Sport-Related Concussion Visual Assessment Teaching Trends in Athletic Training Programs
Beidler E*, Wallace J†, Covassin T‡: *Duquesne University, Pittsburgh, PA; †Youngstown State University, Youngstown, OH; ‡Michigan State University, East Lansing, MI

Context: Athletic training educators should teach students how to use an evidence-based, multifaceted approach to assess sport-related concussion (SRC). Visual assessment has emerged as an important component for SRC management, as vestibular and oculomotor issues occur in 61%-81% of concussed youth athletes. Visual assessment tools should be included in SRC education curriculum, but they are not currently highlighted as part of the clinical examination in SRC position and consensus statements.

Objective: To determine the proportion of athletic training educators that incorporate visual assessment tools into SRC education curriculum.

Patients or Other Participants: Participants were identified through the e-mail list on the CAATE website. Of the 377 athletic training educators who were contacted for participation, a total of 109(28.9%) responded. Fifteen individuals terminated the survey, which left 94 participants [42.6±9.5 years-old; females(n)=58, 61.7%; males(n)=36, 38.3%] in the study sample. The majority of the sample were athletic training program directors (n=78,82.9%) with the rest being clinical education coordinators (n=7,7.4%) and professors (n=9,9.6%).

Interventions: Participants completed a 10-minute online survey that was distributed via e-mail. The instrument used for this study was a 24-item questionnaire that evaluated which SRC management tools athletic training educators incorporate into their teaching practices. The questionnaire was adapted from an earlier 17-item version in order to include more current SRC management tools. The adapted instrument was reviewed for face and content validity by a panel of SRC researchers and athletic training program directors (n=5).

Main Outcome Measures: Athletic training educators were asked to identify from a list the SRC tools they taught their students to use for SRC management and return-to-play decision-making. The primary variables of interest for this study were the participant responses pertaining to the King-Devick (K-D) test and vestibular and ocular motor screening (VOMS) visual assessment tools. Frequency statistics were completed for all survey items.

Results: Only 38.3%(n=36) of responding athletic training educators reported that they taught the K-D test and 22.3%(n=21) the VOMS for SRC management. Less than one-third of participants reported teaching athletic training students to use the K-D test (n=24,25.5%) and VOMS (n=15,16.0%) to aid in making SRC return-to-play decisions. Additionally, less than one-third of the study sample reported that their students gained hands-on experience using the K-D test (n=25,26.6%) and VOMS (n=15,16.0%) during their SRC education.

Conclusions: Previous research has found the K-D test and VOMS to be reliable, sensitive visual assessment tools for detecting and managing SRCs, but they are currently not being taught by the majority of athletic training educators included in this study. These visual assessment tools are low-cost, portable options for identifying vestibular and oculomotor impairments in concussed athletes and should be included in athletic training SRC education curriculum.

Word Count: 450