

THE ASPEN INSTITUTE

FUTURE OF FOOTBALL: REIMAGINING THE GAME'S PIPELINE

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FUTURE OF FOOTBALL: REIMAGINING THE GAME'S PIPELINE

(12:30 p.m.)

MR. FARREY: Our first conversation here is on the future of football, right. So we're just a few days away from the Super Bowl. Show of hands real quickly, who's got the Eagles coming up. All right. Who's got the Patriots, pretty much even, okay. Who's tired of Tom Brady. All right. So now I'm going to make the turn here. Let me ask you show of hands, who thinks Tom Brady would have been a better football player if he played football before high school because he didn't play any type of football until he got into high school? Show of hands, anybody brave.

Crystal, really, wow, I'm going to come back to you on that, all right, that's good. Crystal is -- I have done a lot of reporting on Crystal and her son Donnovan Hill who played Pop Warner. He was paralyzed aged 13 and passed away at age 18 and Crystal was motivated enough about this conversation that she came all the way across the country to be here, so thank you for being here Crystal, and it's interesting that you raised your hands and --

MS. DIXON: There's reason.

MR. FARREY: There's reason, we will come back to that. So Tom Brady is one example, right, but of course there are players in the Super Bowl who played tackle before then and so there -- you can pick your anecdotal case that makes most sense to you, but the whole question of whether kids need and should play tackle football before high school is really emerging, I mean, I'm looking at a headline in today's Dallas newspaper, okay, Dallas, Texas, Is Football Over? Why Studies on C.T.E. is Bad News for the Game. It's a reference to a Boston University study on repetitive head contact that came out just last week.

We've seen research in the past couple of years on how retired NFL players who played football before the age of 12 performed significantly worse on verbal IQ,

executive function and memory. We've seen the Concussion Legacy Foundation just last week, which has really driven a lot of the advocacy in this space, begin a campaign for flag football only up through age 14. We've seen laws in New York and possibly other states introduced, New York was yesterday, saying no tackle football, trying to ban tackle football before the age of 12, we'll see how viable that is or not.

But these are the kind of conversations that are being had out there. We're also seeing real drops in shifts in participation rates, among 6 to 12 year olds we really track this information, where we work with the Sports and Fitness Industry Association on all sports and we know that among 6 to 12 year olds in 2009 1.5 million children played football and now it's less than 1 million. Among 13 to 17 year olds in 2009 it was 2.4 million, now it's 1.9 million, okay. High school programs here and there are dropping, that's about 1 million fewer kids who are playing the game.

You know it is really there was all this conversation I was on at CNBC a couple weeks ago, the NFL ratings are down by about 10 percent, 1.6, you know, million fewer people are watching regular season games than they did the prior year and they're going through all the reasons, too much Thursday night football, court cutting on and on, there was almost no conversation about just the pipeline issue, about if there's a million kids, fewer kids who are playing the game now than in 2009, I mean that almost covers the 1.6 million drop that you have.

Now, it is not an apples to apples one to one, but there is a real pipeline issue and it ties into the industry and in fandom moving forward because we know certainly from ESPN research that kids who play a sport are three times more likely to become avid fans of the sport. A positive sign is that flag is up among 6 to 12 year olds, it has gone from 788,000 to 893,000 last year, that's a one year jump. So is flag the future of football and if so what would it really look like, what would the implications on parent attitudes, participation, injuries, fandom, the NFL, media, the health of communities on

youth, everything that's downstream, what would they be, what would those implications be?

So today's exercise in fact it is really a thought exercise, it's based on a single question. This is our way to bring some discipline to this conversation is, what if flag and not tackle was the standard way of playing football until high school. And we're going to look at this question in four buckets, okay. One is through participation. If we move toward this model, what would happen to participation, what would happen to high school football and high school sports, what would happen to industry, what would happen to public health and what would happen to our civic life, our values that we promote in this country?

The process is such, we're going to have two panels at the end of each which there'll be about 10 minutes of Q&A, we want to hear from you. Second of all there will be a post event survey because we see this as the start of the conversation, each of you will get a survey in your inbox, where you will have the opportunity to weigh in, in a deep way and share your thoughts with us. We will take a look at it and then down the road it might be a month, month and a half, we will see going to the Olympics, I got a lot on my plate, but we'll put together a report and we'll take the best ideas and we'll really try and provide some guidance on what this model might look like, the pluses and the minuses for society as we move forward.

Join the conversation today as we're over the next couple hours at the hash tag you see there, Aspen Sports Lab, Aspen Institute of Sports, please follow us on Twitter. And with that, what I'd like to do is introduce our first panel, okay.

We've got a distinguished group of folks here. Dr Robert Cantu, why don't you come over Bob, co-founder of the CTE Center of the Boston University School of Medicine, senior advisor to the NFL, Head Neck and Spine Committee. We also have Domonique Foxworth, who is a writer for The Undeclared, former NFL player with the Baltimore Ravens and former NFL Players Association

president, and Scott Hallenbeck, who is the executive director of USA Football, which is sort of the governing body I guess of football in this country, driving a lot of the reforms, Scott's -- this is what he wakes up thinking about every single day. And then we have Jennifer Brown Lerner, who is my colleague here at the Aspen Institute and is with the National Commission on Social, Emotional and Academic Development because we know that playing sports isn't just a matter of developing physically, but developing the kind of grit and character traits that are going to be useful in society, but equally important is Jennifer is a parent of a couple of kids.

Let's start with you, Jennifer. So, you're a mom, tell us about your kids, one of them plays football, what form and how did you process the decision on allowing your son to play?

MS. LERNER: So, Tom shared a little bit about my professional life here at the Aspen Institute, but I guess my number one job is being a mom and I have two young boys, an 8 and a 10 year old. My eight year old is a flag football, he asked us at age six if he could play flag football because a number of the kids that he's friendly with in our neighborhood through Cub Scouts and other things that he's done were -- had joined a team.

And I was not keen on this at all, my husband is the one that twisted my arm and said, flag is okay, let's give it a try, he's interested and that's what it's about. So we've been in the league for what, now five seasons and the founder Carl is in the back and I have to say participation in flag has been a great way to not only expose my son to football, but also to gain a lot of the skills and experiences that we really want both as parents and that commission that I work for is really pressing through participation in sports, both team and individual.

It's a rough game, but flag pulling feels like a great way to get started and I will be honest, I know my bio says that I'm hesitant to have my son play tackle. I think hesitance maybe not strong enough of a word, I don't know that I would feel comfortable if he approached us in high school and said, hey, I want to play tackle football.

I think it will be a real serious conversation and then we as a family would sit down and say, why, let's look at what the information is and let's figure out what's the right decision for you. I don't know that I'm going to absolutely put my foot down, but I'm getting pretty close to wanting to do that these days.

MR. FARREY: Got you. Scott, how much does the parent and particularly the mother control the future of football?

MR. HALLENBECK: Absolute gatekeeper, I think you said it all. I mean it's parents more than ever want information, they want the research, they want that synthesized down so they can understand it and we believe more than ever they need more choices. It's one of the reasons that we have looked closely at the American development model, what the USOC and hockey has put out, what many sports are now adopting, the idea of giving more entry points, more options for parents. Frankly football's behind the times in that, it's basically got flag and 11 a side tackle, it's not a progression at all, really doesn't play well together. One of our biggest challenges is that people look at flag as a separate sport, we actually track it as a separate sport, (inaudible) we need to change that, it all is one sport.

We liken it to now baseball, we think baseball is a terrific example, where you have Tee Ball to coach pitch to player pitch, it's a natural progression. Now, we want to see flag football, which is kind of Tee ball to something we pilot this season called Rookie Tackle, which is again not revolutionary, it's modified games, split the field in half, six, seven or eight man, kids play multiple positions, two point stance, not three point stance, coach can actually be on the field and actually help get the kids in the right position, all about kids having success.

One quick story which I thought was amazingly, we polled it in nine locations around the country and we're down in Texas, of all places in both Austin and Frisco, and because kids can play multiple positions, you know, they naturally but the bigger kids in the line, so the one kid was playing on the line, but then he changed

to a different position and got to run the ball, ran in and scored a touchdown, ran off the field right by the coaches all the way to the stands and told mom, I just scored a touchdown.

But those are the moments, honestly, that we need to move towards, it has to be a more positive experience. So we're all about increasing entry points, staying 100 percent focused on improving the quality of coaching, it's an evergreen issue and always something we have to focus on. And the high school coaches, I just got to say real quickly, have been incredibly supportive of this. They're reconnecting with their youth programs and building a continuum, which is really important. They are very important influencers in this and if we can reconnect those relationships, that's really important.

And then last but not least, just as you said, if we don't continue to do those first two entry points and options, improve quality of coaching, we're not going to have a positive experience. And if we don't have that, it's game over.

MR. FARREY: You know USA Hockey moved a couple of years ago to a model of nobody checking at the Peewee level, you know 12 and under level anymore. They put a hard line in the ground factored with policy, backed with messaging or otherwise. Has USA Football taken a position on when it is appropriate, what age to move from flag into tackle.

MR. HALLENBECK: So, excellent question. We are looking at that, as you said you know hockey did it without really any science, I think soccer has done it recently with heading I think at 12 as well. First, we frankly have to get the idea of an ADM seeded into football, that is set --

MR. FARREY: American Development Model.

MR. HALLENBECK: I am sorry, yes, it's American Development Model and that's new to football and change is not easy. So getting that out there and introducing that and frankly we're looking at it as a dynamic framework.

So quite honestly, we're even already evolving beyond just those three game types, we're looking at five and five flag which is out there today, do you explore the idea of nine and nine flag where you actually can introduce linemen, you might even introduce a little bit of blocking and defeating blocks, you actually introduce some contact. And probably the other thing I should say real quickly is, we see each of these four game types as individual entry points. So again a parent can say, "I'm not going to do flag, I'm going to do nine to nine and I may jump from nine to nine to rookie or nine to nine to eleven a side," it can be both a progression or they can be individual entry points. For today's conversation I would argue we can play flag from 5 to 55, you don't have to go through the progression.

So we like that inherent flexibility, I think it's incredibly important to parents today to have those options, but yes, we as a board we're talking to stakeholders, it's-- you said earlier these questions are out there in ether, it's important that we and the organization and others look at that carefully and we are in the process of doing that.

MR. FARREY: Safe to say right now you're not in favor of flag up until high school?

MR. HALLENBECK: The fact of the matter is you can play flag up until high school.

MR. FARREY: You can --

MR. HALLENBECK: So, no, I guess -- the recommendation we are first going to push the idea of this American Development Model and again empower the parents to make the choice. So if they choose to stay in flag -- another thing we're looking at is, the idea of, I mean, why do you have to stop at 14, I mean, I think it's Nevada and Florida actually have girls flag in varsity sports. We want to talk to the state associations and coaches associations and really see an opportunity to stay in a sport for a longer period of time.

Many play, you know, intramurals and flag and

adult flag considerably. So we're looking at all the entire ecosystem from youth to adult and how we can continue to provide parents as many options as possible.

MR. FARREY: Yes, I just wanted to get that point of clarity because I'd like to hear from, just the point of clarity, Bob, flag up until high school, I know your answer to this, but tell me what, do you and is that what you want and how do you feel about that and if so why?

DR. CANTU: Yes, Tom, as you know I'm a neurosurgeon, so for over 50 years we've been diagnosing and managing concussions, but it was in the '70s that I made a major foray into managing athletic concussion at a time when not many people were interested in it. And it's because we moved to the community, we were still on staff at Mass General, but family moved out to the suburbs, I was on the sideline of a local high school, there were no return to play guidelines for football at that time. So we decided to look at the literature and use our own experience and write guidelines and that's kind of where I got started 32 years ago in the athletic concussion business and I've been going ever since.

At that point in time even though we knew that not just concussions were the big issue, but repetitive head blows may be important, it wasn't very much on the radar and all the emphasis was about concussions. But in 2007, when we formed the Concussion Legacy Foundation with Chris Nowinski and then in 2008 the Center for the Study of Traumatic Encephalopathy at B.U. with Ann McKee, Bob Stern, Chris and myself, we started to accumulate brains in our experience with CTE started to grow.

Also at that time I started to, I don't know why I didn't do this before, but just look at my own personal experience, I've always felt every paper I read, I say if I've had a lot of experience in this area and I can't agree with what I'm reading here, I don't care what the journal is, I'm going to question it, and it so happened that there was a lot of information that wasn't ringing true at that particular point in time and I'm looking across the desk, at kid after kid after kid with post-

concussion syndrome that's not quickly recovering, obviously I'm not seeing those that did recover quickly, I am just seeing those that didn't primarily.

And I'm thinking to myself, there's a bigger thing here and I started to research it and there was a lot known back in 2012 when we collaborated with Mark Hyman writing a book, Concussion and Our Kids and calling for flag football under 14 and calling for all contact collision sports not to be abolished, but to be played in a safer format as regards head trauma. Take the heading out of soccer, take the full checking out of ice hockey.

And at that point in time we knew that kids primarily between the ages of 10 and 12, that's the maximal age for connectivity of brain networks, it's the maximal age for pruning of cells of the brain. To give you your God given genetic endowment with regard to what you're going to be as an adult, with regard to your IQ, with regard to your emotional makeup, with regard to depression, anxiety, panic attacks, impulsivity so on.

And if you injure a brain at that early age you have later life potential consequences. And then, since 2008 on every single experience that we've had with the BU group has only fueled that concern more and more. Multiple papers we've been a part of that have shown if you play tackle football under the age of 12, you have a higher chance later in life to have cognitive behavioral and mood problems than if you started at a later age.

If you start football at an early age, you have a greater chance to have atrophy of your brain, greater than if you started at a later age and that is paralleled in boxing and other reports of others too. And then over the last six to seven years the elephant in the room has reared its head. Way back in 1928 when CTE was first described by Martland, he said it's the slugger boxers that take a ton of punches over a long period of time, they have CTE. Another word is a dose response, like pack years and smoking cigarettes and that's exactly what we found in our experiences with who is at highest risk for CTE, it's the person that took the brain trauma over the greatest number of years and had the greatest number of

total hits to the brain.

And if that's not enough, just one week ago as Tom alluded to, Lee Cunningham's group, which is part of our bigger BU group, but the group that's responsible for animal work has come up with an animal model that has shown causation of CTE from repetitive brain hits in the absence of concussion. So concussion counts, a concussive hit counts more than one sub concussive blow, but sub concussive blows alone can cause CTE and that's what we found from the get go in 2008, about 20 percent of our CTE cases that are examined don't have recognized concussions during their life.

Because you can play football in a safer manner and because Walter Payton and Tom Brady and I can go on, we have a who's who list of people that didn't play till high school. I want very much for football to be played in the safer form, I think that safer form is flag, but I agree with Scott completely, it's the parents that are driving the bus, and it's the parents who are directing our educational efforts too.

MR. FARREY: Domonique, you are not just an NFL player, you are a parent yourself, right. Do we need that clear demarcation of flag right up until high school, how do you feel, what's your position on that?

MR. FOXWORTH: Well, I have two girls and a boy and this is -- I think I'm not obviously not in favor of abolishing football and I don't want to come across as radical, but I mean I don't know that we need football as a thing and I think talking about making it safer is important, but all of this stuff is kind of in, it's a progression that leads to a proven dangerous experience for the kids. So I think that's -- we need to reconcile with that and we need to be honest with ourselves about that first is that no matter what age we put, we say you can't do tackle football until you are 14, when you are 14 then you're exposing yourself to a number of sub concussive hits.

So like I just want to make sure that no one leaves here thinking that if we move it to flag at 14 that

somehow we've solved the problem. While we may have potentially improved some of the outcomes, we're far from a solution, we don't know how to solve this problem and it's something to be aware of and obviously other sports are dangerous. So I loved football when I was a kid and I believed that football is a unique sport and there are so many other sports you can like basketball, everyone rebounds, everyone passes, everyone shoots.

Football is like one of the few sports where you are actually literally dependent on other people and I think that's unique and it saddened me that my son isn't going to be able to experience that, but I am certainly not going to willingly put him in that situation in part because I feel like he doesn't have to, he can learn those things elsewhere. So I'm certainly not for the abolition of football and I think there are a lot of people up here who are trying to do better and I think coaches are very important to this.

We got two coaches on the next panel that seem to be very smart when it comes to this stuff, but I think part of the problem and my stand as president of the Players Association we addressed this. Part of the problem is it's an arms race essentially, where coaches care about winning and that's fine we are supposed to care about, but they also believe that there's, whoever can practice more and practice harder is going to be in a better situation, it's true from six years old all the way up to the NFL. Some of things that we implemented in the NFL in the last CBA negotiations and I think it has been adopted by levels below is restrictions. So your practice can only be a certain amount of time, you can't have two a days, you can only have 14 padded practices throughout the course of the season.

So I think those things are important because then those type of restrictions are important because it then takes some of the guilt I guess or pressure away from the coaches to think, well, if we aren't practicing for three and a half hours the guy, the other team is, so we are falling behind and if we aren't hitting as much as that other team, somehow they're going to be like tougher than us and that's something that I experience as a

professional athlete like you make it to the NFL and you think that everyone there is sufficiently tough, but I certainly remember coaches saying that we weren't tough enough last week, so we're going to hit three days this week and I mean that was a point of emphasis like I mentioned at CBA negotiation for somebody like me when I was a third round pick, so you don't have that much leverage and practice when they say that. So once I was in there negotiating, it was very important to me to then say, well, we do have the leverage and you're not going to do that to any players going forward.

MR. FARREY: So look at your crystal ball for me here. Well, let's assume this model takes place where flag is the standard way of playing the game up through age 14 and then kids transition into tackle, all right. Go there with me on the what if there, what happens to participation, are more kids playing football, are fewer kids playing football, Bob, you're shaking your head.

DR. CANTU: Yeah, I think more are going to play it, they're going to play flag, then they are going to play tackle and at the early ages, we're not talking NFL and I'm not talking about abolishing football, I want more people to play football. I just want youngsters at highest risk not to be getting their head 200 times over the course of an average season because you couldn't do that to your child and get away with it and I certainly couldn't have done it to mine and yet they can do it to themselves on athletic fields.

And it's entirely possible that within my lifetime, which is a decade or more I hope, that we will know what limits of repetitive sub concussive blows are safe for the average individual. They'll always be an outlier, that supersensitive and going to have a problem with not much, but it's probable that we're talking tens of thousands or five thousand to ten thousand meaning you could play through five years or four years of high school and have minimal increased risk of later life issues because your exposure was so little especially with better coaching techniques that you will hear from Buddy Teevens and others.

MR. FARREY: Well genetic testing can play a role there to, right, figuring out which kids are most susceptible.

DR. CANTU: Absolutely correct, no question.

MR. FARREY: Yes, absolutely. What do you think Jennifer, you're a mom, again you're a parent here, if this model were in place, I mean --

MS. LERNER: I don't know what if for me, so the model is in place in my house, you're not playing, right, like flag is the only option K-8 for my kids if that's what they want to do. That choice, that foot has cut down, that law has been laid, we are done and so that's the way it goes. I honestly think the bigger question for parents is, are you comfortable with your child playing tackle football even beginning in high school and, you know, I mean I struggle with this.

Domonique said something when we were preparing for that panel in which he said, you know participation in football and football itself is uniquely American and I think that's just so spot on and I think, yeah, I want my kids to be able to understand this game, I want my kids to be able to play this game. I remember as a child and still do, my family has a pickup game over the holidays when we're together. I don't want my kids to be like what, what a first down, that's not okay, that's almost un-American.

But I struggle with what the research is telling us and I hear what you're saying and I'm well educated and I can, it's repetitive. Concussive or sub concussive blows that are it, but still you as a parent you have this emotional response, you hear the story of a single child who was hurt or an undiagnosed concussion by grapevine, at the car pool, of you know somebody's friend of a friend that this happened to, and that makes you think long and hard about whether or not you want your own child to participate in this.

I'm thrilled, I have an option K-8 for my kid to play football, I'm going to think long and hard about what

happens after that. And I'm not sure for my own child that it's going to be tackle. I hope that we can move flag all the way up. I know people play in college and maybe it's not competitive enough for folks, but I hope that that's the model we move towards.

MR. FARREY: I mean right now the model we have certainly in my town is, yes, there's flag for six to eight year olds and then immediately they transition into the tackle and flag disappears. So parents have that choice right now of saying, well, it's only going to last for two years, I'm just not going to open that door. If they knew it was going to be a flag experience up through middle school, would that parent now be more willing to introduce their kid to the game and by the time they get to high school they can't tell their kid not to play tackle football, right, there is a little bit of --

MS. LERNER: No, you can't, I mean, it's going to be hard, right, like I am not looking forward to that dinner table conversation.

MR. FARREY: No, so, Domonique --

MR. FOXWORTH: I mean I'm talking a big game now, but my son's five and he's like I was when I was his age in that he is as much, he fits very squarely into the stereotype of what a little boy is, and he wants to be a firefighter, he wants to be a police officer, he wants to fight me and anybody around him and I remember when I was a kid football was important too, it was an important part of the identity that I was constructing for myself. And as a little boy I -- we all played a bunch of sports, but basketball I loved it, I was good at it, but it was for the soft kids, lacrosse was for the white kids, soccer was for the white kids, I was tough and I'm black and I'm a man, I want to play a sport where I can go up against and like the competitive nature in other sports is there.

But short of combat sports, boxing and MMA and karate or whatever, there is no other sport, mainstream sport, there is no mainstream sport where you can go as a little boy up against another little boy and pretend like you're a man and try to beat them, like wrestling maybe

something similar to that. And I think as an adult now I realize how like problematic and insidious that type of thinking is. But when you're five or six years old and you see movies that are about men being strong and tough and you see ads about the military, about men being strong and tough, like the idea that you can grab on to something like that and you can go to school in your football jersey and that separates you from all the other kids, all the other boys, who are just a little bit softer than you. Like it's all part of your thought process and I hope that our society is moving in a direction that and this is probably a whole another panel about gender roles and perception, but I think that at least for me that was what -- that was what drove me to wanting to play.

When I told my dad I was going to be a NFL player when I was six years old, it was part of me seeing him watch football games and seeing him look at those men on the field like -- and I wanted to be that and I hope not, it's a proud, it's a tough situation for me because I was a football player and I am actively kind of pushing against that for my son, which it seems to backfire every time I tell him like, that doesn't have to be tough, like you can be tough by being quiet, he then tries to punch me.

(Laughter)

MR. FARREY: I mean so there's an interesting scenario unfolding here and what you see it in the data and Scott correct me, if you have seen contrary data, is that as this conversation has grown families like yours Jennifer pushing their kids, upper income, not that we make a ton of money here at the Aspen Institute that's true, but we are in the nonprofit world, but educated people who have some resources are going into flag.

With lower income communities we haven't really seen that you know in Texas, Louisiana, these places, tackle football is doing just fine. How should we feel about a future in which football is increasingly played by kids who are just from the lower socioeconomic, given the fact that there are health implications tied into this? Bob.

DR. CANTU: Yeah, I have a real problem and a real concern. What we are potentially doing is on a socioeconomic basis selecting out a segment of youngsters to take a much greater burden of brain trauma at an early age and set them up for being less cognitively developed as they would have been otherwise to have impulsivity issues as they reach adulthood and depression and panic attacks. So essentially because of socioeconomics you're not giving them another option that they might have done and now you're subjecting them to needless head trauma.

MR. FOXWORTH: I think it's -- I am sorry.

MR. FARREY: No, no, go on.

MR. HALLENBECK: Yes, well so obviously every day I live in the youth football and high school space and so I -- we interact with high school coaches talking about the value and the importance of the game of tackle football. And what's really interesting is regionally there's very different perspectives on this whole discussion.

I want to be respectful of the vision you're laying out, but for me it comes back to, it really is all about the parent, it's all about giving them options, it's critical that they understand that, again each of these could be individual entry points so they could stay in a sport to enjoy the values and the benefits of football. Even in flag, I think you still can enjoy the values of that brotherhood and that team environment, learning from each other, certainly you can get it from other sports as well.

So when I envision it, I really believe that the future of football is this American Development Model. I think research is incredibly important and we all welcome and need more of that. So I look at it more as a balance, if we can continue to look at adding more entry points in the non-contact space and certainly continue to look at how you introduce the game of tackle.

So I really believe in this idea of rookie

tackle that your first experience should probably be non-contact to say the least, again you can continue that, not to suggest you have to move on. Your first experience in contact should be rookie tackle, it should be something where you really get to introduce yourself to the sport, feel what it's like to put the equipment on, all of that is very important, I think there's a lot of benefits to it.

But that's a world I live in and so I think as Dr. Cantu says very eloquently, as this information continues to come out, I know USA Football and our board and I think really every stakeholder I talk to is all about we're going to have to follow the science, period. So as this continues to come out, we have to pay attention to that, we have to continue to address repetitive hits, that is unequivocal.

And I would say, you know you raised it a couple of times. Football has done a very good job of trying to respond what you guys set, you know that the leadership you had at the highest level, right, setting practice guidelines and that has clearly trickled down. At every level we're changing how we approach this. It may not be fast enough, may not be enough to some people's eyes, but the game is clearly evolving and very respectful of all of this conversation, but knowing that there is a good segment of society out there that is definitely interested in tackle football, I see my role and our role collectively is how do we address that, how do we improve that, clearly there's a lot still work to be done and by all means still make sure you give other options and other entry points. And so again that balance is very important to us.

MR. FARREY: So moving to this model could come from any number of places, parents, groundswell of parents making this happen, team shrink, okay, none of the kids were playing tackle football, flag becomes the defacto standard, it could come from the NFL, like a PSA campaign from the NFL and the Players Association saying, "Hey parents, the best you know, you want your kid to play in the NFL, you need to know that flag is at least as good of an alternative, you can develop toughness and character

traits and so forth."

DR. CANTU: Is that an issue in of itself, why do we always focus on the NFL. It's 1,800 amazing freak athletes like this gentleman, why are we just, I mean, there's millions of kids playing between flag and tackle and other sports. There's million plus in high school I think and let's look, we want those kids to have an amazing experience, go back to your project play and activity and all these other things. For me personally stop focusing on the NFLs, stop focusing college, it's about participation and development of the sport.

MR. FARREY: But they are a megaphone though don't they.

DR. CANTU: I know they're and that's true.

MR. HALLENBECK: I'm not focused on the NFL player here, I'm focused on the NFL. They've got the pockets, they've got the billions, they also are spending several hundred million dollars on research. They are funding USA Football, they have a flag division, so far that has not been a major thrust.

MR. FOXWORTH: And they benefit from it more than anyone, so the obligation for them to, I mean, it's hard not with people like Brig Owens, and Sylvia Mackey in the audience and Sean Morey, people -- NFL players that I know, the retired players and family members who are paying the price from this, like it's hard not to look at the NFL and expect some culpability and some obligation responsibility.

MR. HALLENBECK: I am not suggesting that.

MR. FOXWORTH: I know you are not, I know you are not.

MR. HALLENBECK: And just to address the flag thing, I mean we actually they asked us to take over NFL flag, we've grown it 15 percent a year for the last five years, we are hundred percent committed to flag and we probably have the largest, we support the largest

development of flag in the entire country and now we're going to take a look at the entire ecosystem of flag, how do we get much more involved with anyone and everyone playing flag, trying to make sure they're looking at everything from proper coach development to thinking about concussions and those sorts of things.

Dr. Peterson was just mentioning that in his studies, you know, he sees not that many concussions, nobody will talk about it, but still it's kids do hit their heads and they do hit the ground, so there are issues. All of these things have to be addressed, a comprehensive approach to how we address the development of flag.

MR. FOXWORTH: I don't, we kind of glossed over this one specific topic that is important to me that I think brought up like the disparity between socioeconomic classes and intrinsic in that is race and the frightening thing for me is you remove football, what do you replace it with for opportunities for those communities because and you brought up also how it's different from north to south.

And again as a black person, I'm completely familiar with the idea of trying to drag the south along with a more proper way of thinking. And I think football is another place where we need to do that because the people in those areas are not being fully served and just to take something away and not replace it I think is not fair.

MR. FARREY: So if the NFL, if the NCW, if the powers to be in football, put together a messaging campaign, took a position that flag was the best model up through middle school, do we think the South, do we think places like Baltimore would respond to that?

MS. LERNER: Yes. I mean, look, I think the NFL plays an important pertinent signaling role first and foremost to young people, right. My kids are happy to sit on Sunday and watch two, even three games if we will let them back to back. And if there are messages out there that flag is the way to go through, through middle school

or even beyond, that's going to send an important signal to young people, and that's I think a primary audience in this conversation, let's not, yes, I might be the decision maker for my six and eight year old, but I sure as heck hope that he has a voice in the conversation and I'm really trying hard to make sure that he does.

So how are we empowering them with the right type of information as well. Again it's going to be important information that gets to parents, but it also is a really important pertinent signaling message to talk about the disparities that exists and how -- what are we going to replace in communities where football has been the center of it. And I'm happy to say, I grew up in the South and Friday night football was a big deal, and I was happy to go to a football game every Friday night in the fall, and it was a huge social event even though I had nothing to do with what was going on, on the field.

And I don't know that I'd want to take that away from my kids, but I think it could easily be replaced with potentially other sports or potentially a flag game even in high school. It's about the community, it's about the experience, I don't know that it's about the actual playing and the actual hitting of people, although I agree there's a lot of aggression released from my boys through this, but you know I think that they get a lot more from the camaraderie, the leadership opportunities, the ability to be a part of a team, the ability to rotate and play lots of different positions and see themselves as leaders at different points in different ways, all of these things are more critical benefits than actually the potential significant health consequences that we are debating today.

MR. FARREY: Right. Domonique, do you think the message, how would that message be received?

MR. FOXWORTH: Well I mean I --

MR. FARREY: If it came down from on high?

MR. FOXWORTH: I'm not as confident that it would reach the ends that we hope because it feels like

there's been since the *New York Times* piece in the early 2000s about CTE and concussions, it feels like we've been inundated with information about how dangerous it is. But in talking to Tom, one of the coaches that's on the next panel, we're going in another direction where they're now putting spring football for kids, like certain areas are going into other direction where they're adding more and more.

More information is coming out and people I think and part of it is, to the point I made earlier, where making it seem more dangerous and making it seem like even more for the elite toughest of the tough, I mean it backfires to some degree in some communities where I think people particularly and I can say people in the South like it's a pejorative, I don't mean that necessarily, not all the time.

(Laughter)

But I think it becomes more a part of their identity where you're like, oh these soft people from up north don't want to do it, like this is more who we are, we're tough, so I don't necessarily think, I think it helps, but I don't necessarily think it's -- I think the leadership from what you're certainly doing about leadership from people like you is the path that we need to go on.

MR. FARREY: We'd like to spend a little time in questions here, maybe 10 minutes or so. Are we good, Emily?

SPEAKER: Thank you.

MR. FARREY: Then now to go to it. Crystal, let's go to you first.

MS. DIXON: Hello everybody. My name is Crystal Dixon. My son Donovan Hill passed away from a football injury. He broke his neck at 13, was a quadriplegic. Not until he passed away, did we know that his brain injury was worse than, which sounds crazy, his initial injury.

And I have mixed feelings. I'm sitting here shaking. I have so much to say. I wish I was sitting up there. I'm going to make it quick. I don't hate football. I don't like youth football. I don't think that -- I will love to see a world, where there is just flag football, but it's not going to happen. It's not going to happen. And everyone is not a Brady. Everyone can't just hop into tackle football and be successful. More kids I think will be injured if you have some kids playing flag football, some playing tackle football. They get into high school, they start this contact. There's going to be a lot more injuries.

And I'm not just talking about brain injuries and spinal cord injuries, all kind of injuries. We need to work on safety, the overall safety aspect of football. I've told you many times that I am very conflicted, because in the inner cities, you heard me say this before, there's not a lot of outlet. And these kids -- the NFL has a lot to do with it because the -- these kids -- they are playing out there, they are playing as hard as -- that's the level they're trying to get to. And they look up to the NFL. And the NFL knows that this isn't right to have five and -- in my town, five and six years old tackle, you know. I do believe that there should be -- your idea, I agree with your idea. I believe 12 year old flag, after that I think there should be a transition into high school, some type of transition.

Football on every level is dangerous. We are in America, it's not going away, it's not going away, no matter how much we fight, no matter how much we tell our stories, it's not going to go away, because not every parent -- I did this to my son. My son was playing travel basketball and tackle football, his grades started to drop, and I took him out of basketball. I was the loudest mom out there. I was like, you know, I was aching into the fact that I killed my son. You know, I put him out there. I made sure he got to practice. I'm a single mom, I was at work. I made sure he had a right to practice, you're not missing practice. Until we -- or as a society, until we put our kids first -- I'm shaking -- it's not going to change. It's not. And we need to keep having these discussions. We do. We really need to keep having

these discussions.

And come on, if you have -- half of the states playing flag football and then the other half playing tackle. Inner cities, let's think about the inner cities. These colleges they are going to be pulling from the tackle side, they're not going to pull these kids from flag football. And I'm not saying that we should -- there should be something different, but right -- there is not. And I don't see there being anything else for these kids. We need to continue to have these discussions and try to figure out what we could do to make it safer, it's never going to be safe to play football. What can we do to make it safer?

MR. FARREY: Tom, so, yeah, Bob.

DR. CANTU: Can I comment please, Crystal? I'm sorry for your loss. And you very eloquently expressed a view, but I'd like for those in the audience to reflect on the names, James Brown, Walter Payton, John Mackey, Jerry Rice, Tom Brady, Tim Brown, Anthony Munoz (phonetic), Larry Allen, Dawson Berg (phonetic), Walter Jones, Michael Strahan, Dan Hampton, Walter Sapp, Julius Peppers, Lawrence Taylor, Willie Lanier, Harry Carson, Mike Engle (phonetic), Jack Tatum, Everson Walls, Hanford Dixon, you know what they all have in common? They didn't play football before high school. So yes, it's possible to wait, number 1. And number 2 there isn't a single academic study that I have seen that proved --

MR. FOXWORTH: Dr. Cantu, I think -- I mean I think your point is well taken but I think it kind of misses the point that Crystal was making is that there are lot of names that we don't know, who -- kids who were injured and some lost their lives. And I think that's more -- because when -- what struck for me is when she -- I don't know how to put it in, I didn't know how to put into words the way she did because I had never experienced anything like that -- but what looms in my mind when I'm talking about how my son is not going to play football is not a hope that he can be a hall of famer even though he didn't play football. It's the hope that I don't have to live with the guilt of thinking that I had information

that -- that could convince me not to put my son in a situation and I ended up putting him in that situation anywhere and there'll be a bad outcome. Like that level of guilt to me weighed against the potential of being a hall of famer is just like unimaginable. Like I don't know, I just --

DR. CANTU: No, I'm not. All I'm trying to say is that you don't have to have that transition I don't believe. I think he can be taught the skills in a non-tackling way in middle school, if you want to play tackle football in high school and I'm not against it. If you want to do it in an informal way. But I think you don't have to mandate that transition. These are just examples of people that didn't transition.

MR. FARREY: So you are basically saying play flag up through --

DR. CANTU: Play flag till high school.

MR. FARREY: -- into high school, but maybe in like a year or two leading into you're teaching tackling drills with dummies and things like that?

DR. CANTU: Exactly.

MR. FARREY: Right.

DR. CANTU: Buddy Teevens' robot.

MR. FARREY: Right, so that way the kids aren't --

MR. HALLENBECK: Things should point back improving safety and continuing to look at those things and --

MR. FARREY: Right.

MR. HALLENBECK: Very important.

MR. FARREY: Got you. Who -- yeah, yeah, go ahead.

MS. DIXON: We have to know, I don't know how many people in audience have kids that play football. We have to know that we need to do our own physicals because the physicals that these kids go through are a joke. If my son would have had a proper physical, he would have never played football, because his spinal cord was underdeveloped and he wasn't ready -- and that helmet. He wasn't ready to put that helmet on his head. But the physicals that they give our kids, you guys -- some of you guys didn't -- you guys know, they go in here. They're in their football maybe 2, 3 minutes and that's it. They don't know if these kids' bodies are ready for this. So I think that's a very important point. Yeah.

MR. FARREY: Let's go to another. Who has got the next question? Let's go to --

MR. OWENS: My name is Brig Owens. I've played 13 years in national football league, and was the seasonal executive director, and social staff counsel for the NFL Players Association. There's some elements here that we seemed to be passing over. That is as parents, we always want a safe environment for our children to grow and to learn, just as our educational systems, you are going from the elementary school, the high school, we want our kid to be safe. No matter what protections we put out there, we still have shootings. In this situation, I think the parents need to be educated about the kind of experience that your child is getting ready to go into whether flag football, or tackle football. They need to know because you need their support in order for that young man or young lady to feel comfortable that they can achieve anything they want to achieve, that their parents are going to support them.

And also, I think it's important that the coaches need to be certified, educated and certified in the fundamentals of the sport, regardless of the sport, so that their child -- their athlete is going to understand the importance of the fundamentals of the game. And I think we are missing that. Also, you have a lot of young kids at little league level, high school level. When they get hurt, coaches don't know what to do. A majority of

the coaches don't know what to do for the young child who has been knocked out basically. There is no athlete trainer available in a lot of situations. I tried to institute athlete training association to get some of the college kids who are training to be athlete trainers to be at some of these games. They couldn't do it because there has to be a certified trainer. Am I right, Hallenbeck, there has to be a certified trainer at that game. You know, and that certified trainer he wants to get paid.

So I think the -- just basic fundamentals of the safety and education is so very important, we seem to be missing that. This young lady here says if she had been more educated and her child had been given a better physical. Had there been education among the parents in her neighborhood, they wouldn't have not stood up for the kind of physical that young man took.

MR. FARREY: Yes.

MR. OWENS: SPEAKER: That's it.

MR. FARREY: It's a great point. One last question here right behind.

DR. RODRIGUEZ: Hi, my name is Dr. Rebecca Rodriguez. I'm a family practice in sports medicine physician from San Diego with the American Osteopathic Association for sports medicine. And I just want to touch on Crystal's comment because I think that's really important. And that was my question to Dr. Cantu. With all the research and development that's going on over in Boston and all the different organizations that are represented today, it is important -- it's a concern of mine as my clinic is a concussions center of excellence that we do put forth a initiative to bring more education to physicians. There're so many nurse practitioners, urgent care centers with health care providers and also the emergency room doctors and pediatricians that are not educated with the up to date guidelines, and receive the same type of education and training that I have in treating athletes from adolescents all the way up to the Olympians. So I think that that would be really important and not too sure if Dr. Cantu, this is something in Boston

you're looking to, to help all these physicians in all areas of the United States to really just be educated and updated?

So many athletes can be recognized after the actual game of football to go back home and their doc -- their parents will bring them to a pediatrician, and they will not be able to recognize all the signs and symptoms and know the proper evaluations for concussion. And that, then they are returned quickly back into sport. The athletic trainer recognizes this and says no, you have to go back to our team physician. And so that's one of the initiatives that could be helpful and for further conversation in development within USA Football, within the NFL, within research and development in all areas.

MR. FARREY: Thank you. I want to wrap up real quick as we do need to move to the next panel. We'd like to just roll through the panel, roll through our group here with a simple one word, maybe a few words after that much. If we moved as a society, move to this model of flag football up until high school, who is the biggest winner or what's the biggest winner and who or what is the biggest loser? Bob?

DR. CANTU: Number one, I think the biggest winner will be our youth, without question. I think the participation figures will go up. The biggest loser is going to be the equipment manufacturers. They aren't going to be selling as much equipment. And I don't have any problem in a separate conversation in another day letting these flag football players wear football helmets and shoulder pads and gear. Just don't hit with your head and just have the flags pulled, because little kids do like to run around and look like their professional idols, but the equipment manufacturers. And that's an issue.

MR. FARREY: Jennifer?

MS. LERNER: So I agree. I think young people are the biggest winners in this. You know, I think biggest winner or loser kind of combo for me right now is, you know, if we do move to this model, I think we're going to have some really challenging conversations as a

country. At the community level, I think some of the issues here around institutional racism and how this is going to play out at the community level are going to be hard, challenging conversations. And I think I hope very necessary at this point in time but potentially a little bit on the more challenging side of this.

MR. FARREY: Domonique, biggest winner, biggest loser?

MR. FOXWORTH: I agree with Jennifer.

MR. FARREY: Just that?

MR. FOXWORTH: Yeah, I mean I don't need to repeat all the stuff she said --

MR. FARREY: Yes.

MR. FOXWORTH: -- she took it out right out of my head, so I won't waste any more time.

MR. FARREY: Got it.

MR. HALLENBECK: Yeah, so I -- you know, living reality I don't think tackle football is going away, but I think the idea of a frame work and more entry points, more options give parents the choices they need and you can continue to focus on improving the sport. you continue to understand and be very -- consider the research, but I think a framework is the answer at this point.

MR. FARREY: Got you. Okay, excellent. Well, thank you to this panel. Big hand, everybody, great conversation.

(Applause)

MR. FARREY: We will let them go. Scott has to run to the airport.

MR. HALLENBECK: Thank you.

MR. FARREY: And we'll bring up the second panel

here and continue the conversation, and you're free by the way. We're not going to take a break, we're going to continue but if you want to go to the restroom or whatever --

(Recess)

MR. FARREY: Marilyn, we also have Andrew Peterson. You go by Andy, right?

DR. PETERSON: Go by Andy.

MR. FARREY: Andy, okay. Andy is University of Iowa football team physician. He's also executive committee member of the American Academy of Pediatrics Council on Sports Medicine and Fitness, and has done research on youth football versus tackle -- I'm sorry, flag football versus tackle football. Some of the very early research on it, we'll talk to him about that. We also have Buddy Teevens from Dartmouth who is the head coach there. We are missing, kind of missing three of our panelists. Sorry to say, wonder where they are?

Aspen team, could you find our other panelists, please? We'll get started in a minute. So well, Andy, why don't we just kind of start with you here?

DR. PETERSON: Sure.

MR. FARREY: The floor is all yours, right?

DR. PETERSON: Yeah, exactly. This is great I like these kind of panels.

MR. FARREY: Yeah. All right. So first of all, tell us a little bit about your background here. I mean you have studied this topic, correct?

DR. PETERSON: Yes, I'm a pediatrician sports medicine doctor. I take care of Hawkeye football and then Hawkeye wrestling as well as USA wrestling. I run our sport concussion program at the University of Iowa. We got a big academic referral concussion program there. I'm also a trained epidemiologist. I do -- do studies looking at injury epidemiology in youth sports, primarily youth

football recently. We just completed a large study -- by far the largest study of youth football ever done. We published our preliminary data about this time last year. And that got a lot of attention because we showed that the injury rates were actually a smidge higher in the flag leagues than they were in tackle leagues. So I got a lot of attention in the popular media due to that.

Unfortunately, the attention it didn't get was that it also showed that the injury rates were overall very low. You know, overall these are pretty safe games. Most people are not getting hurt. We're talking about injury rates somewhere in the two to five injuries per 1,000 exposures. And most youth football leagues don't have that many exposures. You know, at least where we are they're playing for eight week seasons. They practice twice a week. They play a game once a week. And so we're talking somewhere in the 25 to 35 exposures per year, so the vast majority of kids are extraordinarily low risk for having any type of injury, while playing football whether it's flag or tackle.

MR. FARREY: And this was -- these were self-reported injuries, I'd imagine?

DR. PETERSON: Yeah, sort of. So we -- any injury there was a time loss was included. So if a kid have to miss practice or competition because of an injury that gets -- that gets recorded, we used a -- we used an online database, an online system. All these leagues have their own internal rules about keeping attendance and keeping track of injuries. And what we did was we created an infrastructure for them to do that, so they didn't have to do any extra steps. We tried to make their process as simple as possible. And in exchange, we were able to extract de-identified data on the backside, so we don't have individual level data. I can't go look -- I can't go look and see, you know, this player that played at this particular position for the season had any injuries or not. But once someone is injured I get a lot of -- a lot of play level data about them, I don't have a lot of player level data about people that weren't injured.

MR. FARREY: Uh-huh. I mean how well can we

extrapolate the findings from your study to national. I mean where you looked at --

DR. PETERSON: Yeah.

MR. FARREY: It's one of the first studies however, right?

DR. PETERSON: Right. When the Rockets --

MR. FARREY: In one flag league --

DR. PETERSON: Right. We have way more kids when tackle --

MR. FARREY: You had a few tackle leagues and a lot of it was --

DR. PETERSON: Yeah.

MR. FARREY: You know, there really weren't even many concussions. So --

DR. PETERSON: Right.

MR. FARREY: Can we really conclude at a national level that flag is just as dangerous or --

DR. PETERSON: Yeah.

MR. FARREY: -- as tackle?

DR. PETERSON: I think we can conclude that the injury rates are very low. We started tracking some granularity to compare the injury rates between these two leagues, your point is very well taken. But overall, these are such low rates of injury, it's going to be hard to tease this out, you're going to need gigantic data sets in order to do that. Luckily, we're getting close to be able to do that as our -- as our more of grown up data finally gets published here over the next year or so, we should have a better idea of what the real difference is between these leagues.

MR. FARREY: Got it. Good.

DR. PETERSON: The other point that you're trying to make there is, you know, kids in Iowa might be different than the kids somewhere else, right. I mean the kids that choose to play flag football in Iowa might be very different than the kids that play the -- choose to play flag football Bethesda, Maryland.

MR. FARREY: Right.

DR. PETERSON: You know, we still have kind of this, we kind of get lumped in with the South I think with some of the conversations that had been going. We had a lot of hard nosed kids that like rough and tumble sports.

MR. FARREY: Got it. And for the sake of clarity, I want to roll through the panel here, but thumbs up, thumbs down, do you prefer flag up to the start of high school?

DR. PETERSON: I have more options. So I have no problem with kids playing tackle football. I don't --

MR. FARREY: Starting what age?

DR. PETERSON: As young as they want to start playing tackle football. I don't think we need to legislate or mandate or codify these types of things. You know, the rates of injuries are very low here. The things that we're looking at and that Dr. Cantu was talking about are mainly in people that have very, very long playing careers and the vast majority of people that are playing contact inclusion sports don't have these careers that go on through the NFL lasts decades. You know, I think having a few years of exposure to contact sports as a young person is a fairly safe thing to do and that we shouldn't make decisions based on what's happening to a handful of people at the NFL level.

MR. FARREY: Coach Green. What is your stance on the idea of flag up until the start of high school?

MR. GREEN: I think a lot of the youngsters need

to learn how to tackle, you know, football, basis of the football still blocking and tackling. So I think 10 is too young. But one or two years before high school to teach them how to tackle and how to block with equipment, I think that's important. You may have more injuries if the kids don't start playing until high school. The other thing is educating the coaches. You know, I think the trickle down from the NFL now, a lot of areas you can only practice full equipment, two days a week. I think you can lower that to one day a week. I don't think hitting in practice will help football or hurt football. I think if you limit the amount of contact that the kids have, even at the boys club level. Kids don't have to hit every day.

I think the big thing is their mandating that you only tackle two days a week, but if you watch stuff like Friday Night Tykes -- I've been coaching 20 years. That was tough for me to watch. You know, you have kids 6 and 7 just running head on and a coach is screaming and kids are bang, bang, bang. Kids are getting hurt. They're quitting, they're crying watching this on TV. I think that's part of it is educating the coaches and mandating that you limit the contact. Wonderful off field, and I think that will help. But I'm for tackle football before high school. I think it's important that they learn how to tackle before high school; maybe 12, 13 years old but not 8, 9 years old. I don't think that's necessary to learn the sport of football.

MR. FARREY: What's the age that makes sense to you, Scott?

MR. BORLAND: I think waiting till high school. I see that not as a compromise with the folks that love football and want to see kids play at 5. I actually see it as a compromise with those who have a legitimate point by what this is health professionals that see that it extends to wait until 18. So I actually don't think it's anti football to wait until you are 14. I'm sorry, I think it's a compromise with those that are better that advocate waiting till 18. I'm somewhat incredulous that we even discuss the reasonability of hitting a 5 year old in the head hundreds of times. It baffles me inside, I think you can wait to play.

MR. FARREY: Uh-huh. Buddy?

MR. TEEVENS: Yeah, I'm okay waiting till high school. You know, I don't have no problems. Kids we've approved are basically juniors and seniors. Can they learn the skill set, I think that they can. I'm also a realist, and I'm not sure people in this country will eliminate tackle football, and my approach is, how do we mitigate and limit the amount of tackle or contact at the different age groups.

MR. FARREY: Uh-huh. How do you see this issue playing out over time? I mean, you know, what you need to know about, Buddy, won't you talk about your role and he is a -- he is a true pioneer in this space and what he did with Dartmouth, so -- you know --

MR. TEEVENS: That sounds better than you are an idiot. That's what he --

MR. FARREY: That's what they called you first, right?

MR. TEEVENS: Exactly, right.

MR. FARREY: Yeah, yeah, yeah. Go ahead.

MR. TEEVENS: Yeah, I'm the head football coach at Dartmouth College. And six years ago, we eliminated all tackling. You know, it was a combination of things just concussive head injury at learning, studying my players injuries, I just thought there had to be a better way. It was not the most well received thing with my coaching staff. They thought (inaudible) at the time. We thought we're done. We'll be fired and everything else. But I thought it was the best move for my players. Subsequently, we won championship, so we've been eight wins, nine wins season out of 10 game schedule. My concussive head injuries have dropped appreciably. My peripheral injuries have dropped appreciably. My guys are playing healthfully. We have less sub-concussives than anybody in the country, at the division 1 level.

We do tackle. We tackle a lot. We just don't tackle each other. So literally, a guy that comes to Dartmouth college will never be tackled or make a tackle on another Dartmouth College football player. We've had guys up for players of the year defensively. We're probably one of the best tackling teams in the country, average misses five per game. Why is that we tackle a lot? In the skillset of tackling can be taught on inanimate objects, and that's my big push. I think there's way too much contact at any level. I think coaches are the ones who drive it. I spoke with American Football Coaches Association last -- two weeks ago, and I said that our collective body can fix this right now. We design practices. We approve drills. We say yes or no, if we push contact and aggressiveness, our players going to reflect it and they're going to get hurt. It's a real simple equation. The more you hit, the more you will get hurt, minimize contact.

MR. FARREY: So if we move toward this model of flag to the start of high school, what happens to the level of talent and the depth of talent that is produced and ultimately presents itself to a coach like you who is recruiting at the college level?

MR. TEEVENS: You know, this top line guys that still don't play Pop Warner football. I don't ask that question. I see a guy on tape, and is he a good player, then I'm going to recruit him. If he's not a good player, we'll pass, let him go someplace else. And that's about it. Can you learn a skillset? Yes, I think that you can, developing and again it's on coaches, but I think young children inherently they're going to tackle something. I've got a five year old grandson. He watches this game and he'll go over and he'll tackle stuff. I held up a sofa cushion. I said hit this. He didn't stick his face in it. He kind of went off in the side. And I think we've kind of worked things as coaches. Keep your head completely out of it. Strike in an effective fashion, where, how, when and then how often do you repeat it. That's the most injurious act in the football field and as coaches, it's the one we practice the least because guys will get hurt, how prepared are you on game day.

MR. FARREY: In terms of parent attitudes, your approach, have you found this to be helpful or hurtful in terms of the recruiting advantage?

MR. TEEVENS: Probably one of the biggest topics in recruiting that moms and dads address with me. It's Johnny, at my place, we have guys who want to go into medicine and engineering, law and business. The number of sub-concussive hits and Bob Cantu and Chris Nowinski the work they've done, it's pretty telling that the more you do this, the less capable you probably are going to be down the road. So if we can mitigate the amount, so parents are very responsive. Kids are curious. Coaches have become a little bit more willing to embrace, and I was the oddity and the weirdo in the sport. And nowadays, people are coming on board. Greatest problem I see is the older generation of coaches, because most of us had played years ago, the concussive head injury nobody talked about it. It was, you know, laugh at Johnny who couldn't remember his combination in his locker. The ding thing, oh yeah, he's tough guy, go play.

And I think if we push pass that, and I think the younger generation of coaches is in a position to do that, we might be able to change the game for the better.

MR. FARREY: Uh-huh. So question for you, Andy, I mean your study did not look at sub-concussive hits?

DR. PETERSON: Yeah, not at all.

MR. FARREY: Right.

DR. PETERSON: I don't know how you really study that. You know, it's a very difficult thing with -- unless you're putting accelerometers in 1,000s of kids' helmets and following them longitudinally over decades. It's going to be a long time before we know the answer or the real risk of something like --

MR. FARREY: Right. So given that, I mean do you question the science or do you -- or is that persuasive enough for you to say, you know what, even though it's hard to measure, we probably should be

conservative. Sounds like, you know, you're okay with kids playing anyway.

DR. PETERSON: Oh, yeah, yeah, yeah. No, it's a real issue. I don't want to pretend like I'm some type of, you know, CTE denier or something, you know, the opposite, right. You know, there is good data mainly from pro NFL players and the younger they played, the longer their careers the worse their disease seems to be. There's clearly some burden of disease at their level. There's also the animal model data that's demonstrated how this process develops. And there's also good data using both a special type of MRI as well as some high density EEG studies, that show that there is changes to the brain that happen in people that don't have concussions, so yeah, there is clearly a real risk with sub-concussive hits.

I'm not sure how much that means over the long term for most players at the low level. I think if we're going to make dramatic changes to the game, we need dramatic evidence that what we're doing here has a real public health burden and I'm not sure that there is a meaningful public health burden of the injuries that occur in youth football.

MR. FARREY: Uh-huh. If we move to this model coach, do you think that the -- would you see more or fewer kids coming out for football, assuming they are playing flag and so forth? Because you're like -- maybe it will be, you know, some kids they're less intimidated because they haven't been --

MR. FARREY: The numbers are dropping now.

MR. FARREY: The numbers are dropping now.

MR. FARREY: So, you know, and I talked with Chris earlier and I was telling him how during the off season, we would always have 100 kids in the waiting preparing for the next year. You know, the last few years, we're down to like 40, 35 kids, you know, participating in football, you know, doing off season workout. So our numbers have dropped. I think kids want

to play football. I don't know -- in this area kids want to play because if you look at it, a lot of kids want scholarships to go to college. Football still has the most scholarships in athletes. Division I, 85; one double A, 63; division 2, 36. So if you're looking at wrestling or some of the other sports soccer, lacrosse the numbers -- because football is the money maker. The scholarships aren't there. You are talking 14, 15 scholarships for Division I university for soccer. But for football it's 85. So a lot of these kids in this area or inner city areas, they look at that as a way to go to college and play sports, because they just -- that's the money and that's where they can get that opportunity.

MR. FARREY: Uh-huh. So net-net does high school football do better or worse, if we move towards this model?

MR. FARREY: To be honest, I think skills -- as far as the skilled players, I think it will be the same. I don't think it will do worse but I think it may affect the lineman, the big kids upfront, the blocking, you know, lot of those kids get an opportunity to play now with tackle football, and they get a better opportunity to go to college, you know, but I think as far as the skills of receivers and quarter backs, I don't think that will change. The other thing is we play 7-on-7 football in the spring. You can't be in equipment, we don't have spring ball in this area. I've found that we've had more concussions. The one spring ball playing 7-on-7 and tackle football kids, you know, ran at full speed, defensive acts going for interceptions, receivers going for the ball, head-on-head collisions, kids hitting the ground. So it still needs to be some mandates with that as well to keep it safe because that bigger and faster the kids get, the more of a chance that they'll get injured.

MR. FARREY: Uh-huh. Any thoughts on any of this?

MR. BORLAND: I think participation at the youth level in tackle hinges on the idea that there is something called safe tackling. I know the American Academy of Pediatrics -- sorry, teaches safe tackling. Between 2009

and 2014, my freshmen year was constant. I'm a rookie here with the 49ers, made about as many tackles as anyone on the planet. There's no way to do it entirely safely. And to put that burden on young people, I think if you go to a driving range, how many kids swing like Tiger Woods, if you go to a basketball court, how many kids shoot like Steph Curry. And then to curb the risk of brain injury, we're asking kids to be expert tacklers at 5, 6, 7 years old. To me that doesn't make sense. I think in terms of the quality of the product in high school, to me it's a subsidiary to the public health issue. I think if the quality wanes, so be it.

I think our primary objective is to get children through childhood without any cognitive deficits and then without any emotional disturbances.

MR. FARREY: What do we do with the kids? You may think about flag football that promotes the -- it's the kid who is kind of is light and can kind of run around a bit. It's not necessary for the large line man style kid. If we move more toward the model of flag, what do we give that kid? Is he left on the couch? Are there other sports for him to go into?

MR. BORLAND: Yeah, this was something we talked about last week in our call before this talk. I don't like the notion that we just relegate big kids to football. I say this as someone who two years ago, I've ran the San Francisco marathon. When I was done, I was 222 pounds. I'm under 6 feet tall. I was born a heavy kid. I don't think any kid is born to be obese. I think there's kids that are born with a genetic predisposition to carry more weight, but to say to that child, well, you got to play football, you're a big kid, I think is nonsense. I think you can eat healthy and exercise and participate in other sports, I don't think you are relegated to football.

MR. FARREY: What else could they play though? What else?

MR. BORLAND: I say why not basketball, soccer, judo, golf, you know, any other sport that you don't hit

your head repeatedly. I reject the notion that if you are a bigger kid, you can only play offensive and defensive line of tackle football.

MR. FARREY: The thing is though in some communities there isn't judo and there isn't golf and there isn't tennis and there aren't some of these other sports, so -- yeah, how do we --

SPEAKER: I would --

MR. FARREY: You can make that happen?

SPEAKER: Yes, I can.

MR. FARREY: I mean so how do we -- I mean can we basically move to this model with all -- without also opening up more sport options for the kids and the communities that have a limited set of options?

MR. BORLAND: Well, yeah, I think it'd be a mistake to not have something in place for kids. A helmet costs like \$140, pads cost a lot, hands girdle. One judo instructor is what per hour --

SPEAKER: (Inaudible) 20 bucks (inaudible)

MR. BORLAND: Yeah, just a point being is I think we can be creative and forward looking and create things that are better alternative. And I say this as someone that's full lit from Southwest Ohio where football is a religion. We wanted to play every year and beg my dad. I understand the cultural implications. I understand what Domonique was saying about wanting to be tough, wanting to be a man. I think it's actually an opportunity this problem to redefine a lot of those things and provide healthier alternatives.

MR. FARREY: Uh-huh. So yeah, how should we think about the community piece? I mean, you know, the civic community cohesion, the Friday Night Lights experience. I mean does that -- does that disappear? Does it become less of a feature? Do we have fewer places in our community where we come together around one thing

if we move to this model? Pass. What do you think, coach?

MR. GREEN: I'm not sure. I'm not sure because just, you know, football just brings the community together. It's this -- I haven't seen anything like, you know, in this community on Friday nights the whole community comes out, you know, I still go back to educating the coaches. You know, in high school, we send our equipment back every year to recertify helmets and our shoulder pads before the kids will get in. I've seen clubs where it is not mandated, but they'll use helmets for four or five years and the kids -- and they're not going back to be recertified. You're putting the kid at risk right there. I think the mandate, they have to change. When the equipment, how often they tackle, if they tackle, you know, like the NFL said, okay, we are tackling two days a week, so now college is saying two days a week. So now guess what high school two days a week. But if you're not having people out there watching them, making sure that they follow the rules, it's going to be a problem.

I've gone to boys club practices and I'm like -- I've never seen anything like it. I see people just hitting, coaches haven't been trained, you know, we'll try to help them or just, you know, or leave. It's they're putting kids at risk. If you're not educating the coaches, they should be certified before they step out there.

MR. FARREY: Uh-huh. What type of leadership would you like to see the -- the NFL, the NCAA, the conferences, the colleges gather? You know, the folks who have the megaphones and the credibility, what would you like to see from those entities?

MR. TEEVENS: Well, I actually I use the NFL as a model. 32 teams, 16 week practices and there was six concussions last year. And Domonique helping push through to some of the basic of elimination of contact. I think we can do that at a variety of different levels. The NFL keeps pushing it. They get criticized an awful lot. I understand that. But they would just as ignore it as I

was years ago. You stop the contact, it's going to be reflective. We censorize our guys, we essentially cut contact in half by eliminating and we still have guys that are preparing well. You know, taking away from communities, I just I don't see people coming out in numbers and volume for a touch football 5-on-5 or 6-on-6 or 7-on-7. And I think there is something lost. There's some middle ground. Bob mentioned it, and I've recommended it, before to youth football, how about using, wearing the costumes if you will, just don't have contact.

We have a spring game and we go full out and we don't hit anybody. And everybody walks off the field healthy and a sprained ankle, a pulled hamstring except concussive and concussive is minimized. And I think that's a model people can follow. But it got to be driven by coaches and then I think independent organizations, the Ivy League elected -- there is a group to say we will not tackle (inaudible). No advantage or disadvantage to your opposition. And I think you know the big 12 or the pack 10 or big 10 whatever, collectively they have got to do that because a one-off, you know, I was just -- I was at the point I was going to get fired anyway. You know, here we go. It ended up it worked out but if a coach doesn't win, it's because his players aren't tough enough. They don't work hard enough and so forth into the toughness zone, there's a lot of ways to develop toughness. There are other sports representative here the demands in the weight room, cardio vascular conditioning, suffering together is a big thing. It doesn't mean you have to run into each other nonstop.

And, you know, the perfect tackling with Chris, I may take disagree a little bit, if you practice something more, you become a little bit more efficient with it. And that's one of my greatest concerns was my guys would not be prepared for full tackle games, because we never did it in the practice. So we over time, what I found was the way tackle was -- tackling was taught was not what I saw in tape. We broke down 3,300 tackles a year ago. And just to -- analyze it all and put them into little patterns, how people tackle and what's taught is completely different. And if you have guys schooled up, you tackle high right pick tackle, a low left shoulder

tackle, a lunge tackle, a run-through tackle and actually do it because people will do it differently, a cover corner tackles differently than a line back, who tackles differently than the defense or lineman. We practice what the position requires. And we become a little bit more efficient I think other folks can model in.

MR. FARREY: I want to unpack that word toughness a little bit here, right. So when I hear the word toughness, and we want our kids to be tough. To me that means, we want our kids to be resilient, right. Life is going to throw some -- some difficult things your way, you're going to have to pick yourself up and you're going to have to keep going. This especially happens in a society that's get them into, you know, that's a capitalistic society sorting the winners and losers, you're going to be a loser, you got to figure it out. You know, Scott, talk to me a little bit about toughness. I mean can we promote -- can we teach that kind of trait in kids if we move to the flag model? If we, you know, up through again, up until high school?

MR. BORLAND: I think absolutely. This past Saturday, I participated in a workshop with Dr. Daniel Siegel, who is a developmental neuroscience scientist an expert on the developing brain. His whole -- one of his chief objectives is to develop resilience in the young brain in the young person. I think compromising the organ that would constitute that development is silly. To me, I think a broader definition of toughness is restraint, not the capacity to do harm, but the capacity to do harm and then not. I think martial arts are a great way to do that. There is a variety of sports that go about toughness differently but I would argue are harder to do, if you took your average offensive lineman off your high school football team, ask them to run the 800 in under 2 minutes and 20 seconds, see how tough he is. I think we can explore different ways to teach kids those lessons that don't subject them to brain injury. I think it's that simple.

MR. FARREY: Coach, your thoughts?

MR. GREEN: I agree with --

Mr. TEEVENS: I think it is --

MR. GREEN: -- I'm sorry.

MR. FARREY: Two coaches.

MR. GREEN: Two coaches.

MR. FARREY: Yeah, yeah, I'm sorry. Yeah.

MR. GREEN: I think toughness, you know, a kid is watching football and they are looking at their -- at Ray Lewis on TV and they are seeing, that's what they see as tough, you know, they're watching NFL games, they are watching college games, so we can try to teach it a different way and use different models. But a lot of the kids and a lot of communities, they're looking at Ray Lewis, they want to be Ray Lewis. They see Ray Lewis snapping and knocking guys around. That's what they want to do. In Prince George's county, Nevara Baum (phonetic) and Joe Hayden (phonetic), they see those guys how they're hitting people around. That's what they see as being tough, and guys that played in their community, they are going on to college, that's what they -- you know, that's what they see and that's what they want to do. Coach, I love your model. I read upon your tackling machine probably 10 years ago. But keep in mind, I looked it up, we wanted to buy it, go to that model, couldn't afford it.

I may have led the -- I have access to all of the money in my budget. We wanted to go to that model but because of all of the other demands in athletic department, we couldn't afford it, so we tried to limit the contact and all that stuff to go to that model, but again we have to keep in mind to go to that, to be safer. There is a cost. So, you know, of course, we want the kids to be safe but you have to have the money to provide those things if you're going to do it or work.

MR. TEEVENS: When we started -- we came up with our robotic tackling device which has got a lot of attention. To me, it's a tool and I talked to a lot of different groups, get a full mat, get the cushions off of

sofa. You can do the same type of things just the innovation and imagination to do it, just don't do it with another guy. And then that's my position. Again, it's great if these things move. My thought is how do we make the game safer, and it just that's a method that accompanies our mindset.

MR. FARREY: If we move towards this model, are there a certain types of kids who enter the game who are not playing right now? And one of those type of the kids, let me throw the starter are girls, right. I mean flag football lends itself to co-ed play a little more easily, right. I mean how do you -- how do you see opportunities if any under that type of model in terms of the demographic and the gender of kids who are playing the game?

MR. GREEN: Let's keep this in mind. Before they started going by age, they went by weight. So a lot of big kids didn't play tackle football, they were overweight. They weren't playing sports, so they would get into high school having played any football. And a lot of those kids were getting hurt, and it just took them a while to get into football, so the youth leagues went to age, so now you have kids 250 and 260 pounds playing football at a younger age. And now they're out there, so we have private schools, the method of bigger schools are recruiting these kids and they're getting opportunities that they weren't to get in before, because they weren't seen at the middle school age. So now these big kids out here playing football in a big private schools, the national rank schools in our -- they're recruiting these big 250 pound kids, because now they have an opportunity that they didn't have 10 years ago.

MR. FARREY: Yes.

MR. BORLAND: One of my teammates in San Francisco was a guy named Shayne Skov who played line back at Stanford and I think he is with the Saints right now. Shayne is from Mexico. And so he's like the only NFL player that grew up in Mexico. We went down there together in the off season to teach a clinic, and flag is huge down there. Talk about not being able to afford a

robot in the inner city. Inner city Guadalajara really can't afford a tackling robot. But all the kids play flag. It's not cost prohibitive. Girls play. It's a great atmosphere. After the games, the kids were all rung out, had a blast. And by all accounts, I was there for 3 days, you know, seemed to be gleaning all the lessons that we glean from youth tackle, so I think it's a wonderful alternative so much so that I don't know why youth tackle still exists.

MR. FARREY: Uh-huh. You're writing something down, Andy. What's that?

DR. PETERSON: So I've been thinking here for the last couple of minutes about what we consider toughness, and I think we might be conflating the idea of toughness with physicality. And I think there is lots of ways to get tough, right. There is tough members of the chess team, there is tough members of, you know, every sport team in school. But there is only so many opportunities for people that want to do physical things. Like there are certain people that really like contact, like you know pushing someone else around doing something that's a little bit more violent. And football is one of the reasonable outlets for that. There are other sports that are a lot like that. Some of the contact -- because some of the combat sports are like that, wrestling is like that, hockey is like that to some degree at the higher levels. But I do think we worry about alienating these kids. I think the football is a outlet for that type of physicality that kids that want to push other people around.

MR. FARREY: Uh-huh. What about the downstream effects on the NFL? Fandom, if we move toward this model, do we see impacts, positive or negative, on how much people care about the professional game? Scott.

MR. BORLAND: Well, first I'd like to just briefly touch on that point.

MR. FARREY: Yeah, sure, sure.

MR. BORLAND: I was that tough, rough and tumble

kid. I think water finds its level. That kid finds an outlet. I've got 14 nieces and nephews, a few of them are will hit and run, climb anything. The way I think of it is that they're going to expose themselves to dangers anyway, so then why add 200, 300, 400 hits a year. I think they'll find outlets to be a physical kid, climbing trees, running around. I did a lot growing up. So it's just a maybe a point of difference and how we approach things. In terms of the pipeline and fandom, I think the NFL being behind, youth tackle football is very purposeful. You know, and Patrick has written about it. Patrick Rubio (phonetic) in the front row. A long time ago, the NFLs kind of suffered from a PR crisis and wanted to look cool. So they hired MTV to come in and try to revamp their image. So young kids would look like their stars, and that's the number one thing they came up with was that we need to have kids playing the very same sport, so they'll become fans.

You said it in the intro that if you play this sport, you're more likely to be a fan. So I think that's a calculation, that factors into the NFL being behind USA Football. Again I will belabor the point, to me who cares what it does to the pipeline, this is a public health issue. This is not about industry.

MR. FARREY: Uh-huh, uh-huh. What do you think?

MR. TEEVENS: Yeah, my feeling in terms of a pipeline, if kids play in high school, there would be enough people to service the college levels and the teams would draft from here. It's 2 percent of college players have an opportunity to go on professionally. So in terms of the sport itself, I think there's a lot of lessons that it does uniquely teach. Just the volume of the kids, socio or economic background, racial background, ethnic, whatever all come in together for a common goal. And it is -- it's different. We have large kids, small kids, fast kids, big kids. I hate to see that and I've played a lot of different sports I've been involved in different things, there is none quite like football. So that's a scary thought, it could happen. We do away with football at the youth level and the high school level is affected, down the road, it's the best thing to do. You know, life

is inherently risky. People getting concussions and you name the sport, we're all talking about this. Happens to be more in football, I think we can as coaches control, and I keep repeating that message. But I'd hate to see it go away. I think -- I know my profession could survive with guys who play in high school. And I think that they can do it without the amount of contact currently put in place.

MR. FARREY: Uh-huh. Is there a slippery slope effect where if you say, all right, flag up through 14? People start to say, why are we stopping there? I mean certainly Patrick O'Malley (phonetic) was on NPR, you know, talking with them about this. He says no, no, no football until age 18, until you're through youth. So today's question is actually a sort of a middle ground what if, I guess. So I mean if we put that hard number at 14, do we see a -- do we have problems at the high school level and then people really wondering why is it in the schools, especially look, schools are in the business of developing brains. I mean what are your thoughts? Michael.

MR. BORLAND: Michael Gervais Sports psychologist for the Seattle Fox.

SPEAKER: I have lot of difficulties.

SPEAKER: Yeah, you're struggling in there.

MR. BORLAND: Is it okay in the back? Good. Here has a very simple approach to why we play sports. You can train your body and mind to accelerate at your craft at the professional level. I think the end versus true for youth. You're training your craft only to develop a healthy body and mind. So I don't think youth tackle fits into that. And would like to see something that is more purposeful in developing young bodies and brains. I don't think concerns about the play point, or quality of play need to factor in whatsoever.

MR. FARREY: Dr. Peterson, how do you look at them? I mean you know football does have although your study on youth players were limited in many ways. But

show you show not that many injuries.

DR. PETERSON: In many ways.

MR. FARREY: In many ways, yeah. Well, you know, we ran through those. And I understand your point of view on that. But certainly at the national level, we know that, you know, high school football has -- has some of the highest injury rate out there. Knee injuries, you know, concussions or otherwise. These are injuries that people take into adulthood and otherwise. And some of them are picked up prior to coming into high school as well. Kids do get concussed, it does happen. Some kids do get knee injuries or whatever else it may be. Talking about the long, you know, the downstream public health consequences. If we move toward this model, do we have more healthy adults down the road or no?

DR. PETERSON: We might end up with slightly healthier former NFL players if that makes sense. Yeah, for most kids that want to start playing sports as a young person, they're very unlikely to have long-term problems from playing youth football. The main problem is in people who have very long playing careers, are that most of our data are for people having long-term -- long-term problems, long-term effects from contact inclusion sports are on people that have, you know, gone to a point where they're getting hit in the head for a living, professional boxing, professional football players. People at the younger level are still fairly rare to have long-term effects from the dangerous contact inclusion sports. Now clearly, there is outliers, right. There is definitely people that get hurt playing football just like there are people that get hurt playing other sports and doing other activities. But those are fairly rare. And I'm not sure that what we're seeing among former professional athletes should really inform the decisions that we're making about this.

MR. FARREY: Good. We would like to Q&A. Few questions here. Let's go to someone in the back we haven't talk with from.

MS. BUD: Thanks. Hi Buddy, I'm Dorothy Bud

(phonetic) (inaudible) data buddy. And speaking to that, Terry and I have worked on helping to adopt limits on full contact, football practice at the high school level, which have now but in place in some states including Texas, which was the first, by the way a southern state, for a number of years. So if you are already seeing kids coming in your recruiting class, that's who have been limited to the amount of tackle practice, has it had any impact on your recruiting? Thanks.

MR. TEEVENS: (Inaudible) practice of school, so to get years ago in passing the street -- am I on now?

MR. FARREY: No. All right. So a new building, brand new AV, bear with us.

MR. TEEVENS: Yeah, a good friend has an initiative Practice like Pros basically minimizing the amount of contact. And I think it's a very, very effective across the country groups that he's spoken with. 60% of the injuries I've heard in the college level concussive end injuries occur in practice. You look at how we prepare for game. 80 percent of it is practice, 20 percent of it is game time. So the bulk of your injuries that occur are in practice. So limiting it in practice certainly is going to have an impact.

MR. FARREY: Got it. I got it. Tony, you had a question. Tony Jordan. Back there, yeah.

MR. JORDAN: Just a couple of comments. I played football and then I fell as well. And a comment is that flag is a different game than tackle and I've coached at all levels. And I think that when we're considering this, we have to ask USA Football in all the different leagues NFL to mandate what kind of flag football we play because 9 man flag has blocking versus the way the NFL flag is taught. You know, so that would be one thing that, you know, I would consider as we have these conversations. But my question to the panel is that we know and I live in a city that is highly impoverished. And this is really a racial issue when you talk about what inner cities do. And one of my comments is that you'll never get your football coaches to be qualified enough

because they're volunteers and their time and the demands on their life don't allow them to be highly qualified to coach these kids. I've seen some disappointing things watching youth football with parents and coaches, and that's a whole another discussion.

But once again my question to the panel is we're having a lot of conversation about the NFL and about what leagues do, but how are we addressing the government, politicians, folks who'll mandate that. We know that the sergeant general, if they put their stamp on something, then that then drives local, state, and government because, you know, I watch local youth football, and I know those guys will not stop youth football unless someone helps them stop or puts the proper mandate. So my -- that's my question to the panel, how are we addressing our politicians?

MR. FARREY: That's a great question. So how do you feel about laws -- we saw one introduced yesterday in New York -- and, you know, being partners, banning simply banning tackle football in early age?

MR. BORLAND: I think it's a great idea.

SPEAKER: Do you have them on.

MR. FARREY: Yeah.

MR. BORLAND: I think it's a great idea. And thank you for your work and Sylvia Maggi (phonetic) for doing -- being a part of that. Leagues are so disparate that unless something is universal, you're going to have Snoop Dogg's League hits kids at 5 years old. Friday Night Tykes is celebrating this idea of hyper violence. I think more so than children, a lot of the coaches are given to that Ray Lewis idea of what it is to be a badass. Whatever that, you know, an elementary school I guess there is bad asses, but I absolutely am in support of legislation setting the bar higher at age of entry to tackle football.

MR. FARREY: Buddy.

MR. TEEVENS: Yeah, I have seen coach's organizations have got to identify and maybe as simply as saying, you can do this drill, you can't do that drill. Boy in the ring, the Oklahoma drill, little things like that. And I go around the country and I'll see the camps, and I'm thinking do they have their heads in the sand, you can't do that with people any longer but it continues. And you probably see a bunch of it. So whatever governing body overseas at the prop owner, youth football level, high school level, college level, the NFLs working on it certainly legislations got to start because as coaches, we're probably are not going to change. We're not the most progressive guys in the world.

MR. FARREY: Yeah. Jerry Joy (phonetic).

MR. JOY: Thanks, Tom. So I'm Jerry Joy. I'm a pediatric neuropsychologist here in Washington D.C. at Children's Hospital. So, you know, there's a couple of things that we're all struggling with. First of all, this is a great conversation. This is a really important conversation. It's necessary and I think the diversity of opinions are important here. There's one study I do want to talk about though. Because it seems to have gotten less of the discussion. You know, one of the things in science that we try to do is to take our scientific findings and generalize them, expand them, how do they apply. And I think, you know, Bob knows that we're still trying to understand how to take the findings from the select group of former professional players and how that can reach back and help us with our kids. But I do think the study that was published at the same time, one of the other studies around CTE was publicized was a very large sample of now 65 year olds in Wisconsin, where they looked at -- they all played high school football. There was I think several thousand in the sample. They compared them to athletes at the same level, at high school that didn't football and then also to non-athletes. And they looked at their overall intelligence to give some cognitive measures. And they looked at their overall rates of depression and actually found that the kids that played high school football, now 65 had no differences in their overall intellectual abilities and actually had lower rates of depression.

So from the public health perspective, we have to be careful because that's a broad range of individuals that played this sport. Having said that, we still need to improve on this game. And I'm a developmental, so a pediatric neuropsychologist. I am interested in brain and behavior in the development of children. And I do think that we have to think about a developmental model here. I am concerned about sort of the black white under 14, no over 14, yes. I actually think that that brings along risks as well, and looking at a developmental model is important. I also think that individuals count. So I was around this size in seventh grade. My brother a year younger than me was about half my size. We shouldn't be doing and didn't do the same kinds of activities in sports, and I do think that we do need to come up with tests that understand whether you are developmentally ready. But our sports need to also arrange for what is appropriate at what age.

MR. FARREY: Once, yes. Dr. Peterson.

DR. PETERSON: Kind of real quickly on that general proposal. So this has been done. This has been studied in Australian Rules football. They did a study where they group people based on Tanner stage. So Tanner stage is sexual development maturity rating. And they showed that if you group people by Tanner stage, it was a fairly dramatic reduction in the number of injuries that happened across the entire cohort. So grouping people by their maturity seems to be beneficial. I think most people worry about trying to deploy that here in the United States when you are looking at some of the generals to decide who they can play with. But I think some other type of metric of following someone's development is a very reasonable way to approach this problem.

MR. BORLAND: Very quickly.

MR. FARREY: Yeah.

MR. BORLAND: My dad will turn --

MR. FARREY: Sorry.

MR. BORLAND: My dad will turn 65 in October. He grew up in Wisconsin. He played football in high school and college, we played the same position, we even look alike. It's a radical different sport to compare what he experienced in high school to what I played in high school is just not the same thing, its apples and oranges. We played more, we played on turf, we played with park shell, and it's we weighed more, we were a little bit faster. I've talked with him about this. I was exposed to twice as many hits in the same period of time.

MR. JOY: You could argue we had far worse equipment back then too and certainly our level of even coaching back then was completely ignorant of the injuries. The concussion that I got nobody knew about -- I didn't know about it. And so I think there are different sort of factors at each level to the brain to this equation. An important point though really did how you take a developing child and don't understand what the risks are and the resilience of that is.

DR. PETERSON: I agree with the latter part. I think equipment improvements are counterproductive in terms of the brain.

MR. JOY: Well, they are if you coach wrong, absolutely. I agree.

DR. PETERSON: We'll have to disagree on how you play football. Because definitely I don't need to be.

MR. FARREY: Yeah, definitely. Let's go to one last question here. Jim Whitehead.

MR. WHITEHEAD: Thanks, Tom. I'm Jim Whitehead. I'm the CEO of the American College of Sports Medicine and we're pleased and honored to be working so very closely with project play and the (inaudible) we're doing. Let me ask the question. This is part of the future of sports. Real quickly from each one of you, wonderful panel. What do you see within the context of this discussion as the future of sports and why?

MR. FARREY: Sports or football?

MR. WHITEHEAD: Future of sports and related to this discussion, football.

MR. FARREY: Yeah, yeah. Let's limit it to football.

MR. WHITEHEAD: Obviously the discussion but what do you see as the future?

MR. FARREY: Yeah. Well, yeah, let me phrase it this way. By 2030, is the model that we've been talking about today where it's, you know, where flag is the -- is the standard way of playing the game up to high school, is that -- I don't know if I'm sort of shaping it a little bit better here. You know, does that end up playing out not what you want to play out or what you think will play out based upon where the science is, where parent attitudes are going, where the law is going, insurance. You know, innovations or otherwise. Start with you, Buddy.

MR. TEEVENS: Yeah, I think tackle football would still be around at the youth level, probably. I think it will also be a safer game. People would be able to better educate and how to prepare people.

MR. FARREY: You've tackle football will still be around.

MR. TEEVENS: Tackle football will still --

MR. FARREY: But do you think flag would be the standard?

MR. TEEVENS: Flag would be -- I think flag is wonderful as you mentioned, the woman earlier. I think it's wonderful that they become involved. I just don't see this country, certain sections of the country saying, hey we're going to just go to flag football.

MR. FARREY: Got it.

MR. BORLAND: I think youth tackle will still exist in 2030. I think the trend of less participation and more in flag will continue.

MR. GREEN: I agree with coach. I think it will still be around. As far as high school coaches go, they could change it to all flag. We would adjust. You know, I mean if that's what the best for the youth, and that's safer for the kids, once they get to high school, we would adjust and do what we need to do to get those kids prepared for college. So if they mandate that the kids don't play, they play flag, I think high school coaches if that's what's safer, high school coaches will be fine with that.

MR. FARREY: Uh-huh. Dr. Peterson?

DR. PETERSON: Yeah, I agree with that one. I think flag is becoming increasingly popular point of entry for the game of football.

MR. FARREY: I got it. Good. Well, terrific. We're just going to wrap up here. Thank you really for, you know, just an incredible conversation. So many different angles we're going to go back and take a -- look at all the notes and then -- and create a report coming out of it, and I could just find my notes on how to wrap this thing up, we will be in great shape here. Let's see here. The -- so first of all, thank you again to Marilyn and Michael Glosserman for making this conversation possible today. It's been terrific. We're so excited. We think this is going to be a catalytic conversation that, you know, policy makers and football leaders and folks, parents and otherwise can really do something with. We're committed to doing that. We'd also -- I'd also like to thank my team. Jon Solomon, who brought this together. Where is Jon? Very good. Jon [Technical Difficulty] in an event like this.

(Applause)

MR. FARREY: As well as Risa and Andre and Emily and really the whole Aspen team for supporting us, Ben and

otherwise. The next conversation in the Future of Sports series is on college sport, so it will be sometime in the spring. We'll figure out exactly what the question is to ask, what it will be. It will be one of those, we can assure you that, that's in the ether, that's in the conversation and we want to try and make it the smartest - the smartest conversation on that particular topic.

You're going to leave here today, in your e-mail will be a link to a SurveyMonkey, where you can like I said at the top of the day, really share your thoughts in a deep kind of way. I will read each one of those -- those entries that you submit and then we will pull some of those ideas and then put them into a final report on this topic of, you know, what if we move to, you know, a system where flag was the standard for football in this country up through eighth grade. I really want to think it through on any number of levels, so please share your thoughts. This is a great opportunity to weigh in.

And finally to learn more about our program, you can see the website there. Our Project Play initiative. We just launched a new website last -- two weeks ago, yay. And then please follow us on Twitter and we will continue the conversation on this topic, moving forward. So again, thank you for coming, and thank you for being part of the conversation.

(Applause)

MR. FARREY: All right, thank you.

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