PEDIATRICS PERSPECTIVES

Informed Consent for Youth Tackle Football: Implications of the AAP Policy Statement

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There are 2 to 4 million tackle football players in the United States under the age of 19.[1–3] Concerns are growing over the safety of the sport, particularly with regard to short- and long-term effects of brain injury associated with concussions, also known as mild traumatic brain injury (mTBI). Once thought to be a transient and relatively innocuous injury, we now know the symptoms and underlying neuropathophysiology of concussions often last for weeks to months and sometimes longer.[4–7] There is increasing evidence that subconcussive trauma can be associated with debilitating neuropathology, including chronic traumatic encephalopathy (CTE).[8] Football, with its high incidence of concussion[1,9,10] and participation rates, causes the majority of sports-related brain injuries among our nation's youth.[11,12] Per season, individual players experience 100 to 1000 head impacts,[3,13] and an estimated 53 000 to 178 000 school-aged players sustain at least 1 concussion.[1,7,12]

In response to these concerns, the American Academy of Pediatrics (AAP) Council on Sports Medicine and Fitness published a policy statement in 2015, "Tackling in Youth Football."[3] In this article, we expand on published criticisms[14–19] of the AAP policy, particularly its reliance on informed consent as a justification for youth participation in tackle football, summarized in the statement, "Participants in football must decide whether the potential health risks of injury are outweighed by the recreational benefits associated with proper tackling."[3]

PROBLEMS WITH CONSENT AS JUSTIFICATION FOR PARTICIPATION IN YOUTH TACKLE FOOTBALL

Absence of Suggested Content or Standards for Information in the Consent Process

If participants are to provide morally and legally meaningful consent to assume the risks of tackle football, they need information on which to base that decision. Disclosure should include written material as well as the opportunity to deliberate with an informed provider. The AAP does not provide any guidance on what the content of an adequate consent form or process should include. We suggest the AAP provide children and parents with an adequate summary of the relevant information as well as guidance

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on where to obtain additional information. We offer a starting proposal for such a document (see Draft Model Consent Form in Supplemental Information).

Absence of Standards for Assuring Adequate Comprehension of the Relevant Information

Consent is not ethically meaningful if it is not informed.[20] A verbal or written agreement to participate in tackle football provides no evidence of whether the player or parent has sufficient understanding to support a conclusion that the decision is, in fact, informed. Without such evidence, there is no way of knowing if ethically meaningful consent has occurred. Despite widespread educational efforts, evidence suggests a pervasive lack of understanding regarding mTBI among parents of children in youth football.[21,22] The AAP should state whether they believe assessing comprehension is important; if not, they should state why not; and if it is important, they should provide guidance on what that process might look like (see Assessment of Understanding in Supplemental Information).

Inadequate Information and Evidence

The AAP's policy statement uses terms such as "unclear," "unknown," "limited," and "without scientific basis" >40 times, suggesting that the evidence supporting their recommendations is inadequate to allow for an informed decision.[17] There are several elements to this deficiency.

First, although evidence-based literature on football injuries can be found for professional, collegiate, and high school players, there is a lack of data involving the younger players[3] who are most vulnerable.

Second, the AAP suggests that teaching "proper tackling technique" at a young age can reduce the burden of concussions, but valid data supporting this claim are lacking. They refer to USA Football, a commercial organization supported by the National Football League (NFL), and their Heads Up Football training program. This program has failed to demonstrate any reduction in injuries or concussions, and USA Football has been criticized for publishing misleading information about its efficacy.[23] Furthermore, the mere fact that illegal tackles such as spearing and targeting, which we might call "improper tackling technique," are associated with increased risk of catastrophic injury[24–26] does not serve as evidence that proper tackling technique reduces the high baseline risk of mTBI in football.

Third, the AAP suggests that later introduction of tackling could increase the risk for concussion as a result of players having less tackling experience. There is no evidence to support this claim or the notion that these assumed benefits of teaching proper tackling at a young age could offset the risks of increasing total lifetime collisions. The implication that proper tackling cannot be learned later in life is belied by the long list of successful NFL players who did not play tackle football until high school, including over a dozen Hall of Fame players.[27]

Failure to Distinguish First-Person From Surrogate Consent

By stating "participants must decide. . .,"[3] the AAP implies that children are capable of making an informed decision weighing the risks and benefits of tackle football. The policy does not address the relative roles of parental versus player consent at any level. They need to clarify whether parents and players must both consent, and if so, at what age levels.

The degree to which the child-player should be involved in the decision will obviously vary greatly across the age spectrum. Preadolescent children are not capable of making an informed choice about playing tackle football. It is not self-evident that high school players are capable of providing meaningful consent, and questions are increasingly being raised about the capacity of college-aged athletes to make informed mature choices.[28] This is supported by developmental neuroscience[28] and the fact that players at all levels frequently choose to hide or underreport concussion symptoms[6,29,30] at great personal risk.

Even if children cannot provide ethically meaningful consent, they should be able to demonstrate age-appropriate understanding of the risks, the importance of reporting signs and symptoms of injury, and potential consequences of undertreated brain injuries.

The Language of "Concussion" Obscures the Seriousness of Brain Damage

The AAP offers no definition of "concussion," a word commonly used to refer to clinical signs of what we know is a pathologic injury to the brain. Reliance on overt symptoms obscures the fact that players commonly incur repeated damage to brain tissue insufficient to cause observable symptoms, which may have long-term consequences. Serious neuropathology, including CTE, has been described in players with no diagnostic history of concussions.[31]

Athletes with brief symptoms from a brain injury may have prolonged disruption of brain function (reflecting tissue damage), ranging from days to years after the acute injury. Evidence for this includes increased susceptibility to a second concussion, sensitivity to light and loud noises, and difficulties in concentration, emotional regulation, learning, and memory.[4–7,32–34]

We believe many laypersons and physicians falsely believe that concussion is an acute, transient

event with no lasting effects on the brain once the symptoms resolve. Therefore, we suggest the AAP acknowledge that "brain injury or damage" and "mTBI" would be more appropriate than "concussion," to make clear that acute symptoms are merely the external sign of a brain injury that has often not resolved when symptoms subside.

Risk Minimization in the Consent Process

The AAP provides no model consent form in its policy statement, and although the AAP does not explicitly endorse Pop Warner's consent form (see Box), they do acknowledge Pop Warner as the nation's largest and most influential youth football organization. Pop Warner's "intent to inform"[35] perfectly illustrates the inadequacy of the informing process for players and families. It is not clear that even a careful reader would understand the risks of repetitive concussive and subconcussive brain injuries. It does not even mention concussions and trivializes the risks of football by comparing it to dancing and cheerleading.

Many commentators minimize the risks of football, with arguments comparing them to risks of ordinary life such as riding in an automobile, the leading cause of death in children and teenagers.[36] This argument is flawed because riding in an automobile is an essential aspect of daily life for most children whereas football is an elective activity with countless alternatives of equal benefit and considerably lower risk.

Others have compared rates of head injury in football and biking. According to the National Electronic Injury Surveillance System, significantly more children under the age of 18 experience mTBI in football (53 675 per year) than biking (25 955 per year).[12] Moreover, head trauma while biking is always accidental, whereas it is a repetitive and unavoidable event in football. Additionally, biking has benefits different from tackle football, including lifelong recreation, exercise, and efficient carbon-free transportation. Bike safety is important, but it is a separate issue from safety in football.

The AAP's Football Policy Is Inconsistent With AAP Policy on Other Sports

The AAP's assertion that consent is sufficient to justify participation in youth tackle football appears to be inconsistent with AAP policy statements on at least 5 other sports and activities.[37–40] We will focus on hockey.

The AAP statement acknowledges that rates of injury and concussion are lower in hockey than in football and participation is far higher in football than hockey,[3] yet the AAP recommends banning body-checking for all players under the age of 15 and encourages physicians to advocate for expansion of nonchecking programs.[38] USA Hockey and Hockey Canada banned body-checking for all players <13, leading to a 50% reduction in overall injury and a 64% reduction in concussion for 11- to 12-year-old players.[42] If body-checking in hockey is too dangerous, the AAP needs to explain why blocking and tackling in football are acceptable.

Inadequate Explanation of the Recreational Benefits of Tackle Football

The AAP statement implies that the benefits of tackle football can outweigh the risks but provides little supporting discussion. They reference the benefits of regular exercise and socializing in competitive sports but offer no evidence that football is uniquely associated with these benefits. They do, however, acknowledge that "repetitive trauma to the head is of no clear benefit."[3] The authors refer to the "substantial benefits of regular exercise on health as well as social and academic outcomes that outweigh the risks" and cite 5 sources in support of this idea,[43–47] but the word "football" is mentioned in only one of these publications,[44] and none of them show that football is uniquely associated with the listed benefits.

Countless children who do not participate in organized athletics live healthy and fulfilling lives. Conversely, many athletes fail to develop the virtues associated with sports. The question, therefore, is not whether tackle football has benefits but whether these benefits are unique (ie, not obtainable through other activities) and sufficient to outweigh the disproportionate risks of harm.

Failure to Encourage and Empower Pediatricians to Aid in the Consent Process

Part of the AAP's mission is to support the professional needs of its

"Intent to Inform": Pop Warner 2019 Parent or Guardian Permission and Waiver Form

"I acknowledge that I am fully aware of the potential dangers of participation in any sport, and I fully understand that participation in football, cheerleading, and/or dance may result in serious injuries, paralysis, permanent disability, and/or death. Furthermore, I fully acknowledge and understand that protective equipment does not prevent all participant injuries, and therefore, I do hereby waive, release, absolve, indemnify, and agree to hold harmless the coaches; local, league, and regional Pop Warner organization(s); Pop Warner Little Scholars, Inc; and any and all organizers, sponsors, supervisors, participants, and persons transporting the above-named participant to and from activities from any claim arising out of any injury to my or our child, whether the result of negligence or for any other cause."[35]

members, and pediatricians rely on AAP policies for guidance. The AAP statement on ice hockey[38] advises pediatricians to encourage child-athletes to participate in nonchecking hockey leagues and advocate for the expansion of these programs. The policy statement on youth tackle football does not mention the word "pediatrician" or "physician." The authors are silent on whether pediatricians should use directive counseling in advising parents and children in their decision on whether to play tackle football and provide no guidance to pediatricians who are uncertain about how to respond to those recommending a tackle ban. In a 2017 survey of AAP pediatrician members, it was shown that 77% would not allow their children to play tackle football and 81% support age limits on tackling.[48] These numbers are consistent with a more-recent survey which indicated that 61% to 85% of parents support age restrictions for tackling.[49] Pediatricians, and parents to a lesser degree, are primary AAP stakeholders, and therefore it is important for the AAP to reconcile the differences between their policy and the opinions of their primary constituents.

ANTICIPATING CRITICISMS

Critics may be concerned that the argument for meaningful consent is a Trojan horse for eliminating youth football. Some might be alarmed that dramatic reductions in high school football could be the beginning of the end of college football as a result of an inadequate supply of skilled players, with substantial economic effects on a multibillion-dollar industry.

We do not take a position in this article on whether tackle football should be banned at any level, although we assume that obtaining meaningful consent would probably accelerate the current downward trends in participation and closure of school-based programs.[50,51] If this were to happen, it would only show that consent is doing its job of allowing parents and players to make more informed choices.

There is no "right" answer to the question of what the best consent form or process is. We have offered a sample consent form to move the discussion along. We anticipate and hope that the AAP and others will suggest alternative approaches. That is how the process should work.

Our purpose is to suggest what it would mean to take the AAP's proposal for consent seriously as a key element in justifying participation in youth tackle football.

SUMMARY

Growing evidence and awareness of the unusual risks associated with tackle football are shifting public opinion. The AAP's current reliance on consent as a justification for participation in youth football is problematic, and the issues identified in this article should be addressed if informed consent is to be ethically meaningful. The purpose of this article is to stimulate discussion and inform decisions affecting the scheduled review and possible revision of the policy in 2020.

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ABBREVIATIONS

AAP: American Academy of Pediatrics
CTE: chronic traumatic encephalopathy
mTBI: mild traumatic brain injury
NFL: National Football League

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