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I would like to thank the Chairman, the Ranking Member and the Subcommittee Members for inviting me to testify today regarding the National Hockey League (“NHL” or “League”) and the proactive steps it has taken, in collaboration with the National Hockey League Players’ Association (“NHLPA”), to promote the health and safety of the best professional hockey Players in the world.

As its playing surface is enclosed by boards and glass, making it the only major professional team sport with no “out of bounds,” hockey is a physical game. At the NHL level, our Players want it to be physical. And our fans -- who continue to attend our games in new record numbers almost every year (at least 20 million in attendance in every full season since the turn of the century) -- want it to be physical. But, importantly, all constituent groups associated with the game also want it to be safe, within the context of the physical, high speed game that it is and always will be.

Generations of youngsters have grown up loving hockey, and the National Hockey League’s objective is to make sure that the best game in the world continues to improve as it is passed on to the generations that follow. This objective necessarily includes promoting safe and responsible play in our game, and the National Hockey League, working together with the NHLPA, has gone to elaborate lengths to do that and we will continue to do so. We are proud to note that enrollment in hockey playing programs sponsored by USA Hockey, the national governing body for our sport at the youth and adult level, is at a record high -- approaching 600,000. At the professional level, we want to do everything we can to encourage young people and adults alike to continue to participate in and consume the game in all forms and at all levels. The game of hockey brings families and communities together. It instills the most positive attributes of competitive excellence. It fosters teamwork, character and commitment to a common goal.

It is for these and other reasons that the National Hockey League considers the safety of our Players to be a top priority. And with respect to head injuries in particular, we and the NHLPA recognized early on -- as far back as 1997 -- the importance of the injury and the benefits that would be associated with designing and implementing new prevention and management initiatives. We are extremely pleased to have this opportunity to share with this Subcommittee some of the measures enacted in this pursuit, including:

1. **Early Focus on Concussion Diagnosis and Treatment:** One of the NHL’s initial and most impactful initiatives was its formation of a joint Concussion Committee with the NHLPA in 1997 -- a full four (4) years before the First International Conference on Concussion in Sport convened in Vienna in 2001. This Committee set up a League-wide program pursuant to which Players are assessed in the pre-season “at baseline” and those neuropsychological test results are compared to post-injury test results as a means to help determine when it is safe for a Player to return-to-play following a concussion. The NHL/NHLPA Concussion Committee also has taken affirmative and proactive steps over many years to issue League-wide
recommendations and protocols regarding the diagnosis, management and
treatment of concussions (the “NHL/NHLPA Concussion Program”).

2. **Education**: Education has been a vital component of the NHL/NHLPA Concussion Program since its inception. Educational efforts are directed towards all relevant parties in our game, including most importantly our Players, but also relevant Club personnel, including Club medical staff, Club owners and executives, team General Managers and Coaches, and on-ice game Officials.

3. **Playing Environment**: Over time, the League has adopted policies and regulations aimed at “softening” the arena playing environment. While, as noted at the outset, there is only so much we can do in this area without fundamentally changing the game, both the NHL and the NHLPA recognize the importance of the effort as evidenced by our agreement in the most recent round of collective bargaining to form a joint Playing Environment Subcommittee to examine and make recommendations on the issue.

4. **Playing Rules/Supplemental Discipline**: In addition to enforcing existing Playing Rules more stringently to penalize dangerous body and other contact, several new Playing Rules have been adopted specifically to prohibit contact involving a Player’s head. Ultimate enforcement of these Playing Rules is in the hands of the Department of Player Safety, the first League Department of its kind in professional sports, which monitors every one of our 1,230 Regular-Season games plus each of our Playoff games and assesses every hit -- and every play -- to ensure the League’s standards for safety and responsible play are adhered to.

5. **Player Equipment Regulation**: Since the adoption of a mandatory helmet Rule in 1979, the NHL, together with the NHLPA, has continued to impose a series of additional regulations regarding Player equipment relating both to Player safety generally, but also to “the head” or head injuries more specifically. The League continues to explore potential new regulations in this area in conjunction with the NHLPA.

   NHL and NHLPA representatives also have participated in concussion initiatives that extend beyond “the NHL.”

- Between 2001 and 2012, NHL and NHLPA representatives participated in, and indeed took a leadership role at, each of the four (4) International Concussion in Sport Conferences. These symposiums were conducted in 2001, 2004, 2008 and 2012. The NHL/NHLPA Concussion Program has incorporated findings and recommendations from each of the International Concussion in Sport Conferences, to ensure that the approach in our League is compatible with the latest science and research on brain injuries in sport. These steps include the NHL/NHLPA Concussion Committee’s adoption of the scientific community’s definition of concussion from the 2001 Conference, its introduction of an updated sideline evaluation tool for brain injuries from the 2008 Conference, and its adoption of the Conference’s recommendation that Players diagnosed with a concussion should never be returned-to-play in the same day from the 2012 Conference.
• The League has supported federal and state legislative efforts aimed at the establishment of concussion safety guidelines; increased education about “concussion” both for student athletes and for those who interact with student athletes; and appropriate concussion management techniques and standards. The League also has actively supported legislation prohibiting deceptive or fraudulent claims with respect to the safety benefits of athletic sporting equipment sold in interstate commerce.

• In addition, the League has supported and assisted in the development of concussion educational programs for youth and junior age hockey Players. Indeed, pursuant to our most recent agreement with the Canadian Hockey League, each of Ontario Hockey League, Quebec Major Junior Hockey League and the Western Hockey League will develop comprehensive new concussion education programs for its Players which will focus on the diagnosis and treatment of concussions, and will highlight the importance of Players reporting symptoms and the dangers associated with head injuries generally. These junior hockey league programs will be financed by funds made available by the National Hockey League and its Member Clubs.

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A concussion is an extremely complicated injury. Just as concussion has been described as an “evolving” injury, advanced research into its complexity and short and long-term effects is generally considered to be an emerging science dating roughly back over the past two (2) decades. While there is not yet a clear understanding of many of the scientific and medical aspects of concussion, the NHL/NHLPA Concussion Program has certainly contributed to the scientific understanding of concussion in sports and we have been leaders in this regard.

The NHL was the first major professional sports league to launch a comprehensive, League-wide program to evaluate Players after they incur head injuries. Recognized in 2008 by the National Academy of Neuropsychology, the NHL/NHLPA Concussion Program is one that other professional and amateur sports leagues have tried to emulate. Beginning in 1997, the League’s Program has required that all Players on all Clubs undergo pre-season “baseline” neuropsychological testing. After a Player is diagnosed with a concussion, he undergoes post-injury neuropsychological testing and his pre- and post-injury test results are compared to determine when the Player returns to “neurological baseline” -- a relevant determination in the Player’s ability to safely return-to-play. Notably, at the time the NHL/NHLPA Concussion Program was first launched, neuropsychological testing had not yet been validated as a useful tool in making the decision whether a Player is ready to return-to-play. Indeed, it was the data collected and analyzed pursuant to the NHL/NHLPA Concussion Program that confirmed to us that neuropsychological testing results had “added value” and should be taken into account along with Player-reported symptoms when making return-to-play decisions.

A defining characteristic of the NHL/NHLPA Concussion Program is that it has functioned in a centralized manner since its inception. All NHL Clubs administer the same battery of tests to all Players in the same format and in the same time sequence. The test data
are collected and stored centrally, and if a Player is traded, his data follows him to his new Club. As a result, all NHL Players undergo the same individualized concussion management program irrespective of the Club for which they play. The Program provides for the administration and interpretation of the neuropsychological tests to be performed by independent Club neuropsychologists, based on the NHL/NHLPA Concussion Committee’s view that neuropsychologists are the medical personnel best-suited to evaluate the neurocognitive aspects of concussion. (The experts in the 2004 International Concussion in Sport Conference similarly recognized this, citing neuropsychologists’ “background and training.”)

Another key aspect of the NHL/NHLPA Concussion Program is its unique approach in dealing with Player differences that are attributable to disparate ethnic, linguistic, and educational backgrounds. To this end, the Program has amassed the largest multi-lingual dataset of any professional sport, which allows Players to be compared to other Players with the same ethnic and linguistic backgrounds. In addition, advanced psychometric techniques have been employed to calculate culture-specific "Reliable Change Scores," which allow neuropsychologists to more accurately assess clinically significant changes in functioning from baseline to post-injury assessments.

In 2010, the NHL/NHLPA Concussion Committee codified our then-current policies and protocols into a single document entitled the NHL Concussion Evaluation and Management Protocol. This Protocol, which was consistent with international guidelines, provided for the mandatory removal of a Player from play whenever a concussion is suspected. Thereafter, the Player may be returned-to-play if he has no symptoms both at rest and after strenuous activity, and has returned to his cognitive baseline. This Protocol allowed for the initial concussion evaluation to occur on the bench or in the locker room, and emphasized that concussions are an evolving injury and that symptoms may evolve over time.

Since its initial distribution and implementation, the Protocol has been modified on several occasions to reflect current developments in the scientific community and the League’s own experience with concussions. Notably, in March 2011, the Protocol was revised to include a precise articulation of specific signs and symptoms of concussion that, if observed or reported, require the removal of a Player from play for evaluation in a distraction-free environment, away from arena lights and noise, using a standardized assessment tool. The NHL/NHLPA Concussion Committee was a leader in identifying and articulating these observable signs (any loss of consciousness, motor incoordination/balance problems, blank or vacant look, disorientation, slow to get up following a hit to the head, clutching of the head after a hit, visible facial injury in combination with any of the other signs) and recognizing the value of incorporating them into a standardized Protocol so that a consistent approach could be followed for all Players on all Clubs. Notably, in 2012 the International Concussion in Sport group similarly incorporated “visible signs of concussion” into its sideline evaluation tool and other professional leagues also have since adopted this approach. Effective for the 2013/14 NHL season, the Protocol was modified to comport with recently-issued guidelines from the International Concussion in Sport conference of 2012, to prohibit same day return-to-play for Players who have been diagnosed with a concussion. Finally, our Protocol has been followed
and embraced by other minor professional hockey leagues, as well as professional leagues in other sports.

Education regarding concussions, and importantly, the issuance of warnings to Players regarding the risks of returning-to-play before the recovery from a prior concussion is complete, have been a core component of the NHL/NHLPA Concussion Program since its inception. Our recent educational initiatives have focused on articulating and identifying many of the common visible signs and symptoms of a concussion so that Players will recognize when they, or a teammate, may be at risk. Education is provided regularly to all relevant constituencies in our League, including Players, Club personnel and NHL on-ice Officials. It is our strong belief that the Players’ health and safety will be enhanced if all relevant personnel clearly understand the latest science regarding concussions, as well as the requirements and necessary elements of the NHL/NHLPA Concussion Protocol.

The NHL and the NHLPA have had a proactive and collaborative approach to the adoption of concussion-related initiatives. The NHL/NHLPA Concussion Committee regularly discusses and explores whether modifications should be made to specific aspects of the Program, including elements of the Protocol and other recommendations to the Clubs with respect to the management of concussions, in order to promote the health and safety of the Players. In addition to taking steps to address the diagnosis and management of concussions once they occur, the NHL and the NHLPA also have been proactive in exploring potential new initiatives and game modifications to improve the safety of the game, and to reduce the incidence of concussions in the first instance. Recent initiatives that the League and the NHLPA have adopted through their joint efforts include:

Playing Rules:

- **Hits to the Head:** We have a clear policy that prohibits any body contact with an opponent’s head when the contact is otherwise avoidable and the head is the main point of contact. An earlier and less expansive form of the current Rule was originally adopted in 2010 by the NHL and NHLPA, with a prohibition on “lateral” or “blindside” contact with an opponent’s head where the head was targeted and/or the principle point of contact.

- **Hits from Behind:** In 2011, the League’s pre-existing prohibition on checking a Player into the boards (i.e., “boarding”) was modified and strengthened by the NHL (and NHLPA) to prohibit a Player from checking or pushing a defenseless opponent in a manner that causes the opponent to hit or impact the boards violently or dangerously. The revised Rule assigned responsibility to the Player delivering the check to ensure that his opponent is not in a vulnerable position.

- **Charging, Cross Checking, High Sticking:** It has been the League’s long-standing approach and direction to on-ice officials to strictly enforce existing Playing Rules, such as charging, cross checking, and high sticking, particularly where potential head contact and injuries are involved.
• **Hybrid Icing**: Several years ago the NHL (and NHLPA) introduced a “zero tolerance” standard on contact delivered by a forechecking Player to a defending Player on “touch” icing plays. While the Rule modification had its intended effect of reducing the number of injuries resulting from races for the puck, the League (and NHLPA) nevertheless moved further to protect Players by instituting a so-called “hybrid icing” Rule in advance of the 2013/14 season. Pursuant to the new Rule, icing plays are whistled prior to Players reaching the endboards, thereby and for all intents and purposes eliminating the possibility of Player contact and collisions on icing plays.

• **Supplemental Discipline**: Enforcement of the Playing Rules through “supplementary discipline” (i.e., penalties over and above those issued during a game) is in the hands of the NHL Department of Player Safety -- a Department that is the first of its kind in professional sports. Now in its third season of operation, the Department is headed by Hall of Fame forward and former Player Brendan Shanahan and is staffed by a team of hockey experts, including Hall of Fame defenseman Brian Leetch, former NHL All-Star defenseman Stephane Quintal, and former Philadelphia Flyers scout Patrick Burke. The Department monitors every Regular Season and Playoff game and assesses every hit to make sure the League’s standards for safety are being adhered to. When the Department determines that the standard has been violated, action is taken in the form of a fine or a suspension of varying length, depending on the severity of the incident, in accordance with the Collective Bargaining Agreement (“CBA”) between the NHL and the NHLPA. When supplemental discipline is assessed, and occasionally when it is not assessed, the Department creates a video, distributed through our media assets (NHL.com, NHL Network, NHL social media, etc.) that explains to our Players and to our fans why the behavior merited punishment -- or did not. The cumulative effect of these efforts has changed the culture of the game in a positive way. On a nightly basis, we see examples of Players avoiding dangerous plays and gratuitous contact that they no doubt would have engaged in just a few short years ago.

• **Fighting**: Also to enhance Player safety, two additional Playing Rules relating to fighting were adopted in 2013 by the NHL and NHLPA: Players are now prohibited from removing their helmet before or during a fight. In addition, the minor penalty previously assessed for instigating a fight while wearing a face shield was eliminated. The effect of these Rule changes is two-fold: (i) head and facial protection are now required to be maintained by participants in a fight; and (ii) by “hardening” the target area for Players when they deliver blows in a fight, Players generally are less inclined to engage in this manner.

While fighting remains a small part of our game, its role is diminishing. Only a small percentage of our Players actually participate in the activity, and they generally do so only with willing combatants. Through 75% of the 2013/14 Regular Season, 632 of the 919 games played (68%) have been completely free of fighting -- the highest such
percentage since 2005/06. In addition, the number of major penalties assessed for fighting is down 15% from last season and down 31% from the 2009/10 season.

The role of fighting continues to be a hot topic in our game and one which engenders a broad spectrum of opinions and debate. As a League, we continue to search for a consensus as to how best to serve the interests of all constituent groups in the game on the issue -- including our fans, our teams, and our Players. To this point, that consensus has proved elusive, including with and as among our Players. In this important area, it would be the League’s intention to raise, discuss and negotiate any potential Playing Rules regarding the continued role of fighting in our game directly with the NHLPA.

Playing Environment:
- The League adopted regulations in 1999 and 2001 requiring arenas with tempered glass systems to retrofit their boards and glass systems to meet certain minimum “flexibility” standards that were established in conjunction with outside engineering consultants.
- In 2011, the League mandated a return to acrylic glass from the more rigid (but more spectator friendly) “seamless” or “tempered” glass systems.
- Also in 2011, the League required the redesign and retrofit of “termination points” (poles) positioned near Player and Penalty Bench areas to a curved, impact-absorbing acrylic glass surface that reduces the resistance force applied to a Player’s body upon impact. These changes significantly “softened” the playing environment and have enhanced Player safety.

Playing Equipment:
- In 1997, the NHL and the NHLPA adopted a Rule essentially requiring that all Player helmets on a going-forward basis be “certified.” While we recognize that hockey helmets and current certification standards are designed primarily to protect Players against skull fractures, not concussions, and that no helmet will likely ever protect athletes against all concussions, we are hopeful that the design and development of helmets and the certification standards related thereto will continue to evolve so as to incorporate metrics and standards dealing with neutralizing the rotational forces associated with a large portion of the concussions suffered in our sport.
- In 2001, the NHL (together with the NHLPA) created an educational publication for Players regarding concussions entitled “Did You Know? Hockey Injuries Can Be Prevented,” which emphasized the importance of Players wearing their helmet chin straps properly in order to secure the helmet to the Player’s head, advising how “after market modifications” to helmets may increase the possibility of a severe head injury, and advising Players to more frequently replace their helmets to ensure appropriate protection and to avoid the effects of degradation from equipment aging and extensive
travel. This advisory has been updated to stay current with science and has been reissued regularly to all NHL Players in more recent years on an annual basis.

- The League previously adopted, and continues to explore, other equipment-related initiatives in an effort to address the issue of concussions. In 2003, the League, in conjunction with the NHLPA, enacted a requirement that elbow pads have one-half inch of padding on all surface areas that can make contact with an opponent. In 2012, the NHL and the NHLPA formed a joint Protective Equipment Subcommittee to “study and make recommendations with respect to the standards for protective equipment utilized by NHL Players. . . .” One issue currently being explored is whether regulations should be enacted relative to specifications for shoulder pads worn by Players in our League.

- Prior to the start of the 2013/14 season, the NHL (and the NHLPA) instituted a new Playing Rule that mandates the use of face shields by all incoming NHL Players. While targeted specifically to a reduction in eye injuries, the added protection to the upper face and forehead area should also reduce the incidence of head injuries generally.

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  To summarize: while recognizing there is considerable work to be done, the National Hockey League has been -- and will remain -- absolutely committed to promoting the safety of its Players. We firmly believe it is not only the “right” thing to do for our Players but it is the “right” thing to do for our business -- both in terms of promoting participation at the youth hockey level and in maximizing interest by fans and consumers of the sport at the professional level.

  Again, I thank the Chairman, the Ranking Member and the Subcommittee Members for your time and your invitation to speak.

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