Does Tort Reform Affect Physician Supply?
Evidence From Texas

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Abstract: [*to come]

I. Introduction

We have recently completed the third malpractice insurance crisis of the last forty years. As with previous crises, a precipitous increase in malpractice premiums prompted a push for tort reform, especially in states that had not already enacted caps on non-economic or total damages. Both sides deployed the standard mélange of anecdotes, slogans, talking points, and heartfelt appeals to larger principles. As in prior crises, physicians often had the upper hand, with nine states adopting new caps between 2002 and 2006, and seven more adopting caps on punitive damages or other reforms intended to limit malpractice suits.

We focus here on Texas which, in 2003, adopted a strict cap on non-economic damages and other reforms that drove a 70% drop in total payouts on med mal claims. Physician supply issues played a prominent role in the tort reform debate in Texas. Proponents argued that physicians were fleeing Texas but would stop leaving if the state adopted a cap on non-economic damages. After the reforms took effect, the same spokespersons asserted that new physicians came to the state in droves – a more impressive result than they originally promised, which was only that doctors already in Texas would stay put.

In a previous article, we examined the number of physicians practicing in Texas post-tort reform. Using active, direct patient-care (DPC) physicians per 100,000 population as a measure, we found no evidence of the decline in access to care said to have occurred before 2003, and no evidence of the improvement in access said to have occurred subsequently. To the contrary, after tort reform, the rate of increase in Texas DPC physicians per capita actually slowed. We did not suggest that tort reform caused the slowdown, which seems implausible. Instead, we hypothesized that physician supply was affected primarily by factors other than tort reform, such as the growth of Texas’ uninsured population.

The results in our prior study were necessarily tentative. Data on the number of DPC physicians in Texas covered only four post-reform years (2004-2007). Moreover,

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2 States adopting new caps on non-economic damages were [*to come]. The caps in Georgia and Illinois have since been invalidated by the state courts. States adopting punitive damage caps or other restrictions were [*to come].

the Texas Medical Board ("TMB") had reported a substantial increase in applications from doctors wanting to practice in the state. Thus, it was possible that in later years, physician counts would grow rapidly.

In this article, we extend our analysis through 2010 – sufficient time to have a reasonably clear view of the impact of Texas’ tort reforms on physician supply. The bottom line: Our original findings were correct. There is no evidence that the number of physicians per capita practicing in Texas is larger than it would have been without tort reform. Any effect that tort reform may have had is too small for us to measure, against the background of other, larger forces affecting physician supply, both in Texas and nationally. This ‘non-result’ is consistent with other studies, most of which find that tort reform has little or no impact on physician supply.

Part II sets out the details of the damages cap and other lawsuit restrictions Texas adopted in 2003, shows that the reforms greatly reduced physicians’ liability risk, and summarizes the literature studying the connection between tort reform and physician supply. Part III details the claims made by tort reform proponents, both before and after tort reform, about physician supply in Texas. Part IV assesses the merits of those claims using publicly available data. Part V discusses our findings. Part VI concludes.

II. Background: Literature Review and The Texas 2003 Reforms

A. Prior Research

[ *to come]*

B. Tort Reform, Texas Style

In mid-2003, Texas enacted a package of medical malpractice ("med mal") litigation reforms. The centerpiece of the reforms was a cap on non-economic damages in med mal cases filed after September 1, 2003. The cap limits non-economic damages against physicians and other individuals who are licensed health care providers to $250,000 (nominal, not adjusted for inflation) for all of these individuals together. A separate $250,000 (nominal) cap applies to each hospital or other licensed health care facility, with total non-economic damages capped at $500,000 (nominal) for all health care facilities. Thus, the cap will be $250,000 (nominal) if there is only one liable defendant, but can be as high as $750,000 (nominal) if there is one or more liable individuals and two or more liable institutions.  

Other reforms adopted at the same time included: [ *list to come]*

[4] For a recent review of the literature, see Y. Tony Yang, David M. Studdert, S. V. Subramanian & Michelle M. Mello, A Longitudinal Analysis of the Impact of Liability Pressure on the Supply of Obstetrician-Gynecologists, 5 Journal of Empirical Legal Studies 21, 30 (2008) (concluding that existing research “has not convincingly established what role, if any, liability pressure plays in determining the size of the physician workforce, particularly within individual physician specialties”). See also Klick and Stratmann (2007); Klick and Stratmann (2005); Kessler, Sage, and Becker (2005); Matsa (2005); Dranove and Gron (2005); Dubay, Kaestner, and Waidmann (2001); Mello et al (2005).

The Texas damages cap was slightly less strict than those adopted by some other states. But the cap and other reforms had a profound impact on med mal claim rates and payouts. As Figure 1 reflects, from 1990 to 2003, claim frequency and claim severity were generally stable. Claim frequency is measured in terms of the number of “large” paid claims – those that closed with payments exceeding $25,000 -- per 100,000 Texas residents. Claim severity is defined as payout per capita for all large paid claims that closed in a given year. (All amounts in this article are in 2008 dollars unless specified otherwise.)

Post-reform, both claim frequency and claim severity dropped substantially. Large paid claims per 100,000 population fell by 57%, and the average payout per large paid claim dropped by 35%, for a combined overall drop in payout per capita of over 70% (from $x to $y per person).

**Figure 1. Medical Malpractice Claim Rates and Payouts in Texas**

Insurance premiums also fell. The largest insurer, Texas Medical Liability Trust, reported that the 2003 reforms “dropped the cost of medical liability insurance by 50%”

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for its policyholders. The Texas Tort Reform Association reports that other med mal carriers also reduced prices substantially, as well they should, given the claim and payout trends shown in Figure 1.

To what extent did this transformation of the malpractice environment help patients in Texas by increasing their access to physicians? Part III reviews the claims about physician supply made by reform proponents, both before and after reform.

III. Physician Supply: Claims

A. Pre-reform

During the campaign to persuade the legislature to restrict lawsuits and to convince Texans to amend the state constitution (which had previously been held to forbid caps on damages), proponents argued that doctors were fleeing Texas and that patients were in danger of losing their access to care. For example, during fall 2003, a brochure was mailed to Texas residents warning that “doctors were fleeing Texas, leaving scores of counties with no obstetricians to deliver babies, no neurologists or orthopedic surgeons to tend to the ill. Without [tort reform] the ad campaign warned, vast swathes of Texas would go begging for health care.” Similarly, a “flier printed by the [Texas Medical Association] in English and Spanish and posted in waiting rooms across the state told patients that ‘152 counties in Texas now have no obstetrician. Wide swathes of Texas have no neurosurgeon or orthopedic surgeon. ... The primary culprit for this crisis is an explosion in awards for non-economic (pain and suffering) damages in liability lawsuits.”

Immediately after tort reform was enacted, Governor Rick Perry gave a speech at the Manhattan Institute, in which he explained:

The threat of litigation has a domino effect . . . , causing malpractice carriers to raise rates, which in turn force many doctors to leave Texas, or in some cases to leave the practice of medicine altogether. And ultimately this hurts patient access the most.

* * *

We’ve seen neurosurgeons leave hospitals in medically underserved areas of the state. Women in three out of five Texas counties do not have access to obstetricians. Imagine the hardship this creates for many pregnant

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7 Texas Medical Liability Trust, 2009 Annual Report, p. 4. This is in nominal dollars; the decline would be larger if adjusted for inflation.
8 See, e.g., Paul Adrian, Tort Reform Benefits Questioned, May 16, 2008 (“Tort, or lawsuit, reform supporters accused trial lawyers of filing frivolous lawsuits, which jacked up malpractice insurance rates so high, that doctors were leaving in droves.”)
10 Id.
women in our state, but especially those women with high risk pregnancies.\textsuperscript{11}

As these statements reflect, a core argument for reform was that Texas was hemorrhaging physicians and that restrictions on lawsuits would stop the bleeding. Consistent with this theme, the core pro-tort-reform lobbying organization was named “Texas Association for Patient Access” (TAPA).

The emphasis in the lobbying rhetoric was keeping physicians in Texas and practicing medicine. Reform proponents did not directly claim that the reforms would bring more new physicians to Texas.

B. Post-reform

Post-reform, the claim that tort reform would stop the bleeding was quickly overshadowed by the stronger claim that tort reform was bringing new doctors into the state. In 2006, two prominent advocates of limits on med mal lawsuits wrote of an “amazing turnaround” across Texas and asserted that there had been “substantial increases” in several types of specialists.\textsuperscript{12} In 2007, Drew Thornley of TAPA wrote that tort reform had the following effects:

Over the past four years, doctors and insurers have returned in droves, premiums are falling, and health care is more available and affordable.

* * *

In May 2003, there were 35,723 in-state medical doctors. Today, there are 6,000 more. . . Doctors view Texas as an attractive place to practice.\textsuperscript{13}

A 2007 article in the New York Times similarly quotes the executive director of the Texas Medical Board as saying that “doctors are coming to Texas because they sense a friendlier malpractice climate.”\textsuperscript{14} The headline for the article summarized the proponents’ claim: “After Texas Caps Malpractice Awards, Doctors Rush to Practice There.”

Similarly, in 2008, an op-ed in the Wall Street Journal Texas legislator Joseph Nixon, the chief author of the tort reform bill opened as follows:

\begin{thebibliography}{99}
\bibitem{12} Howard Marcus and Bruce Malone, \textit{2003 Reforms Helping Doctors Do Their Work}, Austin American-Statesman, Apr. 10, 2006, available at \url{http://www.tortreform.com/node/220} (“This amazing turnaround is occurring across Texas, with a statewide gain of 93 orthopedic surgeons, 81 obstetricians and 32 neurosurgeons. We’ve also seen substantial increases in hard-to-recruit children's doctors such as pediatric cancer physicians, pediatric endocrinologists, child neurologists and doctors who specialize in newborns and premature infants. “)
\end{thebibliography}
When Sam Houston was still hanging his hat in Tennessee in the 1830s, it wasn’t uncommon for fellow Tennesseans who were packing up and moving south and west to hang a sign on their cabins that read "GTT" – Gone to Texas.

Today obstetricians, surgeons and other doctors might consider reviving the practice. Over the past three years, some 7,000 M.D.s have flooded into Texas, many from Tennessee.

Why? Two words: Tort reform.15

In a longer article published in 2008, the same author expanded on his argument:

Amazingly, the Texas Board of Medical Examiners has licensed over 14,500 new doctors since 2003, doubling the number of physicians the Board would have licensed in that same time period. Each year since 2003 has set a new record number of applicants. Most surprising is the number of doctors with mature practices relocating to Texas from other states, solely because of [tort reform]. In fact, the Legislature in 2007 made a special, emergency appropriation to the Board to fund the salaries of additional employees to complete background examinations of all the physician applicants.16

Other sources picked up these themes. A 2008 editorial in American Medical News asserted that Texas’s tort reform “is being credited for slashing liability insurance premiums, boosting the ranks of doctors in the state, and improving medical access to patients.”17 In 2009, Dr. Howard Marcus, chair of TAPA, was quoted in the Austin Chronicle as stating that there were an “extra 16,000 doctors practicing in Texas since 2003. . . [and] ‘when insurance premiums drop, doctors want to practice medicine and come to Texas.’”18 Also in 2009, Newt Gingrich and Texas Governor Rick Perry wrote an op-ed in the Washington Post in which they stated that tort reform had “attracted record numbers of doctors to the state.”19 Senator John Cornyn of Texas also jumped on the bandwagon. In a lecture delivered at the Heritage Foundation, he recited grim statistics about “the exodus of doctors from 2001 through 2003,” followed by the assertion that tort reform “encourage[d] doctors to move back to the state.”20

In 2010, Representative Lamar Smith, the ranking Republican on the House Judiciary Committee, wrote a piece entitled “The Truth About Tort Reform.” He claimed that, as a result of tort reform, “[m]ore than 14,000 doctors have returned to Texas or set up new practices in the state.”21 In a 2010 press release, Governor Rick Perry asserted that after tort reform was enacted, “the number of doctors applying to practice in Texas has increased 60 percent and 17,625 doctors either returned to practice in Texas, or began practicing here for the first time, bringing critical specialties to underserved areas of the state.”22

In 2011, while Congress was considering a federal cap on non-economic damages, tort reform proponents argued that Texas’ reforms had made “the state an enormously popular destination for doctors.”23 Texas Representative Kevin Brady stated: “the real benefit in Texas has been more doctors - over 21,000 new doctors - since tort reform was passed in 2003.” For families in the suburbs and rural areas of Texas, that means access to local specialists in emergency and children's care that simply didn't exist before.”24 Similarly, a press release by Representative Michael Burgess, also from Texas, announcing his introduction of the Medical Justice Act, which would cap non-economic damages nationwide, quoted the head of the Texas Medical Association that since tort reform “took effect, Texas has licensed 21,000 new physicians, including a record 3,621 in fiscal year 2008.”25

Reform proponents also claimed that specialists were moving into parts of the state where the need for such physicians was especially great. For example, Governor Perry in [*year] claimed that:

Medical liability reform has been the catalyst for finally bringing critical specialties to underserved areas, including an 18% growth in doctors applying to practice in the Rio Grande Valley, adding 192 physicians to one of the state’s most underserved regions. After a net loss of 19 obstetricians and 3 orthopedic surgeons from 2001 to 2003, Texas gained 205 obstetricians and 162 orthopedic surgeons in the first four years after Prop 12. The historically underserved Rio Grande Valley has added 222 physicians since passage of Proposition 12 – an increase of more than 23


23 Sarah Tung, Doctors laud Texas' brand of tort reform; Brady's bill similar to state's limits on lawsuits, Houston Chron. May 27, 2011.

24 Id.

percent in Hidalgo County and more than 16 percent in Cameron County.26

In 2009, Senator Cornyn stated that tort reform had “attracted hundreds of doctors to Texas’ rural and border communities since it was implemented in 2003.”27 Senator Cornyn provided additional detail in his Heritage Foundation speech:

125 counties added at least one high-risk specialist between 2004 and 2008. . . [M]any of these counties had simply lost access to a doctor or never had it in the first place. For example:

- 70 counties added an emergency room doctor, 20 of which had not had one in 2003;
- 52 counties added an obstetrician, 10 of which had not had one at all;
- 50 added a general surgeon, 12 of which had not had one;
- 45 added an orthopedic surgeon, nine of which had not had one before; and
- 20 counties added a vascular surgeon, 11 of which had not had one before.28

Clearly, proponents of tort reform have boasted that the package of lawsuit restrictions Texas adopted in 2003 produced miraculous results. If they are right, the statute caused Texans’ access to health care to improve enormously. But are they right? Part IV turns to the data, and compares these claims to the empirical reality, both before and after 2003.

IV. Physician Supply: Empirical Reality

A. Initial Facts: Licensed and Active Physicians

Most of the claims quoted in Part III are based on periodic reports issued by the Texas Medical Board (TMB) showing the number of applications to practice medicine that TMB receives, the number of licenses it issues, and the number of doctors practicing in identified specialties by county.29 Figure 1 presents the results reported by TMB for FY2001-2010 for applications and licenses.

26 Rick Perry, Medical Liability Reform, at http://www.governor.state.tx.us/priorities/economy/tax_regulatory_reform/medical_liability_reform/.
27 http://www.myharlingennews.com/?p=4230
28 Cornyn, supra note xx at xx.
Figure 1: Texas Medical Licenses Applied for and Granted, FY2001- FY2010

Number of applications and licenses for 2001-2010, as reported by TMB at http://www.tmb.state.tx.us/TMBstats-FY01-10.pdf. Vertical line between 2003 and 2004 indicates pre- and post-tort-reform periods.

As Figure 1 indicates, applications rose moderately in 2004, then substantially in 2006, and remained elevated in later years. Issued licenses lagged applications, but increased substantially in 2007 and also remained elevated. Tort reform proponents relied on these figures to claim that doctors flooded into Texas after tort reform was enacted. The claims for new doctors entering Texas noted in Part III correspond roughly to the total number of licenses issued by TMB since the reforms were adopted.

Unfortunately, these numbers are quite misleading when used as a measure of access to care. First, TMB only reports licenses applied for and issued. It does not report physicians leaving Texas or retiring. Because TMB’s figures ignore exit, they do not reflect net changes in Texas’ population of physicians.

To see the problem, imagine you are filling a five gallon bucket with water, using a one gallon pail. If the five gallon bucket has no leaks, every gallon of water poured into it from the pail results in an additional gallon of water inside the bucket. If the bucket is leaking, however, pouring in a gallon of water might result in considerably less than a gallon remaining inside the bucket. To know how much water is in the bucket, one must know how quickly water is being added and how quickly it is leaking out.

When measuring the change in a state’s population of physician, one must also know both rates. That is, one must know how many new doctors arrived and how many old doctors departed. Because TMB’s statistics reflect entry only, they cannot tell one whether the number of doctors in Texas rose, fell, or was unchanged. By using TMB’s numbers in their statements, the speakers quoted in Part III circulated misleading information.
The Texas Department of State Health Services (TDSHS), a state agency whose data and reports tort reform spokespersons consistently ignore, made the preceding point in a passage that speaks volumes about both Texas’ failure to gain physicians.

The number of new physicians doesn’t always indicate how many net new physicians [Texas] had each year (net=new physicians minus those who leave). … For example, it has been reported that Texas has experienced a record number of new licensees since tort reform, instituted in Texas in 2003; however, the numbers of new active [direct patient care] DPC physicians is inconclusive. The year with the highest numbers for both new physicians and the net increase of physicians was 2003, but the trend did not continue in the following years; 2004 had the lowest net increase for that decade, and while the numbers fluctuated, the total number of new DPC physicians for 2004, 2006, and 2007 are comparable to the number in 2002. A large increase was recorded in 2008, when [the Health Professions Resource Center, a data gathering agency overseen by TDSHS,] began to include more physicians as DPC at the request of the Texas Medical Association. This number dropped off again in 2009.30

Brian King, Program Director at TDSHS, informed us that the coding change increased the count of active, DPC physicians by 627 in 2008, 674 in 2009, and 738 in 2010, about 1.8% of the total number of DPC physicians in the final year.31

Second, the speakers quoted in Part III also gave tort reform credit for every physician that obtained a Texas license after 2003. This was plainly inappropriate. For example, TDSHS suggested that the remarkable increase in new active DPC physicians recorded in 2005 was “partially due to Hurricane Katrina,” which forced doctors practicing in Louisiana to relocate.32 Unless tort reform caused Hurricane Katrina, a proposition the spokespersons quoted in Part III would likely reject, they should not claim credit for these physicians.

Hurricane Katrina aside, new doctors came to Texas every year before 2003, and many would have come in later years even had Texas not enacted tort reform. To estimate the change in number of issued licenses caused by the reforms, one must estimate a counterfactual: the number of new doctors that would have received Texas licenses without the 2003 reforms.

Third, TMB’s statistics are also misleading because, although they reflect licensure, they do not indicate which physicians are engaged in patient care. Many licensed physicians are researchers, administrators, or otherwise occupied with non-clinical tasks. If one’s concern is with access to medical services, non-practicing physicians should be excluded. Identifying which physicians are in active practice also makes it possible to measure a possible impact of tort reform that would otherwise be obscured. Some licensed physicians may have switched from patient care to research or administration before the reforms, because of Texas’ once-hostile malpractice climate,

31 Email correspondence from Brian King to Charles Silver, September 26, 2011.
and may have switched back after the reforms. That should count as an increase in physician supply, due to the reforms. TMB’s data would not capture this change. Conversely, if the newly licensed physicians in the post-reform period are disproportionately engaged in research, administration, or non-clinical work, counting newly licensed physicians would exaggerate any improvement in access to care.

B. Comparing Texas to Itself: Pre- versus Post-Reform

As it happens, the TDSHS publishes information on the number of active, direct patient care (DPC) physicians in Texas by county and year.33 As far as we can determine, tort reform proponents have never cited these figures when discussing the impact of tort reform on physician supply, even though the data are publicly available and they have surely known about them. Figure 2 presents the TDSHS data on the number of DPC physicians, (both absolute and per 100,000 population, from 1990-2010.

The first lesson to draw from Figure 2 is that Texas was not hemorrhaging physicians before tort reform was enacted in 2003. The absolute number of DPC physicians increased steadily from 1990 to 2003. Of particular interest is the absence of any interruption of the upward curve during the insurance crisis period (1999-2003). Rising insurance premia, which may have more than doubled, appear not to have discouraged doctors from coming to the state. Similar results are observed when one controls for Texas’ population, which also also grew over time. The number of DPC physicians per capita rose steadily from 1996-2003, after a flat period from 1990-1996.

The second lesson is that physician counts did not grow faster after reform than before. As Figure 2 shows, the number of DPC physicians grew at roughly the same rate during the pre- and post-reform periods. In fact, during the post-reform period the rate of increase may have slowed. The line showing physicians per 100,000 population makes this possibility more apparent visually.

These are not the results one would expect to find if the public statements by the speakers quoted in Part III were true. The assertion that Texas experienced an “amazing turnaround” after suffering an “exodus of doctors from 2001 through 2003” is doubly false. There was neither an exodus before reform nor a dramatic increase after reform. When making the case for lawsuit restrictions and when claiming enormous post-reform success, the identified speakers made statements that were wrong.

33 The yearly estimates are available at http://www.dshs.state.tx.us/chs/hpre/PHYS-lnk.shtm.
Figure 2: Total DPC Physicians and DPC Physicians per 100,000 Texans, 1990-2010


To assess the impact of the 2003 statute more precisely, we estimated the number of physicians who would have been practicing in Texas if the pre-reform trend had continued. To do so we estimated the following regression model over the pre-reform years (1981-2002) and used it to predict active physicians over 2003-2010:34

\[
\text{No. of TX Physicians} = \alpha + \beta_1 \times (\text{Year} - 1981) + \beta_2 \times (\text{TX realGDP})
\]  

(1)

This model, while simple, has an \( R^2 \) of 0.9812. A similar model with active DPC physicians per 100,000 population as the dependent variable has an \( R^2 \) of 0.9041.

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34 We limited the time period to 1981-2002 because some doctors may have moved to Texas in 2003 in anticipation of the tort reform statute taking effect.
FIGURE 3: Predicted & Observed DPC Physicians, 2000-2010

Actual and predicted Texas DPC physicians (left scale) and DPC physicians per 100,000 people (right scale). Predicted lines are based on regression equation (1) in text, estimated over 1981-2002. Vertical line between 2003 and 2004 indicates pre- and post-tort-reform periods.

Figure 3 shows that, had Texas attracted DPC physicians over 2004-2010 at the same rate it did during 1981-2002, the state would have had roughly 1,000 more DPC physicians in each year from 2005-2010, or about 7 more DPC physicians per 100,000 residents.\(^{35}\) In robustness checks, the shortfall is larger when we (i) include 2003 in the estimation period, or (ii) allow physician supply to respond to Texas GSP with a one- or two-year lag.\(^{36}\)

The conclusion: Given the growth in Texas population and the performance of Texas’ economy, the number of active, DPC physicians grew more slowly in the post-reform period than experience over the prior two decades would have led one to expect. It is possible that but for tort reform, physician supply trends during 2004-2010 would have been even worse, but that is a very different claim than the one made by reform proponents.

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\(^{35}\) These results make no adjustment for the coding change TDSHS made, which increased the number of active, DPC physicians starting in 2008. See supra, text accompanying note[]. An adjustment would increase the post-2003 shortfall.

\(^{36}\) Compare Richard A. Cooper, Thomas E. Getzen, and Prakash Laud, *Economic Expansion Is a Major Determinant of Physician Supply and Utilization*, 38 Health Services Research 676, 677 (2003) (“a growing body of literature demonstrat[es] that levels of health care spending could be predicted from GDP or national income with a high degree of accuracy, particularly if temporal lags were also considered”) (citing studies).
How is it possible to have substantially more licenses issued post-reform (Figure 1) without a corresponding increase in DPC physicians? There are four main reasons. First, there was a lag between tort reform (2003) and the increase in issued licenses (2007). Second, as Table 1 shows, the number of DPC physicians leaving practice increased over 2000-2010 (we lack data on leavers prior to 2000). So, for a period of time spanning tort reform, the leaky bucket let water escape more quickly than before.

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

Number of year-end active Texas DPC physicians, and number leaving practice each year, for 2000-2010. Source: Texas Dept. of State Health Services (see Figure 2 for source details).

One interesting possibility: the rates of departure and post-reform arrival may be related. Departures peaked in 2005 (Table 1) and license applications did the same in 2006 (Figure 1). This suggests that many of the physicians who entered practice in Texas may have been attracted by the prospect of filling recently created vacancies. If so, then the rise in applications was driven by greater employment opportunities, and not by other factors, such as the adoption of tort reform.

Third, relative to the total number of licensed Texas physicians, the fraction who are in active patient care is falling. From 2002 to 2010, the ratio fell from about 41% to about 39%. The ratio of new active DPC physicians to new licensees fell even faster, from 115% in 2002 to 86% in 2009, the last year for which we have data. Thus, a smaller fraction of the newly licensed physicians reported by TMB are reflected in net growth in DPC physicians.

Fourth, Texas population is rising, and the national ratio of active physicians per 100,000 population is also rising. Both of these factors would tend to drive a steady increase in newly entering physicians.

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38 The number of new DPC physicians can exceed the number of new licensees as a result of changes in practice areas among already licensed physicians.
C. Texas versus National Trends

In section B, we compared post-reform Texas to pre-reform Texas and asked, What physician counts would one predict for the post-reform period given pre-reform trends? This approach implicitly assumes that, during the post-reform period, no changes occurred in national trends that might also have affected Texas. In this section, we ask whether national trends changed in any important respect. We then consider how Texas did in attracting physicians relative to the rest of the U.S.

Figure 4 draws on annual data, published by the American Medical Association (AMA), on the number of active, patient care physicians per 100,000 persons, by state and for the United States as a whole. The figure ends with 2009, the last year for which AMA data is available. The top, upward sloping top line shows the national average, which rises steadily during both the pre- and post-reform periods. The lower, upward sloping line shows Texas, which rises roughly in parallel with the U.S. line during the pre-reform period, but somewhat more slowly after 2003. Finally, the somewhat downward sloping line shows the ratio between these two lines: (Texas physicians/U.S. physicians, each measured per 100,000 people.

Figure 4. US and Texas Trends in Physicians/100,000 Population

The third line provides, in effect, a “difference-in-differences” (DiD) estimate of whether tort reform improved Texas’s drawing power, relative to the rest of the U.S. If so, the line should kink upward after tort reform. Instead if anything, the slight downward slope steepens after reform.
The downward sloping “ratio of ratios” line in Figure 4 treats Texas as doing as well as expected if it maintains the pre-reform Texas-to-U.S. ratio of physicians to population, even though this ratio is well below 1 during the entire period. An alternate DiD estimate would ask whether the Texas minus U.S. number of physicians per 100,000 people is rising or falling. Figure 5 provides that alternative measure. The Texas shortfall increases steadily; and the rate of shortfall increases in the post-reform period.

**Figure 5. US minus Texas Difference in Physicians/100,000 Population**

<table>
<thead>
<tr>
<th>Year</th>
<th>Difference between TX and US Physicians per Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>-80.0</td>
</tr>
<tr>
<td>1992</td>
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<td>2010</td>
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</table>

Source: American Medical Association (physician counts) and Census Bureau (population). See Figure 4 for source details.

A third measure of how Texas is doing relative to other states again draws on the AMA data. Every year, the AMA ranks the states based on the number of active, patient care physicians per capita. If physicians were leaving Texas pre-reform, the state’s pre-reform AMA rank should have fallen. Conversely, if tort reform made Texas more attractive to physicians, the state’s post-reform AMA rank should have risen.
Figure 6 shows how Texas’ AMA rank changed over time. We flipped the vertical axis so that a better (lower) rank appears higher than a worse one. Texas’ ranking did slip pre-reform, from 39th in 1997 to 44th in 2003, and did improve post-reform, from 45th in 2004 to 42nd in 2007 and 2008 – one spot below its 2000-2002 rank and four places below the rank it held in 1998-1999.

Given that Texas fell farther behind the average U.S. state in the post-reform period (as shown in Figures 5 and 6), how can its AMA ranking have improved? To answer this question, one must understand that changes in the AMA rank reflect Texas’ position relative to other states with similarly low physician-to-population ratios. Among that restricted comparison set, Texas did modestly better after reform than before, even though its downward slide relative to the national mean continued and even accelerated. In other words, other below-average states fared worse than Texas did, so Texas occupied a higher slot in the below-average category. Tort reform could have contributed to this result.

The quantitative evidence above is consistent with qualitative evidence that tort reform did not solve whatever physician supply issues Texas already had. In 2009, the AMA listed Texas as a “hot spot” state where Medicare patients had difficulty obtaining treatment. In 2011, it declared that “Texas seniors [] face[d] a Medicare physician access crisis.” Similarly, in 2010, Dr. Gary Floyd, chief medical officer of JPS Health Network, told the Texas House of Representatives that Texas faced “a shortage of physicians of all types” and that the state was losing its medical school graduates because

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residencies were underfunded.\footnote{Alex Branch, JPS official warns Texas legislators of doctor shortage, Star-Telegram.com, Oct. 19, 2010, http://www.star-telegram.com/2010/10/18/2556711/jps-official-warns-texas-legislators.html#ixzz1TZqnR85F} On the basis of his views, 24/7 Wall St. gave Texas the sixth spot on a list of ten states said to be short of physicians.\footnote{24/7 Wall St., States Running Out Of Doctors, March 15, 2011, at http://247wallst.com/2011/03/15/states-running-out-of-doctors/#ixzz1TZseIsxW.}

D. Trends for High-Risk Specialties and Rural Areas

To this point, we have focused on Texas as a whole, rather than on particular geographic areas or practice specialties. Proponents have also used TMB data to argue that the number of physicians practicing in high-malpractice-risk specialties increased after the enactment of tort reform, and that more physicians are practicing in rural areas as well.\footnote{Texas Medical Board, Physician Demographic Information, 1997-2011, at http://www.tmb.state.tx.us/agency/statistics/demo/docs/docdemo.php. TSDHS also provides an annual breakdown of DPC physicians by county, but it does not provide information on specialties. We are in the process of analyzing this data, and anticipate publishing another article on that subject.} We consider these claims in turn.

1. High-Risk Specialties

For specialists, the first difficulty with the claim of increased supply is one we noted in our prior article: In 2001, TMB switched from paper registration to online registration.\footnote{Silver, Hyman and Black (2008), supra note 2, at 28.} This change caused many Texas physicians who had not identified specialties in prior years to do so. We estimate that about 800 of the “new” specialists said to have been added to the ranks from 2003 to 2007 are actually “old” practitioners whose specialties were previously unreported.

Second, as noted above, TMB’s figures include non-DPC physicians. Thus, some of the specialists counted by TMB do not treat patients, but there is no way to know how many or where these physicians reside. TSDHS, for its part, provides data on DPC physicians by county, but not by specialty.

Third, for specialists, as for total physicians, what affects access to care is \textit{net} new physicians, not gross entry. Without measuring exit, one cannot tell whether new specialists made the pool larger or merely replaced doctors who left.

Fourth, growth in the number of specialists should be compared to national trends, and should be assessed per capita, not in raw numbers. For the U.S. as a whole, the number of physicians per capita grew 7.6% from 2003 to 2010. Texas’ population grew 14.4% at the same time. Together, these two trends predict a 23% rise in the number of physicians. Combining this with the improved reporting of Texas physicians’ specialties, discussed above, one might crudely expect the number of physicians in an average specialty to have grown by 25% over this period.
In light of this, consider ob-gyns, orthopedic surgeons, and neurosurgeons, specialists who face high malpractice risk—. Table 2 provides summary information on physician growth in these specialties from 1997 to 2010. Years 2001-2007 are shaded and ignored in this discussion because we cannot determine how greatly these years were affected by TMB’s switch to on-line registration and the resulting improvement in specialty reporting. However, we can compare the annual growth rates in one pre-reform period (1997-2000) and one post-reform period (2008-2010). Two specialties (ob-gyn and orthopedic surgery) grew more quickly before tort reform than after; the third specialty (neurosurgery) grew more rapidly post-reform. These mixed results are consistent with our prior finding of slower growth across the entire profession in the post-reform period, but it is possible that tort reform brought more neurosurgeons into the state. We can also compare the growth rates of all three specialties to the increase predicted by our back-of-the-envelope calculation. Only neurosurgery came close to keeping up. Although all three specialties might have had fewer members without tort reform, claims of dramatic post-reform inflows of ob-gyns, orthopedic surgeons, or neurosurgeons are wide of the mark.
Table 2. Growth in Selected Specialties, 2003-2010

<table>
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<tr>
<td>2010</td>
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Average annual increase 1997-2000: 2.5% 1.5% 0.0%
Average annual increase 2008-2010: 1.6% 0.3% 3.5%
Actual increase, 2003-2010: 10.2% 9.7% 19.9%
Predicted increase, 2003-2010: 25% 25% 25%

Number of Texas physicians (both patient care and non-patient care) in indicated specialties for the month of March in indicated years, percentage growth from 2003-2010, and predicted growth for average specialty. Source: TMB, Physician Demographic Information (MD & DOs), http://www.tmb.state.tx.us/agency/statistics/demo/docs/docdemo.php

One more practice area deserves mention. Primary care physicians are not fancy specialists, and some are not specialists at all, but they are an important factor in access to healthcare. In a 2006 report, TDSHS reported that “the ratio of [primary care] physicians per 100,000 population increased from 57.5 in 1995 to 70.7 in 2002,” but then “declined
to 68.3 in 2005. TDSHS subsequently produced a second report extending the analysis through 2009. It found that the downward slide continued. In 2009, Texas had 67.7 primary care physicians per 100,000 population. Thus, the period preceding reform was one of growth in primary care physicians per capita, but the post-reform period was not.

2. Physicians in Rural Areas

Finally, the speakers quoted in Part III also argued that rural Texas counties experienced a dramatic inflow of physicians after tort reform. The suggestion is not implausible. Some prior research finds a causal effect of tort reform on the availability of physicians in rural areas too.

In the reports cited above, the TDSHS analyzed the growth in the supply of DPC physicians in metropolitan and rural counties. Figure 6 is reprinted from the 2009 report. It supports our findings and shows that the tort reform proponents’ assertions are false. The period stretching from the mid-1990s to the early 2000s was one of substantial improvement in physician supply in both rural and metropolitan counties. Thereafter, no growth occurred in either area, until rural counties experienced a modest uptick in 2008 and 2009. A delayed impact of tort reform might have contributed to that uptick, but even so, the claim that tort reform brought doctors in droves to Texas’ rural counties is plainly wrong.

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47 David Matsa [complete cite].
V. Discussion

Tort reform dramatically changed the malpractice environment in Texas. However, despite the extravagant claims of reform proponents, there is no evidence that it materially affected the supply of DPC physicians. These findings should not be surprising – they are consistent with prior multistate studies of the relationship between tort reform and physician supply. None finds effects as dramatic as those claimed by the spokespersons quoted in Part III.

Texas’ poor record in the post-reform period in attracting new physicians is surely not caused by tort reform. Instead, that record provides strong evidence that physician supply is driven primarily by other factors. One likely factor is Texas’s poor relative performance in percent of the population with health insurance. Anecdotal evidence suggests that the percentage of uninsured Texans, already high prior to reform, rose more rapidly during the post-reform period than the national percentage. A number of factors affect where physicians choose to practice. For some, malpractice insurance rates and the risk of being sued may be important factors. But for many, other factors likely matter more, including where the (insured) patients are.

VI. Conclusion

The tort reform debate has featured extravagant claims about the merits and demerits of damages caps. There is no doubt that caps on total damages, or on non-economic damages, can affect malpractice insurance rates and the frequency and cost of malpractice claims. These impacts can be dramatic, as Texas’ experience shows. But their broader effects are less clear.
In Texas, tort reform proponents blamed the absence of a damages cap for Texas’s failure to attract physicians, and credited adoption of a cap on non-economic damages for an extraordinary increase in the number of physicians. We find no evidence to support either claim. Physician supply was not stunted prior to reform, and did not measurably improve after reform. This is true whether one looks at the number of patient care physicians in Texas, the number of Texas physicians in high-malpractice-risk specialties, or the number of physicians per capita in Texas relative to other states. A single, summary, bottom line statistic: Texas’s ratio of active patient care physicians to population was 79.1% of the national average in 2003, down slightly from 80.2% in 1991. This ratio then fell to 76.8% of the national average in 2009. In the post-reform period, Texas did not move closer to the national average, it lagged farther and farther behind it. The post-reform experience shows conclusive that tort reform was not the “magic bullet” its supporters claimed it was. One must look elsewhere for a solution to Texas’ physician shortage.

Although not discussed in this paper, the same is true for the problem of health care spending. In a separate research, we find no evidence that tort reform reduced the rate of which health care costs grew in Texas.

Limiting med mal lawsuits might be a good idea, or a bad one. But the core message from this study, and our related study of the impact of tort reform on health care spending – both consistent with other research – is that tort reform is a small idea, when it comes to the larger and linked questions of health care access and affordability.

References


