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UNINTENDED CONSEQUENCES OF MEDICAL MALPRACTICE DAMAGES CAPS

CATHERINE M. SHARKEY*

Previous empirical studies have examined various aspects of medical malpractice damages caps, focusing primarily upon their overall effect in reducing insurance premium rates and plaintiffs' recoveries, and (to a lesser degree) upon other effects such as physicians' geographic choice of where to practice and the "anchoring" effect of caps that might inadvertently increase award amounts. This Article is the first to explore an unintended crossover effect that may be dampening the intended effects of caps. It posits that, where noneconomic damages are limited by caps, plaintiffs' attorneys will more vigorously pursue, and juries will award, larger economic damages, which are often unbounded. Implicit in such a crossover effect is the malleability of various components of medical malpractice damages, which often are considered categorically distinct, particularly in the tort reform context. This Article challenges this conventional wisdom.

My original empirical analysis, using a comprehensive dataset of jury verdicts from 1992, 1996, and 2001, in counties located in twenty-two states, collected by the National Center for State Courts, concludes that the imposition of caps on noneconomic damages has no statistically significant effect on overall compensatory damages in medical malpractice jury verdicts or trial court judgments. This result is consistent with the crossover theory. Given the promulgation of

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noneconomic damages caps, the crossover effect may also partially explain the recently documented trend of rising economic (as opposed to noneconomic) damages in medical malpractice cases.

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INTRODUCTION

A San Francisco jury recently awarded a nine-year-old boy \$70.9 million in damages after finding a hospital and medical clinic negligent for failing to diagnose his metabolic disease.¹ The award, although not stratospheric, was plainly large; in fact, it was likely one of the largest awarded in 2003 in the State of California (a state not known for modest jury awards).² As is fairly typical in medical malpractice cases,³ however, the award contains no punitive damages—the usual driving force in multimillion (or billion) dollar awards. Moreover, it was rendered in the state that has enacted the Medical Injury Compensation Reform Act (MICRA).⁴ Under this 1975 progenitor of medical malpractice damages caps, a medical malpractice plaintiff may collect no more than \$250,000 in noneconomic, or pain-and-suffering, damages.⁵

¹ Cook v. Stanford Health Servs., No. Civ. 324905, 2003 WL 23519264 (Cal. Super. Ct. S.F. County Sept. 26, 2003).

² Pam Smith, *Jury Awards Boy, 9, \$70.9 Million*, NAT'L L.J., Oct. 6, 2003, at 4 (“The award could be among the biggest in California this year. In 2002, the top 10 jury awards were about \$70 million or more . . .”).

³ See *infra* notes 102–06 and accompanying text.

⁴ Medical Injury Compensation Reform Act (MICRA), ch. 1, 1975 Cal. Stat. 3949 (codified as amended at CAL. CIV. CODE § 3333.2 (West 1997)).

⁵ MICRA imposed a \$250,000 (non-inflation-adjusted) cap upon recovery of noneconomic damages in medical malpractice cases. The cap has not been modified since MICRA’s enactment in 1975. *Id.*

Conventional wisdom holds that “[t]here is . . . no question [that] the MICRA cap is systematically reducing compensation and substantially reducing the damages paid by culpable defendants.”⁶ MICRA has served as a model for other states’ adoption of damages caps as part of successive tort reform waves in the 1970s, 1980s, and 2000s, and is in fact the blueprint for President Bush’s recent federal medical malpractice reform initiative.⁷ Since 2000, eight states—Florida, Georgia, Mississippi, Nevada, Ohio, Oklahoma, Texas, and West Virginia—have enacted substantial tort reform legislation that includes caps for noneconomic damages in medical malpractice lawsuits.⁸ In May 2004, the U.S. House of Representatives passed the HEALTH Act of 2004, which, like MICRA, caps noneconomic damages at \$250,000.⁹ And more recently, President Bush touted the \$250,000 cap as the solution to a “judicial system [that] is out of control.”¹⁰

⁶ J. CLARK KELSO & KARI C. KELSO, *JURY VERDICTS IN MEDICAL MALPRACTICE CASES AND THE MICRA CAP* 20 (1999).

⁷ See Lauren Elizabeth Rallo, *The Medical Malpractice Crisis—Who Will Deliver the Babies of Today, the Leaders of Tomorrow?*, 20 J. CONTEMP. HEALTH L. & POL’Y 509, 526 (2004); Editorial, *Malpractice Reform Is Not a Panacea*, S.F. CHRON., Mar. 12, 2003, at A24.

⁸ See *infra* Appendix I (“Recent substantive tort reform legislation”) (discussing, in detail, recent reforms enacted in these states). Moreover, the 2004 election spawned a resurgence of state legislative reform efforts. See James Dao, *A Push in States to Curb Malpractice Costs*, N.Y. TIMES, Jan. 14, 2005, at A21 (“As state legislative sessions open across the country this week, Republican governors and lawmakers in many states are mounting major campaigns to control medical malpractice insurance premiums by limiting civil litigation.”).

⁹ The Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2004, H.R. 4280, 108th Cong. (2004), passed the House of Representatives by a margin of 229 to 197, see Final Vote Results for Roll Call 166, at <http://clerk.house.gov/evs/2004/roll166.xml> (May 12, 2004). It has been placed on the Senate Legislative Calendar. See David E. Rosenbaum, *Debate on Malpractice Looms for Senate*, N.Y. TIMES, Dec. 20, 2004, at A20 (“[M]alpractice is likely to be one of the first of President Bush’s campaign issues that Congress takes up in the new year.”). In 2003, the House of Representatives approved the same legislation—the HEALTH Act of 2003—to cap noneconomic damages at \$250,000. H.R. 5, 108th Cong. (2003); see also *House Gives Nod to Medical Liability Bill with Federal Caps on Noneconomic Damages*, 71 U.S.L.W. 2586, 2587 (Mar. 18, 2003). That bill failed to pass in the Senate. See Rosenbaum, *supra*.

¹⁰ Press Release, White House, President Discusses Medical Liability Reform (Jan. 5, 2005), <http://www.whitehouse.gov/news/releases/2005/01/print/20050105-4.html>; see also Ceci Connolly, *Cheney Urges Cap on Malpractice Awards: Proposal Aims to Improve Health Care*, WASH. POST, July 20, 2004, at A6 (quoting Vice President Dick Cheney, who promoted \$250,000 cap as “the central tenet of the White House program to improve access, affordability and quality of care”); Stephanie Francis Ward & Siobhan Morrissey, *Tort Reform Gaining Traction*, A.B.A. J. EREP. para. 2 (Nov. 5, 2004) (“Tort reform figured prominently in the Nov. 2 election, and Americans seem to be embracing it, particularly in medical-malpractice cases.”), at <http://www.abanet.org/journal/ereport/nov5tort.html>.

A fair assessment of the present state of affairs is that “[t]he [battle] lines are clearly drawn between organized medicine pushing for limits on liability and trial attorneys defending the tort system.”¹¹ While the stakes are high and the battle fierce, the conventional wisdom on caps has yet to be challenged. It is accepted, largely on faith, that caps on noneconomic damages will have the intended effects sought by tort reformers—the systematic reduction of medical malpractice awards—to the advantage of doctors, hospitals, and insurers, and to the corresponding detriment of medical malpractice victims (and their attorneys).

With this in mind, perhaps the most striking feature of the recent \$70.9 million San Francisco jury award is that the jury awarded only \$500,000 in noneconomic damages.¹² The remaining \$70.4 million was awarded for economic damages, specifically for future medical and attendant services, special education, and rehabilitative care (\$56.3 million), and for loss of future earnings (\$14.1 million).¹³ Neither MICRA nor President Bush’s federal initiative, each of which allows for unlimited economic damages, appreciably limits this plaintiff’s substantial medical malpractice recovery.¹⁴ This single example begs for an examination of larger questions. To what extent might plaintiffs’ attorneys, when faced with legislative caps on noneconomic damages, steer clear of the caps by recharacterizing components of their clients’ “pain and suffering” and other noneconomic damages as “hard” economic damages? Put differently, to what extent are lawyers now choosing to emphasize to the jury the plaintiff’s future medical bills, or the dollar value of the services once provided by the plaintiff, rather than the pain suffered by that plaintiff in the course of his injuries or by the plaintiff-decedent’s next of kin upon the loss of a loved one? Conversely, do plaintiffs’ attorneys in states without caps focus more on noneconomic damages because they are relatively easier to secure? Finally, what are the implications, not only for tort reform efforts, but, more generally, for how juries might award damages in medical malpractice cases?

¹¹ RANDALL R. BOVBJERG & BRIAN RAYMOND, KAISER PERMANENTE, PATIENT SAFETY, JUST COMPENSATION AND MEDICAL LIABILITY REFORM 1 (2003), available at http://www.kpihp.org/publications/briefs/patient_safety.pdf.

¹² *Cook v. Stanford Health Servs.*, Civ. No. 324905, 2003 WL 23519264 (Cal. Super. Ct. S.F. County Sept. 26, 2003) (awarding \$200,000 for past noneconomic injury and \$300,000 for future injury).

¹³ The jury gave these amounts a present cash value of \$6.3 million and \$1.8 million, respectively, which represents how much money would have to be invested now to pay the total verdict over the plaintiff’s lifetime. *Id.*

¹⁴ MICRA would reduce only the noneconomic damages, from \$500,000 to \$250,000. See *supra* note 5.

Each of these questions, in turn, suggests that before the battle lines become irrevocably drawn, it might be prudent to examine critically the effects—both intended and unintended—of medical malpractice damages caps. To do so, I begin Part I with an analysis of the theoretical and political justifications for medical malpractice damages caps. Part I also includes a survey across the fifty states of the landscape of legal reforms instituting medical malpractice damages caps. I then explore in Part II the conventionally studied consequences of noneconomic damages caps upon jury awards, including both the intended effect of reducing the size of plaintiffs' recoveries, as well as the unintended anchoring effect, whereby the cap amount serves as a benchmark for the jury's damages determination. Part III introduces the possibility of an additional unintended consequence: the "crossover effect," whereby caps upon noneconomic damages lead to increases in economic damages. Part IV sets out a preliminary empirical test of such a crossover effect, where I attempt to measure the significant factors affecting damages awards and, in particular, to isolate the effects of noneconomic damages caps upon damages awards. I present two main findings. First, the severity of injury has a positive and statistically significant effect upon plaintiffs' recovery of compensatory damages, which comports with previous studies. Second, noneconomic damages caps have no statistically significant effect on the size of overall compensatory damages verdicts or final judgments, which is far more surprising, yet in keeping with the crossover effect. I conclude with some thoughts on the wider implications for the most pressing issues in medical malpractice reform.

I

LANDSCAPE OF MEDICAL MALPRACTICE CAPS

A majority of states have imposed some kind of cap or limitation on the amount of damages that plaintiffs can recover in a lawsuit.¹⁵ Sometimes these caps apply to all civil suits; more frequently, however, they apply only to medical malpractice suits.¹⁶ This Part explores the theory and practice of medical malpractice damages caps. I investigate the theoretical and political justifications for damages caps and attempt to look beyond the rhetoric of "tort reform" to evaluate the existing empirical evidence of the effects of caps upon damages awards and the ripple effects upon the insurance and health care industries. Against this backdrop, I present a survey of state damages

¹⁵ See *infra* Appendix I.

¹⁶ See *id.* (listing damages caps under subcategories of "Medical Malpractice" and "General Civil").

caps, highlighting variation in terms of which type of damages—noneconomic, total compensatory, or punitive—the cap aims to restrict.

A. Theory and Politics

An understanding of both theory and politics is necessary to appreciate fully the justifications for caps on medical malpractice damages. Earlier reform efforts provide some illustrative examples. MICRA, enacted in 1975, was among the first responses to the perceived medical malpractice insurance crisis of the early 1970s.¹⁷ The constitutionality (under both the federal and state constitutions) of this cap on noneconomic medical malpractice damages was upheld by the courts in part precisely because it was a response to dramatic increases in medical malpractice insurance premium rates that the California State Legislature reasonably could have believed were having an adverse impact upon medical care.¹⁸ In reality, however, insurance rate regulation, rather than MICRA, may have been key in keeping premiums down in California, or so a June 2003 General Accounting Office (GAO) Report suggests.¹⁹ In a similar vein, the Ohio Supreme Court, in 1991, overturned a provision establishing a \$200,000 cap on noneconomic damages in medical malpractice cases, finding no rational connection between prohibiting awards greater than \$200,000 and the law's goal of reducing insurance rates.²⁰ The court, moreover, was persuaded that it was arbitrary to impose the

¹⁷ See *supra* notes 4–5 and accompanying text.

¹⁸ California state and federal courts determined that reducing the medical malpractice insurance rates to safeguard the availability of health care was plainly a legitimate state purpose. *Hoffman v. United States*, 767 F.2d 1431, 1437 (9th Cir. 1985) (“Since these high [medical malpractice insurance] rates were adversely affecting the quality of the medical services provided to the people of California, reduction of the rates was a legitimate state purpose.”); *Fein v. Permanente Med. Group*, 695 P.2d 665, 680 (Cal. 1985) (“[I]n enacting MICRA the Legislature was acting in a situation in which it had found that the rising cost of medical malpractice insurance was posing serious problems for the health care system in California . . .”).

¹⁹ U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GAO-03-702, *MEDICAL MALPRACTICE INSURANCE: MULTIPLE FACTORS HAVE CONTRIBUTED TO INCREASED PREMIUM RATES* 42 (2003) [hereinafter *GAO REPORT* (June 2003)], available at www.gao.gov/new.items/d03702.pdf. The study notes that Proposition 103, passed in a 1988 referendum, contained “a 20 percent rollback of prices for all property-casualty insurers (including medical malpractice insurers), a 1-year moratorium on premium rate increases, and a provision granting consumers the right to challenge any commercial insurance rate increases greater than 15 percent.” *Id.*

²⁰ *Morris v. Savoy*, 576 N.E.2d 765, 770–71 (Ohio 1991) (holding OHIO REV. CODE ANN. § 2307.43 unconstitutional).

entire cost of the supposed benefit to the public on the class most seriously injured by medical malpractice.²¹

As these examples make clear, medical malpractice damages caps aimed primarily at noneconomic damages are controversial. In this Part, I trace the theoretical and institutional criticisms of juror-awarded noneconomic damages. The move to cap these damages may be seen as a practical outgrowth of such criticisms. Even more influentially, however, caps have been justified by their alleged impact upon insurance premium rates and the concomitant effects of lower insurance rates upon the provision of medical care services. This Part will also explore these two effects, in the context of the insurance and health care industries.

1. Tort Damages: Goals and Criticisms

Like standard tort damages, medical malpractice damages are divided into compensatory damages, which include economic (also referred to as “special” or “pecuniary”), noneconomic (“general” or “nonpecuniary”), and punitive damages. In the medical malpractice context, economic damages include lost wages, medical expenses (past and future), rehabilitation expenses, and other financial costs. Noneconomic damages include past and future subjective damages such as pain and suffering, physical impairment, disfigurement, marital losses, anguish, and inconvenience.²²

While disputes arise over how to compensate for future losses (how to predict future earnings, working life expectancy, etc.) and jurisdictions differ over how to calculate economic damages (present discounted value, taxation of tort recoveries, medical and general

²¹ *Id.* at 771. By contrast, a recently enacted Ohio law limits the award of noneconomic damages in medical malpractice cases to \$350,000, with a provision allowing the cap to rise to \$1 million, depending on the severity of injuries and the number of plaintiffs involved in the suit. Act of Dec. 10, 2002, No. S-281, 2003 Ohio Legis. Serv. L-3250, L-3265–67 (Banks-Baldwin) (codified at OHIO REV. CODE ANN. § 2323.43 (West 2004)); see also *infra* Appendix I note iv.

²² These noneconomic damages are often collectively referred to as “pain and suffering” damages. As Neil Vidmar and Leigh Anne Brown explain:

The general damages portion of damages awards is often labeled “pain and suffering,” but this is an inappropriate label, because some of these elements of damages involve injuries that are not strictly “pain and suffering.” Rather, they include such injuries as severe disfigurement, emotional distress, mental anguish, loss of parental guidance or parental companionship, loss of enjoyment of life and loss of consortium.

Neil Vidmar & Leigh Anne Brown, *Tort Reform and the Medical Liability Insurance Crisis in Mississippi: Diagnosing the Disease and Prescribing a Remedy*, 22 MISS. C. L. REV. 9, 27–28 (2002).

inflation),²³ economic damages on the whole remain relatively uncontroversial.²⁴ By contrast, “[t]he ‘pain and suffering’ component of jury awards represents one of the most criticized aspects of jury behavior.”²⁵

The theoretical critique of noneconomic damages awards stems from their relationship to the primary objectives of tort law: deterrence and compensation (or insurance).²⁶ Two distinct issues engender debate: (1) whether tort law in fact serves a deterrence goal;²⁷ and (2) if so, what are the implications for damages. From an

²³ MAXWELL J. MEHLMAN, PROJECT ON MED. LIAB. IN PA., RESOLVING THE MEDICAL MALPRACTICE CRISIS: FAIRNESS CONSIDERATIONS 49 (2003) (“Jurisdictions differ over how to calculate economic damages, taking various stances on whether to discount future lost income to present value, how to take account of the fact that tort recoveries are not taxable income, and what to do about medical and general inflation.”), available at <http://mediabilitypa.org/research/mehlman0603/MehlmanReport.pdf>.

²⁴ As discussed further below, economic damages may warrant much greater scrutiny than they are given at present. See *infra* Parts III.B and IV.D.

²⁵ Neil Vidmar, *Pap and Circumstance: What Jury Verdict Statistics Can Tell Us About Jury Behavior and the Tort System*, 28 SUFFOLK U. L. REV. 1205, 1224 (1994); see also NEIL VIDMAR, MEDICAL MALPRACTICE AND THE AMERICAN JURY: CONFRONTING THE MYTHS ABOUT JURY INCOMPETENCE, DEEP POCKETS, AND OUTRAGEOUS DAMAGE AWARDS 7 (1995).

²⁶ See, e.g., MEHLMAN, *supra* note 23, at 47 (“The current malpractice system aims to compensate malpractice victims, deter future injuries, and punish providers who injure patients, all of which are appropriate objectives of a fair malpractice system.”). Economists substitute “optimal insurance” for compensation in situations where the victim is in a quasi-contractual relationship with the tortfeasor, in which case it is compensation for which the victim himself or herself pays.

The vast majority of medical malpractice victims do not in fact seek compensation through litigation: Studies demonstrate that “perhaps as few as 3 percent and no more than approximately 30 percent” of individuals with valid claims against health care providers initiate lawsuits. BOVBJERG & RAYMOND, *supra* note 11, at 7 (discussing, inter alia, comprehensive Harvard Medical Practice Study, which estimated that only one in fifteen actual cases of medical negligence resulting in serious injury or death in New York State in 1984 was eventually litigated). The Harvard Medical Practice Study showed that there were about as many suits as there were real injuries, only the overlap between the truly injured and those who sued was shockingly low. See generally *id.* Commentators have offered a variety of explanations for the low rate of litigation of meritorious claims, including patients’ lack of awareness of their injuries and the great expense involved in pursuing a medical malpractice case. See, e.g., Patricia M. Danzon, *Liability for Medical Malpractice*, J. ECON. PERSP., Summer 1991, at 51, 56.

²⁷ Tort law has increasingly focused on regulating or deterring conduct that creates risks of injuries, albeit within a system that is also aimed at determining individual responsibility for personal injuries. See generally GUIDO CALABRESI, THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS (1970). The deterrence objective likewise looms large in the specific context of medical malpractice. See Daniel Kessler & Mark McClellan, *Do Doctors Practice Defensive Medicine?*, 111 Q.J. ECON. 353, 356 (1996) (“In addition to patient compensation, the principal role of the liability system is to induce doctors to take the optimal level of precaution against patient injury.”); Michelle M. Mello & Troyen A. Brennan, *Deterrence of Medical Errors: Theory and Evidence for Malpractice Reform*, 80 TEX. L. REV. 1595 (2002).

economic standpoint at least, medical malpractice is like any other tort where potential injurers are in a market or contractual relationship with victims.²⁸

With respect to deterrence, some law-and-economics commentators argue that, at least in the quasi-contractual realm of products liability (and by extension, medical malpractice), tort liability is not needed to regulate care because customers know the quality (and inherent risks) of the goods and producers can create signals through prices (i.e., lower-priced goods carry more risk).²⁹ In that case, damages serve mainly to insure against injuries. And the justification for compensating noneconomic losses is weak, it is argued, because people facing a risk of serious permanent injury or death will insure against economic losses, but not noneconomic losses.³⁰ A parallel

²⁸ In this way, medical malpractice is closely aligned with products liability. To be sure, commentators in the field often write as if medical malpractice is a unique playing field. The uniqueness of medical malpractice may, nonetheless, lack conceptual robustness and may have more to do with a public-choice reflection of either the political prowess of medical lobbyists or, perhaps less likely, the size of the medical market in American society.

²⁹ See, e.g., George L. Priest, *Can Absolute Manufacturer Liability Be Defended?*, 9 YALE J. ON REG. 237, 252 (1992) (arguing that, so long as there are competitive markets, well-informed consumers, and sufficient insurance availability, "a change in the law toward greater or lesser manufacturer liability will have no effect on the number of product-related accidents, the number of products produced and consumed (the level of product activity), or on the price of the product faced by consumers"); see also Richard A. Epstein, *The Legal and Insurance Dynamics of Mass Tort Litigation*, 13 J. LEGAL STUD. 475, 490-91, 506 (1984) (arguing that, in mass tort litigation, parties may be able to reduce tort liability by forming contractual relationships and deciding proper risk allocation on their own without resorting to tort system). But see Michael Spence, *Consumer Misperceptions, Product Failure and Producer Liability*, 64 REV. ECON. STUD. 561, 563-71 (1977) (arguing that consumers misperceive likelihood of product failure and creating model to determine appropriate level of producer liability to improve market performance).

³⁰ This is because the marginal value of being compensated in a post-injury state may be lower than the amount of money it would take to purchase insurance for pain and suffering in the pre-injury state. See Alan Schwartz, *Proposals for Products Liability Reform: A Theoretical Synthesis*, 97 YALE L.J. 353, 408 (1988) (relying on theory of diminishing marginal utility of money to establish that "strict liability requires consumers to purchase more insurance and more safety than their better informed selves would want"); see also Priest, *supra* note 29, at 254 ("[C]onsumers do not value the new forms of insurance at the prices that must be charged for them.").

While it is likely to be true that people would not insure against all noneconomic losses, it is far from clear that they would not insure against any noneconomic losses. For example, Jennifer Arlen argues:

Individuals will insure against nonpecuniary losses if the injury increases the marginal utility of wealth: implying that the individual derives more utility out of a dollar spent if injured than he did if healthy. This might occur if an injured person would be using the wealth to enable him to get essentials, like mobility, whereas when healthy he would only be using the money to purchase luxuries.

Jennifer Arlen, *Tort Damages*, in 2 ENCYCLOPEDIA OF LAW & ECONOMICS 682, 705 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000); see also Steven P. Croley & Jon D. Hanson, *The Nonpecuniary Costs of Accidents: Pain-and-Suffering Damages in Tort Law*,

argument could be made in the medical malpractice context, where evidence confirms that patients do not purchase coverage for noneconomic damages as part of first-party health care insurance.³¹

The “no deterrence” view, however, is contested by other law-and-economics commentators who emphasize that noneconomic damages payments do in fact serve an important deterrence function.³² In the medical context, this is both because consumers in general may not know the true quality of goods at the time of contracting, and because medical care more specifically involves an investment in quality after the initial contract formation.³³ If tort liability is needed to regulate care, it follows that no basis exists for getting entirely rid of noneconomic damages paid to the victim.

108 HARV. L. REV. 1785, 1791 (1995) (“[A]lthough several insignificant impediments prevent the emergence of a robust market for insurance against pain-and-suffering losses, consumers in fact *do* demand such insurance.”).

³¹ See Randall R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling “Pain and Suffering,”* 83 Nw. U. L. REV. 908, 932 (1989) (explaining, without endorsing, argument that “if people do not choose to purchase such compensatory policies [i.e., private health or life insurance] on their own or through social programs, they should not be forced to ‘buy’ these elements of damage through the liability system”).

³² See, e.g., Mark Geistfeld, *Placing a Price on Pain and Suffering: A Method for Helping Juries Determine Tort Damages for Nonmonetary Injuries*, 83 CAL. L. REV. 773, 786 (1995) (emphasizing deterrence role played by tort law and arguing that arbitrary pain-and-suffering awards undermine that deterrence); W. Kip Viscusi, *Comments and Discussion*, in 1 BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 1993, at 175, 177 (Martin Neil Bailly et al. eds., 1993) (noting that one rationale for pain-and-suffering compensation is that “pain and suffering compensation can help create efficient financial incentives for accident avoidance”). Of course, punitive damages might well serve this function. See W. Kip Viscusi, *Tort Reform and Insurance Markets*, 7 RISK MGMT. & INS. REV. 9, 10 (2004) [hereinafter Viscusi, *Tort Reform*] (“Such deterrence is generally the province of punitive damages rather than pain and suffering awards.”).

³³ Jennifer Arlen and Bentley MacLeod make a persuasive case for the deterrence role of damages in medical malpractice: Even if patients could assess the quality of providers at the moment of contracting, tort liability would be necessary because the quality of medical services is not in fact determined at the moment of contracting. Instead, it depends upon actions taken afterwards, including post-contractual expertise and performance. See Jennifer Arlen & W. Bentley MacLeod, *Malpractice Liability for Physicians and Managed Care Organizations*, 78 N.Y.U. L. REV. 1929, 1979 (2003) [hereinafter Arlen & MacLeod, *Malpractice Liability*]. Arlen and MacLeod elaborate:

Imposing liability for both MCO [managed care organization] and physician negligence increases the parties’ joint welfare relative to the no-sanction equilibrium by inducing optimal expertise and authority. Liability enhances the parties’ welfare by enabling the physician and the MCO to credibly commit to undertaking optimal behavior: the promise to invest optimally in expertise and to assert optimal authority is credible because the imposition of optimal liability renders optimal behavior *ex post* incentive compatible for the MCO and the physician.

Jennifer Arlen & W. Bentley MacLeod, *Torts, Expertise, and Authority: Liability of Physicians and Managed Care Organizations*, RAND J. ECON. (forthcoming 2005) (manuscript at 22–23, on file with the *New York University Law Review*) [hereinafter Arlen & MacLeod, *Torts, Expertise*].

Assuming that noneconomic damages do serve an important deterrence role, a second issue must be addressed: namely, the implications for assessing damages. Adequate deterrence requires that injurers (e.g., physicians or hospitals) pay expected damages equal to the expected harm to the victims of their negligence. This deterrence value necessarily takes into account both economic and noneconomic losses.³⁴ At the same time, however, economic theory suggests that it is not optimal to compensate victims fully for noneconomic losses—at least not in “non-stranger” or contractual (e.g., products liability and medical malpractice) cases, where compensation partially functions as insurance. This is because victims necessarily pay for this up front in the form of higher prices.³⁵ In other words, the efficient measure of deterrence damages is lower than the amount that fully compensates the victim *ex post* for nonpecuniary losses.³⁶

A conundrum thus emerges: Even though noneconomic damages are properly part of what defendants should pay (on deterrence grounds), they may exceed the amount victims should receive (on insurance grounds). Put differently, even when deterrence requires

³⁴ See, e.g., Arlen, *supra* note 30, at 702 (“Optimal deterrence requires that injurers bear the full social cost of their risk-taking activities, including nonpecuniary losses.”); see also Jennifer H. Arlen, Note, *An Economic Analysis of Tort Damages for Wrongful Death*, 60 N.Y.U. L. REV. 1113, 1116 (1985) (“[D]amage rules must require that liable defendants pay the full costs of their accidents.”).

This might argue instead for a broader definition of economic damages. See *infra* Part III.B.2. The same might be said for additional arguments in favor of noneconomic damages—for example, that they compensate for attorneys’ fees, see W. Kip Viscusi, *Pain and Suffering: Damages in Search of a Sounder Rationale*, 1 MICH. L. & POL’Y REV. 141, 167 (1996), or else, in the medical context, that they pay for economic losses where medical inflation increases faster than expected. It may well be, for example, that recent increases in economic damages reflect more careful estimation of medical inflation, particularly where limited noneconomic damages can no longer provide such a cushion, see *infra* notes 202, 413 and accompanying text (describing how increases in medical costs have outpaced inflation).

³⁵ Potential victims must pay for their expected compensation in the form of higher physician fees or health insurance. It is inefficient to make them purchase more insurance than they would want.

³⁶ See Arlen, *supra* note 30, at 702–05. This is due to the fact that victims pay for safety, so the correct measure is willingness to pay—and it is willingness to pay to avoid risk of injury, not actual injury. In the case of medical malpractice, this is the cost to a patient of negligent medical care, as measured by the amount a patient would be willing to pay to obtain proper nonnegligent medical care, instead of the negligent care he or she received. This “willingness to pay” measure includes the amount a patient would pay to avoid both pecuniary and nonpecuniary losses associated with negligent care. See Arlen & MacLeod, *Torts, Expertise*, *supra* note 33, at 23 n.43. This amount differs from pain and suffering because it is not the cost of the harm, but instead what the patient would pay to avoid the harm; it is thus another argument in favor of limits on recovery for nonpecuniary losses. Nonetheless, while this amount can be evaluated *ex ante* based upon the risk imposed (as opposed to the *ex post* amount that would make the victim as well off as he was before the accident), it can still amount to a large number.

compensation for nonpecuniary losses, optimal damages do not provide full recovery for nonpecuniary losses because of the balance that must be struck between the deterrence and insurance goals of tort law.³⁷

A separate additional criticism of noneconomic damages (also often leveled at punitive damages) is more institutional or practical: The system works best as a system for deterring risk (and compensating injuries) when some predictable relationship exists between harm and damages. In contrast, the argument goes, courts lack objective criteria for setting appropriate values for noneconomic losses; nor (unsurprisingly) do jury instructions provide much guidance.³⁸ In fact, jury instructions often explicitly acknowledge the subjective and imprecise nature of noneconomic damages. Take, for example, the California pattern instruction: “No fixed standard exists for deciding the amount of these [noneconomic] damages. You must use your judgment to decide a reasonable amount based on the evidence and your common sense.”³⁹

As might be expected, the practical outgrowth of such criticisms has been a movement to cap noneconomic and punitive damages.⁴⁰ I

³⁷ See, e.g., Geistfeld, *supra* note 32, at 800 (“It would appear, then, that tort damages for pain and suffering must serve both the insurance and deterrence functions of tort law, suggesting that pain-and-suffering damages should be positive but less than full compensation.”); see also Arlen, *supra* note 30, at 702 (“When accidents result in death or serious physical injury, it may be difficult to induce both optimal deterrence and optimal risk-spreading.”); David A. Hyman, *Commentary: Medical Malpractice and the Tort System: What Do We Know and What (If Anything) Should We Do About It?*, 80 TEX. L. REV. 1639, 1644–45 (2002) (arguing that medical malpractice currently fails in both compensation and deterrence prongs).

³⁸ See, e.g., David W. Leebron, *Final Moments: Damages for Pain and Suffering Prior to Death*, 64 N.Y.U. L. REV. 256, 313 (1989) (noting that juries are “given remarkably little guidance in determining amounts for pain and suffering”); see also Catherine M. Sharkey, *Punitive Damages: Should Juries Decide?*, 82 TEX. L. REV. 381, 401–04 (2003) (book review) (discussing similar lack of guidance provided to jurors with regard to their determination of punitive damages); W. Kip Viscusi & Patricia H. Born, *Damages Caps, Insurability, and the Performance of Medical Malpractice Insurance*, 72 J. RISK & INS. 23, 25 (2005) (“Because of this lack of guidance, there have long been claims that jury awards for pain and suffering are random and capricious, though there is no general empirical evidence to that effect.”).

³⁹ Cal. Civil Instruction No. 3905A (2004), available at <http://www.courtinfo.ca.gov/reference/documents/civiljuryinst.pdf>.

⁴⁰ Damages scheduling has been proposed as an alternative solution that would reduce uncertainty and randomness. See, e.g., Jennifer H. Arlen, *Compensation Systems and Efficient Deterrence*, 52 MD. L. REV. 1093, 1106 (1993) (“[I]t might well be preferable to abandon an individualized determination of each victim’s recovery in favor of a recovery schedule under which each victim of a particular injury receives a fixed amount based on expected pecuniary losses for that victim’s injury and income bracket.”). See generally W. KIP VISCUSI, *REFORMING PRODUCTS LIABILITY* 114–16 (1991) (recommending damages scheduling).

next explore the particular justifications for damages caps in the context of medical malpractice awards.

2. *Justifications for Limits on Medical Malpractice Damages*

The stated grounds for noneconomic damages limitations in the medical malpractice context tend to rest largely upon the more general theoretical and practical criticisms of noneconomic damages just described: systematic overcompensation and overdeterrence.⁴¹

Considerable attention has been paid to the magnitude of noneconomic damages in medical malpractice cases.⁴² For example, in their study of 194 California medical malpractice cases from 1993 to 1999, Clark and Kari Kelso found that, before any MICRA reductions, noneconomic damages comprised 31% of the total damages awarded.⁴³ A 2004 RAND study, using data collected from 257 medical malpractice cases in California courts between 1995 and 1999 in which jury verdicts were granted in favor of plaintiffs, found that noneconomic damages constituted 42% of the total aggregate damages awarded before any MICRA reductions.⁴⁴ Patricia Danzon,

⁴¹ As discussed above, noneconomic damages present a problem for economists. On the one hand, some compensation for noneconomic damages is likely critical to the ability of malpractice liability to serve its deterrence goal. On the other hand, it is generally acknowledged that full compensation for noneconomic losses would violate the optimal risk-spreading role of tort law, reducing patients' welfare who, after all, have to pay for this. According to economic theory, however, it is far from clear that damages are too high. From the perspective of deterrence, since the vast majority of victims do not sue, *see supra* note 26, arguably damages must be adjusted by a multiplier of the inverse of the probability that a negligent physician or hospital is actually held liable, *see, e.g.,* Arlen & MacLeod, *Malpractice Liability*, *supra* note 33, at 197–82; Catherine M. Sharkey, *Punitive Damages as Societal Damages*, 113 *YALE L.J.* 347, 367–68 (2003) (discussing origins of “multiplier theory” in context of punitive damages).

⁴² As Kip Viscusi has noted, however, “Determining the magnitude of pain and suffering compensation and whether such compensation is increasing over time is difficult because there is seldom a reporting of the pain and suffering amounts in most court case databases.” Viscusi, *Tort Reform*, *supra* note 32, at 12; *see also infra* notes 263–64 and accompanying text. Moreover, the vast majority of claims settle, *see infra* note 260, and the amount paid is typically given as a single total in such cases.

⁴³ KELSO & KELSO, *supra* note 6, at 3, 18. Kelso and Kelso reviewed 1283 medical malpractice cases dating from January 1, 1993, to March 10, 1999, using the California Jury Verdict Reporter. *Id.* at 17. Of those cases, 310 (24.1%) resulted in a verdict for the plaintiff. *Id.* One hundred and sixteen of the plaintiff victories were dropped due to insufficient information (primarily lack of information on the economic/noneconomic damages breakdown), leaving a sample size of 194 cases. *Id.* Kelso and Kelso report a surprising result: “[T]here appears to be less variation in non-economic awards than in economic awards.” *Id.* at 19. They conclude that their results “suggest that juries are not making erratic assessments of non-economic losses in medical malpractice cases.” *Id.*

⁴⁴ NICHOLAS M. PACE ET AL., RAND INST. FOR CIVIL JUSTICE, *CAPPING NON-ECONOMIC AWARDS IN MEDICAL MALPRACTICE TRIALS: CALIFORNIA JURY VERDICTS UNDER MICRA 3*, 19–20 (2004) [hereinafter RAND MICRA STUDY], available at <http://www.rand.org/publications/MG/MG234/MG234.pdf>.

focusing on the size of noneconomic damages, and using closed-claims insurance data from Florida, estimated that 5.6% of all paid medical malpractice claims include a noneconomic damages component that exceeds \$100,000.⁴⁵

But it is not the size (as a relative or absolute matter) of noneconomic damages *vel non* that drives the initiative for reform. Instead, it is the consequent impact upon important public interests, namely, the availability of insurance and adequate health care at reasonable cost. Central to this feed-through effect is the expectation that caps on noneconomic damages will lower insurers' costs (due to lower damages as well as fewer claims) and thus lower premium rates that physicians must pay.⁴⁶ Also implicit is the assumption that economic damages (including medical costs and lost wages), unlike noneconomic damages, are rational and predictable. This Part explores justifications for limitations upon damages relating to the impact of damages awards upon insurance premium rates and the concomitant impact of insurance rates upon the provision of health care services.

a. Insurance Industry

For some time, there has been a steady debate over the root causes of the medical malpractice insurance crises in the mid-1970s, mid-1980s, and early-2000s. With respect to the present state of affairs, it has been said that “[w]hile the GAO [General Accounting Office] has painted a complicated, nuanced picture of the crisis in which no single factor accounts for the controversy, doctors and plaintiffs' lawyers have steadfastly blamed each other.”⁴⁷ Or, as a recent Kaiser Permanente study puts it:

Trial lawyers say doctors and insurers have only themselves to blame—medical negligence hurts far too many people that only lawyers can help, and insurers' bad investments and business plans

⁴⁵ BARRY L. ANDERSON, PATRICIA M. DANZON, ET AL., FL. MED. ASS'N, *MEDICAL MALPRACTICE POLICY GUIDEBOOK* 134 (Henry G. Manne ed., 1985).

⁴⁶ For this reason, Medical Protective Company—one of the nation's largest medical malpractice insurance companies—caused a stir when it told regulators that noneconomic damages caps, enacted in Texas, would lower payouts by only 1%. See Joseph T. Hallinan & Rachel Zimmerman, *Malpractice Insurer Sees Little Savings in Award Caps*, WALL ST. J., Oct. 28, 2004, at A6. Medical Protective's disclosure was made in a filing to the Texas Department of Insurance that sought a 19% premium rate increase. *Id.* But see *The Doctors Co. Reports Rate Decrease for Texas*, INS. J. (Feb. 25, 2005) (reporting that The Doctors Company, physician-owned medical malpractice carrier, will decrease its average rate level for Texas insureds by 14% in response to recent legislation), at <http://www.insurancejournal.com/news/southcentral/2005/02/25/51965.htm>.

⁴⁷ Jim Edwards, *GAO Study Finds Damage Caps and Lower Premiums Loosely Linked*, N.J. L.J., Sept. 8, 2003, at 1.

jeopardize insurance availability and price stability. Tort reformers say that lawyers and juries are out of control and must be reined in to keep premiums affordable and prevent insurers and doctors from withdrawing.⁴⁸

On the one hand, blame is leveled at insurance companies that have made poor business decisions and whose investment income has faded in times of economic turmoil.⁴⁹ On the other hand, it is argued that rising premiums are due to out-of-control jury verdicts.⁵⁰

The American Medical Association (AMA) has recently reported that twenty states are experiencing a “full-blown medical liability crisis” due to sharply increasing medical malpractice insurance premiums.⁵¹ Perhaps the most dramatic indicator has been the departure, in recent years, of commercial insurance companies from the medical malpractice insurance market altogether. St. Paul, at one time the largest commercial stock insurer of medical malpractice nationally, is a case in point. St. Paul stopped offering medical malpractice insurance in 2001 after determining that it was no longer a profitable line of insurance.⁵² However, “noncommercial medical malpractice insurers have tended to remain in the market.”⁵³ The

⁴⁸ BOVBJERG & RAYMOND, *supra* note 11, at 24.

⁴⁹ For example, a study published in July 2003 by the American Association of Retired Persons (AARP) Public Policy Institute found that Florida’s insurance problems have multiple causes besides an increase in litigation, including the cyclical nature of the property and casualty market, underpricing of premiums in the early 1990s, and insurers’ investment losses. See BERNADETTE WRIGHT, NURSING HOME LIABILITY INSURANCE: AN OVERVIEW (AARP Pub. Policy Inst., No. 2003-08, 2003), available at http://research.aarp.org/health/2003_08_nh_ins.pdf.

⁵⁰ See, e.g., AM. MED. ASS’N, MEDICAL LIABILITY REFORM—NOW! 2–5 (2004), <http://www.ama-assn.org/ama1/pub/upload/mm/450/mlrnowdec032004.pdf>; David Morrison, *In Search of Savings: Caps on Jury Verdicts Are Not a Solution to Health Care Crisis*, 7 LOY. CONSUMER L. REV. 141, 141 (1995).

⁵¹ The twenty states are Arkansas, Connecticut, Florida, Georgia, Illinois, Kentucky, Massachusetts, Mississippi, Missouri, Nevada, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Texas, Washington, West Virginia, and Wyoming. AM. MED. ASS’N, AMERICA’S MEDICAL LIABILITY CRISIS: A NATIONAL VIEW, at <http://www.ama-assn.org/ama/noindex/category/11871.html> (last modified Feb. 4, 2005).

⁵² See RANDALL R. BOVBJERG & ANNA BARTOW, PROJECT ON MED. LIAB. IN PA., UNDERSTANDING PENNSYLVANIA’S MEDICAL MALPRACTICE CRISIS 8 (2003), available at <http://mediabilitypa.org/research/report0603/UnderstandingReport.pdf>; see also Frank A. Sloan & Chee Ruey Hsieh, *Variability in Medical Malpractice Payments: Is the Compensation System Fair?*, 24 LAW & SOC’Y REV. 997, 1011 (1990) (noting St. Paul’s departure from Florida insurance market in 1980s). A West Virginia judge recently certified a nationwide class action on claims of conversion and unjust enrichment brought by doctors against the St. Paul Companies for withdrawing medical malpractice insurance. *Mantz v. St. Paul Fire & Marine Ins. Co.*, No. CIV.A.02-C-770, 2003 WL 23109763, at *1, *9 (W. Va. Cir. Ct. Dec. 17, 2003). The doctors charge that the company’s exit from the medical malpractice market cheated them out of “tail coverage,” extended protection that goes into effect when a physician is disabled, retires, or dies. *Id.* at *2.

⁵³ Sloan & Hsieh, *supra* note 52, at 1011.

majority of these insurers are “sponsored by physician organizations,”⁵⁴ which in effect self-insure.

According to an August 2003 GAO study, “since the periods of increasing [insurance] premium rates during the mid-1970s and mid-1980s, all states have passed at least some laws designed to reduce medical malpractice premium rates.”⁵⁵ The five states covered in the report—Florida, Mississippi, Nevada, Pennsylvania, and West Virginia—are, according to the GAO, “among the most visible and often-cited examples of ‘crisis’ states by [the] AMA.”⁵⁶

The few well-designed studies that have explored the relationship between caps and lower insurance premiums are, for the most part, based on data from earlier eras and present qualified findings of a causal relationship.⁵⁷ The August 2003 GAO study likewise demonstrated that states that have caps on medical malpractice damages also tend to have lower insurance premiums for doctors, and similarly, that

⁵⁴ *Id.* at 1012.

⁵⁵ U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GAO-03-836, *MEDICAL MALPRACTICE: IMPLICATIONS OF RISING PREMIUMS ON ACCESS TO HEALTH CARE 10–11* (2003) [hereinafter *GAO REPORT* (Aug. 2003)], available at www.gao.gov/new.items/d03836.pdf.

⁵⁶ *Id.* at 38, 44. Each of these states has some type of damages cap. Florida, Mississippi, and Nevada each cap noneconomic compensatory damages in medical malpractice cases and punitive damages in all tort cases. West Virginia has a cap on noneconomic compensatory medical malpractice damages. See *infra* Appendix I. And Pennsylvania caps punitive damages in medical malpractice cases. 40 PA. CONS. STAT. ANN. § 1303.505 (West Supp. 2004).

⁵⁷ The vast majority of studies use data from the 1970s and 1980s. See, e.g., Frank A. Sloan, *State Responses to the Malpractice Insurance “Crisis” of the 1970s: An Empirical Assessment*, 9 J. HEALTH POL. POL’Y & L. 629, 637 (1985) (finding no effect from damages caps on premiums paid by physicians in 1974–78); Viscusi & Born, *supra* note 38, at 23 (using closed-claims insurance data files compiled by National Association of Insurance Commissioners for 1984–91, results suggest that “[l]imits on noneconomic damages were most influential in affecting insurance market outcomes”); W. Kip Viscusi & Patricia Born, *Medical Malpractice Insurance in the Wake of Liability Reform*, 24 J. LEGAL STUD. 463, 474 (1995) (using 1984–91 NAIC data to find effect of general and medical liability reforms on insurance market); Stephen Zuckerman et al., *Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums*, 27 INQUIRY 167, 167 (1990) (tracking impact of state reforms through 1986 and finding that caps on damages decrease malpractice premiums).

Danzon et al. use more recent data (1994–2003) on insurance premium rates by state for three major specialties—internists, general surgeons, and obstetricians/gynecologists. See Patricia M. Danzon et al., *The “Crisis” in Medical Malpractice Insurance 20* (Dec. 2003) (unpublished manuscript, available at <http://fic.wharton.upenn.edu/fic/papers/04/Danzon%20%20Paper.pdf>) (finding that “non-economic damage caps with thresholds at or below \$500,000 . . . have significantly reduced premium increases in states that enacted such reforms”); see also Kenneth E. Thorpe, *The Medical Malpractice “Crisis”: Recent Trends and the Impact of State Tort Reforms*, HEALTH AFFAIRS (Jan. 21, 2004) (finding that “premiums in states that cap awards are 17.1% lower than in states that don’t cap”), at <http://content.healthaffairs.org/cgi/content/full/hlthaff.w4.20v1/DC1>.

There is some empirical evidence that caps reduce payouts to plaintiffs. This evidence is discussed in Part II.A, *infra*.

recent increases in medical malpractice premiums “were consistently lower” in states with caps on noneconomic damages.⁵⁸ From 2001 to 2002, states with caps experienced an average percentage growth in premium rates of slightly less than 10%, as compared with a premium-rate percentage growth of 29% in non-cap states.⁵⁹

But the GAO Report specifically states that damages caps do not necessarily translate into lower premiums. It cautions that although damages caps and lower premiums appear to be correlated in some states, myriad intervening factors preclude proof of a direct link.⁶⁰ And some states without damages caps have avoided the medical malpractice crisis altogether. For example, Minnesota has the lowest premiums and the mildest increases in premiums, but it has neither damages caps nor crisis.⁶¹ According to the GAO Report, medical malpractice insurance premiums range from about \$4000 a year for an internal medicine specialist in Minnesota to more than \$201,000 for an OB/GYN in some parts of Florida.⁶² Between 1998 and 2002, malpractice premiums increased only about 2% in Minnesota, whereas premiums went up by 98% for some specialties in parts of Florida.⁶³

In sum, the evidence is decidedly mixed. Insurance rates are soaring in some states, particularly in high-risk specialties, and have influenced states’ decisions to adopt caps.⁶⁴ But whether damages caps slow, or otherwise affect, those increases remains unclear.

b. Health Care Industry

The direct effects of the rise in insurance premiums (whatever the source of the increase) upon the health care industry may seem

⁵⁸ GAO REPORT (Aug. 2003), *supra* note 55, at 32.

⁵⁹ *Id.* at 31. Payments on claims between 1996 and 2002 also tended to be lower in states with caps. *Id.* at 34 (noting, subject to various qualifications, that average per-capita claim payment in states with noneconomic damage caps was \$10, in contrast to states without caps, where average per-capita claim payment was \$17).

⁶⁰ *Id.* at 37 (listing various intervening factors, including unrelated tort reforms such as collateral source offsets and prescreening requirements, state laws such as premium rate regulations, and market conditions faced by insurers).

⁶¹ *Id.* at 8–9. The Minnesota Tort Reform Act of 1986 included a damages cap of \$400,000, applicable in all civil actions, for “intangible loss,” defined as embarrassment, emotional loss, and loss of consortium. Minnesota Tort Reform Act of 1986, ch. 455, §§ 88–89, 1986 Minn. Laws 840, 883–84. The Act, however, was repealed by the Minnesota legislature in May 1990. Act of May 3, 1990, ch. 555, § 23, 1990 Minn. Laws 1557, 1565. Since then, Minnesota has had no damages caps.

⁶² GAO REPORT (Aug. 2003), *supra* note 55, at 8.

⁶³ *Id.* at 8–9. One possibility (not addressed by the GAO Report) is that insurers in Florida can charge more because doctors there, on average, receive a higher percentage of Medicare reimbursement and/or have many more patients because of the older population.

⁶⁴ GAO REPORT (June 2003), *supra* note 19, at 9–10.

clearer. In this Part, I examine the effects of increased premiums upon physician supply and certain aspects of physician behavior.

i. Physician Supply A consistent argument in favor of damages caps is that rising medical malpractice insurance premiums (caused by soaring damages verdicts) will decrease the supply of physicians.⁶⁵ Consider for example the widespread publicity over work stoppages in Florida, New Jersey, Mississippi, and West Virginia staged by doctors as a show of support for legislation imposing noneconomic damages caps in medical malpractice cases.⁶⁶ According to William Sage:

In prior liability crises, hospital closures and physician walkouts were often political theater. Today, by contrast, the payment environment is inconsistent—at least in the short term—with the rising cost of doing business, particularly in states with high malpractice premiums but low Medicare and private insurance reimbursement rates. Because premiums are determined mainly according to specialty, types of procedures performed, and geographic location, physicians may respond (short of retirement) by altering their mix of patients and services, or by relocating.⁶⁷

“High risk” specialties include orthopedics, neurosurgery, obstetrics-gynecology, and general surgery.⁶⁸

⁶⁵ See, e.g., Theodore Haussman & Scott M. Brevic, *State-Level Action*, NAT'L L.J., Feb. 24, 2003, at A17 (“Large jury awards and skyrocketing malpractice insurance premiums threaten Pennsylvania with the possibility of losing thousands of physicians to other states.”).

⁶⁶ See Peter Eisler et al., *Hype Outpaces Facts in Malpractice Debate: Degree of Crisis Varies Among Specialties and from State to State*, USA TODAY, Mar. 5, 2003, at 1A (reporting that walkouts by doctors in these four states were attempts to impress upon Congress and state legislatures that rising medical malpractice costs are driving doctors out of business, and that caps on damages are needed remedy).

⁶⁷ William M. Sage, *Understanding the First Malpractice Crisis of the 21st Century*, in HEALTH LAW HANDBOOK 1, 21 (Alice Gosfield ed., 2003), available at <http://medliability.org/research/law1103/chapter.pdf>. Sage further explains:

Shifts in behavior potentially causing serious access problems may be subtle. For example, many obstetrical patients are covered by Medicaid, which has chronically low reimbursement rates, while adult gynecologic surgery is typically performed on patients with more generous payment from Medicare or private insurance. Consequently, ob-gyn physicians who are considering eliminating obstetrics from their practices to save on liability premiums may be able to do so without simultaneously suffering a loss of practice income.

Id.

⁶⁸ *Id.* at 21–22 (“By unhappy coincidence, women’s health may suffer a double setback, as ob-gyns cut back on obstetrical care and radiologists decline to interpret mammograms—those services being the primary drivers of liability cost within their respective specialties.”).

Here again, while the rhetoric of the debate is strident, the empirical evidence is thin.⁶⁹ The August 2003 GAO Report concludes that doctors' claims that healthcare access is being crippled by lawsuits often turn out to be exaggerated or even false. With respect to doctors' claims of service reduction in emergency surgery and newborn deliveries, the Report observes: "The problems we confirmed were limited to scattered, often rural, locations and in most cases providers identified long-standing factors in addition to malpractice pressures that affected the availability of services."⁷⁰ With respect to reported problems of physicians' moving, retiring, or closing practices in the face of oppressive malpractice pressure, the Report responds: "Although some reports have received extensive media coverage, in each of the five states [Florida, Mississippi, Nevada, Pennsylvania, and West Virginia] we found that actual numbers of physician departures were sometimes inaccurate or involved relatively few physicians."⁷¹

Other confounding factors compound the lack of solid empirical evidence of any general link between insurance premiums and physician supply. Chief among these is the fact that malpractice premiums are not really experience rated, i.e., they are not based on past malpractice claims.⁷² As a result, negligent and nonnegligent physicians pay similar premiums, and they will face the same incentives to restrict services or, at the extreme, to shut down. This raises the question whether the underlying problem is the level of damages themselves, or, alternatively, some aspect of the insurance system that is preventing appropriate experience rating to ensure that physicians pay premiums more appropriately gauged to their risk level.⁷³

⁶⁹ Michelle M. Mello et al., *The New Medical Malpractice Crisis*, 348 *NEW ENG. J. MED.* 2281, 2283 (2003) ("Unfortunately, there have been no studies yet reported by non-stakeholder organizations regarding the alleged migration of physicians, early retirements, practice restrictions, closures of hospital services, and attendant effects on access to care; nor remarkably, are such reports available from previous eras."). *But see infra* note 117 (describing more recent empirical studies).

⁷⁰ GAO REPORT (Aug. 2003), *supra* note 55, at 13. For example, one Pennsylvania hospital "no longer has full orthopedic on-call surgery coverage in its emergency room (ER) because three of its five orthopedic surgeons left" in 2002 in response to high premiums. However, the Report notes that such problems were concentrated in rural areas that, for reasons unrelated to insurance, traditionally have trouble retaining doctors. *See id.* at 5.

⁷¹ *Id.* at 17.

⁷² *See, e.g.*, Hyman, *supra* note 37, at 1645 (noting that malpractice insurance undermines deterrence, especially when sold on non-risk rated basis).

⁷³ *See, e.g.*, Mark Geistfeld, *Malpractice Insurance and the (Il)legitimate Interests of the Medical Profession in Tort Reform*, 54 *DEPAUL L. REV.* (forthcoming 2005) (manuscript at 11, on file with the *New York University Law Review*) ("[D]ue to the absence of experience rating, a medical professional cannot control the level of her premiums by providing quality care and avoiding malpractice liability. The absence of experience rating makes the

Depletion of physician supply (real or perceived) is not the only potential “cost” of soaring insurance premiums. Another consequence might be subtle changes in physician behavior, including the employment of what has been termed “defensive medicine.”

ii. Defensive Medicine Randall Bovbjerg and Brian Raymond have termed “positive” defensiveness (or “assurance behavior”) the practice of “providing or ordering extra services . . . [that are] not justified by medical indications.”⁷⁴ Daniel Kessler and Mark McClellan have explored these positive defensive medicine costs. In particular, they stress the likelihood that “[p]hysicians may employ costly precautionary treatments in order to avoid nonfinancial penalties such as fear of reputational harm, decreased self-esteem from adverse publicity, and the time and unpleasantness of defending a claim.”⁷⁵ They identify a direct link between damages caps and the practice of defensive medicine.⁷⁶ More specifically, they argue, based upon an empirical study, that such caps “lead to substantial reductions in medical expenditure growth in the treatment of cardiac illness in the elderly with no appreciable consequences for important health outcomes, including mortality and common complications.”⁷⁷

Significant controversy, however, surrounds estimates of the costs of defensive medicine.⁷⁸ The August 2003 GAO Report claims that studies by the AMA and other medical groups that demonstrate increased costs from defensive medicine “cannot be used to reliably estimate the overall prevalence or costs of defensive medicine practice.”⁷⁹ For example, a U.S. Department of Health and Human

risk-classification scheme unfair for medical professionals classified in the high-risk pools.”); *see also* Frank A. Sloan, *Experience Rating: Does It Make Sense for Medical Malpractice Insurance?*, *AM. ECON. REV.*, May 1990, at 128, 132 (concluding that “[e]xperience rating does make sense for medical malpractice”).

⁷⁴ BOVBJERG & RAYMOND, *supra* note 11, at 11; *see also* Kessler & McClellan, *supra* note 27, at 354 (“Many physicians and policy-makers have argued that the incentive costs of the malpractice system, due to extra tests and procedures ordered in response to the perceived threat of a medical malpractice claim, may account for a substantial portion of the explosive growth in health care costs.”). “Negative” defensiveness (or “avoidance behavior”), on the other hand, leads physicians to decide not to provide certain needed services or not to serve certain patients where the liability risks seem high. BOVBJERG & RAYMOND, *supra* note 11, at 11.

⁷⁵ Kessler & McClellan, *supra* note 27, at 354. Kessler and McClellan emphasize these particular costs in light of the fact that “physicians bear little of the costs of patient injuries from malpractice” due to the fact that “malpractice insurance is not strongly experience rated.” *Id.* at 356; *see also supra* notes 72–73 and accompanying text.

⁷⁶ Kessler & McClellan, *supra* note 27, at 388.

⁷⁷ *Id.*

⁷⁸ Frank A. Sloan & Randall R. Bovbjerg, *Medical Malpractice: Crises, Response and Effects*, 1989 HIAA RESEARCH BULLETIN 1, 27–29.

⁷⁹ GAO REPORT (Aug. 2003), *supra* note 55, at 26.

Services report claims that there might be a five to nine percent reduction in hospital costs nationally if defensive procedures were eliminated.⁸⁰ However, as the GAO points out, that finding, drawn from Kessler's and McClellan's empirical study, was based only on elderly patients treated for two types of heart disease and therefore "the savings cannot be generalized across all services, populations and health conditions."⁸¹

B. Practice: Different State Approaches

State law governs medical malpractice claims, and limitations on damages vary dramatically across states by amount, type of damages covered, and manner of application. The rhetoric surrounding the debate on damages caps has, for the most part, sloughed over this enormous state-by-state variation, which is the focus of this Part.

1. Limitations on Compensatory Damages

Twenty-five states have, at some time since the 1970s, adopted specific limits on compensatory (predominantly noneconomic) damages in medical malpractice awards;⁸² an additional ten states have enacted more general noneconomic compensatory damages limitations that apply to all cases, including medical malpractice.⁸³ These compensatory damages caps remain in effect today in twenty-nine states.⁸⁴

a. Caps on Noneconomic Damages

The most common medical malpractice damages caps restrict noneconomic damages. Currently, seventeen states have legislation in effect that was enacted specifically to rein in the noneconomic portion

⁸⁰ *Id.* at 28–30 (citing DANIEL P. KESSLER & MARK B. MCCLELLAN, MEDICAL LIABILITY, MANAGED CARE, AND DEFENSIVE MEDICINE (Nat'l Bureau of Econ. Research, Working Paper No. 7537, 2000)).

⁸¹ *Id.* at 30.

⁸² See *infra* Appendix I (counting twenty-four states listed in "Medical Malpractice" column, plus Kansas, which formerly had such selective cap).

⁸³ See *id.* (counting those states listed in "General Civil" column, but omitting those counted within twenty-five states with selective caps (i.e., Alabama, Kansas, and New Hampshire)).

⁸⁴ See *id.* The constitutionality of such caps—a significant issue on its own—is not directly addressed here, but is mentioned briefly *supra* notes 18, 20–21 and accompanying text, and *infra* note 447.

Among the states in which caps were struck down, Florida, Kansas, Ohio, and Texas have reenacted cap legislation. See Appendix I. In Texas, to insulate caps from further constitutional challenges, the lawmakers put the cap issue before the voters in the form of a constitutional amendment (which passed), rather than imposing the cap by legislative means alone. See *infra* note 91 and accompanying text.

of medical malpractice damages.⁸⁵ An additional seven states have caps on noneconomic damages that apply not only to medical malpractice cases, but also to tort cases more generally.⁸⁶

The more general limitation was characteristic of the 1980s wave of tort reform, while medical malpractice specific reform typified the 1970s era⁸⁷ and has again dominated the latest wave of reforms. For example, the most recently enacted reforms in Florida, Georgia, Mississippi, Nevada, Ohio, Oklahoma, Texas, and West Virginia have focused on limiting noneconomic damages in medical malpractice cases.⁸⁸ Recent legislative initiatives are, however, more complex than their 1970s counterparts: They are more likely to include broad exceptions and/or sliding scales, with higher caps for more serious injuries.⁸⁹ These exceptions and sliding scales were included, at least in part, because blanket damages caps were previously struck down as unconstitutional in Florida, Ohio, and Texas.⁹⁰ In Texas, the legislature took more drastic action to ensure that its most recent reforms would not violate the state's constitution: In 2003 it proposed a constitutional amendment to make the new damages caps legal. Proposition 12, passed by public referendum, authorizes the legislature to "determine the limit of liability for all damages and losses,

⁸⁵ One of the states (Colorado) has, in addition to the noneconomic damages cap, a cap on total compensatory damages. See *infra* Appendix I.

⁸⁶ See *id.*

⁸⁷ See Randall R. Bovbjerg, *Legislation on Medical Malpractice: Further Developments and a Preliminary Report Card*, 22 U.C. DAVIS L. REV. 499, 543 (1989) ("Another shift was from an almost exclusive focus in the 1970s on medical malpractice [damages caps] to a nearly even split in the 1980s between malpractice and generic caps.").

⁸⁸ See *infra* Appendix I ("Recent substantive tort reform legislation").

⁸⁹ See *id.*

⁹⁰ See *Smith v. Dep't of Ins.*, 507 So. 2d 1080 (Fla. 1987); *Morris v. Savoy*, 576 N.E.2d 765 (Ohio 1991); *Lucas v. United States*, 757 S.W.2d 687, 692 (Tex. 1988); see also *Times Wires, Malpractice Bill Signed; Quick Challenge Predicted*, ST. PETERSBURG TIMES, Aug. 15, 2003, at 6B (summarizing view held by some legislators that, unlike earlier general damages cap, this one will withstand challenge because it is set at much higher level and is narrowly tailored to address specific health care crisis affecting state), http://sptimes.com/2003/08/15/State/Malpractice_bill_sign.shtml; Ed Vogel, *Medical Malpractice: Both Sides Foresee Win Under Law*, LAS VEGAS REV.-J., Aug. 11, 2002, at 1B (reporting Nevada legislators' beliefs that two broad exceptions to damages cap—which apply in cases of gross malpractice or where there is "clear and convincing" evidence that larger award is justified—protect law against constitutional challenge), http://www.reviewjournal.com/lvrj_home/2002/Aug-11-Sun-2002/news/19369491.html. But see Tracy S. Carlin, *Medical Malpractice Caps Move from the Legislature to the Courts: Will They Survive?*, FLA. B.J., May 2004, at 10, 16 (questioning whether there is any "overpowering public need" for caps).

Of course, presumably political factors played a role as well. For example, the composition of the Ohio Supreme Court changed recently, with the election of a pro-cap Republican to a seat formerly occupied by an anti-cap Democrat. See Editorial, *Hold Yer Horses*, CRAIN'S CLEVELAND BUS., Dec. 9–15, 2002, at 10.

however characterized, other than economic damages.”⁹¹ The passage of Proposition 12 approved the damage limits on medical malpractice suits that the legislature had imposed as part of a sweeping tort reform measure in 2003. The possibility of enacting more generalized caps in the future remains open.⁹²

b. Caps on Total Compensatory Damages

Six states (Colorado, Indiana, Louisiana, Nebraska, New Mexico, and Virginia) have taken a wider approach to damages limitation, capping total compensatory damages, i.e., they limit both economic (medical expenses and lost wages) and noneconomic damages.⁹³ Capped limits range from \$500,000 to \$1.75 million.⁹⁴ Interestingly, most states that have enacted a total compensatory damages cap have also created some form of a patient compensation fund, which limits physicians’ liability at some threshold amount, but provides additional compensation to the plaintiff up to a higher threshold.⁹⁵

Too little attention has been given to these total compensatory damages caps (not to mention their potential interaction with patient compensation funds), or at least to differentiating between them and strictly noneconomic damages caps. For example, in response to a 1986 GAO Report, interest groups from Arkansas, California, Florida, Indiana, New York, and North Carolina weighed in on the effectiveness of malpractice reforms with respect to reducing pre-

⁹¹ TEX. CONST. art. III, § 66. According to the Elections Division in the Texas Secretary of State’s Office, Proposition 12 passed by about a fifty-one- to forty-nine-percent margin. See 2003: *Proposition 12*, THE ONLINE ATLAS OF TEXAS POLITICS (Sept. 15, 2003), at <http://www.burntorangereport.com/atlas/>.

⁹² The amendment authorizes lawmakers to put limits on noneconomic damages in other kinds of civil suits, provided that three-fifths of the members of the Legislature agree. TEX. CONST. art. III, § 66. Under Proposition 12, lawmakers could consider such limits after January 1, 2005. *Id.*

⁹³ See COLO. REV. STAT. § 13-64-302 (2003); IND. CODE § 34-18-4-3 (2003); LA. REV. STAT. ANN. § 40:1299.42 (West 2001); NEB. REV. STAT. § 44-2825(1) (Supp. 2003); N.M. STAT. ANN. §§ 41-5-6, 41-5-7 (Michie 1996 & Supp. 2003); VA. CODE ANN. § 8.01-581.15 (Michie Supp. 2004). Alabama previously limited total compensatory damages in wrongful-death cases to \$1 million. The cap was held unconstitutional. See *infra* note 130 and accompanying text.

⁹⁴ The current cap amounts are as follows: \$500,000 (Louisiana); \$600,000 (New Mexico); \$1 million (Colorado); \$1.25 million (Indiana); \$1.5 million (Virginia); and \$1.75 million (Nebraska). See sources cited *supra* note 93.

⁹⁵ Patient compensation funds are described in more detail below. See *infra* Part IV.A.3.c.iv. In the “total cap” states, the fund kicks in at the following amounts: \$100,000 (Louisiana); \$200,000 (New Mexico); \$250,000 (Indiana); and \$500,000 (Nebraska). See LA. REV. STAT. ANN. § 40:1299.42 (West 2001); N.M. STAT. ANN. § 41-5-25 (Michie Supp. 2003); IND. CODE § 34-18-4-3 (2003); NEB. REV. STAT. § 44-2825(2) (West, WESTLAW through 2004 Sess.).

miums, claim frequency, or mean payment per paid claim.⁹⁶ Only groups in Indiana, the only state in the group with a cap on *total* compensatory damages (at the time, equal to \$500,000), believed that their reforms had been effective.⁹⁷ Indeed, as we shall see, existing empirical studies suggest that comprehensive damages caps might be more effective than noneconomic damages caps.⁹⁸ But none of those studies aimed to explore such differences.⁹⁹

2. *Limitations on Punitive Damages*

Punitive damages have attracted ever-increasing attention, especially among tort-law reformers. While rarely awarded in general tort cases, their impact can nonetheless be significant.¹⁰⁰ Moreover, a wide divergence of opinion exists regarding whether size or incidence should prevail in assessing whether punitive damages pose a problem for our civil litigation system.¹⁰¹ Not surprisingly, this debate finds an analog in the medical malpractice context.

Punitive damages are available in cases of gross negligence and outrageous conduct by a health care provider, yet are nevertheless rarely awarded in medical malpractice cases.¹⁰² According to the U.S. Department of Justice, "From 1992 to 2001, 1% to 4% of plaintiff winners in medical malpractice jury trials received punitive damages."¹⁰³

⁹⁶ Frank A. Sloan et al., *Effects of Tort Reforms on the Value of Closed Medical Malpractice Claims: A Microanalysis*, 14 J. HEALTH POL. POL'Y & L. 663, 681 n.13 (1989).

⁹⁷ *Id.*

⁹⁸ See *infra* notes 122–23, 128–31 and accompanying text.

⁹⁹ Admittedly, it is difficult to compare differences between the effects of total caps and noneconomic caps, given that only a small minority of states have enacted total caps. See, e.g., Danzon et al., *supra* note 57, at 26 (conceding that study's finding of no effect of total damages caps on insurance premium rates "may reflect the small number of states with such caps"); Thorpe, *supra* note 57, at W4-25 ("Only five states cap both economic and noneconomic damages, so I combined states that cap noneconomic damages or both noneconomic and economic damages into a composite 'award cap' measure . . .").

¹⁰⁰ According to the Bureau of Justice Statistics, based on a comprehensive study of tort trials concluded in 2001, in the nation's seventy-five largest counties, "[a]bout 5% of plaintiff winners in tort trials were awarded punitive damages." THOMAS H. COHEN, U.S. DEP'T OF JUSTICE, NCJ No. 206240, *TORT TRIALS AND VERDICTS IN LARGE COUNTIES, 2001*, at 1 (2004), available at <http://www.ojp.usdoj.gov/bjs/pub/pdf/ttvlc01.pdf>.

¹⁰¹ See Sharkey, *supra* note 41, at 351 n.11 (listing sources debating rationality, predictability, and size of punitive damages).

¹⁰² See Viscusi & Born, *supra* note 38, at 24 ("Medical malpractice cases are responsible for a much smaller proportion of punitive awards than are cases involving product liability, fraud, and intentional torts.").

¹⁰³ THOMAS H. COHEN, U.S. DEP'T OF JUSTICE, NCJ No. 203098, *MEDICAL MALPRACTICE TRIALS AND VERDICTS IN LARGE COUNTIES, 2001 (2004)*, available at <http://www.ojp.usdoj.gov/bjs/pub/pdf/mmtvlc01.pdf>. According to Jury Verdict Research (JVR), which tracks statistical trends in medical malpractice litigation, punitive damages awards accompanied compensatory awards in 2% of the medical malpractice cases from 1995–97, and 1% of the cases in 1994 and 1998–2000. JENNIFER E. SHANNON & DAVID BOXOLD,

Why so few punitive awards in medical malpractice cases? Neil Vidmar's research on juror opinion may provide some clues. In interviews with jurors who decided medical malpractice cases, Vidmar found that jurors sounded a common theme: Most doctors try to do a good job and should not be punished for simple human mistake.¹⁰⁴ In a similar vein, Jennifer Arlen and Bentley MacLeod suggest that the vast majority of medical malpractice is caused by inadequate "expertise"—such as inadequate investment in the capacity to diagnose or in systems designed to prevent error—but the errors themselves are truly accidental.¹⁰⁵ Alternatively, Kip Viscusi and Patricia Born have suggested that "[t]he current low level of punitive damages in medical malpractice cases may be due in part to the enactment of reforms in the mid-1980s."¹⁰⁶

Charles Silver has provided some tentative results suggesting that punitive damages may play a larger role in settled cases.¹⁰⁷ Silver's tentative results confirm that punitive damages are disproportionately present when policyholder-providers contribute to settlements with personal or corporate assets.¹⁰⁸ According to Silver, punitive damages may be having an effect on providers by exposing them to uninsured liability—that is, liability that exceeds policy limits and thus remains the provider's responsibility.¹⁰⁹

JURY VERDICT RESEARCH, MEDICAL MALPRACTICE: VERDICTS, SETTLEMENTS AND STATISTICAL ANALYSIS 13 (2002) [hereinafter JVR REPORT]. JVR compiles a nationwide database of plaintiff and defense verdicts and settlements resulting from personal injury awards. JVR is supplied with abstracts of personal injury verdicts on a continuing basis from every state in the nation. Reports are furnished by court clerks, independent contractors, plaintiff and defense attorneys, law clerks, legal reporters, publications, and media sources. For that reason, it does not claim to have systematic or comprehensive coverage. For a discussion of acknowledged biases in JVR data, see *infra* notes 270, 272.

¹⁰⁴ See VIDMAR, *supra* note 25, at 169–71; see also RAND MICRA STUDY, *supra* note 44, at 59–60 (“[J]uries do not often find that what doctors or other health care professionals have wrongly done is so outrageous as to justify financial punishment in addition to paying compensation.”).

¹⁰⁵ Arlen & MacLeod, *Malpractice Liability*, *supra* note 33, at 1950 (noting that, in recent study, 20% of all error was due to lack of expertise, and “a substantial portion of the 60% of medical errors . . . attributed to ‘systematic error’ arguably resulted from inadequate knowledge or expertise”).

¹⁰⁶ Viscusi & Born, *supra* note 38, at 24.

¹⁰⁷ See Charles Silver, *Half-Baked Thoughts on Punitive Damages in Medical Malpractice Cases*, Presentation for Punitive Damages: The Law, the Jury, and the Judge, Judicial Symposium Sponsored by the AEI-Brookings Center for Regulatory Studies (Sept. 24, 2004) (on file with the *New York University Law Review*) (reporting that punitive damages account for roughly 7% of all payments in analysis of Texas insurance closed-claims data).

¹⁰⁸ *Id.* (reporting that punitive damages constituted 18.6% of all damages where insured paid something above policy limit).

¹⁰⁹ *Id.* (“If predictions about punitive damages are generating uninsured exposure for health care providers, their impact in litigation and on health care quality may be dispro-

The paucity of punitive damages awards in litigated cases may, in turn, explain the rarity of statutes that impose restrictions specifically on punitive damages in medical malpractice cases.¹¹⁰ These damages still cause concern, however. William Sage, for example, warns that “the prospect of punitive damages, not only against health plans but against hospitals and even physicians, is greater now than in previous decades.”¹¹¹ The phenomenon of large corporate organizations exposed to punitive damages in individual malpractice cases,¹¹² as well as to class action or multi-party litigation, is of relatively recent vintage.¹¹³ The U.S. Supreme Court’s recent decision in *Aetna Health Inc. v. Davila*¹¹⁴ will, however, likely stem the tide of claims against HMOs. The Court unanimously ruled that federal law barred the states from allowing managed care patients to sue HMOs for damages for refusing to cover treatments that a doctor has deemed medically necessary.¹¹⁵ My main focus in this Article, therefore, is on the far more common limitations on compensatory damages.

portionate to their size and frequency.”). For a further description of Silver’s study, see *infra* text accompanying notes 426–29.

Silver’s hypothesis is akin to the “blood money” thesis advanced by Tom Baker. See Tom Baker, *Blood Money, New Money, and the Moral Economy of Tort Law in Action*, 35 LAW & SOC’Y REV. 275, 276 (2001) (arguing that tort lawyers only go after “blood money”—defined as “money paid directly to plaintiffs by defendants out of their money,” in contrast to “insurance money”—in egregious cases, where defendant has acted particularly reprehensibly). But this hypothesis is complicated by the unsettled status of the insurability of punitive damages in Texas. See Catherine M. Sharkey, *Revisiting the Noninsurable Costs of Accidents*, 64 MD. L. REV. (forthcoming 2005) (manuscript at 125, on file with the *New York University Law Review*).

¹¹⁰ Only a handful of states have enacted punitive damages limitations that are unique to the medical malpractice context. See COLO. REV. STAT. § 13-64-302.5 (2004) (prohibiting punitive damages against physician because of act of another, unless directed or ratified by physician); FLA. STAT. ANN. § 766.207(7)(d) (West Supp. 2005) (prohibiting punitive damages in voluntary arbitrations); 735 ILL. COMP. STAT. ANN. 5/2-1115 (West 1993) (prohibiting punitive damages in medical malpractice cases); 40 PA. CONS. STAT. ANN. § 1303.505 (West Supp. 2004) (limiting punitive damages in medical malpractice cases with intentional conduct to 200% of compensatory damages); OR. REV. STAT. § 31.740 (2003) (prohibiting punitive damages against specific health providers). In addition, punitive damages are not allowed in medical malpractice cases in Massachusetts (where punitive damages must be specifically authorized by statute). See *Int’l Fid. Ins. Co. v. Wilson*, 443 N.E.2d 1308, 1317 n.20 (Mass. 1983).

¹¹¹ Sage, *supra* note 67, at 24–25.

¹¹² See David M. Studdert & Troyen A. Brennan, *The Problems with Punitive Damages in Lawsuits Against Managed-Care Organizations*, 342 NEW ENG. J. MED. 280–83 (2000) (“As legislative and judicial trends thrust health care insurers into the liability spotlight, they introduce an entity into health care litigation that readily fits the profile of the classic defendant in cases involving punitive damages.”).

¹¹³ This is largely a response to the development of a new corporate form of medicine.

¹¹⁴ 124B S.Ct. 2488 (2004).

¹¹⁵ *Id.*

II CONSEQUENCES OF NONECONOMIC DAMAGES CAPS: CONVENTIONAL APPROACHES

A growing number of empirical studies examine certain intended consequences of medical malpractice damages limitations. Because the expected value of the noneconomic compensatory damages award is capped, it would seem to follow that a plaintiff's expected compensatory recovery would be lower—indeed this is one of the legislature's goals in enacting caps.¹¹⁶ This would not, however, be the case if the damages restrictions have certain unintended consequences. For example, damages caps might serve as “anchors,” drawing juries' awards to the damages limit. To that extent, caps act more like a “floor” than a “ceiling.”

This Part explores the conventionally explored intended and unintended consequences of noneconomic caps. Part II.A begins with one particularly salient—and frequently studied—intended effect: reducing the size of plaintiffs' recovery (often termed “claim severity”).¹¹⁷ Part II.B then examines the unintended effect of anchoring, first in the well-trod experimental setting, but then also in the less explored real-world setting.

¹¹⁶ Legislatures that enact caps on noneconomic damages only are operating on the assumption that it is the noneconomic component of medical malpractice damages that is arbitrary, most vulnerable to the wiles of passionate jurors, and in greatest need of external control. *See, e.g.*, *Barlow v. N. Okaloosa Med. Ctr.*, 877 So. 2d 655, 658 (Fla. 2004) (finding that Florida medical malpractice reform provisions limiting only noneconomic damages “were enacted to address soaring noneconomic damage awards, rather than the more predictable economic damage awards” (internal quotation marks omitted)). In addition, it may well be more difficult politically to defend caps on economic damages, for the same reason that they fail to pass constitutional muster, namely because the “right” to recover them is stronger. *See infra* note 447.

¹¹⁷ Other studies have examined the effect of damages caps on the geographic decisions of physicians. *See, e.g.*, FRED J. HELLINGER & WILLIAM E. ENCINOSA, U.S. DEPT' OF HEALTH & HUMAN SERVS., *THE IMPACT OF STATE LAWS LIMITING MALPRACTICE AWARDS ON THE GEOGRAPHIC DISTRIBUTION OF PHYSICIANS* (2003) (concluding that state laws that limit noneconomic damages in medical malpractice cases may have increased number of physicians in those states), available at <http://www.ahrq.gov/research/tortcaps/tortcaps.pdf>; Jonathan Klick & Thomas Stratmann, *Does Medical Malpractice Reform Help States Retain Physicians and Does It Matter?* 6, 12–14 (Oct. 2, 2003) (unpublished manuscript, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=453481) (finding, using AMA data from 1980–98, that “enacting caps on non-economic damages is an effective way to attract and retain physicians”; moreover, noneconomic damages caps have significant effect on infant mortality, at least for blacks, reducing mortality by about sixty-seven deaths per 100,000 births).

A. *Intended Effect: Reducing the Size of Plaintiffs' Recovery*

Over the past two decades, researchers have attempted to measure the effects of various medical malpractice reform measures of the 1970s, 1980s, and 2000s. Of particular relevance here, several researchers have established a link between damages caps and the size of plaintiffs' recovery in medical malpractice cases. It is important to keep firmly in mind that much of this research has relied exclusively on data from previous decades. Moreover, little attention has been paid to the distinction between comprehensive caps on total compensatory damages and caps on noneconomic damages only.¹¹⁸

Patricia Danzon, a pioneer in the empirical study of medical malpractice, conducted a study in the 1980s, using data from the 1970s and 1980s.¹¹⁹ Assessing medical malpractice claims between 1975 and 1984, Danzon concluded that damages caps reduced the average value of paid medical malpractice claims by 23%.¹²⁰ Danzon does not focus on any distinction between caps on noneconomic damages and caps on total compensatory damages.¹²¹

Frank Sloan, Paula Mergenhagen, and Randall Bovbjerg followed up with a study of medical malpractice cases from 1975 to 1978, and 1984.¹²² Using pooled cross-sectional data from before and after the implementation of the reforms of the 1970s, Sloan et al. examined the effects of those reforms on the probability that a claim would be paid, the amount of payment, and the speed with which the claim was resolved. They, like Danzon, concluded that damages caps reduce plaintiffs' recovery: Limits on total compensatory damages reduced indemnity payments by 38%, whereas limits on noneconomic damages

¹¹⁸ See *supra* note 99. This is likewise the case across a wider range of studies. For example, in their empirical study of defensive medicine techniques, Kessler and McClellan consider "undifferentiated" caps on damages as a prime example of "direct" medical malpractice reform. See Kessler & McClellan, *supra* note 27, at 360 ("The two reforms most commonly found to reduce payments to and the frequency of claims, caps on damages and collateral-source-rule reforms, share a common property: they *directly* reduce expected malpractice awards."); *id.* at 371 tbl.II.A ("Either noneconomic (pain and suffering) or total damages payable are capped at a statutorily specified dollar amount.").

¹¹⁹ Patricia M. Danzon, *The Frequency and Severity of Medical Malpractice Claims: New Evidence*, LAW & CONTEMP. PROBS., Spring 1986, at 57, 59.

¹²⁰ *Id.* at 59, 76. In addition, states with collateral source offsets, see *infra* Part IV.A.3.c.ii, had 11–18% lower awards. Danzon, *supra* note 119, at 77.

In an earlier study, based upon 1970 and 1975–78 data, Danzon reported that damages caps lowered awards by 19%. Patricia Danzon, *The Frequency and Severity of Medical Malpractice Claims*, 27 J.L. & ECON. 115, 139 (1984). She found, moreover, that states enacting mandatory collateral source offsets had 50% lower awards. *Id.*

¹²¹ Instead, she lumps together caps that limit "all or part of the plaintiff's recovery," without attempting to analyze any differential effect. Danzon, *supra* note 119, at 76.

¹²² Sloan et al., *supra* note 96, at 667–68.

reduced recovery by 31%.¹²³ Their results were not only consistent with those of Danzon, but they suggested that caps have an even greater effect than Danzon found. Sloan et al. concluded that their results “strengthen the empirical evidence that some reforms work as their proponents intended. . . . For some reforms, such as limitations on awards, it seems obvious how reforms achieve their saving—by changing the measure of damages, quite directly.”¹²⁴ While their actual empirical results suggest a potentially dramatic difference between the effects of total caps and noneconomic damages caps, their analysis did not pursue this difference or its possible policy implications.

In a more recent study, Kip Viscusi and Patricia Born analyzed the complete property and casualty insurance files of the National Association of Insurance Commissioners from 1984 to 1991 to assess the effect of medical malpractice reforms on damages levels.¹²⁵ Their results suggest that “losses in states with noneconomic damages reforms are reduced 16–17 percent compared to states without these measures.”¹²⁶ In sum, their results confirm that “tort reform can reduce losses, as one would expect from measures that . . . reduce payments to medical malpractice victims.”¹²⁷

Two additional studies present “case studies” on the effect of reforms in Alabama and California, respectively. Using a dataset of individual cases filed against physicians insured by a single medical malpractice insurer, Albert Yoon examined the effects of damages caps imposed in Alabama, as compared with three neighboring states

¹²³ See *id.* at 678; see also *id.* at 675–76 tbl.2 (reporting statistically significant regression coefficients for log indemnity of -0.48 and -0.37 for Cap-T and Cap-N, respectively). In addition, they find that collateral source offsets lower awards by 21%. See *id.*

¹²⁴ *Id.* at 682. The authors concede that the “behavioral responses” for other reforms are “less clear-cut.” *Id.*

¹²⁵ Viscusi & Born, *supra* note 38, at 25.

¹²⁶ *Id.* at 32.

¹²⁷ *Id.* at 36. The corresponding effect on insurance premiums was less pronounced. See *id.* at 38–39 (“Noneconomic damages reforms enhance insurer profitability by lowering the loss ratio by 10–13 percent.”); *supra* note 57 and accompanying text. As Viscusi and Born explain: “Premium effects are often difficult to predict because they capture a variety of influences other than simply the riskiness of the state’s legal arenas.” Viscusi & Born, *supra* note 38, at 38; see also *Morris v. Savoy*, 576 N.E.2d 765, 771 (Ohio 1991) (describing amici’s argument that caps do not lower insurance rates).

Tom Baker, moreover, has criticized studies, like that of Viscusi and Born, that rely upon “incurred” (or predicted) as opposed to “developed” (or actual) losses. See Tom Baker, *Medical Malpractice and the Insurance Underwriting Cycle* 20 n.89 (Nov. 7, 2004) (unpublished manuscript, available at <http://ssrn.com/abstract=616281>) (arguing that incurred losses are heavily influenced by dynamics of insurance underwriting cycle, and thus developed-losses measure is superior).

without caps (Arkansas, Mississippi, and Tennessee).¹²⁸ In 1987, Alabama passed three separate damages caps in medical malpractice cases: a \$400,000 cap on noneconomic damages; a \$250,000 cap on punitive damages; and a \$1 million total cap on wrongful-death damages.¹²⁹ In 1991, the Alabama Supreme Court held that the cap on noneconomic damages was unconstitutional; the other caps were invalidated by the court in 1993 and 1995, respectively.¹³⁰

Because of the historical development of damages caps in Alabama, the dataset allowed Yoon to explore the before-and-after effects of the damages caps in two ways: before and after the damages caps were implemented and before and after the damages caps were nullified. The study finds that “the average relative recovery by Alabama plaintiffs decreased by roughly \$20,000 [relative to the three control states] after the Alabama legislature implemented damage caps and increased by roughly double that amount [relative to the control states] after the Alabama Supreme Court ruled damage caps unconstitutional.”¹³¹ Yoon’s study thus suggests that the combination of noneconomic damages caps, punitive damages caps, and total caps on wrongful-death damages will lower plaintiffs’ aggregate recovery. But, again, Yoon does not emphasize the specific individual effects of the caps.¹³²

¹²⁸ Albert Yoon, *Damage Caps and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the South*, 3 AM. L. & ECON. REV. 199, 203 (2001). This study uses a unique dataset provided by the Medical Services Division of the St. Paul Fire & Marine Insurance Company, which insures both hospitals and health care providers. *Id.* at 202. Yoon used data from St. Paul’s “traditional” insurance accounts, “which covers individual physicians or a small number of physicians comprising a practice group” (as opposed to the “major accounts” insurance, “which covers both a hospital and its employees”). *Id.* at 208–09.

¹²⁹ Alabama Medical Liability Act of 1987, No. 87-189, § 5, 1987 Ala. Acts 261, 268 (codified at ALA. CODE § 6-5-544 (1993)) (noneconomic damages); *id.* § 8, 1987 Ala. Acts at 269 (codified at ALA. CODE § 6-5-547 (1993)) (wrongful-death damages); Act of June 11, 1987, No. 87-185, § 2, 1987 Ala. Acts 251, 253 (codified as amended at ALA. CODE § 6-11-21 (2004)) (punitive damages).

¹³⁰ See *Moore v. Mobile Infirmary Ass’n*, 592 So. 2d 156, 171 (Ala. 1991) (striking down noneconomic damages cap); *Henderson v. Ala. Power Co.*, 627 So. 2d 878, 893–94 (Ala. 1993) (striking down punitive damages cap); *Smith v. Schulte*, 671 So. 2d 1334, 1342 (Ala. 1995) (striking down cap on wrongful-death awards); see also Yoon, *supra* note 128, at 206–08.

¹³¹ Yoon, *supra* note 128, at 203. The \$23,395 decrease in average damages awarded was measured with data from payments made while all the caps were in place (i.e., 1987–91), compared with payments made prior to the enactment of caps (i.e., 1984–87). See *id.* at 215. According to Yoon, two high payouts in the post-repeal period account for the asymmetry. *Id.* at 221. After omitting those cases, Yoon found that the decrease after repeal is roughly in line with the \$23,000 increase after enactment. *Id.*

¹³² And, in fact, Yoon reported that the \$20,000 decrease in average damages awarded post-cap (1997–99) remains the same whether one compares recoveries to the period in

A 2004 RAND study assesses how the MICRA cap on noneconomic damages has affected final judgments in California jury trials.¹³³ The researchers analyzed 257 medical malpractice trials (195 with nonfatal injuries; 62 with death claims) with plaintiffs' jury verdicts from 1995 to 1999 in California state courts.¹³⁴ In the 45% of trials that had at least one plaintiff with noneconomic damages exceeding MICRA's \$250,000 cap,¹³⁵ they calculated post-trial reductions according to MICRA's rules.¹³⁶ They concluded that final judgments were reduced by 30% from original jury verdicts as a result of MICRA—a 25% reduction in injury cases and a 51% reduction in death cases.¹³⁷ Unlike Yoon's study, however, the RAND study did not use regression analysis to control for various independent factors, such as case-type mix and severity of injury, among others.¹³⁸ An analysis of California verdicts by David Studdert, Tony Yang, and Michelle Mello that used multivariate regression technique, however, reported a similar 34% reduction in plaintiffs' total recovery as a result of the imposition of the MICRA cap.¹³⁹

B. Unintended Effect: Anchoring

In this Part, I explore one unintended consequence of medical malpractice caps: anchoring effects. Anchoring—"the judgmental

which all three caps were in effect (1987–91), or to the entire period in which at least one cap was in effect (1987–97). *See id.* at 221.

¹³³ RAND MICRA STUDY, *supra* note 44, at 3.

¹³⁴ *Id.* As the researchers explain:

Because the MICRA award cap is applied by the trial judge only after the jury's decision has been delivered, we were able to use the jury verdict data to calculate the difference between what the jurors believed to be the proper amount of damages (as evidenced by their original awards) and what the plaintiffs were likely to have received as a result of MICRA.

Id. at xix.

¹³⁵ *Id.* at 20–21.

¹³⁶ *Id.* at 12 ("The awards reported in [California Jury Verdicts Weekly] do not reflect any post-verdict adjustments by the trial judge, but we calculated the (almost-certain) reductions according to MICRA's clear and explicit rules.")

The researchers, moreover, had to "impute" economic and noneconomic award amounts from undifferentiated awards in 29% of their sample of reported damages awards. *Id.* at 70–71.

¹³⁷ *Id.* at 21. If limited to awards subject to MICRA, trial verdicts were reduced by 33% in injury cases and 57% in death cases. *Id.* A previous study of the effect of MICRA upon judgments (conducted by Kelso and Kelso) found a somewhat smaller decrease (25%) in medical malpractice judgments. KELSO & KELSO, *supra* note 6, at 17–18.

¹³⁸ *See* Yoon, *supra* note 128, at 212–14.

¹³⁹ *See* David M. Studdert et al., *Are Damages Caps Regressive? A Study of Malpractice Jury Verdicts in California*, HEALTH AFF., July–Aug. 2004, at 54, 58. Their sample consisted of 152 cases (from California Jury Verdicts Weekly) decided in California between 1985 and 2002, in which the jury returned a noneconomic damages award greater than \$250,000 and the court applied the cap. *See id.* at 56–57.

process of selecting an initial value, or ‘anchor,’ as a starting point from which to arrive at an award by a process of adjustment”¹⁴⁰—is a phenomenon well documented in the experimental setting. Its impact has, to date, been less well explored in the real-world setting. In this Part, I draw from both settings in order to assess the effects of anchoring in medical malpractice cases when litigants have opportunities to suggest damages numbers to the jury.¹⁴¹

1. *Experimental Setting*

Michael Saks and several collaborators designed a study to examine the effect of various forms of “jury guidance” on pain-and-suffering awards in personal injury cases.¹⁴² Of particular relevance here, Saks et al. included a “cap condition,” whereby jurors were informed of a \$250,000 cap.¹⁴³ Mock jurors were tested using three different injury scenarios, corresponding to “low-severity injury,”¹⁴⁴ “medium-severity injury,”¹⁴⁵ and “high-severity injury.”¹⁴⁶ Saks et al. presented a startling conclusion: In the low- and medium-severity

¹⁴⁰ Sharkey, *supra* note 38, at 408; *see id.* at 408–10 (discussing anchoring effects in punitive damages realm).

¹⁴¹ Anchoring effects have been studied extensively in the realm of plaintiffs’ *ad damnum* requests for specific dollar amounts for noneconomic (pain-and-suffering) damages and punitive damages. Most studies are experimental, conducted using mock jurors and juries. *See, e.g.,* Reid Hastie et al., *Do Plaintiffs’ Requests and Plaintiffs’ Identities Matter?*, in CASS R. SUNSTEIN ET AL., *PUNITIVE DAMAGES: HOW JURIES DECIDE* 62 (2002) (reporting results from two experiments assessing impact of plaintiffs’ *ad damnum* on punitive awards by varying plaintiffs’ closing argument, ranging from low to high amounts of suggested damages).

Neil Vidmar has criticized the methodology of these studies on the ground that “compared to real trials, the experiment presented only the plaintiff’s side of the argument.” Neil Vidmar, *Experimental Simulations and Tort Reform: Avoidance, Error, and Overreaching in Sunstein et al.’s Punitive Damages*, 53 EMORY L.J. 1359, 1390 (2004). More specifically, “the subjects heard not a word from the defense about why the punitive damages should be lower, nor were they provided with a defense counter-anchor or expert evidence.” *Id.* at 1389–90. *But see infra* notes 161–64 and accompanying text (discussing real-world evidence relating to infrequency with which defense attorneys introduce such evidence, where permitted, given potential prejudicial effect).

¹⁴² Michael J. Saks et al., *Reducing Variability in Civil Jury Awards*, 21 LAW & HUM. BEHAV. 243, 246 (1997).

¹⁴³ *Id.* at 249.

¹⁴⁴ The “low-severity injury” scenario involved a fractured wrist. *Id.* at 247. Mock jurors under certain guidance conditions were told that the “average” award for this injury was \$500, and that an “interval” of awards ranged from \$100 to \$10,000. *Id.* at 248 tbl.I.

¹⁴⁵ The “medium-severity injury” scenario involved a forearm broken in two places, which required two further surgeries to relieve pain and numbness. *Id.* at 247. The “average” award for this injury was \$47,500; the “interval” ranged from \$1000 to \$200,000. *Id.* at 248 tbl.I.

¹⁴⁶ The “high-severity injury” scenario involved a broken back, resulting in paralysis from the waist down as well as urinary problems. *Id.* at 247. The “average” award was \$1 million, and the “interval” ranged from \$40,000 to \$2 million. *Id.* at 248 tbl.I.

conditions, cap disclosures to the jurors *increased* the size of awards.¹⁴⁷ The cap had an upward effect upon awards that were, on average, well below the \$250,000 cap limit. They concluded that “[t]he psychological principles of anchoring and assimilation are excellent candidates for explaining the findings.”¹⁴⁸

Anchoring effects may be quite different, however, in the settlement context. Linda Babcock and Greg Pogarsky conducted experiments to test the effect of damages caps on pretrial bargaining.¹⁴⁹ Pairs of mock litigants were given the identical personal-injury case, in which the only unresolved issue was the amount of pain-and-suffering damages (for which the plaintiff was seeking \$1 million).¹⁵⁰ Half of the pairs were told of a \$250,000 damages cap, while the other half were not.¹⁵¹ Not only did caps encourage settlements, but the average settlement for those litigants negotiating under a damages cap was less than half the amount of settlement for those negotiating without a cap.¹⁵²

In these experimental studies (as in numerous others of their ilk¹⁵³), jurors were explicitly informed of the cap placed on the damages award. Although most states do not allow the jury to be informed of the cap, researchers have defended such disclosure on the ground that “even if jurors are not directly instructed that . . . damages are capped at a certain level, they may nonetheless have this expecta-

¹⁴⁷ *Id.* at 253. In the low injury category, the mean award under the cap condition was \$15,718, as compared with the control group's mean award of \$3895. *Id.* at 251 tbl.III. Caps, moreover, increased the variability of awards in this injury category. *Id.* at 251. For the medium injury category, the mean award under the cap was \$183,502, as compared with \$175,517. *Id.* at 251 tbl.III. To be sure, in the high injury category, caps did reduce both the size and variability of awards compared to the control (“no disclosure”) category. *Id.* These findings suggest a possible interaction between the cap and severity category. See *infra* Part IV.C.2.b (reporting results of regressions testing effect of cap in various subsamples of cases defined by severity of injury categories).

¹⁴⁸ Saks et al., *supra* note 142, at 254. An “anchor” is “a position along a frame of reference that has been made salient for any of a variety of reasons.” *Id.* “Assimilation” is “the process whereby positions near the anchor are psychologically displaced toward the anchor.” *Id.*

¹⁴⁹ See Linda Babcock & Greg Pogarsky, *Damage Caps and Settlement: A Behavioral Approach*, 28 J. LEGAL STUD. 341 (1999).

¹⁵⁰ *Id.* at 359–60.

¹⁵¹ *Id.*

¹⁵² *Id.* at 363.

¹⁵³ See, e.g., Verlin B. Hinsz & Kristin E. Indahl, *Assimilation to Anchors for Damage Awards in a Mock Civil Trial*, 25 J. APPLIED SOC. PSYCHOL. 991, 1009 (1995) (finding that caps disclosed to mock jurors served as anchors to which jurors' monetary awards were assimilated).

tion from information available in the media, conversations with others, or from general knowledge of tort reform legislation.”¹⁵⁴

2. Real-World Setting

Most states prohibit cap disclosure to the jury.¹⁵⁵ Considerable debate exists over the likely effect of disclosure. The recent RAND study of the effect of MICRA in California reflects this ambiguity: “It is not clear whether jurors, when armed with such knowledge, would be more likely to ‘self-limit’ their original awards to just \$250,000 for non-economic damages or to inflate their awards beyond what they might have granted to make a public statement about their feelings.”¹⁵⁶ Caps might act alternatively as a “floor” or as a “ceiling”—drawing awards either towards or away from these benchmarks.¹⁵⁷

¹⁵⁴ Edith Greene et al., *The Effects of Limiting Punitive Damage Awards*, 25 LAW & HUM. BEHAV. 217, 224 (2001); see also Babcock & Pogarsky, *supra* note 149, at 352 (“Of course, a statutory prohibition cannot guarantee juror ignorance, since other sources exist for the information, including previous experience with the courts, private conversations, and newspapers.”); Saks et al., *supra* note 142, at 245 (“Although in practice jurors are not informed by courts about caps . . . over time some or many members of the jury may become aware of such provisions . . .”). For a detailed discussion of consequences of “blindfolding” the jury, see Shari Seidman Diamond & Jonathan D. Casper, *Blindfolding the Jury to Verdict Consequences: Damages, Experts, and the Civil Jury*, 26 LAW & SOC’Y REV. 513 (1992).

¹⁵⁵ See, e.g., COLO. REV. STAT. § 13-64-302 (2003); KAN. STAT. ANN. § 60-1903 (Supp. 2003); MO. REV. STAT. § 538.210 (2000). In addition, H.R. 4280, the bill passed by the U.S. House of Representatives, contained an explicit prohibition on disclosure. See *supra* note 9. Other statutes, such as California’s MICRA, contain no explicit restriction, yet disclosure is nonetheless frowned upon by the appellate courts. See, e.g., *Schiernbeck v. Haight*, 9 Cal. Rptr. 2d 716, 724 (Cal. Ct. App. 1992) (“One approach, and one which we recommend for trials of medical malpractice cases, is that the jury not be told of the \$250,000 ceiling for noneconomic damages.”). Compare RAND MICRA STUDY, *supra* note 44, at 13 (“[California juries may be informed about the cap] directly . . . through jury instructions or . . . [indirectly] via the arguments of counsel. It is also possible that some jurors knew about the caps from media reports or other sources and informed the other members of the jury during deliberations.”), with *id.* at 66 n.8 (“Based on discussions with several medical malpractice attorneys in Los Angeles area, it appears that in most instances the jury is not directly informed of the existence of the cap.”).

¹⁵⁶ RAND MICRA STUDY, *supra* note 44, at 13. As the RAND study explains: “The possibility that jurors have self-limited their awards is a very real one: At the individual plaintiff level, 10.5 percent of non-zero awards for non-economic damages in our database were for \$250,000. By comparison, 1.9 percent were for \$200,000, and 3.3 percent were for \$300,000.” *Id.* at 67 n.10. The RAND report, however, does not explicitly link up this result with the possibility that “self-limiting” jurors might also be inflating their economic damages awards.

¹⁵⁷ As the RAND study further elaborates:

[J]uries might “self-limit” their awards for non-economic damages to a maximum of \$250,000, even though they might have awarded much more if they were unaware of this feature of MICRA. Alternatively, juries might misinterpret the meaning of the cap and view the limit as the extreme benchmark to be used for the most severe injuries and then award something less than \$250,000

(Alternatively, as hypothesized in this Article, jurors might respond by inflating awards of economic damages, which are uncapped.) It nonetheless seems plain that “[l]egislators likely fear that juries would award the maximum or would otherwise adjust their awards if told of the statutory limit.”¹⁵⁸

Massachusetts is an exception. It permits disclosure of medical malpractice caps to the jury. Its law provides that “the court shall instruct the jury that in the event they find the defendant liable, they shall not award the plaintiff more than five hundred thousand dollars for pain and suffering, loss of companionship, embarrassment and other items of general [noneconomic] damages.”¹⁵⁹ A defendant, however, must request an instruction on the damages cap.¹⁶⁰

In fact, evidence shows that Massachusetts defense attorneys generally choose not to request such an instruction, on the theory that, if disclosed to the jury, it might act as a floor. A window into the perceived anchoring effects of damages caps in the real world is provided by *Primus v. Galgano*, a case in which the jury returned a medical malpractice verdict of \$1.46 million for past and future pain and suffering.¹⁶¹ Defense counsel, who had not asked for an instruction on

for more moderate injuries that might have received more (essentially, the range of zero dollars to unlimited amounts of money for non-economic damages would be scaled back to zero dollars to \$250,000).

Id. at 66.

¹⁵⁸ Colleen P. Murphy, *Determining Compensation: The Tension Between Legislative Power and Jury Authority*, 74 TEX. L. REV. 345, 347 n.8 (1995); see also Sharkey, *supra* note 41, at 438–40 (discussing potential due process concerns raised by disclosure to jurors that percentage of punitive damages awards will be directed to state or specific fund).

¹⁵⁹ MASS. GEN. LAWS ANN. ch. 231, § 60H (West 2000). The cap makes exceptions where there is (1) a substantial or permanent loss of function; (2) a substantial disfigurement; or (3) other special circumstances. *Id.*

Formerly, West Virginia medical malpractice law gave courts discretion to inform the jury of the noneconomic damages cap in medical malpractice cases. W. VA. CODE ANN. § 55-7B-8 (Michie 2000) (repealed 2003) (“In any medical professional liability action brought against a health care provider, the maximum amount recoverable as damages for noneconomic loss shall not exceed one million dollars and the jury may be so instructed.”). This provision was deleted. Act of Mar. 8, 2003, ch. 147, § 55-7B-8, 2003 W. Va. Acts 1370, 1473 (codified at W. VA. CODE ANN. § 55-7B-8 (Michie Supp. 2003)). There does not appear to be any legislative history specifically pertaining to the legislature’s decision to alter the statutory language relating to the disclosure of the damages caps to juries. My research assistant, Matthew Winters, contacted Thomas J. Hurney, Esq., a medical malpractice attorney in West Virginia, who consulted with a colleague who worked as a lobbyist for the medical associations which supported passage of West Virginia’s recent medical malpractice reform bill. Neither one recalled any discussion whatsoever about this legislative choice. Telephone Interview by Matthew Winters with Thomas J. Hurney, Esq. (Feb. 9, 2004) (summary on file with the *New York University Law Review*).

¹⁶⁰ A defendant waives its entitlement to the cap if no such instruction is sought. See *Primus v. Galgano*, 329 F.3d 236, 238 (1st Cir. 2003) (deciding issue as matter of first impression, seventeen years after statute’s enactment).

¹⁶¹ 187 F. Supp. 2d 1, 1 (D. Mass. 2002), *aff’d*, 329 F.3d 236 (1st Cir. 2003).

the \$500,000 damages cap at trial, argued post-trial that the jury verdict should be reduced in line with the statutory cap.¹⁶² In the course of deciding that defense counsel had waived his claim to a cap on damages, the district court considered evidence of lawyers' general experience with disclosure of the cap to jurors. Affidavits from lawyers "experienced in the trial of medical malpractice actions" confirmed that

the failure of the defendants in this case to request a charge on the cap [was] consistent with the practice in the defense bar to avoid any mention of the cap because that would give the plaintiff's attorney an opportunity to argue a figure, \$500,000, which otherwise would not be permissible under Massachusetts practice and procedure with regard to permissible jury argument on general damages.¹⁶³

Moreover, according to the presiding judge: "In the twenty or more medical malpractice cases over which I have presided, I can recall no instance in which a defendant's counsel asked for the [cap] instruction" ¹⁶⁴

This defense logic—that numbers placed before jurors will serve as "floor" anchors—is consistent with Neil Vidmar's recent work on medical malpractice cases.¹⁶⁵ It also resonates with a study by William Gronfein and Eleanor Kinney, suggesting that anchoring may explain what otherwise appears to be their counterintuitive finding that total compensatory damages caps actually *increase* average payouts.¹⁶⁶ Gronfein and Kinney compared the experience of Indiana with its neighbors, Michigan and Ohio, with respect to what they term "large" medical malpractice claims, namely, those over \$100,000.¹⁶⁷ During the time frame of their study (1977–88), Indiana had a cap on total

¹⁶² *Id.*

¹⁶³ *Id.* at 2–3.

¹⁶⁴ *Id.* at 3. In a similar vein, an experienced trial attorney attested:

Since the enactment of [the cap legislation] in 1986, I have tried more than 75 medical malpractice cases in which the \$500,000 cap might have been applicable. I can recall only one case in which a trial judge charged the jury on the \$500,000 cap, and it was over the strenuous objection of the attorney for the defendant doctor.

Id.

¹⁶⁵ According to Vidmar, in a subsample of twenty-five cases, about 80% of the time the defense argued liability only and presented no information on damages. E-mail from Neil Vidmar, to Catherine M. Sharkey (Feb. 27, 2004) (on file with the *New York University Law Review*).

¹⁶⁶ William P. Gronfein & Eleanor DeArman Kinney, *Controlling Large Malpractice Claims: The Unexpected Impact of Damage Caps*, 16 J. HEALTH POL. POL'Y & L. 441, 458 (1991).

¹⁶⁷ *Id.* at 445. Their sample included 1282 medical malpractice claims filed after July 1975 and closed from 1977 to 1988 in Indiana, Michigan, and Ohio. *Id.*

compensatory damages—i.e., including both economic and noneconomic damages—whereas Michigan and Ohio (allegedly) had no caps at all.¹⁶⁸ The authors set out to test the effect of Indiana's damages cap on the size of recoveries in large claims. They found that, while maximum claims in Michigan (\$7.5 million) and Ohio (\$2.7 million) were indeed far higher than Indiana's cap (\$500,000),¹⁶⁹ the average Indiana claim was 39.6% greater than the average Michigan claim and 33.5% greater than the average Ohio claim.¹⁷⁰ Moreover, payments to claimants under Indiana's patient compensation fund (PCF) tended to be more generous than payments in Michigan or Ohio.¹⁷¹ Finally, nearly 50% of the explained variance among payouts was associated with the state dummy variable for Indiana.¹⁷² The authors concluded that "[t]he most important finding in this analysis is that, between 1977 and 1988, Indiana's mean payment for large malpractice claims was substantially higher than the mean payment for similar claims in Michigan and Ohio, independent of sex, age, severity of injury, allegations of negligence, and year of resolution."¹⁷³ The authors, who had expected that Indiana's cap on total compensatory damages would depress average claim amounts, hypothesized that Indiana's cap "has actually become a 'floor' as some have speculated happens with caps on malpractice damages."¹⁷⁴

¹⁶⁸ *Id.* at 442. Gronfein & Kinney assert that Michigan and Ohio have never implemented a damages cap. *Id.* This is not entirely accurate. In fact, in 1986, Michigan enacted a \$225,000 cap on noneconomic damages, albeit with a host of exceptions (the current cap is \$280,000), and Ohio had a \$200,000 noneconomic damages cap in effect from 1975 until 1991. See *infra* Appendix I and note iv.

¹⁶⁹ Gronfein & Kinney, *supra* note 166, at 447.

¹⁷⁰ *Id.* "Analysis of the variance indicate[d] that the difference between the three means [was] highly significant." *Id.* The median payment was \$435,283 for large Indiana claims, compared to \$180,000 for large Michigan claims and \$200,000 for large Ohio claims. *Id.*

¹⁷¹ *Id.* at 459. The patient compensation fund (PCF) "pays any portion of a claim above \$100,000 and bases decisions on the appropriate level of payment only on the amount of damages, and not liability." *Id.* Moreover, the authors indicate that "some evidence suggests that the PCF has not been vigorously defended by its counsel in the adjudication of PCF claim payments." *Id.*

Payments on large claims may be so high in Indiana, notwithstanding its enactment of comprehensive damages caps, in large part due to the operation of the PCF. Neither Michigan nor Ohio has a patient compensation fund. Indeed, the authors themselves recognize the fact that "[t]he most reasonable explanation is the way in which the PCF operates." *Id.* Patient compensation funds are described *infra* Part IV.A.3.c.iv.

¹⁷² Gronfein & Kinney, *supra* note 166, at 457.

¹⁷³ *Id.* at 458.

¹⁷⁴ *Id.* (citing Sloan & Bovbjerg, *supra* note 78).

III

CROSSOVER EFFECTS IN MEDICAL MALPRACTICE

While the claim severity and anchoring effects have been explored, the crossover theory—that where noneconomic damages are capped in medical malpractice cases, some portion of these damages might spill over into the still-unlimited economic damages category—has not yet been explored in the literature. My initial intuition of just such a spillover emerged from reading medical malpractice cases in which very large awards were given—and often sustained after post-trial and appellate review—in states that enforce caps on the noneconomic portion of compensatory damages.¹⁷⁵ The striking feature of these awards was the high component of economic damages, which were left untouched by the statutory caps. It appears that the subcategory of economic compensatory damages in medical malpractice cases might be much more malleable than its conventional depiction and might therefore be subject to inflation via a crossover function.¹⁷⁶

What might explain the crossover phenomenon? Attorneys, experts, jurors, and courts play critical roles in enabling such crossover. Confronted with caps on noneconomic damages in medical malpractice cases, attorneys may have learned new ways to pitch their arguments about economic damages to juries. In other words,

¹⁷⁵ See, e.g., *Von der Ahe v. McComb*, No. BC 238 978, 2002 WL 32108152 (Cal. Super. Ct. Mar. 25, 2002) (Verdict & Settlement Report) (awarding \$750,000 in noneconomic damages—to be reduced to \$250,000 by MICRA—and \$5,072,479 in economic damages (for lifetime medical costs) to plaintiff for neurosurgeon's failure to disclose full risks of surgery to remove brain tumor, which left child mute, incontinent, and blind); *Solomon v. Desert Valley Hosp.*, No. VCV017352, 2001 WL 1529840 (Cal. Super. Ct. Sept. 10, 2001) (Verdict & Settlement Report) (awarding \$523,323 in noneconomic damages—to be reduced to \$250,000 by MICRA—and \$4,197,964 in economic damages). What was less clear from these isolated examples was how representative these cases are of medical malpractice cases more generally and of the ratio between economic and noneconomic damages.

¹⁷⁶ The crossover function in medical malpractice—from noneconomic damages into economic damages—is analogous to the posited crossover from punitive damages into noneconomic damages in general tort cases. See Catherine M. Sharkey, *Crossing the Punitive-Compensatory Divide* (2005) (unpublished manuscript, on file with the *New York University Law Review*) (exploring possibility of crossover effect in general civil cases between punitive damages and noneconomic damages: namely, as punitive damage component is restricted or foreclosed, noneconomic damages component will rise). Here, the posited crossover is, instead, between noneconomic damages and economic damages for two reasons. First, punitive damages are extremely rare in medical malpractice cases, see *supra* Part I.B.2; second, as I will explore in this Part, it may well be that the economic/noneconomic divide is particularly malleable in the context of medical malpractice.

noneconomic damages caps may have triggered innovative ways to increase economic damages.¹⁷⁷

This development does not mean that plaintiffs' attorneys previously had been "leaving money on the table": In other words, it may not be that, if only attorneys had made such innovative arguments in the past (before the imposition of caps), they likewise could have generated higher economic damages. Instead, it may be that attorneys have always tried to maximize total damages recovery and now, faced with noneconomic damages caps, the mix between the components of economic and noneconomic has changed.¹⁷⁸ Moreover, it is likely that the pursuit of economic damages is more expensive than that of noneconomic damages, so it was optimal for attorneys to pursue the comparatively less costly route as far as possible.¹⁷⁹

¹⁷⁷ Can damages caps be circumvented entirely? With the imposition of limits on noneconomic damages, plaintiffs and their attorneys might attempt end runs by reshaping the claims that they bring or the parties whom they choose to sue. "Suits foreclosed or limited in recovery by laws such as California's MICRA statute may be reframed using new legal theories (e.g., elder abuse, unfair business practices, patient dumping, breach of fiduciary duty), or directed against defendants unprotected by caps (e.g., product liability, bad faith breach of insurance contract)." Sage, *supra* note 67, at 16; see also BOVBERG & RAYMOND, *supra* note 11, at 1 (explaining that "even successful enactments often set the stage for continued efforts to overturn them in court, work around them in practice, and lobby endlessly for their repeal, especially once the immediate insurance crisis has passed"). In California, for example, MICRA's caps do not apply where licensed health professionals are sued for intentional torts committed outside the scope of the license. CAL. CIV. CODE § 3333.2 (West 1997); see also RAND MICRA STUDY, *supra* note 44, at 14. Moreover, MICRA does not apply to suits against HMOs. CAL. CIV. CODE § 3428(c) (West Supp. 2005); see also RAND MICRA STUDY, *supra* note 44, at 8 n.21. But see *supra* notes 114–15 and accompanying text (discussing recent U.S. Supreme Court decision restricting damages against HMOs).

¹⁷⁸ One might say that attorneys are maximizing within an informal juror indifference curve between damages categories that sets the outer bounds of recovery. Noneconomic damages caps may change the point on the indifference curve (i.e., to one with greater economic damages and lower noneconomic damages), but the total damages recovery remains at the frontier set by the indifference curve. Implicit in this characterization is that jurors have informal norms regarding total plaintiff recovery that they attempt to vindicate regardless of the particular mix of economic/noneconomic damages they award.

¹⁷⁹ The pursuit of economic damages is much costlier in terms of the expense of expert witnesses. See, e.g., Catherine T. Struve, *Doctors, the Adversary System, and Procedural Reform in Medical Liability Litigation*, 72 *FORDHAM L. REV.* 943, 993 (2004) (recognizing substantial costs of expert witness fees to plaintiffs facing medical screening panels); Vidmar & Brown, *supra* note 22, at 33 ("[P]laintiffs often have a more difficult time [than defendants] obtaining and hiring experts."); see also *infra* Part IV.E.2.b (discussing effects of this potential cost differential on plaintiffs' attorneys' screening of cases). There are, of course, transaction costs associated with forcing damages into one box as opposed to another. And, if it was relatively less expensive pre-cap to handle losses as noneconomic, whereas post-cap it is worth incurring the transaction costs to push these losses into the box for economic damages, there would be room for crossover.

One must also take into account, however, the relationship between noneconomic damages and economic damages. One standard view is that noneconomic damages are a

Such strategies of attorneys and experts find a receptive audience in jurors, who may treat damages holistically—that is, jurors may have a basic sense of the total amount of damages that a plaintiff should receive.¹⁸⁰ Moreover, jurors tend to blur what the law often treats as hermetically sealed categories of economic and noneconomic damages. Neil Vidmar has presented evidence from juror interviews consistent with this hypothesis. Vidmar's interviews with jurors who decided medical malpractice cases demonstrated that jurors considered, for example, the effects of disfigurement and emotional trauma on a plaintiff's likelihood for promotion.¹⁸¹ Finally, as we shall see, courts have a role to play in terms of enabling or obstructing the fluidity of noneconomic and economic damages.

In this Part, I begin by tracing the historical roots of the crossover phenomenon to wrongful-death cases, where, in the face of rigid statutory barriers to noneconomic damages, attorneys, jurors, and courts increasingly expanded the boundaries of what was considered economic loss. I then consider the even more explicit recognition by courts of the spillover effect that has emerged in modern medical malpractice cases. Expert witnesses' methodology and testimony at trial can play a critical role in effectuating the crossover I have identified. In particular, I explore how experts and the attorneys who hire them

function (usually a multiple) of economic damages. Kip Viscusi's research has demonstrated, for example, that jurors take economic damages into account when determining noneconomic damages. See W. Kip Viscusi, *Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards?* 8 INT'L REV. L. & ECON. 203, 213–15 (1988); see also Lance deHaven-Smith, *Medical Malpractice Claims in Florida: An Analysis of Closed Claims for Physicians and Surgeons, 1991–2001*, at 6 (2002) (unpublished manuscript, on file with the *New York University Law Review*) (finding “statistically significant correlation between the payouts for economic and non-economic losses” in study analyzing Florida closed-claims insurance data). If that were so, then plaintiffs' attorneys would maximize recoveries and fees by maximizing economic damages, even in the absence of caps. Even in Viscusi's findings, however, noneconomic damages responded less than proportionally to increases in economic damages. See Viscusi, *supra*, at 212.

¹⁸⁰ See *supra* note 178. This phenomenon has been explored in the context of compensatory and punitive damages. See, e.g., Tom Baker, *Transforming Punishment into Compensation: In the Shadow of Punitive Damages*, 1998 WIS. L. REV. 211, 227 (quoting plaintiffs' attorney who argued that “in most instances a jury has a figure in mind, and when you have a figure in mind, it can come in the guise of compensatory damages or in the guise of punitive damages”); see also Sharkey, *supra* note 176 (manuscript at 33–34) (discussing ways in which jurors have holistic sense of damages). My contention is that this phenomenon may also apply to jurors' consideration of economic and noneconomic compensatory damages.

¹⁸¹ See Vidmar & Brown, *supra* note 22, at 28. Vidmar and Brown have also remarked upon the blurred line between economic and noneconomic damages awarded by jurors in medical malpractice: “Jury instructions usually caution jurors that they should not award compensation for general damages [i.e., noneconomic damages] when the same element is awarded in special damages [i.e., economic damages], but these lines of demarcation are often indistinct.” *Id.*

may be expanding the boundaries of the category of economic damages.

A. Case Law Examples

Wrongful-death cases provide a useful starting point for exploration of the crossover effect. Faced with historically restrictive wrongful-death statutes, jurors and eventually courts devised methods by which the pain of a lost loved one could be “transformed” into the dollar amount necessary to compensate the surviving relative for those services that were once provided by the deceased. This development may be seen as analogous to the more general crossover effect between noneconomic and economic damages in medical malpractice cases, which is the main focus of this Part.

1. Wrongful Death

In a wrongful-death action, the claim is brought on behalf of, and for the benefit of, designated survivors.¹⁸² Wrongful-death claims are statutory (as opposed to common law) claims,¹⁸³ and most state statutes can be traced back to the nineteenth century.¹⁸⁴

Traditional wrongful-death statutes protected only the *pecuniary* interest of dependent survivors; they allowed only for the recovery of economic damages and excluded recovery for the survivor’s grief or mental anguish (typical elements of noneconomic damages). This had particularly harsh consequences for plaintiffs when the decedent was a minor, retired person, housewife, or other “unproductive” family member whose death did not readily translate into economic loss.¹⁸⁵ Courts attempted to address this problem in several ways.

First there was the “services solution,” by which courts inflated the pecuniary value of household and other “services” provided by

¹⁸² By contrast, a “survivorship claim” or “survival action” (which likewise is brought by the survivors of the deceased) is brought on behalf of the decedent and includes any claims the decedent has before death that “survive” the death. The two types of claims are most often brought together in the same action.

¹⁸³ See, e.g., Wex S. Malone, *The Genesis of Wrongful Death*, 17 STAN. L. REV. 1043, 1044 (1965) (“The effect to be given the death of a person connected with a tort rests almost entirely upon statutory foundations.”).

¹⁸⁴ See, e.g., John Fabian Witt, *From Loss of Services to Loss of Support: The Wrongful Death Statutes, the Origins of Modern Tort Law, and the Making of the Nineteenth-Century Family*, 25 LAW & SOC. INQUIRY 717, 736 (2000).

¹⁸⁵ *Id.* at 742 (“In a world in which married women did little paid work, . . . the pecuniary damage rule placed sharp limits on the recovery that might be had for the death of a wife and mother.”). See generally VIVIANA A. ZELIZER, *PRICING THE PRICELESS CHILD: THE CHANGING SOCIAL VALUE OF CHILDREN* (1985) (describing similar problems in measuring value of children’s lives).

decedents.¹⁸⁶ These losses might take the form of cash, food, or shelter. In addition, the deceased may have contributed other services of economic value—for example, housekeeping, home maintenance, gardening, auto maintenance, driving, laundry, shopping, cooking, or financial planning—which likewise would be included in the accounting. The measure of this damages component was often equal to the amount that the survivor would have to pay to hire others to perform those duties.¹⁸⁷ Numerous states eventually adopted this as an element of wrongful-death damages.¹⁸⁸

A second, more expansive, solution followed by courts across the country involved the assignment of pecuniary value to intangible aspects of family relationships. Under this approach, such things as lost companionship, society, love, advice, and guidance (often summed up as “consortium”) were deemed to have pecuniary value.¹⁸⁹ Over time, therefore, courts either broadened the definition of “pecuniary loss,”¹⁹⁰ or else discarded the limitation altogether.¹⁹¹

¹⁸⁶ 2 DAN B. DOBBS, *DOBBS LAW OF REMEDIES* § 8.3(5), at 440 (2d ed. 1993).

¹⁸⁷ See, e.g., *Mono v. Peter Pan Bus Lines, Inc.*, 13 F. Supp. 2d 471, 480 (S.D.N.Y. 1998). The appropriate amount of damages is calculated either by summing the value of the amenities or services provided, or else by proving the victim’s total earnings, net expenses and other sums that would not have been contributed to the support of dependents. Evidence of past earnings, past contributions, future prospects, family affection, and personal characteristics are used to determine probable future contribution. Such calculations are bounded by the normal life expectancy (or technically, the working life expectancy) of the decedent at the time of death, or else the life expectancy of the beneficiaries in the death action, whichever is less.

¹⁸⁸ See 2 DOBBS, *supra* note 186, § 8.3(5), at 440 nn.8 & 10 (listing case law from Arkansas, Illinois, Indiana, and Missouri). By contrast, a few states instead compensated for the value of the decedent’s life, as opposed to the loss to survivors. See, e.g., CONN. GEN. STAT. ANN. § 52-555 (West Supp. 2004) (measuring wrongful-death recovery by loss to decedent of his life); GA. CODE ANN. § 51-4-2(a) (2000) (surviving relatives “may recover . . . the full value of the life of the decedent”); *Romero v. Byers*, 872 P.2d 840, 846–47 (N.M. 1994) (holding that “the value of life itself is compensable” because law “contemplates damages that encompass more than the pecuniary loss to the beneficiaries because of the loss of the deceased”). For a further discussion of hedonic damages, see *infra* Part III.B.2.

¹⁸⁹ See 2 DOBBS, *supra* note 186, § 8.3(5), at 440–42.

¹⁹⁰ See, e.g., *Green v. Bittner*, 424 A.2d 210, 215–16 (N.J. 1980) (holding that value of companionship and advice child might provide in parents’ old age “must be confined to what the marketplace would pay a stranger with similar qualifications for performing such services”); see also *Krouse v. Graham*, 562 P.2d 1022, 1025 (Cal. 1977) (“[F]or the past century California courts have uniformly allowed wrongful death recovery for loss of the society, comfort, care and protection afforded by the decedent, despite the courts’ insistence that only ‘pecuniary’ losses are compensable.”); *Elliott v. Willis*, 442 N.E.2d 163, 168 (Ill. 1982) (“In determining the pecuniary value of a spouse . . . the society, companionship and conjugal relationship that constitute loss of consortium are factors that the jury may consider.”); *Wycko v. Gnodtke*, 105 N.W.2d 118, 122–23 (Mich. 1960) (“The human companionship thus afforded has a definite, substantial, and ascertainable pecuniary value and its loss forms a part of the ‘value’ of the life we seek to ascertain.”).

This led to the somewhat paradoxical result that “lost love and affection of a spouse or child [was] said to be recoverable while the mental anguish or grief that reflects such lost love and companionship [was] not.”¹⁹²

In part to address this untoward result, several legislatures amended their statutes to permit direct recovery for grief or mental anguish.¹⁹³ David Leebron documented how, prior to legislative reforms, juries may have found other ways to “overcome” statutory restrictions on wrongful-death claims.¹⁹⁴ Leebron found some empirical support for a relationship between wrongful-death awards and the decedent’s pain and suffering prior to death: namely, that “juries intuitively feel that wrongful death awards, constrained as they are primarily to reflect lost income, systematically understate the appropriate measure of damages. [As a result] juries are presumed to add an extra amount to an award by assessing substantial damages for pain and

¹⁹¹ See, e.g., *Sanchez v. Schindler*, 651 S.W.2d 249, 251 (Tex. 1983) (rejecting pecuniary loss limitation and allowing plaintiff to “recover damages for loss of companionship and society and damages for mental anguish”).

¹⁹² 2 DOBBS, *supra* note 186, § 8.3(5), at 441. Nonetheless, as one experienced practitioner has advised: “In states that do not compensate grief but do allow the next of kin to recover for loss of services, society, and companionship, you can argue that grief is relevant evidence because it reflects an objective manifestation of the loss of society.” Richard D. Lawrence, *Primer on Wrongful Death Claims*, TRIAL, Feb. 2004, at 42, 44.

¹⁹³ 2 DOBBS, *supra* note 186, § 8.3(5), at 442. By 1990, according to Dobbs, “[a]t least ten statutes specifically authorize[d] such a recovery, usually in addition to the damages for lost companionship, society, guidance and the like. In addition, some courts have expanded liability to include mental anguish recovery under statutes that do not specifically authorize it.” *Id.*; see also, e.g., FLA. STAT. ANN. § 768.21 (West Supp. 2005) (allowing for mental-pain-and-suffering damages for spouse, minor children, and parent where deceased is minor child); OHIO REV. CODE ANN. § 2125.02(B) (West Supp. 2004) (allowing damages for mental anguish of spouse, minor children, parents, or next of kin); VA. CODE ANN. § 8.01-52 (Michie 2000) (allowing damages for sorrow and mental anguish, including society, comfort, and like); W. VA. CODE ANN. § 55-7-6 (Michie 2000) (same). Courts in several other states have interpreted their wrongful-death statutes (which are not explicit) to cover grief or mental anguish. See, e.g., *City of Tucson v. Wondergem*, 466 P.2d 383, 387 (Ariz. 1970); *Johnson Controls, Inc. v. Forrester*, 704 N.E.2d 1082, 1084 (Ind. Ct. App. 1999).

¹⁹⁴ Leebron, *supra* note 38. In addition to being limited to “pecuniary losses,” most wrongful-death statutes also explicitly cap such economic losses. John Witt has described “presumptions of pecuniary loss” employed by courts in wrongful death cases:

The law of wrongful death presumed pecuniary damages from the withdrawal of support by a deceased husband to his widow and children. Widows were thus not required to show the current wages of a deceased husband, or establish his life expectancy prior to his death, in order to support an award of damages under the statute. Evidence of the decedent’s age, habits, health, and employment adequately supported damage awards of the statutory maximum.

Witt, *supra* note 184, at 742 (footnote omitted).

suffering prior to death.”¹⁹⁵ Legislative reforms that have liberalized the definition of pecuniary losses have presumably mitigated this once-pronounced spillover effect in wrongful-death cases.¹⁹⁶

2. General Medical Malpractice

More direct evidence of the crossover effect at work is found in judicial decisions that address whether statutory limitations of liability and damages function as affirmative defenses, which can be forfeited (or waived) if not invoked. In *Ingraham v. United States*, the Fifth Circuit held that Texas’s statutory cap on noneconomic damages in medical malpractice cases was an affirmative defense.¹⁹⁷ Moreover, the court was persuaded that plaintiffs would be prejudiced by an after-the-fact imposition of the cap (when defendants failed to raise it at trial), based on plaintiffs’ statement that “[h]ad [we] known the statute would be applied, [we] would have made greater efforts to prove medical damages which were not subject to the statutory limit.”¹⁹⁸

Judge Richard Posner of the Seventh Circuit has recently elaborated on the potential prejudicial effect on a plaintiff of the “belated” imposition of a statutory cap on noneconomic damages in medical malpractice:

There might be harm in a case such as this if for example a plaintiff had some leeway in classifying damages as economic rather than noneconomic, or if knowledge that noneconomic damages were unavailable would have induced her to devote less effort to proving up such damages and more to proving her economic damages.¹⁹⁹

This type of argument seems to condone—or at least acknowledge and enable—the crossover effect, and it supports the argument that caps on damages should be waived if not raised as an affirmative defense at trial.

On the other hand, fear of unleashing such a crossover effect may motivate courts to prohibit (or discourage) disclosure of noneconomic

¹⁹⁵ Leebron, *supra* note 38, at 305; *id.* at 306 (“The cases in the database . . . suggest[] that [this] model may hold true in practice.”).

¹⁹⁶ *See id.* at 306 (“The most likely explanation for this phenomenon is that courts have more recently recognized damages for loss of consortium and other losses to survivors in addition to traditional recovery for the lost financial support.”).

¹⁹⁷ 808 F.2d 1075 (5th Cir. 1987); *see also* *Simon v. United States*, 891 F.2d 1154, 1157 (5th Cir. 1990) (concluding that “Louisiana limitation on malpractice damages is an affirmative defense”); *supra* note 160 (discussing similar precedent in First Circuit).

¹⁹⁸ 808 F.2d at 1079. This argument has force only where invocation of the cap is an affirmative defense. In a case where the cap is applied regardless of whether it was invoked, the plaintiff (or his attorney) would always know to push for greater economic damages and it would be up to the jury whether to accept the plaintiff’s arguments.

¹⁹⁹ *Carter v. United States*, 333 F.3d 791, 796 (7th Cir. 2003).

damages caps to the jury. A California appellate court, for example, rejecting plaintiff's request for the jury to be informed of the medical malpractice noneconomic damages cap, remarked that "an instruction based on the terms of the statute would only serve to increase the possibility that a jury may simply label damages that otherwise would have been denominated noneconomic as economic losses."²⁰⁰ Addressing the converse problem, the Wisconsin Court of Appeals has indicated that disclosure of the noneconomic damages cap may be justified where evidence indicates that defendants "seek to have the jury load-up on noneconomic damages with the hope that this would bleed money from its award of economic damages."²⁰¹

Finally, the crossover effect has been remarked upon by defense attorneys and insurance industry professionals. The general counsel to Norcal Mutual Insurance Company has commented that, in response to California's MICRA cap on noneconomic damages, "patients' lawyers have become so adept at making a case for damages in lost income and medical expenses that verdict amounts are rising at about twice the rate of inflation."²⁰² And Medical Protective Company (one of the nation's largest medical malpractice insurance

²⁰⁰ Green v. Franklin, 235 Cal. Rptr. 312, 322–23 (Cal. Ct. App. 1987) (unpublished opinion).

²⁰¹ Guzman v. St. Francis Hosp., 623 N.W.2d 776, 787 (Wis. Ct. App. 2000). Absent any such attempt, the court ruled that the trial court was justified in not disclosing the statutory cap to the jury. *Id.* The court distinguished the case from *Peot v. Ferraro*, 266 N.W.2d 586 (Wis. 1978). *Guzman*, 623 N.W.2d at 786–87. In *Peot*, the defendant's attorney encouraged the jury to award substantial damages for loss of society and companionship—damages that were subject to a statutory cap in wrongful-death cases. 266 N.W.2d at 595. In calling for disclosure of the statutory cap to the jury, the Wisconsin Supreme Court faced the argument that the jury would "balance this factor" and increase its assessment of the damages for pecuniary loss." *Id.* at 596. In response, the court retreated to a view of hermetically sealed damages categories: "Pecuniary injury and loss of society and companionship are separate damage categories, and the jury is given instructions with respect to each." *Id.*; see also *Franklin v. Mazda Motor Corp.*, 704 F. Supp. 1325, 1329 (D. Md. 1989) ("[P]ractical considerations support instructing the jury as to the limitation. Plaintiff's attorney should know in advance of trial what evidence of pain and suffering he can present and whether he can ask the jury to award noneconomic damages in excess of \$350,000.").

²⁰² Martin Kasindorf, *California's Awards Cap Lowered Premiums, but Some Patients Paid Cost*, USA TODAY, Mar. 5, 2003, at 2A; see also Susan Healy Zitterman & Linda M. Garbarino, *1993 Medical Malpractice Tort Reform in Michigan—A Summary of New Responsibilities for Attorneys*, 1995 DETROIT C.L. MICH. ST. L. REV. 1247, 1252 ("With the across-the-board limitation on non-economic damages, the discovery process and litigation will likely focus more directly on economic damages."). In a footnote of the recent RAND MICRA study, the researchers acknowledged this possibility: "In a case with catastrophic injuries, for example, a plaintiff's attorney could request that the jury award \$250,000 as a 'token' amount for non-economic damages while placing far greater emphasis during final argument upon the need for a substantial economic damage award." RAND MICRA STUDY, *supra* note 44, at 13 n.5.

companies), in a petition to the Texas Insurance Commissioner requesting a rate increase²⁰³—notwithstanding the recently enacted cap on noneconomic damages—justified its request, in part, by advertent to the crossover effect: “With big dollars at stake, plaintiff attorneys will find ways to shift costs from non-economic to economic damages.”²⁰⁴

B. Mechanisms of Crossover

Expert testimony is often relied upon (or mandated in certain jurisdictions) to establish past and future lost earnings and medical costs.²⁰⁵ Experts can just as readily be used to offer testimony concerning the market value of less commonly accepted economic losses, such as “loss of services” incurred by the spouse of an injured plaintiff.²⁰⁶ Experts thus emerge as a significant force in effectuating crossover, because their valuation of noneconomic losses may transform such losses into economic ones. Lawyers, in turn, work closely with these experts by calling upon them not only to assess values for commonly accepted economic losses, but to assign values for an ever-

²⁰³ See *supra* note 46.

²⁰⁴ Memorandum from Melissa Cokar, Regulatory Specialist, Medical Protective Company, to Jose O. Montemayor, Insurance Commissioner, Texas Department of Insurance 2 (Oct. 30, 2003), <http://www.aisrc.com/caps.pdf>.

These comments regarding the crossover effect assume, however, that noneconomic damages caps have no effect on the distribution of claims brought or on which claims survive to trial. I will explore this alternative “changing case mix” explanation below. See *infra* Part IV.E.2.

²⁰⁵ See, e.g., *Rheume v. Patterson*, 289 F.2d 611, 613 (2d Cir. 1961) (explaining that under Vermont law, when medical injuries are obscure, expert testimony is required to assess lost future earnings); *Veazey v. State Farm Mut. Auto. Ins.*, 587 So. 2d 5, 8 (La. Ct. App. 1991) (“Awards [for future medical expenses] will not be made in the absence of medical testimony that they are indicated and setting out their probable cost.”); *Gutierrez v. Sutton Vending Serv., Inc.*, 397 P.2d 3, 4–5 (Nev. 1964) (stating that where only symptom of injury to plaintiff at time of trial is subjective, expert testimony is required to sustain award of lost future earnings); *Reed v. Scott*, 820 P.2d 445, 449–50 (Okla. 1991) (finding that injured person without medical training was not competent to testify as to need for future medical treatment where injury suffered was two broken toes); *Stone v. United Eng'g*, 475 S.E.2d 439, 456 (W. Va. 1996) (“Plaintiff was required to establish through expert testimony, not only the existence of a permanent injury, but also, the injury’s ‘vocational effect on the plaintiff’s work capacity, and an economic calculation of the monetary loss over the plaintiff’s work-life expectancy reduced to a present day value.’” (quoting *Liston v. Univ. of W. Va.*, 438 S.E.2d 590, 594 (W. Va. 1993))).

²⁰⁶ See, e.g., *De Long v. County of Erie*, 457 N.E.2d 717, 722–23 (N.Y. 1983) (endorsing use of expert testimony concerning monetary value of housewife’s services outside home); see also *Har-Pen Truck Lines, Inc. v. Mills*, 378 F.2d 705, 710–12 (5th Cir. 1967) (upholding jury award for wrongful death, under Georgia law, based on expert testimony from professor of economics as to value of life of hypothetical housewife).

expanding category of so-called economic damages.²⁰⁷ In other words, by formulating expansive theories of economic loss, lawyers—and the experts whom they hire—may expand the boundaries of the category of economic damages.²⁰⁸

1. *Expert Testimony*

It bears emphasis that “[d]etermining damages in a medical malpractice case is not simply a matter of totaling the plaintiff’s past medical bills and lost wages.”²⁰⁹ In order to calculate lost wages, economists are enlisted as experts to employ some fairly standard procedures, such as estimating personal consumption, household services, and fringe benefits. Other methods—such as wage growth calculations—are far more controversial.²¹⁰ Medical experts and life-care planners may play a significant role in estimating medical costs.²¹¹

²⁰⁷ Cf. Samuel Issacharoff & John Fabian Witt, *The Inevitability of Aggregate Settlement: An Institutional Account of American Tort Law*, 57 VAND. L. REV. 1571, 1611–12 (2004) (tracing origin of strategies by which trial lawyers maximize recoveries by establishing damages to Melvin Belli’s efforts in 1940s and 1950s to focus plaintiffs’ attorneys’ attention on need to establish powerful damages cases, often in settlement discussions).

²⁰⁸ Cf. Joseph H. King, Jr., *Pain and Suffering, Noneconomic Damages, and the Goals of Tort Law*, 57 SMU L. REV. 163, 205 (2004) (proposing expansive definition of economic damages whereby “the victim should be compensated for past and future economic losses, and those economic losses should be broadly conceived to include sufficient money to help make the plaintiff whole and fulfilled in *his current condition*, or in other words a *whole person today*”); *id.* (outlining components of damages to include “money needed to provide pain relief and creative comprehensive rehabilitation, and those rehabilitation services should encompass not merely vocational and medical dimensions, but also should focus more holistically on relieving the victim of discomfort”).

²⁰⁹ CATHERINE T. STRUVE, PROJECT ON MED. LIAB. IN PA., EXPERTISE IN MEDICAL MALPRACTICE LITIGATION: SPECIAL COURTS, SCREENING PANELS, AND OTHER OPTIONS 42 (2003), available at <http://www.medliabilitypa.org/research/struve1003/StruveReport.pdf> (noting that juries are asked to consider variety of questions when assessing economic damages, such as degree and duration of surviving plaintiff’s future impairment; cost of lifetime care for permanently injured plaintiff, including estimation of plaintiff’s life expectancy and cost of future medical services; and estimation of loss of future earning power).

²¹⁰ For example, economists may use historical data, or alternatively, restrict themselves to the more recent data. Other examples include predicting future rates of wage increases and determining the probability of living and working. See Michael L. Brookshire et al., *Estimating Damages in Personal Injury and Wrongful Death Cases*, in LITIGATION ECONOMICS 15, 23–27 (Patrick A. Gaughan & Robert J. Thornton eds., 1993); *id.* at 37 (“The methods used in wage growth calculations, including establishing wage base, and in discounting vary significantly.”); see also W. Wade Gafford, *Qualifications of Experts in Valuing Economic Damages in Personal Injury and Wrongful Death Cases*, J. LEGAL ECON., Fall 1997, at 59, 62 (explaining that degrees in “mathematics, finance, and accounting are . . . significant in determining economic damages”).

²¹¹ See, e.g., James F. Blumstein et al., *Beyond Tort Reform: Developing Better Tools for Assessing Damages for Personal Injury*, 8 YALE J. ON REG. 171, 194 (1991) (“Today’s valuations rely on opinions of ‘experts’ who in fact may have little experience with the full set of future services a particular injury may require and who have little stake in whether their estimates prove right.”); Michael Bobelian, *Large Awards and the Sympathetic Plaintiff*,

The calculation of lost wages and future medical care can be hotly contested trial issues. Consider, for example, the case of *Keene v. Brigham & Women's Hospital, Inc.*, in which the family of a young boy with permanent brain damage resulting from a negligent delivery was awarded \$4.1 million in damages.²¹² The plaintiff's life expectancy was, according to the court, the "most significant contested issue of fact" in the case.²¹³ Or consider *Fellin v. Sahgal*, a case in which a New York jury awarded \$112 million to an elevator mechanic who suffered an aneurysm while working in the hospital, which led to brain damage and quadriplegia due to the facility's alleged delay in diagnosing and treating his condition.²¹⁴ The case was a retrial of an original \$42 million verdict. The key to the larger second verdict was the jury's determination that the plaintiff should receive home care costing \$76 million, as opposed to less costly nursing home care.²¹⁵

Not surprisingly, warring experts are hardly immune from scathing criticism from the medical malpractice reform lobby. And yet, virtually all of the criticism focuses on determinations of liability, missing entirely the equally critical issue of damages determinations.²¹⁶ Despite the prominent role of expert testimony in calculating damages, few tort reform efforts have targeted that testimony.²¹⁷

N.Y. L.J., Mar. 15, 2004, at S3 ("Normally, the plaintiff's lawyer brings in a life-care planner who testifies about the medical care the plaintiff will require and determines its cost. An economist or actuary then testifies about the plaintiff's life expectancy and the rate of increase in costs in arriving at a total . . ."). Economists may have a more expanded role to play in this arena as well. See, e.g., Frank L. Slesnick, *Forecasting Medical Costs in Tort Cases: The Role of the Economist*, in LITIGATION ECONOMICS, *supra* note 210, at 61, 62 (arguing "that an expanded role [for economists] is warranted").

²¹² No. CIV.A.95-1081, 2000 WL 343785 (Mass. Super. Ct. Mar. 15, 2000), *aff'd in part and vacated in part*, 786 N.E.2d 824 (Mass. 2003).

²¹³ *Id.* at *5.

²¹⁴ See Emily Heller, *Med-Mal Cases Down—Is "Tort Reform" the Cause?*, NAT'L L.J., Feb. 9, 2004, at S11 (citing *Fellin v. Sahgal*, No. 4129/1993 (N.Y. Sup. Ct. May 16, 2003)).

²¹⁵ See *id.*

²¹⁶ The bulk of the literature has focused on two issues: (1) whether *Daubert* standards apply to experts testifying about the professional standard of care, see, e.g., Michelle M. Mello, *Using Statistical Evidence to Prove the Malpractice Standard of Care: Bridging Legal, Clinical, and Statistical Thinking*, 37 WAKE FOREST L. REV. 821 (2002); and (2) whether physicians who testify improperly in malpractice cases should be disciplined by medical boards or medical societies for unprofessional conduct, see, e.g., Russell M. Pelton, *Medical Societies' Self-Policing of Unprofessional Expert Testimony*, 13 ANNALS HEALTH L. 549 (2004).

²¹⁷ Two exceptions are Michigan and Pennsylvania. See MICH. COMP. LAWS ANN. § 600.2169 (West 2000) (specifying qualifications for medical malpractice expert witnesses); 40 PA. CONS. STAT. ANN. § 1303.512(b) (West Supp. 2004) (requiring that "expert[s] testifying on a medical matter, including . . . the nature and extent of the injury" must meet various qualifications).

Expert testimony must satisfy the admissibility criteria of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*²¹⁸ Given *Daubert*, plaintiffs' attorneys have an incentive to use more specialized experts.²¹⁹ Moreover, the expert's application of traditional economics principles to wage and medical-cost calculations appears to survive *Daubert* challenges with relative ease: "[I]t would appear that an economist serving as a damages expert is unlikely to succumb to a *Daubert* challenge because most damages analyses operate in the familiar territory of restating economic flows using a combination of professional judgment and standard tools."²²⁰

What has thus far slipped below the radar screen are the ways in which experts can exploit controversies surrounding calculations of lost wages and future medical costs, thereby breathing life into the crossover effect.²²¹ Indeed, though they have eluded attention, warring actuaries and health economists may have as much of an impact as warring clinicians, at least with respect to ultimate total-damages

²¹⁸ 509 U.S. 579, 592–95 (1993) ("Faced with a proffer of expert scientific testimony . . . the trial judge must [make] . . . a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue."); see also *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147–49 (1999) (extending *Daubert* to experts with "technical or other specialized knowledge" (internal quotation marks omitted)); Robert E. Hall & Victoria A. Lazear, *Reference Guide on Estimation of Economic Losses in Damages Awards*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 277, 282 (Fed. Judicial Ctr. ed., 2d ed. 2000) ("It is not uncommon for an analysis by even the most qualified expert to face a challenge under the criteria associated with the *Daubert* case.").

²¹⁹ See Joseph Sanders et al., *Trial Lawyer Perceptions of Expert Knowledge* (May 2001) (unpublished manuscript, on file with the *New York University Law Review*) (describing findings from interviews with focus groups of Texas plaintiffs' attorneys, who reported that, following *Daubert*, they started to use more specialized experts in order to estimate damages).

²²⁰ Hall & Lazear, *supra* note 218, at 282–83; see also, e.g., *Fujisawa Pharm. Co. v. Kapoor*, No. 92C5508, 1999 WL 543166, at *8 (N.D. Ill. July 21, 1999) (denying defendant's motion to exclude plaintiff's economic expert's testimony under *Daubert*, and concluding that expert's economic methodologies and application of those standards were accepted within field). The same is not true, however, for less-traditional economic testimony, such as in the realm of hedonic damages. See *infra* notes 233–34 and accompanying text (describing "controversial science" of economic valuation of human life).

²²¹ See, e.g., Zitterman & Garbarino, *supra* note 202, at 1252 (arguing that, in light of noneconomic damages caps, "[c]ounsel for both sides should anticipate more legal issues and discovery directed to the question of economic damages, and the need for expert witnesses qualified to address issues related to past and future medical expenses, lost earning capacity, etc."). For a discussion of different ways of calculating loss of future earnings, see Richard Lewis et al., *Court Awards of Damages for Loss of Future Earnings: An Empirical Study and an Alternative Method of Calculation*, 29 J.L. & Soc'y 406, 406–08 (2002), noting that in England "claimants . . . generally have been undercompensated" as compared with those in the United States, largely due to the more detailed American system for assessing economic damages.

recoveries at trial.²²² Certainly damages caps on noneconomic losses provide an incentive to develop new techniques for “scientific measurement” of damages, spurring growth in the “loss estimation profession.”²²³

2. *Expansive Theories of Economic Loss*

In the face of restrictions on noneconomic damages, attorneys have a strong incentive to fashion new theories that argue for a more expansive definition of economic damages or a reexamination of what constitutes economic damages. This incentive goes beyond actively persuading jurors to assess higher economic damages to changing the very definition of economic damages, in an effort to sweep into that definition damages previously classified as “noneconomic” and thus susceptible to caps.²²⁴ Components of economic damages would, accordingly, expand over time in response to noneconomic damages caps.

The history of wrongful-death cases discussed above might serve as a useful analogy. There we saw a gradual expansion in the category of economic damages to accommodate the general sentiment (particularly felt by jurors) that wrongful-death damages should be higher. And, in some instances, legislatures responded to that general sentiment by amending wrongful-death statutes to allow plaintiffs to recover noneconomic damages.²²⁵ By contrast, in recent times, the general sentiment appears to have shifted to a belief that damages (at least in medical malpractice) are too high and should be limited; it is

²²² Clinicians of course also testify to the plaintiff's prospects of recovery, likely survival, and likely medical needs and quality of life. My point here is simply that, to the extent these clinicians have garnered criticism for their medical malpractice testimony, it has been for their role in establishing liability, as opposed to their estimation of damages.

²²³ For example, Michael Brookshire has stated:

What may be the impact [of tort reform] upon the profession of loss estimation? . . . [T]he focus has been upon such damage categories as pain and suffering. To the extent that this legislative thrust becomes reality, the loss estimation industry should only grow. . . . [I]f the focus on, and limits upon, such damage categories as pain and suffering grows, the scientific measurement of damages in these categories becomes increasingly important.

MICHAEL L. BROOKSHIRE, *ECONOMIC DAMAGES: THE HANDBOOK FOR PLAINTIFF AND DEFENSE ATTORNEYS* 4 (1987).

²²⁴ Incentives to inflate economic damages may, of course, exist, even in the absence of caps. For example, a RAND study of excess claiming in auto accident cases demonstrates a tendency for plaintiffs' attorneys to inflate economic losses in states with dollar thresholds that must be surmounted before noneconomic damages become available. STEPHEN CARROLL ET AL., RAND, *THE COSTS OF EXCESS MEDICAL CLAIMS FOR AUTOMOBILE PERSONAL INJURIES* 19 (1995). The RAND study also takes seriously the possibility of inflating noneconomic damages by inflating economic damages. See also *supra* note 179.

²²⁵ See *supra* Part III.A.1.

this sentiment that has been codified into law in the form of caps.²²⁶ The question that only time will answer is whether jurors and judges will instead attempt to find new ways to evade the legislative reforms.

So-called “hedonic damages,” or damages for “loss of enjoyment of life,” provide one potential avenue for cap avoidance.²²⁷ State legislatures and courts have taken a variety of positions on hedonic damages. Most jurisdictions seem to regard hedonic damages as either already included within damages for pain and suffering²²⁸ or as an inappropriate category of damages.²²⁹ However, in several other jurisdictions—including Maryland, New Mexico, South Carolina, Tennessee, Washington, and Wyoming—hedonic damages are recoverable as a separate form of damages.²³⁰

While the concept is certainly not new, Victor Schwartz and Cary Silverman have argued that “[t]oday, . . . with increasing frequency in personal injury and wrongful death actions, plaintiffs’ lawyers are attempting to introduce expert testimony on hedonic damages and requesting that courts provide juries with a separate instruction and verdict form for lost enjoyment of life.”²³¹ The return of hedonic damages to attorneys’ arsenals may illustrate one expansive theory of economic damages. In the words of Dr. Thomas Ireland, a forensic economist:

[A] new industry of *expert* witnesses has arisen ready to testify to the pecuniary value of *hedonic* or whole life values on behalf of plaintiffs in wrongful death cases. The reason is simple—financial incentive. . . . Plaintiffs’ attorneys, eager for larger numbers, have sought out *experts* willing to give them these larger loss estimates, and the market for expert testimony has responded with persons willing to provide these larger figures.²³²

²²⁶ See *supra* Part I.B.

²²⁷ “The term ‘hedonic damages’ made its debut in the 1980s when economists began using the term to explain the non-pecuniary damages available in any given case. . . . Dr. Stanley V. Smith, an economist and financial consultant, is given credit as coining the phrase . . .” Victor E. Schwartz & Cary Silverman, *Hedonic Damages: The Rapidly Bubbling Cauldron*, 69 *BROOK. L. REV.* 1037, 1041 (2004).

²²⁸ *Id.* at 1042 (“The highest courts of Kansas, Nebraska, New York, Ohio, Pennsylvania, and appellate-level decisions in California, Minnesota, and Texas, support this position [that hedonic damages are already included within damages for pain and suffering].”).

²²⁹ See, e.g., *Anderson v. Hale*, No. CIV-02-0113-F, 2002 WL 32026151, at *7 (W.D. Okla. Nov. 4, 2002) (“Hedonic damages, as a subject of recovery separate from (or even to be expressed separately from) those elements of damages [recognized in Oklahoma] are unknown to Oklahoma law.”).

²³⁰ Schwartz & Silverman, *supra* note 227, at 1046.

²³¹ *Id.* at 1041.

²³² Thomas R. Ireland et al., *Why Hedonic Measures Are Irrelevant to Wrongful Death Litigation*, *J. LEGAL ECON.*, Mar. 1992, at 49, 49.

To some extent, *Daubert* remains a formidable obstacle to expert testimony on hedonic damages.²³³ The economic valuation of life remains controversial science.²³⁴

Thus far, commentators have considered the admission of such expert testimony regarding hedonic losses as a means of expanding the category of cognizable noneconomic damages, or else as an attempt to circumvent legislatively established limits upon punitive damages.²³⁵ However, given that the foundation of such testimony is economic studies on the “value of life,” its admission may bolster the case for consideration of hedonic losses as *economic* as opposed to noneconomic losses.²³⁶ Indeed, such a distinction may in fact provide a justification for judicial determinations that hedonic damages are separate and distinct from pain-and-suffering losses.²³⁷ For example, the Supreme Court of South Carolina explained that “damages for

²³³ See Thomas R. Ireland et al., *Economic Science and Hedonic Damage Analysis in Light of Daubert v. Merrell Dow*, 10 J. FORENSIC ECON. 139, 156 n.10 (1997) (“A favorable mention in a reported case is of real benefit to [a forensic, or testifying] economist, while an unfavorable mention is a major cost.”). Even prior to *Daubert*, courts were split on the issue of admissibility of expert economic testimony on hedonic damages. See Shubha Ghosh, *Methods, Conclusions, and the Search for Scientific Validity in Economics and Other Social Sciences*, 2000 DIGEST 1, 10. Moreover, expert testimony that passes the *Daubert* hurdle must also pass muster under Rule 403 of the Federal Rules of Evidence, a test that balances the probative value of the evidence against its potential prejudicial impact. FED. R. EVID. 403; see also Joseph A. Kuiper, Note, *The Courts, Daubert, and Willingness-to-Pay: The Doubtful Future of Hedonic Damages Testimony Under the Federal Rules of Evidence*, 1996 U. ILL. L. REV. 1197, 1248–49.

²³⁴ For example, in New Mexico, where hedonic damages are recognized by statute, state courts permit experts to testify on the size of these damages. See, e.g., *Sena v. N.M. State Police*, 892 P.2d 604, 610–11 (N.M. Ct. App. 1995). A federal court in New Mexico has, nonetheless, used *Daubert* to exclude such testimony in an employment discrimination suit. See *McGuire v. City of Santa Fe*, 954 F. Supp. 230 (D.N.M. 1996); see also *Saia v. Sears Roebuck & Co.*, 47 F. Supp. 2d 141, 146 (D. Mass. 1999) (“The willingness-to-pay model on the issue of calculating hedonic damages is a troubled science in the courtroom, with the vast majority of published opinions rejecting the evidence.” (quoting *Kurncz v. Honda N. Am., Inc.*, 166 F.R.D. 386, 388 (W.D. Mich. 1996))).

²³⁵ Schwartz & Silverman, *supra* note 227, at 1054 (arguing that “hedonic damages provide another opportunity for awards to slip legislatively-imposed controls”). Schwartz and Silverman focus on the use of hedonic damages to circumvent statutory limitations on punitive damages. *Id.*

²³⁶ Cf. Bovbjerg et al., *supra* note 31, at 913 (acknowledging that “recent empirical research forcefully concludes that intangible harms like the loss of enjoyment of life are *economic losses*” (emphasis added)).

²³⁷ See, e.g., *Katsetos v. Nolan*, 368 A.2d 172, 183 (Conn. 1976) (defining plaintiff’s entitlement to “just damages,” in addition to medical costs, as including “compensation for the destruction of her capacity to carry on and enjoy life’s activities in a way she would have done had she lived”); ERIC A. POSNER & CASS R. SUNSTEIN, *DOLLARS AND DEATH* 6 (AEI-Brookings Joint Ctr. for Regulatory Studies, Working Paper No. 04-15, 2004) (noting that hedonic damages are considered separate category of damages, distinct from economic and noneconomic damages), available at <http://www.aei-brookings.org/admin/authorpdfs/page.php?id=1015>.

'loss of enjoyment of life' compensate for the limitations, resulting from the defendant's negligence, or the injured person's ability to participate in and derive pleasure from the normal activities of daily life, or for the individual's inability to pursue his talents, recreational interest, hobbies, or avocations."²³⁸

The case law examples and expert-testimony mechanisms explored in this Part begin to answer the questions posed at the outset: To what extent might plaintiffs' attorneys, when faced with legislative caps on noneconomic damages in medical malpractice cases, secure the same recovery for their clients that they would absent the caps, by recharacterizing components of "pain and suffering" and other noneconomic damages into "hard" economic damages? In other words, could the pain of an injured or deceased loved one be "transformed" into the dollar amount purporting to reflect the value of those services that were once provided by, or interests or avocations pursued by, the injured or deceased?²³⁹ Conversely, do plaintiffs' attorneys in states without caps spend more resources developing bases for higher noneconomic awards? While the individual pieces of evidence amassed in the foregoing Part provide a descriptive framework, I embark next on a further empirical investigation of the issue.

IV

EMPIRICAL EXPLORATION OF CROSSOVER EFFECTS

In this Part, I undertake an original empirical analysis using a comprehensive nationwide database of jury trial verdicts, to which I have added numerous variables in order to study state-by-state differences in the effects of noneconomic damages caps. After describing the dataset, the variables included in the study, and the methodology and limitations of my empirical analysis, I present two principal results. First, I find (consistent with a large array of previous studies) that severity of injury is a key determinant of overall compensatory damages awards: categories of increasing severity (from temporary to permanent grave injuries) have an increasingly, and statistically signif-

²³⁸ Boan v. Blackwell, 541 S.E.2d 242, 244 (S.C. 2001); see also Kirk v. Wash. State Univ., 746 P.2d 285, 292 (Wash. 1987) (distinguishing disability damages for "inability to lead a 'normal life'" from pain-and-suffering damages for "physical and mental discomfort").

²³⁹ Consider in this regard a passage from a book that offers advice to plaintiffs' attorneys for presenting pain-and-suffering damages claims in court. Leta Truett & Patricia Iyer, *Suffering: A Multidimensional Concept*, in MEDICAL-LEGAL ASPECTS OF PAIN AND SUFFERING 91 (Patricia Iyer ed., 2003). The authors advise that attorneys should refer to pain-and-suffering damages as "'intangible losses'" as opposed to "mental anguish," which is more likely to connote "'lawyer greed.'" *Id.* at 106. "Instead, the closing argument should focus on the *value of what the plaintiff has lost.*" *Id.* (emphasis added).

icant, effect on plaintiffs' recovery of compensatory damages. Second (and more surprisingly), I find that caps on noneconomic damages—when controlling for the independent effects of severity of injury as well as myriad litigant characteristics, state law, and county demographic variables—have little to no effect on the size of overall compensatory damages in litigated cases.²⁴⁰

It is, of course, critical to interpret the empirical results cautiously. Cases that go to trial and cases that settle may look very different; in other words, each may be a biased sample of the entire population of cases.²⁴¹ So, for example, if caps were to reduce uncertainty for the most severe permanent grave injuries, one might see a fall in the average trial verdicts, or a change in the proportion of economic versus noneconomic damages, simply because more big cases settle without trial.²⁴² Alternatively, the existence of caps may play a significant role in plaintiffs' attorneys' screening of cases. For example, attorneys who practice in jurisdictions where noneconomic caps exist might take on only those cases with potentially large economic awards; this would lead both to increasing economic damages at trial, as well as to a conclusion that caps have little effect on total compensatory damages.²⁴³ Selection bias is thus potentially a real concern: Depending on how caps affect the selection process, the model may generate spurious findings of no effect of caps, or else exaggerated effects.²⁴⁴ The changing composition of cases—due to

²⁴⁰ My finding that caps on *noneconomic* compensatory damages may not significantly affect the size of total compensatory damages awards is, nonetheless, consistent with previous empirical studies that uncovered a significant effect of caps on *total* compensatory damages on plaintiffs' recovery. The empirical results thus suggest that more attention should be paid to possible differences between the effects of damages caps of different varieties. Moreover, they imply policy prescriptions for reform that will be considered in the Conclusion.

²⁴¹ See George L. Priest & Benjamin Klein, *The Selection of Disputes for Trial*, 13 J. LEGAL STUD. 1, 4 (1984) (setting forth selection model to explain and predict how litigated cases will differ from settled cases); see also DANIEL KLERMAN, *THE SELECTION OF THIRTEENTH-CENTURY CRIMINAL DISPUTES FOR LITIGATION 2* (USC Olin Research Paper No. 00-10, 2000) (testing Priest-Klein selection model using dataset of private prosecutions of crime from thirteenth-century England), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=240515; Joel Waldfoegel, *The Selection Hypothesis and the Relationship Between Trial and Plaintiff Victory*, 103 J. POL. ECON. 229, 230 (1995) (exploring "the implications of the Priest and Klein model for the relationship between trial rates and plaintiff win rates").

²⁴² See *infra* Part IV.E.2.a (discussing different varieties of settlement effects).

²⁴³ See *infra* Part IV.E.2.b (describing effects of plaintiffs' attorneys' screening of cases in light of noneconomic damages caps).

²⁴⁴ See, e.g., A. Mitchell Polinsky, *Are Punitive Damages Really Insignificant, Predictable, and Rational? A Comment on Eisenberg et al.*, 26 J. LEGAL STUD. 663, 667 (1997) ("It would be a mistake to conclude that because punitive damages are not a significant factor in cases that go to trial, they also are not a significant factor in the settlement process."); *id.*

either settlement effects or screening on the part of plaintiffs' attorneys—will be explored further below. Moreover, selection bias might raise other unintended (or at least unacknowledged) effects that will be explored below—for example, patients in groups disadvantaged in labor markets might now be less able to sue because their economic damages are too low and caps do not make their suits worthwhile. For now, the point is that the empirical results that follow must be interpreted with caution. At the same time, the results presented are consistent with (and thus bolstered by) the more qualitative evidence presented above in Part III.

A. Data

The datasets used in this study are part of a project of the National Center for State Courts (NCSC) and the Bureau of Justice Statistics.²⁴⁵ The data consist of detailed information on tort, contract, and real-property trials.²⁴⁶ The data were collected at three points in time (for cases disposed of in 1992, 1996, and 2001) from state courts of general jurisdiction in random samples of forty-six of the seventy-five most populous counties in the nation.²⁴⁷ The seventy-five counties from which the final forty-six counties were randomly drawn constitute about thirty-seven percent of the United States population and about half of all civil trials.²⁴⁸

The 2001 dataset includes 8038 cases,²⁴⁹ the 1996 dataset contains 9025 cases,²⁵⁰ and the 1992 dataset covers 6504 cases.²⁵¹ The data about each case include the subject matter, number and type of plain-

at 668–69 (“[T]he observed impact of punitive damages on trial outcomes may substantially understate the impact of punitive damages on settlements.”); see also *infra* note 256 (discussing Eisenberg et al.’s response to selection bias).

²⁴⁵ BUREAU OF JUSTICE STATISTICS, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 2001 (Inter-Univ. Consortium for Pol. & Soc. Research, No. 3957, 2004) [hereinafter CIVIL JUSTICE SURVEY, 2001]; BUREAU OF JUSTICE STATISTICS, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 1996 (Inter-Univ. Consortium for Pol. & Soc. Research, No. 2883, 2004) [hereinafter CIVIL JUSTICE SURVEY, 1996]; BUREAU OF JUSTICE STATISTICS, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 1992 (Inter-Univ. Consortium for Pol. & Soc. Research, No. 6587, 2004) [hereinafter CIVIL JUSTICE SURVEY, 1992].

²⁴⁶ See CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 1.

²⁴⁷ *Id.* The 1992 and 1996 data include forty-five counties, whereas the 2001 data include forty-six counties. *Id.* at 2. Due to fluctuations in population (and thus the definition of the seventy-five most populous counties) in 2001, one county (Norfolk County, Massachusetts) was dropped and two counties were added (El Paso, Texas and Mecklenburg, North Carolina). *Id.*

²⁴⁸ *Id.* at 1.

²⁴⁹ *Id.* at 5.

²⁵⁰ CIVIL JUSTICE SURVEY, 1996, *supra* note 245, at 4.

²⁵¹ CIVIL JUSTICE SURVEY, 1992, *supra* note 245, at 5. For a discussion of the stratified sampling technique employed, see CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 3.

tiffs and defendants, the prevailing party, the amount of compensatory and punitive damages, and the final award amount.²⁵² The 2001 and 1996 datasets are more comprehensive than the 1992 dataset in that they cover bench trials as well as jury trials.²⁵³ Moreover, they include additional variables for the seriousness, permanency, and body part of injury (if any), as well as information on whether wrongful death was claimed.²⁵⁴

The datasets are free of biases usually associated with datasets in which parties or a third party (e.g., insurance companies) report and code the information. The 1992 and 1996 datasets have been used extensively by empirical researchers.²⁵⁵ Ted Eisenberg and Kip Viscusi, who, along with collaborators, have used the data extensively to study punitive damages, have noted that both the frequency and the level of punitive damages vary by region.²⁵⁶ Mine is the first study to use this comprehensive combined dataset to investigate in depth the

²⁵² See CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 6–7. The final award amount differs from total (compensatory and punitive) damages in that it takes into account the trial judge's reductions to the jury's award, including, for example, reductions for comparative negligence or statutory limitations. See *infra* Appendix III (describing variables in detail).

²⁵³ See CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 3; CIVIL JUSTICE SURVEY, 1996, *supra* note 245, at 4.

²⁵⁴ See CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 7; CIVIL JUSTICE SURVEY, 1996, *supra* note 245, at 8.

²⁵⁵ See, e.g., Theodore Eisenberg et al., *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 CORNELL L. REV. 743, 747 (2002) [hereinafter Eisenberg et al., *Juries, Judges*]; Theodore Eisenberg et al., *The Predictability of Punitive Damages*, 26 J. LEGAL STUD. 623, 632 (1997) [hereinafter Eisenberg et al., *Predictability*]; Joni Hersch & W. Kip Viscusi, *Punitive Damages: How Judges and Juries Perform*, 33 J. LEGAL STUD. 1, 2 (2004).

²⁵⁶ See Eisenberg et al., *Predictability*, *supra* note 255, at 631–32. The potential impact of state variations is raised briefly in Eisenberg et al., *Juries, Judges*, *supra* note 255, at 768–70, 771 tbl.4. In attempting to assess possible selection bias, the authors raise the issue of whether state punitive damages caps might have an impact on the frequency and level of punitive damages. *Id.* at 768–69. In other words, the existence of a cap on punitive damages might lessen defendants' incentive to settle (by lessening defendants' fear of losing a huge award at trial), leading to more jury trials, and thereby increasing the percentage of positive punitive jury awards. *Id.* The authors, however, did not find that statutory punitive damages caps were correlated positively with the frequency of punitive awards and thus rejected (at least preliminarily) the existence of such a settlement selection effect. *Id.* at 770. The authors called for further study and acknowledged that there might be a more intricate relationship between caps and punitive-award frequency. *Id.*

state-by-state variations in awards.²⁵⁷ Twenty-two states are represented in the sample.²⁵⁸

While there are some major advantages to using the NCSC datasets to study medical malpractice, significant limitations persist. First, the NCSC datasets do not contain information on settlements. Settlement information is notoriously difficult to obtain; even insurers do not submit information to the National Association of Insurance Commissioners (NAIC) on the portion of losses paid as part of settlements as distinct from the portion paid as a result of a trial verdict.²⁵⁹ It is important to keep in mind that jury verdicts represent only “the tip of the iceberg” in medical malpractice cases,²⁶⁰ which obviously tempers the ability to generalize from these data. At the same time, “trials are important primarily because they influence the terms of settlement for the mass of cases that are not tried; trials cast a major part of the legal shadow within which private bargaining takes place.”²⁶¹ I take up the issue of selection bias due to settlement effects below in Part IV.B.

A second limitation is that the NCSC data do not disaggregate compensatory damages into economic and noneconomic compo-

²⁵⁷ In fact, the 1996 and 1992 datasets do not even include a variable for “state.” See CIVIL JUSTICE SURVEY, 1996, *supra* note 245, at 7–13 (describing variables); CIVIL JUSTICE SURVEY, 1992, *supra* note 245, at 6–16 (same). But see CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 6 (including “state” variable). The variable, of course, can be constructed easily from the “site” variable (which lists counties), but the point is that while countywide differences have been explored, statewide differences have not.

²⁵⁸ The twenty-two states include: Arizona, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Texas, Virginia, Washington, and Wisconsin. See CIVIL JUSTICE SURVEY, 2001, *supra* note 245, at 1–2.

²⁵⁹ E-mail from Glenda Channel, National Association of Insurance Commissioners, to Catherine M. Sharkey (Feb. 7, 2005) (on file with the *New York University Law Review*).

²⁶⁰ Sloan & Hsieh, *supra* note 52, at 1013; see also Patricia Munch Danzon & Lee A. Lillard, *Settlement out of Court: The Disposition of Medical Malpractice Claims*, 12 J. LEGAL STUD. 345, 347 (1983) (reporting that less than ten percent of medical malpractice claims studied proceeded to trial and verdict); Henry S. Farber & Michelle J. White, *Medical Malpractice: An Empirical Examination of the Litigation Process*, 22 RAND J. ECON. 199, 201 (1991) (“[M]ost medical malpractice cases are either dropped by plaintiffs or settled out of court at some point during discovery.”). Medical malpractice cases, nonetheless, are more likely to go to trial than general civil cases. See *infra* text accompanying note 277.

²⁶¹ Samuel R. Gross & Kent D. Syverud, *Don't Try: Civil Jury Verdicts in a System Geared to Settlement*, 44 UCLA L. REV. 1, 4 (1996). Moreover, “[t]rials have this standard-setting effect despite the fact that they are not typical of the cases in which their results are used as guides for settlement.” *Id.*; see also RAND MICRA STUDY, *supra* note 44, at 4 (“[W]e believe an analysis that focuses on jury awards can shed light on how important—albeit selected—aspects of MICRA’s features operate in practice and contribute to the ongoing policy debate over medical malpractice litigation.”).

nents.²⁶² In fact, to date, there is no comprehensive source of information on the breakdown of losses between economic and noneconomic damages, which severely restricts researchers' ability to examine important questions regarding the effects of limitations upon noneconomic damages.²⁶³ Nor is such a comprehensive source even feasible, given that not all states require juries to award separately economic and noneconomic damages.²⁶⁴ As a result, in my regression analyses (reported below), I test the effect of noneconomic damages caps upon total compensatory damages, instead of the more direct

²⁶² This, despite the fact that the data collectors (at least in 1996) were asked to disaggregate compensatory damages into these components. See CIVIL JUSTICE SURVEY, 1996, *supra* note 245, at 101, 109. When I inquired with Neil LaFountain, a National Center for State Courts (NCSC) project manager regarding this, I was told that the NCSC had so little confidence in these figures that they would not be publicly released. Telephone Interview with Neil LaFountain, NCSC Project Manager (Feb. 2004). The data were incomplete, which might be due, at least in part, to the fact that not all states require juries to break awards down by economic and noneconomic components. See *infra* note 264.

²⁶³ The June 2003 GAO study laments the fact that there are no systematic records showing the breakdown between economic and noneconomic damages. See GAO REPORT (June 2003), *supra* note 19, at 23. In similar fashion, Pennsylvania Governor Ed Rendell, in response to calls for noneconomic damages caps, recently requested the gathering of data (otherwise unavailable) regarding information about the breakdown of future payouts resulting from malpractice lawsuits. See, e.g., Marc Levy, *Rendell Looks to Refute Caps Argument*, INTELLIGENCER (Doylestown, Pa.), Aug. 25, 2003, at B7.

Some researchers have been given access to selective insurance company records, see, e.g., Danzon, *supra* note 119, at 61; Sloan et al., *supra* note 96, at 667-68; Yoon, *supra* note 128, at 208, which often distinguish between economic and noneconomic damages (but not jury trials and settlements). Finally, two recent studies offer some promising preliminary results using publicly available insurance data. Charles Silver has mined a Texas data source, see *supra* note 107, and Neil Vidmar et al. have mined a Florida data source, see Neil Vidmar et al., *Uncovering the "Invisible" Profile of Medical Malpractice Litigation: Insights from Florida*, 54 DEPAUL L. REV. (forthcoming 2005) (manuscript on file with the *New York University Law Review*). See also *infra* Part IV.E.2.a (discussing Silver and Vidmar et al. studies). But, in all of these studies relying upon insurance company data, the self-reporting by insurance companies may not be entirely reliable. See *infra* note 396.

²⁶⁴ States with caps require a special verdict because otherwise there is no way of assessing the noneconomic component of a verdict. But non-cap states may still cling to the general verdict. See, e.g., N.C. R. CIV. P. 49.

One potential source for data on the economic/noneconomic breakdown of awards is the Jury Verdict, Settlements, and Judgments database, available on Westlaw, which collects information from numerous sources on both jury verdicts and settlements (by state, region, and circuit), and—at least where special verdicts are used—indicates the economic/noneconomic breakdown. The Kelso and Kelso and RAND MICRA studies use such jury verdict data. See KELSO & KELSO, *supra* note 6, at 17; RAND MICRA STUDY, *supra* note 44, at xix. As Sloan and Hsieh report: "A major advantage of jury verdict data is that they contain a measure of the plaintiff's economic loss, past and future medical expense, past and future income loss, property damage, funeral expense (if the victim died), and other expense." Sloan & Hsieh, *supra* note 52, at 1013. There are, alas, certain drawbacks in using this data source. See *infra* note 270.

effect upon the size of the economic damages component of the award.²⁶⁵

All empirical studies are of course limited by the nature of their data. Notwithstanding the aforementioned limitations, the proliferation of empirical work using the NCSC data is a contribution in its own right. As has been frequently noted in this area, “[f]ew data are available that include details about tort cases brought in the various jurisdictions across the country.”²⁶⁶ Moreover, given the importance and the prominence of the NCSC data, this study represents an early attempt to code the data by state and thus investigate state-by-state differences in damages.

1. *Sample: Size and Description*

My dataset consists of 557 cases extracted from the larger NCSC datasets, which contain a total of 2383 medical malpractice cases: 741 cases from 1992; 792 cases from 1996; and 850 cases from 2001. These 557 cases are those jury cases of the 2383 in which individual plaintiffs received compensatory damages from an individual or hospital (or corporate) defendant: 173 in 1992;²⁶⁷ 168 in 1996;²⁶⁸ and 216 in 2001.²⁶⁹ I will refer to this 557-case dataset as the Combined Medical Malpractice dataset.

²⁶⁵ There are, nonetheless, advantages to using total compensatory damages as the dependent variable if, for example, it is assumed that noneconomic and economic damages may be, at least in part, jointly determined.

²⁶⁶ CONG. BUDGET OFFICE, THE EFFECTS OF TORT REFORM: EVIDENCE FROM THE STATES 9 (2004), available at <http://www.cbo.gov/showdoc.cfm?index=5549&sequence=0>; see also Leebron, *supra* note 38, at 290 (“The empirical research and data on the subject of damages is so scarce, that any systematic attempt to gather, present, and analyze such data represents a step forward.”).

²⁶⁷ The 1992 dataset includes only jury trials; of the 741 cases, 705 are listed as actual jury trials, as opposed to settlements or directed verdicts, under disposition type. The plaintiff prevailed in 190 cases, and the compensatory damages amount awarded is listed in 181. (The compensatory damages amount is coded as “missing” in nine cases.) Of these 181 cases, eight additional cases were dropped: seven cases in which the plaintiff was not an individual and one case in which the defendant was neither an individual nor a hospital or corporation. Therefore, each of the 173 cases may be classified as either individual vs. hospital/corporation (HospDef = 1) or individual vs. individual (HospDef = 0).

²⁶⁸ The 1996 data include bench trials as well as jury trials. Of the 792 cases, 747 are coded as jury trials. Plaintiffs prevailed in 176 of these jury trials; the amount of compensatory damages is listed for 172 cases. (The compensatory damages amount is missing in four cases.) Four additional cases were dropped because either the plaintiff was not an individual, or else the defendant was neither an individual nor a hospital/corporation. The resulting sample consists of 168 cases.

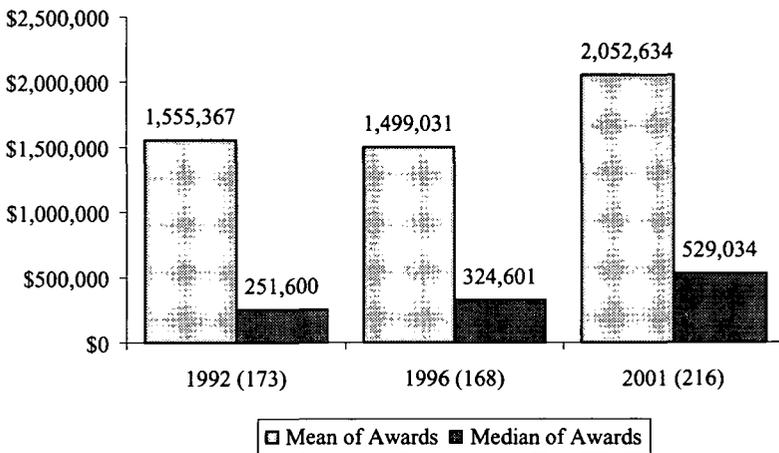
²⁶⁹ The 2001 data also include bench and jury trials. Of the 850 cases, 820 are coded as jury trials. Plaintiffs prevailed in 222 cases. Compensatory damages amount is missing in five cases; an additional case was dropped where the defendant was neither an individual nor a hospital/corporation. The resulting sample consists of 216 cases.

The Combined Medical Malpractice dataset is fairly representative on several measures. First, the mean and median compensatory damages awards are roughly consistent with the larger NCSC sample. The median compensatory damages awards in the Combined Medical Malpractice dataset for the 1992, 1996, and 2001 samples (adjusted in 2001 dollars) are \$251,600, \$324,601, and \$529,034.²⁷⁰

FIGURE 1
COMPENSATORY DAMAGES VERDICTS BY YEAR

(Combined Medical Malpractice Dataset (1992, 1996 & 2001))

Figures in 2001 dollars; (n) case observations



Second, plaintiffs in my dataset recovered compensatory damages in roughly 26% of jury trials: 27% in 1992; 23.6% in 1996; and 27% in 2001.²⁷¹ These numbers are in line with estimates of the percentage of cases won by plaintiffs at trial from numerous national samples of

²⁷⁰ See COHEN, *supra* note 103 (“After remaining stable in 1992 and 1996, the median amount [in the NCSC dataset] awarded in jury trials to plaintiff winners increased from \$287,000 in 1996 to \$431,000 in 2001.”). By contrast, the 1996 JVR values—\$474,536 (median) and \$1.9 million (mean), see JVR REPORT, *supra* note 103, at 1—are larger than those in my sample for 1996 (in 2001 dollars)—\$324,601 (median) and \$1.499 million (mean). And the 2000 JVR values—\$1 million (median) and \$3.48 million (mean), see *id.*—are appreciably higher than those in my sample for 2001—\$529,034 (median) and \$2.053 million (mean). JVR figures, which are based, at least in part, upon plaintiffs’ attorneys’ self-reporting of verdicts, are known, however, to exhibit an upward bias. See, e.g., BOVBERG & RAYMOND, *supra* note 11, at 5 (commenting that JVR reporting “to an unknown degree is thought to over-represent large cases that attorneys want to publicize”); see also *infra* note 272.

²⁷¹ Plaintiffs prevailed in 190 out of the 705 medical malpractice jury trials in the 1992 dataset, 176 out of the 747 cases in the 1996 dataset, and 222 out of the 820 cases in the 2001 dataset. See *supra* notes 245, 267–69.

medical malpractice cases, ranging from 22% to 29%.²⁷² One might be surprised by the low rate of plaintiffs' recovery in medical malpractice cases.²⁷³ Samuel Gross and Kent Syverud offer an interesting possible explanation for the lower plaintiff recovery rate (and correspondingly lower settlement rate) observed in medical malpractice cases: While most liability insurance contracts give the insurance company the power to accept or reject settlements, many medical malpractice insurance policies also give the doctor-defendant veto power over the settlements.²⁷⁴ A larger percentage of medical malpractice cases (60% compared to 25% in all cases) are "zero-offer" cases, i.e., ones in which the defendants made no pretrial settlement offer.²⁷⁵ According to Gross and Syverud, "the high rate of zero offers in medical malpractice cases is best explained by the desire of physicians for vindication at trial."²⁷⁶ They speculate that

[w]hát seems to be happening is that doctors are insisting on trial in some medical malpractice cases in which they expect to obtain public vindication. . . . In other contexts, insurance companies settle most odds-on winners for comparatively small amounts, in order to save trial costs and to minimize risks.²⁷⁷

²⁷² See, e.g., KELSO & KELSO, *supra* note 6, at 17 (reporting 24.1% plaintiff success rate in study of 1283 medical malpractice cases drawn from California Jury Verdict Reporter); RAND MICRA STUDY, *supra* note 44, at 57 (reporting 22% plaintiff win rate in study of California jury trials); Danzon & Lillard, *supra* note 260, at 347 (noting that plaintiffs at trial won in 28% of medical malpractice cases); Gross & Syverud, *supra* note 261, at 40 tbl.23 (indicating that proportion of trials with verdicts for plaintiffs in medical malpractice cases in sample of California jury verdicts in 1985–86 and 1990–91 were 29% and 26%, respectively); Neil Vidmar et al., *Jury Awards for Medical Malpractice and Post-Verdict Adjustments of Those Awards*, 48 DEPAUL L. REV. 265, 293 (1998) (reporting that plaintiffs prevailed in 22.5% of California medical malpractice cases from 1991 to 1997).

A Jury Verdict Research Report gives somewhat higher figures for plaintiff recovery probability, ranging from 29% in 1996 to 38% in 2000 (over the period 1994–2000). JVR REPORT, *supra* note 103, at 14. This may be explained, at least in part, by the partial reliance on plaintiffs' attorneys' self-reporting of verdicts, which may result in an upward bias in the awards gathered by JVR. See, e.g., Sloan & Hsieh, *supra* note 52, at 1007 (comparing 22% plaintiff win rate in non-appealed cases from sample of Florida closed medical malpractice claims with 66% rate reported by JVR, and concluding that "it is likely that the Florida reporters oversampled cases decided in favor of the plaintiffs").

²⁷³ In a well-known article, George Priest and Benjamin Klein hypothesized that, of cases decided at verdict, plaintiffs' recovery probability should be 50%. Priest & Klein, *supra* note 241, at 19–24. They found some evidence in favor of a 50–50 split between plaintiffs and defendants from jury verdict data in Cook County, Illinois. *Id.* at 31–44.

²⁷⁴ Gross & Syverud, *supra* note 261, at 54 & n.78. As Gross and Syverud recognize, however, insurance companies in general have an incentive to avoid the risk of bad-faith failure to settle actions brought against them by their insureds after trial. *Id.* at 54.

²⁷⁵ *Id.* at 56.

²⁷⁶ *Id.* at 58.

²⁷⁷ *Id.* at 58–59. Here again the authors note an important caveat: "[I]ncreasing numbers of doctors have become employed by health maintenance organizations and other

Third, the Combined Medical Malpractice dataset reflects that, as discussed in Part I.B.2 above, the awarding of punitive damages is extremely rare. Punitive damages accompanied compensatory damages in 1% to 4% of cases: six cases (3%) in 1992, two cases (1%) in 1996, and nine cases (4%) in 2001.²⁷⁸ The seventeen cases in which punitive damages were awarded reveal few patterns, apart from a concentration in Texas (with seven awards).²⁷⁹ Nor does the existence of caps on noneconomic or total compensatory damages appear to correlate with either the occurrence or the size of punitive damages.

2. *Dependent Variables*

Regressions were run on two separate logged dependent variables: (1) the jury's award of compensatory damages in its verdict (CompVerd); and (2) the amount of compensatory damages entered in the trial court's judgment (CompJudgmt).²⁸⁰ The compensatory

forms of managed care plans [which] . . . usually divest the doctor's right to veto settlements and, instead, assign that power to the corporate care provider." *Id.* at 59 n.94.

Neil Vidmar and Leigh Anne Brown offer alternative reasons:

One reason is that jurors generally tend to be skeptical of plaintiff claims and essentially place a burden on the plaintiff that is greater than the legally appropriate "balance of probabilities" standard. Another is that plaintiffs often have a more difficult time obtaining and hiring the experts, relative to the defense. It is also important to observe that Vidmar's research [referring to VIDMAR, *supra* note 25] showed that in many instances, plaintiffs who lost at trial against one doctor, nevertheless obtained settlements from other doctors who had been named in the lawsuit. This suggests that medical negligence had occurred in the case, albeit at trial, the jury did not think that the evidence against the remaining defendant or defendants was sufficient to find liability.

Vidmar & Brown, *supra* note 22, at 33–34; *see also* RAND MICRA STUDY, *supra* note 44, at 57 ("Medical malpractice trials are uncommonly difficult for plaintiffs to win.").

²⁷⁸ A listing of cases with punitive damages awards is on file with the *New York University Law Review*. Percentage figures are based upon the number of cases with positive compensatory damages amounts. In 1992, 205 cases were awarded compensatory damages; 183 cases in 1996; and 230 cases in 2001.

These figures are in line with the larger NCSC sample, as well as the 1–2% figures listed by JVR. *See supra* note 103 and accompanying text; *see also* Gross & Syverud, *supra* note 261, at 41 n.58 (reporting that in two samples of California jury verdicts, punitive damages were awarded in 0.0% of medical malpractice cases and concluding that "punitive damages seem to be given almost exclusively for intentional torts and for claims based on violations of obligations in commercial or other ongoing relationships").

²⁷⁹ This result, moreover, is consistent with numerous sources that "show[] Texas counties to be among the counties most frequently awarding punitive damages." Eisenberg et al., *Predictability*, *supra* note 255, at 641 & n.53 (listing numerous sources corroborating Texas findings).

²⁸⁰ The regressions actually use AdjCompVerd (adjusted compensatory verdict) and AdjCompJudgmt (adjusted compensatory judgment), which adjust these variables for inflation (in 2001 dollars), given that the sample combines data from different time periods. The 1992 and 1996 amounts are adjusted for inflation using the GDP implicit deflator method (which is similar to the Consumer Price Index (CPI) method), as supplied by the U.S. Department of Labor, Bureau of Statistics. *See* BUREAU OF ECON. ANALYSIS,

verdict variable is straightforward. It represents the compensatory damages awarded by the jury at trial. If, according to the crossover hypothesis, economic damages rise in response to caps on noneconomic damages, we would expect total compensatory damages awarded by the jury to remain constant as economic damages substitute for noneconomic damages. This level of analysis does not necessarily assume that the jury was aware of the damages cap; instead, the plaintiffs' attorney (along with the attorney's experts) might simply direct greater efforts towards securing larger economic awards. It is, however, possible that jurors were aware of the caps and took them into account in determining the size of both economic and noneconomic damages.²⁸¹

It might be argued that, in fact, the effects of the caps (which are generally not disclosed to the jury) would be felt only *after* the verdict, when the trial judge enters a reduced judgment, in accordance with the cap.²⁸² This is why I employ the second dependent variable, compensatory judgment, which attempts to capture post-verdict reductions of compensatory damages, including those on account of statutory damages limitations.²⁸³

3. *Independent Variables*

The independent variables (and how they are constructed) are described at length in Appendix III. Here, I outline briefly why these control variables (indicated below in parentheses) were chosen and their predicted effects upon plaintiffs' recovery of compensatory damages.

a. Litigant Characteristics

The NCSC datasets include several variables describing the litigants that might affect the size of plaintiffs' medical malpractice recoveries. In my study, I control for any effect that defendant's iden-

U.S. DEP'T OF COMMERCE, GROSS DOMESTIC PRODUCT: IMPLICIT PRICE DEFLATOR (2004), at <http://research.stlouisfed.org/fred2/data/GDPDEF.txt>. For more information regarding the CPI, see CONSUMER PRICE INDEX (Bureau of Labor Statistics, U.S. Dep't of Labor, Wash., D.C.), Feb. 23, 2005, available at <http://stats.bls.gov/news.release/pdf/cpi.pdf>.

²⁸¹ See *supra* notes 154, 156 and accompanying text.

²⁸² See, e.g., RAND MICRA STUDY, *supra* note 44, at xvii ("Typically unaware of the MICRA limit, a jury can award whatever amount it believes is appropriate for non-economic losses, but following the verdict, the judge will reduce the award to \$250,000 if necessary prior to entering the final judgment in the case." (footnote omitted)). Here, I put to one side cases where defendant has waived its right to post-verdict imposition of the cap, in jurisdictions that require caps be raised as an affirmative defense. See *supra* notes 160, 197 and accompanying text.

²⁸³ This variable (CompJudgmt) is described more fully in Appendix III.A.2.

tity (HospDef) might have on recovery amount. I would expect greater awards against hospital (and other corporate) defendants than against individuals.²⁸⁴ I also control for number of defendants (NoDefs) and number of plaintiffs (NoPltfs).²⁸⁵ Cases involving more defendants may offer a higher potential award at verdict.²⁸⁶

b. Severity Measures

My expectation here was that plaintiffs' recovery of compensatory damages would increase with severity of injuries. The severity variables are unique measures that I constructed using several variables in the NCSC datasets, as well as additional information that I compiled from Westlaw's JVR database.²⁸⁷ The severity variables categorize the various injuries listed in the NCSC dataset by relative severity, as exclusive and exhaustive dummy variables:²⁸⁸

(1) "Temporary" injuries (Temp) include all non-permanent injuries to all parts of the body;

(2) "Permanent significant" injuries (PermSig) include those permanent injuries that can roughly be said to occupy the lower echelon (i.e., bottom half) of a seriousness scale. Such injuries include skin lacerations, damaged muscles, broken bones, nerve damage,²⁸⁹ facial scars, pain, and burns;

(3) "Permanent grave" injuries (PermGrave) are those permanent injuries in the top half of the seriousness scale. These injuries include loss of limb; loss of sight, hearing, or mental function; and all forms of paralysis (partial and full); and

(4) "Death" (Death) is for injuries resulting in death.

²⁸⁴ Sloan and Hsieh, however, demonstrated the somewhat counterintuitive result that cases involving hospitals as named defendants (as opposed to individual physicians) resulted in lower (as opposed to higher) payments. Sloan & Hsieh, *supra* note 52, at 1024. This might be explained by the fact that they investigate insurance data covering settlements as well as verdicts. As co-defendants, the nursing staff may play a minor role in the injury, and one that is difficult to prove. Hospitals in such cases sometimes buy their way out with modest settlements, and plaintiffs often agree because of the perceived small odds of proving any liability against the hospital.

²⁸⁵ Other studies have included number of plaintiffs and number of defendants as components of medical malpractice damage measures. *Id.* at 1013.

²⁸⁶ In Sloan and Hsieh's study, four out of five of their regressions demonstrated that "the number of defendants has a positive and statistically significant impact on payments." *Id.* at 1024.

²⁸⁷ See *infra* Appendix III.B.2 (describing severity measure variables in detail).

²⁸⁸ This is preferable to using a scaled measure, from (1) to (4), because a move from (1) to (2) (i.e., from temporary to permanent significant injuries) would not be equivalent to a move from (2) to (3) (i.e., from permanent significant to permanent grave injuries).

²⁸⁹ Note that nerve damage to the spine, back, or brain is placed in the more severe category of "permanent grave" injury, akin to paralysis. See *infra* note 460.

The severity categories I adopt are similar to the ones used by the NAIC. Using the NAIC scale and its corresponding labels, “Temporary injuries” would include (1) emotional damage only, (2) temporary insignificant, (3) temporary minor, and (4) temporary major. “Permanent significant injuries” would include (5) permanent minor and (6) permanent significant. “Permanent grave injuries” would include (7) permanent major and (8) permanent grave. “Death” obviously corresponds to (9) death.²⁹⁰

c. State Laws

I have constructed various state-law variables for my analysis—based on whether the state has enacted noneconomic damages caps (CapN), collateral-source rule reforms (CSR), medical-expert screening panels (ExpPan), and patient compensation funds (Fund)—and added them to the dataset.²⁹¹ Each variable (described further below) is a binary dummy variable that captures the average influence of the reform.²⁹²

i. Damages Caps Table 1 in Appendix III shows the classification of the twenty-two states that correspond to the forty-seven counties represented in the NCSC datasets. States with limitations on noneconomic damages effective during the relevant time periods covered by the datasets (CapN states)²⁹³ include California, Hawaii,

²⁹⁰ Sloan & Hsieh, *supra* note 52, at 1004 tbl.1 (reproducing severity of injury scale from National Association of Insurance Commissioners (NAIC)). The NAIC scale has become one of the most common methods for categorizing medical malpractice cases. *E.g.*, KELSEY & KELSEY, *supra* note 6, at 20; Gronfein & Kinney, *supra* note 166, at 446 & n.7.

²⁹¹ State-law tort reforms are often enacted in groups, and it can be difficult to estimate reliably the effects of individual reforms. This estimation is even more difficult where individual reforms are highly correlated with one another. The four state-law variables in my sample—CapN (cap on noneconomic damages), CSR (collateral-source rule), ExpPan (medical-expert screening panel), and Fund (patient compensation fund)—are not highly correlated with one another, so the individual estimates are more reliable.

²⁹² *Cf.* Viscusi & Born, *supra* note 38, at 28 (“The reform variable used . . . will be in terms of a 0-1 dummy variable that captures the average influence of these reforms. It is not feasible to construct a quantitative measure of reform stringency because of the differing character of the reforms.”).

²⁹³ I use the effective date of the statute enacting damages caps. Of course, any changes in the law may not have instantaneous effects because it may take some time for attorneys, physicians, and patients to assimilate the law and change their practices accordingly. *See, e.g.*, Kessler & McClellan, *supra* note 27, at 362. Illinois and Ohio are the only states in my dataset, however, that experienced a change in the relevant law during the study period. For verdicts in these states, I use the “claim filed” date as the applicable reference date. *Accord* Sloan et al., *supra* note 96, at 670 n.6 (“Depending on the state and the particular reform, some tort changes are applicable to injuries and some to claims filed after a particular time. When this was not specified in the statute, we used claims filed as the applicable reference date.”).

Illinois (where a cap was in effect between March 1995 and December 1997), Massachusetts, Michigan, Missouri, Ohio (where a cap was in effect between January 1997 and August 1999), and Wisconsin. Wrongful-death cases in Texas are also subject to a noneconomic damages cap.²⁹⁴

Indiana and Virginia have enacted limitations on total compensatory damages (CapT states).²⁹⁵ However, because observations are so limited here, I only include noneconomic caps in my empirical analysis.

The remaining "NonCap" states (CapN = 0 and CapT = 0) are Arizona, Connecticut, Florida, Georgia, Illinois (prior to March 1995 and after December 1997), Kentucky, Minnesota, New Jersey, New York, North Carolina, Ohio (prior to January 1997 and after August 1999), Pennsylvania, Texas (except wrongful-death cases), and Washington. The cap variable was checked using original state statutory references and then cross-checked against partial listings from various trade associations.²⁹⁶

If caps work as intended, plaintiffs' compensatory damages recoveries should be lower in cap states than in noncap states. If, however, a crossover effect is in play, the effect of the cap on noneconomic damages may be negligible, as increased economic damages offset restricted noneconomic damages.

ii. Collateral-Source Rule Reforms Although "the basic law of malpractice is the same within any one state,"²⁹⁷ states have adopted, to varying degrees, several reforms in addition to damages caps, including modification of the collateral-source rule.

The collateral-source rule states that a plaintiff's award may not be diminished because of benefits (such as health insurance, workers' compensation, etc.) received from other sources. Reforms to this

²⁹⁴ See *infra* Appendix I and notes iv, v, vii.

²⁹⁵ See *infra* Appendix I.

²⁹⁶ See *id.* The secondary sources consulted included: AM. TORT REFORM ASS'N, TORT REFORM RECORD (2003), available at http://www.atra.org/files.cgi/7668_Record12-03.pdf; CTR. FOR JUSTICE & DEMOCRACY, MEDICAL MALPRACTICE "TORT REFORMS" ENACTED BETWEEN 1985 AND 1999, available at <http://www.centerjd.org/free/Medmallist.pdf> (last modified Dec. 3, 2003); HENRY COHEN, LIBRARY OF CONGRESS, MEDICAL MALPRACTICE LIABILITY REFORM: LEGAL ISSUES AND FIFTY-STATE SURVEY OF CAPS ON PUNITIVE DAMAGES AND NONECONOMIC DAMAGES (2003), available at <http://joewilson.house.gov/Issues/Issue/?IssueID=91>; McCullough, Campbell & Lane, Summary of Medical Malpractice Law (2002), at <http://www.mcandl.com/states.html>; Shook, Hardy & Bacon LLP, Chart of Medical Malpractice Reforms by State (July 22, 2003) (on file with the *New York University Law Review*).

²⁹⁷ BOVBJERG & RAYMOND, *supra* note 11, at 8. Bovbjerg and Raymond attribute variations by locality in rates of bringing suit and in amount of plaintiffs' awards instead to "differences in cultural attitudes." *Id.*

longstanding common law rule have allowed defendants to introduce evidence that certain expenses claimed by the plaintiff (e.g., medical costs, wage losses) were covered by insurance or other outside sources, or allow post-verdict offsets based upon outside payments. Because collateral-source offsets reduce payments for economic losses, I have included the variable in my study. Indeed, to the extent that focus shifts to the economic component of medical malpractice damages,²⁹⁸ collateral-source offset rules become even more important to litigation incentives and payoffs.²⁹⁹ Other researchers, moreover, have found that, in addition to cap variables, collateral-source offsets—unlike most of the other types of reforms—have a significant effect on plaintiffs' recovery.³⁰⁰

Table 2 in Appendix III shows the classification of the twenty-two states. States that have not modified the common law collateral-source rule during the relevant time period (1991–2001) include: Georgia, Hawaii, Kentucky (after January 1995), Missouri, North Carolina, Ohio (between June 1994 and January 1997, and between August 1999 and April 2003), Pennsylvania, Texas, Virginia, and Wisconsin (before May 1995).³⁰¹

States that have enacted collateral-source reforms, including both voluntary and mandatory offsets, include: Arizona, California, Connecticut, Florida, Illinois, Indiana, Kentucky (before January 1995), Massachusetts, Michigan, Minnesota, New Jersey, New York, Ohio (before June 1994 and between January 1997 and August 1999), Washington, and Wisconsin (after May 1995).³⁰²

iii. Medical-Expert Screening Panels Medical-expert screening panels are bodies, composed at least partly of physicians, that review

²⁹⁸ See *infra* Part IV.D.

²⁹⁹ Here, trends in collateral sources that affect medical patients' ability to collect compensation in the event of injury—such as access to health insurance and the scope of benefits coverage—take on special importance as well.

³⁰⁰ See *supra* notes 120, 123 and accompanying text (discussing studies reporting significant effect of collateral-source offsets). By contrast, Sloan et al. found that statutes of limitations reforms had no effect on payment amount. Sloan et al., *supra* note 96, at 674. Likewise, requiring periodic payments (i.e., disbursements of damages over time as an annuity) had no statistically significant effect on payment amount. *Id.* at 678; see also Kessler & McClellan, *supra* note 27, at 360 (“Other malpractice reforms that only affect malpractice awards *indirectly*, such as reforms imposing mandatory periodic payments . . . or statute-of-limitations reductions, have had a less discernible impact on liability”); Thorpe, *supra* note 57 (finding no significant effect from reform of joint and several liability rules). Thorpe’s empirical study found that discretionary collateral-source offsets were associated with decreased loss ratios (i.e., increased profitability) for insurers, whereas mandatory offsets had no statistically significant effect. See *id.*

³⁰¹ See *infra* Appendix III Table 2 (listing relevant statutes and case law).

³⁰² See *id.*

medical malpractice claims prior to trial and provide opinions as to their merits. At present, twenty states utilize screening panels of one form or another.³⁰³ The panels vary in nature, size, and composition:

Some panel systems are mandatory, while others are voluntary. Some screen claims prior to the filing of a legal complaint while others screen claims after filing. . . . Some panels are composed exclusively of physicians, while others include lawyers, judges, and/or laypeople. Other significant variations affect the amount of discovery permitted, the types of evidence allowed, the extent of the panel proceedings, and the scope of the panel findings (liability only, or liability and damages). Some systems provide that panel findings are admissible at a later trial³⁰⁴

Table 3 in Appendix III classifies states according to whether they have some type of medical-expert screening panel (of either a voluntary or mandatory nature). “Expert panel” states include Connecticut, Florida, Hawaii, Indiana, Massachusetts, Michigan, New York (prior to October 1991), Virginia, and Wisconsin. The remaining states (Arizona, California, Georgia, Illinois, Kentucky, Minnesota, Missouri, New Jersey, New York (after October 1991), North Carolina, Ohio, Pennsylvania, Texas, and Washington) are “non-expert panel” states.

In theory, medical-expert screening panels should serve a gatekeeping function by weeding out unmeritorious claims. One might expect such a system to increase damages awards.³⁰⁵ Previous studies, however, have not uncovered any significant effect.³⁰⁶

iv. Patient Compensation Funds Patient compensation funds were established in some states in order to provide excess medical

³⁰³ See STRUVE, *supra* note 209, at 58. Panels were enacted in an additional eleven states where they were subsequently repealed or invalidated. See *id.*

³⁰⁴ *Id.* at 59.

³⁰⁵ Alternatively, especially where the panel opines on damages as well as liability, and the jury is told of the panel’s determination, one might expect the panel to have a temporizing influence on jury awards. See *id.* at 64.

³⁰⁶ See *id.* at 64–65 (surveying available multistate studies, and concluding that panels “do not seem to affect the overall severity of paid claims”). Struve reviews the studies by Danzon, *supra* notes 119, 120; Sloan et al., *supra* note 96; and Zuckerman et al., *supra* note 57. Struve notes that the Sloan et al. study “found that mandatory screening panels were associated with a statistically significant increase in the mean payment per paid claim,” STRUVE, *supra* note 209, at 65; this increase, however, was counterbalanced by a reduction in payments per claim when the findings were admissible in court, Sloan et al., *supra* note 96, at 677.

In a recent study focusing primarily on medical malpractice claims filed in Nevada, Albert Yoon similarly concluded that mandatory arbitration by screening panels did not significantly affect the amount of damages insurers paid to plaintiffs. See Albert Yoon, *Mandatory Arbitration and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the West*, 6 AM. L. & ECON. REV. 95, 99, 112–27 (2004).

malpractice coverage for physicians and hospitals. These funds usually cover an amount over the dollar ceiling on a provider's prime insurance policy. All funds are financed through surcharges on qualified health providers. Funds vary in terms of the threshold amount at which they begin to make payments for awards against a covered health provider.³⁰⁷

On average, payments to claimants may be greater than they would be absent the fund.³⁰⁸ Table 4 in Appendix III lists the states in the Combined Medical Malpractice dataset that have enacted a fund: Florida, Indiana, Pennsylvania, and Wisconsin.³⁰⁹

d. Partisan-Elected Judges

Eric Helland and Alexander Tabarrok have explored the effect of partisan elections of judges on tort awards.³¹⁰ For purposes of my study, I borrow their hypothesis that awards will be higher in states with partisan-elected judges than in states with nonpartisan (either elected or appointed) judges.³¹¹

³⁰⁷ In Louisiana, for example, the fund pays awards over \$100,000, LA. REV. STAT. ANN. § 40:1299.42 (West 2001), whereas in Indiana, the fund does not kick in until \$250,000, IND. CODE § 34-18-4-1 (2003).

³⁰⁸ See *supra* note 171 and accompanying text (discussing results from Gronfein and Kinney's Indiana study).

³⁰⁹ It would be interesting to test the interaction between states with funds and states with damages caps (either total compensatory or noneconomic damages) (i.e., Fund = 1 and CapT = 1 (or CapN = 1)). For example, Indiana has a cap on total compensatory damages, as well as a fund. It may be the case that these two features have offsetting effects—in effect, the cap lowers plaintiffs' recovery, whereas the fund increases it. Unfortunately, there are too few observations in my dataset to test accurately these interactions. (The number of observations in the 557-case sample where CapT = 1 and Fund = 1 is 3; the number where CapN = 1 and Fund = 1 is 6.) See *infra* Appendix III Table 4.

Other states (not in the Combined Medical Malpractice dataset) which have enacted funds include Kansas, Louisiana, Nebraska, New Mexico, Oregon, South Carolina, and Wyoming. See ADVOCACY RES. CTR., AM. MED. ASS'N, STATE PATIENT COMPENSATION FUNDS 1 (2003). Funds in three states (Florida, Oregon, and Wyoming) are currently inactive, and Pennsylvania's fund is scheduled to be phased out. *Id.* Funds in two states—Florida and Virginia—apply only to infants who have suffered a neurological injury. *Id.* at 1, 3. Several other states, including Ohio and West Virginia, are currently contemplating the feasibility of introducing a fund. *Id.* at 3.

³¹⁰ Eric Helland & Alexander Tabarrok, *The Effect of Electoral Institutions on Tort Awards*, 4 AM. L. & ECON. REV. 341 (2002) [hereinafter Helland & Tabarrok, *Electoral Institutions*]; Alexander Tabarrok & Eric Helland, *Court Politics: The Political Economy of Tort Awards*, 42 J.L. & ECON. 157 (1999) [hereinafter Tabarrok & Helland, *Court Politics*].

³¹¹ Tabarrok & Helland, *Court Politics*, *supra* note 310, at 161–62, 167. Tabarrok and Helland “define a state as having elected judges if elections are the primary and dominant means of judicial selection.” *Id.* at 167. I follow Tabarrok and Helland's classification here to distinguish between partisan and nonpartisan elections:

There are good reasons for thinking that partisan and nonpartisan elections may differ. In a partisan election state, judges run under a party banner, just as

At first, it might seem counterintuitive that the mode of selection of trial judges would have any perceptible effect upon tort awards, which are primarily awarded by juries, not judges. However, Tabarrok and Helland predicted that damages would be larger in states with partisan judicial elections, for two main reasons. First, plaintiffs tend to be in-state voters, while defendants are often out-of-state nonvoters.³¹² Elected judges would thus have an incentive to redistribute wealth from out-of-state defendants to in-state plaintiff voters.³¹³ Tabarrok and Helland call this the “local voter” effect.³¹⁴ Second, elected judges rely heavily upon campaign contributions from trial lawyers, who have an interest in larger awards.³¹⁵ Trial lawyers are repeat players before judges, and thus have the greatest incentive to make campaign contributions.³¹⁶

do other politicians, while in a nonpartisan state, judges are required by law to be independent of any party. Elections tend to be less competitive in nonpartisan than partisan states In nonpartisan states many judges run unopposed, and when they do face opposition, few are defeated. . . . Greater competition also suggests that campaign donations, most of which come from lawyers, will be more important in partisan than in nonpartisan electoral systems.

Id. at 168.

³¹² *Id.* at 158.

³¹³ *Id.* In the words of one state court judge:

As long as I am allowed to redistribute wealth from out-of-state companies to injured in-state plaintiffs, I shall continue to do so. Not only is my sleep enhanced when I give someone else’s money away, but so is my job security, because the in-state plaintiffs, their families, and their friends will reelect me.

RICHARD NEELY, *THE PRODUCT LIABILITY MESS: HOW BUSINESS CAN BE RESCUED FROM THE POLITICS OF STATE COURTS* 4 (1988), *quoted in* Tabarrok & Helland, *Court Politics*, *supra* note 310, at 157. Moreover, “[r]edistribution from out-of-state corporations to in-state plaintiffs appeals to juries just as much as to judges.” Tabarrok & Helland, *Court Politics*, *supra* note 310, at 161.

³¹⁴ Tabarrok & Helland, *Court Politics*, *supra* note 310, at 158.

³¹⁵ *Id.* at 160–61. Of course, as Tabarrok and Helland explain: “At a given moment some trial lawyers are working for the plaintiff and others for the defense. Nevertheless, in general, all trial lawyers are interested in larger awards. Larger awards mean larger fees, whether one works for the plaintiff or the defense.” *Id.* at 161.

³¹⁶ *Id.* at 160. This “trial lawyer hypothesis” might be counterbalanced, however, by evidence demonstrating that corporate interests invest heavily in conservative judges. *See, e.g.,* Anthony Champagne, *Interest Groups and Judicial Elections*, 34 *LOY. L.A. L. REV.* 1391, 1398–1403, 1407 (2001) (showing that corporate interests invest heavily in conservative judges, especially at appellate level, but also at trial level); Anthony Champagne, *Tort Reform and Judicial Selection*, 38 *LOY. L.A. L. REV.* (forthcoming 2005) (demonstrating ongoing battle, especially in partisan election states, for control of state supreme courts); *see also* Emily Heller, *Judicial Races Get Meaner*, *NAT’L L.J.*, Oct. 25, 2004, at 1 (noting that U.S. Chamber of Commerce’s Institute for Legal Reform “studies judicial candidates, determines which ones are in favor of restricting liability for corporate defendants and conducts ‘voter education’ programs in the hopes of getting tort-reform-minded judges on the bench”).

State judges are selected by partisan elections in ten states.³¹⁷ Five are included in my sample: Illinois, New York, North Carolina, Pennsylvania, and Texas.³¹⁸ The remaining states select judges either by nonpartisan elections or through an appointments process.³¹⁹

e. County Characteristics

Because the NCSC jury-trial case information was collected at the county level, I have collected county-level (as opposed to state-level) data on various demographic characteristics from the 1990 and 2000 Censuses.³²⁰ Given that jurors are selected for state trials at the county level, I am thereby controlling for juror demographics (at least to the extent that juror demographics reflect county demographics).³²¹ I am also attempting to control for average characteristics of claimants, who are likely to file in the county in which they reside. Guided by the findings of previous empirical studies, I controlled for county-level variations in median household income (MedInc), poverty rate (Poverty), percentage of population over 65 years of age (Pop65Old), and number of physicians and lawyers per 100,000 residents (PhyPer100k; LawPer100k). Here, I briefly describe the predicted impact of each variable.

³¹⁷ These states are: Alabama, Arkansas, Illinois, Mississippi, New York, North Carolina, Pennsylvania, Tennessee, Texas, and West Virginia. Tabarrok & Helland, *Court Politics*, *supra* note 310, at 168 & n.24.

³¹⁸ See *infra* Appendix III Table 5.

³¹⁹ "Appointed" includes gubernatorial appointment, legislative election, and merit plans, following the classification of Tabarrok and Helland:

The "merit plan" . . . is gubernatorial appointment from a slate of candidates put forward by a nominating commission. Furthermore, the governor typically appoints at least some members of the nominating commission. The governor also plays an important role in legislative election, which is used in only three states (Connecticut, South Carolina, and Virginia). . . .

. . . We define states using initial appointment followed by retention elections as "appointed states."

Tabarrok & Helland, *Court Politics*, *supra* note 310, at 166–68.

³²⁰ Information for median household income, income per capita, percentage of individuals under the poverty line, and percentage of the population over sixty-five years old is available from the 2000 Census. U.S. CENSUS BUREAU, U.S. DEP'T OF COMMERCE, COUNTY AND CITY DATA BOOK: 2000, at 66–113 tbl.B-2, 210–57 tbl.B-5, 354–401 tbl.B-8 (13th ed. 2002) [hereinafter 2000 CENSUS DATA BOOK]. Information regarding the numbers of physicians and lawyers per 100,000 residents is available from the Census 2000 Special Equal Employment Opportunity (EEO) files of the 1990 Census. See U.S. Census Bureau, U.S. Dep't of Commerce, Census '90 Detailed Occupation by Race, Hispanic Origin and Sex [hereinafter EEO Files], at <http://censtats.census.gov/cgi-bin/eeo/eeojobs.pl> (last visited Mar. 4, 2005).

³²¹ See Eric Helland & Alexander Tabarrok, *Race, Poverty, and American Tort Awards: Evidence from Three Datasets*, 32 J. LEGAL STUD. 27, 52 (2003) ("[W]e do not have data on the composition of the jury, and we must therefore infer jury characteristics from county characteristics.").

i. Median Household Income A rise in award amount is to be expected with increases in median household income if compensatory damages increase as wages increase.³²² And previous empirical studies have indeed found that income (per capita or median household) is positively associated with claim amounts.³²³

ii. Poverty Rate Given the positive association of income and compensatory awards, one might likewise expect awards to fall as poverty rates increase, given that wages are lower in high-poverty counties. Helland and Tabarrok have found instead that trial awards increase with county poverty rates—an effect they ascribe to an increase in poverty among jurors drawn from the county jury pool.³²⁴ A strong and positive relationship between county poverty rates and jury awards would lend credence to the “wealth redistribution” hypothesis.³²⁵

iii. Age Age might affect tort awards through working life expectancy calculations.³²⁶ Here, I control only for the percentage of the elderly population. Previous studies have demonstrated that

³²² See Viscusi & Born, *supra* note 38, at 31 (“The real state aggregate income level potentially could be influential as well. For any given malpractice misadventure, the economic damages associated with lost earnings will be greater, the higher the income of the injured party.”); see also Tabarrok & Helland, *Court Politics*, *supra* note 310, at 172 (“Compensation for injury will also tend to increase with per capita income to the extent that safety (noninjury) is a normal good.”).

³²³ See, e.g., Roger Feldman, *The Determinants of Medical Malpractice Incidents: Theory of Contingency Fees and Empirical Evidence*, ATLANTIC ECON. J., July 1979, at 59, 62, 64 tbl.2 (finding per capita income directly associated with claim amount); see also Tabarrok & Helland, *Court Politics*, *supra* note 310, at 177 (reporting positive, and highly statistically significant, coefficient on per capita income in regression on total awards). I use median household income instead of per capita income. See *infra* note 463.

³²⁴ Helland & Tabarrok, *supra* note 321, at 34–35 (reporting multivariate regression result that “a 1-percentage-point increase in poverty rates increases awards by approximately \$35,300 in the JVR dataset and by \$33,700 in the state court dataset [the NCSC 1992 Civil Justice Survey data]”); see also Helland & Tabarrok, *Electoral Institutions*, *supra* note 310, at 358; Tabarrok & Helland, *Court Politics*, *supra* note 310, at 182.

Helland and Tabarrok find further evidence that suggests that “poverty alone is picking up results more properly ascribed to some combination of poverty, black, and Hispanic.” Helland & Tabarrok, *supra* note 321, at 39.

³²⁵ Frank M. McClellan, *The Dark Side of Tort Reform: Searching for Racial Justice*, 48 RUTGERS L. REV. 761, 784 (1996). According to Frank McClellan, “the only institutions in America where people of color have the power to make immediate wealth redistribution decisions are urban governments and juries.” *Id.*; see also Tabarrok & Helland, *Court Politics*, *supra* note 310, at 172–73 (“Plaintiffs in tort cases are typically poor relative to defendants, and plaintiffs’ lawyers will often argue that ‘greedy’ corporations need to be taught lessons. We expect that juries will respond to these arguments more favorably the greater the local poverty rate.”).

³²⁶ See *infra* notes 399–403 and accompanying text.

claimants aged sixty-five or older at the time of their injury have tended to receive smaller compensatory awards.³²⁷

iv. Numbers of Physicians and Lawyers Damages awards might increase with increases in the density of the physician and/or lawyer population. These variables might, in turn, have more to do with the degree of urbanization of a particular locale.³²⁸ Sloan reported a direct association between number of lawyers per 10,000 population and medical malpractice insurance premiums.³²⁹

B. Methodology and Limitations

Using pooled cross-sectional data across three separate time periods (1992, 1996, and 2001), I compare the experience of states that have enacted noneconomic damages caps with those that have not. This study uses multivariate linear regression analysis to analyze the effects of noneconomic damages caps upon the size of plaintiffs' recovery of compensatory damages. The goal of such multivariate analysis is to adjust for the simultaneous impact of multiple factors—including a variety of independent factors such as the existence of caps on noneconomic damages, other potentially relevant state laws, severity of injury, litigant characteristics, and statewide or countywide characteristics—on the dependent variable (here, compensatory damages amount). The coefficients for these independent variables are estimated using ordinary least-squares estimators (the OLS technique).³³⁰

The models use log-linear specifications, with the logged dollar amounts of either compensatory damages verdicts or reduced compensatory damages judgments as dependent variables. The log-linear specification in this context is customary, and in fact almost all of the

³²⁷ *E.g.* Sloan & Hsieh, *supra* note 52, at 1019; *see also* Kessler & McClellan, *supra* note 27, at 368 (“Several studies have documented that claims rates are lower in the elderly than in the nonelderly population, presumably because losses from severe injuries would be smaller given the patients’ shorter expected survival.”).

³²⁸ Danzon, for example, found that urbanization was a significant determinant of claim payments. *See* Danzon, *supra* note 119, at 75–76 (“The estimates imply that a ten percentage point increase in the fraction of a state’s population living in urban areas is associated with roughly a seven percent increase in malpractice claim severity.”). No variable representing urbanization is included in my study, however, because the NCSC data are drawn from seventy-five of the most populous—and predominantly urban—counties in the United States.

³²⁹ Sloan, *supra* note 57, at 638–43.

³³⁰ This means that the estimated coefficients are obtained so that they result in the lowest sums of the squares of the differences between the actual and estimated values of the dependent variable.

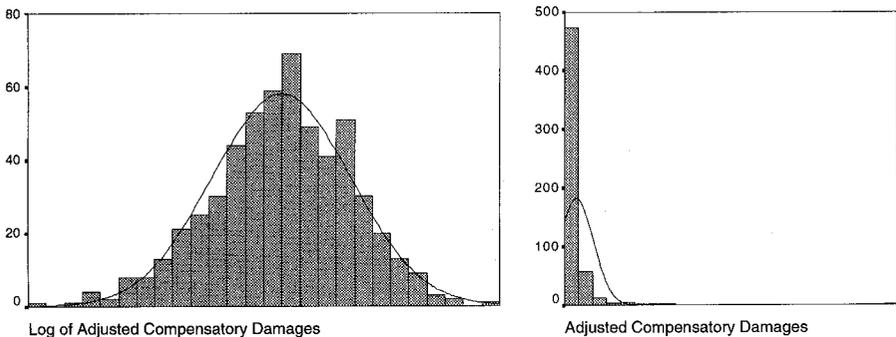
previous empirical studies examining the effects of caps on size of recovery likewise use the log-linear specification.³³¹

The log-linear specification is not without its critics. In particular, some researchers argue that it is more meaningful to use the level of compensatory damages (i.e., non-logged amount) as the dependent variable.³³² But such a specification would fall prey to the “well-known problem with means in trial data, [which] are heavily influenced by a small number of very large cases.”³³³ Nonetheless, we should keep in mind the fact that measures such as median or log compensatory damages might distort the picture, particularly from the

³³¹ It is customary to use the natural log of the payment amount (either the verdict amount or, in insurers' closed claims, the indemnity payments). See, e.g., Farber & White, *supra* note 260, at 206 (“The distribution of settlement amounts is dramatically right skewed, while the distribution of the logs is much more symmetric.”); Gronfein & Kinney, *supra* note 166, at 455 (“Because the distribution of claim payment amounts was highly skewed, claim severity was expressed as a logarithm to the base 10.”); Sloan et al., *supra* note 96, at 668 (“We took the natural logarithm of the two payment variables because the distribution of payments was highly skewed—that is, there were a few very large payments and many smaller ones.”); Sloan & Hsieh, *supra* note 52, at 1012 (using natural log of indemnity payment as dependent variable).

As Figure A demonstrates, in the Combined Medical Malpractice dataset, the distribution of the logs is symmetric and approximates the normal distribution, whereas the distribution of compensatory damages amounts is highly right-skewed (i.e., disproportionately concentrated on the left side of the graph). While the normal distribution is not a requirement of Ordinary Least Squares (OLS) estimation, it ensures reliable significance testing.

FIGURE A
NORMAL FREQUENCY DISTRIBUTIONS OF ADJUSTED COMPENSATORY DAMAGES:
COMPARISON OF LOGGED AND LEVEL DAMAGES AMOUNTS



³³² See, e.g., W. Kip Viscusi, *The Blockbuster Punitive Damages Awards*, 53 EMORY L.J. 1405, 1414 (2004) (“The logarithmic transformation mutes the effect of outliers with respect to punitive damages.”).

³³³ Gross & Syverud, *supra* note 261, at 30. In the Combined Medical Malpractice dataset, there are five extreme outlier awards: a \$90 million award (1992) and a \$32 million award (1996) from New York, a \$37 million award (2001) and a \$25 million award (2001) from Pennsylvania, and a \$30 million award (2001) from Illinois.

standpoint of the defense, for whom outlier judgments may be a significant risk.³³⁴

Several additional caveats or qualifications are in order here. The two principal concerns in any multiple regression analysis are endogeneity and selection bias, which I address here in turn. Perhaps the greatest difficulty in multivariate regression analysis is distinguishing between treatment effects—e.g., the existence of caps on noneconomic damages—and secular trends—e.g., those driven by pre-existing features of states. The endogeneity concern here refers to the possibility that the existence of legislation imposing caps on damages is an endogenous (as opposed to exogenous) variable of the model. In other words, the enactment of cap legislation might be a codification of underlying preexisting conditions in the state in which the legislation is enacted, conditions which actually caused the legislation to be enacted in the first place, and which also affect the level of compensatory damages jury verdicts in the state. If that is so, any variable measuring the impact of the cap variable (when endogenous) is jointly determined and is thus not independent of the error term in the model—violating one of the fundamental assumptions of multivariate linear regression (or OLS) models.

For this reason, one choice methodology is to approximate “natural experiments,” whereby the same treatment group (i.e., verdicts in the same state) may be studied before and after an exogenous change in policy.³³⁵ Within the Combined Medical Malpractice dataset, Illinois and Ohio are the only states to have enacted a noneconomic damages cap within the time frame of the data; moreover, there are not enough observations to limit the analysis to Illinois or Ohio.³³⁶ Nor was an attempt to use the instrumental-variable technique to sort out possible endogeneity (or simultaneity bias) successful. I constructed an instrumental variable based upon the dominant party affiliation of the state legislature, which might plausibly affect whether cap legislation is passed in a particular state, but might not have an

³³⁴ As Gross and Syverud persuasively argue, “[F]or insurance companies and other repeat litigants, a major goal (if not *the* major goal) in pretrial negotiations must be to avoid those huge verdicts that inflate the mean awards.” *Id.* at 38. Nonetheless, Gross and Syverud themselves conclude that “[t]he median nonzero verdict . . . is a useful anchor.” *Id.* (emphasis omitted).

³³⁵ Even here, there is still the possibility that the policy is an endogenous (as opposed to exogenous) variable of the model.

³³⁶ For Illinois, there are nineteen CapN observations for cases filed between March 9, 1995, and December 18, 1997. The remaining forty observations are noncap (thirty-three before March 9, 1995; seven after December 18, 1997). For Ohio, there are five CapN observations, for cases filed between January 27, 1997, and August 16, 1999. The remaining twenty-seven observations are noncap (twenty before January 27, 1997; seven after August 16, 1999).

independent impact upon damages award amounts.³³⁷ However, dominant party affiliation of the state legislature was not strongly correlated with enactment of noneconomic damages caps (at least during the relevant time period of my data, from 1991 to 2001), which precluded its use as an instrument.³³⁸ Thus, endogeneity remains a concern. Kessler and McClellan offer some potential solace. They argue that, “[s]ince the main cause of the tort reforms that are the focus of our study [including damages caps] was nationwide crisis in all lines of commercial casualty insurance, it is unlikely that endogeneity of reforms is a serious problem.”³³⁹ Notwithstanding the claim of nationwide crisis, endogeneity remains an issue, as it affects which states adopted reforms and which did not.³⁴⁰

The second major concern with multivariate regression analysis is selection bias. With respect to my analyses, it is necessary to justify the decision to limit the data to cases in which plaintiffs won some positive amount of compensatory damages. Two different selection biases are implicated.

First, by excluding the cases in which the defendant was not held liable, I have assumed that juries determine liability and damages award levels independently. If this were not the case, then factors that affected the probability that a plaintiff would prevail might also affect the amount of recovery where the plaintiff prevailed. The “dropped” cases in which the defendants prevailed might correlate in some significant way with the amount of compensatory damages received by prevailing plaintiffs—introducing a selection bias into the models. My

³³⁷ A political measure, such as the dominant party affiliation of the legislature that enacted the caps, might be a promising instrument if we posit that it reflects the preferences of the “median voter” in the state, but it may not be significantly correlated with characteristics that influence damages awards. This might be particularly plausible for studies (like mine) using urban juror awards, which may not be especially correlated with measures capturing the preferences of median voters in a state.

³³⁸ The correlation between party affiliation and CapN was tested in two ways: categorical (which party or parties dominated the two legislative houses) and as a percentage of Republicans in the state legislature. The correlation number in the former was 0.05 and in the latter only 0.01 (i.e., very weak). Both correlations were statistically insignificant.

I also investigated the possibility of using either the lawyer or physician ratio as an instrument, but their correlations were likewise too weak (-0.12 for lawyer ratio and -0.24 for physician ratio).

³³⁹ Kessler & McClellan, *supra* note 27, at 365.

³⁴⁰ See, e.g., Viscusi & Born, *supra* note 38, at 33 (noting that “high loss states were the first to enact the [medical malpractice liability] reforms”). Moreover, the insurance “crisis” was so named by people interested in changing the legal system. See generally WILLIAM HALTOM & MICHAEL McCANN, *DISTORTING THE LAW: POLITICS, MEDIA, AND THE LITIGATION CRISIS* (2004) (using “litigation crisis” as case study of social creation of legal knowledge). Because these people were lobbying the public and state legislatures, it is entirely likely that the endogeneity problem is real.

assumption here (that juries determine liability and damages independently) is premised upon previous empirical studies. In the medical malpractice context, Farber and White modeled a two-stage decision-making process in which they allowed for factors to have differential effects on the probability that a claim was paid and on the amount paid; they concluded that “cases tried to a verdict in court look like the cases that were dropped/dropped in the severity dimension.”³⁴¹ Sloan et al. likewise examined both potential effects and determined that, while caps on damages had significant effects on the amount of payment, they had no statistically significant effect on the probability of payment.³⁴²

Second, the model implicitly assumes that damages caps do not affect the probability of litigation. In fact, the existence of caps may affect the likelihood that attorneys settle cases, as well as the types of cases they are likely to bring forward.³⁴³ Many of the preexisting empirical models are subject to strong selection-bias critiques.³⁴⁴ Given the limitations of data that do not include and separately identify settlements from verdicts, it is difficult to measure the possible bias.³⁴⁵ It remains the case that “focus[ing] on jury awards can shed light on how important . . . aspects of [cap legislation] . . . operate in practice and contribute to the ongoing policy debate over medical malpractice litigation.”³⁴⁶

³⁴¹ Farber & White, *supra* note 260, at 205.

³⁴² Sloan et al., *supra* note 96, at 678.

³⁴³ I return to this issue in Part IV.E.2, *infra*.

³⁴⁴ As the RAND MICRA Study noted:

Focusing on jury verdicts ignores MICRA’s effects on the much larger number of cases that were resolved prior to trial and on disputes and losses from health-care-related injuries that never reached the filing stage. MICRA’s most important ramifications for both patients and health care professionals (and their insurers) may not be on trial awards but instead on the far greater number of matters that never went before a jury. But such cases and claims are outside the scope of this analysis. MICRA is likely to have changed the number and character of cases that reached the trial stage; however, our analysis focused solely on actual trials concluded during our study period.

RAND MICRA STUDY, *supra* note 44, at 3–4; *see also id.* at 49.

³⁴⁵ *See* VASANTHAKUMAR N. BHAT, MEDICAL MALPRACTICE: A COMPREHENSIVE ANALYSIS 68–69 (2001) (finding that caps on noneconomic damages “reduce the probability of settlement, raising overall malpractice costs”). There has also been an attempt to model the problem experimentally. *See* text accompanying *supra* notes 149–52 (discussing Babcock and Pogarsky study). I nonetheless attempt to assess the magnitude of the potential selection bias in my study in Part IV.E.2.c, *infra*.

³⁴⁶ RAND MICRA STUDY, *supra* note 44, at 4.

C. Results

My analysis yields two main empirical results. First, severity of injury has a positive and statistically significant effect upon plaintiffs' recovery of compensatory damages. Second, when controlling for the independent effects of severity of injury, as well as numerous additional litigant characteristics, state law, and county demographic variables,³⁴⁷ noneconomic damages caps have no statistically significant effect on the size of overall compensatory damages, as reflected in either jury verdicts or final judgments. This finding is consistent with my crossover hypothesis. Alternative explanations will be explored in the next Part.

Appendix II reports results for several regressions run on the 1996 and 2001 Medical Malpractice dataset and the Combined (1992, 1996, and 2001) Medical Malpractice dataset, respectively.³⁴⁸ The 1996 and 2001 dataset contains severity-of-injury information, which is not available for the 1992 NCSC data (and thus is not included in the Combined Medical Malpractice dataset).

1. Significant Effects of Severity of Injury

As a preliminary matter, I highlight some of the descriptive data relating to compensatory damages awards by category of severity of injury. As Figure 2 below demonstrates, the level of compensatory damages rises with injury severity from Temporary to Permanent Significant to Permanent Grave.³⁴⁹ Death results in larger awards than Permanent Significant injuries, but smaller than Permanent Grave.³⁵⁰ The mean compensatory damages awards (in constant 2001 dollars) are as follows: \$132,975 (temporary injuries); \$1.14 million (permanent significant injuries); \$3.83 million (permanent grave injuries); and \$1.84 million (death). The same general pattern holds as well for median award amounts: \$53,400 (temporary); \$270,179 (permanent significant); \$1.45 million (permanent grave); and \$959,650 (death).

These results are consistent with numerous reported studies that demonstrate that compensatory awards increase with severity of injury, but that death results in lower awards than the most serious category of injuries.³⁵¹

³⁴⁷ The control variables include all of the independent variables described *supra* Part IV.A.3. See also *infra* Appendix III.B.

³⁴⁸ All reported standard errors have been corrected for heteroskedasticity.

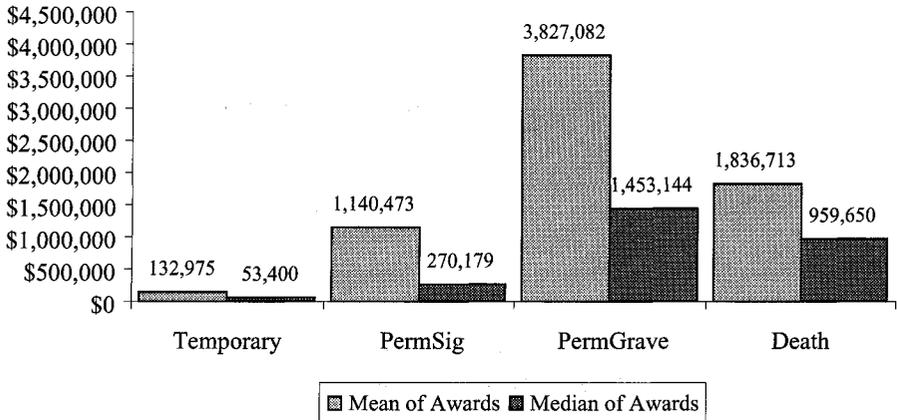
³⁴⁹ These injury categories are defined above. See *supra* Part IV.A.3.b.

³⁵⁰ Each of these differences is statistically significant at the five percent level in a two-tailed *t* test.

³⁵¹ See, e.g., Bovbjerg et al., *supra* note 31, at 921–23 (finding that size of jury awards was positively correlated with severity of injury, except that injuries resulting in death

FIGURE 2
COMPENSATORY DAMAGES VERDICTS BY SEVERITY OF INJURY
(1996 & 2001 Medical Malpractice Dataset)

Figures in 2001 dollars



What might explain lower death awards, relative to awards for permanent grave injuries? The answer may lie in the economic component of damages. As discussed above, typical elements of damages in wrongful-death cases include: loss of financial support, usually determined by calculating the decedent's projected earnings for the remainder of his or her working life, reduced by expenses and any amounts that would not have been spent on dependents; loss of inheritance; loss of services that would have been provided by the decedent; and loss of parental training and guidance to children.³⁵² Missing from this array are medical costs: "For patients who die, future medical care costs are zero, so the hospital's expected liability is lower in cases involving death than in cases involving permanent total disability."³⁵³ The disparity in calculation of economic damages,

resulted in awards significantly lower than severe permanent injuries, such as paralysis); Vidmar et al., *supra* note 272, at 296 (reporting, in study of medical malpractice verdicts in New York, Florida, and California, "a consistent relationship between the amount of verdicts awards and the seriousness of injury suffered by the plaintiff"); see also Sloan et al., *supra* note 96, at 678 (finding that "mean payment increased systematically with severity of injury"); Sloan & Hsieh, *supra* note 52, at 1019 ("In the Florida closed claims analysis, payments rise roughly monotonically with injury severity . . .").

³⁵² See *supra* notes 186–93 and accompanying text. Grief and mental anguish may or may not be specifically recoverable, although (as explored above) such noneconomic damages may be readily convertible into economic damages through courts' broad interpretations of "pecuniary losses."

³⁵³ Farber & White, *supra* note 260, at 205.

then, likely explains the gulf between compensatory awards in permanent-grave-injury cases and death cases.

Appendix II.A reports five different regressions using models that include the severity of injury variables: temporary injuries (the omitted category), permanent significant injuries (PermSig), permanent grave injuries (PermGrave), and death (Death). Each of the specifications includes all cases that have complete severity information. Regressions (1)–(3) use the logged compensatory jury verdict as the dependent variable; regressions (4)–(5) use the logged final (or reduced) compensatory judgment.³⁵⁴

The regression results confirm that severity of injury has an increasing, and statistically significant, effect on plaintiffs' recovery of compensatory damages. Regression (1) indicates that, as compared with temporary injuries, permanent significant injuries result roughly in a 1.46 level increase in the log of compensatory damages; death increases the logged award level by 2.64; and permanent grave injuries by 3.13. Converting these effects into approximate dollar amounts,³⁵⁵ the presence of permanent significant injuries increases awards on average by \$182,410 relative to temporary injuries. Death results in awards that are, on average, \$716,921 higher than temporary injuries; and permanent grave injuries increase average awards by \$1,207,563 relative to temporary injuries. Inclusion of these severity measures

³⁵⁴ In these models (Regressions (4)–(5)), one case is dropped because it is listed as having a final award of \$0 (and the log of 0 is indeterminate). While normally an adjustment is made in order to prevent the dropping of such observations, I dropped it here because the \$0 final award appeared to be a coding error (as I determined by reading the JVR report for the case, *see* *Bracewell v. Farmer Jack Pharmacies*, No. 94-411513-NH, 1996 WL 33104741 (Mich. Cir. Ct. May 2, 1996) (awarding \$25,000 verdict in wrongful-death malpractice case involving overdose)).

³⁵⁵ Log-linear coefficients may be used to give predictions about the non-log average amount of change in the dependent variable—here, compensatory damages. I have computed rough dollar equivalents for each of the regression coefficients by measuring its effect while holding each of the other independent variables at their respective means, and then taking the anti-log of the difference in log values (since the dependent variable is in logs). An example is provided here:

EXAMPLE OF DOLLAR ESTIMATION OF REGRESSION (1) COEFFICIENTS (EFFECT OF PERMANENT SIGNIFICANT INJURY COMPARED TO TEMPORARY INJURY)

	PermSig			Temporary			
PermSig	1.462	1	1.462	PermSig	1.462	0	0
PermGrave	3.133	0	0	PermGrave	3.133	0	0
Death	2.641	0	0	Death	2.641	0	0
Yr2	0.434	0.52	0.22568	Yr2	0.434	0.52	0.22568
Constant	10.69	1	10.69	Constant	10.69	1	10.69
		Σ	12.37768			Σ	10.91568
		Anti-log	\$237,442.32			Anti-log	\$55,032.54

$$\$237,422 - \$55,032 = \$182,410$$

alone explains roughly 31% of the variation in log compensatory damage verdict amounts (i.e., $R^2 = 0.31$).

Once again, these results are consistent with those of earlier reported studies.³⁵⁶ In sum, the regression results in Regression (1) confirm that “[t]he severity measure is a key determinant of the damage award if the defendant is found negligent at trial.”³⁵⁷

2. *Insignificant Effects of Noneconomic Damages Caps*

My regression results indicate that, controlling for severity of injury, as well as myriad litigant characteristics, state law, and county demographic variables,³⁵⁸ caps on noneconomic damages in medical malpractice cases have little to no effect on the size of overall compensatory damages verdicts or judgments. This finding is consistent with the crossover theory articulated above. It is equally possible, of course, that noneconomic damages caps are insignificant solely because they do not affect the majority of jury verdicts, which, in dollar terms, fall below the cap amounts.³⁵⁹ While it is impossible to rule out this alternative explanation, I did confirm my results in subsamples limited to the most severe injury categories (i.e., those most likely to result in award amounts large enough to be affected by caps).

a. Entire Sample of Cases

As Figure 3 demonstrates, when grouped according to cap status, a striking pattern seems to emerge: Lower mean (and median) reduced compensatory damages judgments are associated with states that cap noneconomic damages (CapN) and states that cap total compensatory damages (CapT). This would appear to support the conventional wisdom that the imposition of caps leads directly to a

³⁵⁶ See, e.g., Farber & White, *supra* note 260, at 205–06 (using similar four-category measure of severity, found that 40% of variance in log settlements in subset of settled cases was accounted for by four severity categories); Sloan & Hsieh, *supra* note 52, at 1025 (finding that, in analysis of closed claims in Florida, severity level alone likewise explained roughly 40% of variation in payments); see also Troyen A. Brennan et al., *Relation Between Negligent Adverse Events and the Outcomes of Medical-Malpractice Litigation*, 335 *NEW ENG. J. MED.* 1963, 1965 (1996) (“disability” measure—indicating temporary, permanent or no disability—was likewise only significant predictor of whether settlement would occur in detailed study of small sample of closed medical malpractice claims).

³⁵⁷ Farber & White, *supra* note 260, at 205.

³⁵⁸ The control variables are described above, see *supra* Part IV.A.3, and listed in Appendix II.A in the leftmost column of the table.

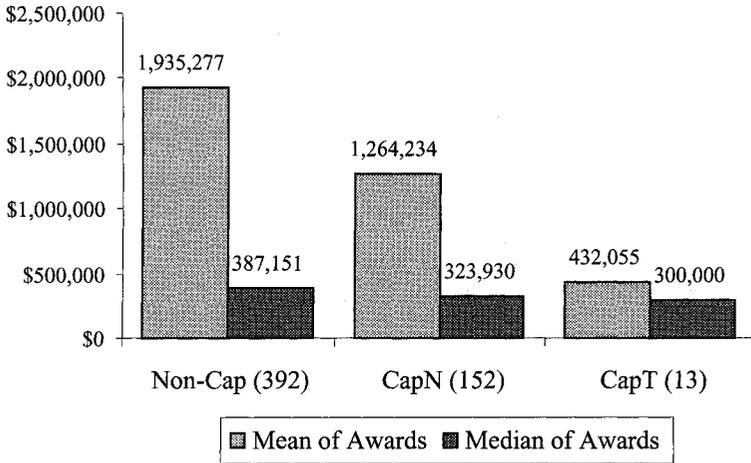
³⁵⁹ Patricia Danzon likewise appreciated the fact that this might be so, despite her findings that damages caps had a significant effect on plaintiffs’ recovery. See Danzon, *supra* note 119, at 76–77 (noting that although caps have reduced average severity by 23%, “[t]he majority of cases would be unaffected by most of the caps”).

reduction in plaintiffs' recovery of compensatory damages. But a more refined analysis of the data reveals something quite different.

FIGURE 3
REDUCED COMPENSATORY DAMAGES JUDGMENTS BY CAP STATUS

(Combined Medical Malpractice Dataset (1992, 1996 & 2001))

Figures in 2001 dollars; (n) case observations



The regression analysis tests these differences more precisely, controlling for severity of injury as well as a host of additional factors. Given the small number of CapT observations, I am not able to test the effect of a total compensatory damages cap.³⁶⁰ When the noneconomic damages cap variable (CapN) is added to Regression (2),³⁶¹ it has a negative impact on the log of compensatory damages verdicts (roughly equivalent to an average reduction of \$51,820 in compensatory damages), but the effect is not statistically significant.

When additional variables measuring differences in other state law reforms, partisan-elected judges, county characteristics, litigant characteristics, and year effects are added to the analysis (Regression (3)), the effect of noneconomic damages caps remains negative, but statistically insignificant: The cap is associated with an average decrease of \$31,335. This result, moreover, holds when the effect of noneconomic damages caps is measured on the reduced compensatory damages judgment as the dependent variables (Regression (4)): The existence of a noneconomic damages cap is associated with an average

³⁶⁰ There are too few CapT observations (n = 13) in the Combined Medical Malpractice dataset to be used in the models reported in the regressions; these cases were thus dropped from the regressions.

³⁶¹ See *infra* Appendix II.A.

decrease of \$30,231 in the trial court's compensatory damages judgment.³⁶²

The fuller model specifications, which include the full panoply of control variables (Regressions (3)–(4)), explain about 39% of the variation in log compensatory damages awards.³⁶³ Apart from the injury severity variables—whose coefficients remain consistently positive and statistically significant (as well as roughly constant in size)³⁶⁴ across each of the specifications of the model—the most significant variables are the existence of partisan-elected judges and medical-expert screening panels. As predicted, each had a positive impact upon the amount of compensatory damages. The existence of partisan-elected judges significantly increases the size of compensatory verdicts and judgments, raising the average awards by \$451,006 and \$309,533, respectively.³⁶⁵ The presence of medical-expert screening panels is associated with an average increase of \$229,618 in compensatory judgments.³⁶⁶ The only other variables that have a significant impact upon the level of compensatory damages are the number of plaintiffs³⁶⁷ and the 2001 year effect (i.e., dummy variable for 2001).³⁶⁸

As predicted, the existence of a hospital or corporation as a defendant had a positive impact upon the level of compensatory

³⁶² Again, however, the result is not statistically significant at the 5% (or even 10%) level.

³⁶³ An R^2 of 39% is certainly respectable for cross-sectional analysis. Moreover, it is consistent with other empirical studies using medical malpractice data. See, e.g., Gronfein & Kinney, *supra* note 166, at 456 (reporting adjusted R^2 of 0.26); Sloan & Hsieh, *supra* note 52, at 1023 tbl.4 (reporting adjusted R^2 statistics ranging from 0.22 to 0.47, using JVR data). As Sloan and Hsieh comment, such R^2 s are high for cross-sectional analysis. *Id.* at 1025–26.

³⁶⁴ The presence of permanent significant injuries increases the awards, on average, between \$107,004 and \$169,827, relative to temporary injuries. Death increases awards by between \$595,231 and \$886,977 relative to temporary injuries; and permanent grave injuries increase awards by between \$634,093 and \$1,008,999 relative to temporary injuries.

³⁶⁵ The partisan-elected-judge effect is similar in magnitude to that found by Helland and Tabarrok.

[M]oving an otherwise average case with an out-of-state defendant from a non-partisan to a partisan state raises the expected award by \$362,988. . . . It is worth emphasizing that the . . . partisan election effect exists after controlling for a wide variety of potential differences in cases across the states, including differences in injuries, income levels, and major laws.

Helland & Tabarrok, *Electoral Institutions*, *supra* note 310, at 359.

³⁶⁶ The average effect of medical screening panels on compensatory verdicts (an increase of \$229,618) is not statistically significant.

³⁶⁷ An additional plaintiff is associated with an average increase of \$132,327 in compensatory damages verdicts and an \$84,864 increase in compensatory judgments.

³⁶⁸ Compensatory jury verdicts in 2001 were, on average, \$193,478 higher than awards for 1996 (and compensatory judgments were, on average, \$115,899 higher). See *infra* notes 375, 386 and accompanying text.

awards,³⁶⁹ whereas, contrary to prediction, both the existence of a patient compensation fund and the existence of the common law collateral-source rule had negative impacts upon awards.³⁷⁰ However, none of these effects was statistically significant. Nor did any of the county demographic characteristics (median income, poverty, percentage of the population over sixty-five years, and percentages of the population that are physicians or lawyers) have any statistically significant impact.

Finally, in order to control for possible statewide variation, the model used in Regression (4) was run again using the clustering technique, grouping observations by state.³⁷¹ Regression (5) reports the results. The adjustment for clustering will not affect the coefficients, but it often lowers the significance level of coefficients. In this case, the significance levels of the variables were not diminished (in fact they increased).³⁷²

The results reported in Appendix II.B continue the investigation of the effect of caps on noneconomic damages on compensatory damages verdicts and reduced compensatory damages judgments. Recall that the regressions here are run on the Combined Medical Malpractice dataset (1992, 1996, and 2001 data), and they do not control for injury severity (which is not available for the 1992 NCSC data).

The first thing to note is that CapN remains statistically insignificant in each of Regressions (1)–(3); however, it has changed signs and

³⁶⁹ Compensatory verdicts against a hospital or business are, on average, \$88,435 higher (\$53,516 higher for judgments) relative to awards against individual defendants (e.g., physicians).

³⁷⁰ The presence of a patient compensation fund decreases verdicts, on average, by \$163,301 (and judgments by \$126,930). The existence of the common law collateral-source rule decreases jury verdicts and final compensatory judgments by an average of \$209,219 and \$131,980, respectively.

³⁷¹ A formidable challenge in empirical studies of tort reforms is to control for differences between states that have enacted reforms and those that have not. In my datasets, there are too few observations for each state to run a model using dummy variables for each state. Instead, the clustering technique adjusts the standard errors for the possibility that the error terms for observations within states are correlated with each other. In other words, the assumption here is that a law's impact applies equally across the state. This adjustment for within-state clustering assumes that the error terms for observations between states are independent. Thus, clustering ensures that observations are evaluated independently across groups (in this case, states).

For a lucid discussion of the clustering-by-state approach, see John R. Lott, Jr., *Right-to-Carry Laws and Violent Crime Revisited: Clustering, Measurement Error, and State-by-State Breakdowns 3–4* (Feb. 4, 2004) (unpublished manuscript, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=523002).

³⁷² The coefficients for medical-expert screening panels and 2001 year effects become highly statistically significant (at the 1% level). In addition, the log of median income emerges as significant. One standard deviation in log median income is associated with a decrease of \$10,291 in compensatory judgments.

is now positive. The presence of CapN is associated with a \$31,348 increase in jury compensatory verdicts and a \$13,249 increase in the reduced compensatory judgments. Recall that in the Appendix II.A regressions, CapN was associated with an approximate \$30,000 decrease in compensatory awards; this effect, however, was statistically insignificant. The explanatory power of the reported regressions has declined to 15%, which can be explained by the omission of the severity variables (which, as discussed above, on their own explained roughly 31% of the variation in log compensatory awards).³⁷³

Similar to the regressions reported in Appendix II.A, the variables for partisan-elected judges, number of plaintiffs, and 2001 year effect are significant. The presence of a partisan-elected judge is associated with an average increase in jury verdicts of \$191,892.³⁷⁴ In this model, the 2001 year effect is significant, whereas the 1996 year effect is not. In other words, awards in 2001 are significantly higher than those in 1992; 1996 awards are not.³⁷⁵

The effect of the medical-expert screening panel remains positive, but it is no longer significant.³⁷⁶ An additional variable emerges as significant: The existence of a hospital or corporate defendant (as opposed to an individual defendant) increases both compensatory damages verdicts and reduced compensatory judgments.³⁷⁷

Finally, as was the case for the Appendix II.A models, the models in Appendix II.B were run using the clustering technique. (Regression (3) reports the results of Regression (2) with clustering.) None of

³⁷³ See *supra* text accompanying note 355; see also *infra* Appendix II.A.

³⁷⁴ By comparison, the effect of PJudge in Appendix II.A Regression (3) is \$451,006 (as discussed above). With respect to compensatory judgments, the presence of a partisan-elected judge adds, on average, \$190,753, as compared to \$309,533 in Appendix II.A Regression (4). Each additional plaintiff increases awards, on average, by \$87,162 (compensatory verdicts) and \$82,596 (compensatory judgments), as compared with \$132,327 (verdicts) and \$84,864 (judgments) from the models in Appendix II.A Regressions (3)–(4).

³⁷⁵ Controlling for other variables, 2001 awards (Yr2 = 1) are, on average, \$289,356 (verdicts) and \$278,456 (judgments) higher, as compared with the previous \$193,478 (verdicts) and \$115,899 (judgments) impact in Appendix II.A Regressions (3)–(4).

³⁷⁶ The existence of the screening panel is associated with an average increase of \$51,131 (verdicts) and \$56,960 (judgments), as compared with the previous reported increases of \$282,663 (verdicts) and \$229,618 (judgments) in Appendix II.A Regressions (3)–(4).

³⁷⁷ For hospital/corporate defendants, there is an average increase of \$219,155 (verdicts) and \$210,874 (judgments). Recall that the (statistically insignificant) dollar effect in Appendix II.A Regressions (3)–(4) was an average increase of \$88,435 (verdicts) and \$53,516 (judgments). See *supra* note 369. Moreover, while the statistically significant result is consistent with conventional expectations, it also may be that some of the impact of severity (omitted variables) shows up in this variable.

the regression coefficients of variables of primary interest or their significance findings changed.³⁷⁸

b. Subsamples of Cases by Severity Categories

Given the somewhat surprising regression results—that the existence of a noneconomic damages cap (CapN) had no significant effect on the amount of compensatory damages verdicts or reduced compensatory damages judgments—I explored whether the same results would obtain in various subsamples of cases defined by severity-of-injury categories.³⁷⁹ Noneconomic damages caps are usually predicted to have the most effect upon the most serious injuries, which in my sample would be permanent-grave-injury and death cases.³⁸⁰ Figure 4 below shows the distribution of awards by categories of injuries in cap and non-cap states.

i. Permanent Grave Injuries As Figure 5 demonstrates, median and mean compensatory judgments are lower for permanent-grave-injury cases (which include permanent brain and spine injuries, and all forms of paralysis) in states with noneconomic damages caps.

After controlling for the full panoply of independent variables, however, Regression (1) in Appendix II.C reports that the effect of noneconomic damages caps on the reduced compensatory judgment in permanent-grave-injury cases is negligible. A noneconomic damages cap is associated with an approximate \$5954 decrease in reduced compensatory judgments in permanent-grave-injury cases—an effect, moreover, that is statistically insignificant.³⁸¹

ii. Death Cases The picture with respect to death cases looks slightly different. As Figure 6 shows, reduced compensatory judg-

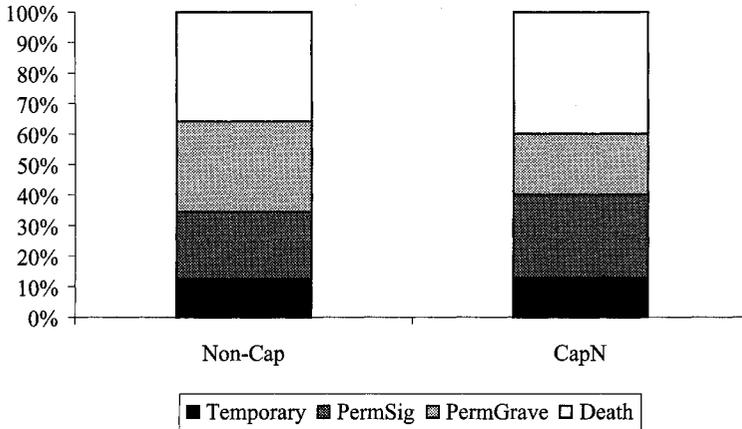
³⁷⁸ The coefficient on partisan-elected judges became highly statistically significant at the 1% level. In addition, the number of lawyers per 100,000 residents emerged as significant, but with a negligible coefficient (-0.000).

³⁷⁹ The regressions on the subcategories of injuries necessarily involve smaller sample sizes for permanent-grave-injury cases ($n = 73$), death cases ($n = 100$), and permanent-significant-injury cases ($n = 65$). The regression results are thus less reliable, but each of the new dependent variables is distributed normally. See *supra* note 331 (depicting normal distribution for original dependent variable).

³⁸⁰ Studdert et al. found strong evidence that the effect of California's MICRA cap on noneconomic damages was significantly stronger for cases with more severe injuries. See Studdert et al., *supra* note 139, at 63.

³⁸¹ Likewise, Figure B below would seem to indicate that compensatory damages in permanent-significant-injury cases might be affected by the existence of caps on noneconomic damages. Again, however, in the full regression analysis, which controls for a host of additional independent variables, the effect of the cap is statistically insignificant. See *infra* Appendix II.C Regression (3). (The rough dollar interpretation of the effect is a decrease of, on average, \$221,161 in final compensatory judgments.)

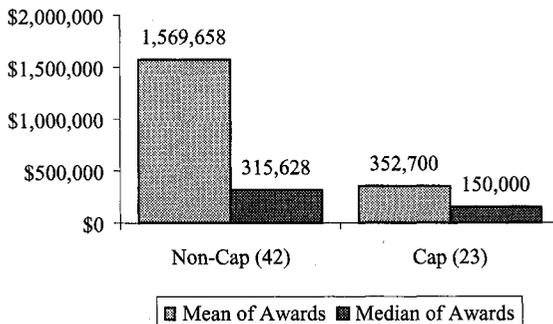
FIGURE 4
 DISTRIBUTION OF AWARDS BY INJURY SEVERITY AND CAP STATUS
 (1996 & 2001 Medical Malpractice Dataset)



ments are actually *higher* in cap states as compared with non-cap states.

Once again, however, after controlling for other variables, the effect of the cap on noneconomic damages on compensatory judgments is both negative and statistically insignificant.³⁸² The coefficient on CapN (-0.521) corresponds to an approximate decrease of \$369,244. Although still not significant, this effect is much larger than the roughly \$6000 decrease in permanent-grave-injury cases reported above. It makes sense that the potential for crossover in death cases

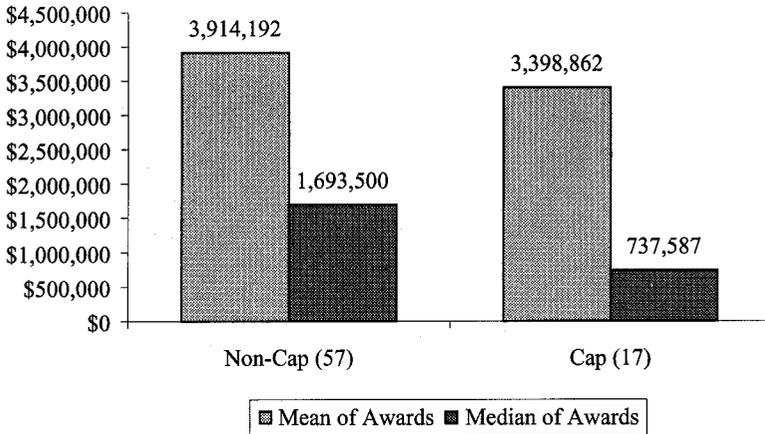
FIGURE B
 REDUCED COMPENSATORY DAMAGES JUDGMENTS
 IN PERMANENT-SIGNIFICANT-INJURY CASES BY CAP STATUS
 (1996 & 2001 Medical Malpractice Dataset)
 Figures in 2001 dollars; (n) case observations



³⁸² See *infra* Appendix II.C Regression (2).

FIGURE 5
REDUCED COMPENSATORY DAMAGES JUDGMENTS
IN PERMANENT-GRAVE-INJURY CASES BY CAP STATUS

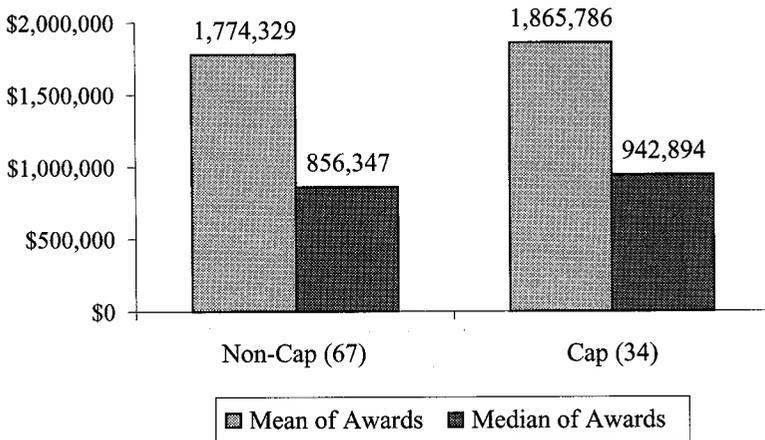
(1996 & 2001 Medical Malpractice Dataset)
Figures in 2001 dollars; (n) case observations



may be substantially less than for permanent-grave-injury cases. First, as discussed above, legislative reforms that liberalized the definition of economic losses under wrongful-death statutes may have accommo-

FIGURE 6
REDUCED COMPENSATORY DAMAGES JUDGMENTS
IN DEATH CASES BY CAP STATUS

(1996 & 2001 Medical Malpractice Dataset)
Figures in 2001 dollars; (n) case observations



dated the spillover damages, as well as mitigated the necessity for further expansion. Second, as we have also seen, wrongful-death damages are significantly lower than those for permanent grave injuries due to the absence of future medical care—one of the key areas subject to potential inflation via the crossover effect. For these reasons, we might expect noneconomic damages caps to have a larger impact upon death awards.

Finally, consistent with the results reported above (for the entire sample of cases), the existence of partisan-elected judges and medical-expert screening panels emerge as significant variables. The presence of partisan-elected judges is associated with a large, statistically significant effect upon compensatory judgments in death cases (roughly equivalent to an average \$1,210,001 increase).³⁸³ Medical-expert screening panels likewise have a large positive, significant effect upon compensatory judgments: an increase, on average, of \$1,967,846.³⁸⁴

D. Implications: Increasing Economic Damages

A recently documented trend of increasing economic (as opposed to noneconomic) damages in medical malpractice cases may provide some further validation of the crossover theory. For the reasons just explored, we would expect this effect to be more pronounced in permanent-grave-injury cases than in death cases.

Compensatory damages verdicts in medical malpractice cases have been on the rise in recent years. According to a U.S. Department of Justice report, “[a]fter remaining stable in 1992 and 1996, the median amount awarded in jury trials to plaintiff winners increased from \$287,000 in 1996 to \$431,000 in 2001.”³⁸⁵ This same trend is con-

³⁸³ The existence of partisan-elected judges is also associated with an approximate \$1,634,237 increase in compensatory judgments in permanent-grave-injury cases. This effect, however, is only weakly statistically significant (at the 10% level). See *infra* Appendix II.C Regression (1).

³⁸⁴ The medical-expert screening panel had a positive—although statistically insignificant—effect upon compensatory judgments in permanent-grave-injury cases. It is associated with, on average, an \$812,629 increase in award amounts. See *id.*

³⁸⁵ COHEN, *supra* note 103. Moreover, “[t]he percentage of plaintiff winners receiving awards of \$1 million or more also rose from an estimated 25% in 1992 and 1996 to 32% in 2001.” *Id.*

Mean and median jury awards, however, may be increasing for many reasons. In this Part, I explore the possibility that economic damages have been on the rise, at least in part due to the crossover effect. In the next Part, I will explore some alternative rationales, including increases in the severity of injury over time, as well as case-selection effects, whereby tort reforms make smaller cases unprofitable and thereby drive up median verdicts (while reducing overall payments to medical malpractice claimants), and/or make more big cases settle without trial. One would ideally like to study the mix of litigated and settled cases in order to determine whether in fact the economic damages component is increasing. See *infra* Part IV.E.2.

firmed in my Combined Medical Malpractice dataset as well.³⁸⁶ Several important features emerge from an attempt to disaggregate this trend in increased recoveries.³⁸⁷

While punitive damages and other noneconomic damages such as pain and suffering generally steal the show as newsworthy tort verdicts, in reality, when it comes to medical malpractice verdicts, “the economic component . . . generally dominates over the non-economic component.”³⁸⁸ Relying upon data from the Missouri Department of Insurance, one researcher reports that “[r]ising economic costs (future medical expenses, lost wages) appear to be rising slightly faster than overall indemnity payments (the sum of noneconomic and economic awards).”³⁸⁹ Kelso and Kelso also report that the mean economic damages award is greater than the mean noneconomic damages award.³⁹⁰ The median for noneconomic damages, however, was four times larger than the median for economic damages.³⁹¹ Thus, “non-economic damages are higher than economic damages in more cases, but the total amount awarded for economic damages exceeds the total amount awarded for non-economic damages.”³⁹²

Finally, Public Citizen analyzed data from the Texas Department of Insurance on closed claims from 1988 to 2000, reporting that economic damages have risen steadily over this period, while noneconomic damages have been more or less constant:

By separating malpractice payouts into their components—economic damages (for lost income and medical care), non-economic damages (for pain and suffering) and exemplary damages (punitive)—and charting the rise and fall of each, it is clear that the rising value of payouts has been caused by an increase in economic damages, not awards for pain and suffering.³⁹³

³⁸⁶ See *supra* Figure 1 (“Compensatory Damages Verdicts by Year”). As Figure 1 demonstrates, the median compensatory damages verdict in the Combined Medical Malpractice dataset increased from \$251,600 in 1992 to \$529,034 in 2001 (all figures in 2001 dollars). Moreover, as confirmed in the regression analyses reported above, the increase in awards in 2001 is statistically significant. See *supra* note 375.

³⁸⁷ Unfortunately, I cannot do so directly with the Combined Medical Malpractice dataset, given that the NCSC data do not disaggregate compensatory awards into economic and noneconomic components. See *supra* note 262 and accompanying text.

³⁸⁸ KELSO & KELSO, *supra* note 6, at 18.

³⁸⁹ Thorpe, *supra* note 57, at W4-23 (citing MO. DEP’T OF INS., MEDICAL MALPRACTICE INSURANCE IN MISSOURI (2003)).

³⁹⁰ KELSO & KELSO, *supra* note 6, at 18.

³⁹¹ *Id.* at 19 (stating that median figure for noneconomic damages is “prior to the MICRA cap reduction”).

³⁹² *Id.*

³⁹³ Press Release, Consumers Union, Capping Awards for Pain and Suffering Would Not Halt Increases in Malpractice Payouts, Study Shows (Mar. 17, 2003) (describing Public Citizen study), <http://www.consumersunion.org/health/malprac303-2.htm>.

According to Charles Silver, however, this story is contestable.³⁹⁴ Silver discovered that Public Citizen assigned the entire settlement payment to economic damages when insurers failed to provide breakdowns by category of damages, as they did a majority of the time.³⁹⁵ When Silver reanalyzed the data, eliminating the undifferentiated cases, noneconomic damages emerged as more significant than economic damages.³⁹⁶

But assuming that economic damages are in fact increasing, the crossover thesis posits that the rise might be driven by (or at least encouraged by) the introduction of medical malpractice caps.³⁹⁷ The empirical results from Part IV.C confirm that the existence of caps on noneconomic damages has no statistically significant impact upon plaintiffs' recovery of compensatory damages awards at trial. This may be due to the crossover effect, whereby amounts that would have previously been awarded as noneconomic damages are transformed into economic damages. At the same time, the fact that the empirical results are consistent with the crossover hypothesis in no way rules out alternative explanations.³⁹⁸

³⁹⁴ Silver, *supra* note 107.

³⁹⁵ *Id.*

³⁹⁶ *Id.* Even this reanalysis may be unreliable, however. The breakdowns by category of damages are self-reported, and there is no check on their accuracy. Examining similar closed-claims reports in Florida, Vidmar et al. concluded that the accuracy of the breakdowns was doubtful. Vidmar et al., *supra* note 263 (manuscript at 11).

³⁹⁷ The latest RAND study on the effects of MICRA in California acknowledges that "the presence of a large economic award helps to compensate, to some degree, for any MICRA-triggered decrease in the size of an award for non-economic damages." RAND MICRA STUDY, *supra* note 44, at 26. And, in a single sentence, it suggests the possibility that jurors "might seek to offset what they perceive to be inadequate compensation for the plaintiff by a commensurate increase in their award for economic damages." *Id.* at 67; see also Studdert et al., *supra* note 139, at 64 ("[J]ury members may learn about the cap . . . which may influence juries' valuations of damages. One potential behavioral response would be to inflate the economic component of the award as a way of offsetting the impending reduction in noneconomic damages under the cap.").

³⁹⁸ In more technical terms, the null hypothesis would be that the crossover effect does not exist. My empirical findings are not sufficient to disprove this null hypothesis. Thus, I have not established the crossover effect, even though my empirical findings are consistent with it.

One possible way to isolate the crossover effect would be to sample and systematically code the content of pleadings in cap states before and after caps were enacted, or else comparing cap and non-cap states. The crossover hypothesis would predict that cap states would have more specified causes of action for economic losses. Another possible research project would be to review the content of expert testimony, given that many verdict reporters describe who the experts are and even some of their specialties.

E. Alternative Explanations

In this Part, I explore two possible alternative explanations for rising economic damages in medical malpractice jury verdicts: (1) conventional explanations such as the rise in medical costs and increased life expectancies; and (2) a less commented-upon change in case mix, resulting from settlement effects and/or screening by plaintiffs' attorneys.

1. Conventional Explanations

Conventional explanations for the increasing trend in economic damages include increases in average life expectancy and working life expectancy, real wages, and medical costs.

Working life expectancy is shorter than average life expectancy, and is based upon historical data as well as the decedent's life expectancy at time of death. Increases in average life expectancy may thus affect the amount of claimed economic losses in wrongful-death cases. In 1970, average life expectancy at birth (for both males and females) was 70.8 years.³⁹⁹ This figure had increased to 73.7 by 1980, and to 75.4 by 1990.⁴⁰⁰ The preliminary figure for 2001 places average life expectancy at 77.2 years.⁴⁰¹ This increase of over six years could have an impact on economic damages awards.⁴⁰² Average retirement age for men, however, has dropped as average life expectancy has increased,⁴⁰³ and the former may thus offset the latter.

Moreover, in addition to working life expectancy, the decedent's earnings capacity (not simply actual earnings) is taken into account in calculating economic damages.⁴⁰⁴ As women have entered the workplace in larger numbers, and as many discriminatory barriers have been lifted in certain professions, it may be the case that earnings projections are more optimistic for a wider array of individuals of both genders, and diverse racial and socioeconomic backgrounds.⁴⁰⁵

³⁹⁹ See NAT'L CTR. FOR HEALTH STATISTICS, U.S. DEP'T OF HEALTH & HUMAN SERVS., HEALTH, UNITED STATES, 2004, at 143 tbl.27 (2004), available at <http://www.cdc.gov/nchs/data/hus/04trend.pdf>.

⁴⁰⁰ *Id.*

⁴⁰¹ *Id.*

⁴⁰² In determining the amount of support that the decedent would have provided to his or her survivors, the trier of fact is asked to consider (among other factors) the age, health, and life expectancy (or working life expectancy) of the decedent at the time of death. See *supra* note 187 and accompanying text.

⁴⁰³ See, e.g., Murray Gendell, *Retirement Age Declines Again in 1990s*, MONTHLY LAB. REV., Oct. 2001, at 12, 12.

⁴⁰⁴ Probable future earnings are hotly contested at trial, with economists often called upon as experts for both plaintiffs and defendants. See *supra* Part III.B.1.

⁴⁰⁵ See, e.g., Lawrence, *supra* note 192, at 43 ("[Did the expert economist] [s]tudy how the expert used average-wage rate tables; did the tables include a historical bias against

Increasing economic damages may instead be driven primarily by rising medical costs.⁴⁰⁶ Future medical expenses often are the predominant factor in the largest jury awards. A recent RAND study indicates that “[r]ising claimed medical costs appear to be one of the most important factors driving increases in jury verdicts.”⁴⁰⁷ More specifically, the empirical study of plaintiffs’ verdicts from 1960 to 1999 in San Francisco County, California and Cook County, Illinois reports that “claimed medical losses account for approximately 58 percent of the observed growth in tort awards from 1960–1999.”⁴⁰⁸ The study demonstrates that economic losses—both medical and non-medical—claimed by plaintiffs have increased over time, albeit not consistently. Of particular relevance here, “[a]verage medical losses stayed flat until the late 1980s and early 1990s, when they began to increase sharply.”⁴⁰⁹

women, which should not exist under current law?”). For example, the calculations for wrongful-death damages in the September 11th Victim Compensation Fund, administered by Special Master Kenneth Feinberg, *see generally* Press Release, United States Department of Justice, Closing Statement from the Special Master, Mr. Kenneth R. Feinberg, on the Shutdown of the September 11th Victim Compensation Fund, *available at* <http://www.usdoj.gov/victimcompensation/closingstatement.pdf>, utilized male data on working life expectancy for both men and women, *see* Martha Chamallas, *The September 11th Victim Compensation Fund: Rethinking the Damages Element in Injury Law*, 71 TENN. L. REV. 51, 71 (2003) (“Mr. Feinberg’s decision to use the male tables for both men and women eliminates any gender disparity in this portion of the award and means that women will not be disadvantaged because of past discriminatory patterns or practices.”).

Contrast this with a passage from a 1975 concurrence by Judge Henry Friendly on the Second Circuit. Judge Friendly challenged the “future earnings capacity” of a young professional woman who was killed in an airplane crash:

Apart from the danger of disabling illness, temporary or permanent, there would be many attractions to which the wife of a successful lawyer might yield: devoting herself to various types of community service, badly needed but unpaid, or to political activity; accompanying her husband on business trips—often these days to far-off foreign countries; making pleasure trips for periods and at times of the year inconsistent with the demands of her job; perhaps, as the years went on, simply taking time off for reflection and enjoyment. Granted that in an increasing number of professional households both spouses work full time until retirement age, in more they do not. Surely some discount can and should be applied to the recovery for these reasons.

Feldman v. Allegheny Airlines, Inc., 524 F.2d 384, 392–93 (2d. Cir. 1975) (Friendly, J., concurring).

⁴⁰⁶ *See* Heller, *supra* note 214 (“Tort law changes may be spreading, but they’re not reducing the biggest verdicts, which are driven by the cost of medical care.” (citing Texas plaintiffs’ counsel)).

⁴⁰⁷ Seth A. Seabury et al., *Forty Years of Civil Jury Verdicts*, 1 J. EMPIRICAL LEGAL STUD. 1, 3 (2004). This RAND study examines long-term trends in jury verdicts reached in trials using forty years of data from San Francisco County, California and Cook County, Illinois. *Id.* at 1. It reports that average and median jury awards in tort cases have increased significantly in real terms from 1960 to 1999. *Id.* at 22.

⁴⁰⁸ *Id.* at 20.

⁴⁰⁹ *Id.* at 14.

Rising medical costs may be due to advances in medical technology. These advances enable us to save malpractice victims who previously would have died, moving them from the relatively less expensive death category to the relatively more expensive permanent or grave injury categories. Medical advances have also enabled us to do more for (and thus spend more on) all persons in the permanent or grave injury categories.⁴¹⁰ Breaking down awards by categories, Kelso and Kelso discovered that “[i]njuries to children at or near birth produce the largest damages judgments”; in these cases in particular, “economic damages are, on average, substantially larger than non-economic damages.”⁴¹¹ William Sage makes a similar point, namely, that in these types of cases, economic damages remain high: “[L]ife-care plans’ for children with cerebral palsy or other serious neonatal injuries cost millions or tens of millions of dollars”⁴¹²

The RAND authors explain, however, that increased medical costs cannot, by themselves, account for the growth in medical expense awards.⁴¹³ They offer several possible explanations for why both claimed medical expense losses and non-medical economic losses grew in real terms: increase in real wages over the time period, the greater likelihood for plaintiffs with severe injuries to file suit and go to trial, and a change in the composition of the types of losses claimed by plaintiffs.⁴¹⁴

Rising medical costs and greater clinical capabilities, which increase survival rates and improve quality of life, will not only increase economic damages in fact but also create a bigger space

⁴¹⁰ See generally Mark F. Grady, *Why Are People Negligent? Technology, Nondurable Precautions, and the Medical Malpractice Explosion*, 82 Nw. U. L. REV. 293, 294 (1988) (“The very effectiveness of new medical technology increases potential liability, because it creates the possibility that someone will negligently deprive the patient of what is now a substantial benefit.”).

⁴¹¹ KELSO & KELSO, *supra* note 6, at 22. The recent San Francisco jury award, with which the Article begins, fits this pattern. See *supra* note 1 and accompanying text.

⁴¹² Sage, *supra* note 67, at 11. In fact, in such cases, where the potential economic damages are so high that by themselves they already exceed the insurance policies’ limits, lawyers may not even ask for pain-and-suffering damages. Moreover, a large number of such cases may settle. See *infra* Part IV.E.2.a.

⁴¹³ As the authors remark:

It is not surprising that claimed medical losses grew in real terms, especially in the last 15 years. From 1960 to 1999, the total Consumer Price Index (CPI) grew at an average rate of approximately 4.6 percent, while the component of the CPI dedicated to medical care grew at an average rate of approximately 6.4 percent, a difference of just under 2 percent per year. The difference in growth rates has increased over time as well, with the annual growth rate in the medical component being 2.5 percentage points higher on average than the total CPI since 1980.

Seabury et al., *supra* note 407, at 15–16 (footnote omitted).

⁴¹⁴ *Id.* at 16.

within which noneconomic damages can hide. But of course, rising medical costs alone (absent any crossover) might account for the insignificant impact of noneconomic damages caps on plaintiffs' compensatory recovery.⁴¹⁵ At the same time, in light of the fact that compensatory damages are increasing (as opposed to remaining constant), something more than simple crossover may be at work.⁴¹⁶

2. *Changing Case Mix*

An empirical analysis that focuses solely on trial verdicts may be capturing either a shift in the overall mix of cases or else a shift in average award amounts. The alteration of the composition of cases going to trial in states with caps is too fundamental to ignore. The standard economic model of litigation assumes that litigation decisions are made on the basis of a cost-benefit calculus. The model posits that a plaintiff will make a claim if the costs (attorneys' fees) are less than the benefits (the probability of winning multiplied by expected recovery). Expected damages in medical malpractice cases include both economic and noneconomic losses (and, in rare instances, punitive damages). The standard model shows that a cap on noneconomic damages will affect the mix of cases going to trial.⁴¹⁷ For several reasons, we would expect the average award for economic damages to increase.

First, cases that go to trial and cases that settle may look very different; in other words, each may be a biased sample of the entire

⁴¹⁵ *But see supra* note 413 and accompanying text.

⁴¹⁶ The rise in compensatory damages might be due to the fact that various legal screens are working more effectively. Fewer issues reach the jury due to settlement, *Daubert*, and the prevalence of summary judgment. As a result, there should be a bias toward clearer and more serious liability issues being selected out for survival to trial. Damages should therefore increase.

An illustrative example is provided by an experiment with "loser pays attorneys' fees" in medical malpractice cases in Florida from 1980 until 1985. The effect was to drive down the number of claims, and to raise significantly the value of judgments that were being realized (together with costs of litigation). Finally, the doctors lobbied for the elimination of "loser pays." The "loser pays" provision seemed to encourage litigation, *see Philip Shuchman, It Isn't That the Tort Lawyers Are So Right, It's Just That the Tort Reformers Are So Wrong*, 49 RUTGERS L. REV. 485 (1997) (citing Edward A. Snyder & James W. Hughes, *The English Rule for Allocating Legal Costs: Evidence Confronts Theory*, 6 J. LAW ECON. & ORG. 345, 377 (1990)), and jury verdicts were much larger in English Rule cases (mean of \$69,390) than in American Rule cases (mean of \$25,500), *id.* at 537 & n.278.

⁴¹⁷ At the same time, the standard economic model also predicts that the crossover effect is likely to exist. The model assumes that litigation decisions are made on the basis of a cost-benefit calculus. As a matter of the plaintiffs' attorneys' cost-benefit calculus, the cap decreases the marginal value of noneconomic damages and therefore diverts litigation resources to the establishment of economic compensatory damages. All else being equal, this diversion of resources should increase the amount of economic damages received by the plaintiff. *See supra* notes 178-79 and accompanying text.

population of cases.⁴¹⁸ So, for example, if caps were to reduce uncertainty for the most severe permanent grave injuries, one might see a fall in the average trial verdicts simply because more big cases would settle without trial.⁴¹⁹

Second, the existence of caps may play a significant role in plaintiffs' attorneys' screening of cases. Attorneys who practice in jurisdictions where noneconomic caps exist might take on only those cases with potentially large economic awards; again, this would lead both to increasing economic damages at trial, as well as an insignificant effect of caps.⁴²⁰ In effect, the cap knocks out a class of cases that otherwise would have been economically feasible for an attorney to bring.⁴²¹

a. Settlement Effects

As mentioned previously, though trials may be "the most visible and important output of the civil justice system," most cases settle.⁴²² Two recent studies by Neil Vidmar and Charles Silver, respectively, shed some light on how changes in patterns of settlements (data missing from the Combined Medical Malpractice dataset) affect the selection of cases for trial, and thus overall compensatory award amounts. Neil Vidmar and collaborators presented a study of Florida medical malpractice cases, using insurance data. They reported that payments on malpractice claims rose from 1990 to 2003 and that there was a significant change in the mix of cases over that same period. Specifically, they found that 93% of claims with million-dollar payments (or more) were settled without a jury, and that, in recent years, there has been an increase in the frequency of settled claims involving

⁴¹⁸ See Viscusi & Born, *supra* note 38, at 31 ("Tort reforms potentially will affect court awards and will consequently exert a backward influence on out-of-court settlements of cases as well as payments involving claims that are not litigated."); see also *supra* note 241 and accompanying text.

⁴¹⁹ The effect could be in the opposite direction: In other words, in the face of caps on damages, defendants might be more likely to risk trial. See *supra* note 256 (describing Eisenberg's test of settlement effects in light of caps on punitive damages).

⁴²⁰ See *infra* Part IV.E.2.b.

⁴²¹ See, e.g., Mark J. Browne & Robert Puelz, *The Effect of Legal Rules on the Value of Economic and Non-Economic Damages and the Decision to File*, 18 J. RISK & UNCERTAINTY 189, 208 (1999) (finding that caps on noneconomic damages have greatest deterrent effect on decision to file of all tort reforms studied); Joan T. Schmidt et al., *The Effect of State Tort Reforms on Claim Filings*, RISK MGMT. & INS. REV., Summer 1997, at 1, 13 (suggesting that limits on noneconomic damages reduce rate of tort filings). This is yet another reason for thinking that the correlation between jury verdicts and total malpractice costs may be attenuated. A more probative study of the impact of caps would focus on total payments on malpractice claims.

⁴²² Helland & Tabarrok, *supra* note 321, at 49–50; see also *supra* note 260 and accompanying text.

serious injury and death.⁴²³ For example, death cases in Florida constitute a higher percentage of paid insurance claims in 2000–03 (roughly 28%) than in 1990–93 (roughly 23%).⁴²⁴ Vidmar et al. suggest that “[c]hanges in case selection could result in an increase in mean overall payments.”⁴²⁵

Silver analyzed insurance closed-claims data from the Texas Department of Insurance from 1988 to 2000. Insurers were required (even in settled cases) to report damages broken down by categories: economic, noneconomic, and punitive damages.⁴²⁶ Looking solely at malpractice cases in which breakdowns were reported, Silver found that punitive damages accounted for roughly 7% of all payments and almost 19% of payments in cases where the insured contributed personal assets above the policy limits.⁴²⁷ These percentages are far higher than those juries typically award in cases that go to trial.⁴²⁸ According to Silver, a plausible (but unproven) hypothesis is that punitive damages figure more importantly in settled cases because the worst cases (involving recklessness or other egregious behavior) settle.⁴²⁹

In addition to settlement trends over time, the introduction of caps on damages might have an even more pronounced effect on settlements, thus affecting the mix of litigated cases even more fundamentally.

b. Screening by Plaintiffs’ Attorneys

Until now, I have assumed that plaintiffs’ attorneys act strategically to manipulate trial awards in medical malpractice cases, through use of a combination of expert testimony and new theories of economic loss.⁴³⁰ What I have not yet addressed, however, is the same attorneys’ strategic behavior in terms of screening cases given the

⁴²³ See Vidmar et al., *supra* note 263 (manuscript at 35, 40) (reporting that, of 801 medical malpractice claims greater than or equal to \$1 million, closed between 1990 and 2003, only 7.5% were result of jury trial).

⁴²⁴ See *id.* (manuscript at 26 tbl.8); *id.* (manuscript at 25) (“Whereas injuries resulting in death over the entire fourteen-year period constituted 26.1% of paid claims, that figure jumped to 30.1% in 2002 and to 31.4% in 2003.”).

⁴²⁵ *Id.* (manuscript at 40).

⁴²⁶ As Silver points out, this assumes that carriers are accurately reporting breakdowns across the damages categories—and there is good reason to be skeptical on this score. See Silver, *supra* note 107; see also *supra* note 396.

⁴²⁷ See Silver, *supra* note 107.

⁴²⁸ See *supra* note 103 and accompanying text (reporting estimates from 1% to 4%).

⁴²⁹ See Silver, *supra* note 107 (describing “lightning strike” theory).

⁴³⁰ See *supra* Part III.B.

background legal rules.⁴³¹ A plaintiffs' attorney plays a critical role as a filter, determining, by which cases he chooses to take, who can gain entry into the world of claims resolution by trial.

Here, I explore the possibility that the mix of cases being brought might be altered by the existence of noneconomic damages caps. The empirical results of my study may be driven by the distribution of cases that come into the system in light of different background rules. Imagine, for example, two potential malpractice clients approaching a plaintiffs' attorney who handles such cases on a contingency basis.⁴³² One client is a young lawyer disabled by medical malpractice who has the potential for large foregone future earnings. The other is a housewife who suffered horribly as a result of malpractice, but has no lost market earnings. In the non-cap state, both cases are brought and the jury on average gives high judgments, but relatively high noneconomic loss to both and economic loss only to the lawyer. This would show up in the data as high noneconomic and moderate economic damages in the aggregate. Now imagine the same scenario in a cap state. One possibility is that the plaintiffs' attorney takes the housewife's case and attempts, through the crossover mechanisms discussed above, to transform noneconomic damages into economic damages—for example, by retaining an expert to testify as to the market value of the services that she provides. What happens, however, if the attorney decides not to take the housewife's case because of the difficulty of classifying her losses as economic? In that situation any collection of data, on aggregate, would show that noneconomic damages have fallen because of the cap but that the economic damages have risen dramatically.⁴³³ But this would be driven in large part by the distribution of cases that come into the system in light of the different background rules.

Moreover, such a result would substantiate the alternative unacknowledged (and presumably unintended) consequence of noneconomic caps: that women (and others whose value is not high in

⁴³¹ I did, however, mention this as a potential form of selection bias when I discussed the methodological limitations of my empirical study. See *supra* text accompanying note 244.

⁴³² See Herbert M. Kritzer, *The Wages of Risk: The Returns of Contingency Fee Legal Practice*, 47 DEPAUL L. REV. 267, 285–86 (1998) (noting that contingency percentages vary between 20% and 50%, with most common being 33%).

⁴³³ Average jury awards may increase given that cases with higher variance and cases that have low economic damages fall out of the system. But it may well be that total expected liability across all patients decreases because fewer injured patients sue. This points out (once again) that the link between jury verdicts and total liability faced by health professionals and their insurers may be attenuated. See *supra* Part I.A.2.a.

the labor market) drop out as medical malpractice plaintiffs.⁴³⁴ Such an effect would exacerbate an existing criticism of noneconomic damages caps—that they disproportionately affect certain disadvantaged groups, including minorities, women, and the young, who are more likely to have lower economic damages.⁴³⁵

c. Assessing Potential Selection Bias

Given the limitations of the data in my empirical analyses (namely, data that do not include settlements), it is difficult to get traction on the possible bias induced by focusing solely on jury verdicts. Here, I investigate further the possibility that a change in the case mix is driving my empirical results.

Ideally, one would look at data in a state before and after the imposition of cap legislation to see whether the total number of lawsuits falls (and compare this to comparable states that have not enacted caps). A decrease in the total number of lawsuits after imposition of the cap would suggest that selection bias (due either to settlement effects or else to plaintiffs' attorneys' screening of cases) might be driving the empirical results.⁴³⁶ While I am not able to investigate this precisely using my dataset, overall trends reported by the U.S.

⁴³⁴ See, e.g., Rachel Zimmerman & Joseph T. Hallinan, *As Malpractice Caps Spread, Lawyers Turn Away Some Cases*, WALL ST. J., Oct. 8, 2004, at A1 (“[C]aps on damages for pain and suffering . . . [are] turning out to have the unpublicized effect of creating two tiers of malpractice victims. . . . [L]awyers are turning away cases involving victims that don’t represent big economic losses—most notably retired people, children and housewives . . .”). The article provides several compelling vignettes, and includes an interview with a prominent plaintiffs’ attorney:

Paula Sweeney, a Dallas trial lawyer who has been handling medical-malpractice cases for 23 years, says the caps have already slashed her business. . . . “The economic feasibility has changed,” she says. She says she believes the new restrictions will eliminate about 85% of medical-malpractice cases in the state.

Id.

⁴³⁵ It has been argued that the elderly, children, and minorities generally suffer lesser direct economic losses because they either do not work or else receive lower wages. For this reason, pain-and-suffering (or noneconomic) damages are considered to be of paramount importance. See, e.g., Lucinda M. Finley, *The Hidden Victims of Tort Reform: Women, Children, and the Elderly*, 53 EMORY L.J. 1263, 1265 (2005) (“The caps on non-economic loss damages that are the favorite of tort reformers have a significant adverse impact on women, and the elderly.”). See generally Michael L. Rustad, *Nationalizing Tort Law: The Republican Attack on Women, Blue Collar Workers and Consumers*, 48 RUTGERS L. REV. 673 (1996); Michael L. Rustad & Thomas H. Koenig, *Taming the Tort Monster: The American Civil Justice System as a Battleground of Social Theory*, 68 BROOK. L. REV. 1 (2002).

⁴³⁶ One might test further to see whether the proportion of female plaintiffs changes. As described above, in a world of damages caps, plaintiffs’ attorneys might disproportionately screen out claims by women (who fare less well in the labor market). Unfortunately, the NCSC data do not include a variable for the gender (or race or age) of the plaintiff(s).

Department of Justice (based on the NCSC data) indicate that “[t]he number of medical malpractice jury trials [between 1992 and 2001] has remained stable as the reported differences were not statistically significant.”⁴³⁷ In other words, at least in the aggregate, there does not appear to have been a substantial decrease in medical malpractice trials over the relevant time period.

It may well be that the crossover effect is more prevalent in certain kinds of cases and less likely in others. An elderly victim of medical malpractice does not have promising damages prospects, whereas potential crossover in a case involving a birth-related injury may be significant.⁴³⁸ My empirical analysis did not uncover any significant interaction between the existence of noneconomic damages caps and the injury severity categories.⁴³⁹ However, this is certainly worthy of further future investigation.

It is also worth considering whether, within each category of injury, the mean level of severity is rising over time. This might be so if one believed that quality of care is changing over time; for example, as physicians are under more time pressure, level of care might suffer. If that were so, we might expect that the average permanent-grave injury is more severe today, than say a decade ago. The effect of increasing severity over time would manifest itself as a secular trend of increasing recoveries over time. However, as Figure 7 demonstrates, with the exception of the category of death, where mean compensatory damages awards have increased significantly over time, there does not appear to be any secular trend upwards in my data in award amounts by severity of injury category.⁴⁴⁰

⁴³⁷ COHEN, *supra* note 103.

⁴³⁸ See Studdert et al., *supra* note 139, at 63 (suggesting that noneconomic damages caps disproportionately burden “injuries that cause chronic pain and disfigurement but do not lead to declines in physical functioning that would generate lost work time or high health care costs”).

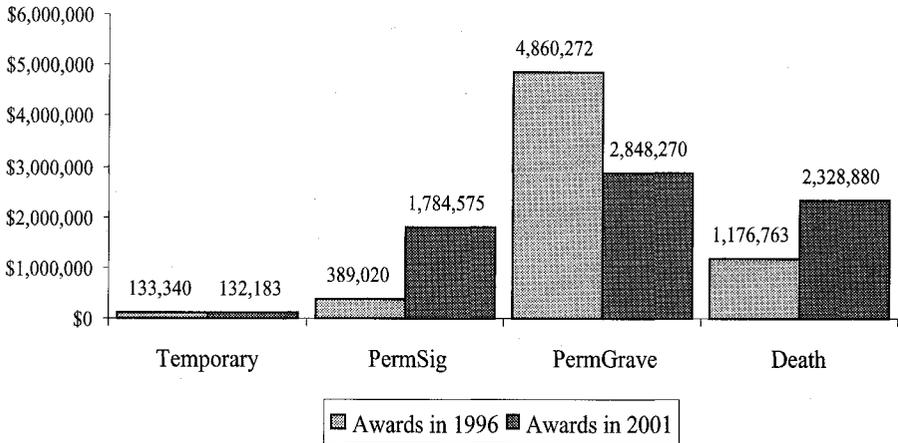
⁴³⁹ The coefficients on the interaction variables (between CapN and the various severity measure variables) were statistically insignificant and therefore not included in the reported regressions. Nor did I find any significant effect of CapN in the regressions run on the subsamples of permanent-grave-injury cases or death cases. Cf. *supra* notes 142–48 and accompanying text (discussing results of experimental study finding that effects of disclosure of caps to jurors varied across different injury-severity groups).

⁴⁴⁰ Here, I consider the patterns for the data, disaggregated by year. As compared with awards by category in 1996, the mean compensatory damages awards in 2001 for temporary injuries are roughly equal; awards for permanent-grave injuries are lower, whereas those for permanent-significant injuries and injuries resulting in death are higher. The only statistically significant difference (at the 5% level) in mean awards is in death cases. Thus, even though in 2001 death awards remain lower than for permanent-grave injuries, there is a rising trend upwards in death awards (as compared with awards in 1996). There is a similar pattern exhibited by the median awards by severity category; however, none of the differences in medians over time is statistically significant.

FIGURE 7
MEAN COMPENSATORY DAMAGES VERDICTS
BY SEVERITY OF INJURY AND YEAR

(1996 & 2001 Medical Malpractice Dataset)

Figures in 2001 dollars



In the final analysis, while various alternative hypotheses for rising economic damages and changing case mix—whether due to settlement effects and/or screening by plaintiffs’ attorneys—may undercut the crossover effect, they share in common the feature that they are, for the most part, unintended effects of noneconomic damages caps. Put differently, caps on noneconomic damages are either having the unintended effect of increasing economic damages, or else the unacknowledged (and presumably unintended) effect of knocking out cases of people with potentially serious injuries who do not fare well in the labor market. Moreover, these unintended consequences that arise from the selectivity of caps (i.e., caps on noneconomic damages only) have important policy implications.

CONCLUSION
RESEARCH AND POLICY IMPLICATIONS

Caps on damages have been designated the “most important and controversial” of all tort reform measures.⁴⁴¹ Politics cannot be overstated here. Medical malpractice reform loomed large in the 2004 presidential election.⁴⁴² Indeed, “‘Are you for malpractice caps?’

⁴⁴¹ PAUL C. WEILER, *MEDICAL MALPRACTICE ON TRIAL* 32 (1991).

⁴⁴² In a July 19, 2004, speech, Vice President Dick Cheney summed up the divide as follows: “When it comes to the legal crisis in American health care, the Kerry-Edwards

[was] a litmus test of loyalty for partisans on both sides.”⁴⁴³ After winning the election, President Bush immediately identified malpractice-liability reform as a leading priority of his second term.⁴⁴⁴

But viewed in closer detail, as I have done in this Article, caps are far more complex, and vary more widely in their efficacy, than has been traditionally thought. As attorneys, jurors, and courts accumulate experience with caps—some of which have been in place for decades, others of which are brand new—they may adapt new strategies for establishing damages. The crossover effect represents one such adaptive measure, whereby restricted noneconomic damages may spill over into the unrestricted economic damages category (albeit at some additional expense in terms of costs of experts, etc.). And the recent rising trend in economic damages in medical malpractice cases may signal, at least in part, the fruits of effective crossover strategies.

With regard to future research in this area, there is an important take-home point. To date, scholars’ empirical studies that investigate the effect of the imposition of damages caps fail to recognize sufficiently that their results may very well depend upon the particular type of damages cap, specifically whether the cap is on noneconomic damages or on total compensatory damages. This is not surprising, because no study before this one has highlighted the crossover effect that I have described. My research and empirical findings suggest that this may be a significant hole in the existing literature. Researchers would do well to consider the possibility of such a crossover effect in their future analyses.

Unveiling the crossover effect raises larger policy questions. How does it affect one’s assessment of caps more generally as measures of tort reform?⁴⁴⁵ Two opposite routes present themselves. Heading in

ticket is on the side of personal-injury trial lawyers, and the Bush-Cheney ticket is on the side of doctors and patients” Connolly, *supra* note 10.

⁴⁴³ Sage, *supra* note 67, at 27–28.

⁴⁴⁴ See *supra* note 10 and accompanying text.

⁴⁴⁵ A full policy analysis would gauge the extent to which caps, along with their intended and unintended effects, enable us to achieve the many, and often conflicting, health care policy goals. These goals include the institution of financial incentives to deter standard medical care, compensation for those injured by negligent medical care, and the maintenance of an optimal supply of health care providers who will not be saddled with crippling insurance costs. Such a policy analysis requires more information than is available at present. Critically, we know very little about the relationship, if any, between caps and incidence of malpractice. Cf. Antonio E. Bernardo et al., *A Theory of Legal Presumptions*, 16 J.L. ECON. & ORG. 1, 3–4 (2000) (arguing that, over time, pro-defendant law may increase lawsuits because defendants protected by such law will take less care, plaintiffs will be more likely to get hurt and, if hurt, will be potentially more likely to sue because, even though it may be more difficult to prevail, plaintiffs may believe that defendant actually was negligent).

one (more conservative) direction, the crossover phenomenon might suggest that total compensatory damages caps, to thwart any crossover potential between subcategories of damages, are a more effective route to pursue.⁴⁴⁶ If legislatures are persuaded that *both* economic and noneconomic damages threaten stability and predictability in the medical malpractice realm, they may try to enact total caps (and, if history is any lesson, face vigorous constitutional challenges in doing so).⁴⁴⁷ Following instead the opposite (more liberal) path, recognition of the crossover phenomenon might instead buttress arguments regarding the futility and unfairness of caps and lead to their eradication altogether.⁴⁴⁸ Alternatively (and perhaps more realistically),

⁴⁴⁶ While total caps might stymie the unintended crossover effect, this is not to say that they would be immune from other possible unintended consequences. In particular, they would still be subject to the anchoring effects discussed above. See *supra* Part II.B.

⁴⁴⁷ Total caps, while satisfying the goal of effectively limiting plaintiffs' recoveries, may not make sense from an insurance perspective. Indeed, Kip Viscusi exhorts insurers to end the fixation with specific numerical caps on particular components of damages. Viscusi, *Tort Reform*, *supra* note 32, at 10 ("[T]he character of the reforms that have been proposed to date often are not ideal. Past proposals have been designed strictly with respect to the narrow objective of reducing insurance costs, which is not necessarily equivalent to fostering sound insurance market performance."); *id.* at 17 ("[W]hat if such [liability reform] policies were taken to the extreme by abolishing tort liability altogether? Losses would be reduced, but there would be no market for insurance.").

I have also put to one side potential constitutional objections. Total compensatory damages caps have withstood constitutional challenges in several states, based, *inter alia*, upon infringement upon the right to jury trial. See, e.g., *Garhart v. Columbia/Healthone, L.L.C.*, 95 P.3d 571, 580–81 (Colo. 2004); *Etheridge v. Med. Ctr. Hosps.*, 376 S.E.2d 525, 529–34 (Va. 1989). In stark contrast, other courts have determined that limiting any category of damages unconstitutionally restricts access to the courts for redress of injuries. See, e.g., *Smith v. Dep't of Ins.*, 507 So. 2d 1080, 1087–89 (Fla. 1987) (holding that noneconomic damages cap violates Florida Constitution's access-to-courts provision, on ground that "[t]he right to redress of any injury does not draw any distinction between economic and noneconomic damages"). Finally, several courts have upheld the constitutionality of caps on noneconomic damages while emphasizing the differences between noneconomic and economic damages. See, e.g., *Fein v. Permanente Med. Group*, 695 P.2d 665, 680 (Cal. 1985) (emphasizing, in upholding MICRA noneconomic damages cap, that "the Legislature placed no limits whatsoever on a plaintiff's right to recover for all of the economic, pecuniary damages—such as medical expenses or lost earnings—resulting from the injury").

⁴⁴⁸ Much attention has been focused on the perceived unfairness of noneconomic damages caps. Many oppose caps on the ground that "comprehensive damage caps seem intuitively unfair to plaintiffs with large claims; they impose a limit on compensation which bears no relation to the damages the plaintiff actually sustained." Gronfein & Kinney, *supra* note 166, at 442; see also *supra* note 435 and accompanying text. Total caps would, of course, compound these unfairness concerns.

Charles Silver has argued that caps go after exactly the wrong people—those with large losses who, even in the absence of caps, typically recover only a fraction of their economic losses, as substantiated by numerous empirical studies. See *Hearing on H.B. 4 Before the Senate Comm. on State Affairs*, 2003 Leg., 78th Reg. Sess. (Tex. 2003) (statement of Charles Silver, Professor, Univ. of Tex. Sch. of Law) (on file with the *New York University Law Review*); see also MEHLMAN, *supra* note 23, at 69–70 ("In short, caps are

identification of a crossover effect may provide guidance, so to speak, to plaintiffs' attorneys, jurors, and courts interested in preserving plaintiffs' recovery in the face of legislatively enacted caps.

What this Article makes clear is that the crossover effect is one that researchers and legislators can no longer afford to ignore. Moreover, any response to crossover between noneconomic and economic damages in medical malpractice should consider treating these damages categories more holistically.

regressive and disproportional, transferring wealth from seriously injured malpractice victims to all patients. Unfairness flags go up. Caps violate the cardinal principle of distributive justice.”). A better approach, then, might be a deductible-like approach that takes compensation from the first dollars recovered rather than the last. This would go after persons with small claims who tend to be overcompensated.

APPENDIX I

MEDICAL MALPRACTICE DAMAGES CAPS, FIFTY-STATE SURVEY
 Shaded entries are for states included in the Combined Medical Malpractice dataset.

State	Effective Date ⁱⁱ	Caps ⁱ		Authority ⁱⁱⁱ
		Medical Malpractice	General Civil	
AK	1986		\$400K	ALASKA STAT. § 09.17.010 (Michie 2004)
CA	1975	\$250K		CAL. CIV. CODE § 3333.2 (West 1997)
CO	1988	\$300K/\$1M (total)		COLO. REV. STAT. § 13-64-302 (2004)
FL	2003 (1987)	\$500K		FLA. STAT. ANN. § 766.118 (West Supp. 2005)
GA	2003	\$350K		Act of Feb. 21, 2005, No. SB-3, § 13 (to be codified at GA. CODE ANN. § 51-13-1)
HI	1986		\$375K	HAW. REV. STAT. § 663-8.7 (1995)
ID	1987		\$250K	IDAHO CODE § 6-1603 (Michie 2004)
IN	1975	\$1.25M (total)		IND. CODE § 34-18-14-3 (2003)
KS	1987 (1988 medical malpractice only)		\$250K	KAN. STAT. ANN. §§ 60-1902, 60-1903 (1994 & Supp. 2003)
LA	1975	\$500K (total)		LA. REV. STAT. ANN. § 40:1299.42 (West 2001)
ME	1999	\$400K		ME. REV. STAT. ANN. tit. 24-A, § 4313 (West Supp. 2004)
MD	1986		\$500K	MD. CODE ANN. CTS. & JUD. PROC. § 11-108 (Supp. 2004)
MA	1986	\$500K		MASS. GEN. LAWS ANN. ch. 231, § 60H (West 2000)
MI	1986	\$280K		MICH. COMP. LAWS ANN. § 600.1483 (West 1996)
MS	2002	\$500K		MISS. CODE ANN. § 11-1-60 (Supp. 2004)
MO	1986	\$350K		MO. REV. STAT. § 538.210 (2000)
MT	1995	\$250K		MONT. CODE ANN. § 25-9-411 (2003)
NE	1976	\$1.75M (total)		NEB. REV. STAT. § 44-2825 (Supp. 2003), amended by Nebraska Hospital-Medical Liability Act, No. 998, § 2 (2004) (West, WESTLAW through 2004 Sess.)

APPENDIX I (continued)

NV	2002		\$350K		NEV. REV. STAT. 41A.031 (2003)
NM	1992		\$600K (total)		N.M. STAT. ANN. §§ 41-5-6, 41-5-7 (Michie 1996 & Supp. 2003)
ND	1995		\$500K		N.D. CENT. CODE. § 32-42-02 (1996)
OH ^v	2003 (1991, 1999)		\$350K [500K 12/7/97-8/16/ 99]		OHIO REV. CODE ANN. § 2323.43 (West 2004)
OK	2003		\$300K		OKLA. STAT. ANN. tit. 63, § 1-1708.1F (West 2004)
SD	1985		\$500K		S.D. CODIFIED LAWS § 21-3-11 (Michie Supp. 2003)
TX [*]	2003 (1990 except wrongful death)		\$750K		TEX. CIV. PRAC. & REM. CODE ANN. § 74.301 (Vernon Supp. 2004-05)
UT	1986		\$400K		UTAH CODE ANN. § 78-14-7.1 (2002)
VA	1976		\$1.5M (total)		V.A. CODE ANN. § 8.01-581.15 (Michie Supp. 2004)
WV	1986		\$250K		W. VA. CODE ANN. § 55-7B-8 (Michie Supp. 2003)
WI	1979		\$350K		WIS. STAT. ANN. §§ 893.53, 895.04 (West Supp. 2004)
Compensatory Caps Held Unconstitutional Without Reenactment (date held unconstitutional)					
AL ^{vi}	1987 (1991)		\$1M (total, wrongful-death)	\$400K	
IL ^{vii}	1995 (1997)			\$500K	
NH ^{viii}	1976 (1980); 1986 (1991)		\$250K	\$875K	
MIN ^{ix}	1986 (repeated 1990)			\$400K	
OR ^x	1987 (1999)			\$500K	
WA ^x	1986 (1989)			43% wage x life expectancy	

ⁱ Caps are on noneconomic damages only unless indicated by “(total),” which denotes caps on total compensatory damages. The most current base figures for caps are given, as cap amounts may have been amended since the effective date. Moreover, the following states have provisions for adjusting the base levels over time: Maryland, Michigan, Missouri, Utah, Virginia, and Wisconsin. In Virginia, adjustments are optional and cannot be made after 2008. In Maryland, the damages limitation increases by \$15,000 annually. In the remaining listed states, annual adjustments are based on inflation.

ⁱⁱ Dates on which caps were previously held unconstitutional are in parentheses.

ⁱⁱⁱ Statutory authority for caps. Recent legislation is discussed in more detail below.

^{iv} Attempts to establish noneconomic damages caps have been held unconstitutional in Ohio several times. In 1975, the Ohio legislature enacted a \$200,000 limit on noneconomic damages except for wrongful death, which was in effect until 1991. Act effective July 1, 1976, § 2307.43, 1975 Ohio Laws 2809, 2813 (codified at OHIO REV. CODE ANN. § 2307.43 (repealed 1997, 2001)); *Morris v. Savoy*, 576 N.E.2d 765, 770–71 (Ohio 1991) (holding that \$200,000 cap violated due process clause of Ohio Constitution). The cap was reinstated effective January 27, 1997, see Act effective Jan. 27, 1997, Am. Sub. H.B. 350, § 1, 1995–96 Ohio Laws 3867, 3978–80 (codified at OHIO REV. CODE ANN. § 2323.54 (Anderson Supp. 1997) (repealed 2001)), but was then struck down in 1999, *State ex rel. Ohio Acad. of Trial Lawyers v. Sheward*, 715 N.E.2d 1062, 1095 (Ohio 1999).

^v During the time of my study, Texas law limited damages in medical malpractice actions for wrongful death to \$500,000 (in 1977 dollars, adjusted annually for inflation). TEX. REV. CIV. STAT. ANN. art. 4590i, § 11.02 (repealed 2003). The statute was intended to apply to all medical malpractice cases, but was held unconstitutional, except with respect to wrongful-death cases. *Lucas v. United States*, 757 S.W.2d 687 (Tex. 1988).

^{vi} Compensatory damages caps statutes were declared unconstitutional in *Moore v. Mobile Infirmary Ass'n*, 592 So. 2d 156 (Ala. 1991), and *Smith v. Schulte*, 671 So. 2d 1334 (Ala. 1995), cert. denied, 517 U.S. 1220 (1996).

^{vii} For causes of action that arose after March 9, 1995, an Illinois law (which was subsequently overturned in 1997) imposed a \$500,000 noneconomic cap. 735 ILL. COMP. STAT. 5/2-1115.1 (2003) (found unconstitutional in *Best v. Taylor Machine Works*, 689 N.E.2d 1057 (Ill. 1997)).

^{viii} The New Hampshire law setting a \$250,000 cap on noneconomic damages in medical malpractice cases was held unconstitutional in *Carson v. Maurer*, 424 A.2d 825, 836–37 (N.H. 1980). The \$875,000 cap on noneconomic damages was held unconstitutional in *Brannigan v. Usitalo*, 587 A.2d 1232, 1237 (N.H. 1991).

^{ix} The cap was repealed by the Minnesota legislature in May 1990. It was formerly located at MINN. STAT. ANN. §§ 549.23, 549.24 (repealed 1990).

^x Oregon’s \$500,000 cap on noneconomic damages in civil actions “arising out of bodily injury” was declared unconstitutional in *Lakin v. Senco Products, Inc.*, 987 P.2d 463, 475 (Or. 1999), clarified by 987 P.2d 476 (Or. 1999). In November 2004 voters in Oregon “narrowly defeated a constitutional amendment that would have enacted a \$500,000 noneconomic damages cap.” Tanya Albert, *State Tort Reform Ballot Wins Set Stage for Further Battles*, AM. MED. NEWS (Nov. 22, 2004), at <http://www.ama-assn.org/amednews/2004/11/22/gvl11122.htm>.

^{xi} A statute setting a variable limit on noneconomic damages awards was held unconstitutional in *Sofie v. Fibreboard Corp.*, 771 P.2d 711, 712 (Wash. 1989).

Recent substantive tort reform legislation

Florida: Effective September 15, 2003, Florida’s medical malpractice bill caps noneconomic damages in malpractice lawsuits against individual physicians at \$500,000 and against multiple physicians at \$1 million. FLA. STAT. ANN. § 766.118 (West Supp. 2005). The cap in lawsuits against individual physicians could increase to \$1 million in cases of severe malpractice. *Id.* Suits against individual hospitals and other health care facilities are capped at \$750,000 (\$1.5 million against multiple facilities), which can be increased to \$1.5 million in cases of severe malpractice. *Id.* In the wake of the 2004 election, Florida’s business lobby has drafted a tort-reform package that would “abolish punitive damages, cap attorney fees and noneconomic damages in all tort cases and

grant immunity from malpractice lawsuits to emergency room doctors.” Julie Kay, *Florida Business Lobby Demands Legislators Protect Businesses, Extend Caps on Attorney Fees*, DAILY BUS. REV., Jan. 21, 2005 (on file with the *New York University Law Review*).

Georgia: On February 21, 2005, Governor Perdue of Georgia signed a comprehensive tort reform package that includes a \$350,000 cap on noneconomic damages in medical malpractice cases. Act of Feb. 21, 2005, No. SB-3, § 13 (to be codified at GA. CODE ANN. § 51-13-1), available at www.legis.state.ga.us/legis/2005_06/fulltext/sb3.htm. In cases against numerous medical facilities, the aggregate amount of damages shall not exceed \$1.05 million. *Id.* The bill also immunizes emergency physicians from medical malpractice liability, absent gross negligence. *Id.* § 10 (to be codified at GA. CODE ANN. § 51-1-29.5). Other provisions address tightening the requirements for expert testimony, *id.* § 7 (to be codified at GA. CODE ANN. § 24-9-67.1), and allowing physicians to apologize without its being used against them in court, *id.* § 6 (to be codified at GA. CODE ANN. § 24-3-37.1).

Mississippi: As of October 8, 2002, Mississippi capped the noneconomic portion of medical malpractice damages at \$500,000. The cap was to be adjusted to \$750,000 for claims for causes of action filed on or after July 1, 2011, but before July 1, 2017. On July 1, 2017, the cap was to increase to \$1 million. No cap applied to damages for disfigurement, or if the judge determined that the jury may impose punitive damages. MISS. CODE ANN. § 11-1-60 (2004). This law was amended on June 16, 2004, during a Special Session of the Mississippi Legislature. Act of June 16, 2004, § 2, available at <http://bill-status.ls.state.ms.us/documents/20041E/pdf/HB/0001-0099/HB0013SG.pdf>. The new act establishes a hard cap of \$500,000 on noneconomic damages in all medical liability cases filed after September 1, 2004; the escalator clauses which would have gone into effect in 2011 and 2017 were repealed. *Id.* For a discussion of tort reform in Mississippi, see Vidmar & Brown, *supra* note 22.

Nevada: The Nevada legislature enacted a medical liability reform bill on August 7, 2002, that caps noneconomic damages arising from care related to a “traumatic injury” at \$350,000 per defendant, except in cases where (1) the defendant’s conduct constitutes gross malpractice, or (2) the court determines by clear and convincing evidence that a higher award is justified because of exceptional circumstances. Act of Aug. 7, 2002, ch. 3, 2002 Nev. Stat. 3, 6–7 (codified at NEV. REV. STAT. 41A.031 (2003)). On November 2, 2004, Nevada voters passed, with about 60% of the vote, a ballot measure removing all exemptions from the cap. See *Elections in 2004*, LAS VEGAS REV.-J. (Dec. 8, 2004), at http://network.ap.org/dynamic/files/elections/2004/general/by_state/ballot_other/NV.html?SITE=NVLASELN&SECTION=POLITICS; Nev. Sec’y of State, Ballot Question No. 3: Keep Our Doctors in Nevada, at http://sos.state.nv.us/nvelection/2004_bq/bq3.htm (last modified Oct. 20, 2004).

Ohio: A noneconomic damages cap was once again reinstated by Ohio’s comprehensive medical liability reform bill, S.B. 281, which took effect on April 11, 2003. The law establishes a sliding cap on noneconomic damages: The cap is not to exceed the greater of \$250,000 or three times the plaintiff’s economic loss, up to a maximum of \$350,000 for each plaintiff (or \$500,000 if multiple plaintiffs are involved). The maximum cap is increased to \$500,000 (or \$1 million in the case of multiple plaintiffs) if the claim is based on either (1) a “[p]ermanent and substantial physical deformity, loss of use of a limb, or loss of a bodily organ system,” or (2) a “[p]ermanent physical functional injury that permanently prevents the injured person from being able to independently care for self and perform life sustaining activities.” Act of Dec. 10, 2002, No. S-281, 2003 Ohio Legis. Serv. L-3250, L-3265–67 (Banks-Baldwin) (codified at OHIO REV. CODE ANN. § 2323.43 (West 2004)).

Oklahoma: Oklahoma enacted a bill, S.B. 629, creating a cap of \$300,000 on noneconomic damages in medical malpractice cases involving pregnancy or emergency room care. The cap does not apply in wrongful-death cases or where there is “clear and convincing evidence” of negligence. Affordable Access to Healthcare Act, ch. 390, § 6, 2003 Okla. Sess. Laws 1678, 1681 (codified as amended at OKLA. STAT. ANN. tit. 63, § 1-1708.1F

(West 2004)). The \$300,000 noneconomic damages cap was extended to cover all health care providers, effective November 1, 2004, but still includes the exceptions for wrongful death and negligence. See Act of Mar. 28, 2004, ch. 368, § 22, 2003 Okla. Sess. Laws 1666, 1691 (to be codified at OKLA. STAT. tit. 63, § 1-1708.1F-1).

Texas: A recent 2003 provision limits the award of noneconomic damages in medical malpractice cases to \$250,000 against all doctors and health care practitioners, and a \$250,000 per-facility cap against health care facilities, with an overall cap of \$500,000 against health care facilities, creating in effect an overall limit of noneconomic damages of \$750,000. Act of June 11, 2003, ch. 204, § 10.01, 2003 Tex. Sess. Law Serv. 847, 873 (Vernon) (codified at TEX. CIV. PRAC. & REM. CODE ANN. § 74.301 (Vernon Supp. 2004-05)).

West Virginia: A comprehensive medical liability reform bill, H.B. 2122, was signed into law in March 2003. The law lowered a preexisting \$1 million noneconomic damages cap to a \$250,000 cap on noneconomic damages per occurrence, regardless of the number of plaintiffs and defendants. Act of Mar. 8, 2003, ch. 147, § 55-7B-8(a), 2003 W. Va. Acts 1370, 1473 (codified at W. VA. CODE ANN. § 55-7B-8(a) (Michie Supp. 2003)). A higher cap (\$500,000 per occurrence) is set for wrongful death; “permanent and substantial physical deformity, loss of use of a limb or loss of a bodily organ system”; or permanent physical or mental functional injury that prevents independent self-care. *Id.* § 55-7B-8(b), 2003 W. Va. Acts at 1474.

APPENDIX II: REGRESSIONS

A. 1996 & 2001 MEDICAL MALPRACTICE DATASET

Compensatory Damages (logged, 2001 dollars)	Reg. (1) (Verdict)	Reg. (2) (Verdict)	Reg. (3) (Verdict)	Reg. (4) (Judgment)	Reg. (5)± (Judgment)
Severity Measures					
PermSig	1.462*** (0.329)	1.464*** (0.330)	1.439*** (0.333)	1.442*** (0.335)	1.442*** (0.278)
PermGrave	3.133*** (0.347)	3.121*** (0.350)	2.992*** (0.349)	3.001*** (0.351)	3.001*** (0.265)
Death	2.641*** (0.309)	2.641*** (0.311)	2.867*** (0.493)	2.941*** (0.488)	2.941*** (0.548)
State Laws					
CapN		-0.119 (0.201)	-0.076 (0.248)	-0.106 (0.249)	-0.106 (0.153)
CSR			-0.477 (0.321)	-0.469 (0.320)	-0.469* (0.264)
ExpPan			0.537 (0.331)	0.657** (0.327)	0.657*** (0.228)
Fund			-0.385 (0.420)	-0.474 (0.420)	-0.474 (0.316)
Partisan-Elected Judges					
PJudge			0.949*** (0.273)	1.016*** (0.272)	1.016*** (0.208)
County Characteristics					
LogMedInc			-1.030 (1.104)	-1.141 (1.098)	-1.141** (0.485)
Poverty			2.193 (3.601)	2.235 (3.604)	2.235 (2.551)
Pop65Old			0.006 (0.048)	0.018 (0.048)	0.018 (0.033)
PhyPer100k			0.000 (0.002)	0.000 (0.002)	0.000 (0.001)
LawPer100k			-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Litigant Characteristics					
HospDef			0.204 (0.236)	0.192 (0.237)	0.192 (0.181)
NoDefs			-0.012 (0.030)	-0.015 (0.029)	-0.015 (0.026)
NoPltfs			0.501** (0.198)	0.502** (0.197)	0.502** (0.200)
Pltfs*Death			-0.236 (0.226)	-0.279 (0.226)	-0.279 (0.207)
Year					
Yr2	0.434** (0.198)	0.442** (0.199)	0.427** (0.204)	0.399** (0.204)	0.399*** (0.130)
Constant	10.690*** (0.273)	10.725*** (0.284)	20.447* (12.013)	21.535* (11.955)	21.535*** (5.326)
Observations	273	273	273	272	272
R ²	0.31	0.31	0.39	0.39	0.39

Robust standard errors are in parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%

± Clustering by state

B. COMBINED MEDICAL MALPRACTICE DATASET (1992, 1996 & 2001)

Compensatory Damages (logged, 2001 dollars)	Regression (1) (Verdict)	Regression (2) (Judgment)	Regression (3)± (Judgment)
State Laws			
CapN	0.094 (0.199)	0.040 (0.199)	0.040 (0.172)
CSR	-0.221 (0.268)	-0.214 (0.268)	-0.214 (0.179)
ExpPan	0.146 (0.249)	0.167 (0.251)	0.167 (0.174)
Fund	0.167 (0.351)	0.148 (0.353)	0.148 (0.353)
Partisan-Elected Judges			
PJudge	0.542** (0.242)	0.559** (0.243)	0.559*** (0.153)
County Characteristics			
LogMedInc	-0.272 (0.866)	-0.295 (0.867)	-0.295 (0.520)
Poverty	0.503 (2.870)	0.502 (2.932)	0.502 (2.633)
Pop65Old	-0.016 (0.046)	-0.011 (0.046)	-0.011 (0.043)
PhyPer100k	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
LawPer100k	-0.000 (0.000)	-0.000 (0.000)	-0.000** (0.000)
Litigant Characteristics			
HospDef	0.710*** (0.180)	0.711*** (0.180)	0.711*** (0.178)
NoDefs	0.065* (0.034)	0.059* (0.034)	0.059 (0.040)
NoPltfs	0.390*** (0.075)	0.380*** (0.075)	0.380*** (0.085)
Year			
Yr1	0.086 (0.219)	0.105 (0.218)	0.105 (0.185)
Yr2	0.779*** (0.199)	0.783*** (0.200)	0.783*** (0.174)
Constant	13.742 (9.353)	13.976 (9.374)	13.976** (5.802)
Observations	544	543	543
R ²	0.15	0.15	0.15

Robust standard errors are in parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%

± Clustering by state

C. 1996 & 2001 MEDICAL MALPRACTICE DATASET, SUBDIVIDED BY SEVERITY CATEGORY

Compensatory Damages (logged, 2001 dollars)	Regression (1) Permanent-Grave- Injury Cases (Judgment)	Regression (2) Death Cases (Judgment)	Regression (3) Permanent-Significant- Injury Cases (Judgment)
State Laws			
CapN	-0.004 (0.628)	-0.521 (0.369)	-0.753 (0.592)
CSR	-1.288 (0.860)	0.093 (0.447)	-0.212 (0.760)
ExpPan	0.486 (0.664)	1.470*** (0.537)	0.587 (0.858)
Fund	0.407 (0.873)	-1.431** (0.647)	0.779 (1.362)
Partisan-Elected Judges			
PJudge	1.009* (0.567)	1.499*** (0.340)	-0.173 (0.919)
County Characteristics			
LogMedInc	-2.271 (2.280)	-0.806 (1.609)	-2.710 (3.070)
Poverty	3.055 (7.766)	1.361 (4.721)	3.255 (8.631)
Pop65Old	-0.066 (0.107)	0.047 (0.067)	0.154 (0.138)
PhyPer100k	0.001 (0.004)	-0.004 (0.004)	-0.009 (0.013)
LawPer100k	-0.000 (0.001)	-0.001 (0.002)	0.004 (0.007)
Litigant Characteristics			
HospDef	1.156** (0.544)	-0.450 (0.399)	0.103 (0.492)
NoDefs	-0.017 (0.052)	-0.031 (0.054)	0.161 (0.259)
NoPltfs	0.445 (0.332)	0.199* (0.113)	0.075 (0.384)
Year			
Yr2	-0.088 (0.444)	0.482 (0.357)	1.272*** (0.441)
Constant	36.869 (24.774)	22.503 (17.442)	39.459 (33.340)
Observations	73	100	65
R ²	0.28	0.28	0.25

Robust standard errors are in parentheses.

* significant at 10%; ** significant at 5%; *** significant at 1%

APPENDIX III: VARIABLES

A. *Dependent Variables*1. *Compensatory Damages Verdict (CompVerd)*

The NCSC datasets⁴⁴⁹ contain a variable “compensatory damages” (JGenComp) that corresponds to the compensatory damages awarded by the jury.

2. *Compensatory Damages Judgment (CompJudgmt)*

The NCSC datasets contain a variable “final award” (JFinAwd), which denotes the final dollar amount entered in the judgment.⁴⁵⁰ The coders were also able to give a reason for any difference between the total jury verdict (compensatory plus punitive damages) and the final awards, including “contributory negligence by plaintiff,” “prior settlement,” “other reason,” and “don’t know.” Unfortunately, the coders were not alerted to the possibility of reduction by damages limitation. Nonetheless, it seems reasonable to assume that in states that have such a damages limitation, the reduction would be reflected in the final award category, since it is reflected in the final award entered in the trial court judgment (similar to the other types of reductions that are coded).

Moreover, I was able to test this assumption in at least the subset of 1996 NCSC cases that I was able to match with JVR reports.⁴⁵¹ By including the reduced compensatory damages judgment amount (CompJudgmt) for any case in a CapN state in which the final compensatory award was less than the total compensatory award, I erred on the side of overinclusivity; in other words, I included cases whereby the jury’s compensatory award was reduced for additional reasons,

⁴⁴⁹ See *supra* notes 245–62 and accompanying text for a description of the NCSC datasets.

⁴⁵⁰ I then created a variable that subtracted the punitive damages award from the final award, leaving the final “compensatory damages judgment” award (CompJudgmt).

⁴⁵¹ I uncovered three California cases in which the final award was reduced pursuant to MICRA, the statutory cap on noneconomic damages. *Hecker v. Monastersky*, No. 721784, 1996 WL 760500, at *3 (Cal. Super. Ct. June 11, 1996) (reducing plaintiffs’ \$1,500,000 noneconomic damage award to \$250,000 pursuant to MICRA); *Stroh v. Tawadrous*, No. RCV04268, 1996 WL 341852, at *1 (Cal. Super. Ct. Apr. 24, 1996) (reducing \$1,770,317 award to \$820,317 pursuant to MICRA); *Mast v. Cedars-Sinai Med. Ctr.*, No. BC116736, 1996 WL 451093, at *1 (Cal. Super. Ct. Feb. 1, 1996) (reducing \$507,534 award to \$257,534 pursuant to MICRA). However, the NCSC variable used to explain the difference between total and final awards (TotDiff) was entered as “contributory negligence” for *Stroh* and “prior settlement” for *Hecker*. Print-out from NCSC dataset (on file with the *New York University Law Review*). Moreover, the small number of matches is not surprising, given the fact that the match rate was less than 100%, coupled with the fact that JVR reports typically do not include post-verdict reductions.

including comparative negligence.⁴⁵² In this way, my estimates should be biased in favor of finding a significant effect of damages caps in reducing compensatory damages.

B. Independent Variables

1. Litigant Characteristics

a. Hospital defendant (*HospDef*)

A binary variable that distinguishes between cases where the defendant is an individual (*HospDef* = 0) and those in which the defendant is a hospital or corporation (*HospDef* = 1). *HospDef* = 1 in two-thirds (375/557) of the cases.⁴⁵³

b. Number of defendants (*NoDefs*)

In my sample, roughly 93% of the cases involved six or fewer defendants: one (32%), two (28%), three (18%), four (8.5%), five (4.5%), and six (2%). The remaining 7% involved seven to thirty-six defendants.

c. Number of plaintiffs (*NoPltfs*)

The vast majority of medical malpractice cases involve only one plaintiff. (Recall that all plaintiffs are individuals in my sample.) In my sample, 57% of the cases involved a single plaintiff.⁴⁵⁴ As expected, a large percentage of the cases with numerous plaintiffs were wrongful-death cases. (I therefore include a variable *Pltfs*Death*, which is the interaction term for number of plaintiffs and death.⁴⁵⁵)

⁴⁵² There were twenty-four such cases in my dataset (of a sample of 152 awards in CapN states): eleven in California, three in Illinois, two in Massachusetts, six in Michigan, one in Texas, and one in Virginia. Thus, roughly 15% of the jury compensatory verdicts were reduced. (In California, eleven out of sixty-two awards, or 18%, were reduced—as compared with the 45% figure reported in the RAND study of California verdicts, *see* RAND MICRA STUDY, *supra* note 44, at 20–21.) The 2001 dataset, moreover, includes a dummy variable, “Reduced,” which indicates when an award was reduced. There are nine such awards in the 2001 dataset, although one is excluded from my classification of *CompJudgmt* because it appears to have been coded in error.

⁴⁵³ This is slightly higher than the percentage of hospital or corporate defendants in other sample studies. *See, e.g.*, Gross & Syverud, *supra* note 261, at 19–20 tbls.9, 10 (reporting 43% and 39% figures for corporate defendants in medical malpractice cases within samples of California jury verdicts from 1985–86 and 1990–91, respectively).

⁴⁵⁴ An additional 31% involved two plaintiffs, followed by roughly 8.5% with three plaintiffs, 2.5% with four plaintiffs, 1% with five plaintiffs, and a single case each with seven and nine plaintiffs.

⁴⁵⁵ In fact, of the cases with more than two plaintiffs, about half (49%) were death cases, whereas death cases comprised roughly one-third (36%) of the sample. Moreover, the two variables are significantly correlated.

2. Severity Measures

The severity variables were constructed using three different variables in the 1996 and 2001 NCSC datasets,⁴⁵⁶ as well as additional information compiled from Westlaw's JVR database for a set of cases that matched with the 1996 NCSC data entries.⁴⁵⁷

a. Temporary injuries (*Temp*)

This is a binary variable.⁴⁵⁸ "Temporary" injuries comprise 12.6% of the cases.

b. Permanent significant injuries (*PermSig*)

This is a binary variable.⁴⁵⁹ "Permanent significant" injuries comprise 23.5% of the cases.

⁴⁵⁶ The NCSC datasets include injury variables for permanence of injury (BInjPer), seriousness of injury (BInjSer), and part of body injured (BInjPrt). Roughly 65% of the cases in the NCSC datasets contained sufficient information to classify cases according to the severity scale that follows in the text. (In the 1996 dataset, the classification rate was 107 out of 168 cases; in the 2001 dataset, it was 143 out of 216.)

The injury variables are not included in the 1992 NCSC dataset. The variable for "bodily injury" (included in the 1992 dataset) is not a useful discriminating variable because each of the medical malpractice cases involved some bodily injury. Because of the resulting lack of variation in this variable, it is not used in my analysis.

⁴⁵⁷ I was able to supplement the information included in the 1996 NCSC dataset by matching cases (using plaintiff's name, county and state location, and year of trial) with JVR entries in the Westlaw database. Of the 168 cases, I was able to match sixty-eight cases. By reading each of these JVR entries, I was able to fill in missing information in the NCSC data for twenty-seven cases. My subsample of 1996 cases with complete information was thus increased from 107 to 134 cases. The 2001 NCSC dataset excludes case-identifying information, so matching was not possible.

⁴⁵⁸ Cases were coded Temp = 1 where the NCSC variable, BInjPer1 (permanence of first injury) = 1 (temporary). The total number of cases was thirty-five.

For 1996, Temp = 1 in twenty-four cases. (Ten of these cases included information from the JVR reports. Examples include cases where the injury was described as wrist pain, temporary emotional distress, and temporary bone set. Matched JVR reports are on file with the *New York University Law Review*.)

For 2001, Temp = 1 in eleven cases.

⁴⁵⁹ Cases were coded PermSig = 1 where the NCSC variable BInjPer1 (permanence of first injury) = 2 (permanent) and BInjSer1 (seriousness of first injury) = 1 (skin lacerations), 2 (damaged muscle, tendon), 3 (broken bones), 4 (nerve damage), 5 (facial scars), 6 (chronic pain), or 7 (burns). Cases were also coded PermSig = 1 where BInjSer1 was either missing or coded as "other," but BInjPer1 = 2 (permanent) and BInjPrt1 (first part of body injured) = 8 (arm/shoulder), 9 (leg/hip), 10 (foot/feet), or 11 (hands). The total number of cases was sixty-five.

For 1996, PermSig = 1 in thirty cases. (Nine of these cases include additional information from the matched JVR reports, on file with the *New York University Law Review*. Examples include injuries reported as permanent skin lacerations, bladder incontinence, and nose fracture.) Three nerve-damage cases that would otherwise satisfy these criteria were recoded as PermGrave.

For 2001, PermSig = 1 in thirty-five cases.

c. Permanent grave injuries (*PermGrave*)

This is a binary variable.⁴⁶⁰ “Permanent grave” injuries comprise 26.7% of the cases.

d. Injury resulting in death (*Death*)

This is a binary variable.⁴⁶¹ “Death” cases comprise 37.1% of the cases. While death is a frequently claimed injury in medical malpractice cases, this sample contains a slightly higher percentage than other studies.⁴⁶²

⁴⁶⁰ Cases were coded PermGrave = 1 where the NCSC variable BInjPer1 (permanence of first injury) = 2 (permanent) and BInjSer1 (seriousness of first injury) = 8 (loss of limb), 9 (loss of sight), 10 (loss of hearing), 11 (loss of mental function), 12 (paralysis—lower body), or 13 (paralysis—neck down). Cases were also coded PermGrave = 1 where BInjSer1 was either missing or coded “other,” but BInjPer1 = 2 (permanent), and BInjPrt1 (first part of body injured) = 1 (brain), 2 (skull), 3 (eyes), 4 (neck), 5 (spine/back), 6 (heart), or 7 (lungs). Also included in this category PermGrave = 1 are cases involving permanent nerve damage to the spine/back or brain, given that such injuries approximate paralysis in terms of severity. Thus, where BInjPer1 = 2 (permanent), BInjSer1 = 4 (nerve damage), and BInjPrt1 = 1 (brain) or 5 (spine/neck), these cases were coded as PermGrave = 1. The total number of cases was seventy-four.

For 1996, PermGrave = 1 in thirty-six cases. (Eight of these cases included information from the JVR reports. Examples include cases where the injury was described as quadriplegia, severe mental deficiency, and permanent injury to the spinal cord. Also included are three cases of permanent nerve damage to the spine or brain, previously coded as PermSig = 1, which were reclassified as PermGrave = 1.)

For 2001, PermGrave = 1 in thirty-eight cases. (One case of permanent nerve damage to the brain or spine, previously coded as PermSig = 1, was reclassified as PermGrave = 1.)

⁴⁶¹ Cases were coded Death = 1 where the NCSC variable WrDeath (wrongful death) = 1 or PInjPer1 (permanence of first injury) = 3 (death). Death = 1 in 103 cases: forty-four cases in 1996 and fifty-nine cases in 2001.

⁴⁶² According to JVR, the most frequently claimed injury in medical malpractice cases is death, which accounted for 23% of the total number of plaintiff verdicts in its sample from 1994–2000. Death was followed by brain damage (9%); genital injuries (7%); leg injuries (5%); emotional distress, cancer, spinal, nerve, and eye injuries (each 4%); and paralysis, amputations, intestinal tract, and foot injuries (each 3%). All other injuries made up 3% or less of the total number of plaintiff verdicts. JVR REPORT, *supra* note 103, at 9.

3. State Laws

a. Noneconomic Damages Caps (*CapN*)

TABLE 1
COMBINED MEDICAL MALPRACTICE DATASET: DAMAGES CAPSⁱ

NonCap States (n cases)	CapN States (n cases)	CapT States (n cases)
Arizona (27)	California (62)	Indiana (3)
Connecticut (7)	Hawaii (1) ⁱⁱ	Virginia (10)
Florida (31)	Illinois (19)	
Georgia (3)	(filed 3/9/95–12/18/97)	
Illinois (40)	Massachusetts (14)	
(except 3/9/95–12/18/97) ⁱⁱⁱ	Michigan (32)	
Kentucky (11)	Missouri (7)	
Minnesota (8)	Ohio (5)	
New Jersey (49)	(filed 1/27/97–8/16/99)	
New York (50)	Texas wrongful death (6) ^{iv}	
North Carolina (1) ^v	Wisconsin (6)	
Ohio (27)		
(except 1/27/97–8/16/99) ^{vi}		
Pennsylvania (101)		
Texas (31)		
Washington (6)		
Subtotal (392)	Subtotal (152)	Subtotal (13)

ⁱ For statutory sources of the damages caps in this table, see *supra* Appendix I.

ⁱⁱ There were ten medical malpractice cases in Hawaii in the combined dataset (23,302 observations). Compensatory damages were awarded in only one of these cases.

ⁱⁱⁱ Cases filed before March 9, 1995 (n = 33), and after December 18, 1997 (n = 7), are considered “NonCap.” See *supra* Appendix I note vii.

^{iv} The cap on wrongful-death cases affects six cases in the dataset. Texas is considered a “CapN” state only for these six wrongful-death cases; otherwise, it is considered NonCap. See *supra* Appendix I note v.

^v The 2001 NCSC dataset added a single county from North Carolina (a state not represented in the previous NCSC datasets), which explains its underrepresentation. See *supra* note 247.

^{vi} Cases filed before January 27, 1997 (n = 20), and after August 16, 1999 (n = 7), are considered “NonCap.” See *supra* Appendix I note iv.

b. Collateral-Source Rule (*CSR*)

The variable for collateral-source rule (CSR) is coded as “1” for states that have not modified the common law rule and “0” for those that have, either by enacting mandatory or discretionary collateral offsets.

TABLE 2
COMBINED MEDICAL MALPRACTICE DATASET:
COLLATERAL-SOURCE RULE REFORMS

Collateral-Source Rule (CSR = 1) (n cases)	Collateral Offsets (CSR = 0) (n cases)
Georgia (3)	Arizona (27)
Hawaii (1)	California (62)
Kentucky (7) (after 1/19/95)	Connecticut (7)
Missouri (7)	Florida (31)
North Carolina (1)	Illinois (59)
Ohio (11)	Indiana (3)
(6/1/94-1/26/97; 8/17/99-4/11/03)	Kentucky (4) (before 1/19/95)
Pennsylvania (101)	Massachusetts (14)
Texas (37)	Michigan (32)
Virginia (10)	Minnesota (8)
Wisconsin (3) (before 5/25/95)	New Jersey (49)
	New York (50)
	Ohio (21) (before 6/1/94; 1/26/97-8/17/99)
	Washington (6)
	Wisconsin (3) (after 5/25/95)
Total CSR = 1 (181)	Total CSR = 0 (376)

Sources

Arizona: ARIZ. REV. STAT. ANN. § 12-565 (West 2003) (effective 1976).

California: CAL. CIV. CODE § 3333.1 (West 1997) (effective 1975).

Connecticut: CONN. GEN. STAT. ANN. § 52-225a (West 1991) (effective 1986).

Florida: FLA. STAT. ANN. § 768.76 (West 2004) (effective 1986).

Georgia: A Georgia law allowing defendants to introduce evidence of collateral-source payments, GA. CODE ANN. § 51-12-1(b) (2000) (effective 1987), was held unconstitutional on March 15, 1991, in *Denton v. Con-Way S. Express, Inc.*, 402 S.E.2d 269 (Ga. 1991).

Illinois: 735 ILL. COMP. STAT. ANN. 5/2-1205 (West 2003) (effective 1985). There is a mandatory 50% offset of lost wage benefits and 100% offset of medical benefits. The total offset, however, cannot be greater than 50% of the award.

Indiana: IND. CODE ANN. § 34-44-1-2 (West 1999) (effective 1986).

Kentucky: A Kentucky law providing that juries can be informed of collateral-source payments evidence, KY. REV. STAT. ANN. § 411.188 (Michie 1992) (effective 1988), was held unconstitutional on January 19, 1995, in *O'Bryan v. Hedgepeth*, 892 S.W.2d 571, 578 (Ky. 1995).

Massachusetts: MASS. GEN. LAWS ANN. ch. 231, § 60G (West 2000) (effective 1986).

Michigan: MICH. COMP. LAWS ANN. § 600.6303 (West 2000) (effective 1986).

Minnesota: MINN. STAT. ANN. § 548.36 (West 2000) (effective 1986).

Missouri: Missouri has one narrow exception to the collateral-source rule. If, prior to trial, a defendant or his insurer has paid any part of plaintiff's special damages, the defendant may introduce evidence of such payments at trial. Admission of such evidence, however, will constitute a waiver of the defendant's right to a credit against the judgment for any such payments. See MO. REV. STAT. § 490.715 (2000) (effective 1987).

New Jersey: N.J. STAT. ANN. § 2A:15-97 (West 2000) (effective 1987). The New Jersey statute exempts workers' compensation and life insurance benefits; an award must be offset by any private health insurance payment by the plaintiff.

New York: N.Y. C.P.L.R. 4545(a) (McKinney 2004) (effective 1984).

Ohio: As of April 11, 2003, there is discretionary collateral-source offset. See OHIO REV. CODE ANN. § 2323.41 (West 2004). Two previous collateral-source reforms were struck down as unconstitutional. See *State ex rel. Ohio Acad. of Trial Lawyers v. Sheward*, 715 N.E.2d 1062 (Ohio 1999); *Sorrell v. Thevenir*, 633 N.E.2d 504 (Ohio 1994).

Pennsylvania: As of March 20, 2002, there is a mandatory collateral-source offset. See 40 PA. CONS. STAT. ANN. § 1303.508 (West Supp. 2004). Before 2002, the offset applied only to public benefits. 40 PA. CONS. STAT. ANN. § 1301.602 (West 1999) (effective 1975), *repealed by* Medical Care Availability and Reduction of Error (MCARE) Act, No. 2002-13, §§ 508, 5104, 2002 Pa. Laws 154, 171, 197.

Washington: WASH. REV. CODE ANN. § 7.70.080 (West 1992) (effective 1976).

Wisconsin: Wisconsin enacted a discretionary offset, effective May 25, 1995. WIS. STAT. ANN. § 893.55 (West 2004). Cases filed on or after that date are coded as CSR = 0.

c. Medical-Expert Screening Panels (*ExpPan*)

TABLE 3
 COMBINED MEDICAL MALPRACTICE DATASET:
 MEDICAL-EXPERT SCREENING PANELS

ExpPan = 0 (n cases)	ExpPan = 1 (n cases)
Arizona (27)	Connecticut (7)
California (62)	Florida (31)
Georgia (3)	Hawaii (1)
Illinois (59)	Indiana (3)
Kentucky (11)	Massachusetts (14)
Minnesota (8)	Michigan (32)
Missouri (7)	New York (31) (prior to 10/1/91)
New Jersey (49)	Virginia (10)
New York (19) (after 10/1/91)	Wisconsin (6)
North Carolina (1)	
Ohio (32)	
Pennsylvania (101)	
Texas (37)	
Washington (6)	
Total ExpPan = 0 (422)	Total ExpPan = 1 (135)

Source: STRUVE, *supra* note 209, at 57.

d. Patient Compensation Funds (*Fund*)

TABLE 4
 COMBINED MEDICAL MALPRACTICE DATASET:
 PATIENT COMPENSATION FUNDS

State (n cases)	CapN State?	CapT State?
Florida (31)	No	No
Indiana (3)	No	Yes
Pennsylvania (101)	No	No
Wisconsin (6)	Yes	No

Sources: ADVOCACY RES. CTR., *supra* note 309, at 1; McCullough, Campbell & Lane, *supra* note 296.

4. Electoral Institution Variable

a. Partisan-Elected Judges (*PJudge*)

TABLE 5
COMBINED MEDICAL MALPRACTICE DATASET:
PARTISAN-ELECTED JUDGES

Partisan Judge (PJudge = 1) (n cases)	Nonpartisan Judge (PJudge = 0) (n cases)	
Partisan Elections	Nonpartisan Elections	Appointed
Illinois (59)	Georgia (3)	Arizona (27)
New York (50)	Kentucky (11)	California (62)
North Carolina (1)	Michigan (32)	Connecticut (7)
Pennsylvania (101)	Minnesota (8)	Florida (31)
Texas (37)	Ohio (32)	Hawaii (1)
	Washington (6)	Indiana (3)
	Wisconsin (6)	Massachusetts (14)
		Missouri (7)
		New Jersey (49)
		Virginia (10)
Total PJudge = 1 (248)	Total PJudge = 0 (309)	

Source: Tabarrok & Helland, *Court Politics*, *supra* note 310, at 157. Their classifications of “partisan elections,” “nonpartisan elections,” and “appointed” are described *supra* notes 311, 319.

5. County Characteristics

a. Log of Median Household Income (*LogMedInc*)

This variable is measured by county, in 1999 dollars.⁴⁶³

b. Individuals with Incomes Under the Poverty Line (*Poverty*)

This variable is measured as the percentage of the total population in each county.⁴⁶⁴

⁴⁶³ This information was obtained from the 2000 Census. 2000 CENSUS DATA BOOK, *supra* note 320, at tbl.B-5. Mean per capita income (in 1999 dollars) per county was also collected and included in some unreported regressions. The effect of log per capita mean income was not significant; because it is highly correlated with *LogMedInc*, I only included one of these income measures in the reported regressions.

⁴⁶⁴ The 2000 Census includes the number of individuals under the poverty line, by county. *Id.* at tbl.B-5. In order to get this percentage, these numbers were divided by the total population of each county.

c. Individuals Aged Sixty-Five or Older (*Pop65Old*)

This variable is measured as the percentage of the total population in each county.⁴⁶⁵

d. Number of Physicians (*PhyPer100k*)

This variable measures the number per 100,000 individuals per county.⁴⁶⁶

e. Number of Lawyers (*LawPer100k*)

This variable measures the number per 100,000 individuals per county.⁴⁶⁷

6. *Year Variables*

a. 1996 (*Yr1*)

b. 2001 (*Yr2*)

⁴⁶⁵ To obtain these percentages, one must locate the age structure table for each county in the 2000 Census information, obtain the sum of 65 and above cells, and divide the sum by the total population of the county. *Id.* at tbl.B-2. A separate variable, PopDen—the population density or number of individuals per square mile—was also collected from 2000 Census data. Again, because its effect was insignificant and because it was correlated with other variables in the regressions, it was not included in the regressions.

⁴⁶⁶ The following formula was used: $\text{PhyPer100k} = (\text{number of physicians} * 100,000) / \text{total population of the county}$. The information was obtained from the EEO files of the 1990 Census. EEO Files, *supra* note 320. In unreported regressions, I also included a variable HospBedPer100k, the number of hospital beds per 100,000 individuals per county. This variable was highly correlated with PhyPer100k (as well as with some of the cap variables) and thus was not included in the reported regressions.

⁴⁶⁷ The following formula was used: $\text{LawPer100k} = (\text{number of lawyers} * 100,000) / \text{total population of the county}$. The information was obtained from the EEO files of the 1990 Census. *Id.*