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Testimony Prepared for  
Senate Judiciary Committee Hearing  
September 8, 2020  
Legislative Budget and Finance Committee Report  
“A Study of the Impact of Venue for Medical Professional Liability Actions”

## **Background**

Since 2008, I have been a tenured full professor of law at the University of Pennsylvania, and, since 2009 I have held the Erasmus Chair of Empirical Legal Studies at the Erasmus University Rotterdam. Previously, I held the Jeffrey A. Stoops Chair of Law and Economics at Florida State University, and I have been the Maurice R. Greenburg Visiting Professor at Yale Law School. I was the first Dean’s Distinguished Visitor at Villanova University Law School.

I have also held visiting professor positions at Columbia University Law School, Northwestern University Law School, and the University of Southern California Law School. Internationally, I have served as a visiting professor in the law schools, business schools, or economics departments of the University of Hamburg (Germany), the University of Ljubljana (Slovenia), Bar Ilan University (Israel), the University of Canterbury (New Zealand), Waseda University (Japan), Goethe-Universität Frankfurt (Germany), and the Max Planck Institute (Germany). I hold a Ph.D. in economics and a J.D. from George Mason University. I regularly teach torts, and I have taught econometrics at both the undergraduate and graduate levels both domestically and abroad. I frequently teach courses on empirical methods, statistical evidence, and liability risk to federal, state, and international judges and regulators.

In 2003, I helped found the “Liability Project” at the American Enterprise Institute in Washington, D.C. with Richard Epstein and Michael Greve. In this program, we studied the effects of state tort law and litigation on individual behavior, including that of physicians, and the influence of the tort system on economic outcomes. I have studied tort reform, including medical malpractice reform, extensively. Among my publications in this area is the 2007 article “Medical Malpractice Reform and Physicians in High Risk Specialties” in the peer-reviewed Journal of Legal Studies which has been cited almost 100 times in leading academic legal, economic, medical, and public health journals. I was also a senior economist with the Rand Corporation’s Institute for Civil Justice from 2007-2009.

## Prior Work Relating to Pennsylvania's Venue Rule for Medical Malpractice Litigation

I previously circulated a report (dated October 4, 2019) commenting on the Milliman study (dated February 20, 2019) examining the effects of reversing the 2003 rule that restricted medical malpractice plaintiffs from filing claims in counties other than where the underlying medical care was provided. My report is available at <https://www.law.upenn.edu/live/files/10773-klickmillimancommentpdf>.

To summarize my comments, the Milliman report concludes, that reversing the venue rule will lead to an increase in medical malpractice premiums of 15 percent on average, with physicians practicing in Philadelphia County seeing increases of 45 percent. Further, they conclude, high risk specialists such as general surgeons and obstetricians will experience additional increases of 17 percent. They claim that these estimates are likely conservative.

In my comment, I note that these conclusions are not credible. First, the Milliman study can only observe the joint effect of the 2003 venue change along with all of the other medical malpractice litigation changes occasioned by the 2002 Medical Care Availability and Reduction of Error (MCARE) Act. There are a host of MCARE changes that could have influenced changes in malpractice premiums, such as the Certificate of Merit requirement (which is presumed to weed out frivolous litigation) and the change in the collateral source rule (which will make many cases unprofitable if the plaintiff has little in the way of lost wages or other un-insured damages). Assuming *arguendo* that there was a decline in medical malpractice premiums after 2003, it is not possible to single out the venue rule as being responsible for such a decline, to the exclusion of the other MCARE changes.<sup>1</sup>

The Milliman report attempts to surmount this problem by assuming that the effects of all of the other MCARE changes are common throughout the state, while the venue rule change's effects are concentrated in places where plaintiffs want to file cases, which Milliman assumes is Philadelphia County. By this assumption, malpractice premium differentials between Philadelphia County and other counties must be due to the venue rule change (because, by assumption, all of the other MCARE induced changes will be present in both Philadelphia County and the comparison counties).

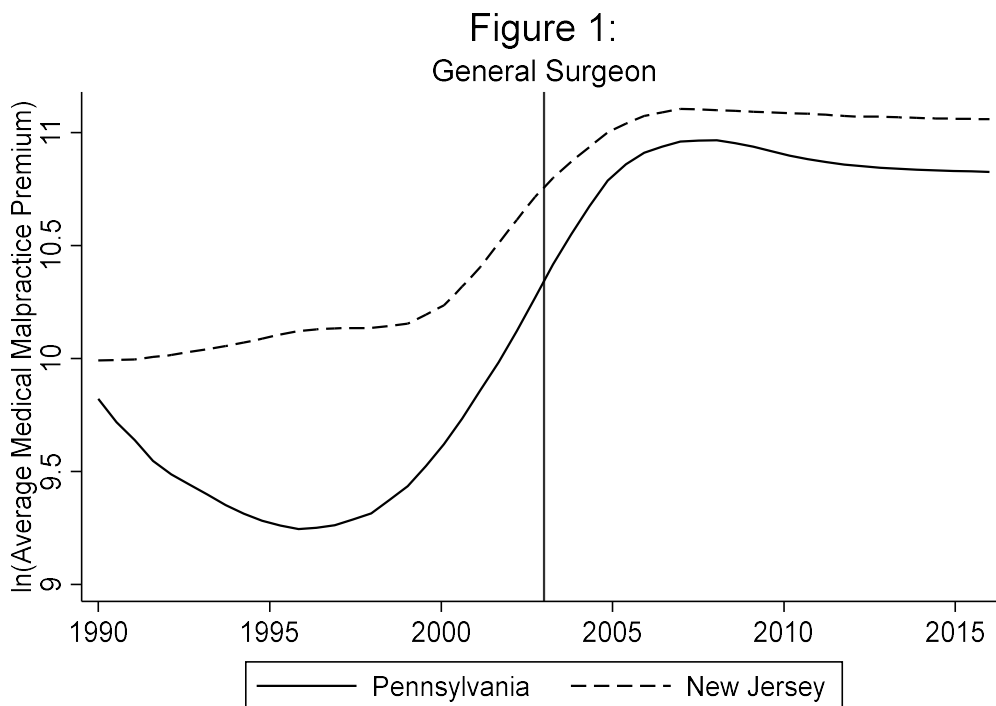
This assumption about the difference in the venue rule as opposed to the other MCARE changes is made with zero underlying support. It is easy to think of reasons why other MCARE provisions might have differential impacts depending on which counties one is comparing. For example, the decision to bring a medical malpractice claim will generally be driven (among other factors) by whether the expected yield of the case will exceed the costs of bringing the case. The expected yield will be a combination of the probability the plaintiff will win and the likely damages awarded. If the MCARE's collateral source rule

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<sup>1</sup> This is the statistical problem known as perfect multicollinearity. See, for example, James Stock and Mark Watson, *Introduction to Econometrics*, 2<sup>nd</sup> ed (2007), pp. 203-204. Intuitively, from a statistical perspective, when we estimate the effect of a variable (in this case, is the constrained venue rule in place) on an outcome, we are using the data to examine, when all other variables are held constant, what is the effect of the change in the variable. However, if we only observe the venue variable turn on when multiple other variables also turn on, there is no way for the data to tell us what happens when the venue rule changes and all other policies are held constant. Instead, we can only know the total effect of all of the variables changing.

reform makes it impossible to recover insured hospital costs, the expected damages will decline. This decline may induce the plaintiff to drop the case altogether if the other elements of damages (e.g., lost income) are no longer sufficient to justify the cost of the case. If plaintiffs who are injured in Philadelphia generally have lower incomes than plaintiffs injured in Chester, Montgomery, Bucks, and Delaware Counties,<sup>2</sup> otherwise identical cases might not be brought in Philadelphia County, while they would still be brought in the surrounding counties regardless of the venue rule.

Second, even if one were to ignore this fatal statistical problem, there is no evidence that Pennsylvania’s medical malpractice premiums changed in ways that were different from other states’ rates before and after 2003 even though other states were not engaging in medical malpractice reform in general or changing their venue rules in particular. My report provides more exhaustive and rigorous regression analyses on this point, but the general point can be seen easily in the figures presented below. In these figures, I provide a smoothed trend line of the logarithm of the average medical malpractice premiums<sup>3</sup> in Pennsylvania and New Jersey for general surgeons, internal medicine specialists, and obstetricians. Although Pennsylvania’s upward trend line does eventually flatten out years after the 2003 venue and other MCARE changes, the same is true in New Jersey, despite not having adopted any of these changes.



<sup>2</sup> In 2018, according to data from the Bureau of Economic Analysis, in terms of per capita personal income, the top county was Chester (\$82,846), followed by Montgomery (\$80,606), Bucks (\$73,447), and Delaware (\$66,617), while Philadelphia County came in at \$55,747.

<sup>3</sup> The premium data were taken from the Medical Liability Monitor (MLM). The MLM is generally regarded as the most reliable comprehensive premium dataset available. See Bernard Black, Jeanette W. Chung, Jeffrey Traczynski, Victoria Udalo, and Sonal Vats, Medical Liability Insurance Premia: 1990–2016 Dataset, with Literature Review and Summary Information, *Journal of Empirical Legal Studies*, 14(1): 238-254(2017).

Figure 2:  
Internal Medicine

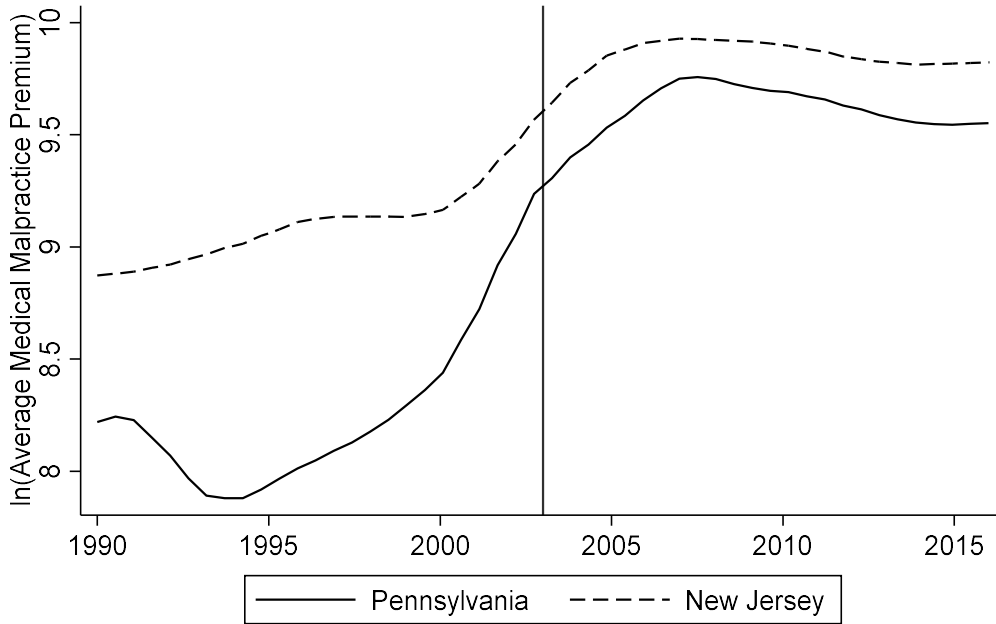
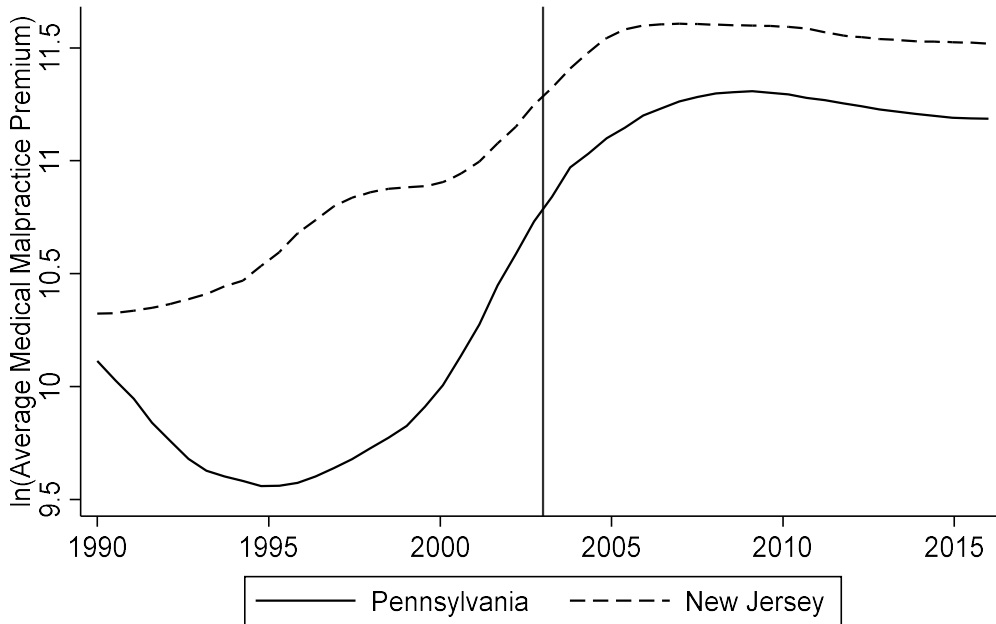


Figure 3:  
Obstetrician



My full report shows that the same conclusion holds if one compares Pennsylvania to the rest of the nation, as well as if the comparison is made to just Pennsylvania's border states.<sup>4</sup> Given these results, it is highly unlikely that any of Pennsylvania's 2003 reforms is responsible for the observed trajectory of medical malpractice premiums in Pennsylvania. It is, therefore, unreasonable to conclude that a reversal of the venue rule would lead to any systematic changes in those rates today. These results are not particularly surprising given the large literature showing that, at most, only noneconomic damage caps have systematic effects on short terms premiums and longer-term losses for insurers.<sup>5</sup>

For these reasons, among others, I concluded my report with the following: "Pennsylvania's MCARE Act was passed toward the beginning of this nationwide trend. Once the background trend is removed from the data, there is no evidence that MCARE had any significant effect on medical malpractice filing rates, settlements and awards, or medical malpractice premiums. Given that, the data do not support the conclusion that medical malpractice claims and insurance premiums would increase if the MCARE Act's venue restriction were reversed. The analysis and the conclusions in the Milliman Report are not reliable and do not meet even the most basic standards of empirical policy analysis." I continue to think this is the appropriate assessment of the Milliman report.

### **Comments on Legislative Budget and Finance Committee Report**

In my opinion, the LBFC exercised the appropriate caution regarding not drawing conclusions about the effect of the 2003 venue rule change given all of the other changes occurring at the same time, as discussed above.

Despite this caution being the most sensible stance, it may be helpful to, as above, ignore the fatal statistical problem that multiple changes presents and see if there is any evidence at all that the 2003 venue reform improved patient access to healthcare. The committee is correct to suggest that the issue of access is a complicated one. Just looking at the change in the number of doctors, hospitals, and hospital beds may leave out other dimensions of access. For example, doctors can vary how much they work or how many patients they see.<sup>6</sup>

In an attempt to side-step the complexities of access, Dubay, Kaestner, and Waidmann (2001) examined the effect of medical malpractice reform on prenatal care received by pregnant women. Intuitively, if there are more doctors (and/or cheaper doctors) because of medical malpractice reform, it should be easier for pregnant women to receive prenatal care. Examining the national natality files (which code various variables for each live birth in the United States), they found that a 22 percent increase in obstetrician medical malpractice premiums increases the likelihood that a pregnant women receives late

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<sup>4</sup> Ohio and West Virginia also engaged in medical malpractice reform (although not venue reform) in 2003, so a more valid comparison would drop those states from the border state analysis, which I do in my report.

<sup>5</sup> On this point, see Patricia Born, W. Kip Viscusi, and Tom Baker, *The Effects of Tort Reform on Medical Malpractice Insurers' Ultimate Losses*, *Journal of Risk and Insurance*, 76(1): 197-219 (2009) and citations therein.

<sup>6</sup> Eric Helland and Mark Showalter, *The Impact of Liability on the Physician Labor Market*, *Journal of Law and Economics*, 52(4): 635 – 663(2009) examines how physicians change the amount they work as a response to tort reform.

prenatal care (i.e., either no prenatal care or having the first instance of prenatal care occurring after the first trimester) by between 2 and 6 percent.<sup>7</sup>

Applying this approach to the Pennsylvania reforms is relatively straight forward. I first downloaded all of the natality records for the United States from 2000-2004.<sup>8</sup> The public use natality records after 2004 censor geographic information about the birth and, therefore are not useful in this setting.<sup>9</sup> First, I examined the relationship between the 2003 PA reforms and whether a pregnant mother made her first prenatal visit during the first trimester, controlling for state to state baseline differences and controlling for background (potentially nonlinear) nationwide trends using state and year fixed effects. I used ordinary least squares regression to simplify presentation, though results are similar using logistic regression. In Table 1, I provide results using records from all states, records from Pennsylvania and its border states, and Pennsylvania and its border states with Ohio and West Virginia omitted because they too engaged in tort reform in 2003.

Table 1:			
Probability Pregnant Woman Makes Prenatal Visit During First Trimester			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	-0.10*** (0.00)	-0.10*** (0.00)	-0.10*** (0.00)
Observations	19,825,249	3,687,577	2,843,134
*** Statistically significant at the 1 percent level			

Pennsylvania actually saw a reduction in the probability a pregnant woman receives prenatal care during the first trimester after the 2003 MCARE reforms. From a baseline of about 85 percent, the number dropped about 10 percentage points relative to the changes occurring nationwide. While not a huge decline,<sup>10</sup> it surely is suggestive that the MCARE reforms did not lead to an immediate improvement in this important metric of healthcare access.

In Table 2, I examine the probability that a pregnant woman goes without prenatal care entirely.

<sup>7</sup> Lisa Dubay, Robert Kaestner, and Timothy Waidmann, Medical malpractice liability and its effect on prenatal care utilization and infant health, *Journal of Health Economics*, 20: 591-611 (2001), p. 605.

<sup>8</sup> These data and their codebooks are available at <https://data.nber.org/data/vital-statistics-natality-data.html>.

<sup>9</sup> Although it is possible to get access to the unredacted files, there was not time to apply for the required permissions.

<sup>10</sup> Given the millions of observations in the data, even small declines would likely be judged statistically significant, as all of the results in Table 1 are.

Table 2:			
Probability Pregnant Woman Receives No Prenatal Care			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	0.006*** (0.001)	0.009*** (0.001)	0.008*** (0.001)
Observations	19,690,499	3,684,654	2,854,016
*** Statistically significant at the 1 percent level			

From a baseline of 0.8 percent, these results suggest that the 2003 reforms are associated with an increase in the probability a pregnant woman in PA does not receive prenatal care of between 0.6 percent and 0.9 percent (i.e., effectively a doubling of the baseline rate), and the effects are statistically significant (though, again, with millions of observations, that is not a surprise).

The natality files also include data for the total number of the mother’s prenatal care visits. In Table 3, I present results of a regression examining this visits variable as the outcome, again with state and year fixed effects. Again, for presentation purposes, I use ordinary least squares regression models, but the results are quite similar if I use a count data model.

Table 3:			
Prenatal Care Visits			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	-0.57*** (0.04)	-0.61*** (0.11)	-0.52*** (0.14)
Observations	19,690,499	3,684,654	2,854,016
*** Statistically significant at the 1 percent level			

The Table 3 results indicate that the post MCARE period is associated with a statistically significant reduction in prenatal care visits. From a baseline of almost 11 visits per mother, this reduction represents a drop of more than 5 percent.

To investigate whether these care reductions result in worse health, I examine the 5-minute Apgar<sup>11</sup> score recorded for each birth. The Apgar rating is a summary metric of a baby’s health performed soon after delivery. The score ranges from 0-10, with scores above 7 being considered normal. I again use ordinary least squares, although the results are comparable if one uses an ordered probit or other model for categorical data, and I include state and year fixed effects to account for state-to-state baseline differences and background national trends.

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<sup>11</sup> The five criteria for the score fall under the categories Appearance, Pulse, Grimace, Activity, and Respiration.

Table 4:			
Apgar Scores			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	-0.15*** (0.01)	-0.16*** (0.01)	-0.15*** (0.00)
Observations	15,718,748	3,819,382	2,957,897
*** Statistically significant at the 1 percent level			

In all three samples, the 2003 reforms are associated with a small, but statistically significant, reduction in the 5-minute Apgar scores. This reduction is not particularly important from a health perspective as the PA baseline of 8.93 more than allows a 0.15 reduction with the average baby remaining well within the normal range. However, this reduction does cast doubt on whether the 2003 MCARE reforms, including the venue change, improved access to medical care and, indeed, public health.

One concern about the foregoing natality record analysis involves its short time span, owing to the suppression of geographic identifiers after 2004 in that data. It is possible, however, to use the aggregated version of the natality data available from the Centers for Disease Control's Wonder System<sup>12</sup> to do an analysis of the prenatal care variables (the Apgar scores are not available in this system) with one caveat. The prenatal care variable is not available for all states for all years. Specifically, for Pennsylvania, this variable is not available for 2003-2006. I can, however, augment the data with this variable from the natality records themselves for 2003 and 2004, leaving Pennsylvania with data from 1995-2004 and 2007-2018. While not perfect, this does allow us to examine whether there was a longer-term improvement in access to prenatal care associated with the 2003 Pennsylvania reforms.

In Table 5, I regress the percentage of births in a state for a given year where the mother received prenatal care during the first trimester, including state and year fixed effects. For the denominator in the percentage, I only use the number of births where it was known whether the mother received prenatal care, though results are comparable if I use the total number of births as the denominator.<sup>13</sup>

Table 5:			
Percentage of Births where Mother Received Prenatal Care in First Trimester			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	-0.04*** (0.00)	-0.02 (0.02)	-0.03 (0.03)
State-Specific Trends	No	No	No
Observations	1,054	145	105
*** Statistically significant at the 1 percent level			

<sup>12</sup> <https://wonder.cdc.gov/natality.html>

<sup>13</sup> Results are also similar if I weight the regressions by the number of births.



This suggests that the earlier results were not an artifact of examining a time period that was too short. The Table 5 results suggest that there is no improvement in healthcare access associated with the 2003 Pennsylvania reforms even if we expand the time series out to 2018.

Table 6 presents similar results for the percentage of births where the mother received no prenatal care at all. There is no reduction in the percentage of births where the mother did not receive any prenatal care after Pennsylvania enacted the MCARE reforms.

Table 6:			
Percentage of Births where Mother Received No Prenatal Care			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	0.001 (0.001)	0.001 (0.004)	0.000 (0.007)
State-Specific Trends	No	No	No
Observations	1,054	145	105

One concern with examining such a long time period (1995-2018) is that different states may be experiencing differential background trends. In Tables 7 and 8, I re-run the regressions allowing each state to have its own linear time trend. This does not make any difference in the ultimate conclusion.

Table 7:			
Percentage of Births where Mother Received Prenatal Care in First Trimester			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	-0.09*** (0.00)	-0.08*** (0.01)	-0.08*** (0.01)
State-Specific Trends	Yes	Yes	Yes
Observations	1,054	145	105
*** Statistically significant at the 1 percent level			

Table 8:			
Percentage of Births where Mother Received No Prenatal Care			
(Standard Errors Clustered by State)			
	All States	PA & Border States	PA, DE, MD, NJ, NY
MCARE Reforms	0.003*** (0.001)	0.002 (0.004)	0.000 (0.005)
State-Specific Trends	Yes	Yes	Yes
Observations	1,054	145	105
*** Statistically significant at the 1 percent level			

Using these more direct indicators of healthcare access, it is clear that the MCARE reforms, including the change in the venue rule, have not led to increased access to care. Because obstetricians fall within the top 10 specialties in terms of annual likelihood of facing a medical malpractice claim and within the top 5 for the highest mean payments to plaintiffs,<sup>14</sup> this access metric should be particularly sensitive to changes in the liability environment. Indeed, the Dubay, Kaestner, and Waidmann (2001) results indicate that a reduction in annual malpractice premiums on the order of \$10,000 can substantially improve access to prenatal care for pregnant women. There is no evidence that Pennsylvania has experienced an improvement in the cost of premiums, in healthcare access, or in ultimate public health as a result of the 2003 reforms, including the change in the venue rule.

## **Conclusion**

As a statistical matter, it is not possible to parse out the individual effects of multiple reforms all being implemented at the same time. Because of this, there is no reason to believe that the change to Pennsylvania's venue rule in medical malpractice cases had any effect on litigation metrics or insurance premiums. To claim otherwise indicates either a lack of understanding of rudimentary statistics or question begging by merely assuming away the statistical problem. Further, the evidence is clear that the leveling off in insurance premiums that occurred in the mid-2000s in Pennsylvania was a nationwide phenomenon. Even states that changed none of their medical malpractice litigation rules exhibited a comparable leveling off.

In many ways, though, insurance rates are only important to the extent that we think increased premiums will cause doctors to raise their prices or reduce supply by leaving the state or working less. If these things occur, access to healthcare services will be reduced. There is no evidence that Pennsylvania's MCARE reforms, including the venue rule change, improved access to healthcare for Pennsylvania patients. If anything, studying prenatal care indicates that access has worsened since 2003. Given this, there is no reason to fear that returning the venue rule to its pre-2003 state (and bringing it back in line with the rule for all other civil litigation in the state) will have any adverse effects on litigation rates, medical malpractice premiums, or public health more generally.

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8/31/2020

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<sup>14</sup> See Anupam B. Jena, Seth Seabury, Darius Lakdawalla, and Amitabh Chandra, Malpractice Risk According to Physician Specialty, *New England Journal of Medicine*, 365:629-636(2011).