Testimony of Gregory P. Guyton, MD

Chief of Orthopaedic Foot and Ankle Surgery Fellowship Director, Orthopaedic Foot and Ankle Fellowship Union Memorial Hospital, Baltimore, MD gpguyton@gmail.com (410) 554-6844

Favorable for HB1098 Use of Public Funds – Playground and Athletic Field Surfaces – Authorizations, Preferences, and Prohibitions

- The best data on the rates of injury for artificial turf versus grass surfaces come from the National Football League, which conducts extensive surveillance of every game from multiple cameras, has well-maintained fields, and tracks shoewear use of the players. Every team is followed and injury reporting is mandatory and highly structured.
- NFL data show a higher incidence of injury for turf versus grass for noncontact (cutting)
 injuries and that disparity increases the closer the body part is to the ground. The forces
 required for the cleat to release are higher than for grass and the extra energy goes into
 the bones and joints. The NFL and shoe companies are actively involved in research on
 this issue.
- The turf industry has aggressively funded studies that have come to the opposite conclusion. They have claimed lower overall and lower-extremity rates on turf versus grass. These studies do not have the extensive injury reporting of the NFL data, and use cohorts selected by the investigators. That means that rather than studying entire leagues, the industry-sponsored authors chose which teams to include. This may skew the data because player safety cultures vary between teams and affect injury reporting. Almost all industry-sponsored studies have come from a single investigator who has received over \$1 million of support.
- All large-scale safety data come from comparison of grass to turf with traditional rubber infill. In the past, county executives and rec councils have promoted the use of more environmentally-friendly infill materials, but these have not been studied with regard to player injury.
- The bottom line is that the best data on player safety demonstrate an increased rate of injury for lower extremity injuries resulting from cutting on turf versus grass. Industry-sponsored research has been conducted with questionable methodology.