

IN THE UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

Nos. 15-2206, 15-2217, 15-2230, 15-2234, 15-2272, 15-2273, 15-2290, 15-2291,
15-2292, 15-2294, 15-2304 & 15-2305

In Re: NFL Players Concussion Injury Litigation

Appeal from the United States District Court
For the District of Pennsylvania
E.D. Pa. No. 2-12-md-02323
(The Honorable Anita B. Brody)

**BRIEF AMICUS CURIAE OF
BRAIN INJURY ASSOCIATION OF AMERICA
IN SUPPORT OF APPELLANTS
SEEKING REVERSAL**

Shana De Caro
De Caro & Kaplen, LLP
427 Bedford Road
Pleasantville, NY 10570
(914)747-4410
shana@brainlaw.com

Michael V. Kaplen
De Caro & Kaplen, LLP
427 Bedford Road
Pleasantville, NY 10570
(914)747-4410
michael@brainlaw.com

Counsel for Amicus Curiae
Brain Injury Association of America

August 20, 2015

IN THE UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

Nos. 15-2206, 15-2217, 15-2230, 15-2234, 15-2272, 15-2273, 15-2290, 15-2291,
15-2292, 15-2294, 15-2304 & 15-2305

In Re: NFL Players Concussion Injury Litigation

Appeal from the United States District Court
For the District of Pennsylvania
E.D. Pa. No. 2-12-md-02323
(The Honorable Anita B. Brody)

**BRIEF AMICUS CURIAE OF
BRAIN INJURY ASSOCIATION OF AMERICA
IN SUPPORT OF APPELLANTS
SEEKING REVERSAL**

Shana De Caro
De Caro & Kaplen, LLP
427 Bedford Road
Pleasantville, NY 10570
(914)747-4410
shana@brainlaw.com

Michael V. Kaplen
De Caro & Kaplen, LLP
427 Bedford Road
Pleasantville, NY 10570
(914)747-4410
michael@brainlaw.com

Counsel for Amicus Curiae
Brain Injury Association of America

August 20, 2015

CORPORATE DISCLOSURE STATEMENT

Under Federal Rule of Appellate Procedure 26.1 & 29(c) (1), amicus curiae, Brain Injury Association of America, states that it has no parent corporation and that there is no publicly held corporation that owns 10% or more of Brain Injury Association of America. Pursuant to Federal Rule of Appellate Procedure 29(c)(5), counsel states that no party's counsel authored this brief, in whole or in part, and no party, nor any person other than amicus, its members or its counsel, contributed money that was intended to fund preparing or submitting this brief. Neither amicus, nor its counsel, are affiliated with any party or any party's counsel in any capacity, in the past or present.

/s/ Shana De Caro
Shana De Caro

TABLE OF CONTENTS

CORPORATE DISCLOSURE STATEMENT.....	i
TABLE OF AUTHORITIES.....	iv
INTEREST OF AMICUS CURIAE.....	1
INTRODUCTION AND SUMMARY OF ARGUMENT.....	2
ARGUMENT	
I. The Settlement Excludes The Majority of Conditions and Consequences of TBI.....	6
A. The Settlement Improperly Excludes “Mild” Traumatic Brain Injury.....	8
B. The Settlement Omits Players Suffering Non-Cognitive, Physical, Emotional, and Behavioral Disorders.....	10
C. Level 2 Enumerated Injuries Omit Well-Established Neurological Disorders Caused by Brain Trauma.....	13
1. Epilepsy or Seizure Disorders are Improperly Excluded.....	14
D. Treatment Modalities Fail to Provide Effective Options to the Majority of Class Members	16
II. The Settlement Improperly Reduces Compensation for Known Contributing Factors	18
A. Benefits Are Improperly Reduced for Stroke	19

B. The Settlement Improperly Reduces Benefits Based Upon Years of Play and TBI Prior to NFL Participation.....	19
C. The Settlement Improperly Reduces Recovery for Liens.....	22
III. The Baseline Assessment Program, is Deficient, Places Improper Emphasis on Neuropsychological Testing and Excludes Other Reliable Sources	24
A. The Testing Criteria Places Unjustifiable Prominence on Tests of Exaggeration and Effort.....	28
B. The Testing Protocol Ignores Positive Neuroimaging Studies In Determining Eligibility	31
CONCLUSION.....	33
CERTIFICATE OF COMPLIANCE.....	34
LOCAL RULE 31.1(C) CERTIFICATION	34
CERTIFICATE OF BAR MEMBERSHIP.....	34
CERTIFICATE OF SERVICE.....	35

TABLE OF AUTHORITIES

Page

CASES

<i>In re Cendant Corp. Litig.</i> , 264 F.3d 286, 296 (3 rd Cir. 2001).....	6
<i>US Airways, Inc. v. McCutchen</i> , 133 U.S. 1537 (2013).....	23

STATUTES AND REGULATIONS

20 CFR § 404.1527. (2012) Evaluating Opinion Evidence. Social Security Administration statement on weight afforded the opinions of treating health care providers.....	28
FRCP §23 (a)(4).....	5
29 U.S.C. § 1132(a)(3).....	23
42 U.S.C. §1396a(25)(B).....	23
42 U.S.C. §1396a(25)(H).....	23
42 U.S.C. §1395y(b)(2)(B)(ii).....	23

OTHER AUTHORITIES

Octavian Adam, et al., <i>Clinical and Imaging Assessment of Acute Combat Mild Traumatic Brain Injury in Afghanistan</i> , 85 Neurology 219-227, July 2015.....	31
Michael P. Alexander, <i>Mild Traumatic Brain Injury: Pathophysiology, Natural History and Clinical Management</i> , 45 Neurology 1253 - 60, July 1995.....	10

Average playing career length in the National Football League (in years), STATISTA.COM, http://www.statista.com/statistics/240102/average-player-career-length-in-the-national-football-league/ (last visited August 3, 2015).....	20
Erin D. Bigler, <i>Effort, Symptom Validity Testing, Performance Validity Testing and Traumatic Brain Injury</i> , <i>Brain Injury</i> , 2014, 28(13-14) 1-16	29
Erin D. Bigler, <i>Structural Imaging</i> , in <i>Textbook of Traumatic Brain Injury</i> 2 nd Ed. pages 73-90 (Jonathan M. Silver, et al eds., 2011)	26,31
Centers for Disease Control and Prevention. U.S. Department of Health and Human Services, <i>Facts About Concussion and Brain Injury</i> . Version 2. (2010) http://www.cdc.gov/concussion/pdf/facts_about_concussion_tbi-a.pdf	9, 25
Centers for Disease Control and Prevention, Department of Health and Human Services. <i>Report to Congress on Mild Traumatic Brain Injury in the United States: Steps to Prevent a Serious Public Health Problem</i> . September 2013.....	9
Centers for Disease Control and Prevention (2014). <i>Report to Congress on Traumatic Brain Injury in the United States: Epidemiology and Rehabilitation</i> . National Center for Injury Prevention and Control; Division of Unintentional Injury Prevention, Atlanta, GA.....	3
CDC, NIH, DoD and VA Leadership Panel, <i>Report to Congress on Traumatic Brain Injury in the United States: Understanding the Public Health Problem among Current and Former Military Personnel</i> . (2013).....	14
Yi-Hua Chen, et al., <i>Patients With Traumatic Brain Injury Population-Based Study Suggests Increased Risk of Stroke</i> , <i>Stroke</i> 2011; 42: 2733-2739.....	19

	Page
James Dao, <i>Symptoms of Traumatic Brain Injury Can Persist for Years</i> , New York Times, July 18, 2012	22
Department of Veterans Affairs and Department of Defense. Va/DoD Clinical Practice Guideline for Management of Post-Traumatic Stress. Version 2.0 (2010).....	29
Department of Veterans Affairs. Traumatic Brain Injury (TBI), Diagnosable Illnesses Secondary to TBI and the Defense and Veterans Brain Injury Center (DVBIC) Resource Webcenter (2012) http://www.nd.gov/veterans/files/resource/Traumatic %20Brain%20Injury%20%28TBI%29,%20Diagnosable%20Illnesses%20Secondary%20to%20TBI.pdf	16
Carlton S. Gass, Carolyn L. Williams, Edward Cumella, James N. Butcher Zina Kelly, <i>Ambiguous Measures of Unknown Constructs: The MMPI-2 Fake Bad Scale (aka Symptom Validity Scale, FBS, FBS-r)</i> , Psychol. Inj. And Law (2010) 3:81-85.....	30
Denise Grady, <i>Brain Injuries are Seen in Scans of Veterans</i> , New York Times, June 1, 2011	31
Eric W. Johnson, Mark R. Lovell, <i>Neuropsychological Assessment</i> , in Textbook of Traumatic Brain Injury 2 nd Ed. 135, 127-141 (Jonathan M. Silver, et al. eds., 2011).....	27
Ricardo E. Jorge, Robert Robinson, <i>Mood Disorders</i> in Textbook of Traumatic Brain Injury, 2 nd Ed. 2011, 173-187 (Silver, Jonathan M., et al. eds. 2011).....	3
James P. Kelly, Jay H. Rosenberg, <i>Diagnosis and management of concussion in sports</i> , Neurology 1997; 48:575-80, 576.....	22
Muriel D. Lezak, et al., <i>Neuropsychological Assessment</i> , Fifth Ed. Oxford University Press, 833, 204-205(2012).....	20,27,28

	Page
Daniel J. Luciano, et al., <i>Posttraumatic Epilepsy</i> in Textbook of Traumatic Brain Injury, 2 nd Ed. 2011, 265-75 (Jonathan M. Silver, et al. eds. 2011).....	15
Brent E. Masel, Douglas S DeWitt, <i>Traumatic Brain Injury: A Disease Process, Not an Event</i> , Journal of Neurotrauma. Vol. 27: 1529-1540 (August 2010).....	2,3
Thomas W. McAllister, <i>Mild Brain Injury</i> , in Textbook of Traumatic Brain Injury, 2 nd Ed. 2011, 253 (Silver, Jonathan M., et al. eds. 2011).....	24
Paul McCrory et al., <i>Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012</i> , British Journal of Sports Medicine 2013; 47:250-258.....	9
Thomas M. McMillan, Graham M. Teasdale, Elaine Stewart, <i>Disability in Young People and Adults After Head Injury: 12-14 Year Follow-Up of a Prospective Cohort</i> , Journal of Neurol Neurosurg Psychiatry 2012.Nov; 83(11) 1086-91.	3
NIH Consensus Statement 1998 Oct 26–28; 16(1): 1-41 Rehabilitation of Persons With Traumatic Brain Injury. http://consensus.nih.gov/1998/1998TraumaticBrainInjury109html.htm ..	11,12, 18
National Institute of Neurological Disorders & Stroke, Traumatic Brain Injury: Hope Through Research (last updated July 17, 2015) http://www.ninds.nih.gov/disorders/tbi/detail_tbi.htm	13
Gregory O’Shanick, Alison M. O’Shanick, Jennifer A. Znotens, <i>Personality Change</i> in Textbook of Traumatic Brain Injury, 2 nd Ed. 2011, 211-223 (Silver, Jonathan M., et al. eds. 2011).....	10,13
Jean A.Orman, et al., <i>Epidemiology</i> in Textbook of Traumatic Brain Injury, 2 nd Ed. 2011, 8-9 (Silver, Jonathan M., et al. eds. 2011).....	21

	Page
Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Assessment: Neuropsychological testing of adults. Consideration for neurologists. <i>Neurology</i> 1996; 47:592-599.....	26
Robert J. Sbordone, <i>The Hazards of Strict Reliance on Neuropsychological Tests</i> , <i>Applied Neuropsychology: Adult</i> , 21 98-107 (2014).....	25
State of New York, Department of Health, Traumatic Brain Injury Medicaid Waiver Program (2006) https://www.health.ny.gov/publications/1111.pdf	17
Robert Stern, Prof. of Neurology, Neurosurgery and Anatomy and Neurobiology, Boston University <i>State of Play: Brain Injuries & Diseases of Aging</i> , Statement Before Senate Special Committee on Aging, 113 th Cong. (2014) http://www.aging.senate.gov/imo/media/doc?Stern 6 25 14.pdf	24,25
Nils R. Varney, Richard J. Roberts <i>The Evaluation and Treatment of Mild Traumatic Brain Injury</i> , 108, 1999.....	10
Nathan D. Zasler, et al. <i>Traumatic Brain Injury Medicine: Principles and Practices</i> , 2 nd Ed. 2013, 429.....	14
Nathan D. Zasler, <i>NeuroMedical Diagnosis and Management of Post-concussive Disorders</i> , in <i>Medical Rehabilitation of Traumatic Brain Injury</i> 133–170 (Horn & Zasler, eds. 1995).....	9
Yongxia Zhou, et al., <i>Mild Traumatic Brain Injury: Longitudinal Regional Brain Volume Changes</i> , <i>Radiology</i> Vol. 267 Issue 3, pages 880-890, June 2013.....	20,21

INTEREST OF AMICUS CURIAE

Founded in 1980, the Brain Injury Association of America (BIAA) is the oldest, largest, non-profit, nationwide brain injury, advocacy organization.

The mission of BIAA is to advance brain injury prevention, research, treatment, and education, to improve the quality of life for the 2.5 million children and adults who sustain traumatic brain injuries (TBI) in the United States annually. Since its founding, BIAA has worked jointly with Congress, the Congressional Brain Injury Task Force, the Centers for Disease Control and Prevention, Department of Defense, National Institutes of Health, National Institute of Neurological Disorders and Stroke, and state public health agencies. The Brain Injury Association of America's national network of chartered state affiliates provide direct support, information, resources, education, and advocacy for individuals living with brain injury, their friends, family, professionals and the public.

As the leading advocate for all victims of brain injuries, BIAA has an interest in ensuring this settlement fairly considers all brain-injured players for whose benefit this action was commenced. BIAA seeks to provide the Court with unbiased, accurate information regarding consequences of traumatic brain injury and protect the integrity of traumatic brain injury scientific research. The

extraordinary importance of this settlement, in terms of the status of the parties, the allocation of settlement funds among the entire class, and the implications for equal justice for all victims of traumatic brain injury, compels the association to file this brief.

BIAA has significant expertise in the causes, consequences, and symptoms of traumatic brain injury, and seeks to inform the Court about misconceptions of TBI incorporated within the terms of this settlement, and the sweeping ramifications these fallacies have upon the entire class of players. The district court accepted the declaration of Drs. Brent E. Masel, M.D. and Gregory J. O'Shanick, M.D. for the Brain Injury Association of America. (J.A. 3066-3076)¹

INTRODUCTION AND SUMMARY OF ARGUMENT

This brief will provide the Court with important and relevant information about the physical, psychiatric, and cognitive disease processes and symptoms caused by traumatic brain injury (TBI) vis-à-vis the flawed settlement.

Brain injury is a chronic disease with long-term consequences.² The after-effects are numerous and diverse, regardless of classification as “mild”, “moderate,” or “severe.” Brain damage causes a vast array of recognized neurological disorders, including epilepsy, sleep disorders, cognitive dysfunction,

¹ All references designated “J.A.” are to the Joint Appendix.

² Brent E. Masel, Douglas S. DeWitt, *Traumatic Brain Injury: A Disease Process, Not an Event*, *Journal of Neurotrauma*. Vol. 27: 1529-40 (August 2010).

Alzheimer's disease, chronic traumatic encephalopathy, and Parkinson's disease. Neuroendocrine disorders, including thyroid, and pituitary dysfunction, are linked to brain trauma.³ Psychiatric disorders, including obsessive-compulsive, anxiety, psychosis, mood disorders, and major depression, often develop following traumatic brain injury.⁴ Brain injury victims may sustain sexual dysfunction, incontinence, musculoskeletal dysfunction, including spasticity,⁵ and have a reduced life expectancy.⁶ Developers of the Glasgow Coma Scale found most head trauma survivors have persistent disability 12-14 years after injury, regardless of initial classification,⁷ which exacerbate the cognitive, emotional, and behavioral consequences.

The settlement neither recognizes nor compensates the majority of players suffering long-term consequences of brain trauma, but merely rewards certain, small, discrete groups. The vast majority of retired football players experiencing

³ Brent E. Masel, Douglas S. DeWitt, *Traumatic Brain Injury: A Disease Process, Not an Event*, *supra*.

See, Centers for Disease Control and Prevention (2014). Report to Congress on Traumatic Brain Injury in the United States: Epidemiology and Rehabilitation. National Center for Injury Prevention and Control; Division of Unintentional Injury Prevention, Atlanta, GA.

⁴ Ricardo E. Jorge, Robert Robinson, *Mood Disorders* in Textbook of Traumatic Brain Injury, 2nd Ed. 2011, 173-187 (Silver, Jonathan M., et al. eds. 2011)

⁵ Masel, *supra* 1530-35.

⁶ Masel, *supra* at 1529.

⁷ Thomas M. McMillan, Graham M. Teasdale, Elaine Stewart, *Disability in Young People and Adults After Head Injury: 12-14 Year Follow-Up of a Prospective Cohort*, *Journal of Neurol Neurosurg Psychiatry* 2012.Nov; 83(11) 1086-91.

physical, emotional, and behavioral impairments following repetitive concussions remain excluded and uncompensated under settlement terms.⁸ In the interest of expediency, the District Court relied on self-serving submissions of counsel, which unjustifiably categorized the vast majority of brain injuries as not being “serious” or unrelated to repetitive head trauma, ignoring the overwhelming scientific consensus regarding the causes and ramifications of traumatic brain injury.

(J.A.142)

Although the settlement purports to provide generous financial stability for players with traumatic brain injury, analysis reveals a systematic design to exclude most from participation and reduce payments to the small group who meet arbitrary criteria. It imposes unfair and illogical restrictions on the categories of compensable injuries. The settlement requires players to have participated in NFL play for excessive periods, implicitly denying that a player can sustain a life-altering concussion after a short NFL career. The plan is replete with complex, arbitrary, and overlapping omissions in its unwieldy and intricate criteria.

The settlement excludes many known conditions, such as seizure disorders, known concussion complications, and creates arbitrary distinctions based upon years of service and age of symptom onset. Class attorneys have an inherent

⁸ This brief does not address the unique issues pertaining to Chronic Traumatic Encephalopathy (CTE). Although BIAA does not believe that players already diagnosed or who will be diagnosed with this condition are properly provided for in this settlement, the issues are adequately briefed by appellants.

conflict in simultaneously representing players in different categories with varying injuries, unfairly favoring some with neither rational nor medical basis.

Representative parties have not fairly and adequately protected the interests of all class members suffering brain damage, required by F.R.C.P. §23 (a) (4).

The NFL and players' committee actuarial reports confirm players labeled as suffering "mild" cognitive brain damage, are ineligible to receive any benefits under the settlement, despite comprising the overwhelming majority. The Segal Group report asserts, "89.0% of the plaintiffs in the sample data file do not have a current Qualifying Diagnosis." (J.A. 1719) Both sides agree these players have permanent brain damage but lack a qualifying diagnosis, and remain uncompensated. Though unquestionably NFL-related, their brain damage injuries are inexplicably omitted from settlement distribution.

The settlement, as approved by the District Court, is faulty in many respects, including but not limited to : 1- failure to consider subtle differences and distinctions of developing brain damage not immediately apparent; 2- omission of mild brain injury; 3- failure to compensate recognized physical, behavioral, emotional, and cognitive sequelae of concussion; 4- exclusion of well-recognized categories of presumptive brain injury; 5- failure to provide meaningful benefits for cognitive impairment; 6- arbitrary compensation distinctions based upon years of play and age; 7- implicit disregard of overwhelming medical evidence that one

concussion can precipitate life-long consequences; 8- an illusory benefit failing to account for required Medicare and Medicaid lien offsets; 9- insurmountable neuropsychological testing criteria; 10- ignoring physical, emotional, and behavioral impairment undetectable by the settlement's testing protocol; 11- overemphasis on malingering tests; and 12- failure to consider alternate testing modalities, such as diagnostic imaging.

The court, serving as a “fiduciary,” has an obligation to protect the entire class. *In re Cendant Corp. Litig.*, 264 F.3d 286, 296 (3rd Cir. 2001) Any settlement that does not, should be rejected as unfair.

ARGUMENT

I. The Settlement Excludes the Majority of Conditions and Consequences of TBI

Three major categories of “benefits” provided to players under the settlement grid are based upon arbitrary levels of impairment denominated Level 1, Level 1.5, and Level 2. Although ostensibly encompassing all brain damaged players, scrutiny of their definition of cognitive impairment, (determinative of compensation eligibility) reveals omission of the vast majority of players suffering from “mild” brain injury, despite devastating consequences. The first and lowest category of impairment, Level 1, determined by neuropsychological testing under the Base Line Assessment Program (“BAP”), is limited to players with moderate cognitive impairment, excluding those suffering from “mild” brain injury.(Revised

settlement, J.A. 1462) Even those who meet Level 1 criteria (moderate cognitive impairment) receive no monetary compensation. Only players with Level 1.5 cognitive impairment (early dementia), defined as “moderate to severe cognitive decline” (J.A. 1463) and Level 2 impairments (moderate dementia), and specified neurological disorders (ALS, Parkinson’s disease, Alzheimer’s disease, Death with CTE) (J.A. 1464) are eligible for monetary compensation. (J.A. 1465) The applicable offsets conflict with sound medical principles pertaining to causes and effects of traumatic brain injury. The settlement unacceptably elevates labels over after-effects and/or symptoms of brain injury. Most retired players are not within the scope of Level 1.5 (early dementia exhibited by moderate to severe cognitive decline) or Level 2 (moderate dementia, exhibited by severe cognitive decline), Alzheimer’s disease, Parkinson’s disease, ALS and/or Death with CTE. For the majority, initial eligibility for any benefit depends upon a finding of “moderate cognitive impairment” exhibited by a “moderate cognitive decline” (J.A. 1465-66) under testing protocols established in the BAP. An analysis of the BAP definition of impairment and testing protocols, however, reveals flaws calculated to exclude players with meritorious claims.(J.A. 1464, 1525-26) The settlement grid’s categories of injury, exclusions, offsets, and application of its Baseline Assessment Program are completely arbitrary and contrary to good science and medicine. The

illogical distinctions are created solely to implement this settlement and eliminate most players with TBI from compensation.

A. The Settlement Improperly Excludes “Mild” Traumatic Brain Injury

In categorizing benefits, the settlement completely disregards and omits players suffering permanent consequences of “mild” traumatic brain injury, although “mild” brain injury often leads to permanent disability. A mild brain injury is only mild if it affects someone else’s brain. If a player cannot manage the consequences of brain injury in his daily life, the label is meaningless.

Plaintiffs’ Master Complaint states, “This action arises from the pathological and debilitating effects of mild traumatic brain injuries (referenced herein as “MTBI”) caused by concussive and sub-concussive impacts that have afflicted former football players in the NFL.” (J.A. 695, 867) The settlement excludes the permanent damage that flows from this injury despite pleadings, and inclusion of players in the original class.

Traditionally, traumatic brain injury has been classified as “mild,” “moderate,” or “severe,” based upon the patient’s initial presenting symptoms. Director for the Centers for Disease Control and Prevention, Dr. Julie Louise Gerberding, M.D., M.P.H., stated, “[I]t is clear that the consequences of MTBI are

often not mild.”⁹ There is nothing “mild” about mild traumatic brain injury.

“Modifiers such as subtle, minimal, and minor are to be discouraged. Practitioners must understand that the term 'mild' describes only the initial insult relative to the degree of neurological severity. There may be no correlation with the degree of short or long-term impairment or functional disability.”¹⁰

A concussion is a brain injury.¹¹ The term concussion and mild traumatic brain injury are synonymous, often used interchangeably. “Doctors may describe these injuries as ‘mild’ because concussions are usually not life-threatening. Even so, their effects can be serious.”¹² The term, post-concussive disorder, or post-concussive syndrome denotes the symptoms that develop from brain trauma. The most common physical symptoms associated with post-concussion syndrome include headache, fatigue, sleep disorders, vertigo, and dizziness. Some individuals also experience visual difficulties and heightened sensitivity to sound

⁹ Centers for Disease Control and Prevention, Department of Health and Human Services. Report to Congress on Mild Traumatic Brain Injury in the United States: Steps to Prevent a Serious Public Health Problem. September 2013.

¹⁰ Nathan Zasler, NeuroMedical Diagnosis and Management of Post-concussive Disorders, in Medical Rehabilitation of Traumatic Brain Injury 133–134 (Horn & Zasler, eds. 1995).

¹¹ Centers for Disease Control and Prevention. U.S. Department of Health and Human Services, Facts About Concussion and Brain Injury. Version 2. (2010) http://www.cdc.gov/concussion/pdf/facts_about_concussion_tbi-a.pdf; See. Paul McCrory et.al., *Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012*, British Journal of Sports Medicine 2013; 47:250-258.

¹² McCrory, *supra* at 1.

(hyperacusis). Persons suffering post-concussion syndrome encounter emotional difficulties, including irritability manifested as aggression, anxiety, depression, lability (excessive emotional reactions and frequent mood change), and personality changes. (Masel/O'Shanick Declaration, J.A. 3069)¹³

It is estimated that 10 to 15 percent of mild TBI patients don't recover after one year, and may continue to have chronic and often debilitating post-concussive signs and symptoms.¹⁴ The settlement classification of injury ignores the physical, emotional, and behavioral long-term disabilities of post-concussion syndrome.

The settlement disregards the permanent consequences of mild traumatic brain injury caused by a singular concussion, the cumulative effects of sub-concussive injuries or multiple concussions, and the consequences of premature return to play while still symptomatic.(Masel/O'Shanick Declaration, J.A. 3072)

The District Court ignored the declaration of Drs. Masel & O'Shanick, on behalf of BIAA, in concluding there was no evidence that a single concussion can produce lifelong consequences.(J.A. 160)

B. The Settlement Omits Players Suffering Non-Cognitive, Physical, Emotional, and Behavioral Disorders

¹³ Nils R. Varney, Richard J. Roberts, *The Evaluation and Treatment of Mild Traumatic Brain Injury*, 108, 1999.

See. Gregory O'Shanick, Alison M. O'Shanick, Jennifer A. Znotens, *Personality Change* in *Textbook of Traumatic Brain Injury*, 2nd Ed. 2011, 211-223 (Silver, Jonathan M., et al. eds. 2011)

¹⁴ Michael P. Alexander, *Mild Traumatic Brain Injury: Pathophysiology, Natural History and Clinical Management*, 45 *Neurology* 1253 - 60, July 1995.

A glaring large-scale inadequacy in the settlement is the complete omission of any player suffering emotional and behavioral consequences across the entire spectrum of brain injury, whether mild, moderate, or severe. This settlement is limited to those players who have demonstrable cognitive injuries labeled as “moderate” or “severe,” regardless of severity of the other concomitant constellation of TBI-related impairments. Ignoring all but cognitive impairment, disregards the full range of disabling injuries. The deficient settlement criterion omits players who suffer emotional and behavioral difficulties, but are not cognitively impaired. (Revised Settlement, J.A. 1462-63, Stern Declaration, J.A. 2955-56)

The National Institute of Health’s (NIH) Consensus Statement, Rehabilitation of Persons with Traumatic Brain Injury, recognizes cognitive impairment, as one of many complicated and interrelated TBI disorders. TBI may cause physical, emotional, and behavioral consequences affecting all aspects of a person’s life.¹⁵ Significantly, the Consensus Conference declared, “Rarely are the consequences limited to one set of symptoms, clearly delineated impairments, or a disability that affects only one part of a person’s life. Rather, the consequences of TBI often influence human functions along a continuum from altered physiological

¹⁵ Rehabilitation of Persons With Traumatic Brain Injury. NIH Consensus Statement 1998 Oct 26–28; 16(1): 1-41, <http://consensus.nih.gov/1998/1998TraumaticBrainInjury109html.htm>

functions of cells through neurological and psychological impairments, to medical problems and disabilities that affect the individual with TBI, the family, friends, community, and society.”¹⁶ “All of these consequences can occur singularly or in combinations, and are variable in terms of their effects on individuals; furthermore, they change in severity and presentation over time.”¹⁷ Physical sequelae “include a variety of movement disorders, seizures, headaches, ambient visual deficits and sleep disorders,”¹⁸ yet players with these conditions are omitted from the settlement and ineligible for compensation.

The “social consequences of mild, moderate and severe TBI are many and serious, including increased risk of suicide, divorce, chronic unemployment, economic strain, and substance abuse.”¹⁹ Players, who manifest these symptoms now, and/or may suffer from their consequences in the future, are unfairly eliminated under the settlement plan.

The Consensus Panel identified behavioral deficits and mood disorders as consequences of TBI. “Common behavioral deficits include[d] decreased ability to initiate response, verbal and physical aggression, agitation, learning difficulties, shallow self-awareness, altered sexual functioning, impulsivity and social disinhibition. Mood disorders, personality changes, altered emotional control,

¹⁶ NIH, *supra*, at 11.

¹⁷ NIH, *supra*.

¹⁸ NIH, *supra*.

¹⁹ NIH, *supra*, at 12.

depression and anxiety are also prevalent after TBI.”²⁰ Inexplicably, this settlement overlooks and excludes players with these impairments.

The most notable TBI patient was Phineas Gage. In 1848, Gage was a 25-year-old railway foreman, working with explosive powder and a packing rod. A sparked explosion propelled a three-foot long pointed rod through his brain and exited through his temple. Prior to injury, Gage was a quiet, mild-mannered man; afterward he became obscene, obstinate, and self-absorbed. His personality and behavioral problems persisted until his death in 1861.²¹ Had Phineas Gage been a professional football player, he would be denied benefits under the settlement agreement.

C. Level 2 Enumerated Injuries Omit Well-Established Neurological Disorders Caused by Brain Trauma

The settlement recognizes some neurological conditions as presumptively caused by traumatic brain injury, yet inexplicably overlooks other well-known neurological conditions caused by brain trauma. The enumerated injuries eligible for compensation [moderate Dementia, Amyotrophic Lateral Sclerosis (“ALS”), Alzheimer’s Disease, Parkinson’s Disease and/or Death with chronic traumatic

²⁰ NIH, *supra*.

²¹ National Institute of Neurological Disorders & Stroke, Traumatic Brain Injury: Hope Through Research, (last visited August, 3, 2015). http://www/ninds.nih.gov/disorders/tbi/detail_tbi.htm
See. O’Shanick, *supra* at 212.

encephalopathy (CTE)] exclude neurological and medical conditions such as traumatic epilepsy, seizure disorders, hormonal deficiencies and stroke, known to be caused by either singular or repetitive head trauma.

Despite purportedly covering five enumerated injuries, the settlement reduces benefits for players who have sustained these injuries, under the implicit assumption that causation is related to years of service, time of onset, and the player's age when the condition is diagnosed. There is no empirical evidence to support these assumptions.²²

1. Epilepsy or Seizure Disorders are Improperly Excluded

“TBI is the largest known risk factor for epilepsy.”²³ Head trauma is one of the most commonly identified etiologies for epilepsy (defined as two or more unprovoked seizures) accounting for 20 percent of all symptomatic epilepsy.

²² “[E]vidence is emerging that indicates TBI should be viewed as a chronic disease that imposed increased risk of long-term health problems for those who survive the initial injury regardless of age of onset. Therefore, TBI should not simply be viewed as an isolated event similar to a fractured bone that will heal over time but rather as a chronic disease with the traumatic event representing the initiation of the disease process. In addition to direct injury to the brain, TBI has been associated with diseases of other organ systems as well as shortened life expectancy and should be viewed as disease causative or accelerative.” Nathan D. Zasler, et al., *Traumatic Brain Injury Medicine: Principles and Practices*, 2nd Ed. Demos Medical Publishing 2013 at 429.

²³ The CDC, NIH, DoD and VA Leadership Panel, Report to Congress on Traumatic Brain Injury in the United States: *Understanding the Public Health Problem among Current and Former Military Personnel*. Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Department of Defense (DoD), and the Department of Veterans Affairs (VA), 2013, at 35.

Imprudently, however, epilepsy or posttraumatic seizure disorder is omitted from the plan's enumerated injuries.²⁴ Traumatically induced seizures may not occur for years following head trauma. 15 to 20 percent of individuals may not suffer their first seizure until two years post-trauma, and the risk of a first seizure remains elevated for 10 years following moderate head injury; 20 years after a severe head injury.²⁵ Studies of veterans in the Vietnam Head Injury Study found 12.6 percent of patients may experience their first seizure over 14 years post-injury.²⁶ One seizure begets future seizures. Following an initial late posttraumatic seizure, 86 percent of patients experienced a second seizure within two years; 52 percent had at least five late seizures, and 27 percent had 10 or more seizures.²⁷ The risk for developing posttraumatic seizure disorder increases with the severity of brain injury. All head injuries, whether mild, moderate, or severe, however, increase the risk. One study reported the risk of epilepsy doubled following mild head injury or skull fracture, and was seven times higher after a severe injury.²⁸ The Department of Veteran Affairs presumptively deems unprovoked seizures following moderate

²⁴ Daniel J. Luciano, et al., *Posttraumatic Epilepsy* in *Textbook of Traumatic Brain Injury*, 2nd Ed. 2011, 265-75 (Silver, Jonathan M., et al. eds. 2011)

²⁵ Luciano, *supra*, at 265.

²⁶ Luciano, *supra*, at 266.

²⁷ Luciano, *supra*.

²⁸ Luciano, *supra*.

or severe TBI to be service-connected.²⁹ There is neither rational nor medical basis for excluding this group of players from participating in the global settlement.³⁰

D. Treatment Modalities Fail to Provide Effective Options to the Majority of Class Members

A settlement designed to compensate players who sustained traumatic brain injury should provide appropriate treatment to all players with brain damage. Even if an individual player meets the insensitive BAP criteria and is determined to have qualifying neurocognitive impairment, the benefit is limited to “medical” treatment and/or examination, counseling, and pharmaceuticals. These purported benefits do not provide most players with the full array of required, beneficial services.

Besides providing medical care, these players require a wide range of home and community-based services supporting both the individual and family caregivers.

These essential services assist brain-injured players to function as independently as

²⁹ Department of Veterans Affairs. Traumatic Brain Injury (TBI), Diagnosable Illnesses Secondary to TBI and the Defense and Veterans Brain Injury Center (DVBIC) Resource Webcenter. (2012)
<http://www.nd.gov/veterans/files/resource/Traumatic%20Brain%20Injury%20%28TBI%29,%20Diagnosable%20Illnesses%20Secondary%20to%20TBI.pdf>

³⁰ In addition to seizure disorders, the Veterans Administration also considers depression if it is manifest within 3 years of moderate or severe TBI, or within 12 months of mild TBI. Hormone deficiency from hypothalamo-pituitary changes are deemed to be competently caused by the initial brain trauma if they manifest within 12 months of moderate or severe TBI.

Department of Veterans Affairs, *supra*.

feasible, and should be required.³¹ The settlement fails to provide meaningful treatment to a majority of eligible players. (Masel/O’Shanick Declaration J.A. 3074)

Acknowledging these distinct and unique issues, New York State instituted the New York State Traumatic Brain Injury Medicaid Waiver Program, to insure persons with a brain injury, eligible for nursing home-care services, can lead independent lives in a community setting of their choice. This program provides Service Coordination, Independent Living Skills Training, Structured Day Programs, Substance Abuse Programs, Positive Behavioral Interventions and Supports, Community Integration Counseling, Home and Community Support Services, Environmental Modifications, Respite Care, Assistive Technology (special medical equipment and supplies), Waiver Transportation, and Community Transitional Services.³² None is available to disabled players under the settlement.

The National Institutes of Health (NIH) has advocated, “Rehabilitation services should be matched to the needs, strengths, and capacities of each person

³¹ One Voice for Brain Injury Consortium Recommendations to Strengthen Existing Legislation and Programs for Individuals with Brain Injury and Their Families, September 2013 has been endorsed by the American Congress of Rehabilitation Medicine (ACRM), Brain Injury Association of America (BIAA), the North American Brain Injury Association (NABIS) and the United States Brain Injury Alliance, among other disability advocacy organizations.

³² State of New York, Department of Health, Traumatic Brain Injury Medicaid Waiver Program (2006)
<https://www.health.ny.gov/publications/1111.pdf>

with TBI and modified as those needs change over time.”³³ There is no provision within the plan for the individualization of services or the ability to modify them, as the person’s condition and resultant needs change. Continued monitoring and repeat testing are necessary to fulfill this requirement. The NIH recommendations provide rehabilitation must be “interdisciplinary and comprehensive” rather than the myopic view of treatment under this proposal. The NIH recommends, “[P]ersons with TBI should have access to rehabilitation services through the entire course of recovery, which may last for many years after the injury.”³⁴ There is no “quick fix” for TBI. There is no “one size fits all” treatment for TBI. The consequences and manifestations of TBI change prospectively, with new, different, and/or altered symptoms. There is no mechanism, under this plan, to reevaluate or recalibrate the services necessary, and no means to pay for previously unanticipated services.

II. The Settlement Improperly Reduces Compensation for Known Contributing Factors

The settlement, in direct contradiction to the science of traumatic brain injury, improperly reduces compensation to otherwise eligible players, for conditions and events known to contribute to all classes of brain damage.

(Masel/O’Shanick Declaration J.A. 3072-3073)

³³ NIH, *supra*, at 23.

³⁴ NIH, *supra* at 25.

A. Benefits Are Improperly Reduced for Stroke

The settlement reduces benefits to brain-injured players by an enormous 75 percent if they sustain a stroke post-concussion, with neither rational nor medical basis. (J.A. 1395-1396) Individuals who have sustained traumatic brain injury confront a markedly increased risk of stroke. In an article published in *Stroke: Journal of the American Heart Association*, researchers found 2.91 percent of patients suffered a stroke in the three-month period following TBI, compared with 0.30 percent for those with no traumatic brain injury; a tenfold difference. After one year, the risk of stroke decreased, but those with a traumatic brain injury remained at significantly higher risk than the comparison group, approximately 4.6 times higher. After five years, traumatic brain injury sufferers were 2.3 times more likely to sustain a stroke.³⁵

B. The Settlement Improperly Reduces Benefits Based Upon Years of Play and TBI Prior to NFL Participation

Player compensation, as determined by the settlement grid, is based upon years of play, and reduced for any traumatic brain injury sustained before qualified NFL play. (Revised settlement, J.A. 1394-95, 1530-31) This is an arbitrary distinction without empirical support. Grounding compensation upon years of NFL service ignores the reality that a player can sustain a brain injury, and its

³⁵ Yi-Hua Chen, et al., *Patients With Traumatic Brain Injury Population-Based Study Suggests Increased Risk of Stroke*, *Stroke* 2011; 42: 2733-2739

permanent consequences, any time throughout his professional career, including preseason play or the first season. Reducing benefits for players with fewer than six seasons, disregards the average NFL career is only 3.3 years, according to the NFL Players Association.³⁶ For some positions (cornerbacks, wide receivers and running backs), it is fewer than 3 years.³⁷ The settlement only compensates players on the team roster, ignoring those who sustained career-ending pre-season traumatic brain injury and were cut before the first game.

It has been established that one concussion can generate lasting brain damage with lifelong reverberations.³⁸ A 2013 study comparing brain scans from a group of healthy individuals with concussion patients conducted at New York University Medical School found that after one year, those who suffered a concussion, showed signs of structural brain damage in regions of the brain linked to mood disorders and depression.³⁹ "In some patients, there are structural changes to the brain after a single concussive episode," stated Yvonne W. Lui, M.D.,

³⁶ Average playing career length in the National Football League (in years), STATISTA.COM, <http://www.statista.com/statistics/240102/average-player-career-length-in-the-national-football-league/>(last visited August 3, 2015).

³⁷ Statista, *supra*.

³⁸ Muriel D. Lezak, et al., *Neuropsychological Assessment*, Fifth Ed. Oxford University Press, 204 (2012)

³⁹ Yongxia Zhou, et al., *Mild Traumatic Brain Injury: Longitudinal Regional Brain Volume Changes*, *Radiology* Vol. 267 Issue 3, pages 880-890, June 2013. <http://pubs.rsna.org/doi/abs/10.1148/radiol.13122542>; <http://www.medicalnewstoday.com/releases/257543.php>

Neuroradiology section chief and assistant professor of radiology at NYU Langone School of Medicine.⁴⁰ “A single concussion, whether diagnosed or not, is capable of generating debilitating physical, cognitive and behavioral impairments that interfere with the activities of daily living and require treatment through the lifespan.” (Masel/O’Shanick Declaration J.A.3072)

Football is a concussion delivery system. Repetitive concussions in a single season can lead to permanent brain damage. Players repeatedly sustain concussive injuries in the same game, in the same week, playing in both practice and competition during an entire season. Repeated concussions before the brain heals, can lead to permanent brain damage and even death.⁴¹ James Kelly, MA, MD, FAAN, director of the National Intrepid Center of Excellence (NICoE), one of America’s leading expert neurologists on treating concussions, observed, “[T]he National Football Head and Neck Injury Registry documented a yearly average of eight deaths caused by head injuries between 1971 and 1984 at all levels of football. Some players suffer two or more concussions. The risk of sustaining a concussion in football is four to six times greater for the player who has a history of concussion, than for the player who has no history of concussion. Repeated concussions have been shown to disclose cumulative neuropsychological and

⁴⁰ Zhou, *supra*.

⁴¹ Jean A.Orman, et al., *Epidemiology in Textbook of Traumatic Brain Injury*, 2nd Ed. 2011, 8-9 (Silver, Jonathan M., et al. eds. 2011)

neuroanatomical damage, even when incidents are separated in time by months or years.”⁴² Penalizing a player for an earlier concussion, which renders him more susceptible to permanent brain damage from a second concussion during his NFL career, is illogical and unfair.

It is illustrative to utilize the data compiled about military TBI victims. The New York Times report of a study of combat veterans returning from Iraq and Afghanistan who tested positive for a brain injury during their deployment, found that symptoms of dizziness, headaches, depression, problems with judgment or memory and poor coordination, known collectively as the “post-concussive syndrome” persisted without improvement over an eight-year period. The study further found the symptoms were worse for veterans who experienced over one traumatic brain injury, suggesting a cumulative impact of head injuries.⁴³

C. The Settlement Improperly Reduces Recovery for Liens

Many retired players receive government benefits due to disability and poverty, through Medicaid and Medicare. Others will reasonably be classified as permanently disabled, entitling them to Social Security Disability Benefits, and can establish Medicare eligibility. When a player receives recovery under this

⁴² James P. Kelly, Jay H. Rosenberg, *Diagnosis and management of concussion in sports*, *Neurology* 1997; 48:575-80 at 576.

⁴³ James Dao, *Symptoms of Traumatic Brain Injury Can Persist for Years*, *New York Times*. July 18, 2012
http://atwar.blogs.nytimes.com/2012/07/18/symptoms-of-traumatic-brain-injury-can-persist-for-years/?_php=true&_type=blogs&_r=0

settlement, he will be required to reimburse the State for all past Medicaid reimbursed medical expenses. This pertains even if these expenses were unrelated to the specific injuries purportedly compensated under the settlement.⁴⁴ Besides Medicaid reimbursement, he must satisfy Medicare for any past paid benefits,⁴⁵ and will further be required to set aside funds to satisfy Medicare's future interests (Medicare set aside). (Revised settlement, J.A. 1417-21) After receiving the net proceeds from this settlement, the player may also become ineligible for future Medicaid benefits under the resource test imposed. These liens, set asides, and potential ineligibility for government benefits, substantially influence any evaluation of whether the settlement funds are sufficient and in the player's best interest, or whether he should reject the settlement and risk a defendant's verdict.

Even retired players whose medical expenses are covered by private insurance plans must consider the effect of liens. Any player who receives insurance benefits under a self-funded ERISA plan must reimburse all benefits provided in full, even if that reimbursement is unjust, inequitable, or creates a hardship.⁴⁶ *US Airways, Inc. v. McCutchen*, 133 U.S. 1537 (2013)

⁴⁴ 42 U.S.C. §1396a(25)(B), State Plans for Medical Assistance
42 U.S.C. §1396a(25)(H)

⁴⁵ 42 U.S.C. §1395y(b)(2)(B)(ii), Exclusions from Coverage and Medicare as Secondary Payer

⁴⁶ 29 U.S.C. §1132(a)(3)

Under the limited payment amounts in the settlement, the gross sum recovered may provide little or no financial benefit to players, since they will be compelled to expend most, if not all the funds received, to satisfy Medicare, Medicaid, and insurance liens, and the future interests of Medicare.

III. The Baseline Assessment Program is Deficient, Places Improper Emphasis on Neuropsychological Testing, and Excludes Other Reliable Sources

An analysis of BAP testing protocols reveals it is scientifically flawed and calculated to exclude many players with meritorious claims. Sole reliance on neuropsychological testing to determine impairment ignores the physical, emotional, and behavioral injuries historically recognized, acknowledged, and treated among the full-range of post-concussive syndrome consequences. Players affected by mood changes, depression, impulsivity, aggressive disorder, would be excluded from this settlement using the BAP criteria for impairment, contrary to medical consensus that “TBI in general, including mTBI, increases the risk for developing a variety of psychiatric disorders that can contribute to significant disability after the injury.”⁴⁷ Persistent, debilitating headaches, dizziness and sleep disorders would not be deemed to disable, utilizing the BAP criteria.⁴⁸ As the

⁴⁷ Thomas W. McAllister, *Mild Brain Injury*, in *Textbook of Traumatic Brain Injury*, 2nd Ed. 2011, 253 (Silver, Jonathan M., et al. eds. 2011)

⁴⁸ Robert Stern, Prof. of Neurology, Neurosurgery and Anatomy and Neurobiology, Boston University *State of Play: Brain Injuries & Diseases of Aging*, Statement Before Senate Special Committee on Aging, 113th Cong. (2014)

Centers for Disease Control cautions, “because the brain is very complex, every brain injury is different” and “because all brain injuries are different so is recovery.”⁴⁹ These physical, behavioral, and emotional disorders are prevalent in all categories of brain injury and not related to just one outcome, such as CTE.

Most retired players do not exhibit early dementia (Level 1.5) moderate dementia (Level 2) or enumerated neurological conditions (Alzheimer’s disease, Parkinson’s disease, ALS, and/or Death with CTE). The foundation of benefits for the majority of retired players (Level 1, moderate cognitive impairment) is neuropsychological testing of the Baseline Assessment Program.

In isolation, these neurocognitive tests may not detect conditions for which they were appropriately designed. Neuropsychological assessment provides only one aspect for determining cognitive impairment, when employed, as a component of a comprehensive assessment. It is unreliable when viewed in seclusion from all other available evidence of an individual’s ability to function in everyday life.⁵⁰ The utilization of the neuropsychological assessment protocol as the sole means of determining Level I, Neurocognitive Impairment is medically unsound and unacceptable in practice.⁵¹ (Masel/O’Shanick Declaration, J.A. 3070)

[http://www.aging.senate.gov/imo/media/doc?Stern 6 25 14.pdf](http://www.aging.senate.gov/imo/media/doc?Stern%206%2025%2014.pdf)

⁴⁹ Facts About Concussion, Centers for Disease Control and Prevention, *supra*.

⁵⁰ Robert J. Sbordone, *The Hazards of Strict Reliance on Neuropsychological Tests*, *Applied Neuropsychology: Adult*, 21 98-107 (2014).

⁵¹ Stern, *supra*, at 6.

The BAP disregards a player's prior neuropsychological testing, establishing a pre-morbid baseline for neurocognitive impairment. The BAP overlooks important pre and post-injury observations of a player's family, friends, and associates. (Masel/O'Shanick Declaration, J.A. 3070) Co-workers, employers, and others can compare and explain pre-injury functioning to a player's post-injury performance. A neuropsychologist, relying exclusively on the findings of the BAP to determine a player's level of cognitive impairment, without considering these observations, knowingly discounts the full range of evidence available for meaningful diagnosis.

Neuropsychological testing has been approved by the American Academy of Neurology as a tool to determine cognitive dysfunction. The Academy cautions, however, "[L]ike other tests, neuropsychological assessments are of limited usefulness by themselves and must be interpreted in conjunction with other clinical, imaging and laboratory information."⁵² Although neuroimaging studies, such as diffusion tensor imaging (DTI), are available to provide useful diagnostic information, they are not utilized under the plan.⁵³ Rejecting this admonition about

⁵² Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Assessment: Neuropsychological testing of adults. Consideration for neurologists. *Neurology* 1996; 47:592-599 at 592.

⁵³ Erin D. Bigler, Ph.D., *Structural Imaging*, in Textbook of Traumatic Brain Injury 2nd Ed. 82, 73-90 (Jonathan M. Silver, et al. eds., 2011).

the diagnostic utility of neuropsychological testing, the settlement criteria disregard all other evidence of cognitive impairment.

Any conclusion drawn from a neuropsychological assessment should be based in part, upon an evaluation and comparison with pre-injury functioning. Pre-injury neuropsychological test results allow direct comparison with an individual's post-injury level of functioning.⁵⁴ Evidence of premorbid functioning, "far outweighs normative expectations."⁵⁵ Although important comparative pre-injury baseline testing is available in reaching a meaningful diagnosis for many players, it is eliminated in determining all levels of impairment under the BAP.

Exclusive reliance on the BAP criteria directly conflicts with that utilized by the Social Security Administration in evaluating TBI impairment. This limited evaluation completely disregards and disrespects the value or importance of the opinions of treating health care professionals. Social Security Disability evaluations emphasize the significance of opinions of treating health care providers by affording them weight greater than other sources. Treating health care professionals have the best vantage from which to provide a detailed, nuanced, and longitudinal perspective of an applicant's impairments. These educated observers have a unique outlook on the medical evidence not discernible from one medical

⁵⁴ Eric W. Johnson, Mark R. Lovell, *Neuropsychological Assessment*, in *Textbook of Traumatic Brain Injury* 2nd Ed. 135, 127-141 (Jonathan M. Silver, et al. eds., 2011).

⁵⁵ Lezak, *supra* at 171.

examination.⁵⁶ Absolute and exclusive reliance on the BAP evaluation completely disregards these opinions, even if obtainable by the applicant.

A. The Testing Criteria Places Unjustifiable Prominence on Tests of Exaggeration and Effort

The BAP embraces inappropriate measures of exaggeration, malingering, and effort, to endeavor to deny valid claims. The malingering testing protocol employs eight separate symptom validity tests and includes the Minnesota Multiphasic Personality Inventory (MMPI-2RF). (Revised Settlement, J.A. 1468-69, 1476) The suggestion of intentional falsehood, and perhaps even perjury, must be approached with extreme caution.⁵⁷

A battery of "tests," purportedly formulated to distinguish the malingerer from the legitimately injured individual, implicitly assumes a test can differentiate between a brain-injured person and one feigning symptoms and complaints. This supposition dismisses fundamental, known truths characteristic of traumatic brain injury. Can a lack of motivation test distinguish intentional malingering from the effects of traumatic brain damage itself? Should failing the test be attributed to chronic pain and depression, or intentional falsehoods propounded by the test-taker? The conclusion that one failed to use his or her best effort on these tests

⁵⁶ 20 CFR § 404.1527. (2012) Evaluating opinion evidence. Social Security Administration statement on weight afforded to the opinions of treating health care providers: http://ssa.gov/OP_Home/cfr20/404/404-1527.htm

⁵⁷ Lezak, *supra* at 833.

endorses the hypothesis that a brain-injured individual can consistently apply best efforts. Further, the conclusion of malingering presupposes that a brain-injured person cannot fail the exam, regardless of score. Test performance below recommended cutoffs is not the *sine qua non* of malingering.⁵⁸

There is no agreement within the scientific community regarding many aspects of effort testing. Disagreement abounds concerning 1- which symptom validity tests should be used to measure effort, 2- when to administer these tests within a neuropsychological test battery, 3- the number of tests that should be administered, or 4- interpreting the test findings.⁵⁹ The conclusion that a test-taker is malingering because he or she has scored below the arbitrary cut off score of a symptom validity test may be inappropriate,⁶⁰ but will cause denial of any benefits to players under the BAP.

The United States Army rejected using malingering measures. On April 10, 2012, the U.S. Department of the Army issued a “Memorandum for Commanders, Mecom Regional Medical Commands regarding posttraumatic stress disorder.”⁶¹

The Memorandum categorically asserts, “[P]oor effort testing on

⁵⁸ Erin D. Bigler, *Effort, Symptom Validity Testing, Performance Validity Testing and Traumatic Brain Injury*, *Brain Injury*, 2014. 28(13-14) 1623-1638. Accessible on line at <http://www.tandfonline.com/doi/pdf/10.3109/02699052.2014.947627>

⁵⁹ Bigler, *supra* at 1623.

⁶⁰ Bigler, *supra* at 1634.

⁶¹ Department of Veterans Affairs and Department of Defense. *Va/DoD Clinical Practice Guideline for Management of Post-Traumatic Stress*. http://cdn.govexec.com/media/gbc/docs/pdfs_edit/042312bb1.pdf

psychological/neuropsychological tests does not equate to malingering, which requires proof of intent per OTSG/MEDCOM Policy II-076.”⁶²

The utilization of a subtest of the Minnesota Multiphasic Personality Inventory (MMPI-2) known as the Fake Bad Scale, (FBS) and renamed the Symptom Validity Scale, to determine symptom exaggeration is misguided and reckless. The scale comprises 43 questions used in the personality inventory. If the patient endorses many somatic complaints; ("Much of the time my head seems to hurt all over."); sleep disturbance complaints, ("My sleep is fitful and disturbed."); tension or stress complaints, ("I find it hard to keep my mind on a task or job."); and categories of low energy and deviant attitudes or behaviors, the individual is said to be exaggerating.

The author of the MMPI itself, James N. Butcher, has rejected including this scale in the inventory, stating, “[T]he Fake Bad Scale (FBS; Symptom Validity Scale) had fundamental psychometric flaws, interpretive problems and potentially adverse social consequences. The FBS was constructed without due consideration to scientifically based guidelines for scale development. After almost two decades in existence, its face, content, and construct validity have not been established in empirical literature.”⁶³

⁶² Dept. of Veterans, *supra*, at 7.

⁶³ Carlton S. Gass, Carolyn L. Williams, Edward Cumella, James N. Butcher, Zina Kelly, *Ambiguous Measures of Unknown Constructs: The MMPI-2 Fake Bad Scale*

B. The Testing Protocol Ignores Positive Neuroimaging Studies In Determining Eligibility

Although recent advances in neuroimaging techniques allow neuroscientists to detect structural changes in the brain, imaging such as diffusion tensor imaging (DTI), are not recognized under the settlement to confirm traumatic brain damage. DTI is an important diagnostic tool, besides neuropsychological testing, used to detect traumatic brain injury.⁶⁴ Not only is this evidence excluded at the present, there is no potential to allow its use in the future, as technological improvements enhance sensitivity.

The Department of Defense endorses using DTI studies in diagnosing and understanding the consequences of mild traumatic brain injury, contrary to the NFL settlement protocol. DTI testing was employed and relied upon by the Department of Defense, in the Afghanistan conflict, to diagnose mild traumatic brain injury.⁶⁵ The settlement prevents the subset of retired players with positive

(aka *Symptom Validity Scale, FBS, FBS-r*), *Psychological Injury and Law*.
Published online: 22 January 2010.

<http://link.springer.com/article/10.1007%2Fs12207-009-9063-2#page-1>

⁶⁴ Erin D. Bigler, Ph.D., *Structural Imaging*, in *Textbook of Traumatic Brain Injury* 2nd Ed. pages 73-90 (Silver, JM, et al eds., 2011).

⁶⁵ Denise Grady, *Brain Injuries are Seen in Scans of Veterans*, *New York Times*, June 1, 2011 http://www.nytimes.com/2011/06/02/health/02brain.html?_r 0; See. Octavian Adam, et al., *Clinical and Imaging Assessment of Acute Combat Mild Traumatic Brain Injury in Afghanistan*, 85 *Neurology* July 21, 2015; pages 219-227.

DTI findings from submitting this evidence now or in the future to support a finding of permanent brain damage.

The absence of positive imaging data has permitted skeptics of the consequences of mild traumatic brain and the post-concussive syndrome to contend incongruously that no brain damage has occurred. They suggest positive findings would confirm pathological changes to the brain because of trauma. Until recently, the insensitivity of CT scans and MRI studies gave credence to this argument, presuming exhibited cognitive, behavioral, and emotional impairments substantiated by positive neuropsychological findings were psychogenic. Using these new neuro-imaging modalities, however, will provide objective evidence of structural brain damage, impossible to corroborate previously.

CONCLUSION

In view of the foregoing facts, the settlement fails to consider the majority of players who have sustained traumatic brain damage and improperly creates unwarranted distinctions among those who are eligible for any benefits. The settlement should be reversed and remanded for further proceedings.

Respectfully submitted,

Shana De Caro
De Caro & Kaplen, LLP
427 Bedford Road
Pleasantville, NY 10570
(914) 747 4410
shana@brainlaw.com

Michael V. Kaplen
De Caro & Kaplen, LLP
427 Bedford Road
Pleasantville, NY 10570
(914) 747 4410
michael@brainlaw.com

Counsel for Amicus Curiae
Brain Injury Association of America

August 20, 2015

CERTIFICATE OF COMPLIANCE

Pursuant to FRAP 32(a)(7)(C), I hereby certify that this brief was produced in Times New Roman (a proportionally-spaced typeface), 14-point type and contains 6961 words (based on the Microsoft Word 2010) word processing system word count function (not including those parts not required to be counted).

/s/ Shana De Caro
Shana De Caro

CERTIFICATE OF COMPLIANCE WITH LOCAL RULE 31.1(C)

I further certify that the text of the electronic brief is identical to the text of the paper copies mailed to the Court pursuant to Local Rule 31.1(b) (3). I further certify that the electronic file of this brief was scanned with VIPRE anti-virus software and that no virus was detected.

/s/ Shana De Caro
Shana De Caro

CERTIFICATE OF BAR MEMBERSHIP

I certify pursuant to Local Appellate Rule 46.1 that both Shana De Caro & Michael V. Kaplen, counsel for amicus curiae, were admitted to the Bar of the United States Court of Appeals for the Third Circuit on June 19, 2015 and are members in good standing of the Bar of this Court.

/s/ Shana De Caro
Shana De Caro

/s/ Michael V. Kaplen
Michael V. Kaplen

CERTIFICATE OF SERVICE

I certify that on August 20, 2015 a true and correct copy of the foregoing brief was served on counsel for all parties to this appeal, via CM/ECF, pursuant to Third Circuit Rule 25.1(b), who are CM/ECF Filing Users who will be served electronically by the Notice of Docket Activity and by U.S. Postal Service, Priority mail on Pro Se appellant, Darren Carrington, 14097 Montfort Court, San Diego, CA. 92128 and Antonio G. Hernandez, 4 Southeast 1st Street, 2nd Floor, Miami, FL. 33131.

/s/ Shana De Caro
Shana De Caro