ABSTRACT

**Background:** The Vestibular Ocular Motor Screen (VOMS) is a relatively new measurement tool intended for the non-vestibular practitioner to identify vestibular ocular dysfunction (VOD) following sport related concussion (SRC). Specific knowledge of VOD and usage of the VOMS among athletic trainers in professional sports leagues is currently unknown.

**Hypothesis/Purpose:** The purpose of this study was to examine knowledge of VOD following SRC and utilization of the VOMS tool and other vestibular ocular tests and measures among athletic trainers in professional sports.

**Study Design:** Cross Sectional Study

**Methods:** A total of 117 athletic trainers from Major League Baseball, the National Basketball Association, the National Football League and Major League Soccer, with a mean of 17 ± 9 years in the athletic training profession were surveyed via Qualtrics™ with a response rate of 33%. The survey contained three primary sub-sections; demographics, knowledge of vestibular ocular deficits following SRC, and VOMS component utilization at baseline, acute and return-to-play phases of management. Total knowledge scores as well as percentage of utilization based on concussion management stages were calculated.

**Results:** The average percentage correct on the knowledge items was 56% (range of 30% to 65%). There was no difference in knowledge score among athletic trainers with formal post-professional concussion training ($p = 0.29$) compared to those with no formal training. There was no relationship found between total years practicing and total knowledge score, $r = -0.128$, ($p = 0.17$). Smooth pursuit testing was the most commonly utilized (70%) in clinical practice and Visual Motion Sensitivity (VMS) was the least utilized (17%). Balance assessment measures to examine vestibular functioning remained the highest utilized examination technique at all-time points in management of SRC.

**Conclusion:** The range of correct responses from 30% to 65% indicates that at the time of survey the participants had decreased knowledge of VOD following SRC. There was low overall utilization of all VOMS components despite recent evidence showing good sensitivity and low false positive rates in SRC. The results of this study identify an opportunity for future training specific to vestibular-ocular impairments and assessment following concussion injury.

**Level of Evidence:** 2c

**Keywords:** Vestibular ocular dysfunction, movement system, screening, concussion management.

---

**CORRESPONDING AUTHOR**

Rebecca A Bliss, PT, DPT, DHSc
Assistant Teaching Professor
University of Missouri
Department of Physical Therapy
801 Clark Hall
Columbia, MO 65211
(910) 644 4898
E-mail: Rebecca.bliss@health.missouri.edu

---

1 University of Missouri, Department of Physical Therapy, Columbia, MO, USA
2 Missouri State University, Department of Public Health and Sports Medicine, Springfield, MO, USA

**Conflict of interest:** The authors have no conflicts of interest to declare.