

Pediatric Traumatic Brain Injury and Burn Patients in the Civil Justice System: The Prevalence and Impact of Psychiatric Symptomatology

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The goal of this research was to conduct an assessment of psychopathology in plaintiffs following pediatric traumatic brain injury (TBI) and burns and its relationship to awards of total compensatory damages. Childhood TBI ($n = 43$) and burn ($n = 51$) plaintiffs were ascertained through a survey of the U.S. civil justice system involving a review of judicial opinions and verdict reporters in cases that had resulted in an award of compensatory damages in all states from 1978 to 1988. Narrative summaries, drawn from these sources with supplemental information from counsel of record, where possible, were prepared. Psychiatric and disability ratings were made from the summaries, blind to award data. Outcome measures were the pattern and prevalence of psychiatric disorders and their correlation with the awards. It was found that psychiatric disorders, which were almost exclusively internalizing disorders (e.g., anxiety), were present in approximately 25 percent of the subjects in each group. Psychiatric symptoms were not related to the award amount. Significantly greater awards in the TBI group were accounted for by greater disability measures. Physical disability and total disability (including physical and quality of life limitations) were significantly and independently correlated with the award. It is concluded that the prevalence of psychiatric disorders in childhood TBI and burn plaintiffs is similar to that found in TBI and burn subjects in clinical studies. Distribution of disorders is atypical in that externalizing disorders (e.g., attention deficit/hyperactivity disorder) were not commonly reported for either class of injuries. Awards are strongly correlated with disability variables reflecting mainly the severity of physical injury. Internalizing psychopathology may be underappreciated in decisions involving magnitude of awards following selected childhood injuries.

Traumatic brain injury (TBI) and burns are common childhood injuries. There are

100,000 hospitalizations annually in the United States following TBI of children

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under the age of 15.¹ Estimates of annual pediatric burn hospitalizations range from 24,000 to 40,000.²

The psychiatric consequences of TBI and severe burns, which we address in this article, may be associated with serious morbidity.³⁻⁸ Psychopathology following pediatric burns⁶ has been noted to include anxiety disorders such as over-anxious disorder and posttraumatic stress disorder (characterized by recurrent re-experiencing of the trauma, phobic avoidance, and heightened emotional arousal), which may follow terrifying, vividly remembered, life-threatening burns. Depressive symptomatology often occurs together with posttraumatic stress disorder. Generally, patients who have suffered severe TBI are unable to recall their accident and rarely experience posttraumatic stress disorder. Typical symptomatology following pediatric TBI, noted in clinical experience and in the literature,^{3, 4, 7, 8} may include disruptive (externalizing) behavior such as explosive outbursts, hyperactivity, tactlessness, and oppositional behavior. The study of psychopathology in burn and TBI victims is complicated because preinjury externalizing behaviors are important risk factors for these childhood injuries.^{2, 4, 9}

There is a vigorous debate concerning the influence of litigation on prolonging the presence of psychiatric symptoms, as

well as whether these symptoms are the direct result of brain injury following mild TBI in adults.¹⁰ There are ramifications of this debate for children, judging by the specific exclusion of subjects with pending litigation, from a major prospective behavioral study of childhood mild TBI.¹¹ There are no studies of children with injuries that focus on the effect of litigation on psychiatric symptomatology, although the issue has been addressed in passing. Two prospective studies of children following TBI^{3, 12} have noted that the involvement in litigation did not significantly influence behavioral outcome in the first one to two years of follow-up. In the case of burns, a Medline search failed to find any study of the association of litigation with psychiatric outcome following burns in children, which may be because this area is not very controversial or possibly has not yet been studied.

Furthermore, there are no empirical data regarding the influence of the presence of psychiatric symptoms, as presented by the plaintiff at trial, upon the size of compensatory damages in childhood injury cases. Injury severity has previously been shown to be significantly correlated with awards.¹³

In the present study, we have attempted to address the issues noted above by further analysis of the data from an earlier study.¹⁴ This earlier study was the only study of childhood injury and the court system that has investigated the relationship of the award of damages to "physical disability" and also to "total disability" (a broader concept that includes a quality of life assessment). Our primary goal was to provide an empirical description (derived

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from a complete review of a decade of judicial opinions and verdict reporters from all states of the United States) of psychiatric problems that occur among TBI and burn plaintiffs and to explore their relationship to the awards of total compensatory damages. Our specific hypotheses were as follows: (1) childhood burn plaintiffs compared with the childhood TBI plaintiffs will more likely have "internalizing" disorders and symptoms such as anxiety, posttraumatic stress, and depression; (2) TBI plaintiffs will have more "externalizing" disorders and symptoms such as disruptive behavior and poor social judgment; and (3) physical disability and psychiatric status, independently, will significantly predict the total award made to the injured plaintiff.

Methods

The Children's Study¹⁴ was a project designed to examine and improve judicial oversight of jury damages assessments. The study put forward a proposal for the comparative additur/remittitur review of awards for nonpecuniary harms and punitive damages. The methods of the study have been described in detail previously¹⁴ and will be reviewed only briefly here. The study reviewed eight categories of childhood injury court cases in the United States that had been reported in a judicial opinion or a jury verdict reporter. Sixty percent of the cases came from the West Reporting System and 40 percent from national jury verdict reporters such as American Trial Lawyers Association (ATLA) Law Reporter. The study included data on 461 injured infants and children (18 years of age or younger)

whose personal injury cases were tried and resulted in a finding of liability and a damages award. Ninety-seven percent of the cases were decided between 1978 and 1988; three percent were decided before 1978. Relevant cases were found in 43 states. Plaintiffs suffered one or more of the following injuries: amputations ($n = 48$), burns ($n = 51$), intracranial injury ($n = 166$), fractures ($n = 49$), lacerations ($n = 39$), paralysis from nerve or spinal injury ($n = 30$), hearing impairment or sight impairment ($n = 31$), or "miscellaneous" injuries ($n = 47$). In addition to the published record, the study obtained information (all within the public domain) in about one-half of the cases from counsel of record and prepared a separate file of information for each case. These data were coded into a data collection instrument that includes over 200 topics related to liability, injuries, and damages. Initial coding was done by law students who had received training by and worked under the supervision of senior staff or a law-trained supervisor. Upon completion, Dr. John MacQueen (University of Iowa; an experienced pediatrician) or a medically trained associate (a medical student or recent graduate) coded the medical aspects of the case, which included information on injuries, diseases, complications, medical treatment, and rehabilitation. The medical coding was entered both in the ICD-9* format and in customary legal categories.

Dr. MacQueen also assessed and coded both the severity of the plaintiff's physi-

*International Classification of Diseases (ed 2, rev 9), 1980.

cal disability from physical injury caused by the defendant's tortious behavior and the overall level of total disability resulting from the plaintiff's injury. To measure the level of physical disability, Dr. MacQueen defined 12 levels based on the severity and duration of the physical disability. The scale ranged from potentially latent symptoms from an injury, through minimal, minor, moderate, major, and severe categories, each of which could have a temporary or a permanent risk designation.

Total disability, in contrast, was defined as the impairment of the plaintiff's whole person, caused by the injury, which in aggregate leads to society's perception of an individual as being handicapped. This included specific consideration of the extent (severity and duration) to which the injuries impaired the child's future ability to engage in daily activities such as employment; domestic life; personal care; education and training; sports and leisure activities; passive leisure; and affectionate relationships, sex, and reproduction. The degree of total disability was coded on a five-point scale of degree (at risk, minor, moderate, major, severe). All coding of physical disability and total disability was done blind to the amount of the plaintiffs award for compensatory damages.

The award amount used in the analyses was the total compensatory damages corrected for inflation to correspond to a 1989 dollar value. Total compensatory damages compensate injured plaintiffs for both economic losses (e.g., lost income and medical expenses) and nonpecuniary harms (pain, suffering, and loss of enjoy-

ment of life). In legal parlance, the compensation for economic losses is known as "special" damages, while the compensation for nonpecuniary harms is known as "general" damages. For TBI cases, the general damages amounted to approximately 50 percent of the total compensatory damages, whereas in the burn cases, the corresponding proportion was approximately 90 percent.¹⁴ The reason for this disparity is that TBI cases commonly involve much larger medical and custodial expenses and significant loss of future income, while burn cases typically are associated with much pain, suffering (e.g., anguish and embarrassment) and loss of enjoyment of life, all of which relate to the general damages component of the total award. For each case, the student coders prepared a detailed narrative summary with the level of detail concerning the plaintiff's injuries and other consequences the data would allow.

The subpopulations of interest for this study are the burn cases ($n = 51$) and the traumatic brain injury cases ($n = 43$), which in turn is a subgroup of the larger group of intracranial injury cases that excludes anoxic birth injuries. The extent of burns ranged from approximately 9 to 85 percent of the body area. Severity of TBI was never less than moderate (e.g., otherwise uncomplicated subdural hemorrhage requiring surgical evacuation) and was very severe (e.g., prolonged period of coma or permanent neurological complications) in most cases. Therefore, there appeared to be no case in which significant psychiatric or cognitive symptomatology was being attributed to concussion, an area of controversy in adults.¹⁰

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The Appendix includes three illustrative narrative summaries from each of the two injury categories of interest.

Authors J.E.M. and W.A.B. coded each case for psychiatric disorder and symptoms. They trained on the unedited narrative summaries for plaintiffs from the "fracture" group. They developed a set of objective rules (available from the authors upon request) to guide the rating of the presence or absence of a psychiatric disorder, the type of psychiatric disorder, and the counting of symptoms. Generally there was insufficient detail to make a specific DSM-IV diagnosis.¹⁵ Therefore, to meet our criteria for a disorder, the constellation of symptoms had to be clinically significant; that is, evidence of associated impairment in social or school function must be present.

We categorized disorders as follows: (A) Internalizing disorders: (1) internalizing disorder, anxious subtype, in which the predominant symptoms were anxiety, phobias, separation anxiety, posttraumatic stress, and generalized anxiety; (2) internalizing disorder, depressive subtype, in which the predominant symptoms were of a depressive nature; (3) internalizing disorder, "nonspecific" subtype was used only when it was clear that an internalizing disorder was present but very few other data were available. If both anxiety and depressive symptoms were prominent, both subtypes were recorded rather than the "nonspecific" subtype; (B) Externalizing disorders: referred to disorders consistent with attention deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder, some adjustment disorders, and certain subtypes of

personality change disorder. The following disorders were not considered either internalizing or externalizing disorders: eating disorders, substance dependence, nonaffective psychoses. Personality change disorder could be classified as internalizing or externalizing disorder depending on the symptom profile (e.g., affective lability versus disinhibited/aggressive subtypes, respectively).

A research assistant edited the narrative summaries of the burn and TBI plaintiffs to include only psychosocial data and exclude all medical and legal data. Thus, blinded from injury group affiliation and dollar amount of the award, J.E.M. and W.A.B. independently rated the summaries for the presence or absence of psychiatric disorders and number of symptoms. Interrater reliability κ value for the presence of an internalizing disorder was .42, which is considered fair.¹⁶ The κ value could not be calculated for externalizing disorder because only one rater found any² cases. The interrater reliability measure for the symptom count, κ , was .68, which is considered good.¹⁶ We discussed discrepancies and reached a consensus rating regarding diagnoses and symptom counts. The statistical analysis was based on the consensus ratings. The apparent reason for the lower than desirable reliability for the diagnoses is related to the limited information provided in the summaries. One rater consistently rated the presence of a diagnosis in which only one or two symptoms were mentioned, while the other rater used a higher threshold. We resolved the discrepancy with the introduction of a consensus category of "possible disorder."

Table 1
Psychiatric Characteristics, Award Amounts, Disability Status, and Demographic Data for TBI and Burn Plaintiffs^a

	TBI (<i>n</i> = 43)	Burns (<i>n</i> = 51)
A. Plaintiff's psychiatric characteristics		
1. Definite psychiatric disorders % (<i>n</i>)	27.9% (12)	25.5% (13)
2. Possible psychiatric disorders % (<i>n</i>)	16.3% (7)	13.7% (7)
3. Definite plus possible psychiatric disorders % (<i>n</i>)	44.2% (19)	39.2% (20)
4. Internalizing disorders—definite % (<i>n</i>)	25.6% (11)	25.5% (13)
5. Externalizing disorders—definite	4.7% (2)	0% (0)
6. Symptom count—mean (SD)	.84 (1.10)	.96 (2.02)
7. With one or more symptoms % (<i>n</i>)	48.8% (21)	43.1% (22)
B. Plaintiffs' disabilities, age, and sex		
1. Physical disability rating***	8.93 (2.25)	7.27 (1.91)
2. Total disability rating*	3.30 (1.26)	2.76 (.70)
3. Age at injury	9.95 (4.99)	8.10 (5.46)
4. Sex (% male)	67.4	60.8
C. Jury awards		
1. Award: mean in thousands of dollars (SD)*	2,928 (4,849)	1,324 (1,970)
2. Log award (LAWARD): mean in thousands of dollars (SD)**	6.9 (1.6)	5.9 (2.0)

^a The differences in the damage awards and psychiatric ratings, as the case may be, between the two groups of cases were significant at the following levels: *.05; **.01; ***.001. Physical disability rating consists of 12 levels based on the severity and duration of the physical disability. The scale ranged from potentially latent symptoms from an injury (1–2) through minimal (3–4), minor (5–6), moderate (7–8), major (9–10), and severe (11–12) categories. The lower and higher ratings within each severity category refer, respectively, to a temporary and permanent risk designation. The total disability rating consists of five levels: at risk (1), minor (2), moderate (3), major (4), and severe (5).

We calculated the interrater reliability for the various psychiatric assessments by J.E.M. and W.A.B. using the κ correlation coefficient and transformed the raw dollar amount of the award to a log of the award (LAWARD) because of its large variance.

We compared the actual dollar awards and LAWARD in the two injury groups by independent sample *t* tests.

To assess the linking by juries of the psychiatric or psychosocial aspects of the cases to the LAWARD, we conducted bivariate correlation analyses of LAWARD and our two psychiatric measures. We also estimated their impact on award levels in linear multiple regression analyses

after controlling for physical disability, total disability, and injury category. The two psychiatric variables tested were ConsenSYM, the presence of at least one psychiatric *symptom* (consensus rating) and ConsenPD, the presence of a possible/definite psychiatric *disorder* by the consensus clinical significance rating, were used.

Results

Table 1 outlines the psychiatric and disability status, award amounts, and demographic data for TBI and burn plaintiffs. The mean interval from injury to award in both groups of subjects was approximately five years. These data

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demonstrate that the award, LAWARD, physical disability, and total disability were statistically significantly higher in the TBI group than in the burn group. Additionally, a correlational analysis for the entire cohort showed that neither of the major psychiatric measures we assessed was significantly correlated with LAWARD: ConsenSYM: $r = .0131$; $p > .77$; ConsenPD: $r = .0594$; $p > .56$. The corresponding correlations with LAWARD for the TBI group only were: ConsenSYM: $r = -.1299$; $p > .40$; ConsenPD: $r = -.1116$; $p > .47$. The corresponding correlations with LAWARD for the burn group only were: ConsenSYM: $r = .0818$; $p > .56$; ConsenPD: $r = .1541$; $p > .27$.

The linear regression analysis assessing the relative contributions of our psychiatric measure, ConsenSYM, and the measures for physical disability, total disability, and injury category (TBI versus burns) to LAWARD is presented in Table 2. The linear regression analysis was repeated with ConsenPD replacing ConsenSYM. The results for the psychiatric variables in both of these analyses were the same as in the bivariate correlational analyses reported above. Specifically, ConsenSYM did not have a significant effect nor did ConsenPD when it replaced ConsenSYM in the regression.

Table 2 demonstrates the independent and significant contributions of the physical disability and total disability constructs to the LAWARD. Of interest as well is that injury category (TBI versus burns) is no longer statistically significant when the severity of disability is controlled.

Table 2
Linear Regression Analysis Predicting the LAWARD Following Childhood Burns ($n = 51$) and TBI ($n = 43$)^{a,b}

Variable	B	<i>t</i>	<i>p</i>
Total disability	.5445	3.263	<.002
Physical disability	.4215	5.180	<.0001
Injury category	.0431	.138	>.89
ConsenSYM	.2254	.773	>.44

^a Independent variables: ConsenSYM; total disability; physical disability; injury category. Dependent variable: LAWARD (log of the award). Adjusted R^2 , .46537.

^b B, estimated parameter; ConsenSYM, consensus rating of subjects' psychiatric symptoms (those with symptoms (category 1) versus those without symptoms (category 0)). The Spearman correlation relationship of physical disability to total disability for the entire cohort, TBI group only, and burn group only were, respectively, $r = .54$; $p < .001$; $r = .61$; $p < .001$; $r = .35$; $p < .05$.

Discussion

Our main findings concerned (1) the pattern of psychopathology documented in plaintiffs who had suffered a TBI or a burn and (2) the factors that predicted the award of total compensatory damages.

Psychopathology in TBI and Burn Plaintiffs Our main finding was that pediatric TBI and burn plaintiffs frequently had psychiatric problems, which is consistent with the literature. Tarnowski¹⁷ has critically reviewed the findings from studies of long term psychological consequences of pediatric burns. Early reports, mostly with significant methodological problems, suggested that the majority of children who suffered burns had evidence of serious adjustment problems at follow-up.¹⁷ More recent studies that employed standardized assessment methods found lower rates of psychopathology.¹⁷ Several studies have noted rates of psychopathology in the realm of 15 to 20 percent.¹⁷

These rates are not substantially different from those from the plaintiffs we studied (Table 1). However, Stoddard *et al.*, utilizing a standardized interview, found that 73 percent of burn subjects selected from consecutive admissions to a tertiary care hospital met criteria at the time of the assessment (at least six months following injury) for a psychiatric disorder versus 40 percent of a control group selected randomly from children enrolled in a health maintenance organization.⁶ Our finding was that 25 percent (13 of 51) of burn plaintiffs had a definite psychiatric disorder and 39 percent (20 of 51) had at least a possible psychiatric disorder. In the case of severe TBI, we would have expected a rate of psychiatric disorder of approximately 50 to 69 percent.^{4,7} We found that the rate of definite and possible psychiatric disorders in this group were 28 percent (12 of 41) and 16 percent (7 of 41), respectively, for a total of 44 percent (19 of 41).

In addition, the blindly rated TBI and burn groups had a very similar profile of psychopathology consisting almost exclusively of internalizing disorders (see Table 1). The finding of a high percentage of internalizing disorders among burn plaintiffs is consistent with available psychiatric data.^{5,6} The prevalence of definite internalizing disorders (26%) following TBI also is consistent with previous studies.^{4,7}

However, the frequency of externalizing disorder is substantially lower for both groups than is suggested by the literature. The complete absence of externalizing disorders in the burn group is at odds with previous findings.⁶ The rarity

of externalizing disorders among the TBI group (4.7%) is different than that found in psychiatric studies of childhood TBI in prospective cohorts,^{4,8,9} retrospective cohorts,^{7,18} specialty pediatric TBI clinics,¹⁹ a child psychiatry outpatient clinic,²⁰ and a child psychiatry inpatient unit.²¹ Possible explanations for this surprising finding include the following. (1) The discrepancy between what we expected to see and what we observed is a statistical artifact caused by a sampling bias against the presence of externalizing disorders in the case selection process that results in a case being reported in a judicial opinion or verdict reporter. We believe that the sampling bias explanation is highly unlikely, since cases got into the sample (i.e., were published) because of high verdicts and/or close legal issues, which should be random with respect to the distribution of psychopathology. (2) Poor data account for the disparity. This is also unlikely because the quality of the data did not prevent the documentation of the anticipated prevalence of internalizing disorders that appear in the data at the rate we would expect. (3) It is possible that the information concerning externalizing disorder was not presented in court even though it existed in the injured children. Such deemphasis on the part of legal counsel for plaintiffs with externalizing symptoms may occur if a pattern of disruptive behavior existed before the injury, which could permit impeachment of the plaintiff's claim that his/her injury was "caused" by the defendant's tortious conduct. Evidence of externalizing disorders could also make the jury less sympathetic to the plaintiff's

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claim of damages. Although it is unlikely that plaintiff's counsel would selectively deemphasize disruptive behavior of the plaintiff, particularly if the causal link between such behavior and the defendant's actions are clear, causation issues of this sort are often unclear. This inference draws strength from evidence in the narrative summaries that the injuries in 16 percent (8 of 51) of burn plaintiffs and 19 percent (8 of 43) of TBI plaintiffs were the result of unnecessary and impulsive risk taking by the child. Such behaviors are common in children with externalizing disorders and a potent and prevalent risk factor for childhood TBI and burns.^{2, 4, 9} Furthermore, these are similar percentages to the expected rate of preinjury externalizing disorders in this population. In addition, in 10 percent (5 of 51) of burn cases, and 9 percent (4 of 43) of TBI cases, the award was reduced by the juries because the injured plaintiffs were partially responsible for causing the accidents. Clinical experience suggests that such behavior would likely persist and not be inhibited in the future, which makes it more surprising that we do not see emphasis in case narratives on postinjury externalizing disorder. 4) It is possible that the information was presented in court but was not reported in judicial opinions by the court or by verdict reporters prepared by attorneys. This seems implausible. Overall, we think that scenario 3, as detailed above, is the most likely one.

Factors Predicting the Award Another important finding was that the plaintiffs' psychiatric status was not significantly related to the magnitude of the

awards (specifically the log of the award) following childhood TBI and burns. Rather, the awards were independently and significantly predicted by the medical expert's measures of both physical disability and total disability. Also, the significantly higher awards to TBI plaintiffs were accounted for by their significantly more severe disability ratings. These findings suggest that, in general, jury damage awards are substantially influenced by the levels of disability—both physical and total—in cases. This finding is consistent with the empirical literature on the determinants of damages in personal injury cases.¹³

The dominating influence of physical disability and total disability on award levels may reflect a ceiling effect in these plaintiffs with very serious injuries. Specifically, physical limitations that impair the quality of life for plaintiffs may be so severe that the contribution of psychological problems to the overall (physical and psychological) limitation may seem trivial. Frequently the cases report only total compensatory damages, which mask details regarding the general damages component of the award for nonpecuniary harms. In our sample of 94 cases, only three mentioned specific psychiatric symptomatology as an explanation for the case's compensatory damages, and even then it was not clear how much the award had been influenced by this factor.

The above findings must be considered within the limits of the methodology employed. (1) As stated earlier, data were not sufficiently detailed to allow for the application of DSM-IV diagnoses.¹⁵ This is in part due to the lack of first-hand

observation of the trials or psychiatric interviews. (2) Another caution in the interpretation of these data is that our sample of published cases may not be representative of the pediatric TBI or burn lawsuits in the United States that have been adjudicated but not reported or settled without trial. However, we do not consider it plausible that our two principal empirical findings (the infrequency of externalizing disorders and a lack of correlation between our psychiatric measures and jury awards) are an artifact of either of these two limitations.

The findings suggest that, in general, total compensatory damage awards may not be greatly influenced by internalizing psychiatric symptomatology such as anxiety and depression. This type of symptomatology is internal rather than overt and may therefore be underappreciated or viewed with suspicion in the decision process involving magnitude of awards following selected childhood injuries. However as noted, psychiatric symptoms may be of some importance in certain cases. Further psychiatric research of a prospective nature following childhood injuries is essential in broadening our understanding of the determinants of outcome. Education of the public, legal professionals, and even members of the medical profession regarding the disabling consequences of psychiatric disorders in general, and injury-related psychiatric disorders in particular, is necessary.

Conclusions

Psychiatric complications frequently occur in children who have suffered TBI and severe burns. However, studying ju-

dicial reviews and verdict reporters may not be the best way to estimate the true prevalence of these complications because plaintiff attorneys may overstate internalizing symptoms and understate externalizing symptoms.

There is great variation in the dollar amount of compensatory damages in these jury awards. The variation is related, for the most part, to the degree of physical disability or total disability. Total compensatory awards may not be influenced much by psychiatric symptoms. The authors recommend education of the public, legal professionals, and even members of the medical profession regarding the disabling consequences of psychiatric disorders in general and injury-related psychiatric disorders in particular.

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Appendix: Examples of Injuries Suffered by Plaintiffs[†]

Cases 1, 2, and 3 are representative of the top, middle, and bottom tertile total compensatory damages for burn plaintiffs. Cases 4, 5, and 6 represent the corresponding tertiles for TBI plaintiffs. Cases were selected because of the presence of psychiatric symptoms.

Case 1: An 8-year-old male suffered severe facial burns resulting in permanent scarring and psychological damage when his apartment was fire-bombed. There had been two arson attempts in the three days prior to the fire-bombing, and the plaintiff's mother alleges that the police promised

[†]All awards are in 1989 dollar values.

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protection and failed to provide it. Total compensatory damages were \$10,479,820.

Case 2: A 12-year-old male suffered extensive second and third degree burns of his chest and left upper arm, which caused permanent scarring when his acrylic shirt melted in a fire and adhered to his skin. The fire occurred when the boy's father splashed lantern fuel on a campfire causing an explosion. The plaintiff was hospitalized for one month. He suffered from depression due to his hospitalization and pain. He would speak little. He continues to suffer from psychological problems including embarrassment and humiliation. He sued the manufacturer of the fabric, alleging defective design. The jury found the defendant strictly liable for a design defect. Total compensatory damages were \$864,290. The jury reduced the award by 17 percent for plaintiff's comparative negligence.

Case 3: A 13-month-old female was with her mother and brother at the home of her grandmother. The plaintiff knocked a can of paint thinner off a table where the grandmother had placed it. The paint thinner came into contact with the pilot light of a water heater and ignited, causing serious burns to the child's hands and face. She was hospitalized for seven days, and treatments continued for another four weeks. She had some scarring of hands, lips, nose, and cheeks, but these injuries had improved by the time of trial. She had trouble eating and sleeping and began having nightmares as a result of "posttraumatic stress disorder, chronic and delayed." The jury found the grandmother negligent in placing the can of paint thinner on the table. However, the jury did not find her the proximate cause of the accident. Total compensatory damages were \$9,050.

Case 4: A 15-year-old male sustained a closed head injury when the front quick release wheel of his bicycle disengaged from the fork as he was riding over a railroad crossing maintained by the defendant. He required three surgeries to remove accumulated hematomas and had one-third of the right side of his damaged brain removed to relieve pressure. He developed problems with inappropriate, uninhibited behavior. Total compensatory damages were \$9,489,930.

Case 5: A 17-year-old male, the leader of his senior high school class, who was a passenger in a car driven by Defendant 2, was struck from the rear by Defendant 1. The boy had a severe permanent brain injury, which included a residual left

hemiparesis, and in addition had a fractured femur. He exhibited an altered personality, permanent impairment in speech and coordination, permanent defects in spatial perception, and impairment of thinking, coping, and control of mood and impulse. He is permanently and severely incapacitated from performing gainful employment and from caring for himself. The injuries have had a devastating effect on the quality of his life, his appearance, demeanor, emotional stability, and greatly reduced his intellectual capacity. Plaintiff's theory against Defendant 1 consisted of speeding and failure to yield; against Defendant 2, failure to yield and poor judgment. The jury found Defendant 1 liable. Total compensatory damages were \$827,450.

Case 6: A 10-year-old male had a lead projectile pierce his skull and lodge in the right hemisphere of his brain when another 10-year-old fired an air rifle at him while the two children were target shooting. The plaintiff had been standing behind a tree out of the direct line of fire. He poked his head out and the defendant pointed the rifle at him and told him to "quit it." The defendant fired at the target. The plaintiff again poked his head out and the defendant pointed the rifle at him and fired, striking him behind the right eye. The plaintiff required a craniotomy and was hospitalized for eight days. He recovered physically but suffered an "anxiety reaction," expressing fear of being mentally retarded. This disturbance required two psychiatric consultations. Plaintiff suffered partial hearing loss, which may have resulted from the accident. His school work never matched up to his preaccident level. The injured child's parents brought suit on his behalf against the parents of the other child, alleging strict liability for the act of the child. The defendants claimed contributory negligence and assumption of risk. Trial court held the defendants liable. The total compensatory damages were \$42,120.

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