FICTIONS AND FACTS: MEDICAL MALPRACTICE LITIGATION, PHYSICIAN SUPPLY, AND HEALTH CARE SPENDING IN TEXAS BEFORE AND AFTER H.B. 4

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This Article, written for a specialty issue of the *Texas Tech Law Review*, summarizes our research on the impact of Texas's 2003 medical malpractice (med mal) reform. Our central findings are as follows: (1) there were no major changes in the frequency of med mal claims, payout per claim, total payouts, defense costs, or jury verdicts that can explain the spike in premiums for med mal liability insurance that occurred in Texas in the years before the 2003 reforms; (2) Texas's supply of direct-patient-care (DPC) physicians grew steadily, at similar rates, in both the pre- and post-reform periods, despite politicians' claims that physicians fled Texas before reform and flocked back thereafter; (3) although the damage caps adopted in Texas and other states greatly reduced the volume of malpractice litigation and payouts to patients, neither in Texas nor in other states have damage caps moderated the growth of health care spending; (4) the savings in liability costs generated by the Texas reforms were shared between physicians and their insurers, with the former paying lower premiums and the latter collecting more premium dollars relative to dollars paid out on claims; and (5) there is evidence that when liability rules are relaxed, hospital safety records gradually deteriorate.

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The authors provided statistical analyses from a combination of sources for their data. While the authors have previously published many of the datasets and figures that appear within, this Article updates their findings and interprets the data as they relate to the proposed purposes and effects of House Bill 4. *See generally* David A. Hyman et al., *Does Tort Reform Affect Physician Supply? Evidence from Texas*, 42 INT'L REV. L. & ECON. 203 (2015).

I. INTRODUCTION

Starting in 2000, med mal premiums in Texas spiked dramatically.[1] The Texas Department of Insurance (TDI) reported that premiums for policies issued by the Texas Medical Liability Trust (TMLT), the largest medical professional liability carrier in Texas, shot up by an estimated 147.6% between 1999 and 2003.[2] The same source found that, across all Texas med mal insurers, the unweighted average increase was 73.6%.[3]

Physicians and insurers blamed the civil justice system for these premium spikes and lobbied for tort reform.[4] The Texas Legislature responded in 2003 by adopting the package of lawsuit restrictions known as House Bill 4 (H.B. 4).[5] The centerpiece of the package was a cap on noneconomic damages, which the Texas Supreme Court had previously declared unconstitutional.[6] H.B. 4's supporters, therefore, launched a

1. *See Medical Malpractice Insurance: Overview and Discussion*, TEX. DEP'T OF INSURANCE 6 (Apr. 22, 2003), https://www.tdi.texas.gov/hprovider/documents/spromptpay.pdf.

2. *Id.*

3. *Id.*

4. *See* Crystal Conde, *Tort Reform Under Attack: Ex-Cowboy's Wife Challenges 2003 Reforms*, TEX. MED. ASS'N (Mar. 2008), https://www.texmed.org/Template.aspx?id=6574.

5. Roger L. Mandel & Martin Woodward, *Navigating the Rough Terrain: Class Actions in Texas After HB4 and CAFA*, 44 ADVOC. 70, 70 (2008).

6. BERNARD S. BLACK ET AL., MEDICAL MALPRACTICE LITIGATION: HOW IT WORKS, WHAT IT DOES, AND WHY TORT REFORM HASN'T HELPED (forthcoming 2019) (manuscript at 7) (on file with authors).

campaign to amend the state constitution.[7] The Texas Limit on Damages in Medical Lawsuits Amendment passed by a 2.26% margin on September 13, 2003.[8]

Thereafter, med mal premiums in Texas declined. Legislators and physicians were quick to assert that this sequence of events proved that the premium spikes were the result of an out-of-control litigation system, which H.B. 4 fixed.[9] They also claimed that H.B. 4 had other benefits; it supposedly attracted tens of thousands of new doctors to Texas and lowered health care spending by reducing the practice of defensive medicine.[10]

Are these claims correct? The short answer is no, as we have shown in a variety of empirical studies published in leading peer-reviewed journals. First, we find no evidence that the "smoke" of the insurance crisis that prompted the reforms was produced by an underlying "fire" of rising liability.[11] Measured in a variety of ways, before and during the insurance crisis, the performance of the liability system was stable.[12]

Second, we find neither an exodus of physicians before the passage of H.B. 4 nor an influx thereafter. To the contrary, the supply of DPC physicians grew steadily, both in Texas and nationally, throughout the relevant period.[13] Texas had a lower ratio of physicians to population than most other states before reform and has a lower ratio today.[14]

Third, we find no evidence that H.B. 4 reduced health care spending or slowed the rate of spending growth. If anything, we find mild evidence that health care spending slightly increased (relative to pre-existing trends) following H.B. 4.[15] Doctors who fear liability may sometimes do more (conduct more defensive tests and procedures), but they may also sometimes do less (avoid risky procedures). Texas was among the lower spending states per capita before reform and is among the lower spending states today.[16]

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7. *See* Conde, *supra* note 4.

8. *Texas Limit on Damages in Medical Lawsuits, Proposition 12 (September 2003)*, BALLOTPEDIA, https://ballotpedia.org/Texas_Limit_on_Damages_in_Medical_Lawsuits,_Proposition_12_(September_2003) (last visited Apr. 13, 2019).

9. *See* Joey Berlin, *Coming of Age: Celebrating 15 Years of Texas Tort Reform*, TEX. MED. ASS'N (Sept. 2018), https://www.texmed.org/Template.aspx?id=48427.

10. *Id.*

11. *See generally* Bernard Black et al., *Stability, Not Crisis: Medical Malpractice Claim Outcomes in Texas, 1988–2002*, 2 J. EMPIRICAL LEGAL STUD. 207 (2005).

12. *Id.*

13. Many sources provide single-year information on physician supply, including PHILLIP MILLER ET AL., N. TEX. REG'L EXTENSION CTR., THE PHYSICIAN WORKFORCE IN TEXAS 21–22 (2015), https://dfwhcfoundation.org/wp-content/uploads/2015/04/mhaNTREC2015studyfinal.pdf. For statistics across years, we use data from the Texas Department of State Health Services.

14. *Id.* at 10.

15. Information on health care spending is available from many sources, including *Health Care Expenditures per Capita by State of Residence*, KFF, https://www.KFF.org/other/ state-indicator/health-spending-per-capita/ (last visited Apr. 13, 2019). Our analyses of spending rely on Medicare data.

16. *Id.*

Fourth, it is true that in the post-reform period, med mal claims and payouts declined substantially. H.B. 4 deserves part of the credit for these changes, but only part. Since 2001, med mal claims and payouts have dropped nationwide.[17] Consequently, both would likely have dropped in Texas too, even without H.B. 4. This "reduced claims and payouts" coin also has two sides: More injured patients who deserved compensation received either inadequate payments or nothing at all.

Fifth, premiums for med mal insurance also dropped substantially, but insurers retained many of the dollars they saved. Comparing 1999–2001 to 2014–2016, the ratio between premia charged to physicians and payouts to patients more than *quintupled*.[18] Today, Texas's ratio is among the highest in the nation.[19]

Finally, the classic "deterrence" case for tort liability posits that, for all types of risky activities, liability deters negligent care. If that is right, then policies that insulate providers from liability may endanger patients by permitting mistakes to become more common. Using standard patient safety measures, we find evidence that hospitals made more avoidable errors after the adoption of H.B. 4.[20]

The results just described appear in a series of articles published in major peer-reviewed journals, in most of which we used a "difference-in-differences" research design. This design can provide evidence on causation, although no empirical study, short of a randomized trial, can provide definitive proof.[21] All of these results are also found nationwide when we examine both Texas and the other eight states that adopted damage caps around the same time in response to the national forces that led to the 1999–2003 med mal insurance crisis.

In sum, although Texas and other states experienced an insurance crisis from 1999 to 2003, no litigation crisis precipitated it. That is why we titled our first article on Texas's med mal reform *Stability, Not Crisis*.[22] The same goes for Texans' access to health care (using the number of physicians per capita as a proxy) and health care spending. Relative to control states, which did not adopt caps, patient safety declined and physicians paid more premium

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17. Myungho Paik et al., *The Receding Tide of Medical Malpractice Litigation: Part 1—National Trends*, 10 J. EMPIRICAL LEGAL STUD. 612, 616–17 (2013).

18. David Belk, *Texas Medical Malpractice Summary and Statistics*, TRUE COST HEALTHCARE, http://truecostofhealthcare.org/wp-content/uploads/2018/08/Texas-Malpractice.pdf (last visited Apr. 13, 2019).

19. *See id.*

20. *Texas Watch* contends that H.B. 4 harmed Texans in a variety of ways, including by reducing scrutiny of health care quality. *See Ten Years Later: How House Bill 4 Has Harmed Texans*, SOMMERMAN, MCCAFFITY, QUESADA & GEISLER, https://www.textrial.com/ten-years-later-how-house-bill-4-has-harmed-texans/ (last visited Apr. 13, 2019).

21. Andrew M. Ryan et al., *Why We Should Not Be Indifferent to Specification Choices for Difference-in-Differences*, 50 HEALTHCARE SERVICES RES. 1211 (2014), https://onlinelibrary.wiley.com/doi/full/10.1111/1475-6773.12270.

22. *See generally* Black et al., *supra* note 11.

dollars relative to payouts (although fewer gross premium dollars than they did before Texas adopted H.B. 4).

We begin by describing the Texas dataset upon which we chiefly rely. Then we present our findings regarding the performance of Texas's liability system, med mal premia, physician supply, health care spending, and patient safety.[23]

II. THE TEXAS CLOSED CLAIM DATASET

In a series of articles and a forthcoming book, we use the Texas Closed Claim Database (TCCD), which includes claim-level and, in some instances, aggregate data to describe Texas's med mal litigation environment. TDI maintains the TCCD.

During the period we studied, Texas was one of only two states (Florida was the other) with a publicly available dataset containing details on paid med mal claims over an extended period of time.[24] The TCCD runs from 1988 to 2012, but sadly has now been terminated.[25] It contains individual reports of closed paid personal injury claims covered by five lines of commercial insurance: mono-line general liability, commercial auto liability, commercial multi-peril liability, medical professional liability, and other professional liability insurance.[26] From 1990 on, TDI audited the TCCD for completeness and accuracy, a feature not shared by either the Florida dataset or the National Practitioner Data Bank (NPDB), which contains information on paid med mal claims against physicians in all states.[27] TCCD data is at the county level; neither patients nor physicians are identified.[28]

The TCCD's richness derives mainly from its "Long Form" reports, which contain detailed information about closed claims. Long Form reports cover claims with payouts by all defendants of more than $25,000 (nominal) through August 2009, and $75,000 (nominal) after that.[29] TDI also required insurers to file less-detailed "Short Form" reports for claims with payouts by

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23. In this Article, we have kept the number of footnotes to a minimum. Readers are directed to our published articles, cited herein, for more detailed information.

24. *Texas Closed Claim Reporting Guide*, TEX. DEP'T INSURANCE (June 2015), https://www.tdi.texas.gov/company/documents/ccguide2015.pdf; *PCLR Medical Professional Liability (MPL) Reporting Claims Database*, FLA. OFF. INS. REG., https://apps.fldfs.com/PLCR/Search/Home.aspx ?Type= External (last visited Apr. 13, 2019).

25. TDI has collected data for 2013 and 2014 but has not released that data, and at this point, we have no expectation that this data will ever be released.

26. *E.g., Texas Closed Claim Reporting Guide*, *supra* note 24 (providing various datasets compiled by the TDI).

27. *See generally* Black et al., *supra* note 11 (discussing the efficacy of TDI's data collection and verification methodology in composition to other data compilers); *National Practitioner Data Bank*, U.S. DEP'T HEALTH & HUM. SERVICES, https://www.npdb.hrsa.gov (last visited Apr. 13, 2019).

28. *Property and Casualty Reports*, TEX. DEP'T INSURANCE, https://www.tdi.texas.gov/reports/report4.html#closed (last visited Apr. 13, 2019).

29. *See generally* Black et al., *supra* note 11 (explaining the usefulness of TDI's Long Form reports).

all defendants of more than $10,000 (nominal) through August 2009, and $25,000 (nominal) after that.[30] TDI also published aggregate annual reports on all closed claims, including zero- and small-payout claims, by line of insurance.[31]

When using the TCCD, it is important to understand its limitations. Small- and zero-payment claims, which often require insurers to incur defense costs, are reported only in the aggregate.[32] Fortunately, claims that close with payments above $25,000, on which we have claim-specific detail, account for the overwhelming majority of the money that insurers paid out to patients and a large portion of the dollars spent on defense.[33] We therefore focus on these paid claims, which we call "large paid claims," in the analyses below.[34]

III. TEXAS'S LIABILITY ENVIRONMENT: MYTH AND REALITY

When the Texas Legislature enacted H.B. 4 in 2003, it made the following findings:

> (1) the number of health care liability claims (frequency) has increased since 1995 inordinately; . . .
> (3) the amounts being paid out by insurers in judgments and settlements (severity) have likewise increased inordinately in the same short period of time;
> (4) the effect of the above has caused a serious public problem in availability of and affordability of adequate medical professional liability insurance; [and]
> (5) the situation has created a medical malpractice insurance crisis in Texas . . . .[35]

A skeptic would have good reason to wonder about the accuracy of these findings. The liability system is reactive. It receives malpractice cases that stem from services delivered in prior years.[36] Consequently, absent sudden changes in the delivery of medical treatments, one would not expect the inflow of new claims to vary much over a short period. The liability system also processes cases slowly: the median paid claim resolves about two years from the date of filing and about four years from the date of injury.[37] This

30. *See generally id.*
31. *See generally id.*
32. *See generally id.*
33. *See generally id.*
34. *See generally id.* We used a threshold of $25,000 in 1988 dollars. *Id.*
35. Act of June 2, 2003, 78th Leg., R.S., ch. 204, § 10.11, 2003 Tex. Gen. Laws 847, 884.
36. David A. Hyman & Charles Silver, *Medical Malpractice Litigation and Tort Reform: It's the Incentives, Stupid*, 59 VAND. L. REV. 1085, 1106 (2006).
37. *Id.*

should further dilute the effect of any sudden changes in the delivery of health care that do occur because claims that open in different years are mixed. Finally, we know from other studies that the biggest drivers of malpractice claims are the rate of medical mistakes and the severity of resulting injuries.[38] These drivers depend on the volume and mix of medical services patients receive, patients' characteristics, and technological developments, all of which change slowly.[39] There is no obvious reason why the error rate or the claim rate should spike for an entire state.

We used the TCCD to learn whether the legislature's findings were accurate. After careful study, we concluded they were not.

IV. CLAIM FREQUENCY

Had the number of large paid claims increased "inordinately" as the Texas Legislature concluded? Figure 1 contains a simple plot of the frequency of large paid claims reported to the TCCD, both raw and adjusted for population and number of physicians.[40] Considering only raw large paid claims, Figure 1 indicates there was a gradual increase in claim frequency between 1990 (the first year in which we have confidence in TCCD completeness) and 2002 (the last year with available data when H.B. 4 was passed). But unadjusted frequency is not an appropriate measure of claim frequency. Texas's population grew steadily during that period.[41] The number of practicing physicians grew even more rapidly.[42] Both of these changes would predictably increase the frequency of med mal claims by increasing the number of medical treatments and procedures that were performed. An increase driven by rising population or a rising number of medical procedures would be expected, not "inordinate."

Figure 1 makes it clear that the gradual upward trend in claim frequency disappears when one adjusts for population growth and reverses when one adjusts for the increase in physician supply. By 2002, when Texas was in the midst of the malpractice insurance crisis, large paid claims per physician were 25% *below* their level in 1992.[43] Since the legislative concern was with impact of malpractice insurance premiums on individual physicians, we believe that the adjustment for the number of physicians is the most

38. *Id.* at 1095.

39. *Id.*

40. *See infra* Figure 1 (plotting frequencies of large paid malpractice claims with various adjustments).

41. *QuickFacts*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/fact/table/tx.US/PST045218 (last visited Apr. 13, 2019).

42. *See generally* Black et al., *supra* note 11 (discussing the correlation between Texas's increasing population and increasing number of physicians).

43. *See infra* Figure 1 (showing the number of large paid claims per year between 1992 and 2002).

appropriate measure.[44] We are not sure what "evidence" reform proponents provided to the legislature, but using the best available measure—claims per physician—we found that claim rates were falling in the period that preceded the adoption of H.B. 4.[45]

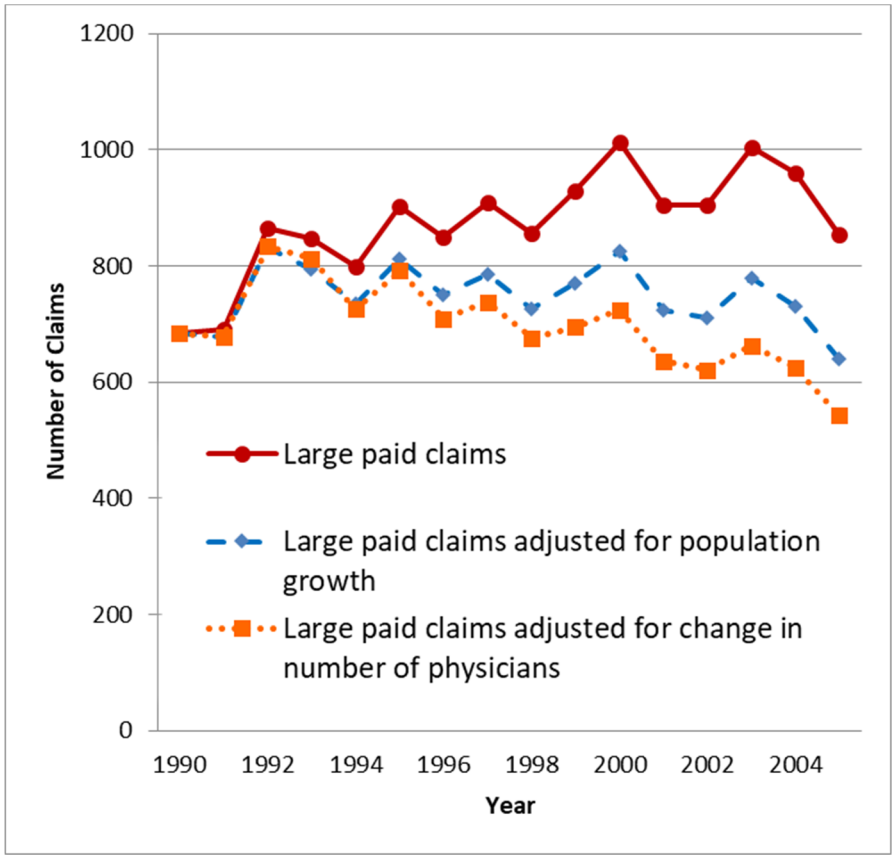
Figure 1 is based on the years when claims closed, but we discovered similar trends when we studied claim rates by claim opening year. There is no evidence that the spike in costs of malpractice insurance premia that began in 2000 was driven by a surge in new claim filings. To the contrary, from 1998 to 2001, the annual number of newly opened malpractice claims, which later became large paid claims, declined.[46] The raw number fell, and counts adjusted for population or for the number of practicing physicians fell even faster.

44. *See* Black et al., *supra* note 11, at 223–24. Regression analysis, presented in our prior article, *Stability, Not Crisis*, confirms the visual impression that claim rates adjusted for population were roughly flat over our time period and that claim rates per physician fell. *See id.* ("Adjusted for population growth, the total number of closed claims, the number of 'large' paid claims (payouts of at least $25,000 in 1988 dollars), and the percentage of claims that produced large payouts were stable over 1990–2002.").

45. The decline in claim rates would be steeper if we also considered smaller paid claims because these claims were being progressively squeezed out of the med mal liability system during this period, presumably by rising litigation costs.

46. *See* Black et al., *supra* note 11, at 219 (showing the number of large paid claims placed by Texans decreased between 1998 and 2001).

Figure 1. Number of Large Paid Claims per Year by Closing Year, 1990–2005.[47]



Number of large paid med mal claims per year from 1990 to 2005, unadjusted (top line) and adjusted for population growth (middle line) or for growth in the number of physicians (bottom line).

Many states, not just Texas, experienced the turn-of-the-century med mal insurance crisis. In other work, we examined claiming patterns across all fifty states and the District of Columbia.[48] Some states had adopted caps on noneconomic damages or total damages (damage caps) in prior years (old-cap states); some states adopted them between 2002 and 2005 in response to the insurance crisis (new-cap states); and some states never adopted them (no-cap states).[49] During the pre-reform period, we found similar time trends in claim rates in all three groups of states.[50] In particular, there was no evidence of rising paid-claim rates for the nine new-cap states,

47. BLACK ET AL., *supra* note 6 (discussing the data supporting the figure).

48. *See generally* Paik et al., *supra* note 17 (providing an overview of state med mal tort reforms between 1992 and 2012).

49. *Id.*

50. *Id.* at 617–18.

taken together.[51] Evidently, factors other than claim frequency strongly influence med mal premia, which can spike even when claim frequency is stable or declining.

V. PAYOUT PER CLAIM

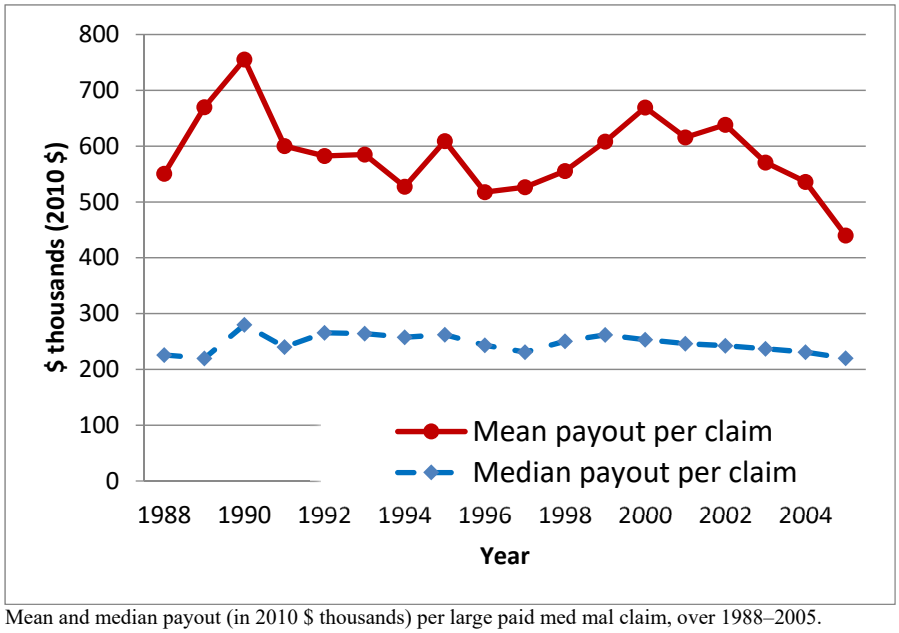
The Texas Legislature also believed that payout severity (payout per claim) had increased inordinately. We examined the evidence on payout per claim as well. Figure 2 shows the mean and median payout per large paid claim between 1988 and 2005 in real, inflation-adjusted dollars.[52] The median payouts are highly stable. There is more fluctuation in the mean, but no overall trend. The mean payout per claim peaked at $755,000 in 1990, fell in the first half of the 1990s to a low of $518,000 in 1996, then rose to $669,000 in 2000 before falling again.[53] Regression analysis confirms that there is no significant time trend in payout per claim. Here, too, there was no litigation "fire" that might have accounted for the "smoke" of the insurance crisis.

51. *Id.*

52. *See infra* Figure 2 (analyzing the mean and median payout per large med mal claim between 1988 and 2005).

53. *See infra* Figure 2 (showing no clear trend emerged for either mean or median payout per large med mal claim between 1988 and 2005).

Figure 2. Mean and Median Payout per Large Paid Claim, 1988–2005.[54]



Mean and median payout (in 2010 $ thousands) per large paid med mal claim, over 1988–2005.

Given the increase in health care costs over this period, the consistency of real payout per claim is remarkable. Medical costs account for a significant fraction of damages in personal injury cases.[55] Because those costs rose much faster than overall inflation, one might have expected payout per claim to rise too. Because no increase occurred means that payouts did not keep up with medical inflation.

Why might the Texas Legislature have believed that payout per claim was rising, inordinately or otherwise? A computation of raw payout per claim, made without adjusting for inflation and without accounting for the progressive exclusion of smaller paid claims from the med mal system, would show payout per claim rose in the period leading up to the insurance crisis. But this is the wrong measure, both because an inflation adjustment is needed and also because payout per claim across all paid claims is misleading when the composition of paid cases is changing. During the pre-reform period—and thereafter as well—small claims were declining rapidly.[56] This drove an increase in mean and median payout per claim across all paid claims.[57] The

54. Black et al., *supra* note 11, at 217 (explaining the composition of the datasets utilized).

55. Seth A. Seabury et al., *Forty Years of Civil Jury Verdicts*, 1 J. EMPIRICAL LEGAL STUD. 1, 3 (2004).

56. *See* Paik et al., *supra* note 17, at 617–18 (elaborating on the decrease in small med mal claims paid between 1990 and 2012).

57. *Id.* at 622.

increase did not, however, mean that the liability environment worsened for physicians. Quite the contrary, from their perspective, the environment improved because they faced fewer small claims.

An example may help make the point more clearly. Suppose that an insurer settled ten claims, paying $1 million each on five of them and $10,000 apiece on the rest (a number below our threshold for "large" paid claims). Across all ten claims, the mean payout is $505,000. Now assume that two of the five smaller claims go away (a decline in smaller claims consistent with the Texas data) and that the payouts on the five $1 million claims remain the same (also consistent with the Texas data). The mean payout per claim is now $629,000, even though total payout has barely changed (falling from $5.05 million to $5.03 million), and the payout on the large paid claims has not changed at all. The disappearance of smaller claims makes it seem as if payout per claim increased, but what actually changed was the composition of the group of claims.

This is what happened in Texas. Whether because of rising litigation costs or other reasons, plaintiffs' lawyers increasingly found it impracticable to litigate claims with less severe injuries and smaller damages.[58] This changed the composition of med mal claims and created the (misleading) appearance of an increase in claim "severity." In other research, we document a similar national decline in smaller paid claims.[59] The changing composition of the malpractice caseload makes it perilous to accept publicly quoted statistics about rising average med mal payouts, especially if those statistics are not accompanied by mention of the falling number of paid claims.

VI. JURY VERDICTS

Although the Texas Legislature made no findings about jury verdicts, interest groups that favor lawsuit restrictions often claim that rising trial awards have driven insurance prices higher.[60] The empirical analyses of claim frequency and payout enable one to make short work of this contention. Most cases settle in the shadow of what a jury might award or—as we argue in our research—in the shadow of what the plaintiff might collect following a jury verdict, taking into account policy limits on malpractice insurance

58. *See* MO. DEP'T OF INS., MEDICAL MALPRACTICE INSURANCE IN MISSOURI: THE CURRENT DIFFICULTIES IN PERSPECTIVE (2003), https://www.citizen.org/sites/default/files/missouri_report_from_d._of_insurance_2-7-03.pdf (providing supporting evidence, indicating rising injury severity for closed paid med mal claims); Neil Vidmar et al., *Uncovering the "Invisible" Profile of Medical Malpractice Litigation: Insights from Florida*, 54 DEPAUL L. REV. 315, 346 (2005).

59. Paik et al., *supra* note 17, at 622 (showing a sharp decline in med mal payouts of less than $100,000 from 1992 to 2012).

60. *The Rise of Sky-High Jury Awards*, AM. MED. NEWS (July 16, 2012), https://amednews.com/article/20120716/profession/307169940/4.

policies and the great rarity of above-limits payouts.[61] If jury awards had inflated total payouts by increasing claim rates or payouts, one would see those effects in Figures 1 and 2. That neither frequency nor severity increased establishes that whatever may have happened to jury verdicts during the pre-reform period did not cause insurers' costs to increase.

We also studied jury verdicts directly and found no evidence of sharply rising awards.[62] Figure 3 provides the evidence. It shows verdicts, adjusted to include pre- and post-judgment interest. Annual means are quite variable, driven by a small number of cases with very large awards. Once we exclude these cases, both means and medians are stable. And while very large awards can generate newspaper headlines, they are rarely paid in full.[63] Regression analysis indicates that while smaller verdicts are paid in full, a plaintiff can expect to collect only about 60% of a $1 million verdict and only 35% of a $10 million verdict.[64]

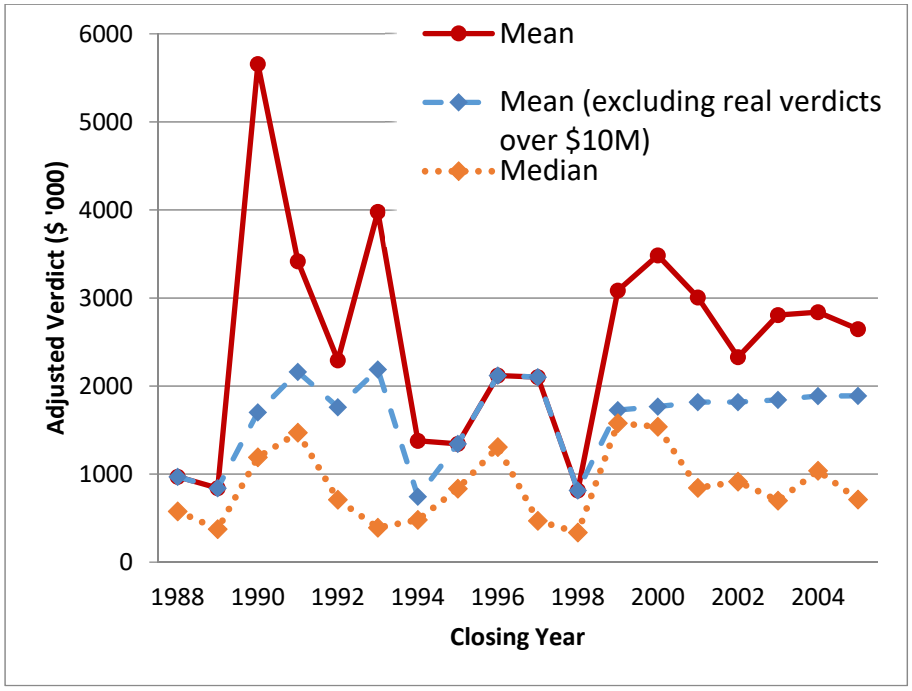
61. Kathryn Zeiler et al., *Physicians' Insurance Limits and Malpractice Payments: Evidence from Texas Closed Claims, 1990–2003*, 36 J. LEGAL STUD. S9, S37 (2007).

62. *See generally* David A. Hyman et al., *Do Defendants Pay What Juries Award? Post-Verdict Haircuts in Texas Medical Malpractice Cases, 1988–2003*, 4 J. EMPIRICAL LEGAL STUD. 3 (2007) (analyzing the jury verdicts in med mal cases from 1988 to 2003).

63. *See, e.g.*, *id.* at 5–7.

64. *See, e.g.*, *id.* at 29.

Figure 3. Mean and Median Adjusted Jury Verdicts over Time.[65]



Annual mean (all cases), mean (excluding nineteen real verdicts over $10 million), and median adjusted verdicts for 350 large paid med mal cases with plaintiff jury verdicts over 1988–2005.

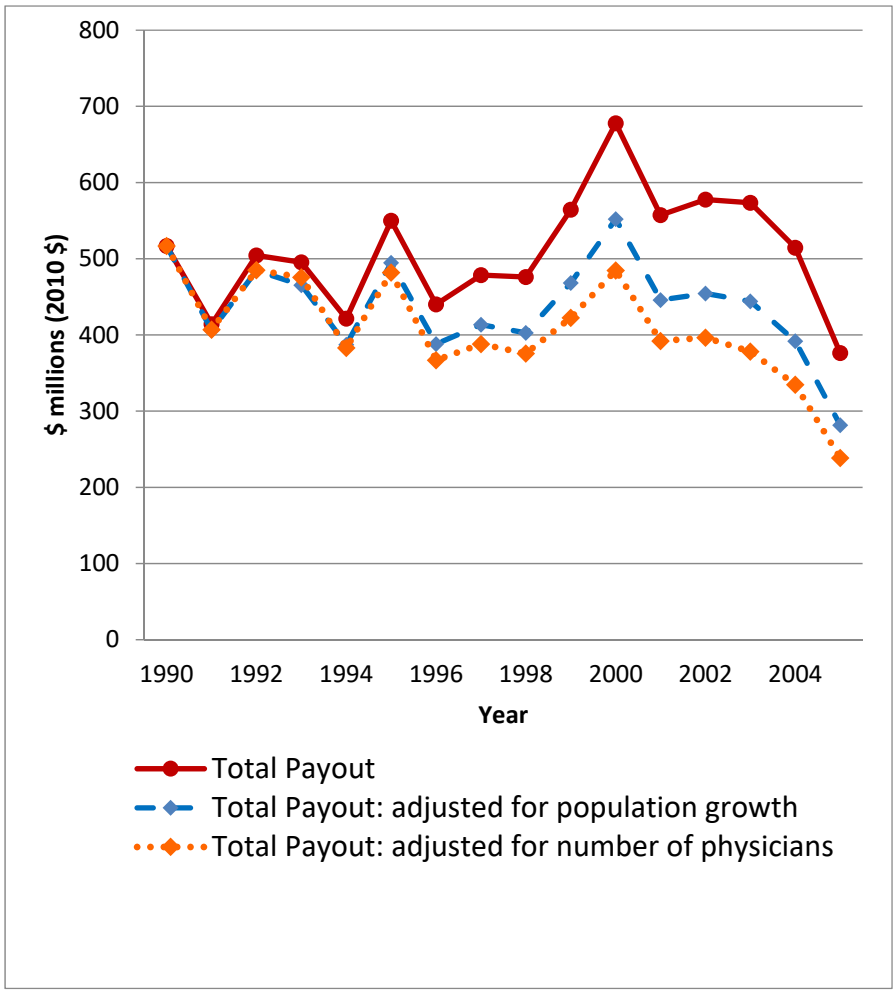
VII. TRENDS IN TOTAL PAYOUTS AND INSURERS' COSTS

Total payouts to injured patients are the product of multiplying the number of large paid claims by payout per large paid claim.[66] Because both claim rates and payout per claim were stable (adjusted for growth in population and the number of physicians), total payout in real dollars was stable too. Figure 4 shows total payout per year for large paid claims unadjusted, adjusted for population growth, and adjusted for the number of active practicing physicians. Over the 1990–2004 period, there was no significant trend in total payout adjusted for population growth, and there was a decline in total payout per physician.[67] There was an upward trend from 1998 to 2000, with a two-year rise in payout per physician of 29%.[68] This could have contributed to the spike in insurance premia. However, total payout per physician in 2000 was lower than in 1990 and was similar to the levels seen in 1992, 1993, and 1995.[69] Payout also fell steadily starting in

65. BLACK ET AL., *supra* note 6.
66. *See* Black et al., *supra* note 11, at 244–45.
67. *See infra* Figure 4 (showing payout trends).
68. *See infra* Figure 4 (showing payout trends).
69. *See infra* Figure 4 (showing payout trends).

2001, even though the spike in malpractice premiums continued.[70] Thus, the short-lived rise in payout per physician cannot explain more than a small part of the more-than-doubling in insurance premia over the 1999–2003 period.

Figure 4. Total Med Mal Payouts, 1990–2005.[71]



Total payout (in 2010 $ millions) for large paid med mal claims over 1990–2005, adjusted for population growth (middle line) and number of physicians (bottom line).

70. *See infra* Figure 4 (showing payout trends).
71. BLACK ET AL., *supra* note 6.

For those who prefer total payout figures expressed on a per-physician basis, payout per physician was $22,800 in 1990; $21,300 in 2000; and then fell to $14,700 in 2005, a 31% decline from 2000.[72]

Total payout is only a partial measure of insurers' costs because it excludes defense costs.[73] Defense costs are a modest share of overall insurer spending, although we do find evidence that defense costs are growing over time.[74] Figure 5 presents information on total insurer costs for large paid claims, including defense costs. As before, we present both raw figures adjusted only for inflation, and also figures adjusted for population growth and for growth in the number of physicians.[75] Once again, during the pre-reform period there is no significant trend in total cost when we adjust for population, and there is a decline when we adjust for the number of physicians. Including a reasonable estimate of the cost of defending claims that closed with zero or small payments does not alter this qualitative picture.

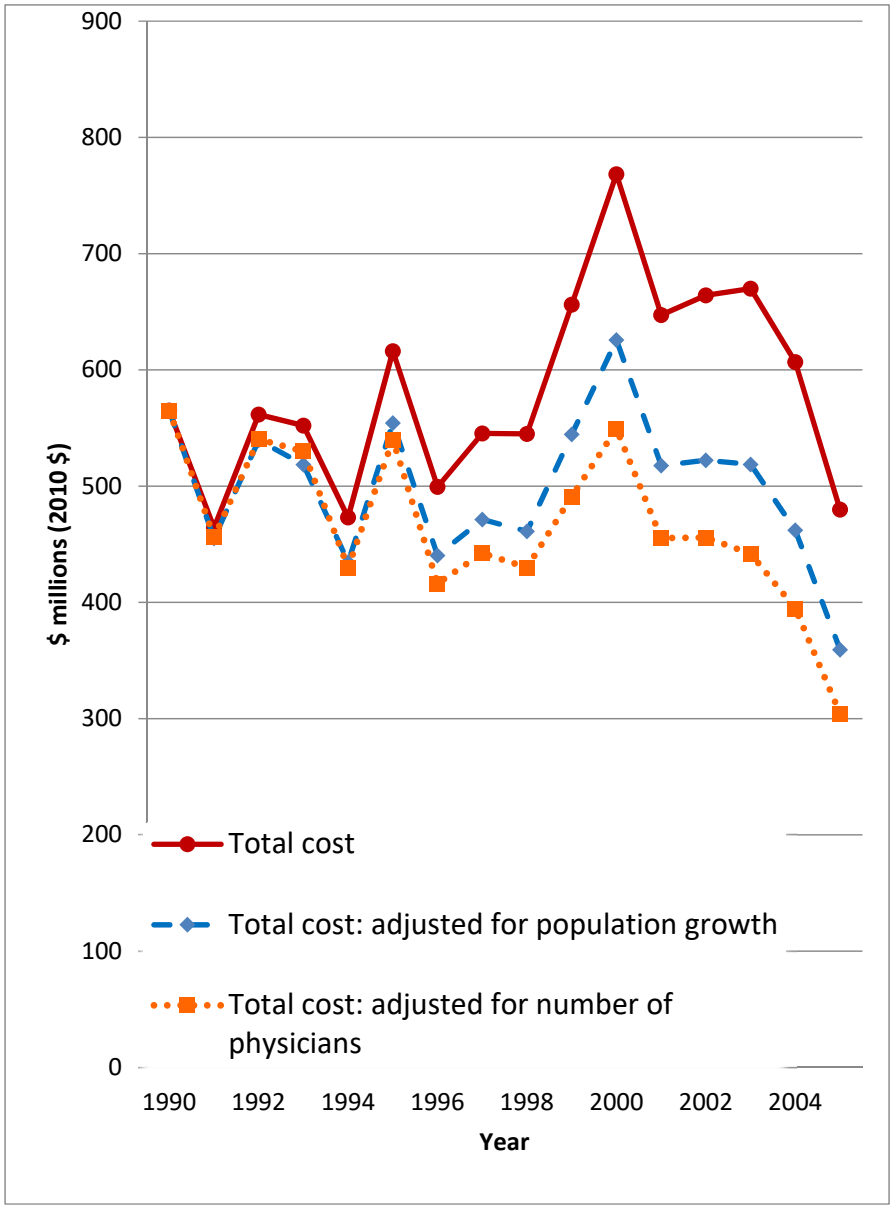
72. *See id.* Because of the time lag between when claims were made and when they were closed, the September 2003 cap adoption had a negligible effect on 2004 payouts and only a small effect on 2005 payouts. *Id.*

73. *See* Black et al., *supra* note 11, at 244–48.

74. 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, 217 (2008).

75. *See infra* Figure 5 (showing trends in defense costs).

Figure 5. Total Payouts plus Defense Costs for Large Paid Claims, 1990–2005.[76]



Total payout-plus-defense cost (in 2010 $ millions) for large paid med mal claims, 1990–2005, adjusted for population growth (middle line) and number of physicians (bottom line).

76. BLACK ET AL., *supra* note 6.

VIII. WHY THE MALPRACTICE INSURANCE CRISIS?

Texas med mal insurance premiums rose dramatically between 1999 and 2003.[77] Doctors and insurers asserted that this insurance crisis reflected an underlying crisis in the medical liability system and persuaded the state legislature and voters to change Texas law.[78] In reality, no litigation crisis existed. This is true whether one looks at the number of claims, payout per claim, or insurance companies' total payouts on med mal claims.

So, what caused the med mal insurance crisis? We can only speculate. Many insurance markets, including the market for medical professional liability coverage, cycle between "soft" markets, in which insurance is underpriced, and "hard" markets, where it is overpriced.[79] The cycle may simply have turned around in 2000. That the med mal insurance crisis was not limited to Texas, and that other states also saw no pre-crisis jump in claims, rates, or payouts, supports this idea. In 2005, the American Medical Association (AMA) listed twenty states, including Texas, as being in crisis.[80] Insurance prices rose rapidly around this time for many coverage lines, not just med mal.[81] That the med mal insurance crisis was national in scope further suggests that its causes lay largely outside Texas's civil justice system.

IX. MALPRACTICE REFORM AND PHYSICIAN SUPPLY

The Texas Legislature also based its decision to adopt H.B. 4 on a finding that the insurance "crisis has had a material adverse effect on the delivery of medical and health care in Texas, including significant reductions of availability of medical and health care services to the people of Texas and a likelihood of further reductions in the future."[82] According to the bill's sponsors, access to care was impeded because of the cost of malpractice insurance and fear of liability drove doctors away from Texas.[83] Governor Rick Perry made physician flight the central focus of a column published in 2012 in which he attacked our work:

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77. *See* Joanne Doroshow & J. Robert Hunter, *Insurance "Crisis" Officially Over – Medical Malpractice Rates Have Been Stable for a Year*, AMERICANS FOR INS. REFORM 1 (Feb. 27, 2006), www.centerjd.org/air/pr/MMSOFTMARKET.pdf.

78. *Id.*

79. Tom Baker, *Medical Malpractice and the Insurance Underwriting Cycle*, 54 DEPAUL L. REV. 393, 396 (2005).

80. AM. MED. ASS'N, MEDICAL LIABILITY REFORM–NOW! 9 (2005), http://www.legalreforminthenews.com/Reports/MedicalLiabilityReformNow-AMA-142005.pdf.

81. *See* Scott E. Harrington, *Tort Liability, Insurance Rates, and the Insurance Cycle*, 2004 BROOKINGS-WHARTON PAPERS ON FIN. SERVICES 97, 101 (2004).

82. Act of June 2, 2003, 78th Leg., R.S., ch. 204, § 10.11(a)(6), 2003 Tex. Gen. Laws 847, 884.

83. *See id.* § 10.11(a).

> In 2003, Texas was facing a very real crisis, one that we met with a very specific solution.
>
> The crisis involved a dramatic drop in the number of doctors practicing medicine in our state, as we fell all the way to 44th overall in a national ranking of physicians per capita. Even more concerning, the greatest loss occurred among doctors practicing in high-risk specialties. Patients in dire need were discovering the only doctors in their county that could help them had either left the state or ceased treating their types of ailments.
>
> The prime culprit behind this crisis was skyrocketing malpractice insurance rates that reflected Texas' then-status as a lawsuit haven.[84]

Governor Perry then described H.B. 4 as "an overwhelming success" that "reversed [the] trend" of physicians leaving the state.[85] "Where Texas once ranked 44th in physicians per capita," he continued, "today we rank 20th, despite our rapidly-expanding population."[86] He concluded that "tort reform in Texas did precisely what it was designed to do. And that means better health care for all of us."[87]

These are strong claims about the effects of tort reform. They are also false. We can evaluate them using data maintained by the Texas Department of State Health Services (TDSHS), which tracks the number of DPC physicians practicing in the state and, for Texas's national ranking, national data on practicing physicians from the AMA.[88] TDSHS's numbers show clearly that physicians neither fled Texas prior to tort reform nor moved to Texas in droves thereafter.[89] To the contrary, there was steady growth in Texas's supply of DPC physicians, both total and per capita, before and after reform.[90] Texas had fewer physicians per capita than most other states in 2003 (thus, part of Perry's column is true).[91] But, this did not change after reform.[92] Any effect that H.B. 4 may have had on physician supply is too small to be measured.

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84. Governor Rick Perry, *Tort Reform Has Done the Job It Was Designed to Do*, TEX. CIV. JUST. LEAGUE (Aug. 16, 2012), https://tcjl.com/tort-reform-has-done-the-job-it-was-designed-to-do-by-governor-rick-perry/. We note that the same column sought to discredit our research by attacking one of us (Charles Silver) personally. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

88. DEREK R. SMART, PHYSICIAN CHARACTERISTICS AND DISTRIBUTION IN THE US (2014); *County Supply and Distribution Tables – Direct Patient Care Physicians*, TEX. DEP'T ST. HEALTH SERVICES, http://dshs.texas.gov/chs/hprc/DPC-lnk.shtm?terms=physicians (last updated Feb. 13, 2019) [hereinafter *County Supply*].

89. *County Supply*, *supra* note 88.

90. *Id.*

91. *Id.*

92. *Id.*

X. THE HISTORY OF PHYSICIAN SUPPLY IN TEXAS

To evaluate Texas's supply of physicians, we use the number of DPC physicians as determined by TDSHS. For reasons we discuss in our original research, we believe that this is the best available dataset.[93] TDSHS begins with data from the TMB on the number of active physicians in Texas.[94] It adjusts this number to measure how many physicians are engaged in DPC by excluding doctors who are administrators, teachers, researchers, federal, military, retired, residents and fellows, or "not-in-practice."[95]

In Figure 6, the top solid line depicts the number of DPC physicians in Texas from 1990 to 2010.[96] The bottom solid line shows the number of DPC physicians per 100,000 population over the same period.[97] Both lines show steady increases in the years leading up to 2003. The top line shows remarkably consistent growth. The bottom line shows growth as well, with some year-to-year variations.[98] Both trends contradict Governor Perry's claim that there was "a dramatic drop in the number of doctors practicing medicine in [Texas]"[99] prior to reform.

Figure 6 also contains two dashed regression lines, one for total DPC physicians and one for DPC physicians per capita.[100] These regressions are fitted using data from 1981 to 2002 (the last year before H.B. 4 was enacted) on physician counts, Texas's real GDP, and a constant term.[101] We used the coefficients from these regressions to predict the total number of DPC physicians and the number of DPC physicians per capita over 2003–2011.[102] The top regression line fits closely to the actual number of physicians after

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93. David A. Hyman et al., *Does Tort Reform Affect Physician Supply? Evidence from Texas*, 42 INT'L REV. L. & ECON. 203, 216 (2015).

94. *County Supply*, *supra* note 88; *see Publications, Physician Statistics*, TEX. MED. BOARD, http://tmb.state.tx.us/docs/docs (last visited Apr. 13, 2019) (navigate: Topics > Newsroom > Physician Statistics).

95. *County Supply*, *supra* note 88. Because the number of residents and fellows is determined by the number of funded positions in Texas and not by med mal reform, it is appropriate to exclude these doctors when measuring the impact of H.B. 4.

96. *See infra* Figure 6 (comparing the predicted growth rate of DPC physicians with the actual growth rate of DPC physicians).

97. *See infra* Figure 6 (comparing the predicted growth rate of DPC physicians with the actual growth rate of DPC physicians).

98. *See infra* Figure 6 (comparing the predicted growth rate of DPC physicians with the actual growth rate of DPC physicians).

99. Perry, *supra* note 84.

100. *See infra* Figure 6 (comparing the predicted growth rate of DPC physicians with the actual growth rate of DPC physicians).

101. *See* BUREAU OF ECON. ANALYSIS, REGIONAL ECONOMIC ACCOUNTS: DOWNLOAD, ANNUAL GDP BY STATE, https://apps.bea.gov/regional/downloadzip.cfm (visited Apr. 13, 2019) (files for Texas from 1963 to 1997 and 1997 to 2017); Hyman et al., *supra* note 93, at 204–09 (discussing physician counts)

102. Hyman et al., *supra* note 93, at 214–15.

2003.[103] The prediction for DPC physicians per capita performs poorly because the actual number of DPC physicians per capita grew *more slowly* after 2003 than one would have expected based on the pre-reform period.[104] Together, these findings show that Governor Perry spoke falsely when he characterized H.B. 4 as "an overwhelming success" that "reversed [the] trend" of physicians leaving the state.[105] There is no evidence that physicians left Texas in substantial numbers before 2003 or returned to it in droves thereafter.[106]

We also studied the number of physicians in high-med-mal-risk specialties, focusing on the three specialties highlighted by reform proponents. There, too, we found no evidence of a pre-reform outflow or a post-reform influx.[107] We also found no evidence of a change in trend for rural physicians. Texas, like many other states, faces a challenge in attracting physicians to rural areas.[108] But we found no evidence that tort reform lessened that challenge.[109]

Do these results make sense? We think they do. There is a market demand for physicians that is relatively inelastic. Prior to reform, even if med mal risk caused some physicians to leave practice or active patient care, we would expect others would be drawn in to take their place. After reform, physicians might well have seen Texas as more attractive from a med mal risk perspective, but they still needed jobs to come to, and salaries in Texas compared to elsewhere would adjust to reflect differences in med mal risk. Could med mal risk still have a second-order effect on physician supply? Sure, but Figure 6 indicates that, for Texas as a whole, any such effect is too small to measure.

103. *See infra* Figure 6 (comparing the predicted growth rate of DPC physicians with the actual growth rate of DPC physicians).

104. Hyman et al., *supra* note 93, at 216.

105. Perry, *supra* note 84.

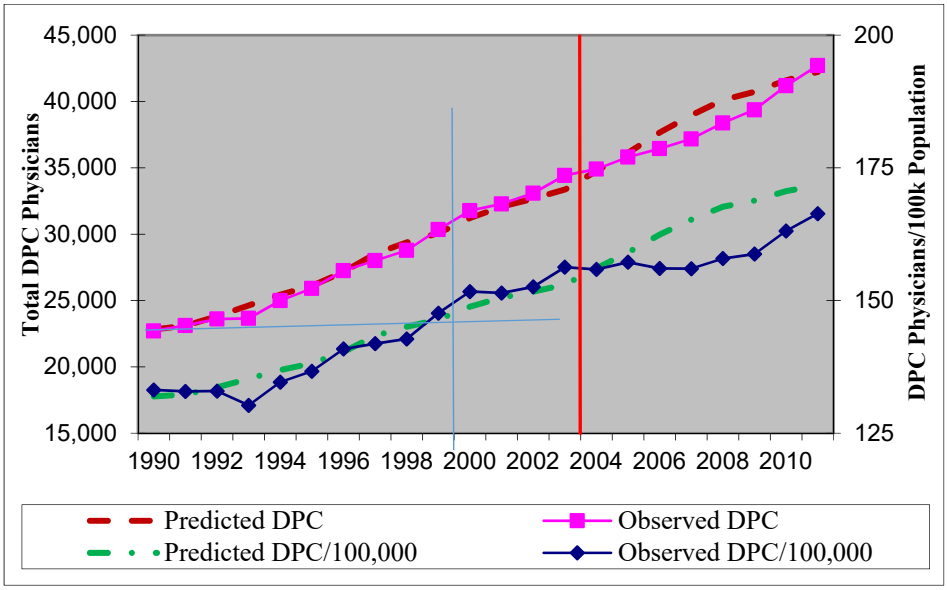
106. Hyman et al., *supra* note 93, at 203.

107. *Id.* at 213–14.

108. Susan Kreimer, *In Rural Areas, Recruiting and Retaining Doctors Are No Easy Tasks*, AM. ASS'N FOR PHYSICIAN LEADERSHIP (Apr. 12, 2018), https://www.physicianleaders.org/news/in-rural-areas-recruiting-and-retaining-doctors-are-no-easy-tasks.

109. Hyman et al., *supra* note 93, at 212–14. *But see* Berlin, *supra* note 9.

Figure 6. Predicted & Observed DPC Physicians, 2000–2011.[110]



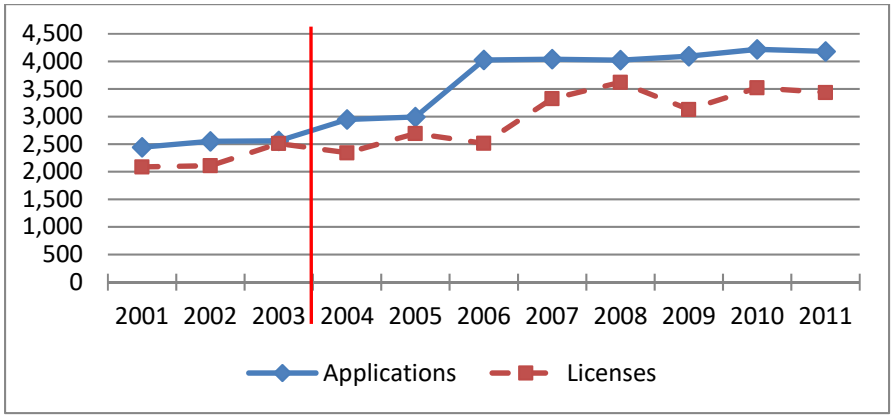
Actual and predicted Texas DPC physicians (left scale) and DPC physicians per 100,000 population (right scale). Predicted lines are based on regression equation including growth in Texas's GDP, estimated over 1981–2002. Source for physician data: TDSHS.

XI. GARBAGE DATA IN, GARBAGE CLAIMS OUT

Given the disconnect between the assertions that H.B. 4's proponents made and the actual supply of DPC physicians as reported by TDSHS, it is plain that the proponents did not use TDSHS's data. Instead, they based their assertions "on reports by the Texas Medical Board (TMB) showing the number of applications . . . it receiv[ed], the number of licenses it issue[d], and the number of doctors . . . in identified specialties by county."[111] Figure 7 shows "the numbers of applications and licenses reported by TMB for its 2001–2010 fiscal years (ending August 31)."[112]

110. Hyman et al., *supra* note 93, at 215–16.
111. *Id.* at 211–12.
112. *Id.* at 212.

Figure 7. Texas Medical Licenses Applied for and Granted.[113]



Applications for medical licenses and issued licenses, for fiscal years 2001-2010, reported by the TMB. Texas med mal reform in 2003 is depicted by vertical line.[114]

"As Figure [7] indicates, applications rose moderately in 2004, then substantially in 2006, but [were] roughly flat [thereafter]. Issued licenses lagged [behind] applications, but increased in 2007 and 2008, and [were] roughly flat since."[115] These increases in both applications and newly issued licenses are the basis for reform proponents' claims that H.B. 4 led to a dramatic post-reform influx of physicians.[116]

Unfortunately, the number of licenses granted by TMB is a terrible measure of the growth in Texas's physician supply. Data on new licenses reflects entry, but ignores exit.[117] It says nothing about the number of doctors who leave Texas, retire, or stop treating patients for other reasons (e.g., by becoming administrators or researchers).[118] One cannot use a count of newly issued licenses to determine whether the number of practicing physicians in Texas rose, fell, or was unchanged during the post-reform period.

Figure 6 shows that Texas's supply of DPC physicians continued its pre-reform trend of gradual growth, notwithstanding the growth in applications and new licenses documented in Figure 7.[119] How is that possible?[120] Because, as larger numbers of doctors were arriving, larger numbers were

113. *Id.* at 211–13; *Publications, Physician Statistics*, *supra* note 94.
114. Hyman et al., *supra* note 93, at 211–13.
115. *See id.*
116. *Id.* at 212.
117. *See* Steve Jacob, *Studies: Texas Tort Reform Has Had No Effect on Physician Supply, Lowering Costs*, D CEO HEALTHCARE (Aug. 28, 2012), https://healthcare.dmagazine.com/2012/08/28/studies-texas-tort-reform-had-no-effect-on-physician-supply-lowering-costs.
118. *See* Hyman et al., *supra* note 93, at 213.
119. *See supra* Figure 6 (tracking number of Texas medical licenses granted from 2001 to 2011).
120. *See* Hyman et al., *supra* note 93, at 213.

also departing.[121] Table 1 "shows the number of DPC physicians [who left the] practice" of medicine in Texas from 2000 to 2009 (we lack data on departures in other years).[122] From 2000 to 2005, the departure rate was much higher than in earlier or later years. We do not know why, but tort liability cannot be the culprit; the timing does not match because the rise in departures continues after reform. A plausible explanation for the increasing inflow of physicians that began in 2004 is that there were lots of vacancies to fill, both because Texas's population was growing and also because many physicians ceased to engage in DPC.[123] The 2006 surge in applications was likely also affected by Hurricane Katrina, which chased many Louisiana residents, including physicians, to Texas.[124]

Table 1. TDSHS Statistics on DPC Physicians Who Left Practice.[125]

Year	Active DPC Physicians	Left Active DPC Practice	% of DPC Physicians Leaving Practice
2000	31,769	1,010	3.2%
2001	32,281	1,416	4.4%
2002	33,094	1,614	4.9%
2003	34,432	2,029	5.9%
2004	34,904	2,020	5.8%
2005	35,811	2,463	6.9%
2006	36,450	1,762	4.8%
2007	37,177	1,687	4.5%
2008	38,387	1,999	5.2%
2009	39,374	1,720	4.4%

Number of year-end active Texas DPC physicians and number leaving practice each year, for 2000–2009. Source: TDSHS, Characteristics of Physicians Who Left Practice in Texas: 2000–2009.[126]

The influx of new licensees also had less impact on the number of DPC physicians than one might have expected because, during this period, a declining percentage of licensed physicians were DPC physicians. "The fraction of licensed Texas physicians who [were DPC physicians fell between] 2002 to 2010, from about 41% to about 39%."[127]

Finally, it should be clear that counting new licenses issued during the post-reform period is not a useful way of evaluating the impact of H.B. 4.

121. *See* Charles M. Silver, *Guest Column: No Better Care, Thanks to Tort Reform*, TEX. TRIB. (Oct. 24, 2011, 11:00 AM), https://www.texastribune.org/2011/10/24/guest-column-no-better-care-thanks-tort-reform/.

122. Hyman et al., *supra* note 93, at 217.

123. *See* Jacob, *supra* note 117.

124. *See id.*

125. Hyman et al., *supra* note 93, at 217.

126. *Id.*

127. *See id.* (depicting the change in active DPC physicians between 2002 and 2010). *See generally, e.g.*, *Publications, Physician Statistics*, *supra* note 94. We cannot determine from the data what fraction of the newly licensed physicians were DPC physicians.

Physicians came to Texas every year before 2003, and many would have sought to become licensed in Texas even if H.B. 4 had never been enacted.[128] Without controlling for pre-2003 licensing trend, one cannot assess how many new doctors came to Texas because of H.B. 4.[129] H.B. 4's sponsors and proponents do not even try to make this adjustment.

XII. TEXAS VERSUS THE UNITED STATES AS A WHOLE

When bragging about the impact of H.B. 4, Governor Perry asserted that the state rose from "44th in physicians per capita" to "20th" after the statute was enacted.[130] This claim is bizarre; Texas has never ranked nearly that high.[131] In 2011, the year before Governor Perry published his column, the AMA ranked Texas 44th in total physician/population ratio[132] and 43rd in patient care physician/population ratio.[133] In 2013, it ranked Texas 43rd in both categories.[134] The Association of American Medical Colleges' assessments are similar. In 2012, it ranked Texas 41st in physicians per capita, a position the state still occupied in 2016.[135]

Figure 8 uses the AMA's annual ranking of states based on active patient care physicians per capita, and shows rankings for Texas and four states that ranked just above or below Texas in 1997: Alabama, Arizona, Arkansas, and Utah.[136] The vertical axis is inverted so that a better (lower) rank appears higher than a worse (higher) one. As Figure 8 makes clear, Texas's ranking did fall in the pre-reform period. Even though Texas gained more physicians per capita during these years (Figure 6),[137] it did so more slowly than other states with relatively low numbers of physicians per capita. But after reform, Texas improved only slightly—to 42nd over 2005–2009.[138]

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128. *See supra* Figure 6 (depicting data used from 1981 to 2002).

129. *See* Hyman et al., *supra* note 93, at 217.

130. Perry, *supra* note 84 (discussing tort reform passed by former Texas Governor Rick Perry).

131. Miller, *supra* note 13.

132. ASS'N OF AM. MED. COLLS., 2011 STATE PHYSICIAN WORKFORCE DATA BOOK 9 (2011), https://www.aamc.org/download/263512/data/statedata2011.pdf.

133. *See id.* at 11.

134. *See* Miller, *supra* note 13.

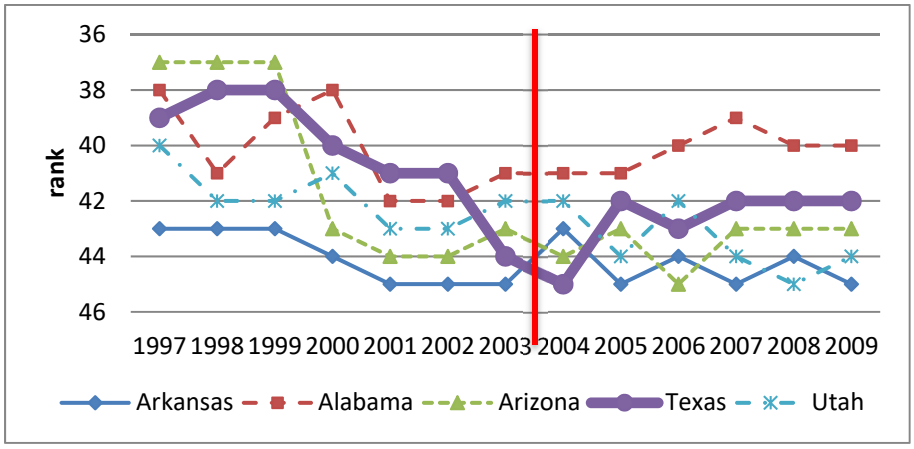
135. *Texas Physician Workforce Profile*, ASS'N AM. MED. COLLEGES (Dec. 31, 2016), https://www.aamc.org/download/484596/data/texasprofile.pdf.

136. *See generally, e.g.*, *2017 State Physician Workforce Data Book*, ASS'N AM. MED. COLLEGES, https://www.aamc.org/data/workforce/reports/484392/2017-state-physician-workforce-data-report.html (last visited Apr. 19, 2019) (follow link to relevant state); *infra* Figure 8 (comparing Texas's AMA rating with other similarly ranked states over time).

137. *See supra* Figure 6 (visualizing the predicted and observed changed in DPC physicians from 2000 to 2011).

138. *See supra* Figure 6 (visualizing the predicted and observed changed in DPC physicians from 2000 to 2011).

FIGURE 8. AMA Ranking of Texas and Four Similarly Ranked States on Patient Care Physicians Per Capita.[139]



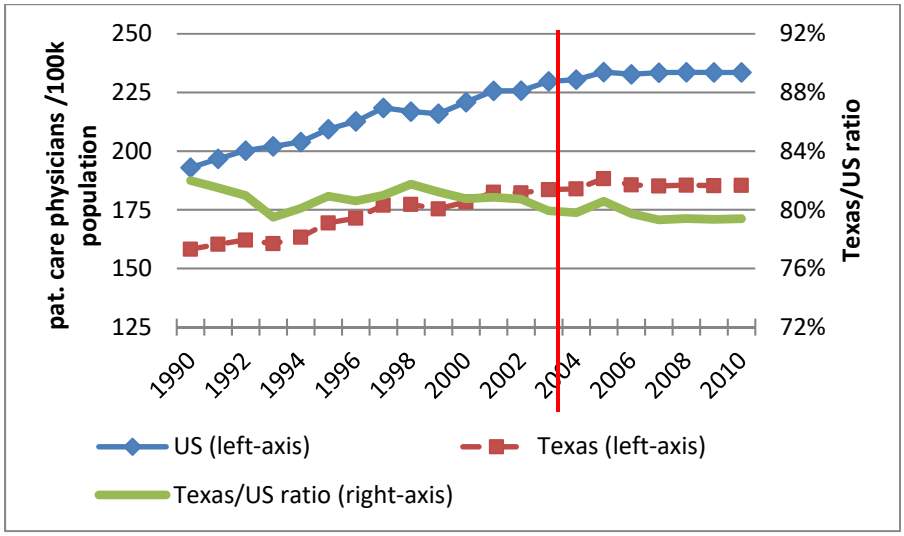
AMA annual ranking of Alabama, Arizona, Texas, and Utah among 50 states based on active patient care physicians per capita, over 1997–2009. We chose the comparison states because they ranked close to Texas in 1997. Source: AMA, Physician Characteristics and Distribution in the U.S., various editions.

Another way to look at Texas's success, or lack thereof, in attracting physicians during the post-reform period is by comparing Texas to the national average. Figure 8 again relies on AMA data and shows the number of active, non-federal, patient care physicians per 100,000 population for Texas and the United States as a whole from 1990 to 2010.[140] The top, upward-sloping line shows the national average; the bottom, dashed, upward-sloping line shows Texas. Both lines rise steadily through about 2005 then flatten out. Finally, the slightly downward-sloping line that begins between the other two lines shows the ratio of the two lines and the ratio of Texas physicians to United States physicians, each per 100,000 population.

139. *See generally* Hyman et al., *supra* note 93.

140. *See supra* Figure 8 (comparing the number of DPC physicians in Texas to the number of DPC physicians in similar states). The AMA definition of active physicians is broader than the TDSHS definition of DPC physicians; in particular, the AMA count AHRF includes interns and residents. But trends should be similar using either definition. *See generally Workforce Data and Reports*, ASS'N AM. MED. COLLEGES, https://www.aamc.org/data/workforce/reports (last visited Apr. 13, 2019) (detailing recent reports by the AAMC on physician data at the state and national level). *Cf. County Supply*, *supra* note 88.

Figure 9. U.S. and Texas Trends in Patient Care Physicians.[141]



Texas and United States active patient care physicians per 100,000 population, 1990–2010, and ratio of Texas to United States physicians per 100,000 population. Source: AHRF

Had H.B. 4 turned Texas into a magnet for physicians, as Governor Perry and other reform proponents claimed, then after 2003 the gap between Texas and the United States as a whole would have shrunk and the middle, bold line would have turned upward. In fact, the gap widened a bit, as shown by the continuing downward slope of the ratio line in the post-2003 period. Putting all these pieces of evidence together, there is no indication that H.B. 4 made Texas an especially attractive destination for physicians.

XIII. WHAT DRIVES PHYSICIANS' LOCATION DECISIONS?

H.B. 4 had no measurable effect on the size of Texas's physician population. The impact of H.B. 4 on Texans' access to medical treatments is best described as both close to zero and precisely estimated. Our findings are consistent with those from multi-state studies of the relationship between lawsuit restrictions and physician supply, including our own, which generally find no effect or small effects for particular sub-groups of physicians, such as those practicing in rural counties.[142]

The primary drivers of physicians' location decisions appear to be population trends, location of the physician's residency, job opportunities within the physician's specialty, lifestyle choices, and local demand for

141. *See generally* Hyman et al., *supra* note 93.

142. *See generally* Myungho Paik et al., *Damage Caps and the Labor Supply of Physicians: Evidence from the Third Reform Wave*, 18 AM. L. & ECON. REV. 463 (2016) (reviewing other studies).

medical services, including the extent to which the population is insured.[143] Because Texas has a large uninsured population and large areas with low population densities,[144] its difficulty in attracting physicians (relative to other states) is likely to continue.

Labor market dynamics may also make it hard for Texas to attract doctors. When employers in one state seek to attract physicians from other states, employers in target states will react to retain their own physicians.[145] They may offer current employees and new applicants higher compensation, shorter work weeks, longer vacations, etc.[146] These reactions may prevent the would-be poacher from achieving its goal.

Whatever the explanation, the truth is obvious. The extravagant claims made by H.B. 4's proponents about physician flight and the statute's effects on access to care were completely untrue. The med mal liability insurance crisis that Texas experienced from 1999 to 2003 did not measurably stunt the growth of the state's supply of DPC physicians, a fact that Texas's anti-litigation legislators could have easily determined by studying TDSHS's reports but chose not to.[147] Their assertion that doctors came to Texas in droves after H.B. 4 was enacted is also false. Instead of taking account of physician departures and other relevant considerations, as TDSHS does, they relied on TMB's misleading reports of applications and new licenses.[148] And instead of controlling for the pre-2003 licensing trend, they gave H.B. 4 credit for every new doctor who arrived in the state.[149] These mistakes are so fundamental, so serious, and so obvious that it is hard not to regard them as intentional. That the elected leaders of Texas made them when addressing voters is reprehensible. The public deserves better.

XIV. H.B. 4 AND HEALTH CARE SPENDING

Rising health care costs plague both Texas and the rest of the United States.[150] The Texas Legislature attributed the problem to excessive litigation and offered H.B. 4 to the public as a cure for this ailment. Its findings in support of H.B. 4 included the following two:

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143. *See id.* at 463–67.

144. Charles Silver et al., *The Impact of the 2003 Texas Medical Malpractice Damages Cap on Physician Supply and Insurer Payouts: Separating Facts from Rhetoric*, 44 ADVOC. 25, 27 (2008).

145. *See* Hyman et al., *supra* note 93, at 215–16.

146. *See id.* at 215.

147. *See id.* at 207–09.

148. *See supra* Part XI (discussing the unreliability of the TMB's reports on applications and new licenses).

149. *See* Hyman et al., *supra* note 93, at 207.

150. *See* CHARLES SILVER & DAVID A. HYMAN, OVERCHARGED: WHY AMERICANS PAY TOO MUCH ON HEALTH CARE (2018) (explaining the health care spending crisis and proposals that might end it).

> (8) the direct cost of medical care to the patient and public of Texas has materially increased due to the rising cost of malpractice insurance protection for physicians and hospitals in Texas; [and]
> (9) the crisis has increased the cost of medical care both directly through fees and indirectly through additional services provided for protection against future suits or claims, and defensive medicine has resulted in increasing cost to patients, private insurers, and Texas and has contributed to the general inflation that has marked health care in recent years . . . .[151]

The goal of improving access to treatments by reducing costs was stated clearly, too. The fifth purpose identified by the legislature was to "improve and modify the system by which health care liability claims are determined in order to . . . make affordable medical and health care more accessible and available to the citizens of Texas."[152]

The direct costs of med mal liability are small, accounting for less than 1% of health care spending.[153] This is why the supporters of H.B. 4 highlighted what they believed were the larger savings to be gained by freeing doctors from having to practice defensive medicine.[154] Physician groups and the organizations they support have been making this assertion for decades.[155] Tom Price, an orthopedic surgeon who served as Secretary of Health and Human Services in the Trump Administration, claimed that defensive medicine costs $650 billion annually nationwide.[156]

Most academic researchers believe the true cost of defensive medicine is much lower. In 2010, after surveying the literature on the subject, a group of health economists put the cost of defensive medicine in the $50 billion range, or around 2% of total health care spending.[157] But more recent work, including our own, suggests that tort reform has either a small effect or no effect on health care spending. Some recent evidence also suggests that that small effect could be to *increase*, rather than reduce, overall spending.

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151. Act of June 2, 2003, 78th Leg., R.S., ch. 204, § 10.11(a)(8)–(9), 2003 Tex. Gen. Laws 847, 884–85.

152. *See id.* § 10.28(b)(5).

153. *See* Daniel P. Kessler & Mark McClellan, *Do Doctors Practice Defensive Medicine?*, 111 Q.J. ECONOMICS 353 (1996).

154. *See Hearings on Tex. H.B. 3 and H.J.R. 3 Before the H. Comm. on Civil Practices*, 78th Leg., R.S. (Feb. 9, 2003) (written testimony of Spencer Bethelson, M.D., Texas Medical Association) (citing Texas Medical Association Biennial Survey Results that show more than 70% of Texas doctors have increased defensive medicine practices).

155. *See, e.g.*, M. Sonal Sekhar & Navya Vyas, *Defensive Medicine: A Bane to Healthcare*, ANNALS MED. & HEALTH SCI. RES. 295 (2013).

156. *See* Eric Stirgus, *Estimates Vary on Cost of Defensive Medicine*, POLITIFACT (Dec. 11, 2013, 12:00 AM), https://www.politifact.com/georgia/statements/2013/dec/11/doctors-healthy-georgia/estimates-vary-cost-defensive-medicine/.

157. Michelle M. Mello et al., *National Costs of the Medical Liability System*, 29 HEALTH AFF. 1569, 1571 (2010).

As with the other subjects we address in this Article, whether H.B. 4 affected health care spending is an empirical question. The issue is complicated by the fact that defensive medicine comes in two forms: "assurance" behavior and "avoidance" behavior.[158] Assurance behavior occurs when physicians take steps to avoid liability that increase costs, such as by ordering tests and other procedures that do not benefit patients or that are not cost-justified.[159] Avoidance behavior occurs when physicians reduce their exposure by refraining from performing services that would expose them to malpractice risks, such as by refusing to operate on sicker patients or by declining to perform procedures with high risks of adverse outcomes.[160] In surveys, many physicians report that both assurance and avoidance behaviors are widespread.[161]

Assurance behavior increases health care spending, while avoidance behavior reduces it.[162] If tort reform affects both behaviors, the net effect on health care spending will depend on the relative magnitudes of the two effects.[163] Only empirical studies can measure which effect predominates. The deterrent effect of liability further complicates the picture.[164] If it is true that physicians react to fears of liability by delivering services that are not necessary, the same fears may also lead physicians to deliver needed services.[165] Not all actions induced by fear of litigation are necessarily bad.

XV. OUR STUDIES OF THE IMPACT OF H.B. 4 ON HEALTH CARE SPENDING

We have conducted several studies on the relationship between damage caps and health care spending on medical treatments. We have looked at

158. *See* Lisa M. Reisch et al., *Medical Malpractice Concerns and Defensive Medicine: A Nationwide Survey of Breast Pathologists*, 144 AM. J. CLINICAL PATHOLOGY 916, 920 (2015).

159. *See id.* at 916.

160. *Id.* at 920.

161. *See* Tara F. Bishop et al., *Physicians' Views on Defensive Medicine: A National Survey*, 170 ARCHIVES INTERNAL MED. 1081, 1093 (2010); *see also* ILL. STATE MED. SOC'Y, FEAR AND LOATHING IN ILLINOIS: LAWSUIT THREAT LEADS TO "DEFENSIVE MEDICINE" IN HEALTH CARE (2010), https://www.ismie.com/News-and-Publications/News-and-Announcements/Fear-and-Loathing-in-Illinois-Lawsuit-Threat-Leads-to--Defensive-Medicine--in-Health-Care/ (reporting that in a 2010 survey of Illinois physicians, 89% reported that malpractice fears caused them to order "more tests than [were] medically needed," but 66% reported that they "reduced or eliminated high-risk services or procedures"; another 11% planned to do so).

162. *See* Angelo Antoci et al., *The Ecology of Defensive Medicine and Malpractice Litigation*, 11 PLOS ONE 1 (2016), https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0150523&type=printable.

163. Janet Currie & W. Bentley MacLeod, *First Do No Harm?: Tort Reform and Birth Outcomes*, 123 Q.J. ECONOMICS 795, 825 (2008); Daniel Montanera, *The Importance of Negative Defensive Medicine in the Effects of Malpractice Reform*, 17 EUR. J. HEALTH ECON. 355, 363 (2016).

164. *See* Zenon Zabinski & Bernard S. Black, *The Deterrent Effect of Tort Law: Evidence from Medical Malpractice Reform* (Nw. Law & Econ., Working Paper No. 13-09, 2019), http://ssrn.com/abstract=2161362.

165. *See, e.g.*, Ity Shurtz, *Malpractice Law, Physicians' Financial Incentives, and Medical Treatment: How Do They Interact?*, 57 J.L. & ECON. 1 (2014).

Texas alone,[166] and have also compared the full group of new-cap states to other states. We focus initially on our Texas-specific results because H.B. 4 is the focus of this Book.[167]

The core assumption behind our within-Texas analysis is that physicians are sensitive to the *local* risk of a malpractice claim. If physicians responded to the lower post-reform risk of malpractice suits, one would expect the impact on practice decisions to be larger in areas where physicians faced relatively higher risk of being sued before 2003 than in lower risk areas because H.B. 4 had a much smaller effect in those lower risk counties. We therefore compared changes in health care spending in high-risk counties before and after the enactment of H.B. 4 with changes in health care spending in low-risk counties. If H.B. 4 reduced health care spending, spending in high-risk counties should have fallen relative to low-risk counties.

Like most other studies of defensive medicine, we rely on Medicare data. Medicare uses an administered pricing system, prices mostly set on a national basis and only minimally affected by local med mal risk.[168] Thus, when we study Medicare spending, we are effectively studying whether tort reform changed the *quantity* of medical services provided.

Because most med mal plaintiffs are younger than the Medicare-eligible population, an ideal dataset would cover younger patients as well. Unfortunately, that data is not available for the time period we want to study.[169] Therefore, like other researchers, we use Medicare data because it is publicly available. In other ways, however, Medicare data is better suited to the study of defensive medicine than is data on commercially insured patients because Medicare places fewer constraints on providers than most private insurers do.[170] This gives providers more leeway to alter their treatment practices in light of changes in the liability environment.

XVI. OUR WITHIN-TEXAS RESULTS

So, what did we find for Texas? First, there was no correlation between Medicare spending and med mal risk prior to reform.[171] In other words, intensity of liability exposure was not strongly correlated with health care spending.[172] Second, H.B. 4 reduced neither Medicare spending levels nor

166. *See generally* Myungho Paik et al., *Will Tort Reform Bend the Cost Curve? Evidence from Texas*, 9 J. EMPIRICAL LEGAL STUD. 173 (2012).

167. TEX. CIV. PRAC. & REM. CODE ANN. § 74.301 (West 2017).

168. *See* Ali Moghtaderi et al., *Damage Caps and Defensive Medicine: Reexamination with Patient-Level Data*, 16 J. EMPIRICAL LEGAL STUD. 26, 29 (2019).

169. We also study Medicare Part A (hospital spending) and Part B (outpatient and physician spending), but not Part C (Medicare Advantage) or Part D (prescription medicines). Data is not available for Part C, and Part D began in 2006, after the reforms we are studying.

170. *See* Paik et al., *supra* note 166, at 209.

171. *See id.* at 190–98.

172. *See id.*

spending trends in high-risk counties, relative to low-risk counties.[173] Third, H.B. 4 did not significantly influence spending for imaging and laboratory services, the area of medical practice that is widely thought to be the most sensitive to liability risk.[174]

We also found weak evidence that Medicare Part B spending (physician spending) trends *increased* in high-risk counties (again relative to low-risk counties) after H.B. 4 was enacted.[175] This finding suggests—but does not prove—that liability risk exerted breaking pressure on some physicians who responded to H.B. 4 by providing more services. This is the opposite of the story proffered by the proponents of H.B. 4.

In sum, we found no evidence that Texas's 2003 tort reforms bent the cost curve downward. If anything, there is weak evidence of *higher* post-reform spending by Texas physicians who practiced in high-risk (generally urban) counties.[176] During the post-reform period, total spending on health care in Texas rose at the same rate as the rest of the nation.[177] In 2003, Texas spent about $100 billion on medical treatments.[178] In 2014 it spent $193 billion.[179] That works out to an average annual growth rate of 7.75%.[180] Total United States spending rose from $1.47 trillion to $2.56 trillion over the same period—an average rate of only 6.2%.[181] Enacting H.B. 4 did not moderate health care spending.

XVII. MULTISTATE RESULTS: MED MAL REFORM AND HEALTH CARE SPENDING

The within-Texas results are consistent with multistate evidence, based on studies of all new-cap states. Figure 10 is taken from a forthcoming article that uses patient-level data, including patient "fixed effects," to control for otherwise unobserved patient health characteristics. In this graph, each state's cap adoption year is year zero. Spending in new-cap states, relative to the control group of no-cap states, is reasonably flat prior to reform and rises after reform.[182] This provides further evidence that tort reform is unlikely to *reduce* overall health care spending and could even lead to higher spending.

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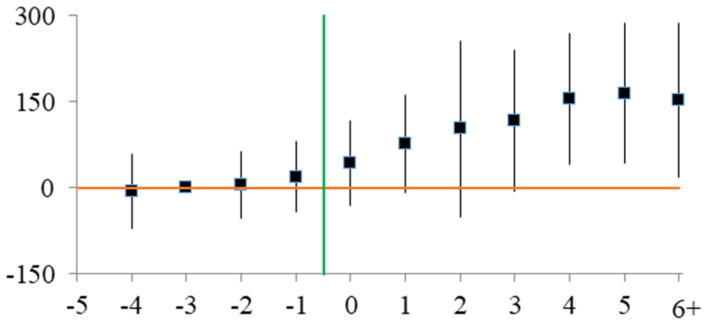
173. *See id.*
174. *See id.* at 175.
175. *See id.* at 173–77.
176. *See id.*
177. *Id.* at 175.
178. *Health Care Expenditures by State of Provider (in Millions)*, KFF, https://www.kff.org/other/state-indicator/total-health-spending/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D (last visited Apr. 13, 2019).
179. *Id.*
180. *See id.*
181. *See id.*
182. *See* Moghtaderi et al., *supra* note 168, at 52.

Figure 10. Damage Cap Adoptions and Total Medicare Spending.[183]



Leads and lags regressions of Part A, Part B, and total Medicare spending over 1999–2011, for nine new-cap states versus control group of twenty no-cap states. Y-axis shows coefficients on the lead and lag dummies; vertical bars show 95% confidence intervals around coefficients, using standard errors clustered on state. Coefficient for year -3 is set to zero. Regressions include patient zip code fixed effects. Amounts adjusted to the value of the United States dollar in 1999.

Further work that we have conducted finds evidence that treatment intensity does fall, following cap adoption, for patients with suspected coronary artery disease.[184] But if treatment intensity falls in one area, yet not overall, it must rise somewhere else. Where that somewhere else might be remains a subject for future research. But two things are clear. First, tort reform appears to have differing effects in different areas of medical practice. Second, there is no evidence that tort reform does anything to limit the overall growth in health care spending. That overall growth is driven primarily by rapidly rising costs for prescription drugs, and by health care providers, especially hospitals, charging ever-higher prices for doing much the same things as before.[185] Health care inflation continues to outpace general inflation by a wide margin.[186]

183. CTRS. FOR MEDICARE & MEDICAID SERVS., FFS DATA (1998–2007), https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/FFS_Data05a.html (last modified Apr. 25, 2012, 6:37 AM).

184. *See generally* Steven Farmer et al., *Association of Medical Liability Reform with Clinician Approach to Coronary Artery Disease Management*, 3 JAMA CARDIOLOGY 609 (2018).

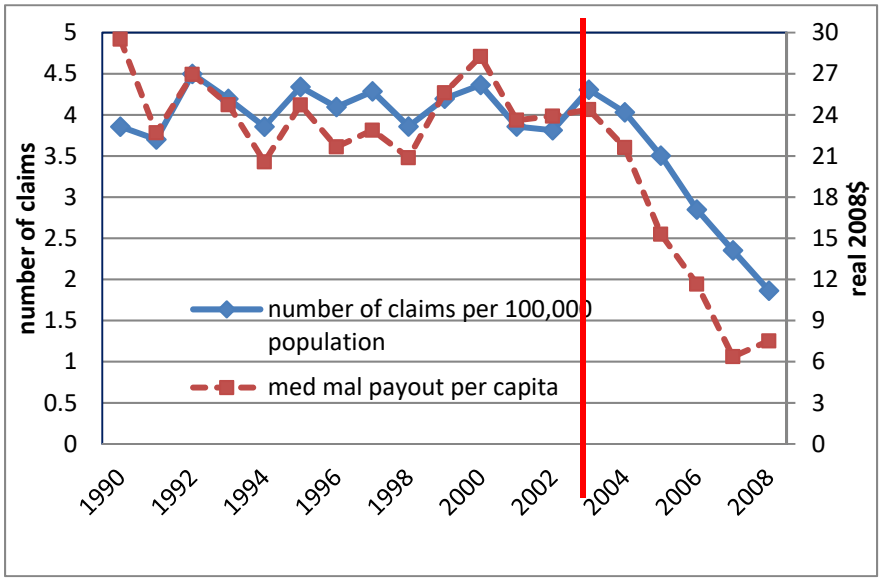
185. *See* David Belk, *Hospital Financial Analysis*, TRUE COST HEALTH-CARE, http://truecostofhealthcare.org/hospital_financial_analysis/ (last visited Apr. 13, 2019); David Belk & Paul Belk, *The Pharmaceutical Industry*, TRUE COST HEALTH-CARE, http://truecostofhealthcare.org/the_pharmaceutical_industry/ (last visited Apr. 13, 2019).

186. *Healthy Inflation? Inflation in the Healthcare Industry vs. General CPI*, FRED BLOG (July 13, 2017), https://fredblog.stlouisfed.org/2017/7/healthy-inflation/ (discussing health care inflation outpacing general CPI inflation in the past twenty years).

XVIII. THE EFFECT OF DAMAGE CAPS ON CLAIM RATES AND MED MAL INSURANCE RATES

We observed that H.B. 4 did not respond to the med mal liability crisis, only an insurance crisis; did not attract significant numbers of new physicians to Texas; and did not reduce health care spending.[187] Nonetheless, from the perspective of physicians and hospitals, H.B. 4 was a success: It greatly reduced the frequency of paid med mal claims and reduced total payouts even more sharply.[188] Figure 11 provides the evidence. Med mal payouts per capita were stable prior to reform (as we have seen above), but fell from around $24 pre-reform to around $6 by 2008—a 75% drop.[189]

Figure 11. Medical Malpractice Claim Rates and Payouts in Texas.[190]



Number of claims per 100,000 population by year for all claimants (left scale), and payouts per capita (right scale) for large paid med mal cases closed from 1990–2008. Texas tort reform in 2003 is depicted by a vertical line. Amounts in 2008 United States dollars.

Some of the rapid decline in claims may have occurred anyway due to forces that—for unclear reasons—are driving down med mal claim rates nationwide. But a substantial amount of the drop-in claims is surely due to

187. *See generally* Hyman et al., *supra* note 93 (describing the effect of tort reform on physician supply in Texas); Paik et al., *supra* note 166, at 176 (discussing the effects of tort reform on health care spending in Texas).

188. *See infra* Figure 11 (depicting the relationship between number of med mal claims per 100,000 Texans and med mal payout from 1990 to 2008).

189. *See infra* Figure 11 (representing med mal payout in Texas from 1990 to 2008).

190. *See* Hyman et al., *supra* note 93, at 205; Belk, *supra* note 18.

H.B. 4.[191] In particular, the larger drop in payout per capita than in paid claims per capita reflects the effect of the cap on noneconomic damages in limiting recoveries in the claims that are still brought.

These drops in claim rates and payouts led, as one might expect, to lower prices for med mal liability insurance. The TMTL, a physician-owned mutual insurance company that provides insurance for around 60% of Texas physicians, reported in 2009 that the 2003 reforms "dropped the cost of medical liability insurance by 50%" for its policyholders.[192] To be sure, some of that drop would likely have happened anyway because the more than doubling in premia from 1999 to 2003 far outpaced any changes in the med mal liability system.[193] Still, H.B. 4, by reducing claims and payouts, surely contributed to falling premia.

Yet, as good as tort reform was for physicians, it was even better for TMLT and other med mal liability insurers. For unclear reasons, one outcome of tort reform, in both Texas and the other new-cap states, was a soaring ratio of med mal premia to payouts.[194] Current work in progress by Bernard Black compares trends in two data series.[195] The first is med mal payouts per physician, drawn from the NPDB.[196] The second is average med mal insurance premia for policies with $1 million per claim limits, for three specialties (general surgery, obstetrics and gynecology, and internal medicine), from annual surveys of insurers by *Medical Liability Monitor*.[197] The two series are not directly comparable, but changes in the ratio of payouts per physician (from NPDB) and average premia (from *Medical Liability Monitor*) still tell us much about changes over time in the relative profitability of writing med mal liability insurance.[198]

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191. *See generally* Myungho Paik et al., *The Receding Tide of Medical Malpractice Litigation: Part 2—Effect of Damage Caps*, 10 J. EMPIRICAL LEGAL STUD. 612 (2013).

192. *See* Hyman et al., *supra* note 93, at 204 (quoting TEX. MED. LIABILITY TR., 2009 ANNUAL REPORT: PHYSICIANS WORKING FOR PHYSICIANS 4 (2009)). "This is in nominal dollars; the decline would be larger if adjusted for inflation." *Id.* at 204 n.12. *Consumer Price Index, 1913-*, FED. RES. BANK MINNEAPOLIS, https://www.minneapolisfed.org/community/financial-and-economic-education/cpi-calculator-information/consumer-price-index-and-inflation-rates-1913 (last visited Apr. 13, 2019).

193. *See infra* Figure 12 (depicting the relationship between premium and payout per physician from 1990 to 2015).

194. *See infra* Figure 12 (depicting the relationship between med mal premia and payouts in new-cap states).

195. Bernard Black et al., *How Do Insurers Price Medical Malpractice Insurance* (Working Paper 2018).

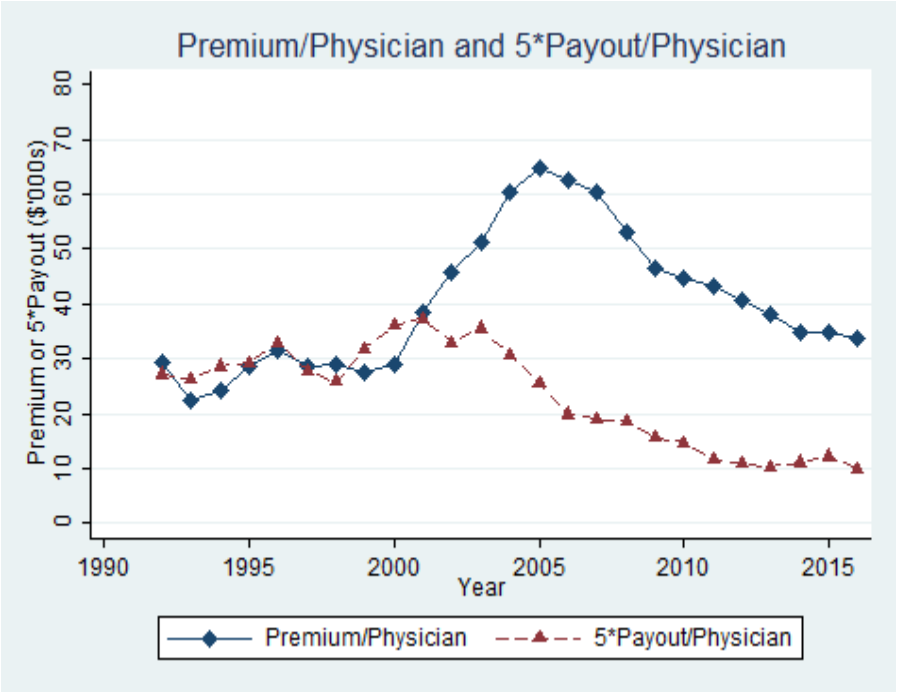
196. *See infra* Figure 12 (showing med mal payouts per physician).

197. TMLT does not, unfortunately, provide data to Medical Liability Monitor, but a number of other Texas insurers do. *See Rate Survey*, MED. LIABILITY MONITOR, https://medicalliabilitymonitor.com/rate-survey/ (last visited Apr. 13, 2019) (describing the Medical Liability Monitor Annual Rate Survey that overviews "the changing rates physicians pay for medical professional liability (medical malpractice) insurance").

198. *See infra* Figure 12 (comparing med mal premia with per-physician payouts in new-cap states from 1992 to 2016).

In Texas, this ratio soared from 4.4 over 1999–2001 (close to the then-national average of 3.9) to 24.9 over 2014–2016.[199] The national average rose as well to 9.2, but Texas far outpaced the national average.[200] We found a similar pattern in the other new-cap states. Figure 12 shows two lines for all new-cap states together: average premia from *Medical Liability Monitor* and, to make the scales comparable, five times payout/physician from NPDB.[201] The two lines overlap through 2001, but greatly diverge thereafter.[202]

Figure 12. Med Mal Premia and Per-Physician Payouts in New-Cap States, 1992-2016.[203]



Premium (solid blue line) is the average premium for the three *Medical Liability Monitor* specialties in each county, weighted by the number of active practicing non-federal physicians in that county. Payout per physician (dashed red line) is total physician payments (at state level) reported in NPDB, divided by the number of active practicing non-federal physicians in the state. Amounts in 2016 dollars by thousands. Payout per physician is multiplied by 5.

The gap between the two lines in Figure 12 provides a crude measure of insurers' ability to take advantage of falling payouts by only slowly and

199. *See supra* Figure 11 (showing the number of claims and payouts per capita).

200. *See supra* Figure 11 (same).

201. *See infra* Figure 12 (using NPDB and MLM data to track average premia and payout per physician from 1990 to 2015).

202. *See infra* Figure 12 (showing a divergence in trendlines around 2001).

203. *National Practitioner Data Bank*, *supra* note 27; *Rate Survey*, *supra* note 197.

gradually reflecting those lower payouts in lower premia.[204] From 2003 on, med mal liability insurance has been a great business to be in.

In 2003, physician groups were remarkably effective in persuading Texas voters to adopt H.B. 4 and the related constitutional amendment.[205] Perhaps they should now be turning their political skills to TMLT—which, after all, they own—and persuading it to sharply cut their med mal insurance premia. This would force other insurers to follow suit.

XIX. DAMAGE CAPS AND PATIENT SAFETY

Does malpractice liability lead to improved health care quality? Classic tort law deterrence theory suggests that if liability risk falls, providers may invest less in patient safety and the quality of care may decline.[206] Again, only empirical studies can estimate any effect of tort reform on measures of care quality.

This question has been studied for Texas and for the four other states with available data. This study uses the United States Agency for Healthcare Research and Quality's (AHRQ) measure of patient safety to assess the frequency of often-preventable complications in hospitals, including infections, wounds splitting apart after surgery, hip fractures due to patients falling out of bed, collapsed lungs after surgery, and so on.[207]

In Figure 13, we plot annual difference-in-differences coefficients for the average change in a composite measure of these preventable complications, which uses all of the AHRQ measures taken together, for Texas versus an average of the twenty-six no-cap and old-cap states with available data.[208] It is apparent that there is no pre-reform relative trend and apparent that Texas's patient safety score deteriorates after 2003.

204. *See supra* Figure 12 (showing how med mal insurers could have used the insurance crisis to inflate the cost of their premiums).

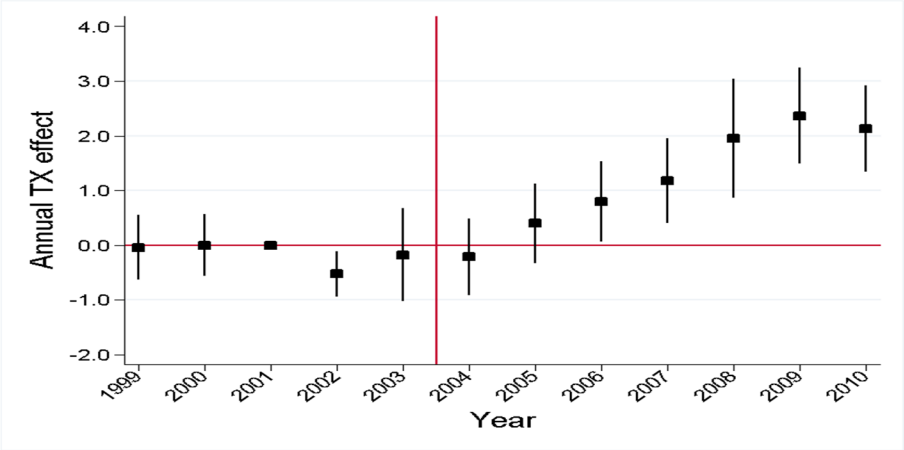
205. *See supra* Part I (explaining how H.B. 4 was passed through the Texas Legislature).

206. Zenon Zabinski & Bernard S. Black, *The Effect of Tort Reform on Patient Safety: Evidence from Texas* (Working Paper 2019).

207. *Id.*

208. *See infra* Figure 13 (graphing patient-level regression of a composite safety measure).

Figure 13. Composite Patient Safety Measure: Texas vs. No-Cap States.[209]



Graphs show coefficients and 90% confidence intervals from patient-level regressions of composite patient safety measure on year* Texas dummies, hospital and quarter fixed effects, and patient-specific covariates. We drop 1Q1999 due to outlier PSI-8 rate. Control states are 26 states with discharge data from NIS. Coefficient for year-3 (relative to reform year) is set to zero. Vertical line indicates adoption of H.B. 4. Standard errors are clustered on state.

This evidence, coupled with similar evidence for all five new-cap states taken as a whole, provides strong evidence that when liability rules are relaxed, hospital safety records gradually deteriorate. This outcome is consistent with tort deterrence theory but is scarcely an outcome that anyone would wish for.

XX. CONCLUSION

The political case for H.B. 4 was built on assertions about the causes and adverse effects of the med mal liability insurance crisis of 1999–2003 and on predictions about the improvements H.B. 4 would foster.[210] The assertions were false and the predictions were wrong.[211]

The falsity of the descriptive assertions could have been easily determined. To learn that Texas's civil justice system operated in a stable manner throughout the relevant period, the state's legislators should have commissioned studies like ours, using data from TDI that were readily available.[212] Having seen no "fire" of liability to account for the "smoke"

209. *See generally* Zabinski & Black, *supra* note 164.

210. *See supra* note 1 and accompanying text (describing the premium increase before the enactment of H.B. 4).

211. *See supra* Part XVI (discussing the actual effects of H.B. 4 on Texas).

212. *See supra* note 15 and accompanying text (claiming the TDI have information the Texas Legislature could have used).

coming from the insurance sector,[213] they might have suspected that the insurance crisis, which hit many states and affected many insurance lines, did not have a Texas-specific litigation cause, but was instead driven by dynamics in nationwide insurance markets.

Texas's legislators could just as easily learned that doctors were not abandoning Texas. Had they examined TDSHS's reports, they would have seen that the state's supply of DPC physicians grew at the same rate during the crisis period as it had in preceding years.[214] The claim that Texans were in danger of losing access to medical treatments was merely a scare tactic that organized medicine used when stumping for tort reform. There never was any truth to it.

The legislators should also have questioned the assertion that large savings in medical costs could be gained by restricting lawsuits. By 2003, many states already had tort reforms in place.[215] Pro-reform legislators could have asked how much money those states saved. Had they inquired, they would have learned that no state saved money.[216] Since the mid-1960s, rising health care costs have been a problem throughout the United States.[217] No governmental effort to contain them has succeeded.

Given the inaccuracy of the descriptive assertions legislators relied on to justify H.B. 4, it should surprise no one that predictions made by the statute's proponents fell flat.[218] Physicians had not left Texas in droves before the legislature enacted H.B. 4, and they did not flock back to the state thereafter. H.B. 4 had no measurable effect on Texans' access to DPC physicians.[219] It did not save any money on medical treatments either, even though its supporters in the legislature said that it would.[220]

Only two consequences were reasonably to be expected of H.B. 4. By insulating providers from liability for medical errors, it would weaken incentives to protect patients from harm and make professional liability insurance cheaper.[221] That is exactly what it did, and it accomplished these results on the backs of injured patients, who would otherwise have been protected better and compensated more fully than they were.[222]

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213. *See supra* Part I (describing findings from empirical studies).

214. *See supra* note 13 and accompanying text (stating that the number of physicians actually grew).

215. AM. TORT REFORM ASS'N, 2003 STATE TORT REFORM ENACTMENTS, https://www.atra.org/wp-content/uploads/2016/11/2003-enact.pdf (last visited Apr. 13, 2019) (listing state tort reforms enacted by 2003).

216. *See supra* Part XVII (discussing the failure of tort reform in states other than Texas).

217. Kimberly Amadeo, *The Rising Cost of Health Care by Year and Its Causes*, BALANCE, https://www.thebalance.com/causes-of-rising-healthcare-costs-4064878 (last updated Mar. 12, 2019).

218. *See supra* Part I (describing the arguments presented by advocates of H.B. 4).

219. *See supra* note 13 and accompanying text (stating the number of physicians actually grew).

220. *See supra* Part XVI (discussing the actual effects of H.B. 4 on Texas).

221. *See supra* note 208 and accompanying text (explaining how quality of care decreases if risk of liability decreases).

222. *See supra* Figure 13 (plotting patient-level regressions of a composite safety measure).

If Texas's pro-reform legislators were ill-informed, it can only have been because they wanted to be. The means of learning the truth were at hand. But in politics, the object is not to learn the truth; it is to appease supporters. The legislators who supported H.B. 4 won their offices with help from organized medicine, the insurance industry, and advocacy groups like the Texas Alliance for Patient Access, all of whom wanted the plaintiffs' bar reined in. The med mal liability system was gutted because the interest groups that mattered wanted it to be.