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Negotiating in the Shadow of “Bad Faith” Refusal to Settle: A Game Theory Model of Medical Malpractice Pre-Trial Settlements and Insurance Limits

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Abstract

Recent empirical studies of Texas data by Hyman et al., Zeiler et al., and Silver et al. suggest that insurance limits affect settlements of medical malpractice cases. Writing separately, Silver argues that insurance limits act as a de facto cap on malpractice payouts, that plaintiffs are being underpaid as a result, and that therefore legislative caps on damages are unnecessary. But this hypothesis is inconsistent with the data, which indicates that forty-seven percent of cases in which plaintiffs obtain verdicts above policy limits are subsequently settled above policy limits. We propose to reconcile the data by accounting for the effects that third-party causes of action for alleged bad-faith refusal to settle—known in Texas as a Stowers action—have on pretrial settlement negotiations. If an insurer in Texas is presented with a settlement offer within insurance limits, refuses to settle, and the plaintiff wins an award greater than insurance limits, the plaintiff is entitled to sue the insurer for the full damages amount, plus punitive damages, for refusal to settle. In this paper, we explore the game theory of medical malpractice settlement negotiations in the shadow of Stowers. Using a Monte Carlo simulation of the “game,” we find: (1) plaintiffs have an incentive to make, and defendants have an incentive to accept, settlement offers at insurance limits; (2) a settlement at insurance limits may therefore sometimes reflect something other than the quality of the underlying medical malpractice case; (3) the possibility of Stowers awards increases expected returns to plaintiffs and disproportionately increases the settlement value of low-merit cases; (4) plaintiffs with weak cases are systematically overcompensated, while plaintiffs with strong cases are systematically undercompensated; and (5) non-economics damages caps have the greatest effect on low-merit cases by reducing overcompensation, without affecting the highest-merit cases.

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It is conventional wisdom from President Barack Obama\(^1\) down that there is a medical malpractice crisis.\(^2\) Physicians have substantial trouble finding affordable professional liability insurance, especially in states with litigation environments that favor plaintiffs’ attorneys.\(^3\) Reformers argue that malpractice liability does a poor job of distinguishing between good doctors and bad doctors.\(^4\) Plaintiffs’ lawyers and other opponents of

\(^{1}\) Sheryl Gay Stolberg and Robert Pear, *Obama Open to Reining in Medical Suits*, New York Times, June 15, 2009 (“In closed-door talks, Mr. Obama has been making the case that reducing malpractice lawsuits — a goal of many doctors and Republicans — can help drive down health care costs, and should be considered as part of any health care overhaul.”).


\(^{3}\) American Medical Association, *supra* note 1.

\(^{4}\) Sloan & Chepke, *supra* note 2 at 81; *see, e.g.*, David M. Studdert, *et al., Claims, Errors, and Compensation Payments in Medical Malpractice Litigation*, 354 NEJM 2024 (May 11, 2006) (28% of claims without errors resulted in compensation; 40% of malpractice lawsuits are meritless) (“the Harvard study”); John A. Morris, Jr., *et al., Surgical Adverse Events, Risk Management, and Malpractice Outcome: Morbidity and Mortality Review Is Not Enough*, 237(6) ANN. SURG. 844 (June 2003) (“no rational link between the tort system and the reduction of adverse events”). *See also* Brennan et al., *Relation between Negligent Adverse Events and the Outcomes of Medical-Malpractice Litigation*, 335 NEJM 1963 (Dec. 26, 1996) (litigation system was just as likely to award damages in a case where no medical malpractice has taken place as one where medical malpractice has taken place; sued non-negligent doctors paid more on average to injured
reform disagree, arguing that the contingent fee system deters lawyers from bringing low-merit suits.

Reformers maintain that the random and capricious nature of malpractice liability prevents insurers from using claim histories to “experience rate” most physicians, and that high insurance rates therefore deter medical practice, rather than malpractice. This problem is exacerbated in their view by the misuse of litigation techniques to push scientifically questionable theories of liability, and by the expense of unfettered noneconomic damages, which are inherently arbitrary and unpredictable, and which present a moral hazard risk of ex post exaggeration of injuries by plaintiffs. Doctors’ organizations and tort reform groups have called for caps on noneconomic damages in

patients than the sued negligent doctors; majority of patients receiving compensation weren’t injured by negligence); Robert Caplan and Karen Posner, The expert witness: Insights from the Closed Claims Project, 61(6) ASA NEWSLETTER 9 (1997) (expert witness testimony affected by outcome bias); Robert Caplan et al., Effect of outcome on physician judgments of appropriateness of care, 265 JAMA 1957 (1991) (same).

5 BAKER, supra note __ at __; L. Boyle, The Truth About Medical Malpractice, TRIAL (April 2002).

6 SLOAN & CHEPKE, supra note 2 at 228.


9 Richard Abel, General Damages are Incoherent, Incalculable, Incommensurable, and Incoherent (but otherwise a great idea), 55 DEPAUL L. REV. 253 (2005); Joseph H. King, Jr., Pain and Suffering, Non-economic Damages, and the Goals of Tort Law, 57 SMU L. REV. 163 (2004).

medical malpractice cases, which have been shown to reduce insurance costs; many states have adopted such measures.\textsuperscript{11}

A group of five scholars, performing empirical research using closed claim data from Texas, have written a series of papers that often challenge the conventional wisdom. Four of these papers in particular—Hyman \textit{et al.},\textsuperscript{15} Zeiler \textit{et al.}\textsuperscript{16} and Silver \textit{et al.}\textsuperscript{17} and Hyman, \textit{et al.}\textsuperscript{18} (“the Texas studies”) are the first to study the effect of insurance limits on medical malpractice litigation. Silver \textit{et al.} proposes that insurance limits act as a “\textit{de facto} cap on malpractice damages,”\textsuperscript{19} and notes that many plaintiffs settling for insurance

\textsuperscript{11} Mello, \textit{supra} note 2 at ___. For a comprehensive summary of available research, see Leonard J. Nelson, \textit{et al.}, \textit{Damage Caps In Medical Malpractice Cases}, 85 MILBANK Q. 259, 269 (2007) (“In short, the more rigorous empirical analyses consistently showed that damages caps reduced medical malpractice premiums. … [T]he issue is not whether caps reduce premiums but whether the reductions are closer to 6 percent or 25 percent.”). See also Daniel P. Kessler and Mark B. McClellan, \textit{The Effects of Malpractice Pressure and Liability Reforms on Physicians’ Perceptions of Medical Care}, 60 LAW AND CONTEMPORARY PROBLEMS 81, 98 (1997) (finding “substantially and statistically significant lower trend growth in [doctors’] real malpractice insurance premiums” within three years of reforms); Stephen Zuckerman, \textit{et al.}, \textit{Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums}, 27 INQUIRY 167 (1990) (caps on physician liability “significantly lower premiums”).

\textsuperscript{12} SLOAN & CHERKE, \textit{supra} note ___ at 107.


\textsuperscript{15} \textit{Haircuts}, \textit{supra} note ___.

\textsuperscript{16} Zeiler, \textit{supra} note ___.


\textsuperscript{18} David Hyman, \textit{et al.}, \textit{The Impact of the “Duty to Settle” on Settlement: Evidence From Texas} (forthcoming 2009) (“Impact”).

\textsuperscript{19} \textit{Id.} at 188.
limits are being undercompensated. Silver et al. concludes that “if policy limits essentially cap amounts collectible by claimants, statutory caps set above prevailing limits will have less impact on payments and premiums than one might predict.” In a series of blog posts, Silver goes farther and argues that the putative de facto cap makes the debate over damages caps irrelevant. But while a disproportionate number of settlements are indeed at or near policy limits, a substantial number of settlements are made above policy limits, and, in the Texas studies’ dataset, forty-seven percent of cases in which plaintiffs obtain verdicts above policy limits are settled after trial for amounts that are also above policy limits, while another twenty percent settle below policy limits, suggesting the likelihood of a strong appeal, rather than at limits, which would be more consistent with the hypothesis advanced by Silver, et al. that such post-verdict haircuts almost always reflect collectability concerns.

We build on the analysis of the Texas studies by considering more fully the effect of collateral litigation over an insurer’s failure to settle a case before trial. Under Texas law, a plaintiff who makes a settlement offer at or below settlement limits that is rejected has a potential cause of action against an insurer for the full amount of a judgment above policy limits for bad-faith refusal to settle. Punitive damages are possible. This is known in Texas as a Stowers action.

The Stowers issue is not unique to Texas. A Tampa-area hospital emergency room failed to diagnose Allan Navarro’s stroke after two negative CT-scans failed to show any

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20 Id.; accord Zeiler, supra note __ at s41.

21 Silver, supra note __ at 188.

22 Charles Silver, Tort Deform blog, “How Much Malpractice Coverage Does Your Doctor Have?”, http://www.tortdeform.com/archives/2007/05/how_much_malpractice_coverage.html (May 23, 2007) (“If people in our society focused on things that mattered, the debate over damages caps would end immediately. We already have them.”).

23 Zeiler, supra note __ at __.

24 Haircuts, supra note __ at 42.


26 Universal Life Insurance Company v. Giles, 950 S.W.2d 48, 54 (Tex. 1997) (punitive damages available, inter alia, if insurer is aware of possibility of “financial ruin” of insured).

27 Garcia, 876 S.W.2d at __.
problem. With 20/20 hindsight, a jury awarded $217 million in damages. The plaintiff’s lawyer, Steve Yerrid, promised to sue the insurance company, which, apparently thinking the case meritless despite the seriousness of the outcome, had offered only three hundred dollars in settlement. Florida, like Texas, has a closed claim database, and one of us retrieved the record of the closed claim in Navarro’s case: the insurer settled the case after trial for $4,766,781, well over the three-million-dollar policy limits. Similarly, when a Stamford, Connecticut, jury awarded $38.5 million to the family of a boy born with cerebral palsy, Professor Baker acknowledged to the press that the possibility of a bad-faith lawsuit against the insurer that refused a insurance-limit settlement offer would likely result in a post-trial settlement of the original case for an amount above the insurance limits.

Bad-faith insurance litigation obviously has a substantial effect on pre-trial negotiations and settlements in malpractice cases across the country, yet no paper has explored that effect and its implications for proposals for legal reform.

Articles by Kent D. Syervud and Charles Silver and a monograph by Kenneth Abraham model the incentives facing an insurer subject to possible litigation over breach of the duty to settle, but they do not explore how changes in legal rules (such as noneconomic


29 Kevin Pho, “The medicine behind the Navarro stroke case,” http://www.kevinmd.com/blog/2006/10/medicine-behind-navarro-stroke-case.html (last accessed ____, 2009) (“For every stroke/bleed that you do the neurology consult/MRI/LP workup on [after negative CT scans], there are thousands where the cause really would be a sinus headache.”).

30 Riddick, supra note _.


33 Zach Lowe, Malpractice Awards May Push Out Physicians, STAMFORD ADVOCATE, Feb. 24, 2008. “The average [Connecticut] obstetrician pays $170,000 a year for medical malpractice insurance; in 2000, the same state doctor paid about $63,000.” Id.

damages caps) affect the resulting litigation and settlement model. Seth J. Chandler developed a game-theory model to explore the effect that a duty to settle has on negotiations between liability insurers and their insureds, but Chandler does not address the effect that a Stowers-like action might have on plaintiffs’ incentives during pre-trial settlement negotiations.\textsuperscript{35}

In the medical malpractice context, the Texas studies all acknowledge the existence of Stowers or bad-faith refusal-to-settle claims in passing;\textsuperscript{36} Hyman, et al. ("Haircuts") notes that plaintiffs’ lawyers structure their settlement negotiations to maximize returns under Stowers;\textsuperscript{37} and Impact explores the effect of at-limits settlements on duration of the case and legal expenses, but the first three studies each fail to fully account for the resulting settlement dynamic in their analysis and conclusions about their Texas data.

This paper develops a game theory model of medical malpractice settlement and litigation in the shadow of insurance limits, Stowers, and other laws that permit lawsuits by injured plaintiffs against insurers alleging bad-faith failure to settle.

Part I of this paper gives a brief overview of the law of bad-faith insurance litigation, with particular attention paid to Texas, where the availability of Stowers claims would have affected settlements recorded in the Texas closed claims database that the Texas studies analyzed.

Part II of this paper explores the previous economic literature, with special attention to the Texas studies, including the blog arguments of co-author Charles Silver that these studies demonstrate that injured patients are systematically undercompensated in malpractice settlements.


\textsuperscript{36} Silver, \textit{supra} note \_ at 188; Zeiler, \textit{supra} note \_ at s31 n. 32 and s41; \textit{Haircuts}, \textit{supra} note \_ at 55.

\textsuperscript{37} \textit{Haircuts}, \textit{supra} note \_ at 55. Others have noted this tactic. \textit{E.g.}, Syervud, \textit{supra} note \_ at 1169-70 & n. 146 (noting that plaintiffs “attempt to ‘set-up’ insurers for excess liability claims under current duty-to-settle law” by making settlement offers within policy limits and citing cases); Russell G. Thornton, \textit{Settling a Claim Within Policy Limits}, 15(3) Baylor U. Med. Ctr. Proc. 336 (2002) (“A strategic purpose of a Stowers demand is to create tension between an insured and his insurance carrier in an effort to force a settlement or to obtain a settlement for a greater amount than the insurance carrier might otherwise be willing to pay.”); Karen O. Bowdre, \textit{Conflicts of Interest Between Insurer and Insured: Ethical Traps for the Unsuspecting Defense Counsel}, 17 Am. J. Trial Advoc. 101, 132-33 (1993).
Part III presents a game theory model of litigation and settlement of medical malpractice cases. We show that by varying the model to include the possibility of *Stowers* litigation, incentives are changed to substantially increase the likelihood that settlement offers will be made and accepted at insurance policy limits. Using a Monte Carlo simulation of thousands of malpractice cases, we also show that *Stowers* increases the expected return of plaintiffs in malpractice litigation, and that plaintiffs with low-merit cases are systematically overcompensated. Finally, we show that, given *Stowers* and insurance limits, the effect of noneconomic damages caps on settlements falls almost entirely on the low-merit cases, and that plaintiffs in those cases remain overcompensated even when caps are in place.

Part IV analyzes the public-policy implications of the Frank-Gryphon game-theory model and suggests further refinements to be pursued in future research.

I. The Cause of Action for Failure to Settle

Imagine a scenario in which a defendant has an insurance policy with a $1 million limit, and a plaintiff brings a suit against the defendant with a 90% chance of recovering $3 million. If the insurer has full control over the case, the excess liability will give it a conflict of interest with the insured defendant. If, as the jury is deliberating, the plaintiff offers to settle the case for $1 million, the insurer has the incentive to refuse the offer (because of the 10% chance that it will not have to pay any damages), while the defendant would want the insurer to accept the offer (because of the 90% chance that she will be liable for the excess $2 million).\(^{38}\)

Because of this conflict of interest, the law has for nearly a century\(^{39}\) imposed on insurers a “duty to settle” the cases of insured defendants within policy limits.\(^{40}\) The scope of this duty varies from state to state. In some states, the duty is merely one of good-faith evaluation of the settlement offer with due care. In others, there is an affirmative duty to settle claims where there is a likelihood of excess liability: the duty is considered a fiduciary duty, and the legal effect is very much like strict liability.\(^{41}\) Texas requires insurers to settle whenever the terms of a plaintiff’s demand within policy limits “are

\(^{38}\) For an expanded analysis of this dynamic, see Syervud, *supra* note ___ at 1127-30.

\(^{39}\) Syervud, *supra* note ___ at 1116 n. 4 (tracing duty to settle in United States back to 1914-1916).

\(^{40}\) *Id.* at 1126 (“Courts entertain the duty-to-settle claim because they believe that insurance companies will at times abuse their power over settlement by inappropriately refusing a demand and thereby exposing their insureds to liability in excess of the policy limits.”).

such that an ordinarily prudent insurer would accept it, considering the likelihood and
degree of the insured’s potential exposure to an excess judgment.\(^{42}\) The legal duty to
settle, in theory, better aligns the insurer’s interests with those of the insured, and some
states express the duty in terms of the carrier being required to evaluate a settlement
demand as if its own liability were unlimited.\(^{43}\) Breach of the duty to settle is sometimes
framed as “bad faith,” which is technically a misnomer because liability does not
anywhere require a showing of malice or recklessness.\(^{44}\)

The breach of the duty to settle can result in the insurer being liable not just for the excess
liability in the underlying malpractice case,\(^{45}\) but also for non-economic and punitive
damages.\(^{46}\) Punitive damages in particular can have a tremendously distorting effect.
One of the United States Supreme Court’s landmark decisions on punitive damages
involved a failure to settle.

In *Campbell v. State Farm*,\(^{47}\) Curtis Campbell had tried to pass six vans traveling ahead
of him on a two-lane Utah highway.\(^{48}\) An oncoming car driven by Todd Ospital at
80 mph\(^{49}\) swerved onto the shoulder to avoid Campbell.\(^{50}\) Ospital lost control of his
vehicle and collided with another car driven by Robert Slusher.\(^{51}\) Ospital was killed;
Slusher was permanently disabled.\(^{52}\) Campbell said the accident wasn’t his fault, and his
insurer, State Farm, refused an offer from Slusher to settle the case within Campbell’s
$50,000 policy limits.\(^{53}\) Slusher and Ospital’s estate collaborated to blame Campbell for


\(^{43}\) Bowdre, *supra* note __ at 134-35 & n. 160.

\(^{44}\) Sykes, *supra* note __ at 1348.

\(^{45}\) Syervud, *supra* note __ at 1116-17.

\(^{46}\) E.g., Ranger County Mut. Ins. Co. v. Guin, 723 S.W.2d 656 (Tex. 1987) (total
judgment of $450,000 for excess liability of less than half that amount).

\(^{47}\) 98 P.3d 409 (Utah 2004).


\(^{49}\) Brief for Petitioner, State Farm Mut. Automobile Ins. Co. v. Campbell, at 3 n. 2.

\(^{50}\) Campbell, 538 U.S. at 412.

\(^{51}\) *Id.* at 412-413.

\(^{52}\) *Id.* at 413.

\(^{53}\) *Id.* at 413.
the accident, and a jury agreed, finding him liable for $185,000. \(^{54}\) State Farm at first refused to pay any amount in excess of its policy limits, but the insurer eventually agreed to pay the judgment in full. \(^{55}\)

Slusher and Ospital never executed on their judgment against Campbell; instead they settled with him for a share of and control of Campbell’s “bad faith” lawsuit against State Farm. \(^{56}\) Though Campbell presented no evidence of physical or emotional distress, \(^{57}\) a jury awarded $2.6 million in “compensatory” damages, and another $145 million in punitive damages. \(^{58}\) Compensatory damages were reduced to $1 million by the trial judge, \(^{59}\) and, after the Supreme Court held the $145 million punitive award unconstitutional, \(^{60}\) the Utah Supreme Court, finding State Farm’s behavior to be “reprehensible,” reduced it to a 9:1 ratio of $9 million, \(^{61}\) and the U.S. Supreme Court refused further review. In conjunction with other awards and liability for attorneys’ fees, State Farm was eventually held liable for $11 million over its refusal to settle a case that resulted in an excess judgment of only $135,000. \(^{62}\)

Regardless of the legal standard articulated by courts in duty-to-settle cases, juries tend to apply a \textit{de facto} standard of strict liability due to the well-documented psychological phenomenon of hindsight bias. \(^{63}\) Courts give lip service to the idea that an insurer’s

\(^{54}\) Id. at 413.

\(^{55}\) Id. at 413-414.

\(^{56}\) Id. at 413-414.


\(^{58}\) State Farm v. Campbell, 538 U.S. at 415.

\(^{59}\) Id.

\(^{60}\) 538 U.S. 408.

\(^{61}\) Campbell v. State Farm, 98 P.3d at 418.

\(^{62}\) Id.

\(^{63}\) Karen O. Bowdre, \textit{Conflicts of Interest Between Insurer and Insured: Ethical Traps for the Unsuspecting Defense Counsel}, 17 Am. J. Trial Advoc. 101, 137 (1993) (“The insurance company should also remember that, if it loses on its gamble and is faced with a suit for failure to settle, its decision will be ‘second guessed’ by a jury with the benefit of hindsight.”); Sykes, \textit{supra} note ___ at 1373 (warning of drift to strict liability standard).
refusal to settle should be examined in the context of the facts known to it at the time.\textsuperscript{64} But in practice, juries sometimes impose excess liability unexpectedly in relatively low-merit cases. When that happens, juries in subsequent breach-of-duty-to-settle suits systematically overestimate the \textit{ex ante} likelihood of an over-limits verdict in the underlying case, often imposing noneconomic and punitive damages on an insurer that could not, in fact, have reasonably foreseen the unlikely trial outcome when it engaged in pre-trial settlement negotiations. An “honest judgment that the insured is not liable when facing a claimant with substantial damages may be insufficient to negate subsequent liability for failure to settle.”\textsuperscript{65}

Even academic commentators underestimate the effect that hindsight bias has on the expected outcomes of lawsuits alleging a breach of the duty to settle. Indeed, one of the co-authors of the Texas studies wrote a law review article arguing that allegations of a breach of the duty to settle should be permitted to reach a jury whenever the “maximum possible judgment” was greater than policy limits\textsuperscript{66}—which effectively means every time a judgment is issued greater than policy limits,\textsuperscript{67} as well as an occasional case in which the defendant wins at trial against someone who claims severe injuries.

An insurer therefore must seriously consider an offer to settle any tort lawsuit at or below policy limits before trial due to the high potential cost of a \textit{Stowers} action. Even if the expected value of the underlying case is below the insurer’s policy limits, a small chance that a jury will return an over-limit verdict can generate an expected \textit{Stowers} liability that outstrips the value of the underlying case. An observer who examines an insurer’s risk-neutral settlement decision without considering the effect of the \textit{Stowers} mechanic on the insurer’s wealth-maximization curve would be surprised to see results that look as though the insurer is extraordinarily risk-averse. And some courts have suggested that insurers should adopt the risk-aversion of their insureds in fulfilling their duty to settle, which should exaggerate this effect further.\textsuperscript{68}

An observer who fails to consider the effect of expected \textit{Stowers} punitive and excess damages, and who assumes risk-neutrality on behalf of insurers when evaluating tort

\textsuperscript{64} \textit{Id.} at 135-36; \textit{e.g.}, \textit{Commercial Union Ins. Co. v. Liberty Mut. Ins. Co.}, 426 Mich. 127, 393 N.W.2d 161, 166 (1986) (“A microscopic examination, years after the fact, made with the luxury of actually knowing the outcome of the original proceeding is not appropriate.”).

\textsuperscript{65} Bowdre, \textit{supra} note __ at 138-39; see, \textit{e.g.}, \textit{Rova Farms Resort}, 323 A.2d at 504; \textit{Shearer v. Reed}, 428 A.2d 635, 638 (Pa. Super. 1981).

\textsuperscript{66} Silver, Va. L. Rev.

\textsuperscript{67} Syverud, \textit{supra} note __ at 1599-1600.

\textsuperscript{68} Syverud, \textit{supra} note __ at 1146-47; \textit{Merritt v. Reserve Ins. Co.}, 34 Cal. App. 3d 858, 869 n.2, 870, 110 Cal. Rptr. 511, 518 n.2, 519 (1973) (dicta). \textbf{Other cases TK?}
settlements, will also overestimate the legal merits of the underlying claims that those insurers settle before trial. It is a mistake to assume that a settlement demand and acceptance at the amount of an insured’s policy limits necessarily reflects the parties’ belief that the expected value of an underlying malpractice case is greater than or equal to those limits.

Return to the hypothetical at the beginning of this section, but assume instead that the plaintiff has a 25% chance of success of proving liability on $3 million in damages rather than a 90% chance of success. If the plaintiff makes a settlement demand of the $1 million policy limits under these circumstances, her offer will be materially higher than the $750,000 expected value of the case. But there is still a conflict of interest between the defendant and the insurer: a risk-averse defendant will wish for the insurer to accept the offer: the settlement creates a 100% chance that she will face no liability versus a 25% chance of $2 million excess liability if the case goes to trial. If the risk and size of Stowers liability is large enough, a risk-neutral insurer may engage in behavior that, absent Stowers, appears to be risk-averse and agree to the $1 million settlement demand.

Thus a settlement at policy limits may indicate that a plaintiff has been forced to artificially compromise a strong claim due to the uncertainty of collecting an excess judgment, but it may just as easily indicate that a plaintiff with a lower-value claim has nonetheless obtained a settlement at policy limits because of the insurer’s wish to avoid the possibility of a Stowers suit. The quantitative data on settlements in Texas therefore cannot reveal the objective qualitative value of a medical malpractice case because of the confounding factor of Stowers liability. That a malpractice plaintiff settles at policy limits does not necessarily mean that her claim is worth more than policy limits; it easily may be worth less.

Finally, Texas and other states refuse to impose a duty to settle on an insurer when a settlement demand is made above the insurance policy limits. There is therefore a feedback effect: the amount of the settlement demand will affect the expected value of the case. As Figure 1 below shows, this effect results in a discontinuity in the function expressing the expected value of the case, ceteris paribus, as the settlement demand increases:

69 Garcia, 876 S.W.2d at 849; see also, e.g., Landie v. Century Indem. Co., 390 S.W.2d 558, 563 (Mo. App. W.D. 1965).
Figures 1 and 2 are inspired by Chandler. For simplicity’s sake, they measure wealth rather than utility and reflect risk-neutral parties, but neither simplification affects the analysis that follows. With the help of Stowers or other bad-faith opportunities, many cases will settle at insurance limits because the plaintiff will not offer less than limits, while the insurer will not, pre-trial, offer to pay more than limits. In the absence of a bad faith cause of action for failure to settle within policy limits, the plaintiff would choose trial for all settlement amounts up to the expected value of trial, and will choose settlement for all higher amounts. With the addition of an option to pursue (an assigned or original) bad-faith claim, however, the plaintiff may make other choices, depending on the value of the bad-faith claim at any given settlement amount, which will be a function of the probability of success at trial, the settlement offer, and the policy limits.

Figure 1 thus shows that for some parameter values, the introduction of bad faith will cause the plaintiff to refuse to settle for any amount below policy limits, even if the offered amount exceeds the expected value of the underlying case.

Figure 2 shows, conversely, that within the same parameters, insurers will be willing to pay no more than settlement limits pre-trial; the lack of bad-faith liability when the
settlement offer is more than policy limits will cause insurers to choose to go to trial rather than settle if the plaintiff demands more than settlement limits pre-trial:

**Figure 2**

![Insurer's Payoffs With Stowers](image)

Many cases will land in the discontinuity and thus settle for insurance limits. In fact, every case for which the following inequality holds should settle exactly at limits: EV \( \text{Trial} + \text{EV Stowers Claim} > \text{Policy Limits} > \text{EV Trial} \). We would therefore expect to see a disproportionate number of cases settle for settlement limits, even if none of the underlying cases have an expected value greater than settlement limits. If the defendant’s assets are sufficiently small or otherwise protected by law, the settlement demand at insurance limits might well reflect the global maxima for expected wealth-maximization for a plaintiff.

**II. Previous Literature**

Kent D. Syverud’s 1990 article, *The Duty to Settle*, added a new dimension to the policy debate surrounding bad faith liability by observing that tort litigation and the liability insurance industry have a symbiotic relationship. Not only do changing conditions in the legal arena affect the kind and amount of liability insurance that potential defendants
purchase, products and prevailing practices in the liability insurance market in turn affect which suits are brought and whether (and for how much) they settle.70

Syverud highlights several sources of possible conflicts of interest between liability insurers and their insureds. First and most famously, liability limits may create conflicts between the insurer and insured because the presence of limits may incentivize insurers to litigate cases that their insured defendants would prefer to settle.71 Second, conflicts may arise due to the customary allocation of defense costs to the insurer rather than the insured, which may motivate the insurer to quickly settle cases that the defendant would prefer to litigate.72 Third, Syverud cites differences in risk aversion between insurers and their insureds.73 Although such differences are what make insurance a viable industry, they may sometimes lead risk-neutral insurers to litigate cases that the insured would rather settle.74 Fourth, Syverud points to the insurers interest in strategic bargaining as a possible source of conflict of interest.75 Finally, Syverud discusses conflicts that may arise because the insurer or insured have additional stakes in the outcome of the case, such as reputational concerns.76

Syverud observes that not all conflicts involve an insurer that has less interest in settling a claim than does its insured, and yet a “duty to settle” doctrine addresses only the subset of conflicts that take this form. In cases in which an insured faces a large deductible or, as in the case of professional malpractice suits, reputational costs associated with any settlement, or in cases that would be expensive for the insurer to defend at trial, the insured may actually prefer to try a case that the insurer wishes to settle. Nonetheless, there is no judicially-created “duty to litigate” doctrine to prevent the insurer from settling the cases over which it has contractual control, and Syverud reasons that this may be true in part because a duty to litigate would run counter to the general judicial policy of minimizing overcrowded dockets by promoting settlement whenever possible.77

Syverud acknowledges that a duty to settle will ameliorate some conflicts between insurers and insureds, but argues that current doctrines, based on unclear standards

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70 Syverud, supra note ___ at 114-5.
71 Syverud, supra note ___ at 1127-39.
72 Syverud, supra note ___ at 1139-45.
73 Syverud, supra note ___ at 1145.
74 Syverud, supra note ___ at 1146.
75 Syverud, supra note ___ at 1149-57.
76 Syverud, supra note ___ at 1158-62.
77 Syverud, supra note ___ at ______.
described variously as “negligence,” “bad faith,” or failure to “give equal consideration” to an insured’s interest in settlement, are costly. The costs of current duty to settle doctrines include not only the direct costs of litigating bad faith claims, but also the cost of documenting the process of claims adjustment and settlement in anticipation of a possible bad faith suit.

To avoid the cost of over-documenting the settlement process while preserving the benefits of a duty to settle, Syverud proposes a modified form of strict liability according to which an insurer that turns down a settlement offer within the insured’s coverage limit will be automatically liable for any excess judgment unless the insurer offered to settle the suit for an amount set by a neutral arbiter such as a mediator or settlement judge. He observes that such neutral valuations routinely take place in many jurisdictions due to court rules that require pre-trial dispute resolution efforts.

In a 1991 comment on Syverud’s article, Charles Silver objected to Syverud’s apparent claim that policy limits created no conflict of interest in cases in which the expected value of a claim at trial is within those limits. Silver pointed out that, even in such cases, a methodical insurer will be willing to pay less in settlement than the expected value of the claim as long as the largest possible judgment in the case exceeds the policy limits because the insurer, in calculating it’s own expected value of going to trial, will truncate the values of possible verdicts on the right tail (the high end) of the distribution of possible trial judgments, while a unitary defendant would not. For this reason, Silver argued, bad faith failure-to-settle cases should reach a jury as long as the largest possible judgment foreseeable by the insurer at the time that a settlement offer is tendered and refused exceeds the limits of its policy.

Syverud accepted as a helpful clarification Silver’s argument that the presence of insurance limits may give rise to conflicts of interest even in cases in which the expected judgment does not exceed those limits. However, he argued that Silver would allow virtually any bad faith claim to get to a jury because plaintiffs attorneys easily can

78 Syverud, supra note ___ at 1163-8.
79 Ibid.
80 Syverud, supra note ___ at 1168-71.
81 Syverud, supra note ___ at 1170-1.
83 Silver, A Missed Misalignment, supra note ___ at 1592-3.
84 Silver, A Missed Misalignment, supra note ___ at 1594.
manipulate the amount of the maximum possible verdict when they draft complaints. In the end, Silver stated that he was “attracted” to Syverud’s proposal of a strict liability duty that applies only in cases in which the insurer declines to offer an amount set by a neutral arbiter, due in part to the systematic tendency of juries to exaggerate the ability of insurers to correctly predict the outcome of a case.

Seth J. Chandler contributed a rigorous article examining the economic consequences of the duty to settle in 1993. His article developed a three-player game between a Tortfeasor, an Insurer, and a Victim in order to explore the effects of a legal duty to settle on the outcome of the underlying tort claim, on the degree to which victims are compensated for their injuries and on the price of liability insurance. Chandler presented four findings based on his model. First, a duty to settle increases the rate at which cases are settled rather than tried. Second, a duty to settle will, on balance, increase the amount for which cases settle, with the result that especially generous remedies for breach of this duty will occasionally lead to overcompensation of plaintiffs. Third, a duty to settle will result in higher liability insurance premiums. Fourth, a duty to settle is likely to reduce the care that potential Tortfeasors (physicians, in the medical malpractice context) take to avoid injuring potential Victims, especially if the remedies for breach of the duty to settle are generous.

Chandler describes an initial settlement game that can lead to any of four subgames depending on which, if any, party rejects the last offer made by any player. The “bad faith subgame” is reached only if the Insurer declines a settlement offer approved by both Tortfeasor and Victim, and in Chandler’s simplified model, the Victim’s payoffs (and therefore his ex ante incentives during the settlement game) are never affected by the


86 Silver, *A Missed Misalignment*, supra note ___ at 1596.


88 See Chandler, *supra* note ___.

89 Chandler, *supra* note ___ at 742-3.

90 Chandler, *supra* note ___ at 744.

91 Ibid.

92 Ibid.

93 Ibid.

outcome of the bad faith subgame.95 Chandler acknowledged that knowledgeable readers might be “troubled” by his failure to incorporate the possibility that the Tortfeasor and Victim would agree, as they did in Campbell v. State Farm,96 to assign the bad faith cause of action to the Victim in a post-trial settlement.97 He observes that such claim assignments occur “quite frequently.”98 Chandler also fails to consider how the availability of a Stowers action would affect the payoffs of a Victim in his version of the bad faith subgame. Chandler points out, however, that this omission does not undermine any of his four findings and in fact bolsters his argument that the availability of generous remedies for breach of the duty to settle will reduce the incentives of the potential Tortfeasors to meet the legal standard of care.99 Nonetheless, the limitations of Chandler’s model prevented him from considering the possibility that an assigned claim or Stowers action might affect the minimum amount that the Victim would be willing to accept in a pre-trial settlement.

Alan O. Sykes considered several ways in which the duty to settle could affect a plaintiff’s bargaining power in a 1994 article.100 First, a duty to settle may increase the percentage of any judgment that is collectable by the plaintiff if the defendant would otherwise be bankrupted by an over-limit verdict.101 If the expected value of going to trial thereby goes up, then the plaintiff will demand more money in settlement. Second, the availability of punitive or noneconomic damages for breach of the duty to settle can increase the plaintiff’s bargaining power by driving up the defendant’s expected cost of going to trial.102 This is true even if there is no Stowers liability and the plaintiff’s maximum trial payoff is equal to what it would be in the absence of a duty to settle. Finally, in some kinds of cases the duty to settle might induce a defendant to engage in costly settlement negotiations that it would otherwise find it economical to avoid.103 While Sykes thus argues that the insurer’s duty to settle may increase a plaintiff’s bargaining power in certain subsets of cases, he does not consider the possibility of a

95 Chandler, supra note ___ at 757-8.
96 Campbell, 538 U.S. at 413-14.
97 Chandler, supra note ___ at n. 46.
98 Chandler, supra note ___ at n. 46.
99 Chandler, supra note ___ at n. 46.
100 Alan O. Sykes, Judicial Limitations on the Discretion of Liability Insurers to Settle or Litigate: An Economic Critique, 72 TEXAS L. REV. 1345, 1365-70 (1994).
101 Sykes, supra note ___ at 1367-8.
102 Sykes, supra note ___ at 1368.
103 Sykes, supra note ___ at 1368-9.
Stowers action in his analysis, nor does he explicitly discuss the possibility that an insured’s bad faith cause of action could be assigned to a successful plaintiff, thus raising the minimum amount that she would accept in pre-trial settlement.

Neil Vidmar et al., using Florida data, looked at post-verdict and pre-suit settlements, but did not acknowledge the issue of bad-faith insurance litigation.\textsuperscript{104}

David A. Hyman, et al., performed an empirical analysis of the differences between trial verdicts and post-trial settlement amounts in medical malpractice cases using a database comprised of closed claims in the state of Texas in order to better understand the causes of so-called “haircuts” – the difference between post-trial settlements underlying trial verdicts in cases in which the settlement amount is lower.\textsuperscript{105} Hyman, et al. determined that haircuts are common in medical malpractice cases: 75 percent of cases in which a trial verdict was rendered were settled for some amount below that verdict (adjusted for pre-trial and post-trial interest).\textsuperscript{106} Another 20 percent of these cases were settled for an amount at or near the amount of the verdict, and 5 percent of plaintiffs received settlements that were higher than their verdict at trial.\textsuperscript{107}

Hyman et al. observe that haircuts are explained in part by the always-present possibility that a trial verdict will be reversed on appeal.\textsuperscript{108} Verdicts in weaker cases would receive larger haircuts than others to the extent that this factor influences post-trial settlement negotiations, but no independent measure of case strength is available for Hyman et al. to use in order to measure this effect. Instead, they focus on the frequency with which haircuts coexist with factors including judicial reductions in trial verdicts (either remittitur or JNOV), punitive damages caps, special caps on damages in wrongful death suits, and a verdict that exceeds the limits on a defendant’s liability insurance policy.\textsuperscript{109}

Hyman et al. conclude that policy limits are “the most important factor in explaining haircuts.”\textsuperscript{110} They observe that the size of haircuts as a percentage of underlying trial


\textsuperscript{105} See Haircuts, supra note ___.

\textsuperscript{106} Haircuts, supra note ___ at 5-6.

\textsuperscript{107} Id.

\textsuperscript{108} Haircuts, supra note ___ at 52.

\textsuperscript{109} Haircuts, supra note ___ at 34-47.

\textsuperscript{110} Haircuts, supra note ___ at 4.
verdicts increases more sharply for cases with above-limits verdicts than it does for cases with below-limits verdicts. They also note that 31 percent of cases in which above-limits verdicts were handed down settle after trial for an amount within 5 percent of the applicable policy limits, creating a visible spike in the distribution of post-trial settlement amounts.

However, some of Hyman et al.’s other findings cast doubt on their conclusion that policy limits, though clearly a settlement magnet for some reason, “effectively cap recovery,” either because of the great difficulty involved in collecting the excess judgment amount from a physician’s personal assets or due to a civilized decision by plaintiffs lawyers to avoid seeking “blood money.” Most notably, Hyman et al. found that 47 percent of all cases involving trial verdicts in excess of policy limits were settled for amounts that also exceeded policy limits. In nearly half of all excess-verdict cases, then, collectability concerns were not overriding enough to convince plaintiffs to settle for an amount equal to the policy limits. Moreover, insurers, rather than physicians, usually agreed to pay the portion of the settlement exceeding the contractual limits of the policy. As Hyman et al. note, the frequency with which insurers voluntarily pay judgment amounts that exceed their contractual liability suggests that, in some cases, insurers are effectively settling future Stowers claims in the form of voluntary over-limits settlement payments.

Zeiler et al., also using the Texas Closed Claims Database, examine the insurance limits and malpractice payments of paid claims that closed in 1990-2003. 98.5 percent of claims were settled within policy limits, and 16 percent of claims were between 95 percent and 100 percent of policy limits, with most of those at policy limits. The “spike” at limits increases as policy size falls. Zeiler et al. finds that real insurance limits are declining over time. In 2003 dollars, primary carriers paid $2.4 billion at or below limits, while $121.1 million was paid above limits by primary and excess carriers as well as the insured doctors, who contributed just $11.8 million to that total, and even then, in just a few cases per year. Zeiler et al. concludes, “Even patients with strong claims,

111 Haircuts, supra note ___ at 40-1.

112 Haircuts, supra note ___ at 53.

113 Ibid.

114 Haircuts, supra note ___ at 39.

115 Haircuts, supra note ___ at 42.

116 Haircuts, supra note ___ at 55.

117 Zeiler, supra note ___ at s10.

118 Id. at s25.
such as those who win at trial, must often be satisfied with physicians’ primary policy limits, even when this amount only partially compensates the patient’s damages.”  

However, Zeiler et al. does not provide the data to back up this statement: there is no accounting in the paper of how often primary policy limits are a constraint on total settlement in “strong” cases. While Zeiler et al. acknowledges that “pressure from below” may have some effect on the spike at policy limits, the paper does not expressly suggest that plaintiffs’ litigation strategy might result in at-limits settlement. Silver et al. summarizes Zeiler et al.

Writing separately at the Tort Deform blog in a post titled “‘A Lot Off the Top’: Jury Verdict Haircuts,” Charles Silver draws further conclusions from the findings in Haircuts. Observing that “the biggest [trial] verdicts go to the people whose injuries are the worst,” he argues that “the tort system requires the neediest patients to give up the most” in the form of a post-trial haircut. Silver mentions three causes of haircuts: statutory caps, judicial review for excessiveness, and the amount of liability coverage possessed by the defendant, the last of which is the most significant of the three. He concludes by suggesting that doctors be required to purchase higher-limit liability insurance policies in order to combat the perceived problem of policy limits effectively capping damages.

A month later, Silver offered some additional analysis of the research in Haircuts in a blog post titled “How Much Malpractice Coverage Does Your Doctor Have?” in which he bluntly concluded that “as a practical matter, payments are capped at the limits of doctors’ insurance policies.” Silver cites the spike in settlements that occur at policy limits as evidence that insurance policies cap recoveries even when patients deserve much more. Silver argues that “state laws, trusts, limited partnerships, and other devices” insulate physicians’ assets and make it impractical to pursue recoveries from the personal assets of medical malpractice defendants. Silver concludes that doctors’

119 Id. at s41.
120 Id. at s40.
121 Silver, supra note __.
123 Ibid.
124 “How Much Malpractice Coverage Does Your Doctor Have?” supra note __.
125 Ibid.
126 Ibid.
assets are so well protected that statutory caps on damages are completely irrelevant: “If people in our society focused on things that mattered, the debate over damages caps would end immediately. We already have them.”

III. The Model

A. Basic Framework

We begin with the simplest possible model. Assume one plaintiff, one defendant, fixed damages $D$ and fixed noneconomic damages $N$, probability of winning at trial $p$, and insurance limits $L$. In such a model the expected judgment $E(J)$ is equal to $p(D+N)$.

$$E(J) = p \times (D+N)$$

The variable $p$ serves as an approximation of the merit of the case, as judged by a fact-finder. In this world of perfect information, no one ever goes to trial, and risk-neutral parties will quickly reach settlement $Y$

$$Y = E(J) \text{ if } E(J) \leq L.$$  

Strong cases settle for more than weak ones—indeed, the settlement amount reflects the strength of the case.

If there is a cap of non-economic damages at $N^*\leq N$, then

$$Y = E(J) = p \times (D+N^*)$$

and the bulk of the effect falls upon those with strong cases with high $p$: 
The question becomes what happens when $E(J) > L$. The Texas studies found a cluster of settlements at or near $L$. The Texas studies suggest that there are polite reasons not to seek more than $L$, and Silver suggests that all settlements at insurance limits reflect highly meritorious claims. Silver’s hypothesis is reflected in Figure 4, in which a kink on the graph where $Y = L$ reflects under-compensation for those with the strongest cases.

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127 Silver, supra note __ at 189;

128 “How Much Malpractice Coverage Does Your Doctor Have?” supra note __.
Silver, *et al.* suggests that there are polite reasons not to seek more than $L$. But this hypothesis contradicts both what we know about the incentives of attorneys and the empirical data. Are we to believe that trial lawyers, out of the goodness of their heart, refuse to seek more than $L$? This seems improbable: the insured doctor is likely to have substantial assets, trusts provide limited protection, and the plaintiff attorney’s fiduciary duty to her client requires her to zealously pursue the doctor’s assets. It is more likely that insurance companies aggressively pursue settlement after an above-limits verdict. In *Campbell*, for example, the mere threat of execution on a judgment resulted in $11$ million in additional liability for an underlying claim a tiny fraction of that size.

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130 *But see* Zeiler, *supra* note ___ at s39 (giving evidence that trial lawyers do not pursue doctors’ assets as a rule).

131 Texas does provide relatively favorable debtor protection laws. Zeiler, *supra* note ___ at s39.

132 *Cite to Model Code on zealous representation.* *Cf.* are there legal malpractice cases against lawyers for failing to seek enough?
Even a risk-averse plaintiff would be motivated to seek a settlement between \( E(J) \) and \( L \). But then we need an explanation of why it is that so many cases do settle at exactly or just under \( L \).

Moreover, the observed data in the Texas studies shows many settlements for amounts greater than insurance limits. The Texas studies’ hypothesis that insurance limits are a *de facto* cap cannot explain these settlements, and there is also no evidence in the database to support an inference that all settlements at \( L \) reflect judgment-proof defendants.

For the model to be consistent with the empirical data, it must generate both a cluster of settlements at \( L \) as well as a significant number of settlements greater than \( L \). Our basic framework model is too simple, and fails one or both tests.

We believe that something is missing from this model, and that what is missing is a full recognition of the effect of *Stowers* in the analysis.

**B. Frank-Gryphon Model**

We now add two factors to the basic framework that we previously introduced. First, we add an error measure \( \varepsilon \) to each of the parties’ assessment of the likelihood of success at trial. As others have demonstrated, an error term is a necessary component of a model where some cases settle and other cases go to trial; trials occur when the parties are too optimistic relative to one another.\(^{133}\)

\[
p_p = p + \varepsilon_p \\
p_d = p + \varepsilon_d
\]

Next, we add a *Stowers* factor \( S \), which is equal to expected *Stowers* recovery given a victory at the underlying medical malpractice trial.

Finally, we create a game theory model around these additional factors. First, the plaintiff decides whether to bring a case. We assume the plaintiff will only bring a case if \( p_p > 0 \).\(^{134}\)

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\(^{134}\) Notwithstanding this simplification, the model is robust enough that it works just as well if we assume that the plaintiff will bring a zero-value case to test whether the defendant is sufficiently pessimistic to bring her own offer to the table.
At the next stage of the game, the plaintiff makes an offer $O_p$ to the insurance company. The offer takes into account the possible expected value of a *Stowers* award if the case goes to trial. But the plaintiff must also take into account the fact that if its offer is not within insurance limits, then $S = 0$.\(^{135}\)

$$O_p = f(p_p, D, N, S, L)$$

Function $f$ is discontinuous; so long as $S$ is large enough, the plaintiff is always going to prefer $O_p = L$ over $O_p > L$.

$$O_p = f(p_p, D, N, S, L) = \min (p_p \times (D+N+S), L)$$

The defendant’s insurance company evaluates that $O_p$ against its own $O_d$

$$O_d = g(p_d, D, N, S, L) = \min (p_d \times (D+N+S), L)$$

If $O_d \geq O_p$, the parties will settle.$^{136}$ If the plaintiff is more optimistic than the defendant is pessimistic, $O_d < O_p$, and the parties will go to trial.

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\(^{135}\) *Garcia*, 876 S.W.2d at 849.

\(^{136}\) The model conservatively assumes the parties will settle at the lower of the two values, but the model works equally well with any settlement number in the range between $O_d$ and $O_p$. 

26
At trial, the judgment $J$ comes back as either $D + N$ or 0, with the likelihood of the favorable plaintiff judgment equal to $p$. If $J > L$, the plaintiff’s expected value $V$ of settlement equals

$$E(V) = D + N + S$$
C. Monte Carlo Simulation

A Monte Carlo simulation “is a statistical technique that uses randomly generated inputs from probability distributions to model a real-world process.”\textsuperscript{137}

We programmed a Microsoft Excel spreadsheet\textsuperscript{138} to do a Monte Carlo simulation of 1000 “games” for individual levels of $p$ to see what the average recovery is for each level of $p$ to test our hypothesis. In each game, we generated two random values of $\varepsilon$, with a mean of 0 and a standard deviation of 0.155. In successful tests of robustness, we also varied the fixed values of $D$, $N$, and $S$, (and the standard deviation of $\varepsilon$); we also ran robust Monte Carlo simulations relaxing some of the game rules regarding which party makes the first settlement offer without change to our findings.

Figure 8

\[
p = 0.26, \quad D + N = 2, \quad S = 2, \quad L = 1
\]
\[
\mu = 0.83 \textsuperscript{139}
\]

\textsuperscript{137} CITE.

\textsuperscript{138} The spreadsheet is available on-line at TK.

\textsuperscript{139} The conditional mean of cases that were brought was 0.86.
A direct comparison to the Texas data is not possible because of the lack of qualitative data to generate a similar mix of cases, but the model produced results seemingly consistent with the observed Texas data. The modal settlement (not including trial losses) was at insurance limits in a number of instances where the underlying expected value of the case \( (p \times (D + N)) \) was below insurance limits. Moreover, there were cases in which the defendant was overly optimistic and faced a judgment above insurance limits.

\[ p = 0.7, \quad D + N = 1, \quad S = 0.5, \quad L = 1 \]
\[ \mu = 0.96 \]

Figure 9

\[ p = 0.3, \quad D + N = 3, \quad S = 3, \quad L = 1 \]
\[ \mu = 1.06^{140} \]

A direct comparison to the Texas data is not possible because of the lack of qualitative data to generate a similar mix of cases, but the model produced results seemingly consistent with the observed Texas data. The modal settlement (not including trial losses) was at insurance limits in a number of instances where the underlying expected value of the case \( (p \times (D + N)) \) was below insurance limits. Moreover, there were cases in which the defendant was overly optimistic and faced a judgment above insurance limits.

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140 The conditional mean of cases that were brought was 1.08.
limits. There were also cases in which the plaintiff was too pessimistic and failed to bring a case that had actual value. (This is an artifact of the game model, and changing the game so that an aggressive plaintiff still brings a case that it believes to be valueless and seeks to settle where the defendant’s valuation of the case is greater than zero does not affect our conclusions. Such an aggressive plaintiff will recover more, but we recognize that that is solely an artifact of the model, and we do not have empirical qualitative data to show that it is profitable to bring a case that the plaintiff believes to be valueless.\textsuperscript{141})

Figure 10

\[
p = 0.26, D + N = 2, S = 2, L = 1 \text{ (aggressive plaintiff)}
\]

Most surprisingly, we found that the expected value $E(V)$ for plaintiffs had the following characteristic:

For all $J > L$ if $E(S) > 0.2 \times L$ then

there exists a $p^* < 1$ such that $E(V) | p = p^* > E(V) | p = 1 \geq L$

Perversely, so long as there is a chance of recovery via \textit{Stowers}, plaintiffs bringing suit with lower-merit cases would outperform plaintiffs with higher-merit cases, holding all other values constant. Plaintiffs in higher-merit cases would still offer an undercompensating settlement at insurance limits to preserve the possibility of a \textit{Stowers} judgment, which the defendants would gladly agree to. But the lower-merit cases have the possibility of settlement negotiations falling through because of an overly optimistic valuation by the insurer, followed by the possibility of recovering both an above-limits

\textsuperscript{141} However, the Harvard study showed that 13 to 16 percent of settlement payouts were for meritless cases. Studdert, \textit{supra} note __.
judgment and Stowers claim. This feature was robust for a variety of values of \( D + N > L \) and \( S \). \(^{142}\)

Notably, this contradicts the claim often made by trial lawyers that the contingent fee system deters bringing low-merit suits. \(^{143}\) Rather, when damages are likely to exceed insurance limits if awarded, the malpractice world more closely resembles trial-lawyer Mark Lanier’s description of mass tort litigation: a lawyer need only win one suit out of three. \(^{144}\) In fact, a malpractice lawyer in a Stowers jurisdiction will, under some circumstances, do better litigating cases with a one-in-three chance of success than litigating higher merit cases with similar expected values.

Figure 11

![Expected value at different levels of p](image)

The line of crosses in Figure 11 represents the basic-framework model (and the implicit model of the Texas studies) with perfect information, \( D = 1.75 \) million, \( N = 1.25 \) million, no Stowers liability, and a de facto cap at insurance limits \( L = 1 \) million. For

\(^{142}\) The 0.2 is a simplifying artifact. There are runs of the model where \( S < 0.2 \times L \) where the observation holds, such as when \( D \) and/or \( N \) are very high.

\(^{143}\) See note __, supra.

\(^{144}\) Brenda Sapino Jeffreys, *Hundreds of Cases Hang in Balance as First Federal Vioxx Trial Begins*, TEXAS LAWYER, November 29, 2005 (quoting Mark Lanier as saying “In mass torts, it’s like batting in baseball. The plaintiffs are great if they bat .333.”).
\( E(V) \leq L \), the plaintiff is fairly compensated with a settlement of \( E(V) \); for \( E(V) > L \), the plaintiff is undercompensated with a settlement of \( L \).

We add Stowers liability \( S \) to the simulations represented by the other lines. The line of diamonds represents \( D = $1.75 \) million, \( N = $1.25 \) million, \( S = $6 \) million, and \( L = $1 \) million. By reducing \( S \) to $3 million, the line of squares shows that \( E(V) \) peaks at a higher level of \( p \), but is still declining for \( p > p^* \).

Introducing Stowers liability into the model causes the payoffs associated with low-merit claims to increase dramatically. A low-merit case with only a ten percent chance of recovering $3 million in damages at trial is now worth more than double the expected $300,000 because of the possibility of a settlement breakdown, success at trial, followed by Stowers recovery.

At the lowest values of \( p \), \( E(V) \) increases much faster than \( p \times (D + N) \), overcompensating such plaintiffs, reaching a maxima at \( p^* \), and then either asymptotically approaching or actually reaching \( L \), as \( p \) increased above \( p^* \), often undercompensating the high-\( p \) plaintiffs. Settlements at \( L \) were not uncommon for low-merit cases.

We next run a simulation in which we cap \( N \) at $250,000, but hold Stowers liability constant. The line of triangles in Figure 11 represents the results of this simulation. As readers can see, capping \( N \) results in a wealth-transfer from plaintiffs to doctors/insurers, but (1) the entire burden falls on plaintiffs with low-\( p \) cases; (2) plaintiffs with medium-\( p \) cases counter-intuitively do slightly better with the damages cap; and (3) plaintiffs with low-\( p \) cases remain overcompensated relative to the expected value of their cases in the absence of Stowers while plaintiffs with high-\( p \) cases remain undercompensated. This result remains robust varying \( N \) while keeping a variety of values of \( D \) and \( S \) fixed.

To the extent one believes that \( p \)—the probability of success before a jury—correlates with the underlying merit of a case, noneconomic damages caps have their greatest effect on low-merit cases.

**D. Limitations of the Model**

This is still a relatively simple model: it assumes instantaneous and frictionless rulings, rather than an expensive process that may take several years with substantial fees for attorneys and medical expert witnesses. We assume that the trial court’s judgment is 100% accurate, and that there will be no appeal. We therefore do not consider the issue of post-trial settlement. In real life, the risk that a favorable judgment will be struck on appeal one reason why so many large judgments are settled so seemingly favorably, but it is impossible to estimate the size of this effect without qualitative data that the Hyman “haircut” study does not have.

Trials take years. We make no effort to compare the value of a settlement in the hand with a judgment several years in the future that is stayed by appeal. On the other hand,
Texas has relatively generous post-judgment interest rates with a floor of 5%. Expanding the model to consider the time-value of money from early settlement would be useful in adjudging the merits and effects of the so-called “early offers” reform. As Zeiler notes, such time-value can also result in settlements below policy limits by virtue of aggressive negotiating by insurers.

The model assumes that the parties to the malpractice case consist of one plaintiff versus one defendant. In real life, it is quite common for many parties to be sued. For example, a doctor who commits malpractice with the use of a drug may be a shallow pocket compared to the pharmaceutical manufacturer.

We assume that there is no dispute between insurers and their insureds over duty to defend or indemnify; then again, such disputes are generally not at issue in medical malpractice cases.

We assume that damages are known and certain. In reality, juries’ awards of noneconomic damages vary widely, even when the underlying facts of the case are identical, and economic damages are often contested. Moreover, the risk of punitive damages in a jury verdict is very real. We have also simplified the Stowers litigation process by assuming that the parties have perfect information and will agree to Stowers damages, though damages for alleged bad-faith refusal to settle also vary enormously, being often based on arbitrary figures for emotional distress and punitive damages.

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145 Texas Finance Code § 304.003(c).


147 Zeiler, supra note __ at s39-s40. For the viewpoint that insurers are intentionally recalcitrant to settle high-merit cases, see Feinman.


149 Thornton, supra note __ at 33__.

150 CITE.

151 Zeiler, et al., supra note __ at s19-s20 (“In our data set, 4.3 percent of malpractice cases with jury verdicts contained punitive awards.”).
We also assume an identity of interests between the defendant and the insurer and that the insurer’s decision to settle is simultaneously the defendant’s decision to settle. This is an oversimplification, but interests can diverge in both directions. Doctors may be risk-averse and demand unfavorable settlements within policy limits.\textsuperscript{152} In the alternative, the insurer may have a more pessimistic view of the case than the doctor, and wish to settle to avoid legal expense when the doctor-defendant does not wish to settle. Such conflicts may arise in real life, where the insured is facing a deductible,\textsuperscript{153} where the insured wishes to avoid possible reporting to national databases for malpractice settlements or other reputational effects from settling,\textsuperscript{154} or situations where the doctor simply firmly believes in her innocence and wishes vindication. It is conceivable that an insurer might ask a defendant doctor for a contribution to the settlement, or that a risk-averse doctor would agree to put up some of her own money to encourage settlement, but Zeiler, Silver, and Syverud each note that this practice is rare.\textsuperscript{155} This is perhaps also an artifact of \textit{Stowers}, because, as Syverud suggests, “an insurer’s ‘insistence upon a contribution as the price of settlement’ will almost certainly be considered evidence of bad faith in any subsequent action for excess liability.”\textsuperscript{156}

We also ignore any divergence in interest or duty between the insurer and the defense attorney, though liability rules differ on the question of whether an insurer is vicariously liable for the errors of the defendant’s attorney.\textsuperscript{157}

We ignore the possibility that an excess carrier may contribute to a settlement, which, according to Zeiler, occurred in 1.4 percent of closed claims in the Texas studies.\textsuperscript{158}

\begin{flushright}
\textsuperscript{152} Cf. Thorton, \textit{supra note }\textsuperscript{_} at __ (recommending tactics for defendant doctors to persuade insurers to agree to settlements within policy limits).

\textsuperscript{153} Cf. Syverud, \textit{supra note }\textsuperscript{_} at 1188-89. Medical malpractice insurance policies, however, typically lack deductibles or co-payments. Silver, \textit{supra note }\textsuperscript{_} at __ (only 280 reports out of 8657 include amounts paid by physicians as deductibles); Patricia M. Danzon, \textit{Liability and Liability Insurance for Medical Malpractice}, \textit{4 J. HEALTH ECON.} 309, 310 (1985). Of course, the time and trouble of being sued serves as a hidden coinsurance rate. \textit{Id.} at 323.

\textsuperscript{154} Cf. Syverud, \textit{supra note }\textsuperscript{_} at 1158; Sykes, \textit{supra note }\textsuperscript{_} at 1359.

\textsuperscript{155} Cf. Bowdre, \textit{supra note }\textsuperscript{__} at 140-42 (discussing potential ethical pitfalls for defense attorneys where insurer interests and client interests diverge).

\textsuperscript{156} Zeiler, \textit{supra note }\textsuperscript{__} at s25.
We ignore the effect that attorneys’ fees may have on a decision to go to trial. In a case with complex facts, the insurer may prefer to simply pay out limits rather than nearly exhaust the policy defending itself and potentially being on the hook for more than the limit. Plaintiffs’ lawyers are certainly aware of that dynamic, and the aversion of an insurer to paying legal fees, and that certainly promotes settlement in most cases, including weaker ones. A future project would add the element of attorneys’ fees to our model to determine how a loser-pays rule might affect the incentives of plaintiffs and defendants to bring and settle claims.

The game theory model assumes that there will be one settlement demand, capped at the insurance limits. In reality, there will often be several different demands. Impact found 84 separate instances of the final pre-trial settlement demand being higher than insurance limits.159 Nevertheless, the Texas dataset is indeterminate on how that settlement demand arose. One possible scenario, for example, would be an at-limits settlement demand, followed by a denial by the insurer, followed by an especially bad performance at deposition by the insured doctor. In such a scenario, it is plausible for the plaintiff to make a new settlement demand above insurance limits, while still protecting their Stowers rights because of the earlier settlement offer below limits; the Texas dataset would only record the last demand.

The error rate \( \varepsilon \) was randomly generated in order to produce a number of cases in which settlement negotiations fell through; it has no empirical basis. A smaller error rate generates less dramatic curves, but the model is sufficiently robust that its observations hold. Of course, actual measurement of \( \varepsilon \) (and, in most cases, \( p! \)) is impossible.

IV. Discussion

This paper is the first to model the effect of a bad-faith refusal to settle cause of action on the pre-trial settlement negotiations in underlying medical malpractice cases and the related effects of noneconomic damages caps. Though further refinements in the model are possible, our results find that settlements at insurance limits are not always a reflection of the merits of the case. Not every settlement at insurance limits reflects a case in which the system is under-compensating a plaintiff whose underlying claim is worth more. Rather, it is entirely possible, as Chandler notes, that a settlement at insurance limits is a risk-neutral decision to settle with a party with a low-merit case.

Thus, Silver is incorrect to infer that the Texas studies necessarily reflect frequent under-compensation: without knowledge of the underlying qualitative characteristics of the case that leads to such a settlement, such as the likelihood of successful appeal, no conclusions can be drawn. The mere fact of the settlement at insurance limits is indeterminate of the quality question because the possibility of a Stowers judgment down the line increases the value of low-merit cases, as well as the long-term costs to insured physicians.

159 Impact, supra note __ at Table 8.
Ironically, the purpose of Stowers and other bad-faith refusal-to-settle cases is to protect insureds, but the doctrine of unintended consequences has backfired on the judges who created these rules. We can see from the model that Stowers increases the settlement value of low-merit cases, therefore causing more low-merit cases to be brought against insured physicians. Each additional low-merit case that is settled or litigated raises premium costs for insureds in the long run. Because Stowers provides a cause of action to the third-party plaintiff, Texas insureds cannot even choose to contract out of bad-faith litigation in exchange for a lower insurance rate. What they can do is opt out of the insurance system entirely to avoid the deleterious effects of Stowers on the incentives of plaintiffs and insurance companies. This may be part of the reason why we see an increase in the number of hospitals that choose to self-insure.

We don’t yet propose to do away with Stowers and its ilk entirely. The principal-agent problem in insurance cases is a real one, and it remains unclear whether it could be resolved in advance through contracting. But capping bad-faith damages at double the amount of any excess liability would reduce uncertainty and possibly reduce the wealth transfer from doctors to attorneys who bring low-merit cases.

If insurance limits acted only as a de facto cap on damages, then the effects of non-economic damages caps would indeed be blunted, as Silver, et al. suggests. But our model indicates that the brunt of non-economic damages caps falls entirely upon parties and attorneys who are overcompensated by bringing relatively low-merit cases. This is a pleasant and counterintuitive surprise. The “fairness” argument against caps is now stood on its head, which should reduce resistance to damages caps as a vehicle for reform.

That same insurance limit, however, potentially under-compensates plaintiffs with sure-thing cases. The Texas studies raise the possible problem of doctors deliberately under-purchasing insurance in order to discourage lawsuits. We are loathe to further regulate doctors by mandating a particular level of insurance, but it would be reasonable for doctors to be required to identify how much insurance they carry so that patients and insurance companies could decide on a case-by-case basis whether they would rather have more malpractice insurance or lower medical expenses.

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160 For a critique of judicial limitations on the insurer’s discretion to settle, see Sykes, supra note __.


162 Hyman, supra note __ at 53.