each case has unique characteristics. It is this uniqueness that, in my opinion, requires management by providers with the broadest knowledge base available. The short-term symptoms of concussion can range from loss of consciousness to emotional lability (uncontrolled laughing or crying). These symptoms are generally easily recognizable and allow for a broad range of people to presumptively diagnose sports concussions. I agree with the current legislation allowing people such as officials and coaches to remove an athlete from potential harm if a concussion is suspected.

The long-term symptoms of concussion can be much more varied and subtle, including symptoms such as trouble with concentration, sleep, balance, headaches, and even occasionally depression or other mental health issues. These varied presentations are occasionally difficult to diagnose and, if present, may be difficult to manage without a broad medical knowledge base to draw from.

Physicians, from family medicine doctors in the small towns of our state to subspecialist neurologists in our larger communities, have extensive training in neurologic function that equip them to make the important decisions about when an athlete can return to competition after a concussion. Their training begins with months of classes on basic neuroanatomy and physiology in the first year of medical school. The second year has classes in pathology where diseases of the brain are discussed from a theoretical perspective. The third and fourth years of medical school are the clinical years, with a broad range of exposure, from internal medicine to surgery. Some of a medical students' training during these years is required to be in the areas of neurology and psychiatry, ranging from a few weeks to a few months. Time is also spent in radiology, where the imaging of the brain is discussed.

After medical school, residency training provides a deeper level of training. This currently ranges from three years for family practice physicians to six years for neurosurgeons. I can speak most in-depth about the training of family physicians. During the three years of residency, family physicians are required to spend a month of training with a neurologist, 1-2 months with a psychiatrist and a month with a sports medicine physician.

This exposure to an extensive background of medical information along with seeing patients with many illnesses and injuries, including concussions, gives physicians an excellent amount of experience in managing the athlete who is unfortunate enough to

suffer this type of injury.

Despite our broad knowledge, physicians cannot provide all of the care necessary for athletes who have suffered a concussion. We need to work in close coordination with other health care providers, including athletic trainers, physical therapists, and nurse practitioners. I have been fortunate to work with several people in each of these disciplines who are extremely dedicated and talented and truly appreciate the special skills they bring to caring for these athletes.

In closing, I would like to encourage you to require student athletes who have suffered a concussion to have an evaluation and clearance by a physician before returning to their sport.

Thank you for your time today.