This Report seeks to improve the health of NFL players (former, current, and future) by comparing policies, and, where information is available, practices, in the NFL to other elite professional sports leagues. The leagues share considerable similarities—at their core, they are organizations that coordinate elite-level athletic competitions for mass audiences. In this respect, the leagues are competitors within the professional sports industry, with each of them competing for fans' dollars and attention. The practices and policies by which the leagues operate are thus often very similar. However, there are also differences between the leagues. This Report seeks to identify and understand those different policies and practices that have the possibility to affect player health. Organizations operating within the same industry often can learn better practices and policies from one another. While leagues and their games are different in many important respects, making it impractical and unfair to opine as a definitive matter on which of the leagues' policies and practices in their totality best protect player health the Report generally concludes that the NFL's policies concerning player health appear superior to the other leagues. Nevertheless, through the nine recommendations contained in this Report, we hope to elucidate several ways in which the NFL can learn from other leagues and further protect player health.

With the purpose of this Report in mind, the remainder of this Introduction provides additional background information on the subject matter of the Report and then further introduces the Report by describing its audience, articulating the process we used to develop our ultimate recommendations, and clarifying important points about scope.

A) The Leagues

This Report analyzes the policies and practices of the following professional sports leagues:

 The National Football League ("NFL"): The world's premier professional football league, consisting of 32 member clubs.
The NFL began play in 1920, has its headquarters in New York City, and is led by Commissioner . The NFL's 2017 revenues are estimated to reach \$14 billion.⁴

- Major League Baseball ("MLB"): The world's premier professional baseball organization, consisting of 30 member clubs. MLB began play in 1903,^a has its headquarters in New York City, and is led by Commissioner Rob Manfred. MLB's 2016 revenues were an estimated \$10 billion.⁵
- National Basketball Association ("NBA"): The world's premier professional basketball league, consisting of 30 member clubs. The NBA began play in 1946, has its headquarters in New York City, and is led by Commissioner Adam Silver. The NBA's 2016–17 revenues are projected to be approximately \$8 billion.⁶
- National Hockey League ("NHL"): The world's premier professional hockey league, consisting of 30 member clubs.
 The NHL began play in 1917, has its headquarters in New York City, and is led by Commissioner Gary Bettman. The NHL's 2015–16 revenues were an estimated \$4.1 billion.⁷
- Canadian Football League ("CFL"): A professional football league consisting of 9 member clubs, all of which are located in Canada. The CFL began play in 1958, has its headquarters in Toronto, and is currently looking for a new Commissioner. The CFL's revenues are an estimated \$200 million annually.8

Although both are professional football leagues, the NFL and CFL playing rules vary in several important ways. Some of the key distinctions include: (1) in the NFL, a team has four downs to advance the ball ten yards, while in the CFL a team only has three downs; (2) an NFL field is 120 yards long (including two ten-yard end zones) and 160 feet wide, while an CFL field is 130 yards long (including two twenty-yard end zones) and 65 yards wide; (3) in the NFL, goalposts are at the back of the end zone while in the CFL they are on the goal line; and, (4) in the NFL, players in the backfield are not allowed to be moving forward when the ball is snapped, while in the CFL, all offensive backfield players (except the quarterback) can be moving forward at the snap.

a MLB consists of the National League and American League. The National League began play in 1876 and the American League in 1901. The leagues merged to create Major League Baseball in 1903. See History of baseball in the United States, Baseball-Reference.com, http://www.baseball-reference.com/bullpen/History_of_baseball_in_the_United_States (last visited Mar. 10, 2016), archived at https://perma.cc/DSK5-6VRN.



The NFL's skill level is considered by most outside observers as superior to the CFL. Many CFL players aspire to make the NFL while many players who were unable to make it in the NFL turn to the CFL.

 Major League Soccer ("MLS"): A professional soccer league consisting of 20 clubs. As is explained in further detail in Chapter 5, Section F: Compensation in MLS, MLS is uniquely organized - rather than having each club owned and controlled by a different person or entity (like in the other sports leagues), all of the clubs in MLS are owned and controlled by Major League Soccer, LLC, a Delaware limited liability company.9 The reasoning for this structure is discussed in Chapter 5. MLS began play in 1996, has its headquarters in New York City, and is led by Commissioner Don Garber. MLS' 2016 revenues were an estimated \$600 million.10

Soccer, as a global game, has dozens of professional leagues around the world. Although MLS has made strides and is an internationally respected league, it is not the world's premier soccer league. The European leagues, such as the English Premier League, Bundesliga in Germany, and La Liga in Spain are generally considered the best in the world. Nevertheless, we chose to focus our review on MLS for a few reasons: (1) the European leagues are organized and regulated in materially different ways than MLS and American sports leagues; (2) the European leagues generally are not governed by CBAs or a labor-management dynamic like in MLS and North American sports leagues; and, (3) European laws on a variety of relevant issues are materially different from American (and Canadian) laws. For these reasons, MLS was the best soccer league from which to draw useful comparisons to the NFL.

We chose these leagues because of their similarity to the NFL, both structurally and legally. The NFL, MLB, NBA, and NHL are particularly similar. Each of these leagues has been operating for nearly a century (or more in the case of MLB) and is an entrenched part of the American sports and cultural landscape. They share similar structures and operational practices, at least in part because they have shared many executives, lawyers, stadiums, and fans over the years. Their revenue streams also dwarf those of any other professional sports leagues, including the CFL and MLS. For these reasons, the NFL, MLB, NBA, and NHL are commonly referred to collectively as the "Big Four" sports leagues.¹¹ Where appropriate, we also adopt this moniker.

We nevertheless acknowledge that other sports and sports leagues can provide lessons for the NFL and the other

sports leagues concerning player health. b Sports of all kinds present health risks and rewards to their athletes and thus how those sports manage those risks and rewards is relevant. We have not undertaken this analysis here, focusing instead on the sports and leagues most similar to the NFL.

B) The Unions

Each of the leagues discussed in this Report has an important counterpart. The leagues are the constructs of the individual clubs (or operator-investors in MLS) and thus are principally interested in protecting and advancing the rights of the clubs. To protect and advance their rights and interests, the players in each of the leagues have formed a players association, a labor union empowered with certain rights and responsibilities under federal labor laws.^c The players associations are:

- National Football League Players Association ("NFLPA"): The NFLPA was formed in 1956,12 has its headquarters in Washington, DC, and is led by Executive Director DeMaurice Smith.
- Major League Baseball Players Association ("MLBPA"): The MLBPA was formed in 1953,13 has its headquarters in New York City, and is led by Executive Director Tony Clark, a 15-year MLB veteran.
- National Basketball Players Association ("NBPA"): The NBPA was formed in 1954,14 has its headquarters in New York City, and is led by Executive Director Michelle Roberts.
- National Hockey League Players Association ("NHLPA"): The NHLPA was formed in 1957,¹⁵ has its headquarters in Toronto, and is led by Executive Director Don Fehr, who served as Executive Director of the MLBPA from 1985-2009.
- Canadian Football League Players Association ("CFLPA"): The CFLPA was formed in 1965,16 has its headquarters in Stoney Creek, Ontario, and is led by President Scott Flory, a 15-year CFL veteran.
- Major League Soccer Players Union ("MLSPU"): The MLSPU was formed in 2003,17 has its headquarters in Bethesda, Maryland, and is led by Executive Director Bob Foose.
- b Boxing, in which fighters are subjected to repeated hits to the head, draws obvious comparisons to playing in the NFL. Of note, the Muhammad Ali Boxing Reform Act provides for certain safety standards for professional boxing matches. 15 U.S.C. §
- To avail themselves of federal labor laws, the unions must be certified by the National Labor Relations Board ("NLRB"). Here, we provide the dates the players associations were formed and began working on behalf of the players, which were generally several years before they gained official recognition from the NLRB.

The principal right and purpose of the unions is to negotiate with the leagues concerning many of the policies examined in this Report, as is discussed in the next Section.

C) Collective Bargaining Agreements

Nearly all of the policies and practices that we discuss in this Report are contained in and governed by collective bargaining agreements ("CBA") agreed to by the league and its respective players association. In this Section, we provide a brief explanation of CBAs to provide context for and assist in the comprehension of the Report.

Pursuant to the National Labor Relations Act ("NLRA"), the unions are "the exclusive representative[] of all the employees in [the bargaining] unit^d for the purposes of collective bargaining in respect to rates of pay, wages, hours of employment, or other conditions of employment." Also pursuant to the NLRA, each league's clubs, acting collectively as the league, are obligated to bargain collectively with the unions concerning the "wages, hours, and other terms and conditions of employment" for the players.

We acknowledge that many commentators believe that MLBPA has historically been the strongest union, and that the NFLPA has been regarded as having been less effective by comparison. 18f However, complexity and nuance belie any easy comparisons. For context, the NFLPA's union membership is roughly the same size of all of the other major unions combined and NFL players generally have shorter careers than other athletes, creating challenges for building and maintaining solidarity among the players. Ultimately, the CBAs speak for themselves as the result of the negotiations between the leagues and the unions. Rather than speculate on the leagues' and unions' approaches to player health, we can objectively analyze the collectively bargained provisions and policies. Nevertheless, the ability to effectuate change, including the areas in need of change highlighted in this Report, is a function of each union's strength.

d A "bargaining unit" is the group of employees sufficiently similar to be represented by the union. See 29 U.S.C. § 159(b) (describing the factors for determining whether a bargaining unit is appropriate for collective bargaining). Since the 1960s, the Big Four leagues and their respective players associations have each negotiated approximately ten to 15 CBAs.^g The CBAs are hundreds of pages long and govern nearly every aspect of the sports. Collective bargaining is inherently a give-and-take dynamic where the negotiating power and leverage of each side plays an important role in the outcome. Both league and union leadership and the dynamics between the leagues and unions have changed over time, resulting in varied CBA negotiations and results. Nevertheless, generally speaking, most important changes in leagues' policies and practices are the result of the CBA process. Consequently, CBAs are of paramount importance to understanding how the leagues function and making recommendations for improvement.

The CBA represents the key covenant between players and club owners, on all matters pertaining to player health (alongside many other important issues that matter to these parties). The most straightforward way to implement many of the changes we recommend to protect and promote player health would be to include them in the next CBA. That said, whenever change is possible outside of the CBA negotiating process, it should not wait. Moreover, although the CBA will often be the most appropriate mechanism for implementing our recommendations, we do not want to be understood as suggesting that player health should be treated like just another issue for collective bargaining subject to usual labor-management dynamics. As an ethical matter, players should not be expected to make concessions in other domains in order to achieve gains in the health domain. To the contrary: player health should be a joint priority, and should not be up for negotiation.

Finally, it is important to clarify our writing process concerning the MLB-MLBPA CBA. MLB reviewed a draft of this Report in the fall of 2016 and provided comments in September 2016. We made edits based on those comments and asked MLB for additional information in October 2016. On November 30, 2016, MLB and the MLBPA agreed to the terms of a new CBA.¹⁹ On December 2, the league and union issued a joint press release providing the terms of the new CBA,²⁰ and on December 14, the MLB owners and the MLBPA Executive Board (consisting of player representatives) ratified the new CBA.²¹ Nevertheless, as of the date that our Report went to press on March 18, 2017, the full length CBA had not yet been publicly released. Thus, while we were able to update the Report based on the information contained in the joint press

e 29 U.S.C. § 159(a). Similarly, Canada's Labour Code declares that unions certified by the Canada Industrial Relations Board "has exclusive authority to bargain collectively on behalf of the employees in the bargaining unit[.]" Canada Labour Code, § 36(1) (a).

f Indeed, DeMaurice Smith, Executive Director of the NFLPA, has effectively admitted as much. At a public event in 2017, Smith stated that he "aspire[s] for our union to be as strong as the baseball union." See University of Houston, Health Law & Policy Institute, Medical and Legal Ethics in the NFL and Sports (Jan. 31, 2017), http:// www.uh.edu/infotech/services/streaming-media/events/hlpi/ (last visited Feb. 1, 2017), archived at https://perma.cc/K7JK-DKG5.

g Throughout this Report, we will refer to the CBAs by years, such as the 1968 CBA, 1993 CBA, or 2011 CBA. The years reference the dates the CBAs became effective, which is usually, but not always, the year in which the CBA was agreed to, i.e., some CBAs had retroactive application.

release, additional details, nuance or context may be contained in the full length CBA when it is publicly released. On February 27, 2017, we provided MLB with the sections of this Report relevant to MLB, including those which were edited based on the press release about the new CBA. In March 2017, MLB provided additional comments on the revised sections of the Report before it went to press.

D) Audience

This Report has several key audiences. There are those that we see as the major change agents: current players; club owners; the NFL; the NFLPA; club medical staff; and, various player advisors (e.g., contract advisors, financial advisors, and family members). If change is to occur, these are the key individuals and entities that will need to effectuate it. But we live in an era where discussions about protecting and promoting player health extend far beyond these change agents. Fans, the media, the NFL's business partners, and others all have a stake in—and more importantly, some power to shape—how the policies and practices of NFL football will evolve to best protect and promote player health. Finally, while our focus is on promoting the health of NFL players, much of what we have learned and discuss here is likely useful to the other leagues as well.

Writing for such divergent audiences is a significant challenge. Ultimately, we decided to err in favor of providing a more comprehensive analysis, with all the complexity and length that entails.

E) Goals and Process

This Report has four functions. First, to identify the various policies that do or could influence the health of players in the various leagues. Second, to describe the policies and their relation to protecting and promoting player health. Third, to evaluate the capacity of these policies to protect and promote player health, in particular, by comparing policies on similar issues. And fourth, to recommend changes to policies that affect NFL players grounded in our evaluation of certain approaches taken by other leagues that appear to be more favorable.

It is worth describing those functions in greater depth.

1) **IDENTIFY**

To arrive at the policy domains analyzed herein, we considered for potential analysis any policy or practice that can, does, or should affect player health. Our prior Report, *Protecting and Promoting the Health of NFL Players:*Legal and Ethical Analysis and Recommendations, offers a comprehensive analysis of stakeholders and issues affecting NFL player health. That Report mapped a wide variety of issues, and this Report more closely examines how the NFL and other leagues have handled some of them. This Report includes six Chapters analyzing different policies concerning player health: (1) Club Medical Personnel; (2) Injury Rates and Policies; (3) Health-Related Benefits; (4) Drug and Performance-Enhancing Substance Policies; (5) Compensation; and, (6) Eligibility Rules.

One important limitation to the domains we include in this Report deserves explicit discussion. This Report focuses primarily on written policies and rules. We have intentionally avoided analysis about unwritten practices within the leagues, which is a practical limitation to our work. The policies we have analyzed are generally codified in the CBAs and other documents and can easily be reviewed. To accurately understand unwritten practices would require gathering substantial data from individuals working in the leagues. For example, understanding the relationship among clubs, club medical personnel, and players—and the ways in which these relationships might vary among the leagues—is interesting and important. However, without collecting data from representative portions of both players and club medical personnel in all of the leagues, we cannot fairly compare club medical personnel practices across the leagues. Gathering such data is beyond the scope of the current project. Therefore, we focus on the written policies that govern club medical personnel.

We similarly researched the role and practices of clubs, coaches, agents, and financial advisors concerning player health across the different leagues. However, again, reliable data about the practices of these groups across each of the leagues—as opposed to their policies—generally does not exist and is challenging to gather. Such information would clearly be useful, and thus we encourage others to conduct such research if sufficient funding and access to the relevant populations can be obtained. However, for practical purposes, this Report focuses primarily on the relevant policies in each of the leagues. By understanding these policies, we can understand the range of relationships and actions expressly permitted and analyze whether existing policies could allow for or give rise to potentially problematic situations could arise.

Figure Introduction-A: The Report's Goals and Process

1 > Identify	the various policies that do or could influence the health of players in the various leagues.
2 - Describe	the policies and their relation to protecting and promoting player health.
3 - Evaluate	the capacity of these policies to protect and promote player health.
- Recommend	changes to policies that affect NFL players grounded in our evaluation of certain approaches taken by other leagues that appear to be more favorable.

2) **DESCRIBE**

As discussed above, our analysis of the leagues' policies stemmed largely from reviewing the CBAs and other publicly available policies and documents, such as court filings, medical studies, law review articles, and news articles. To supplement our review, in some cases we requested that the leagues and/or unions provide us with information and documents that were not otherwise available. The leagues and unions provided varying degrees of cooperation:

- The NFL provided documents and information relevant to our prior report, Protecting and Promoting the Health of NFL Players: Legal and Ethical Analysis and Recommendations, as well as this Report. However, the NFL declined our invitation to review this Report.
- The NFLPA provided documents and information relevant to our prior report, Protecting and Promoting the Health of NFL Players: Legal and Ethical Analysis and Recommendations, as well as this Report. The NFLPA was also provided with a draft of this Report to review but did not provide comments.
- MLB provided documents and information that we requested, reviewed the Report, and provided comments.
- The MLBPA declined our invitation to review the Report.

- The NBA provided documents and information that we requested, reviewed the Report, and provided comments.
- The NBPA was provided with a draft of this Report to review but did not provide comments.
- The NHL reviewed the Report but declined to provide specific comments. The NHL stated "[w]ith respect to NHL-related information contained in the draft report, there are numerous factual and data-related inaccuracies. By way of example, the report references and relies upon certain outdated/superceded (sic) NHL/NHLPA policies and procedures. In addition, certain of the cited analytical data appears to be inaccurate. As a result, analysis of and conclusions drawn from such policies, procedures and data are flawed."²² In response to this statement, on multiple occasions we requested additional information or specification about those items the NHL believed were inaccurate. The NHL did not respond.

In addition, the NHL declined to provide copies of the following requested documents: (1) the NHL/NHLPA Authorization Form for Health Care Providers to Release Health Information; (2) the NHL/NHLPA Concussion Program Authorization Form; (3) the Authorization for Management and Release of Neuropsychological Test Results; (4) the Substance Abuse and Behavioral Health Program; (5) the Prohibited Substances List

for the Performance Enhancing Substances Program; and, (6) the NHL Concussion Protocol.

- The NHLPA reviewed the Report and provided comments and relevant documents. The NHLPA requested that the following statement appear in the Report to explain its involvement:
- The NHLPA is pleased to have been able to respond to the authors' request for comments regarding a late draft of the study, and to provide certain of the information requested. The information and comments were provided to the authors of the study on the strict understanding that they were not to be attributed to the NHLPA in the text of the study, either directly or by implication. Nothing in the study, including the study's decision not to address a question or issue, is to be construed as reflective of the position of the NHLPA.
- MLS declined our invitation to review the Report and declined to provide relevant documents, including a Medical Policies and Procedures Manual and MLS' injury reporting policy.
- The MLSPU provided documents and information that we requested, reviewed the Report, and provided comments.
- The CFL provided some degree of cooperation by providing some information during a telephone call. However, after that call, the CFL declined to provide additional information or documents and declined our invitation to review the Report.h
- The CFLPA provided documents and information that we requested, and was provided a draft of the Report to review but did not provide comments.

As a result of the varying degrees of cooperation from the leagues and unions, we were not able to explore certain issues as deeply as we would have liked, in particular the relationships among clubs, club medical staff, and players. We again highlight this and other practices as areas calling for further research, provided the leagues provide the necessary access and information.

Importantly, while the leagues and unions had the opportunity to comment, and their comments in many instances did inform the content of this Report, we retained control over the final content of the Report. We carefully considered the comments from the leagues and unions and made changes we determined were appropriate but no reviewer had the authority to demand that any change be included. Thus,

review should not be considered an individual endorsement of any part of the final Report.

3) **EVALUATE**

Once we understood the leagues' varying policies, we could compare and contrast them. In cases where other leagues had policies that differed from the NFL we asked, "If the NFL adopted this policy, would it improve player health?" In doing so, we were careful to take into account the leagues' different circumstances and motivations. Nevertheless, in certain situations, we were able to identify gaps and opportunities for better protecting and promoting the health of NFL players. On the other hand, in some instances, we discovered that the NFL has more protective policies in place than other leagues, indicating that the learning from this Report can be multi-directional.

4) RECOMMEND

The primary goal of this Report is to make recommendations that improve the overall health of NFL players. Our analysis is thus principally focused on understanding other leagues' policies and practices and comparing them to the NFL's. As will be shown in this Report, it would be reasonable to conclude that overall the NFL's policies and practices concerning player health are the most protective of player health among the leagues. However, there are still some areas in which the NFL might learn lessons as compared to one or more comparator leagues and we have made corresponding recommendations. Additionally, even though our analysis likely reveals many areas in which other leagues can and should improve concerning the health of their players, as described above, it is beyond the scope of this Report to make those recommendations—we focus only on advancements for NFL players.

For every recommendation we describe both the *reason* for the change and, where applicable, potential mechanisms by which it may be implemented. However, we avoided being overly specific or prescriptive when multiple options for implementation may exist, and/or when we lacked sufficient information to determine which mechanism might be best.

While we consider and discuss a wide range changes that could improve player health, we purposefully chose to focus on actionable recommendations that could be realistically achieved between the publication of this Report and execution of the next NFL-NFLPA CBA. This pragmatic approach does not mean that we are giving relevant

During the course of our research, both the NHL and CFL were defending themselves in lawsuits brought by former players alleging that the leagues had acted negligently concerning player concussions. Nevertheless, we do not believe our requests concerned issues relevant to those cases nor did either league indicate the ongoing litigation was the reason for their decisions not to cooperate. Additionally, the NFL was and is the subject of more litigation than either the NHL or CFL, but it substantially cooperated with our requests related to this Report.

i The 2011 NFL CBA expires in March 2021.

Figure Introduction-B: Summary of League and Union Involvement

League/Union		Provided Documents/ Information	Accepted Invitation to Review Draft Report	Provided Comments
(1)	NFL	✓	×	×
	NFLPA	✓	✓	×
	MLB	✓	✓	/
	MLBPA	None requested	×	×
	NBA	✓	✓	/
	NBPA	None requested	✓	×
	NHL	×	✓	Yes, but no details
	NHLPA	✓	✓	/
H	CFL	✓	×	×
	CFLPA	✓	✓	×
	MLS	×	×	×
	MLSPU	/	*	/

stakeholders a pass to simply accept the many current barriers to change that may exist, but it does recognize that change may be difficult in this complex web of relationships and in a culture that has developed over the course of many decades and is deeply entrenched. Furthermore, certain changes might require further information, research, or discussion than we were able to achieve in this Report. When we concluded that was the case, we so indicated by recommending only that a change be "considered" or that additional information be sought. Our recommendations may not be easy to achieve, but we have taken into account various realities in making them.

Finally, it is important to recognize that we do not view our recommendations as the exclusive changes that the various stakeholders should consider. We do, however, view these as minimum next steps forward—a floor, not a ceiling.

Appendix A is a compendium of all of the recommendations made in this Report. As discussed above, the NFL's policies concerning player health on the whole appear superior to the other leagues. Consequently, we include only nine recommendations in this Report. This is not to say there are not other areas in which the NFL can improve player health. Indeed, in our Report *Promoting the Health of NFL Players: Legal and Ethical Analysis and*

Recommendations, we included 76 recommendations for improving player health directed at a variety of stakeholders, including the NFL and NFLPA. This Report is focused only on those Recommendations that are derived from an understanding of other leagues' policies.

F) Scope

As already alluded to, the scope of this project is to generate legal and ethical recommendations that will improve the overall health of NFL players, current, future, and former. To fully grasp what is to come, it is essential to clarify these parameters.

As described at length in the Introduction to our Report Promoting the Health of NFL Players: Legal and Ethical Analysis and Recommendations, we adopt a broad definition of health that extends beyond the sort of clinical measurements that might immediately be evoked by the phrase. We maintain the importance of considering the full range of non-medical inputs that can influence health, also known as the "social determinants of health." These social determinants extend beyond the sorts of things for which one would seek out a doctor's care, and include broadly "the conditions in which people are born, grow, live, work, and age," as affected by the "distribution of money, power, and resources at global, national and local levels."23 Indeed, the NFL's Player Engagement Department itself includes "physical strength," "emotional strength," "personal strength," and "financial strength" within its concept of "total wellness."24

Ultimately, for the purposes of all of our work, we define health for purposes of this Report as "a state of overall wellbeing in fundamental aspects of a person's life, including physical, mental, emotional, social, familial, and financial components."

In making recommendations regarding NFL player health, we have taken as our threshold the moment that a player has exhausted or foregone his remaining college eligibility and has taken steps to pursue an NFL career—from that point on, what needs to happen to maximize his health, even after he leaves the NFL? The reason we have selected this frame is not because the health of amateur players those in college, high school, and youth leagues—is secure or unimportant. Instead, the reason is largely pragmatic: there is only so much any one report can cover. We recognize that what happens at the professional level can have a trickle-down effect on the culture of football across the board, and also that some amateur players may be taking health risks in hopes of eventually reaching the NFL, even when that may be highly unlikely. Nonetheless, our goal with this Report, prompted by the limited scope of the request for proposals for this project and in part by the fact that further analysis will be possible by others, is only to address the already complicated set of factors influencing the health of NFL players, current, future, and former.

That said, many of our recommendations will be most relevant to current and future players, simply because former players may not continue to be engaged with or affected by many of the stakeholders that we are analyzing, or may be past the point at which implementation of particular recommendations could help them. For example, no matter what improvements we recommend related to club doctors, these simply could not affect players who are no longer affiliated with any club.



Endnotes

- 1 CBA, Art. 12, § 5.
- 2 Nat'l Football League Players Ass'n, Request for Proposals Advancing the Frontiers of Research in Professional Football (2012), § 1(a).
- 3 Alvaro Pascual-Leone and Lee M. Nadler, Let's not kill football yet, Pitt. Post. Gazette, May 10, 2015, http://www.post-gazette.com/opinion/ Op-Ed/2015/05/10/Let-s-not-kill-football-yet-Yes-players-get-injured-but-the-scope-of-the-problem-is-far-from-clear/stories/201505100034, archived at http://perma.cc/V3DN-Z2F3.
- 4 Mike Florio, NFL will reach \$14 billion in 2017 revenue, ProFootballTalk (Mar. 6, 2017, 11:29 AM), http://profootballtalk.nbcsports.com/2017/03/06/nfl-will-reach-14-billion-in-2017-revenue/, archived at https://perma.cc/X57A-VRXU. Mark Leibovich, Roger Goodell's Unstoppable Football Machine, N.Y. Times, Feb. 3, 2016, http://www.nytimes.com/2016/02/07/magazine/roger-goodells-unstoppable-football-machine.html?_r=0, archived at https://perma.cc/Y7L5-A99L.
- Maury Brown, MLB Sees Record Revenues Approaching \$10 Billion for 2016, Forbes (Dec. 5, 2016, 3:22 PM), http://www.forbes.com/sites/ maurybrown/2016/12/05/mlb-sees-record-revenues-approaching-10-billion-for-2016/#7704e2e21845, archived at https://perma. cc/775E-WE9A.
- 6 Dan Feldman, Report: NBA Revenue Projected to Reach \$8 Billion Next Season, Pro Basketball Talk (Sep. 16, 2016, 10:05 AM), http://nba. nbcsports.com/2016/09/16/report-nba-revenue-projected-to-reach-8-billion-next-season/, archived at https://perma.cc/73NP-QRJN.
- 7 See The Business of Hockey, Forbes (Nov. 30, 2016), http://www.forbes.com/nhl-valuations/list/, archived at https://perma.cc/545K-NQBV (listing NHL clubs' estimated revenues).
- 8 Andrew Bucholtz, What percentage of league-wide revenues did CFL players get in 2013 under the old CBA?, Yahoo! Sports Can. (June 9, 2014, 6:49 PM), https://ca.sports.yahoo.com/blogs/cfl-55-yard-line/percentage-league-wide-revenues-did-cfl-players-2013-224954281. html, archived at http://perma.cc/F5NU-FWE3.
- 9 See Fraser v. Major League Soccer, L.L.C., 284 F.3d 47, 53-55 (1st Cir. 2002) (discussing MLS' structure and operations).
- 10 See Chris Smith, Major League Soccer's Most Valuable Teams 2016, Forbes (Sep. 7, 2016, 10:32 AM), http://www.forbes.com/sites/ chrissmith/2016/09/07/major-league-soccers-most-valuable-teams-2016-new-york-orlando-thrive-in-first-seasons/, archived at https:// perma.cc/K7B6-DJ86.
- 11 See Michael A. McCann, The NBA and the Single Entity Defense: A Better Case? 1 Harv. J. Sports & Ent. L. 39, 40 (2010) (referring to the NFL, MLB, NBA and NHL as the "Big Four"); Marc Edelman, How to Curb Professional Sports Bargaining Power Vis-à-Vis the American City, 2 Va. Sports & Ent. L.J. 280, 291 (2003).
- 12 History, Nat'l Football League Players Ass'n, https://www.nflpa.com/about/history (last visited Aug. 7, 2015), archived at https://perma.cc/3D2R-8EQG?type=pdf [hereinafter "NFLPA History"].

- 13 See Glenn M. Wong, Essentials of Sports Law, § 11.3 (4th ed. 2010) (providing history of the unions in the Big Four sports leagues).
- 14 Id.
- 15 *ld.*
- 16 Id.
- 17 *l*
- 18 See, e.g., A. Jason Huebinger, 16 Sports Law. J. 279, 281-82 (2009); Matthew Levine, Despite His Antics, T.O. Has a Valid Point: Why NFL Players Deserve a Bigger Piece of the Pie, 13 Vill. Sports & Ent. L.J. 425, 435-36 (2006); Mark Bradley, NFL players may hate Roger Goodell, but he's their biggest ally, Atl. J.-Const., Jun. 4, 2012, available at 2012 WLNR 28612021; Larry Brooks, Head-Less Iceman Lead to the Slaughter, N.Y. Post, Aug. 15, 2010, available at 2010 WLNR 16396767 Jon Saraceno, Mawae's labor of love: Fighting for players, USA Today, Oct. 21, 2010, available at 2010 WLNR 21102155.
- 19 Bill Baer, Report: Owners, Union Agree on New Collective Bargaining Agreement, Hardball Talk (Nov. 30, 2016, 8:51 PM EDT), http://mlb.nbc-sports.com/2016/11/30/report-owners-union-agree-on-new-collective-bargaining-agreement/, archived at https://perma.cc/3JRF-PTYF.
- 20 MLBPA, MLB Announce Details of New Labor Agreement, MLBPA (Dec. 2, 2016), http://www.mlbplayers.com/ViewArticle.dbml?DB_ 0EM_ID=34000&ATCLID=211336390, archived at https://perma. cc/4XUA-2DAW.
- 21 Craig Calcaterra, Owners, Players Ratify New Collective Bargaining Agreement, Hardball Talk (Dec. 14, 2016, 5:16 AM EDT), http://mlb. nbcsports.com/2016/12/14/owners-ratify-new-collective-bargaining-agreement-29-1/, archived at https://perma.cc/YYK2-GLSR.
- 22 Email from Julie Grand, NHL, Deputy General Counsel, to authors (Nov. 1, 2016).
- 23 Social Determinants of Health, World Health Org., http://www.who.int/social_determinants/sdh_definition/en/ (last visited Aug. 2, 2016), archived at http://perma.cc/USS7-8C9J; see also Michael Marmot & Richard G. Wilkinson, Social Determinants of Health (2d ed. 2005); For discussions of the relationship between these social determinants and ethics and political philosophy, see, e.g., Sridhar Venkatapuram, Health Justice: An Argument from the Capabilities Approach (2011); Norman Daniels, Just Health: Meeting Health Needs Fairly (2007); Madison Powers & Ruth Faden, Social Justice: The Moral Foundations of Public Health and Health Policy (2006).
- 24 See NFL Total Wellness, NFL Player Engagement.com, https://www.nflplayerengagement.com/total-wellness/ (last visited Aug. 7, 2015), archived at https://perma.cc/Z368-BBV4.