MEDICAL MALPRACTICE REFORM: WHAT WORKS AND WHAT DOESN'T

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ABSTRACT

Concerns with medical malpractice liability costs have been a principal factor leading states to adopt a series of tort liability reforms. Following the enactment of medical malpractice reforms, medical malpractice premiums have been declining, creating less of a cost-based impetus for additional reforms. The most consistent empirical evidence that indicates statistically significant effects of medical malpractice reforms has come from caps on noneconomic damages. Damages caps reduce insurance losses and foster insurer profitability, consistent with the objective of caps. The impacts of caps are greatest for insurance companies that otherwise would have experienced the greatest losses in the state. However, caps may reduce payouts to plaintiffs, potentially reducing the funds available to cover economic losses and attorney fees. More recent medical malpractice reforms, apology laws, may have a counterproductive effect by encouraging apologies that have the unintended consequence of increasing litigation and damages payments. There is also evidence that medical malpractice reforms affect both the delivery of medical care and the supply of physicians, but these effects are not as prominent as the impacts on payouts. Medical malpractice liability remains an inefficient way to transfer funds to injured patients. The share of litigation and defense expenses relative to costs remains high. The early offer reform proposal is one approach that is directed at reducing these costs.

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I. OVERVIEW: WHAT ISSUES SHOULD BE ADDRESSED?

Policy initiatives to enhance the performance of the health care system and the viability of medical malpractice insurance markets have included a variety of medical malpractice reforms.[1] These efforts potentially affect the circumstances under which injured patients are eligible for compensation and the levels of compensation that they receive. For example, reforms of statutes of limitation will affect whether there is liability for injuries to a patient.[2] Reforms that place caps on noneconomic damages will affect the amount that the plaintiff can receive as compensation for noneconomic losses.[3] Other types of medical malpractice liability reforms include, among others, attorney fee limits; joint and several liability reform; collateral-source rule reform; statutes of limitations and repose; and apology laws.[4] Medical malpractice reforms, consequently, may have diverse ramifications for injured patients, patient treatments, physicians, health care institutions, attorneys, and insurers.[5] This Article provides an overview of the empirical evidence regarding some of these impacts, and an assessment of which laws have been most influential.

An overriding issue that should frame the discussion is how we define what we mean by successful reforms. A common empirical approach is to explore which reform efforts have had statistically significant effects on various policy-relevant variables of interest, such as the effect of reforms on losses incurred by medical malpractice insurers.[6] While it is possible to categorize reforms that have no statistically significant influence on any measures of interest as being ineffective, having statistically significant impacts does not necessarily qualify as a success. For example, abolishing all potential liability for medical malpractice would certainly generate a statistically significant impact in reducing medical malpractice costs, but it would also harm injured patients who would not be compensated for the harms. Because medical malpractice reforms have such diverse effects on the health care system, patients, insurers, and attorneys, the discussion

1. *See* MICHELLE M. MELLO & ALLEN KACHALIA, MEDICAL MALPRACTICE: EVIDENCE ON REFORM ALTERNATIVES AND CLAIMS INVOLVING ELDERLY PATIENTS 1 (2016).
2. *Id.* at 58.
3. *Id.* at 32.
4. *Id.* at 45–61, 89–93.
5. *Id.* at 1–2.
6. *See, e.g.*, Patricia Born, W. Kip Viscusi & Tom Baker, *The Effects of Tort Reform on Medical Malpractice Insurers' Ultimate Losses*, 76 J. RISK & INS. 197, 198 (2009).

below will focus primarily on identifying the different kinds of effects as well as some of the competing concerns that may arise with respect to them. However, the discussion does not equate statistically significant impacts with increases in social welfare.

The presence of a perceived "crisis" is often the impetus for policy action, whether it is for a declared immigration crisis at the border or a liability crisis that threatens to harm the insurance industry.[7] Examining whether medical malpractice reform is timely with respect to a liability crisis is a legitimate matter of interest, but should not be a requirement for assessing whether potential reforms will be beneficial. The broader concern is whether, on balance, the reforms will enhance social welfare, taking into account all of the economy-wide impacts. There could be undesirable reforms launched during a period of perceived crisis, and also reforms that could serve a constructive function even in the absence of a crisis if, for example, a reform was successful in reducing litigation costs without any attendant, adverse effects on patients.

This Article's review of many of the effects of medical malpractice reforms will seek to distinguish which reforms have had the greatest demonstrable impacts. What have been the effects of the reforms on patient welfare, health care, and insurance-market performance? Because not all reforms have been adopted in every state, examining the impact of the different reforms serves to highlight laws that have had a particularly noteworthy performance that other states may wish to emulate or avoid. The more general empirical issues are whether the current medical malpractice liability system operates in a manner that best promotes societal welfare, and, if that is not the case, which alternative policies might be preferable.

Despite a substantial body of empirical research on medical malpractice, including work that is still ongoing, there are still many empirical issues that have yet to be resolved.[8] In recognition of this gap, one focus of this Article is to identify some of the most prominent outstanding issues in the empirical assessments of medical malpractice.

The discussion below first reviews the impetus for medical malpractice reform and then turns to the impacts of these reforms on insurance-market performance, the effect of the recently adopted apology law reforms, the effect on the health-care system, and a potential alternative liability reform. In almost all of these instances there will be competing impacts that ultimately must be taken into account in making a

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7. *See* Joe Ward & Anjali Singhvi, *Trump Claims There Is a Crisis at the Border. What's the Reality?* N.Y. TIMES (Jan. 11, 2019), https://www.nytimes.com/interactive/2019/01/11/us/politics/trump-border-crisis-reality.html; *see also* W. KIP VISCUSI, REFORMING PRODUCTS LIABILITY 1–41 (1991) (discussing the existence, dimensions, and consequences of the liability crisis).

8. Other reviews similarly note that there is often insufficient evidence to make definitive empirical assessments. *See* Michelle M. Mello, Allen Kachalia & David M. Studdert, *Medical Liability-Prospects for Federal Reform*, 376 NEW ENG. J. MED. 1806, 1806–07 (2017).

broader assessment of the overall desirability of the reform. Part II examines the factors that are related to the impetus for medical malpractice reforms, such as cost pressures, insurer profitability, and premium levels. Part III explores the set of long-established tort reform approaches and their effects on insurance markets, where the most influential reform has been placing limits on noneconomic damages. A more recent reform approach is the adoption of apology laws, which is the subject of Part IV. Medical malpractice reforms not only affect insurance markets but also may have ramifications for patient safety and treatments, which are considered in Part V, and physician mobility and litigation costs, which are the focus of Part VI. A possible strategy for limiting these litigation costs is an early offer proposal that is designed to expedite out-of-court settlements. That approach is examined in Part VII. Part VIII summarizes the current status of the performance of medical malpractice reforms.

II. THE IMPETUS FOR MEDICAL MALPRACTICE REFORM

Much of the support for tort liability reform has stemmed from a desire to influence liability costs.[9] Lowering liability costs will enhance insurer profitability in the short run, will lead to a reduction in insurance premiums, and will reduce the liability costs for physicians and health care institutions.[10] The counterpart of cost reductions is often lower levels of payouts to claimants, particularly if the reforms take the approach of limiting damages amounts. In addition to influencing the level of costs, liability reforms can also reduce the variability of liability costs.[11] Making losses more predictable can potentially enhance insurance-market performance by giving firms a greater ability to estimate the losses for which they will have to make payouts for the premiums they have written. Other legitimate objectives of liability reforms could be to deter medical errors and to promote the efficient mobility of physicians.[12] As the review below will indicate, fulfilling all of these objectives simultaneously is not feasible, as some, such as limiting costs and providing compensation to claimants, are often in conflict.

The impetus for the major wave of medical malpractice reforms in the mid-1980s was the perceived liability crisis in the insurance industry.[13]

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9. *See* Born, Viscusi & Baker, *supra* note 6, at 197.

10. For any given level of premiums, higher insurance costs will lower the level of profitability because insurance profitability is inversely related to the ratio of losses to premiums (i.e., the loss ratio). *See* W. Kip Viscusi & Patricia Born, *Damages Caps, Insurability, and the Performance of Medical Malpractice Insurance*, 72 J. RISK & INS. 23, 27 (2005) [hereinafter Viscusi & Born, *Damages Caps*]. For a discussion of the effect of medical practice reforms on insurance costs and, consequently, on consumers, see W. Kip Viscusi & Patricia Born, *The National Implications of Liability Reforms for General Liability and Medical Malpractice Insurance*, 24 SETON HALL L. REV. 1743, 1765 (1994) [hereinafter Viscusi & Born, *Liability Reforms*].

11. *See* George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521, 1525–26 (1987) (emphasizing the importance of returning stability to insurance markets).

12. *See* Mello, Kachalia & Studdert, *supra* note 8 (noting these and other performance dimensions).

13. *See* VISCUSI, *supra* note 7; Viscusi & Born, *Liability Reforms*, *supra* note 10, at 1743.

A useful barometer of the health of the insurance industry is an index of its profitability, known as the loss ratio (i.e., the ratio of insurance losses divided by the corresponding value of the premiums).[14] Higher loss ratios are an indicator of lower levels of profitability, with the other principal profitability considerations being administrative costs and the return that the firm can earn on investing the premiums, which are paid before the losses are incurred.[15] Consider the results based on insurance-market data by firm, by state, and by year from 1984 to 1991—a pivotal period for the adoption of liability reforms.[16] High loss ratios led states to adopt medical malpractice reforms based on an empirical analysis of the relationship between the profitability of medical malpractice insurance in the state and the adoption of medical malpractice reforms.[17]

Lower levels of insurance profitability will also lead insurance firms to raise premiums to cover these losses and to maintain profitability.[18] From the standpoint of physicians, the level of the premiums that must be paid is a reflection of their liability costs, but the level and rate of change in premiums also serve as useful measures for whether there is a perceived liability crisis.[19] To the extent that change is what is consequential, a rapidly rising level of medical malpractice premiums might be evidence that there was a liability crisis. Figure 1 presents the national statistics for the net premiums written for medical malpractice coverage for the decade from 2007 to 2016.[20] Even without any adjustment for inflation, which would make the more recent costs appear to be even lower, there has been a dramatic drop in premiums, from $10.0 billion in 2007 to $8.1 billion in 2016.[21] Thus, the medical-malpractice-premium trend has been down, not up. While it is possible to suggest that some reforms might enhance insurance-market performance and the liability system more generally, based on the trend in total medical malpractice premiums, there is no evident crisis being manifested in the premium trends.

14. *See* Charles L. McClenahan, *Ratemaking*, *in* FOUNDATIONS OF CASUALTY ACTUARIAL SCIENCE 25, 25 (1990).

15. William B. Fairley, *Investment Income and Profit Margins in Property-Liability Insurance: Theory and Empirical Results*, 10 BELL J. ECON. 192, 201–02 (1979).

16. *See* Viscusi & Born, *Liability Reforms*, *supra* note 10, at 1747.

17. *Id.* at 1764–65.

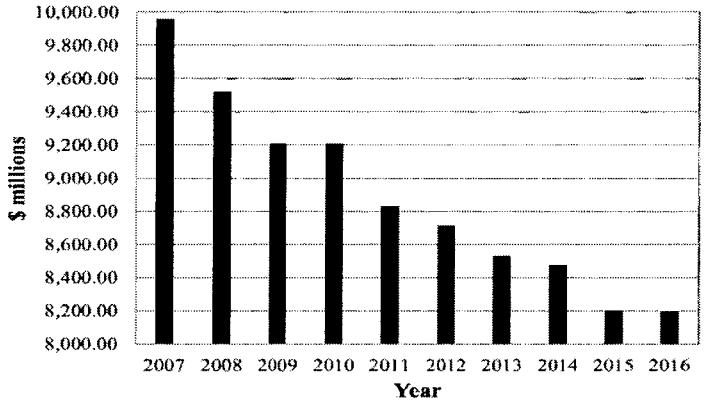
18. The goal of insurance ratemaking is to set rates to provide adequate funds to cover losses, or to maintain a profitable ratio of losses to premiums (i.e., the loss ratio). *See* McClenahan, *supra* note 14, at 33.

19. *See* VISCUSI, *supra* note 7, at 25–31 (discussing premium changes as a measure of changes in liability costs regarding the 1980s tort liability crisis).

20. *See* INS. INFO. INST., 2018 INSURANCE FACT BOOK 129 (2018).

21. *Id.*

Figure 1: Medical Malpractice Net Premiums Written



III. EFFECTS OF LIABILITY REFORMS ON INSURANCE MARKETS

Finding that there has been an effect of medical-malpractice-reform packages on insurance-market performance does not, however, isolate the particular reforms that have been most influential. To do this, studies have addressed not only the influence of reforms in general but also the impact of specific reforms such as limits on noneconomic damages, limits on attorney fees, limits on the insurability of punitive damages, the prohibition of punitive damages for medical malpractice, and other reforms.[22] One study of medical malpractice data found that liability reforms generally reduced loss ratios, but the specific types of reforms did not have a statistically significant effect, except for damages caps and limits on attorney fees.[23] The most consistent, statistically significant effects on medical malpractice insurance losses were for tort reforms generally but, in terms of reform components, it was the damages cap variable that was most consistently significant.[24] However, there was also a statistically significant effect in reducing insurance losses from collateral-source rule reforms and limits on attorney fees.[25]

A subsequent medical malpractice insurance study similarly found statistically significant effects of various reform variables on different aspects of medical malpractice insurance. Punitive damages reform, prohibition of punitive damages, and noneconomic damages reform all reduced medical malpractice insurance losses.[26] As one might expect, the impacts on reducing losses were also similar to the effects on insurer profitability, as noneconomic damages reforms and prohibition of punitive

22. *Id.* at 476–78.
23. *Id.* at 480–82.
24. *Id.* at 485–86.
25. *Id.* at 486, 488.
26. *See* Viscusi & Born, *Damages Caps*, *supra* note 10, at 32–33.

damages all led to a reduction in medical malpractice insurance loss ratios.[27] Noneconomic damages reforms and laws that do not allow punitive damages in medical malpractice cases are both negatively associated with premium levels.[28]

Because medical malpractice claims often take a long time to be resolved, it is instructive to examine the long-run impacts on insurance markets rather than the more immediate effects captured in the studies discussed above. An analysis of medical malpractice insurance data from 1984 to 2003 considered these impacts on what are termed "developed losses," which provide for long-term impact of tort reforms on the trajectory of losses over time.[29] Rather than considering the short-term effects of the initially reported losses, the analysis considered the long-term negative effect of tort reforms on insurer losses.[30] The largest, consistently significant effect in constraining developed losses is the imposition of a noneconomic damages cap.[31]

The overall impact of the reforms depends not only on the average effect across the entire insurance market but also on the distribution of the effect of the losses.[32] Do the reforms have the same proportional effect on losses for all firms, or are there differences in the impacts across the industry? Exploration of these differences is made possible using quantile regressions, which estimate the impact of the reforms across the distribution of firms' losses, such as firms at the 10th percentile, the 25th percentile, the median, the 75th percentile, and the 90th percentile of the loss distribution.[33] The largest impact on reducing losses is at the high loss end of the distribution for the impacts of noneconomic damages reforms, punitive damages reforms, prohibition of punitive damages, and other reforms.[34] The firms that otherwise would have experienced large losses relative to premiums are those that reap the greatest benefits from the reforms.[35] In contrast, the effects are modest—and in some cases not statistically significant—for the more profitable firms that have low levels of losses relative to premiums.[36]

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27. *Id.* at 38–39.
28. *Id.* at 37–38.
29. *See* Born, Viscusi & Baker, *supra* note 6, at 200.
30. *Id.* at 198.
31. *Id.* at 197, 212.
32. *See id.* at 208–12 (discussing the different effects of tort reforms across the distribution of firms with different levels of losses); Viscusi & Born, *Damages Caps*, *supra* note 10, at 34.
33. *See* Born, Viscusi & Baker, *supra* note 6, at 210–11; Viscusi & Born, *Damages Caps*, *supra* note 10, at 35.
34. *See* Born, Viscusi & Baker, *supra* note 6, at 210–11; Viscusi & Born, *Damages Caps*, *supra* note 10, at 34–36.
35. *See* Born, Viscusi & Baker, *supra* note 6, at 210–11; Viscusi & Born, *Damages Caps*, *supra* note 10, at 34–36.
36. *See* Born, Viscusi & Baker, *supra* note 6, at 210–11; Viscusi & Born, *Damages Caps*, *supra* note 10, at 34–36.

The health-policy literature on these reforms has yielded similar evidence regarding which of these reforms are influential, often including results from the medical and health care literature.[37] Caps on noneconomic damages reduce compensation amounts, and there is more moderate evidence that caps reduce both the frequency of paid claims and the growth of liability insurance premiums.[38] Attorney fee limits do no alter compensation amounts, and there is also moderate evidence that they do not alter either the frequency of claims or liability insurance premiums.[39] Collateral-source rule reforms and joint and several liability reforms, likewise, do not appear to affect compensation amounts.[40]

IV. THE ADVENT OF APOLOGY LAWS

Although most of the more traditional medical malpractice reforms have focused on various damages-related laws, a majority of the states have adopted evidence-related reforms known as apology laws.[41] After committing a medical error, or simply providing care that has an unfortunate outcome, the physician may apologize to the patient or the patient's family. Apology laws make apologies inadmissible in medical malpractice lawsuits, and in some cases the apology laws also exclude statements of fault and liability.[42] Although apology laws are different in structure from reforms that place caps on noneconomic damages and punitive damages, they have been designated as a form of "de facto tort reform."[43] Thirty-four of the thirty-nine states that have adopted apology laws are of the partial apology law form that only protect the apology, not admissions of fault and liability.[44] The full apology laws protect statements of apology, condolence, and sympathy and also protect statements of fault, error, or liability.[45] Massachusetts adopted the first apology law in 1986, and was followed by Texas in 1999, but the main wave in adopting these laws was not until the 2004 to 2007 period when twenty-four states adopted apology laws.[46]

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37. *See* MELLO & KACHALIA, *supra* note 1, at 101–03; Mello, Kachalia & Studdert, *supra* note 8, at 1807–08.

38. *See* Mello, Kachalia & Studdert, *supra* note 8, at 1807–08.

39. *Id.* at 1807.

40. *Id.*

41. *See* Benjamin J. McMichael, R. Lawrence Van Horn & W. Kip Viscusi, *"Sorry" Is Never Enough: How State Apology Laws Fail to Reduce Medical Malpractice Liability Risk*, 71 STAN. L. REV. 341, 395–99 (2019).

42. *See, e.g.*, FLA. STAT. § 90.4026(2) (2018) ("The portion of statements, writings, or benevolent gestures expressing sympathy or a general sense of benevolence relating to the pain, suffering, or death of a person involved in an accident and made to that person or to the family of that person shall be inadmissible as evidence in a civil action.").

43. Yonathan A. Arbel & Yotam Kaplan, *Tort Reform Through the Back Door: A Critique of Law and Apologies*, 90 S. CAL. L. REV. 1199, 1201 (2017).

44. McMichael, Van Horn & Viscusi, *supra* note 41, at 356.

45. *See, e.g.*, GA. CODE ANN. § 24-4-416 (2018).

46. *See* McMichael, Van Horn & Viscusi, *supra* note 41.

The impetus for adopting these laws was twofold. States adopted these laws in an effort to reduce medical malpractice costs by excluding evidence that might increase physicians' liability.[47] In addition, there was a belief that apology laws could serve a constructive function by fostering apologies from physicians.[48] These apologies could enable physicians to express sympathy for the adverse outcome and also might assuage anger on the part of the injured party.[49]

How promoting apologies might ultimately affect liability is not clear in the absence of empirical evidence, which until recently had been quite limited.[50] Apologies might make injured patients less likely to file a claim because they feel better about the outcome after receiving the apology.[51] An alternative possibility is that apologies might enhance the chance that the patient will file a claim if the apology makes it clear that the physician made a mistake.[52] While the patient cannot introduce the apology in evidence, knowing that the injury was the result of a medical error may increase patient's assessed chance of making a successful claim for the injury.[53]

To assess the empirical impact of apology laws, a recent study analyzed medical malpractice claims for a comprehensive longitudinal sample consisting of 90% of all physicians of a single specialty in the country[54] The time period considered for the analysis was 2004 to 2014, and the analysis accounted for a wide range of physician and regional characteristics.[55] The analysis distinguished differences between nonsurgeons and surgeons.[56] The authors' reasoning was that, for surgical procedures, patients are more likely to anticipate that they are incurring potential risk, while for nonsurgical treatments, there is less of that expectation.[57] As a consequence of this differential information, an apology that admits to a medical error that caused the patient harm is likely to be more of a surprise to patients in nonsurgical contexts.

The empirical findings indicated no statistically significant effects of apology laws on liability outcomes for surgeons, but there were cost-increasing effects for nonsurgeons.[58] In particular, apology laws increased

47. *See, e.g.*, CAL. EVID. CODE § 1160 cmt.; TENN. R. EVID. 409.1 cmt.
48. *See* Jennifer K. Robbennolt, *Apologies and Settlement Levers*, 3 J. EMPIRICAL LEGAL STUD. 333, 368 (2006); McMichael, Van Horn & Viscusi, *supra* note 41, at 349–50.
49. *See* AARON LAZARE, ON APOLOGY 181 (2005); McMichael, Van Horn & Viscusi, *supra* note 41, at 350.
50. *See* Mello, Kachalia & Studdert, *supra* note 8, at 1807 (concluding that there was "insufficient evidence" to assess the impact of apology laws).
51. McMichael, Van Horn & Viscusi, *supra* note 41, at 361.
52. *Id.*
53. *Id.*
54. *Id.* at 363.
55. *Id.* at 363, 373, 399.
56. *Id.* at 342, 348, 402.
57. *See id.* at 360–61.
58. *Id.* at 348, 402.

the probability of lawsuits, increased the payments by insurers to resolve the claims, and increased defense costs for nonsurgeons.[59] On balance, for nonsurgeons, the more influential impact of apology laws was to increase the likelihood that patients would pursue claims for medical injuries after receiving an apology.[60]

This broad empirical assessment contrasts with the results in some case studies, such as the performance of apology laws in hospitals that have adopted the apology approach.[61] However, these efforts have been successful in avoiding an increase in liability perhaps because they may have been accompanied by other measures such as physician-training programs because the success stories are often at academic medical centers.[62] As a result, it is possible that such findings in very narrowly defined locales, rather than a national sample, also reflect the influence of factors other than the presence of an apology law protection. If training programs are, in fact, effective in providing guidance for making successful apologies, then hospitals may be able to implement such measures by adopting the training programs incorporated in the Communication and Optimal Resolution (CANDOR) Toolkit developed by the Agency for Healthcare Research and Quality.[63]

V. REFORM IMPACTS ON PATIENT SAFETY, MEDICAL ERRORS, AND TREATMENT QUALITY

Medical malpractice reforms affect physicians' liability, which in turn may affect their treatment practices, such as which procedures to undertake and which diagnostic tests to administer.[64] While there is no comprehensive assessment of all of the potential effects of medical malpractice liability reforms on patient safety, medical errors, and treatment quality, there have been several analyses that have addressed different components of this issue. A review of several key tort liability reforms found that there was no change in the quality of care as the result of joint and several liability reforms or collateral-source rule reforms, but that caps on noneconomic damages reduced some types of defensive medicine.[65]

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59. *Id.* at 348, 393.

60. *Id.* at 393.

61. *See, e.g.*, Allen Kachalia et al., *Liability Claims and Costs Before and After Implementation of a Medical Error Disclosure Program*, 153 ANNALS INTERNAL MED. 213, 215 (2010) (finding that a program which encouraged physicians to apologize decreased the risk of medical malpractice liability); *see also* Megan A. Adams et al., *Effect of a Health System's Medical Error Disclosure Program on Gastroenterology-Related Claims Rates and Costs*, 109 AM. J. GASTROENTEROLOGY 460, 461–62 (2014); Richard C. Boothman et al., *A Better Approach to Medical Malpractice Claims? The University of Michigan Experience*, 2 J. HEALTH & LIFE SCI. L. 125, 143–44 (2009).

62. *See* McMichael, Van Horn & Viscusi, *supra* note 41, at 348.

63. *Id.* at 391–92.

64. *See* Mello, Kachalia & Studdert, *supra* note 8, at 1807.

65. *Id.* at 1807–08.

Further review of pertinent studies also suggests that there is a reasonable relationship between medical malpractice costs and patient safety, and that medical malpractice reforms do not appear to have undermined this linkage.[66] At the broadest level, there is a plausible relationship between which hospitals have the highest medical malpractice costs and the quality of medical care being provided, which is a result that is inconsistent with the claims of some advocates of medical malpractice reform.[67] In particular, higher medical malpractice costs in Florida and Texas are positively associated with adverse patient safety events, as measured by the Patient Safety Indicators, developed by the Agency for Healthcare Research and Quality.[68] While this analysis does not identify any causal relationships, it does indicate that the financial costs imposed by medical malpractice liability are not random but are targeted at the practices that put patients at risk.[69]

Changes in liability costs can potentially induce changes in medical treatments. In an empirical analysis of four specific obstetric and gynecologic procedures, the author found that the effect of the reforms on medical treatments varied, but that increased liability through joint and several liability reform decreased preventable complications, which would be consistent with a deterrent effect of liability.[70] However, that study also found that punitive damages caps and collateral source rules appeared to increase preventable medical conditions.[71] Less clear-cut results emerged from a different study of acute heart disease, as there was no evidence that tort reforms altered the quality of care.[72] A third study of treatment quality found that that there was no evidence of adverse effects of the decreased liability associated with medical malpractice reforms.[73]

A prominent hypothesis is that medical malpractice costs increase defensive medicine as physicians undertake procedures or tests to reduce their liability exposure.[74] A principal case study on this topic has been with respect to whether medical malpractice liability affects the frequency of Caesarean sections (C-sections), which doctors may undertake to reduce potential liability associated with childbirths. One study found that increased medical malpractice costs increased C-sections but did not

66. *See id.* at 1807–08; Bernard S. Black, May R. Wagner & Zenon Zabinski, *The Association Between Patient Safety Indicators and Medical Malpractice Risk: Evidence from Florida and Texas*, 3 AM. J. HEALTH ECON. 109, 109–10 (2017).

67. *See* Black, Wagner & Zabinski, *supra* note 66, at 127, 129, 132–33.

68. *Id.*

69. *See id.* at 135.

70. *See* Toshiaki Iizuka, *Does Higher Malpractice Pressure Deter Medical Errors?*, 56 J.L. & ECON. 161, 164, 180 (2013).

71. *Id.* at 180.

72. *See* Daniel Kessler & Mark McClellan, *Do Doctors Practice Defensive Medicine?*, 111 Q.J. ECON. 353, 388 (1996).

73. *See* Michael Frakes & Anupam B. Jena, *Does Medical Malpractice Law Improve Health Care Quality?*, 143 J. PUB. ECON. 142, 157–58 (2016).

74. *See* Daniel P. Kessler, *Evaluating the Medical Malpractice System and Options for Reform*, 25 J. ECON. PERSP. 93, 97 (2011).

increase infant health.[75] However, other researchers found that noneconomic damages caps increased complications from labor and use of C-sections, while joint and several liability reforms, which limit joint and several defendant liability to situations in which the defendant was liable for at least 50% of the tort, decreased complications from labor and use of C-sections.[76] There is also empirical evidence on the extent of the causal linkage with respect to how doctors respond to medical malpractice costs. Medical errors resulting in malpractice litigation led to a 4% jump in C-sections and an 8% increase in C-sections after 2.5 years.[77]

There is also the expected linkage between the provision of high-quality care and the reduction in medical malpractice costs. An analysis of patterns across states found that more money spent on health insurance decreased medical malpractice losses.[78] Similarly, more health care decreased medical malpractice costs.[79] The extent of the linkage, however, is modest, as each $1 in health insurance claims reduced medical malpractice claims by $0.01 to $0.05 per capita.[80] Because much health care is directed at matters other than altering medical malpractice costs, one would not expect there to be a substantial relationship. The reverse direction of influence between health insurance and medical malpractice insurance is not influential, as decreases in medical malpractice risks have little effect on health insurance losses.[81] To the extent that health insurance levels serve as a proxy for the level of care, this result also would be consistent with medical malpractice reforms not leading to an overall cutback in care.

VI. MOBILITY AND LITIGATION COST EFFECTS

A. Mobility Effects

Do locales with high medical malpractice costs deter physicians from practicing in these areas, and are there differences among medical specialties in these effects? The presence of noneconomic damages caps in states serves to attract physicians to the state.[82] An exit survey of

75. *See* Lisa Dubay, Robert Kaestner & Timothy Waidmann, *The Impact of Malpractice Fears on Caesarean Section Rates*, 18 J. HEALTH ECON. 491, 497, 515 (1999).

76. *See* Janet Currie & W. Bentley MacLeod, *First Do No Harm? Tort Reform and Birth Outcomes*, 123 Q.J. ECON. 795, 797, 800 (2008).

77. *See* Ity Shurtz, *The Impact of Medical Errors on Physician Behavior: Evidence from Malpractice Litigation*, 32 J. HEALTH ECON. 331, 331–32 (2013).

78. *See* J. Bradley Karl, Patricia H. Born & W. Kip Viscusi, *The Relationship Between the Markets for Health Insurance and Medical Malpractice Insurance*, 48 APPLIED ECON. 5348, 5359 (2016).

79. *Id.* at 2, 12.

80. *Id.* at 2.

81. *See* Patricia H. Born, J. Bradley Karl & W. Kip Viscusi, *The Net Effects of Medical Malpractice Tort Reform on Health Insurance Losses: The Texas Experience*, 7 HEALTH ECON. REV. 1, 11 (2017).

82. Pinka Chatterji, Siyang Li & Gerald R. Marschke, *Medical Malpractice Reforms and the Location Decisions of New Physicians* (Nat'l Bureau of Econ. Res., Working Paper No. 24401, 2018), https://www.nber.org/papers/w24401.

medical residents in New York State found that there was an increased supply of physicians to states with noneconomic damages caps for medical malpractice, but there was no comparable effect with punitive damages caps.[83] The impacts on physician supply are not uniform, as it is the supply of physicians in the specialties that face the greatest liability risks that are most influenced by the presence of a damages cap.[84]

An intriguing result pertains to the mobility of physicians in a base-period state once a neighboring state has adopted a noneconomic damages cap.[85] The more favorable liability environment in the neighboring state leads to the expected exit of physicians, as the ratio of the number of physicians to the population in the base-period state declines after a neighboring state adopts a reform.[86] The physicians that exit either were practicing in high-liability risk areas or were more prone to liability costs as state medical malpractice rates declined after their exit.[87]

Overall, there is strong evidence that noneconomic damages caps lead to a modest increase in physician supply.[88] However, based on the strong empirical evidence that is available, there is no reason to conclude that either joint and several liability reforms or collateral-source rule reforms alter physician supply.[89] Similarly, a moderate degree of empirical evidence fails to indicate any effect of attorney fee limits in altering physician supply.[90]

B. Litigation Costs

From the standpoint of operating an efficient system of delivering damages payments to injured parties, it would be desirable to do so without incurring substantial litigation costs. Analysis of closed commercial claims data for insurance lines, including medical malpractice, can be used to assess the legal costs incurred by claimants and defendants. For claims filed in Texas from 1988 to 2004, legal fees and court costs overall were $0.75 per $1 paid to claimants and $0.83 per $1 paid if the claimant retained an attorney and filed a lawsuit.[91] The costs for the medical malpractice component of these claims may be even greater, as the legal

83. *Id.*
84. *Id.*
85. Ethan M.J. Lieber, *Medical Malpractice Reform, the Supply of Physicians, and Adverse Selectin*, 57 J. L. & ECON. 501, 501, 505 (2014).
86. *Id.* at 514.
87. *Id.* at 508.
88. *See* Mello, Kachalia & Studdert, *supra* note 8, at 1807.
89. *Id.*
90. *Id.*
91. Joni Hersch & W. Kip Viscusi, *Tort Liability Litigation Costs for Commercial Claims*, 9 AM. L. & ECON. REV. 330, 330 (2007).

fees and expenses for both sides have been estimated to average about $1 for every $1 in payments.[92]

While there has been evidence that legal fees have been increasing over time, these costs appear to be stabilizing. From 1988 to 2004, defense costs and reserves for legal fees and expenses for medical malpractice cases in Texas rose at an annual rate of 4.6% per year on an inflation-adjusted basis.[93] The national statistics on medical malpractice defense costs and containment expenses indicate substantial expenses that, in absolute terms, have recently been fairly stable, with values of $1.8735 billion in 2014, $1.8679 billion in 2015, and $1.9205 billion in 2016, all of which round off to $1.9 billion.[94] Because of year-to-year fluctuations in insured losses, the defense costs as a percent of insured losses is more variable, at a level of 44.3% in 2014, 53.7% in 2015, and 50.3% in 2016.[95] By definition, the costs incurred by claimants are in addition to these amounts, reflecting the substantial costs in resolving medical malpractice claims. Other than products liability insurance, medical malpractice insurance has the highest share of defense costs as a percent of insured losses of all commercial liability insurance lines.[96]

VII. THE EARLY OFFER PLAN

From the standpoint of running an efficient compensation system, one might view it as being desirable to reduce the share of attorney fees and legal expenses relative to the level of payments to injured parties.[97] However, for the attorneys who might be affected by cost-reducing reforms, these legal costs are their income opportunities, leading to opposition to early offer plans by medical malpractice plaintiffs' lawyers.[98] Policy proposals that seek to reduce these costs, and consequently their income, may not necessarily be embraced by either the plaintiff or defense bar.

The one proposal I focus on here is the early offer plan, which is the medical malpractice descendant of various no-fault insurance proposals espoused by Jeffrey O'Connell, and which Joni Hersch and I first proposed

92. Bernard Black, et al., *Defense Costs and Insurer Reserves in Medical Malpractice and Other Personal Injury Cases: Evidence from Texas, 1988–2004*, 10 AM. L. & ECON. REV. 185, 239 (2008).

93. *Id.* at 185–86.

94. INS. INFO. INST., *supra* note 20.

95. *Id.* at 211.

96. *Id.*

97. For a discussion of the role of substantial litigation costs providing an impetus for tort liability reform, see Joni Hersch, Jeffrey O'Connell & W. Kip Viscusi, *An Empirical Assessment of Early Offer Reform for Medical Malpractice*, 36 J. LEGAL STUD. S231, S234 (2007).

98. Holly Haines & William D. Woodbury, *The Early Offer Alternative in Medical Malpractice Litigation: A Statutory Trap to Limit Liability*, 53 N.H. BAR J. 6, 6 (2012); Jason Hart, *New Hampshire Legislature Overrides Governor's Medical Malpractice Reform Veto*, HEARTLAND INST. (July 24, 2012), https://www.heartland.org/news-opinion/news/new-hampshire-legislature-overrides-governors-medical-malpractice-reform-veto?source=policybot (explaining that trial attorneys opposed the early offer plans).

for medical malpractice in conjunction with him.[99] Under this scheme, within 180 days after a claim is filed, defendants can make an offer to claimants for their net economic damages and their attorney fees.[100] Defendants are not required to make an offer, as well might be the situation if they dispute the claim, in which case the usual medical malpractice liability structure would prevail. If the defendant makes an offer, the plaintiff can accept the offer, which addresses both economic loss and legal expenses.[101] If the plaintiff turns the offer down, the plaintiff can still pursue conventional tort claim, but the legal standards for both the burden of proof and the level of misconduct will be raised to a showing of gross negligence on the part of the defendant.[102] The rationale for this proposal is to provide prompt payment for the claimant's economic losses and attorney fees.[103]

Missing from the proposal is payment for pain and suffering damages. In general, people do not purchase insurance for pain and suffering losses, and, from the standpoint of economic analysis, the optimal insurance policy typically would not provide for such coverage.[104] That economic result does not imply that pain and suffering damages serve no useful purpose. Under the present tort liability regime, pain and suffering compensation does provide financial resources for claimants to be able to pay their attorneys and still be able to have remaining funds to address their economic losses, depending on the attorney fee share.[105] However, under the early offer proposal, the payment of attorney fees is included so that there is no need to have additional pain and suffering compensation to provide the financial leeway to address the economic loss component.

An empirical analysis using Texas malpractice data showed that the early offer approach could lead to a substantial reduction in litigation costs, and medical malpractice costs more generally, by about $100,000 to $200,000 per claim.[106] Claimants would receive more prompt payment of economic losses and attorney fees but would lose the pain and suffering compensation to the extent that such compensation would have exceeded their attorney fee share.[107] The absence of such payments for pain and suffering potentially could reduce the total payment to injured patients, depending on the share of attorney fees that they must pay, which some

99. *See* Hersch, O'Connell & Viscusi, *supra* note 97, at S232.
100. *Id.* at S234.
101. *Id.*
102. *Id.*
103. *Id.* at S231–32.
104. W. KIP VISCUSI, PRICING LIVES: GUIDEPOSTS FOR A SAFER SOCIETY 212 (2018).
105. *Id.* at 213.
106. Hersch, O'Connell & Viscusi, *supra* note 97, at S231.
107. *Id.* at S256.

view as a drawback of the early offer scheme.[108] While the reduction in litigation costs would reduce the payments to both plaintiff and defense attorneys, it would decrease the uncertainty that plaintiff attorneys might otherwise face if paid on a contingency fee basis.[109] Most important is that it would reduce the inefficiency of the current system and would provide for prompt and certain payments to injured patients.[110]

To date, the only state that has enacted an early offer reform proposal is New Hampshire.[111] The early offer bill was originally vetoed before it was ultimately enacted and had been opposed by both medical malpractice plaintiffs' lawyers and by the two largest medical malpractice insurers in the state.[112] The early offer plan consequently did not have the political support from insurers that one might expect for a plan targeted at reducing medical malpractice costs. The lack of broad support may have contributed to the failure of other states to adopt the early offer approach.

VIII. DIRECTIONS FOR REFORM

The most consistent empirical result to date is that noneconomic damages caps have been most influential to medical malpractice reform in controlling liability costs. Restraining these costs may be desirable to the extent that one views noneconomic damages as being more speculative given that juries have no precise guidance for how to map their concerns with pain and suffering into a dollar amount. However, if the cap is a very low absolute amount or the damages amounts are substantial, there is the danger that, in the presence of the cap, the remaining funds, after paying for attorney fees, may not be sufficient to address the plaintiff's economic losses.

More innovative approaches than a rigid damages cap system merit exploration. Recent efforts to enact apology laws that provide protections for statements of apology by physicians represent one such example. However, empirically these efforts have not served to reduce the likelihood of being found liable or the level of damages, as the impacts may be counterproductive on balance.

The early offer proposal is an alternative that has not been enacted broadly. Based on simulations using Texas malpractice insurance data, adoption of this approach will lead to substantial cost reductions. This proposal is an example of one approach that would both restrain

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108. *See* Bernard Black, David A. Hyman & Charles Silver, *The Effects of "Early Offers" in Medical Malpractice Cases: Evidence from Texas*, 6 J. EMPIRICAL LEGAL STUD. 723, 749 (2009). For a reply that summarizes errors in their analysis, see Joni Hersch, Jeffrey O'Connell & W. Kip Viscusi, *Reply to "The Effects of 'Early Offers' in Medical Malpractice Cases: Evidence from Texas,"* 7 J. EMPIRICAL LEGAL STUD. 164, 172–73 (2010).

109. Hersch, O'Connell & Viscusi, *supra* note 97, at S244.

110. *Id.* at S232.

111. N.H. REV. STAT. ANN. § 519-C (2018); *see also* Haines & Woodbury, *supra* note 101.

112. Haines & Woodbury, *supra* note 98.

noneconomic damages and also ensure that the attorney fees were covered without cutting into the funds available for economic damages. While only one state has adopted an early offer medical malpractice reform proposal, there continues to be a need for more flexible tort reform policies rather than a rigid cap on noneconomic damages.

The empirical evidence with respect to the impacts of medical malpractice reforms on physician behavior, patient treatments, and health outcomes is less well-established empirically than insurance market impacts of reforms such as noneconomic damages caps. Many of the studies to date have focused on specific medical specialties, such as obstetrics. Additional research may provide insight into the generalizability, magnitude, and welfare consequences of the reform effects. However, based on existing evidence, the main consequences of the reforms have been to reduce the costs incurred by defendants and the funds received by claimants. The ramifications for the health care system are much less pronounced.