Transforming Concussion Management in Virginia Public Schools by Advancing Our Understanding of Barriers that Impede Policy Implementation

Learning Objectives
In this session, participants will:
Understand how concussion management policy was propagated and implemented.
Learn about an effective and rigorous culturally responsive framework for complex evaluations.
Identify research and evaluation methods that can be used to gather meaningful evidence and generate culturally responsive solutions.

Statement of Purpose
Concussions are a public health concern. All states have passed laws regarding concussion management in schools. The Virginia Department of Education (VDOE) developed guidelines for public schools in Virginia. All 131 public school divisions (316 high schools) were mandated to develop and implement policies without fiscal support. The Virginia Concussion Initiative (VCI) aimed to evaluate policy implementation in Virginia public high schools to more fully understand the barriers and facilitators to translating concussion policy into effective practices.

Methods
A sequential mixed methods evaluation approach was employed. First, all school division concussion management policies were scored using a researcher-derived rubric (54 possible points) that aligned with the VDOE guidelines. Policy documents were scored by three independent coders with high interrater reliability (α=.919). Second, single-participant interviews and surveys with both open- and closed-ended items were used to understand stakeholder perspectives. A K-means cluster analysis was performed using a local ability-to-pay index (CIS) and percentage of students eligible for free/reduced lunches as provided by the VDOE to inform interview sampling. Using a cluster-stratified random sample of divisions, stakeholder interviews (n=67) offered multiple stakeholder perspectives from defined roles. Interview data were used to inform survey methods that were employed to better understand stakeholder perceptions of policy implementation. One web-based survey to provide an organizational scan of implementation practices within schools and another distributed to pertinent professional associations throughout Virginia.

Results
Three clusters emerged creating high (n=22), moderate (n=72), and low (n=37) resourced groups. Higher-resourced divisions tended to have more schools and larger student populations, CIS, and student populations. Average policy compliance was 59% with 64% scoring between 32-35 points. Seven divisions were missing policies (all from rural localities). Three clusters emerged from the interviews: 1) adequacy of resources, 2) culture and motivation, and 3) shared community risks.

Conclusions
School groups with shared risks and protective factors reported similar individual limitations that inevitably inhibit overall division implementation. Observed disparities suggest concussion policy
implementation in Virginia is not equitable. Due to diverse barriers and unequal resources faced among public school divisions, culturally-responsive solutions are necessary to address unique needs throughout Virginia which may inform implementation implications for other states.

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Esther Nolton is a third year PhD in Education student at George Mason University—specializing in Research & Evaluation Methods and Health & Education Policy. She received her BS in Athletic Training with minors in Biology and Psychology at Mason and her MEd in Kinesiology from the University of Virginia. Prior to returning to Mason, she served as the Director of Research at Inova Sports Medicine for three years. Her primary research interests are in access disparities in health and education; social determinants; evaluation theory and policy; and policy implementation. She currently coordinates the Virginia Concussion Initiative which is funded by the Virginia Department of Health and CDC to evaluate concussion management policy implementation. She is a 2018-2019 AEA GEDI scholar and is interning with the National Science Foundation (NSF) with the Evaluation & Assessment Capability Section in the Office of Integrative Activities.
Beyond Return to Play: Concussion Education for School Staff

Learning Objectives
Describe schools' implementation of concussion policies with a focus on return to learn.
Identify differences in implementation of concussion policies by a variety of school personnel.
Explain the importance of school wide staff concussion education.

Statement of Purpose
Much work has been done on "Return to Play"; many schools have clear polices in place. Return to Learn policies seem to be less defined.

Methods
Surveys of six different groups associated with schools were conducted. These included school administrators; teachers; school counselors and school psychologists; school nurses; school board presidents; and special education, para-educators and other staff. The purpose of the surveys was to evaluate schools' implementation of concussion policies. Surveys were sent out in partnership with several educational associations.

Results
Respondents reported a rather alarming impact that concussions had on students in the classroom. Fifty percent reported decline in academic performance, 16% reported classroom behavior issues and 11% reported mental health concerns. The vast majority of schools appear to have a return-to-learn policy, but many teachers appear not to know about it. Elementary teachers are significantly behind their peers teaching in other grade levels in terms of awareness and knowledge of concussions.

Conclusions
There is a clear need for education/training for teachers on concussion management. School nurses play an important role in concussion management and often are the most knowledgeable about return-to-learn among school staff. It is a challenge to find the appropriate mechanism to provide this needed teacher education.

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Tennessee Safe Stars Initiative

Learning Objectives
Objective 1: Participants will be able to describe results of a statewide youth sports safety standards project.
Objective 2: Participants will be able to list a minimum of two facilitators and two barriers in the implementation of a statewide youth sports safety standards project.
Objective 3. Participants will learn how to recruit and sustain partners to support a statewide youth sports standards safety project.

Statement of Purpose
Youth sports organizations have no set safety standards despite approximately 2.7 million emergency department visits annually in the United States due to sports injuries in children under age 19.

Methods
The Tennessee Department of Health and Children’s Hospital at Vanderbilt implemented the first youth sports safety rating system. Safe Stars consists of three levels - Gold Star, Silver Star and Bronze. Each level requires that sports organizations meet safety criteria determined by a team of health professionals. The bronze level criteria are considered the most critical for preventing injuries among youth athletes and organizations must meet all of these criteria. To reach silver or gold, organizations must meet two or four additional criteria, respectively.

Results
Process data collected demonstrate many youth sports organizations do not have minimum policies in place to achieve Safe Stars designation. This demonstrates a need for this safety rating system. Organizations may also lack funds to purchase automated external defibrillators (AEDs). The Safe Stars Initiative has gained the interest of professional sports organizations, along with several state organizations. These organizations are partnering to promote the program. A partnership with the Tennessee Athletic Trainers Association has resulted in increased interest among public schools. Schools could benefit from the safety rating system to ensure that the highest standards of sports safety.

Conclusions
The Safe Stars Initiative has the potential to reduce sports injuries among youth. As the first youth sports safety rating system in the country for organizations and schools, this innovative approach to injury prevention will be evaluated further to determine success.

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Mr. Terrence Love, MS, is a community leader with over 20 years in community-based prevention. He has worked in multiple settings to develop leaders and motivate stakeholders to facilitate population
level change in school, university, and statewide settings. Using data, evidence-based methods, and policy, he has assisted communities with identifying and mitigating the root causes of behavioral health problems including motor vehicle injury, substance abuse, premature birth, and other health issues. He enjoys the process of influencing policy and is eager to share his knowledge of advocacy with others. A native Arkansan, Terry recently adopted Middle Tennessee as his home where he works as the Injury Prevention Manager for the Tennessee Department of Health with a goal of impacting multiple injuries including, but not limited to: motor vehicle crashes, traumatic brain injury, suicide, and intimate partner violence. Terry enjoys exploring Tennessee with his Wife Tammy, and Daughter Anna Marie whom they adopted from China thirteen years ago.