Conclusions Acute traumatic injuries are common in mountain bike racing coaches and in student-athletes. Dissimilarly to student-athletes, coaches sustain upper extremity injuries more often than concussions. To our knowledge, this is the first ISS to track injuries in mountain bike racing coaches.

Abstracts

**INJURIES AMONG YOUTH MOUNTAIN BIKE RACING COACHES: THREE-YEAR DATA FROM A NATION-WIDE INJURY SURVEILLANCE SYSTEM IN THE UNITED STATES**

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Background As youth mountain bike racing is a rapidly growing sport in the United States, it is essential to monitor injuries in both student-athletes and coaches who ride with student-athletes during practices. An injury surveillance system (ISS) implemented through a collaboration between University of Utah researchers and the National Interscholastic Cycling Association (NICA), referred to as NICA-ISS, helps to better understand injury characteristics in this sport and pursue data-driven injury prevention strategies.

Objective Describe the types of and factors associated with injuries sustained by coaches during NICA-sanctioned mountain bike training.

Design Data were collected via NICA-ISS, developed using a web-based system, from NICA leagues during the 2018–2020 racing seasons. A designated reporter from each team reported injuries sustained by coaches along with those sustained by student-athletes.

Setting Nation-wide youth mountain biking leagues in the United States.

Participants NICA coaches participating in the 2018–2020 seasons.

Assessment of Risk Factors Variables analyzed included injury characteristics, coach demographics, and factors associated with injuries.

Main Outcome Measurements Summary measures (frequency and proportion) of injuries and associated factors.

Results Injuries were tracked in 31,280 coach-years, resulting in 407 injuries in 227 reported injury events. The most commonly reported injury was to the shoulder (34.8%), followed by concussion (17.6%) and wrist/hand (17.6%). 57.3% of injuries occurred on downhillss. Males and females reported similar injury rates (0.70% and 0.80%, respectively). Injury characteristics differed between sexes, with female coaches sustaining more lower limb injuries while males sustained more upper limb injuries. Whereas 56.4% of crashes resulted in an emergency room visit, 9.3% required hospital admission. Nearly half (48.3%) of injury events resulted in time-loss of 4 weeks or greater.

Conclusions Acute traumatic injuries are common in mountain bike racing coaches and in student-athletes. Dissimilarly to student-athletes, coaches sustain upper extremity injuries more often than concussions. To our knowledge, this is the first ISS to track injuries in mountain bike racing coaches.