

ACTUARIAL REVIEW OF THE PROPOSED AMENDMENT TO THE MEDICAL PROFESSIONAL LIABILITY VENUE RULE

Pennsylvania State Senate Judiciary Committee

June 9, 2022

CONTENTS

1.	Executive Summary	1
1.1.	Purpose and Scope.....	1
1.2.	Actuarial Findings.....	1
1.3.	Report Organization.....	3
2.	Background.....	4
2.1.	2002 Tort Reform.....	4
2.2.	Proposed Rule Change	4
3.	Data.....	6
4.	Thesis	7
4.1.	Shifting of Claims Due to the Introduction of the Venue Rule	7
4.2.	Cost Differences Between Counties.....	9
4.3.	Report Thesis	12
5.	Medical Professional Liability Stakeholder Views	13
5.1.	Stakeholders	13
5.2.	Stakeholder Views.....	13
6.	Health Care Consolidation	18
6.1.	History.....	18
6.2.	Current State of Health Care Consolidation in Pennsylvania.....	18
7.	Analysis	21
7.1.	Overview	21
7.2.	Testing the Thesis	21
7.3.	Post Consolidation Cost Estimation	26
8.	Potential Downstream Effects	27
8.1.	Changes in Professional Liability Premiums.....	27
8.2.	Accessibility of Health Care Services.....	27
8.3.	Effect on the Cost of Medical Care	27
9.	R Packages.....	29
10.	Distribution and Use	30
11.	Confidentiality.....	31
12.	Considerations and Limitations.....	32
13.	Acknowledgement of Qualifications	33

14. Exhibits 34

LIST OF TABLES

Table 1: Estimated Change in Costs 2
Table 2: Medical Professional Liability Stakeholder 13
Table 3: Pennsylvania Cases 15
Table 4: Filing Shifts 24

LIST OF FIGURES

Figure 1: History of Statewide Case Filings 7
Figure 2: History of Philadelphia County Case Filings 8
Figure 3: History of Montgomery Case Filings 8
Figure 4: Prevailing Primary Premiums and Mcare Assessments, Selected Specialties 9
Figure 5: Prevailing Primary Premium Rates per Occupied Bed 10
Figure 6: Percentage of Defense Verdicts 11
Figure 7: Distribution of Case Settlement 11
Figure 8: Hospital and Health System M&A Activity, 2000-2021 18
Figure 9: Distribution of Pennsylvania Health Systems by Occupied Beds 19
Figure 10: Top 5 Pennsylvania Health Systems - Occupied Beds 20
Figure 11: All Other Pennsylvania Health Systems - Occupied Beds 20
Figure 12: Recission Gainers 22
Figure 13: Recission Losers 25

1. Executive Summary

1.1. Purpose and Scope

The Pennsylvania State Senate Judiciary Committee (PA Senate) retained Oliver Wyman Actuarial Consulting, Inc. (Oliver Wyman) to provide an analysis of the change in cost that would result if the Civil Procedural Rules Committee of the Supreme Court of Pennsylvania rescinded subparagraph (a.1) of Rule 1006. In this report, we refer to Rule 1006, subparagraph (a.1), as the “Venue Rule.” The Venue Rule currently limits venue in medical professional liability actions to the county where the cause of action arose.

In this report, unless otherwise indicated, “cost” refers to the indemnity, claims administration and defense expenses required to administer, and settled medical professional liability claims.

The specific scope of our review includes the following:

- Estimates of changes in medical malpractice claim costs if the Civil Procedural Rules Committee were to rescind the Venue Rule
- Downstream effects of the proposed rescission include:
 - Changes in professional liability premiums
 - Accessibility of healthcare services, including the effect on the number of physicians practicing in the Commonwealth
 - The effect on the cost of medical care in the Commonwealth

This report includes several technical insurance and actuarial terms that may not be familiar to readers who do not regularly review actuarial reports.

1.2. Actuarial Findings

- Our models indicate statistically significant evidence that the enactment of the Venue Rule in 2002 resulted in claim filings shifting between counties.
- The issue of venue is most significant in the counties in southeastern Pennsylvania.
- Based on our experience providing actuarial consulting services, our professional judgment, and our discussion with medical professional liability stakeholders, we expect a reversal of the shift following the enactment of the Venue Rule.
- There has been a consolidation in healthcare service providers both in Pennsylvania and nationally since 2002 since the passage of the Venue Rule. In Pennsylvania, just under ½ of the occupied beds in Pennsylvania are affiliated with one of five health systems. Two of those systems (Jefferson/Main Line Health and the University of Pennsylvania Health System) have significant operations in Philadelphia County. Two others (UPMC and Allegheny Health Network) have substantial operations in Allegheny County. The fifth, Lehigh Valley Health Network, is based in Allentown. This consolidation will result in a more exacerbated reverse shift (as compared to 2002) if Civil Procedural Rules Committee were to rescind the Venue Rule.

Table 1 presents the estimated change in costs on a statewide basis and for several selected counties. (We present the changes for all counties on our Summary exhibit.) We present estimates under three scenarios reflecting various rates of case transfer from those counties to the most

plaintiff-friendly county in which the five largest health systems (individually) operate. At a minimum, we assume cases will revert to filing patterns prior to enactment of the Venue Rule. We provide the following examples to support interpretation.

- Columbia County - Our modeling indicates that were the Venue Rule to be rescinded, hospital professional liability costs in Columbia County would increase by 4.9%. Although none of the five largest health systems operate in Columbia County, we observed that prior to the Venue Rule, 38% of the claims that would have been filed in Columbia County were filed in Schuylkill County. The data from commercial insurers included in the Medical Liability Monitor Rate survey indicates that costs in Schuylkill County are 13% higher than Columbia County. The estimates therefore do not vary in our three scenarios and the projected change is 4.9% (38% × 13%).
- Montgomery County – Prior to 2002, we estimate that 74% of post-Venue Rule Montgomery County cases would have been filed in Philadelphia County. We identified that 35% of Montgomery County beds are associated by Main Line Health. Because 35% is lower than 74%, there is no difference between our low, central and high estimates as all scenarios assume that 74% of cases will move to Philadelphia.
- Potter County – 100% of the beds in Potter County are from UPMC facilities. We estimate costs in Allegheny County to be 10.6% greater than Potter County. As such, our range of cost changes is 5.3% (low, 50% × 10.6%), 8.0% (central, 75% × 10.6%) and 10.6% (high, 100% × 10.6%).

These scenarios correspond to the low end of our range of estimates, our central estimate and the high end of our range of estimates.

Table 1: Estimated Change in Costs

	Hospital Professional Liability			Physician Professional Liability		
	50% Case Transfer (Low)	75% Case Transfer (Central)	100% Case Transfer (High)	50% Case Transfer (Low)	75% Case Transfer (Central)	100% Case Transfer (High)
Statewide	+3.1%	+3.9%	+4.7%	+4.9%	+6.0%	+7.2%
Selected Counties						
Lancaster	+36.3%	+54.5%	+72.7%	+41.0%	+61.5%	+82.0%
Lehigh	+6.0%	+9.0%	+12.1%	+6.4%	+9.6%	+12.8%
Lycoming	+5.1%	+7.7%	+10.2%	+12.6%	+18.9%	+25.2%
Montgomery	+14.7%	+14.7%	+14.7%	+49.2%	+49.2%	+49.2%
Venango	+5.3%	+8.0%	+10.6%	+13.9%	+20.8%	+27.8%
Washington	+7.7%	+7.7%	+7.7%	+0.0%	+0.0%	+0.0%

Our modeling indicates that there will be significant variation in changes in costs by county. Specifically, the cost increases in counties where the predominant health system is attached to Philadelphia County may be significant. Within those counties, the exposure of those health systems will be significantly greater than health systems without attachment to Philadelphia County.

We caution that our estimates may be understated if the plaintiff bar is successful in developing theories to bring cases where the health system has only a remote attachment to Philadelphia County into the higher-cost jurisdiction.

In addition, our estimates may be further understated because they don't consider claims changing jurisdiction could potentially have higher average severities since more complicated medical procedures are often performed at larger health systems.

1.3. Report Organization

- In Section 2, we present background on the current and proposed Venue Rule and other legislative reforms.
- In Section 3, we summarize the data used in our analysis.
- In Section 4, we present the thesis that we analyzed.
- In Section 5, we present the views of various stakeholders on the proposed change in Venue Rule.
- In Section 6, we discuss the consolidation of hospitals and health systems both nationally and in the Commonwealth.
- In Section 7, we present our analysis and estimate the change in medical malpractice claim costs across the Commonwealth if the Venue Rule were rescinded.
- Section 8 discusses the downstream effects that could result from the change in the Venue Rule.

* * * * *

We developed the estimates in this report in accordance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.

Please direct all questions related to this report to the undersigned.

Oliver Wyman Actuarial Consulting Inc.



Rajesh Sahasrabuddhe, FCAS, MAAA
+1 215 246 1028
rajesh.sahasrabuddhe@oliverwyman.com



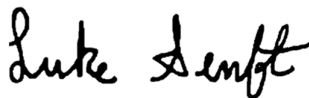
Alexandra Taggart, ACAS, MAAA
+1 215 246 1227
alexandra.taggart@oliverwyman.com



Kenneth Smart, ACAS, MAAA
+1 215 246 1012
kenneth.smart@oliverwyman.com



Lauren Morell
+1 215 246 1106
lauren.morell@oliverwyman.com



Luke Senft
+1 215 982 4410
luke.senft@oliverwyman.com

2. Background

2.1. 2002 Tort Reform

In 2002, the Pennsylvania legislature passed the Medical Care Availability and Reduction of Error (Mcare) Act (Act of Mar. 20, 2002, PL 154, No. 13). The Mcare Act included the following policy declaration:

medical professional liability insurance has to be obtainable at an *affordable and reasonable cost* in every geographic region of this Commonwealth.
emphasis added (Chapter 1, Section 101)

The Mcare Act included a provision on consideration of **Collateral Sources**. Under this provision, a “claimant in a medical professional liability action is precluded from recovering damages for past medical expenses or past lost earnings incurred to the time of trial to the extent that the loss is covered by a private or public benefit or gratuity that the claimant has received prior to trial.” (40 Pa. Stat. § 1303.508)

Additionally, in conjunction with the Mcare Act, the Supreme Court established Rule 1042.3, the Certificate of Merit Rule and Rule 1006, the Venue Rule.

The **Certificate of Merit Rule** requires that “an appropriate licensed professional has supplied a written statement that there exists a reasonable probability that the care, skill or knowledge exercised or exhibited in the treatment, practice or work that is the subject of the complaint, fell outside acceptable professional standards and that such conduct was a cause in bringing about the harm.” (231 Pa. Code § 1042.3)

The **Venue Rule** requires that “Except as otherwise provided by subdivision (c), a medical professional liability action may be brought against a health care provider for a medical professional liability claim only in a county in which the cause of action arose.” (231 Pa. Code § 1006.)

Before 2002, Pennsylvania law required medical professional liability claims to be filed against individuals in a county in which the defendant may be served, the cause of action arose, or a transaction or occurrence out of which the cause of action arose took place. The current Venue Rule came into effect in October 17th, 2002.

In this report, we focus on the proposed Venue Rule change. However, consideration of collateral sources and the Certificate of Merit Rule influences the data we reviewed. We consider this influence in the models presented.

2.2. Proposed Rule Change

Under subparagraph (a.1) of the Pennsylvania Supreme Court Rules of Civil Procedure Rule 1006, the current Venue Rule for medical malpractice cases requires plaintiffs to file suits in the county where their injury occurred unless that injury occurred outside the Commonwealth of Pennsylvania. Other (i.e., non-medical malpractice) civil actions have a wider latitude as to the venue for the lawsuit.

As described in the NOTICE OF PROPOSED RULEMAKING:

The Civil Procedural Rules Committee is proposing amendment of Rule 1006 to rescind subdivision (a.1), which limits venue in medical professional liability actions to the county in which the cause of action arose. The current rule provides special treatment of a particular class of defendants, which no longer appears warranted. Data compiled by the Supreme

Court on case filings on medical professional liability actions (<http://www.pacourts.us/news-andstatistics/research-and-statistics/>) indicates that there has been a significant reduction in those filings for the past 15 years. Additionally, it has been reported to the Committee that this reduction has resulted in a decrease of the amount of claim payments resulting in far fewer compensated victims of medical negligence. The proposed rescission of subdivision (a.1) is intended to restore fairness to the procedure for determining venue regardless of the type of defendant. The proposal would apply to medical professional liability actions filed after the effective date of the amended rule. Conforming and stylistic amendments have also been made to Rules 2130, 2156, and 2179.

3. Data

In developing this report, we considered the following sources of data:

- The February 2020 Legislative Budget and Finance Committee Report, A Study of the Impact of Venue for Medical Professional Liability Actions
- Mcare annual reports and 2021 Assessment Manual
- Interviews with various stakeholders as described in Section 5
- Data from the Pennsylvania Census Bureau, such as population by county
- Exposure data, including physician count and occupied beds by hospital and county from the Pennsylvania Department of Health
- The National Practitioner’s Data Bank, which is a detailed loss run of physician malpractice claims in the United States
- The Milliman report on the Venue Rule, dated February 20, 2019.
- Verdict data from Guy Carpenter¹

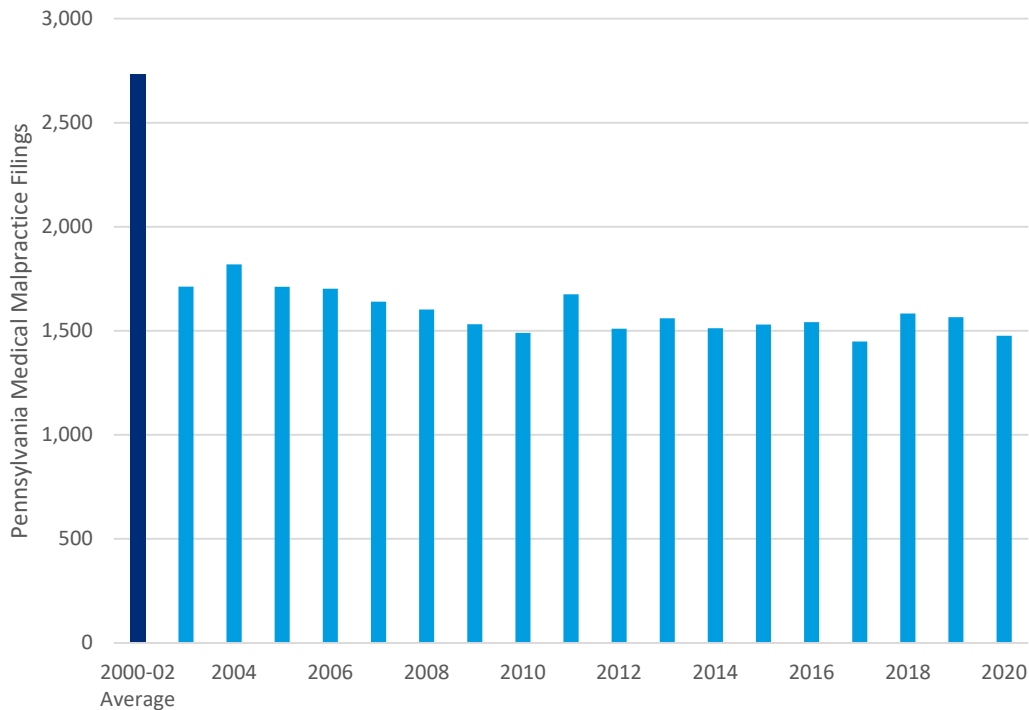
¹ Oliver Wyman and Guy Carpenter are separately managed businesses of Marsh McLennan. Guy Carpenter’s principal business is as an intermediary on reinsurance placements

4. Thesis

4.1. Shifting of Claims Due to the Introduction of the Venue Rule

The introduction of reforms described in Section 2.1 resulted in a dramatic change in the number of medical professional liability cases. In Figure 1, we present a history of case filings from statistics reported by the Unified Judicial System of Pennsylvania².

Figure 1: History of Statewide Case Filings



The case filing data is also available by county. In Figure 2 and Figure 3, we present the data for Philadelphia County and Montgomery County.

² <https://www.pacourts.us/news-and-statistics/research-and-statistics/medical-malpractice-statistics>

Figure 2: History of Philadelphia County Case Filings

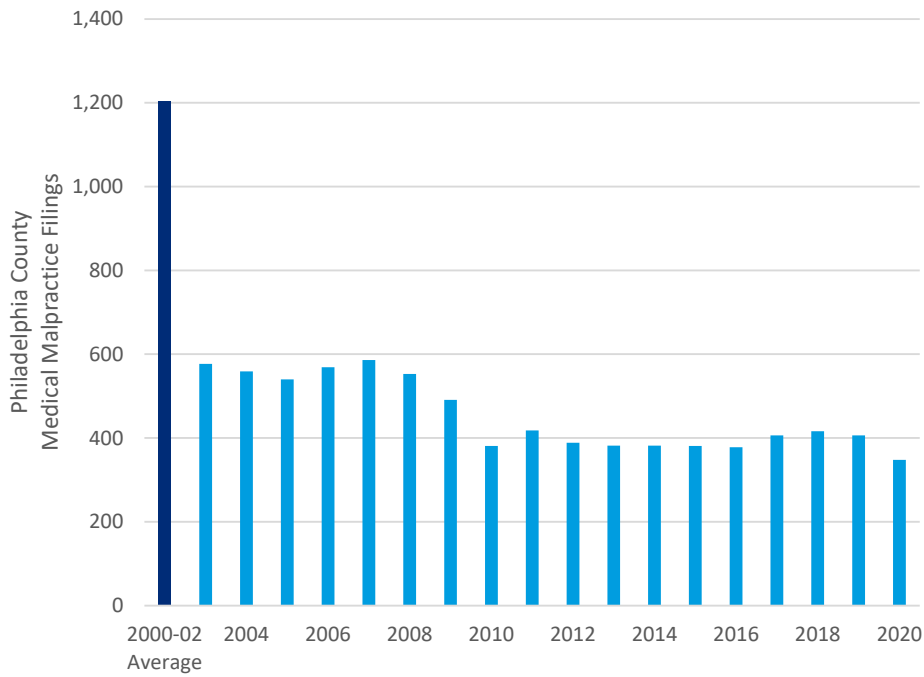
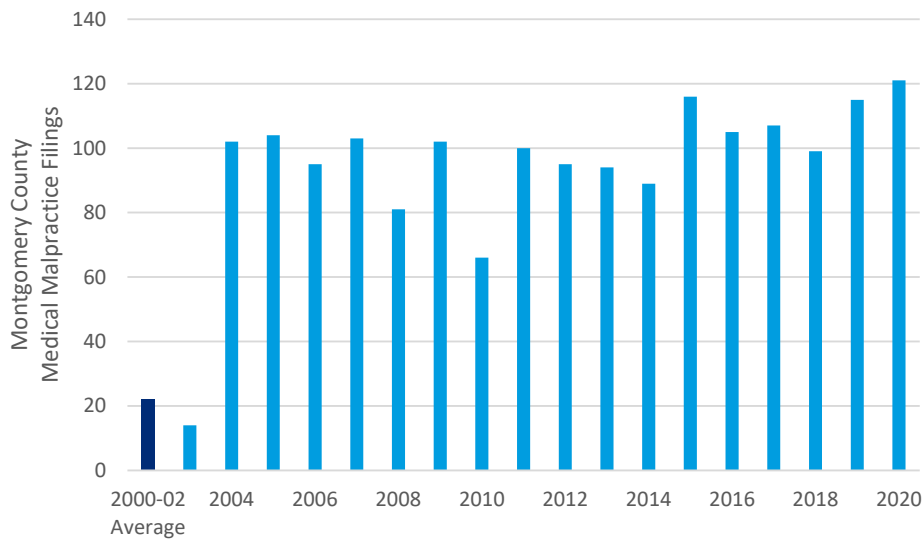


Figure 3: History of Montgomery Case Filings



We observe a decrease in cases filed in Philadelphia County, similar to statewide trends, but an *increase* in cases filed in Montgomery County. **A reasonable conclusion from this data is that the introduction of the Venue Rule shifted cases from Philadelphia County to Montgomery County.**

The shifting of cases would not have cost implications if there were no differences in cost between counties³. We reviewed the 2021 Mcare Assessment Manual to understand whether such differences exist. We review cost differences in the following section.

4.2. Cost Differences Between Counties

A Review of Mcare Surcharges

In Figure 4, we present the sum of the prevailing primary premium and Mcare assessment from Exhibit 1 of the 2021 Mcare Assessment Manual for:

- “Class 015, Physicians - No Surgery” which includes low-risk specialties such as family practice and internal medical physicians (top panel), and
- “Class 080, Surgeons – Specialists” which includes high-risk specialties such as “Obstetrics – Major Surgery” (bottom panel).

Figure 4: Prevailing Primary Premiums and Mcare Assessments, Selected Specialties

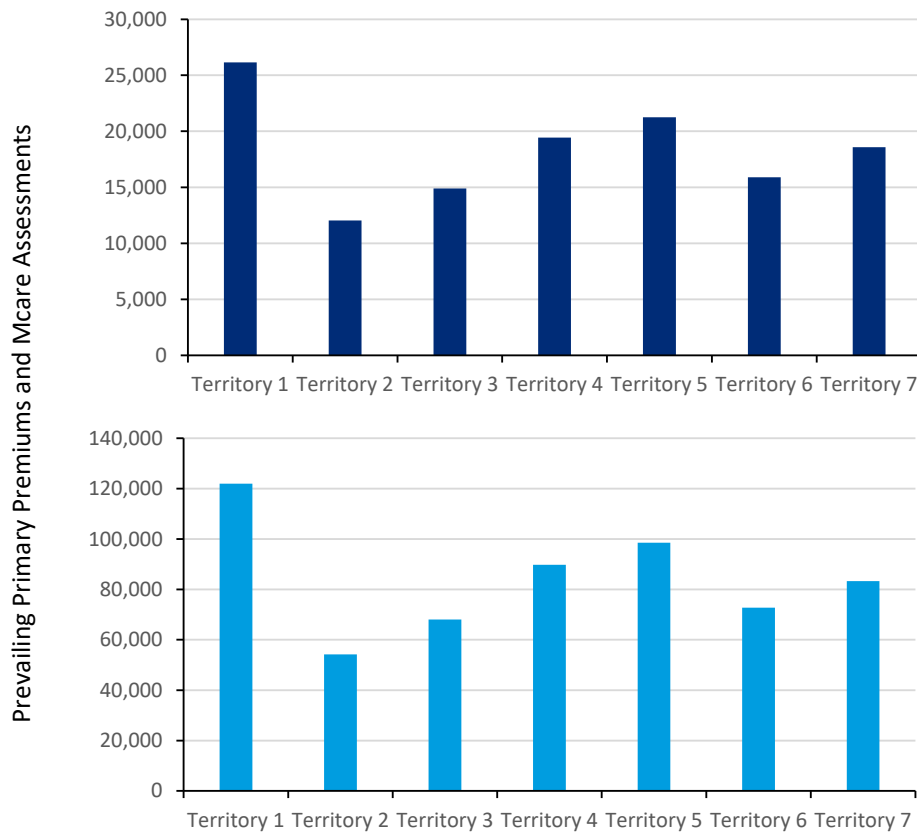


Figure 4 Territory Definitions

- Territory 1: Philadelphia (51)
- Territory 2: Remainder of State (01, 05, 06, 08, 10-12, 14, 16, 18, 21, 24, 27-32, 34, 36, 38, 41, 42, 44, 47, 49, 50, 52, 53, 55-62, 64, 66, 67)
- Territory 3: Allegheny (02), Armstrong (03), Beaver (04), Carbon (13), Clearfield (17), Dauphin (22), Jefferson (33), Washington (63)
- Territory 4: Delaware (23), Fayette (26), Luzerne (40), Mercer (43)
- Territory 5: Lackawanna (35)

³ Of course, we wouldn’t expect claims to shift between counties if doing so were not advantageous to one of the parties involved in the litigation.

Territory 6: Bucks (09), Chester (15), Columbia (19), Crawford (20), Erie (25), Lawrence (37), Lehigh (39), Monroe (45), Montgomery (46), Northampton (48), Schuylkill (54), Westmoreland (65)
Territory 7: Blair (07)

We observe a significant difference in the costs for Philadelphia compared to the other areas of the state.

In Figure 5, we present the prevailing primary premium rates per occupied bed from Exhibit 2 of the 2021 Mcare Assessment Manual.

Figure 5: Prevailing Primary Premium Rates per Occupied Bed

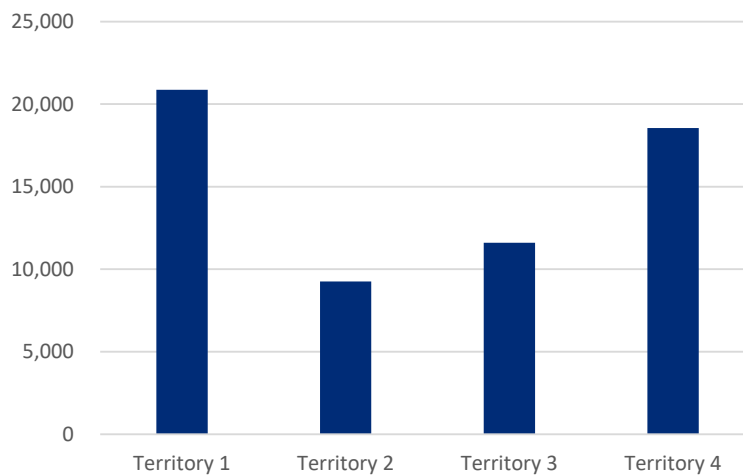


Figure 5 Territory Definitions

Territory 1: Delaware (23), Philadelphia (51)

Territory 2: Remainder of State

Territory 3: Allegheny (02), Crawford (20), Erie (25), Lackawanna (35), Lawrence (37), Luzerne (40), Mercer (43)

Territory 4: Bucks (09), Chester (15), Montgomery (46)

In Figure 6, we observe a significant difference in the costs for Philadelphia (Territory 1) and the surrounding counties (Territory 4) compared to the other areas of the state.

State Supreme Court Data

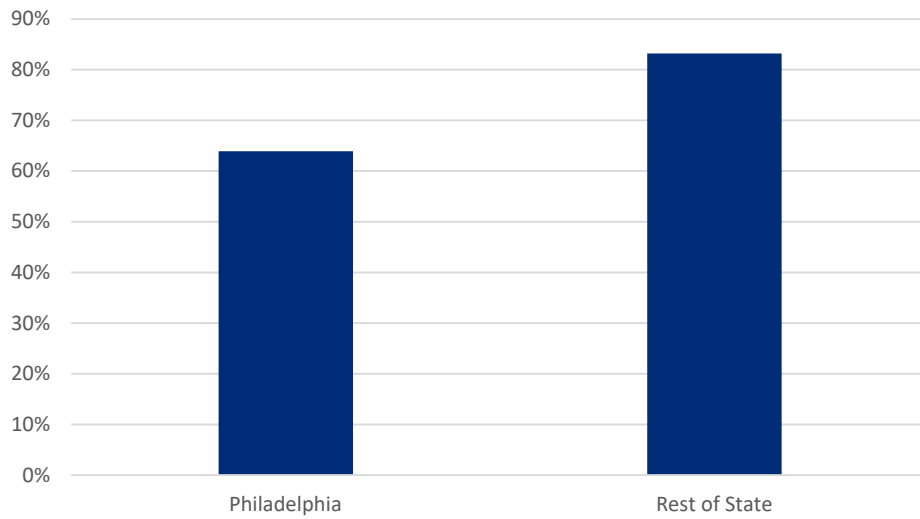
In addition, we reviewed the distribution of defense verdicts and case settlements reported by the Unified Judicial System of Pennsylvania⁴⁵.

In Figure 6, we compare the rate of defense verdicts in Philadelphia and the remainder of the Commonwealth.

⁴ <https://www.pacourts.us/news-and-statistics/research-and-statistics/medical-malpractice-statistics>

⁵ We used the Milliman Report on the Venue Rule which presented the distribution of jury verdicts and awards from 2000 to 2017 supplement with data from 2018 and 2019 data reported by the Unified Judicial System of Pennsylvania. We did not consider 2020 data due to the effect of the COVID-19 pandemic.

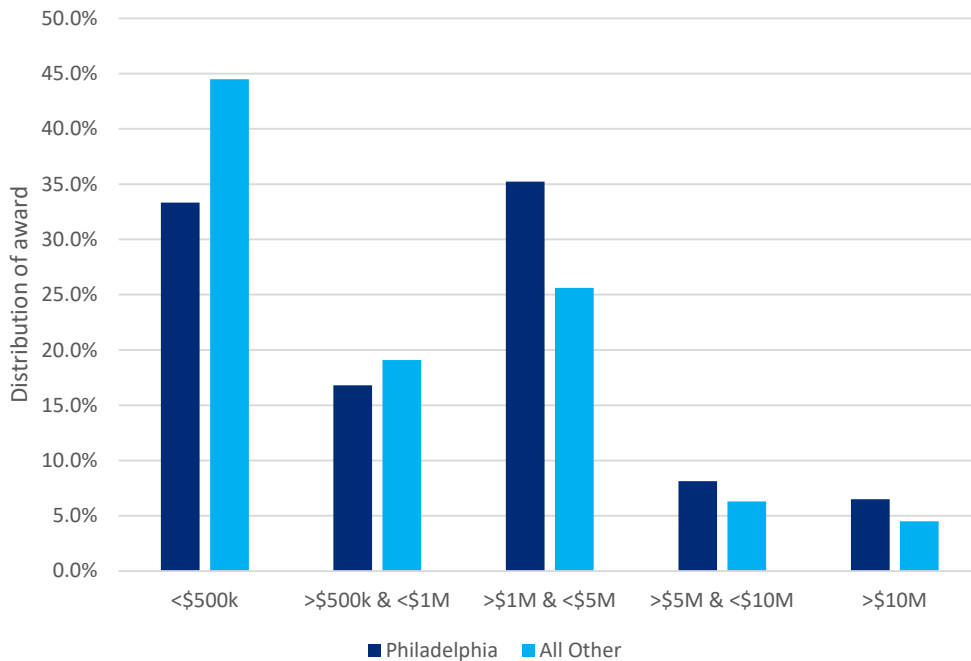
Figure 6: Percentage of Defense Verdicts



We observe a significant difference in the percentage of defense verdicts won in Philadelphia, 63.9%, compared to the rest of Pennsylvania, 83.2%.

Figure 7 presents the distribution of awards for cases that did not result in a defense verdict.

Figure 7: Distribution of Case Settlement



Philadelphia has a lower percentage of awards less than \$1 million, 50.1%, compared to the rest of Pennsylvania, 63.6%, showing that cases are settling higher in Philadelphia county than the rest of the state.

A reasonable conclusion from this data is that parties responsible for claim payments have concluded that there is a difference in costs based on geography and that their conclusions are consistent with the claim experience.

4.3. Report Thesis

These conclusions would indicate that the introduction of the Venue Rule affected medical professional liability costs. And logically, the rescindment of the Venue Rule would have the opposite effect as the introduction. In this report, we present a model to estimate the effect.

5. Medical Professional Liability Stakeholder Views

5.1. Stakeholders

To understand the importance of the venue, we interviewed several medical professional liability stakeholders. These stakeholders include defense attorneys, plaintiff attorneys, health system risk managers, and third-party claims administrators. The stakeholders that we interviewed represented stakeholders in various regions of the Commonwealth. We describe the roles of these stakeholders in Table 2.

Table 2: Medical Professional Liability Stakeholder

Stakeholder	Role
Plaintiff Counsel	Lawyer(s) who regularly represent people that are suing for damages.
Defense Counsel	Lawyer(s) who specialize in defending individuals or organizations charged with an offense.
Health System Risk Manager	Risk Managers oversee a risk management program that can include clinical, financial, legal, and general business aspects. They deal with risk financing as well as incident and claim management.
Insurer	Insurers agree to pay for the claim in exchange for a premium.
Employed Doctors	Employed doctors are generally covered under the hospital or health systems insurance policy. These physicians are employed by a hospital or health system.
Independent Doctors	Physicians in private practice are required to purchase insurance to practice.
Reinsurer	A reinsurer provides financial protection to insurers by providing coverage for claims that exceed a specified amount.
Mcare Fund	A fund established to ensure reasonable compensation for medical professional liability claims against healthcare providers for losses in excess of primary insurance coverage.
Claims Administrator	A claims administrator specializes in the evaluation of a case. The claims administrator may be independent (referred to as a third-party administrator) or an insurer or health system employee.

5.2. Stakeholder Views

All stakeholders considered venue a significant factor in evaluating a case—most listed venue as one of the primary factors after liability issues. We present additional comments below.

Defense Attorney

Defense attorneys indicated that they will always attempt to move a case from major cities to suburban, exurban, and rural areas. There is a focus on settlement for cases in urban venues to minimize risk.

The stakeholders we interviewed indicated that a 30-mile difference could exponentially magnify the value of a case and the risks involved.

In the past 10-15 years, there has been a slight improvement in the composition of jurors in Philadelphia. Specifically in Center City, younger, educated residents and empty nesters have moved into the city. However, they noted that this jury pool might also seek social equities.

Defense attorneys also noted a difference in process between Philadelphia and surrounding counties. In Philadelphia, judges are often assigned only days before a jury. The case assignment process in the surrounding counties, with cases assigned at filing, is more likely to result in faster and more reasonable outcomes.

Plaintiff Attorney

Venue is one of the first items plaintiff attorneys review when reviewing medical malpractice cases. There is a perception that verdicts are higher in the city. They also noted the change in Center City, Philadelphia demographics.

One of the plaintiff attorneys we interviewed indicated that limitations on recovering damages with the additional restrictions enacted in 2002 have resulted in a lower acceptance rate in medical malpractice cases due to the lower probability of success. A plaintiff attorney indicated to us that while venue is important, there are significant structural realities unrelated to venue that (which are not in scope for this report) limit the percentage of cases litigated.

We note that plaintiff attorneys are often compensated from a contingency fee. The attorney receives a percentage of the settlement if they win. If they lose the case, the plaintiff counsel receives nothing.

At times, an attorney accepts the case and refers to another attorney who has more experience with medical malpractice. The attorney accepting the case will typically receive a portion of the total fee paid to the plaintiff counsel.

Health System Risk Manager

Venue is of more significant concern in the southeast region of the state and is less of an issue in other areas. From a reserving and settlement perspective, severity is discounted in counties other than Philadelphia. The range of expected values is significantly greater in Philadelphia relative to the surrounding counties.

The Venue Rule has historically benefitted health system risk managers in the counties surrounding Philadelphia. However, a risk manager also noted severity seems to be increasing in the surrounding counties due to higher economic values resulting from higher wages.

A health system risk manager noted that if a plaintiff attorney did *not* attempt to transfer a case to Philadelphia, it could be viewed as legal malpractice.

The risk manager also commented on the demographic changes in Center City, Philadelphia, noting an increase in defense verdicts.

Third-Party Claims Administrator

Third-party claims administrators (TPAs) evaluate venue and plaintiff counsel equally after considering the actual injury. Cases in Philadelphia are more likely to receive a plaintiff verdict, and these cases are worth more than in other counties. Cases in Philadelphia have a greater likelihood of an excess verdict, so TPAs are willing to pay more in settlement than in other counties with a chance for a defense verdict. Ultimately, TPAs do not want to expose a case to jury valuation in Philadelphia,

so they will often resolve a case via alternative dispute resolutions or pay a significant amount of money to move the case out of Philadelphia.

The TPA commented that if the Venue Rule were rescinded, “connectedness” resulting from the internet would allow more plaintiffs to establish minimum contact with Philadelphia.

Direct Reinsurance Broker

Pennsylvania is often treated as a single territory in pricing reinsurance as large verdicts occur throughout the state. That is, primary and Mcare coverage are more affected by the Venue Rule than excess coverages.

Table 3 presents medical malpractice jury verdicts greater than \$10 million in Pennsylvania since 2007.

Table 3: Pennsylvania Cases

Year	County	Hospital or Physician	Case	Amount Awarded by Jury	Comments
2010	Lehigh County	Nurse & Hospital	Various v. Cullen, Charles; St. Luke’s Hospital	\$95,000,000	Wrongful death (not medical malpractice)
2012	Philadelphia County	Hospital & Physician	Nicholson-Upsey v. Touey, et. al.	\$78,500,000	Failure to meet standard of care (birth injury)
2007	Allegheny County	Hospital, Physician, Midwife	Jordan v. West Penn Hospital et. al.	\$57,623,113	Negligent care (birth injury)
2013	Lehigh County	Hospital & Physician	Crowell v. Dr. Ronald Kirner, St. Luke’s University Hospital	\$55,000,000	Negligent care (birth injury)
2018	Cambria County	Hospital & Physician	Harker, Baldacchino v. Dr. John Chan; Conemaugh Memorial Medical Center	\$47,000,000	Negligence (birth injury)
2016	Philadelphia County	Hospital and Physician	Tate v. Hospital of the University of Pennsylvania	\$44,100,000	Negligence
2013	Philadelphia County	Hospital & Physician	Fortson v. Dr. Doris Chou, Dr. Kwandaa Roberts, Chestnut Hill Hospital, Hospital of the University of Pennsylvania	\$42,900,000	Negligent care (birth injury)
2017	Franklin County	US Government (federally funded clinic)	Late and Armolt v. US Government (federally funded Keystone Women’s Health Center)	\$41,600,000	Negligence (birth injury)
2018	Delaware County	Hospital & Physician	Grayson Charlton v. Dr. Steven Troy; Crozer-Keystone Health System; Health Access Network; Delaware County Memorial Hospital	\$40,258,000	Negligence (birth injury)

Year	County	Hospital or Physician	Case	Amount Awarded by Jury	Comments
2014	Chester County	Hospital & Nurses	Ciechoski (Proffitt) v. Phoenixville Hospital; Christine Winter; Lana Jones-Sandy	\$32,800,000	Negligence
2011	Northampton County	Hospital	Smoyer v. St. Luke's Hospital, et. al.	\$23,120,958	Negligence
2011	Philadelphia County	Hospital	Shaughnessy v. Roxborough Hospital; Solis Healthcare	\$23,000,000	Negligence
2015	Philadelphia County	Physician, Hospital and Anesthesia Group	Drainer v. Dr. Hagop L. DerKrikorian, Riddle Memorial Hospital, and Society Hill Anesthesia Consultants	\$21,800,000	Negligence
2011	Erie County	Hospital	Graham v. Hamot Medical Center	\$21,573,993	Negligent care (birth injury)
2011	Philadelphia County	Hospital	Campbell v. Temple University	\$21,325,179	Negligence
2008	Philadelphia County	Hospital & Physician	Fledderman v. Jefferson Health System; Glunk, Richard; Destephano, Edward	\$20,525,000	Wrongful death
2008	Lackawanna County	Hospital & Physician	White v. Community Medical Center; Behlke, Richard	\$20,500,000	Negligent care (birth injury)
2018	Luzerne County	Hospital & Physicians	Hughes v. Wilkes-Barre General Hospital; Dr. Lori DelGaudio; Dr. Teresa Baseski	\$19,500,000	Negligence (birth injury)
2013	Philadelphia County	Hospital & Physician	Pomroy v. Hospital of University of Pennsylvania, Dr. Ernest Rosato	\$19,500,000	Negligence
2011	Philadelphia County	Hospital & Oral Surgeon	Ellison v. Hospital of the University of Pennsylvania	\$17,544,805	Negligence (tooth extraction)
2012	Centre County	Psychologist	E.L. v. Metter, Julian B. PH.D. and G.L.	\$16,500,000	Medical malpractice - Psychology - Patient accuses doctor of implanting memories of rape and abuse by satanic cult during treatment
2019	Washington County		McLaughlin v. Washington County Health System, Dr.'s Berkley and Simmons	\$15,000,000	Negligence

Year	County	Hospital or Physician	Case	Amount Awarded by Jury	Comments
2017	Clearfield County	Hospital & Physician	Welker & Brinkley v. Dr. Thomas Carnevale; Clearfield Hospital	\$14,480,000	Negligence (birth injury)
2013	Allegheny County	Hospital	Rettger v. UPMC Shadyside	\$14,200,000	Wrongful death (original verdict in 2011 was for \$10M, hospital appealed, upon retrial judges awarded \$14.2M)
2012	Philadelphia County	Hospital & Physician	Stokes as Guardian ad litem for Sharon Phillips v. Temple University Hospital, Inc., et. al.	\$12,876,070	Negligence
2015	Delaware County	Physician and Radiologist	Del Grosso v. Dr. Hussam Yacoub, Dr. Ben-Zion Friedman	\$12,500,000	Negligence
2019	Bucks County		Giberson v. Obstetrics and Gynecology, Alderfer Kupersmith Associates, Grand View Medical Center, Drs et al.	\$11,000,000	Negligent care (birth injury to mother)
2020	Blair County		Miller v. Tyrone Hospital	\$10,800,000	Negligence
2015	Philadelphia County	Hospital	Tillery v. Children's Hospital of Philadelphia	\$10,100,000	Failure to diagnose
2019	Lehigh County		Kline v. St. Luke University Health Network, Drs Nguyen, Stromski	\$10,000,000	Failure to diagnose
2017	Luzerne County	Clinic	Shimko v. Geisinger-Kistler Clinic	\$10,000,000	Failure to diagnose
2011	Allegheny County	Hospital	Rettger v. UPMC Shadyside	\$10,000,000	Wrongful death

Of the 32 jury verdicts listed, 11 were Philadelphia cases. Of the ten largest amounts awarded, three were from Philadelphia cases. This data indicates that many large jury verdicts are occurring outside of Philadelphia County.

Section 6 presents a consolidation of hospitals and health systems nationally and in the Commonwealth.

6. Health Care Consolidation

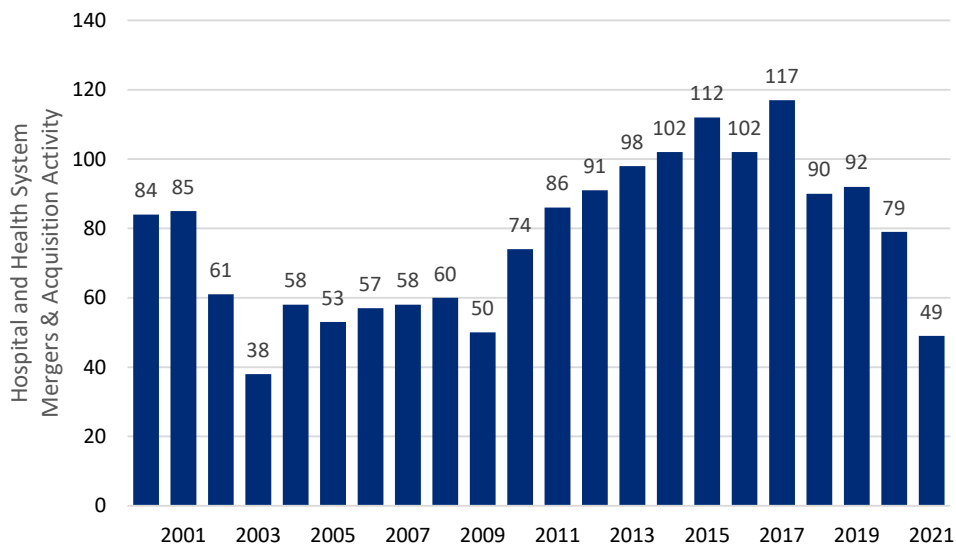
6.1. History

Mergers and acquisitions have disrupted the healthcare industry nationally. The US healthcare system had experienced two phases of partnerships⁶:

- In **Phase One**, which peaked in the 1980s and 1990s, independent hospitals combined into healthcare systems to contain rapidly rising healthcare costs and respond to the new demands of managed care.
- In **Phase Two**, which peaked in the 2010s (following the passage of the Affordable Care Act), healthcare systems combine to attain or accelerate access to critical resources to prepare for population health, tighter integration of healthcare services, and assumption of risk.

Hospital consolidation in Pennsylvania aligns with national trends. There were 117 transactions announced in 2017, the highest number in recent history, with Pennsylvania (14 deals) being the most active state. Specifically, the University of Pennsylvania Health System, UPMC Pinnacle, and Reading Health System acquired multiple hospitals from community health systems in 2017. Though the number of transactions through 2021 is lower, with fewer independent community hospitals seeking partnerships, the size of transactions is up.

Figure 8: Hospital and Health System M&A Activity, 2000-2021



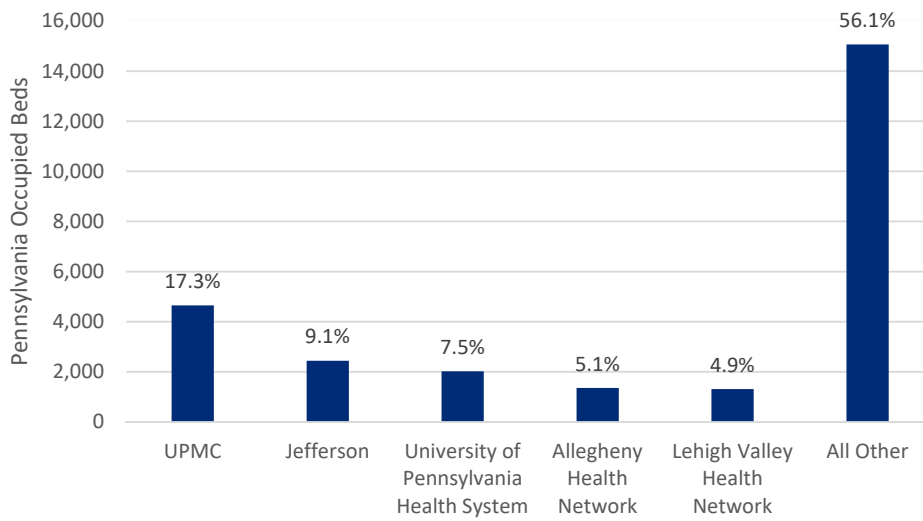
Source: Kaufman, Hall & Associates, LLC

6.2. Current State of Health Care Consolidation in Pennsylvania

Five health systems comprise approximately 45% of the total occupied beds (OBs) in Pennsylvania. UPMC, Jefferson Health, University of Pennsylvania Health System, Allegheny Health Network, and Lehigh Valley Health Network account for 11,792 of the state's 26,856 OBs.

⁶ <https://www.kaufmanhall.com/insights/research-report/2021-ma-review-new-phase-healthcare-partnerships>

Figure 9: Distribution of Pennsylvania Health Systems by Occupied Beds



Source: Compiled using 2020 data from the Pennsylvania Department of Health – Division of Health Informatics

UPMC (4,649 OBEs) and Allegheny Health Network (1,360 OBEs) are located in Allegheny County and comprise 80.4% of the county’s 4,694 occupied beds.

Jefferson Health (2,444 OBEs) and the University of Pennsylvania Health System (2,027 OBEs) are located in Philadelphia County and comprise 56.9% of the county’s 4,781 occupied beds.

Lehigh Valley Health Network (1,312 OBEs) is predominantly located in Lehigh County and makes up 61.7% of the county’s 1,604 occupied beds.

Figure 10 and Figure 11 present the distribution of occupied beds for the top five health systems and those outside the top five, respectively. (Counties in grey do not have any occupied beds in that category.)

Figure 10: Top 5 Pennsylvania Health Systems - Occupied Beds

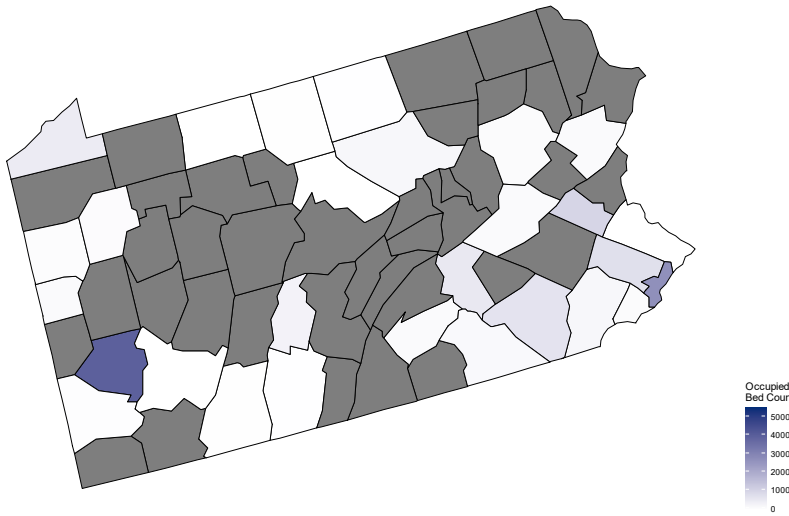
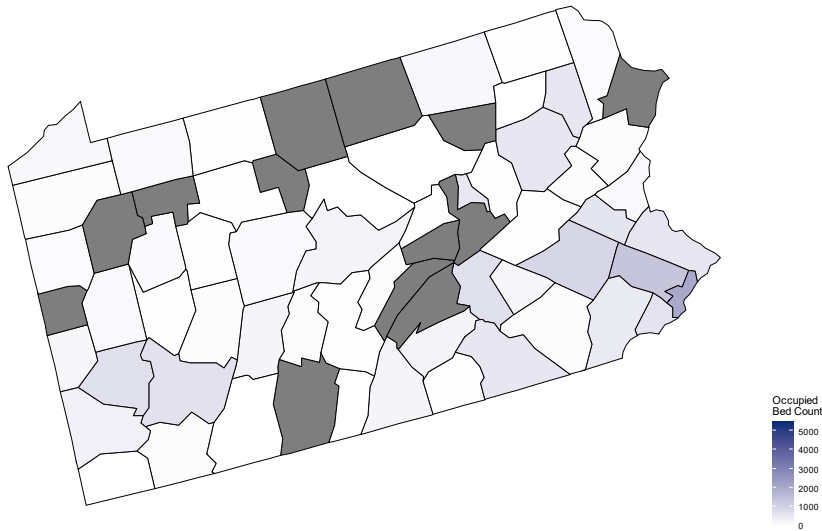


Figure 11: All Other Pennsylvania Health Systems - Occupied Beds



7. Analysis

7.1. Overview

In the initial phase of our analysis, we test our thesis that claims would shift between counties if the Civil Procedures Rules Committee rescinded the Venue Rule. To test this thesis, we compared (i) the observed 2000-02 average and (ii) the modeled 95% prediction interval for the average number of claims between 2000 and 2002 using data from 2003 and subsequent.

After testing the thesis, we incorporate the effect of consolidation.

7.2. Testing the Thesis

We modeled the prediction interval using linear regression with $\log(\text{counts})$ as the response variable and time (year) as the predictor. We would generally expect county trends to mirror statewide trends, i.e., decreases post-reform. However, since we have not normalized the filing data for population growth, the fitted models include population changes.

Generally, we fit the model to claims observed between 2005 and 2020 (the calibration period) as we observed noisy data for 2003 and 2004 in several counties. We attribute this noise to adaptation to the changes in the rules.

In some cases, we noted that the data continued to be noisy beyond 2005, and we selected different calibration periods based on our professional judgment.

We then assigned each county to one of the following groups:

Recission Gainers: The observed counts for 2000-02 were above the upper bound of the prediction interval. We expect these counties potentially to gain claims if the Venue Rule were rescinded.

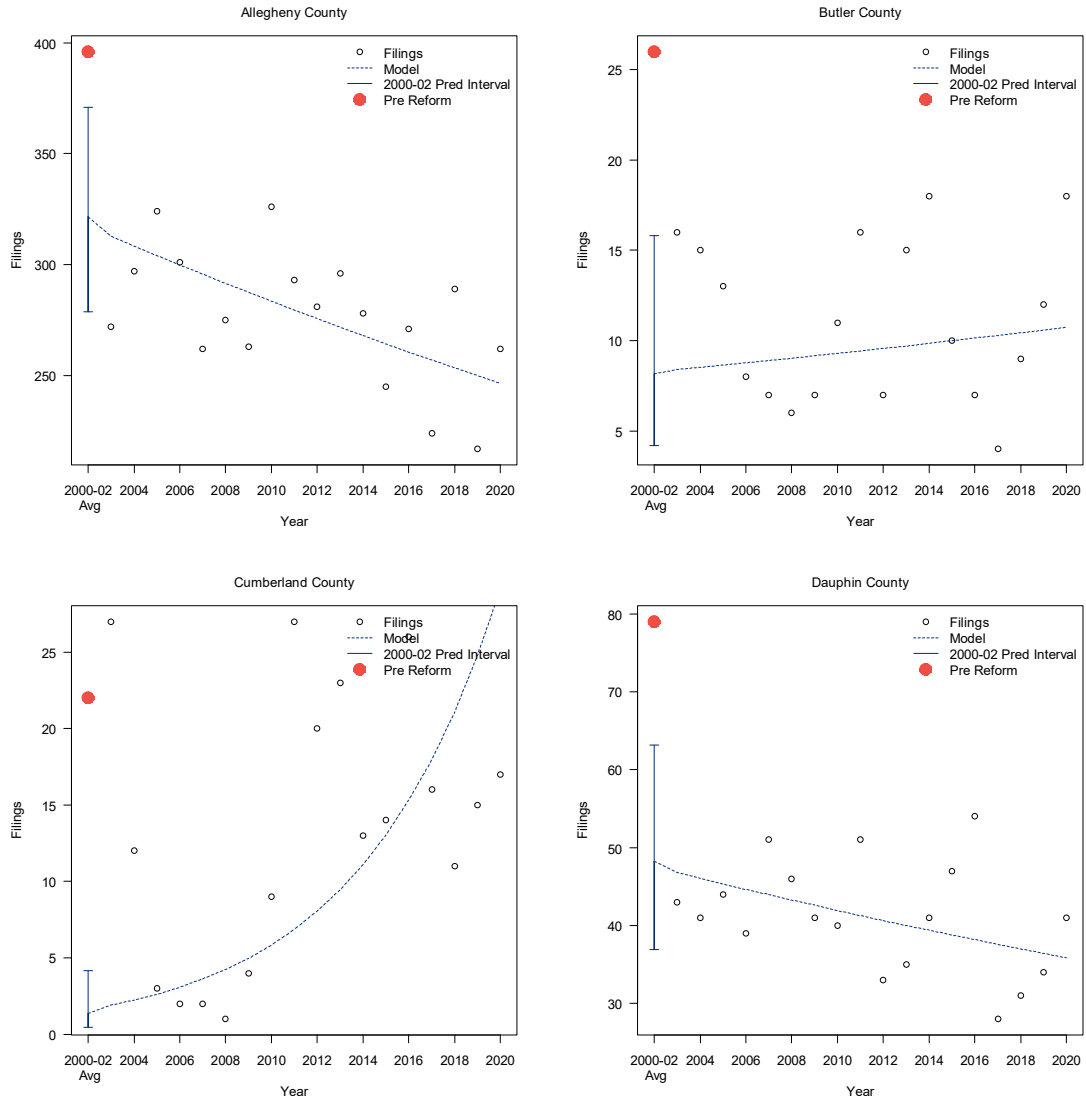
Recission Losers: The observed counts for 2000-02 were below the lower bound of the prediction interval. We expect these counties potentially to lose claims if the Venue Rule were rescinded.

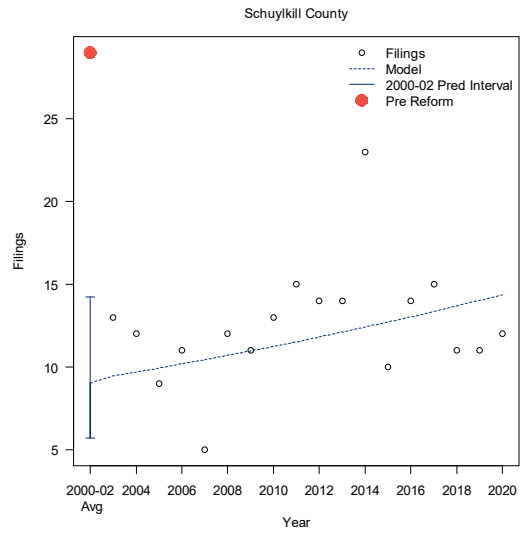
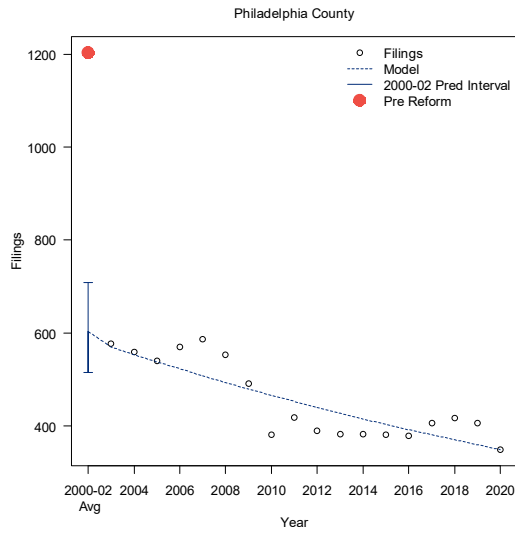
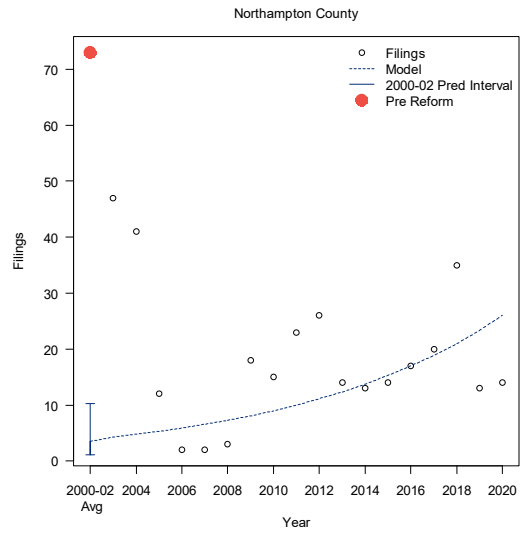
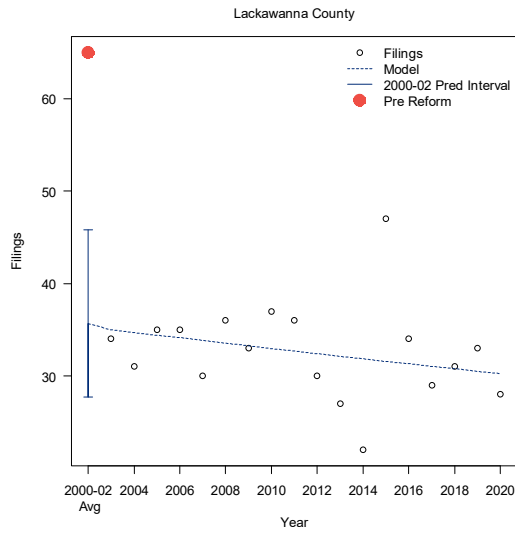
All Other: The observed claims were within the prediction interval in these counties. Prior to consideration for consolidation, we do not expect that there would be a net gain or loss of claims in these counties if the Venue Rule were rescinded.

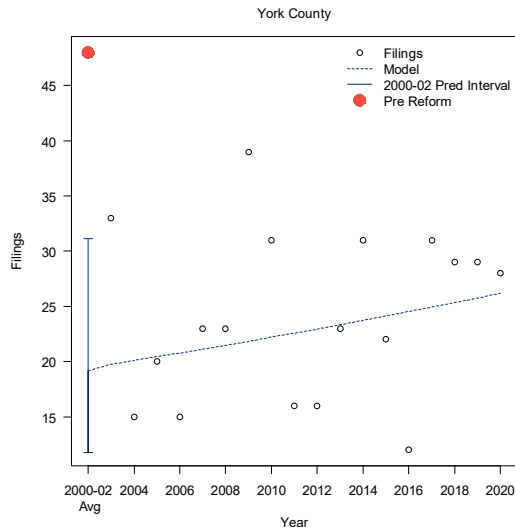
Figure 12 presents our models and the data for notable⁷ Recission Gainers.

⁷ We present data and models for counties where the observed pre-reform count exceeded the upper bound of the prediction interval by at least five claim filings.

Figure 12: Recission Gainers







We generally expect Recission Gainers to be venues that are more favorable to the plaintiff. Because they are more “plaintiff-friendly,” we would also expect these counties to have a higher percentage of frivolous and low-value cases than the other counties. We would expect the volume of such cases to be reduced or eliminated by the Certificate of Merit Rule and the collateral source provisions, respectively. That is, we didn’t need to attribute 100% of “recission gains” to “recission losses.” We assumed that the Recission Gainers would not return case levels to 2000-02 levels as some cases will have been eliminated through the other provisions.

In order to determine the recission gain, we reviewed the filing history for each of the counties surrounding each of the Recission Gainers. Table 4 presents the counties where our model indicates a statistically significant loss of claims if the Venue Rule were rescinded.

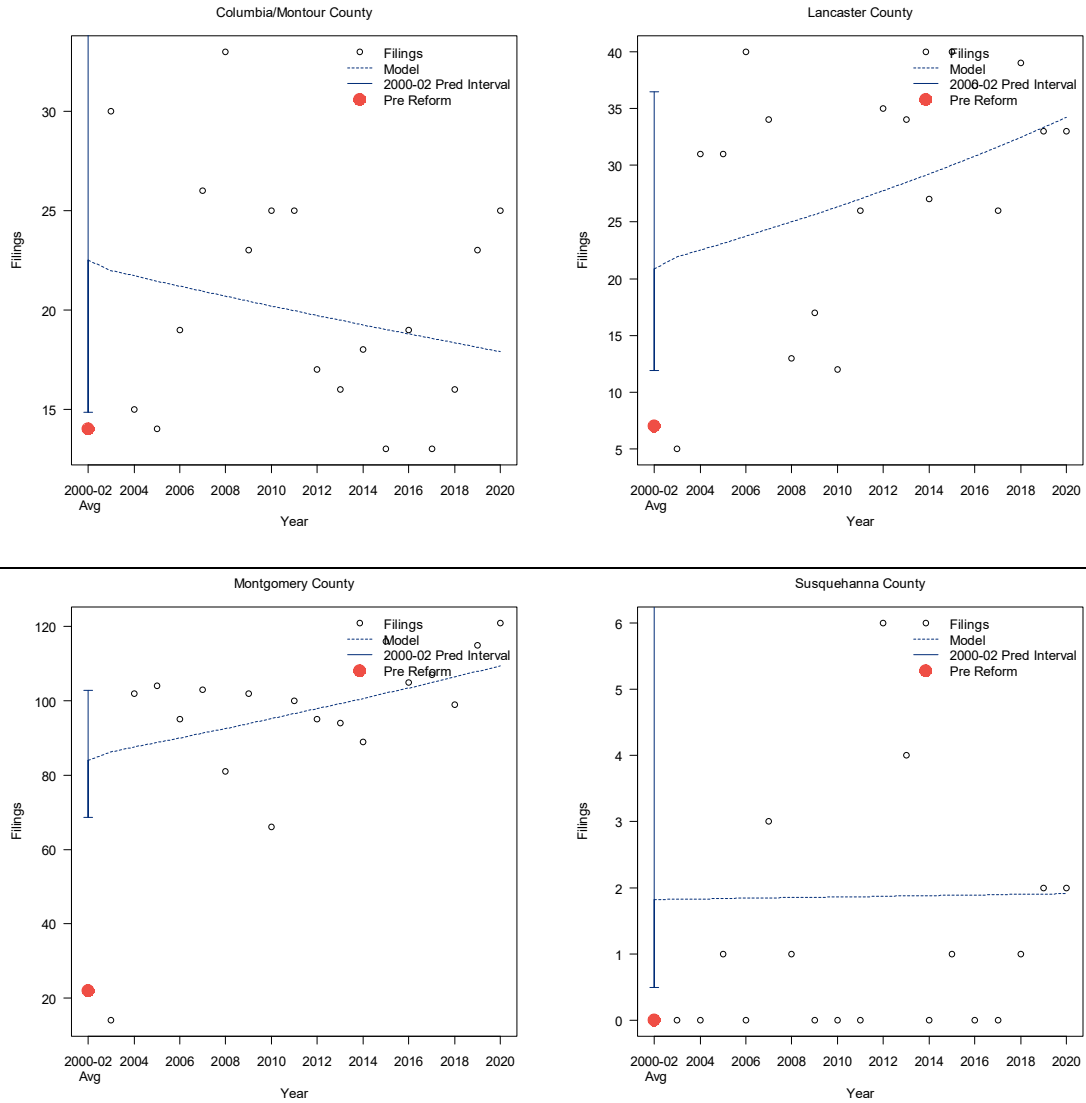
Table 4: Filing Shifts

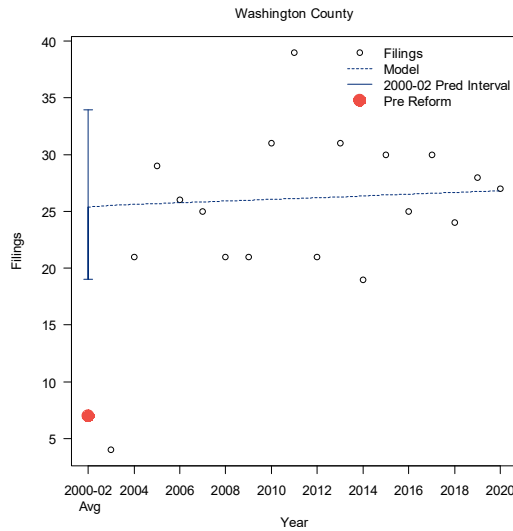
Recission Gainer	Adjacent Recission Loser
Allegheny	Washington
Butler	None
Cumberland	None
Dauphin	Lancaster
Lackawanna	Susquehanna
Northampton	None
Philadelphia	Montgomery
Schuylkill	Columbia/Montour
York	Lancaster

For Recission Gainers, where we did not identify a Recission Loser, we assume that the excess pre-reform case count was principally the result of the filing of low-value and frivolous cases.

We present the model and data for the Recission Losers in Figure 13.

Figure 13: Recission Losers





Based on this modeling, we concluded the Venue Rule resulted in the movement of cases between counties.

7.3. Post Consolidation Cost Estimation

We then developed a model to estimate changes in claims costs after considering the consolidation described in Section 6. Our model assumes the following:

- Hospital professional liability costs are proportional to the occupied beds in a county⁸.
- The plaintiff firms will seek to transfer all cases as follows:
 - UPMC and Allegheny Health Network cases to Allegheny County
 - University of Pennsylvania and Jefferson Health System cases to Philadelphia County
 - Lehigh Valley Health Network cases to Lackawanna County – We recognize that Lehigh Valley Health Network (LVHN) is based in Lehigh County. However, LVHN has a facility in Lackawanna County, the most plaintiff-friendly venue in which it operates.
- Insurance rates reflect cost differences between counties.

⁸ Actuaries use “exposure bases” in their analyses as proxies for the true exposures. We select exposure bases that we expect to be proportional to the true exposure. “Occupied beds” is a common exposure base for the actuarial evaluation of hospital professional liability risk.

8. Potential Downstream Effects

Our analysis concludes that costs will rise if the Venue Rule were rescinded. Although we do not consider ourselves experts in labor economics, we offer the following commentary based on our expectations of changes.

8.1. Changes in Professional Liability Premiums

Over the last several years professional liability insurance has been relatively stable with favorable low premiums in a soft market⁹. Changing the Venue Rule will likely increase costs for the industry which will accelerate the hardening of the market in Pennsylvania. The estimated change in costs presented in Table 1 demonstrate the potential consequences of the Venue Rule rescission which will negatively impact insurers. This impact will consequently raise premiums for professional liability, especially for providers in counties that are more affected by the potential rescission of the Venue Rule.

8.2. Accessibility of Health Care Services

The trend of consolidation has been accelerated by the COVID-19 pandemic as rural healthcare systems experienced significant financial burden. The pandemic has also increased the widespread use of telemedicine, which further increases the geographic reach of the Commonwealth's urban-based health networks. Advice provided over the internet could expand the potential venues¹⁰. Increased geographic reach coupled with increased liability could force health networks to make significant changes, which could ultimately reduce accessibility of care.

The current Venue Rule, among other structural factors, has resulted in a lower acceptance rate in medical malpractice cases for plaintiff attorneys, as discussed in Section 5.2, so we would expect an increase in the acceptance rate following rescindment. That is, access to plaintiff-friendly venues may result in additional claims. A 2019 study led by the Stanford University School of Medicine found that physicians with multiple malpractice claims were more likely to stop practicing medicine (not necessarily a direct result of changes in the cost of malpractice insurance) or switch to smaller practice settings¹¹. This may particularly impact accessibility of health care for low-income and underserved communities.

In the following section, we discuss the potential effect of the Venue Rule rescission on medical care costs. If health care providers are not able to pass on those higher costs, that would result in decreased compensation which we expect would reduce supply and accessibility of health care services.

8.3. Effect on the Cost of Medical Care

An increase in professional liability premiums as well as a decrease in the accessibility of healthcare services could have a significant impact to the cost of medical care.

⁹ "Soft market" refers to market condition where insurance is available and prices are stable. In a "hard market," insurance availability is more limited and at higher costs.

¹⁰ <https://www.law.com/thelegalintelligencer/2022/03/28/medical-professional-liability-lawsuit-venue-new-post-covid-considerations/?sreturn=20220506143521>

¹¹ <https://www.nejm.org/doi/full/10.1056/NEJMsa1809981>

- Hospitals and physicians will have to pay more for liability insurance resulting in an increase to patients' medical care costs to cover this rise.
- Reduced access to healthcare services can increase demand for the remaining providers and further inflate the burden of medical care costs.
- There may be an increase in defensive medicine as a response to higher malpractice claims resulting in unnecessary testing and higher medical care costs.

9. R Packages

In developing the analysis documents in this report, we used R and packages included in the R installation (collectively referred to as Base-R).

Citations for Base-R and other packages used in our review are as follows:

- Base-R** R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.
- tidyverse** Wickham et al., (2019). Welcome to the tidyverse. *Journal of Open Source Software*, 4(43), 1686, <https://doi.org/10.21105/joss.01686>
- extrafont** Winston Chang, (2014). extrafont: Tools for using fonts. R package version 0.17. <https://CRAN.R-project.org/package=extrafont>
- easyr** Oliver Wyman Actuarial Consulting and Bryce Chamberlain (2022). easyr: Helpful Functions from Oliver Wyman Actuarial Consulting. R package version 0.5-8. <https://CRAN.R-project.org/package=easyr>
- phillyR** Rajesh Sahasrabuddhe (2021). phillyR: Utilities for the Philadelphia P&C practice of Oliver Wyman Actuarial Consulting. R package version 0.1.12.
- usmap** Paolo Di Lorenzo (2022). usmap: US Maps Including Alaska and Hawaii. R package version 0.6.0. <https://CRAN.R-project.org/package=usmap>

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12. Considerations and Limitations

COVID-19 Pandemic – We have included no explicit adjustments in this report for the effect of the COVID-19 pandemic on loss experience except as specifically noted in this report. The impact of this event on loss experience is highly uncertain and generally unquantifiable at this time.

Data Verification – For our analysis, we relied on data and information provided by various sources without independent audit. Though we have reviewed the data for reasonableness and consistency, we have not audited or otherwise verified this data. Our review of data may not always reveal imperfections. We have assumed that the data provided is both accurate and complete. The results of our analysis are dependent on this assumption. If this data or information is inaccurate or incomplete, our findings and conclusions might therefore be unreliable.

Rounding and Accuracy – Our models may retain more digits than those displayed. Also, the results of certain calculations may be presented in the exhibits with more or fewer digits than would be considered significant. As a result, there may be rounding differences between the results of calculations presented in the exhibits and replications of those calculations based on displayed underlying amounts. Also, calculation results may not have been adjusted to reflect the precision of the calculation.

Unanticipated Changes – We developed our conclusions based on an analysis of the data from various sources and on the estimation of the outcome of many contingent events. We developed our estimates from the historical claim experience and covered exposure, with adjustments for anticipated changes. Our estimates make no provision for extraordinary future emergence of new types of losses not sufficiently represented in historical databases or which are not yet quantifiable.

Internal / External Changes – The sources of uncertainty affecting our estimates are numerous and include changes in the legal, social, or regulatory environment surrounding the claims process. Uncontrollable factors such as general economic conditions also contribute to the variability.

Uncertainty Inherent in Projections – Users of this analysis should recognize that our projections involve estimates of future events and are subject to economic and statistical variations from expected values. We have not anticipated any extraordinary changes to the legal, social, or economic environment that might affect the frequency or severity of claims. For these reasons, we do not guarantee that the emergence of actual losses will correspond to the projections in this analysis.

13. Acknowledgement of Qualifications

I, Rajesh Sahasrabuddhe, am a Partner with Oliver Wyman Actuarial Consulting, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial analysis contained herein.



Rajesh Sahasrabuddhe, FCAS, MAAA

+1 215 246 1028

rajesh.sahasrabuddhe@oliverwyman.com

14. Exhibits

Pennsylvania State Senate Judiciary Committee
Medical Professional Liability Venue Rule

Summary Schedule

(1) County	(2) Hospital Professional Liability			(3) Physician Professional Liability		
	(4) 50% Case	(5) 75% Case	(6) 100% Case	(7) 50% Case	(8) 75% Case	(9) 100% Case
	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer
	Estimated Change in Costs					
Statewide	+3.1%	+3.9%	+4.7%	+4.9%	+6.0%	+7.2%
Adams	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Allegheny	+1.4%	+2.2%	+2.9%	+1.1%	+1.7%	+2.2%
Armstrong	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Beaver	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Bedford	+5.3%	+8.0%	+10.6%	+13.9%	+20.8%	+27.8%
Berks	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Blair	+4.2%	+6.3%	+8.4%	+0.0%	+0.0%	+0.0%
Bradford	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Bucks	+0.1%	+0.2%	+0.2%	+2.1%	+3.2%	+4.2%
Butler	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Cambria	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Cameron	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Carbon	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Centre	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Chester	+3.0%	+4.4%	+5.9%	+10.1%	+15.1%	+20.1%
Clarion	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Clearfield	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Clinton	+4.8%	+7.1%	+9.5%	+11.7%	+17.5%	+23.4%
Columbia	+4.9%	+4.9%	+4.9%	+0.0%	+0.0%	+0.0%
Crawford	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Cumberland	+0.7%	+1.1%	+1.5%	+5.9%	+8.9%	+11.8%
Dauphin	+0.7%	+1.1%	+1.4%	+0.0%	+0.0%	+0.0%
Delaware	+0.3%	+0.4%	+0.5%	+3.4%	+5.1%	+6.8%
Elk	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Erie	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Fayette	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Forest	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Franklin	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Fulton	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Greene	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Huntingdon	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Indiana	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Jefferson	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Juniata	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Lackawanna	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Lancaster	+36.3%	+54.5%	+72.7%	+41.0%	+61.5%	+82.0%
Lawrence	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Lebanon	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Lehigh	+6.0%	+9.0%	+12.1%	+6.4%	+9.6%	+12.8%
Luzerne	+0.7%	+1.0%	+1.4%	+1.4%	+2.2%	+2.9%
Lycoming	+5.1%	+7.7%	+10.2%	+12.6%	+18.9%	+25.2%
McKean	+0.5%	+0.8%	+1.1%	+2.5%	+3.7%	+5.0%
Mercer	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Mifflin	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Monroe	+2.5%	+3.8%	+5.0%	+4.7%	+7.0%	+9.4%
Montgomery	+14.7%	+14.7%	+14.7%	+49.2%	+49.2%	+49.2%
Montour	+4.9%	+4.9%	+4.9%	+12.6%	+12.6%	+12.6%
Northampton	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Northumberland	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Perry	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Philadelphia	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Pike	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Potter	+5.3%	+8.0%	+10.6%	+13.9%	+20.8%	+27.8%
Schuylkill	+1.9%	+2.9%	+3.9%	+9.1%	+13.6%	+18.1%
Snyder	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Somerset	+4.0%	+6.1%	+8.1%	+5.4%	+8.2%	+10.9%
Sullivan	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Susquehanna	+37.4%	+37.4%	+37.4%	+77.8%	+77.8%	+77.8%
Tioga	+5.3%	+8.0%	+10.6%	+13.9%	+20.8%	+27.8%
Union	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Venango	+5.3%	+8.0%	+10.6%	+13.9%	+20.8%	+27.8%
Warren	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Washington	+7.7%	+7.7%	+7.7%	+0.0%	+0.0%	+0.0%
Wayne	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
Westmoreland	+0.1%	+0.1%	+0.1%	+0.0%	+0.0%	+0.0%
Wyoming	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%	+0.0%
York	+1.1%	+1.6%	+2.1%	+5.9%	+8.9%	+11.8%

Pennsylvania State Senate Judiciary Committee
Medical Professional Liability Venue Rule

PPL Cost Factors by County - Central Estimate

Table with 24 columns: (1) County, (2) Territory (PPL), (3) Number of Residents (2020), (4) Primary Care Physicians, (5) Specialists, (6) Total Physicians, (7) Mcare/JJA Assessment (PPL), (8) Relative Cost Factor (PPL), (9) Weight to Actual County, (10) Weight to Alt County, (11) County Moved To, (12) County Moved to Relativity (PPL), (13) Cost Factor (PPL), (14) UPMC, (15) Jefferson, (16) University of Pennsylvania Health System, (17) Allegheny Health Network, (18) Lehigh Valley Health Network, (19) All Other, (20) Projected Post-Consolidation at 75%, (21) Model Cost Factor (PPL), (22) # Physicians * Relative Cost Factor (PPL), (23) # Physicians * Relative Cost Factor (PPL), (24) Change.

Worksheet Control Difference
0

Pennsylvania State Senate Judiciary Committee
 Medical Professional Liability Venue Rule

Hospitals, Nursing Homes and Primary Health Centers
 Prevailing Primary Premiums

(1) Exposure Base	(2) Exposure Type	(3) Rate				(6)
		(4) Territory 1	(5) Territory 2	(5) Territory 3	(5) Territory 4	
per 2021 Mcare Assessment Manual						
Hospitals						
Per Occupied Bed	Hospital (Acute Care)	7,600.44	3,374.58	4,225.83	6,756.80	
Per Occupied Bed	Mental Health/Mental Rehabilitation	3,803.48	1,688.75	2,114.73	3,381.28	
Per Occupied Bed	Extended Care	338.37	150.23	188.13	300.80	
Per Occupied Bed	Outpatient Surgical	7,600.44	3,374.58	4,225.83	6,756.80	
Per Occupied Bed	Health Institution	1,522.70	676.07	846.62	1,353.66	
Per 100 Visits	Emergency	759.73	337.33	422.41	675.40	
Per 100 Visits	Other	303.89	134.93	168.97	270.16	
Per 100 Visits	Mental Health/Mental Rehabilitation	189.95	84.32	105.58	168.84	
Per 100 Visits	Extended Care	16.86	7.50	9.36	15.01	
Per 100 Visits	Outpatient Surgical	759.73	337.33	422.41	675.40	
Per 100 Visits	Health Institution	113.94	50.60	63.36	101.30	
Per 100 Visits	Home Health Care	189.95	84.32	105.58	168.84	
Nursing Homes						
Per Occupied Bed	Convalescent	516.81	229.49	287.37	459.46	
Per Occupied Bed	Skilled Nursing	425.63	188.99	236.65	378.39	
Primary Health Centers						
Per 100 Visits	Emergency	747.59	331.91	415.67	664.60	
Per 100 Visits	Other	299.04	132.76	166.27	265.85	
Per 100 Visits	Mental Health/Mental Rehabilitation	186.92	83.00	103.93	166.18	
Per 100 Visits	Outpatient Surgical	747.59	331.91	415.67	664.60	
Per 100 Visits	Home Health Care	186.92	83.00	103.93	166.18	
Total		26,310	11,682	14,628	23,390	
Control		26,310	11,682	14,628	23,390	
Difference		0	0	0	0	
		Territory 1	Territory 2	Territory 3	Territory 4	
Total Hospitals Per Occupied Bed		20,865.43	9,264.21	11,601.14	18,549.34	
Selected Relativity		1.000	0.444	0.556	0.889	

Note:

Territory 1: Delaware (23), Philadelphia (51)

Territory 2: Remainder of State

Territory 3: Allegheny (02), Crawford (20), Erie (25), Lackawanna (35), Lawrence (37), Luzerne (40), Mercer (43)

Territory 4: Bucks (09), Chester (15), Montgomery (46)

Worksheet Control Difference

0

Pennsylvania State Senate Judiciary Committee
 Medical Professional Liability Venue Rule

Physicians, Surgeons, Podiatrists, and Certified Nurse Midwives
 Prevailing Primary Premium / Assessment

(1) Class	(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)	
	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess
	per 2021 Mcare Assessment Manual																											
	Territory 1		Territory 2		Territory 3		Territory 4		Territory 5		Territory 6		Territory 7															
	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess	PPP	Assess
005	4,243	806	2,309	439	2,703	514	3,324	632	3,573	679	2,838	539	3,324	632														
006	8,310	1,579	4,099	779	4,956	942	6,309	1,199	6,851	1,302	5,249	997	6,221	1,182														
007	14,812	2,814	6,960	1,322	8,558	1,626	11,082	2,106	12,092	2,297	9,105	1,730	11,082	2,106														
010	10,682	2,030	5,143	977	6,270	1,191	8,051	1,530	8,763	1,665	6,656	1,265	8,051	1,530														
012	30,762	5,845	13,978	2,656	17,395	3,305	22,790	4,330	24,948	4,740	18,564	3,527	21,404	4,067														
015	21,972	4,175	10,110	1,921	12,525	2,380	16,337	3,104	17,862	3,394	13,351	2,537	15,616	2,967														
017	21,506	4,086	9,905	1,882	12,267	2,331	15,995	3,039	17,487	3,323	13,074	2,484	15,853	3,012														
020	24,916	4,734	11,405	2,167	14,156	2,690	18,498	3,515	20,236	3,845	15,097	2,868	17,252	3,278														
022	34,532	6,561	15,637	2,971	19,483	3,702	25,557	4,856	27,986	5,317	20,799	3,952	23,481	4,461														
025	37,519	7,129	16,951	3,221	21,138	4,016	27,749	5,272	28,893	5,490	22,570	4,288	24,468	4,649														
030	34,109	6,481	15,450	2,936	19,249	3,657	25,246	4,797	27,645	5,253	20,548	3,904	23,938	4,548														
035	51,478	9,781	23,093	4,388	28,871	5,485	37,995	7,219	41,265	7,840	30,848	5,861	34,246	6,507														
050	44,678	8,489	20,101	3,819	25,104	4,770	33,004	6,271	36,164	6,871	26,816	5,095	32,523	6,179														
060	52,092	9,897	23,363	4,439	29,211	5,550	38,446	7,305	42,139	8,006	31,212	5,930	38,267	7,271														
070	82,509	15,677	36,746	6,982	46,062	8,752	60,772	11,547	66,655	12,664	49,249	9,357	58,428	11,101														
080	102,525	19,480	45,554	8,655	57,151	10,859	75,464	14,338	82,789	15,730	61,119	11,613	69,988	13,298														
090	55,121	10,473	24,696	4,692	30,889	5,869	40,669	7,727	44,581	8,470	33,008	6,272	40,669	7,727														
100	158,466	30,109	70,168	13,332	88,143	16,747	116,524	22,140	127,877	24,297	94,292	17,915	111,901	21,261														
120	4,984	947	2,635	501	3,114	592	3,868	735	4,170	792	3,277	623	3,868	735														
130	36,058	6,851	16,308	3,099	20,328	3,862	26,676	5,068	27,683	5,260	21,704	4,124	23,024	4,375														
900	33,071	6,283	14,994	2,849	18,674	3,548	24,484	4,652	26,434	5,022	19,933	3,787	21,993	4,179														
Total	864,345	164,227	389,605	74,027	486,247	92,388	638,840	121,382	696,093	132,257	519,309	98,668	605,597	115,065														
Control	864,345	164,227	389,605	74,027	486,247	92,388	638,840	121,382	696,093	132,257	519,309	98,668	605,597	115,065														
Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
Selected Relativity	Territory 1		Territory 2		Territory 3		Territory 4		Territory 5		Territory 6		Territory 7															
	1.000		0.450		0.575		0.750		0.800		0.600		0.700															

Note:

- Territory 1: Philadelphia (51)
- Territory 2: Remainder of State (01, 05, 06, 08, 10-12, 14, 16, 18, 21, 24, 27-32, 34, 36, 38, 41, 42, 44, 47, 49, 50, 52, 53, 55-62, 64, 66, 67)
- Territory 3: Allegheny (02), Armstrong (03), Beaver (04), Carbon (13), Clearfield (17), Dauphin (22), Jefferson (33), Washington (63)
- Territory 4: Delaware (23), Fayette (26), Luzerne (40), Mercer (43)
- Territory 5: Lackawanna (35)
- Territory 6: Bucks (09), Chester (15), Columbia (19), Crawford (20), Erie (25), Lawrence (37), Lehigh (39), Monroe (45), Montgomery (46), Northampton (48), Schuylkill (54), Westmoreland (65)
- Territory 7: Blair (07)

Worksheet Control Difference
 0

Pennsylvania State Senate Judiciary Committee
 Medical Professional Liability Venue Rule

Model Data and Output

(1) County	(2) Year	(3) Count	(4)		(6)			(8)
			(5)		(7)			
			Start	End	Mean	Lower	Upper	
Clarion	2000-02 Average	3	2005	2020	3.513	1.281	9.634	
	2003	5	2005	2020	3.329	0.629	17.608	
	2004	3	2005	2020	3.240	0.635	16.525	
	2005	7	2005	2020	3.154	0.640	15.556	
	2006	1	2005	2020	3.071	0.642	14.693	
	2007	5	2005	2020	2.989	0.642	13.926	
	2008	3	2005	2020	2.910	0.639	13.249	
	2009	0	2005	2020	2.832	0.634	12.652	
	2010	0	2005	2020	2.757	0.627	12.132	
	2011	0	2005	2020	2.684	0.617	11.681	
	2012	1	2005	2020	2.613	0.604	11.294	
	2013	4	2005	2020	2.543	0.590	10.967	
	2014	3	2005	2020	2.476	0.573	10.695	
	2015	2	2005	2020	2.410	0.555	10.475	
	2016	3	2005	2020	2.346	0.534	10.303	
	2017	2	2005	2020	2.284	0.513	10.176	
	2018	4	2005	2020	2.223	0.490	10.091	
	2019	1	2005	2020	2.164	0.466	10.046	
	2020	3	2005	2020	2.107	0.442	10.038	
	Clearfield	2000-02 Average	9	2005	2020	2.607	0.605	11.233
2003		4	2005	2020	3.074	0.273	34.553	
2004		5	2005	2020	3.337	0.312	35.732	
2005		7	2005	2020	3.624	0.354	37.120	
2006		12	2005	2020	3.934	0.399	38.749	
2007		4	2005	2020	4.272	0.449	40.654	
2008		6	2005	2020	4.638	0.502	42.881	
2009		4	2005	2020	5.036	0.558	45.479	
2010		1	2005	2020	5.468	0.616	48.510	
2011		7	2005	2020	5.936	0.677	52.046	
2012		9	2005	2020	6.446	0.740	56.173	
2013		1	2005	2020	6.998	0.803	60.990	
2014		9	2005	2020	7.598	0.867	66.617	
2015		5	2005	2020	8.250	0.930	73.196	
2016		13	2005	2020	8.957	0.992	80.896	
2017		9	2005	2020	9.726	1.052	89.917	
2018		8	2005	2020	10.560	1.110	100.496	
2019		89	2005	2020	11.465	1.164	112.918	
2020		9	2005	2020	12.448	1.215	127.521	
Clinton		2000-02 Average	2	2005	2020	1.390	0.543	3.561
	2003	1	2005	2020	1.405	0.304	6.492	
	2004	1	2005	2020	1.412	0.320	6.237	
	2005	0	2005	2020	1.419	0.335	6.011	
	2006	2	2005	2020	1.427	0.350	5.812	
	2007	0	2005	2020	1.434	0.365	5.639	
	2008	1	2005	2020	1.442	0.378	5.493	
	2009	1	2005	2020	1.449	0.391	5.373	
	2010	0	2005	2020	1.456	0.402	5.279	
	2011	0	2005	2020	1.464	0.411	5.211	
	2012	0	2005	2020	1.472	0.419	5.169	
	2013	0	2005	2020	1.479	0.425	5.152	
	2014	0	2005	2020	1.487	0.428	5.162	
	2015	0	2005	2020	1.494	0.430	5.199	
	2016	3	2005	2020	1.502	0.429	5.263	
	2017	2	2005	2020	1.510	0.426	5.354	
	2018	2	2005	2020	1.518	0.421	5.474	
	2019	1	2005	2020	1.526	0.414	5.623	
	2020	1	2005	2020	1.533	0.405	5.802	
	Columbia/Montour	2000-02 Average	14	2005	2020	22.515	14.840	34.158
2003		30	2005	2020	21.979	11.018	43.843	
2004		15	2005	2020	21.715	11.038	42.719	
2005		14	2005	2020	21.455	11.044	41.679	
2006		19	2005	2020	21.196	11.035	40.720	
2007		26	2005	2020	20.944	11.010	39.840	
2008		33	2005	2020	20.693	10.969	39.039	
2009		23	2005	2020	20.445	10.910	38.314	
2010		25	2005	2020	20.200	10.834	37.664	
2011		25	2005	2020	19.958	10.741	37.086	
2012		17	2005	2020	19.719	10.630	36.579	
2013		16	2005	2020	19.483	10.503	36.141	
2014		18	2005	2020	19.249	10.359	35.769	
2015		13	2005	2020	19.019	10.200	35.461	
2016		19	2005	2020	18.791	10.027	35.214	
2017		13	2005	2020	18.566	9.841	35.025	
2018		16	2005	2020	18.343	9.643	34.893	
2019		23	2005	2020	18.123	9.435	34.814	
2020		25	2005	2020	17.906	9.218	34.785	
Crawford		2000-02 Average	3	2005	2020	2.940	0.898	9.624
	2003	2	2005	2020	3.154	0.446	22.315	
	2004	5	2005	2020	3.266	0.482	22.128	
	2005	2	2005	2020	3.383	0.520	22.026	
	2006	5	2005	2020	3.504	0.558	22.013	
	2007	0	2005	2020	3.629	0.596	22.094	
	2008	6	2005	2020	3.759	0.634	22.276	
	2009	1	2005	2020	3.893	0.672	22.565	
	2010	5	2005	2020	4.032	0.708	22.970	
	2011	7	2005	2020	4.177	0.742	23.501	
	2012	5	2005	2020	4.326	0.774	24.168	
	2013	4	2005	2020	4.481	0.804	24.984	
	2014	9	2005	2020	4.641	0.830	25.963	
	2015	3	2005	2020	4.807	0.852	27.121	
	2016	5	2005	2020	4.978	0.870	28.476	
	2017	8	2005	2020	5.156	0.885	30.049	
	2018	11	2005	2020	5.341	0.895	31.863	
	2019	11	2005	2020	5.532	0.901	33.944	
	2020	1	2005	2020	5.729	0.904	36.322	

Pennsylvania State Senate Judiciary Committee
 Medical Professional Liability Venue Rule

Model Data and Output

(1) County	(2) Year	(3) Count	(4)		(5)	(7)		(8)
			Calibration Interval		Mean	Prediction Interval		Upper
			Start	End		Lower		
Northumberland	2000-02 Average	9	2005	2020	2.733	1.021	7.317	
	2003	4	2005	2020	2.755	0.539	14.082	
	2004	6	2005	2020	2.766	0.559	13.682	
	2005	2	2005	2020	2.777	0.578	13.334	
	2006	2	2005	2020	2.789	0.596	13.037	
	2007	2	2005	2020	2.800	0.613	12.791	
	2008	6	2005	2020	2.811	0.627	12.594	
	2009	6	2005	2020	2.822	0.640	12.447	
	2010	1	2005	2020	2.834	0.650	12.348	
	2011	4	2005	2020	2.845	0.658	12.299	
	2012	1	2005	2020	2.857	0.664	12.299	
	2013	5	2005	2020	2.868	0.666	12.349	
	2014	7	2005	2020	2.880	0.666	12.448	
	2015	7	2005	2020	2.891	0.664	12.599	
	2016	3	2005	2020	2.903	0.658	12.803	
	2017	2	2005	2020	2.915	0.651	13.059	
	2018	3	2005	2020	2.927	0.641	13.370	
	2019	2	2005	2020	2.938	0.628	13.738	
	2020	2	2005	2020	2.950	0.615	14.164	
	Philadelphia	2000-02 Average	1,204	2005	2020	603.463	514.578	707.702
2003		577	2005	2020	569.579	437.432	741.648	
2004		559	2005	2020	553.358	427.239	716.706	
2005		540	2005	2020	537.598	417.076	692.947	
2006		569	2005	2020	522.287	406.941	670.329	
2007		586	2005	2020	507.412	396.832	648.807	
2008		553	2005	2020	492.961	386.750	628.341	
2009		491	2005	2020	478.922	376.698	608.886	
2010		381	2005	2020	465.282	366.679	590.401	
2011		418	2005	2020	452.031	356.699	572.841	
2012		389	2005	2020	439.157	346.766	556.164	
2013		382	2005	2020	426.650	336.890	540.324	
2014		382	2005	2020	414.499	327.082	525.278	
2015		381	2005	2020	402.694	317.354	510.982	
2016		378	2005	2020	391.225	307.719	497.391	
2017		406	2005	2020	380.083	298.192	484.463	
2018		416	2005	2020	369.258	288.785	472.155	
2019		406	2005	2020	358.742	279.514	460.426	
2020		348	2005	2020	348.525	270.390	449.238	
Pike		2000-02 Average	0	2005	2020	2.000	NA	NA
	2003	0	2005	2020	2.000	NA	NA	
	2004	0	2005	2020	2.000	NA	NA	
	2005	0	2005	2020	2.000	NA	NA	
	2006	0	2005	2020	2.000	NA	NA	
	2007	0	2005	2020	2.000	NA	NA	
	2008	0	2005	2020	2.000	NA	NA	
	2009	0	2005	2020	2.000	NA	NA	
	2010	0	2005	2020	2.000	NA	NA	
	2011	2	2005	2020	2.000	NA	NA	
	2012	0	2005	2020	2.000	NA	NA	
	2013	0	2005	2020	2.000	NA	NA	
	2014	0	2005	2020	2.000	NA	NA	
	2015	0	2005	2020	2.000	NA	NA	
	2016	0	2005	2020	2.000	NA	NA	
	2017	0	2005	2020	2.000	NA	NA	
	2018	0	2005	2020	2.000	NA	NA	
	2019	0	2005	2020	2.000	NA	NA	
	2020	0	2005	2020	2.000	NA	NA	
	Potter	2000-02 Average	3	2005	2020	0.727	0.377	1.401
2003		6	2005	2020	0.851	0.294	2.463	
2004		1	2005	2020	0.920	0.328	2.581	
2005		2	2005	2020	0.996	0.365	2.715	
2006		1	2005	2020	1.077	0.405	2.867	
2007		1	2005	2020	1.165	0.447	3.040	
2008		1	2005	2020	1.261	0.491	3.237	
2009		1	2005	2020	1.364	0.537	3.464	
2010		2	2005	2020	1.475	0.585	3.724	
2011		1	2005	2020	1.596	0.633	4.024	
2012		1	2005	2020	1.727	0.682	4.369	
2013		3	2005	2020	1.868	0.732	4.767	
2014		0	2005	2020	2.021	0.781	5.227	
2015		2	2005	2020	2.186	0.830	5.757	
2016		3	2005	2020	2.365	0.878	6.368	
2017		3	2005	2020	2.559	0.926	7.072	
2018		0	2005	2020	2.768	0.972	7.883	
2019		0	2005	2020	2.994	1.017	8.818	
2020		0	2005	2020	3.239	1.061	9.893	
Schuylkill		2000-02 Average	29	2005	2020	9.024	5.718	14.240
	2003	13	2005	2020	9.477	4.451	20.179	
	2004	12	2005	2020	9.712	4.631	20.367	
	2005	9	2005	2020	9.953	4.812	20.586	
	2006	11	2005	2020	10.199	4.992	20.839	
	2007	5	2005	2020	10.452	5.171	21.128	
	2008	12	2005	2020	10.711	5.347	21.457	
	2009	11	2005	2020	10.977	5.520	21.828	
	2010	13	2005	2020	11.249	5.688	22.246	
	2011	15	2005	2020	11.528	5.851	22.713	
	2012	14	2005	2020	11.814	6.007	23.233	
	2013	14	2005	2020	12.107	6.156	23.809	
	2014	23	2005	2020	12.407	6.297	24.445	
	2015	10	2005	2020	12.715	6.429	25.144	
	2016	14	2005	2020	13.030	6.552	25.911	
	2017	15	2005	2020	13.353	6.666	26.748	
	2018	11	2005	2020	13.684	6.770	27.661	
	2019	11	2005	2020	14.023	6.864	28.652	
	2020	12	2005	2020	14.371	6.948	29.725	

Pennsylvania State Senate Judiciary Committee
 Medical Professional Liability Venue Rule

Model Data and Output

(1) County	(2) Year	(3) Count	(4)		(7)			(8)
			(5)		(6)			
			Start	End	Mean	Lower	Upper	
Snyder/Union	2000-02 Average	7	2005	2020	1.635	0.629	4.251	
	2003	6	2005	2020	1.818	0.374	8.841	
	2004	2	2005	2020	1.917	0.407	9.027	
	2005	2	2005	2020	2.022	0.442	9.245	
	2006	1	2005	2020	2.132	0.478	9.499	
	2007	4	2005	2020	2.248	0.516	9.795	
	2008	3	2005	2020	2.370	0.554	10.136	
	2009	6	2005	2020	2.499	0.593	10.529	
	2010	5	2005	2020	2.635	0.632	10.980	
	2011	1	2005	2020	2.779	0.672	11.495	
	2012	1	2005	2020	2.930	0.710	12.083	
	2013	4	2005	2020	3.089	0.748	12.753	
	2014	6	2005	2020	3.258	0.785	13.515	
	2015	2	2005	2020	3.435	0.821	14.379	
	2016	0	2005	2020	3.622	0.854	15.360	
	2017	3	2005	2020	3.819	0.886	16.470	
	2018	4	2005	2020	4.027	0.915	17.726	
	2019	5	2005	2020	4.246	0.942	19.145	
	2020	6	2005	2020	4.478	0.966	20.748	
	Somerset	2000-02 Average	8	2005	2020	5.893	2.800	12.402
		2003	8	2005	2020	5.742	1.674	19.698
		2004	5	2005	2020	5.668	1.694	18.967
2005		8	2005	2020	5.594	1.710	18.305	
2006		3	2005	2020	5.522	1.722	17.710	
2007		8	2005	2020	5.451	1.730	17.178	
2008		3	2005	2020	5.380	1.733	16.708	
2009		6	2005	2020	5.311	1.731	16.296	
2010		8	2005	2020	5.242	1.724	15.940	
2011		4	2005	2020	5.174	1.712	15.639	
2012		6	2005	2020	5.107	1.695	15.390	
2013		7	2005	2020	5.041	1.673	15.191	
2014		5	2005	2020	4.976	1.646	15.040	
2015		3	2005	2020	4.912	1.615	14.936	
2016		7	2005	2020	4.848	1.580	14.877	
2017		2	2005	2020	4.786	1.541	14.861	
2018		11	2005	2020	4.724	1.499	14.887	
2019		6	2005	2020	4.663	1.454	14.953	
2020		3	2005	2020	4.602	1.407	15.059	
Sullivan/Wyoming		2000-02 Average	4	2005	2020	1.385	0.744	2.578
		2003	2	2005	2020	1.335	0.485	3.674
		2004	3	2005	2020	1.310	0.490	3.506
	2005	1	2005	2020	1.286	0.493	3.353	
	2006	0	2005	2020	1.262	0.495	3.216	
	2007	2	2005	2020	1.239	0.496	3.094	
	2008	0	2005	2020	1.216	0.496	2.986	
	2009	1	2005	2020	1.194	0.493	2.891	
	2010	0	2005	2020	1.172	0.489	2.808	
	2011	0	2005	2020	1.151	0.483	2.738	
	2012	0	2005	2020	1.129	0.476	2.680	
	2013	0	2005	2020	1.109	0.467	2.632	
	2014	1	2005	2020	1.088	0.456	2.595	
	2015	0	2005	2020	1.068	0.445	2.567	
	2016	0	2005	2020	1.049	0.431	2.549	
	2017	0	2005	2020	1.029	0.417	2.540	
	2018	0	2005	2020	1.010	0.402	2.539	
	2019	1	2005	2020	0.992	0.386	2.546	
	2020	1	2005	2020	0.974	0.370	2.560	
	Susquehanna	2000-02 Average	0	2005	2020	1.818	0.493	6.702
		2003	0	2005	2020	1.828	0.216	15.457
		2004	0	2005	2020	1.833	0.229	14.953
2005		1	2005	2020	1.837	0.242	13.954	
2006		0	2005	2020	1.842	0.254	13.355	
2007		3	2005	2020	1.847	0.265	12.849	
2008		1	2005	2020	1.852	0.276	12.433	
2009		0	2005	2020	1.857	0.285	12.101	
2010		0	2005	2020	1.861	0.292	11.853	
2011		0	2005	2020	1.866	0.298	11.685	
2012		6	2005	2020	1.871	0.302	11.597	
2013		4	2005	2020	1.876	0.304	11.588	
2014		0	2005	2020	1.881	0.304	11.658	
2015		1	2005	2020	1.886	0.301	11.808	
2016		0	2005	2020	1.891	0.297	12.040	
2017		0	2005	2020	1.896	0.291	12.357	
2018		1	2005	2020	1.901	0.283	12.762	
2019		2	2005	2020	1.906	0.274	13.259	
2020		2	2005	2020	1.911	0.264	13.853	
Tioga		2000-02 Average	3	2005	2020	0.900	0.564	1.433
		2003	0	2005	2020	0.940	0.436	2.026
		2004	0	2005	2020	0.961	0.454	2.036
	2005	1	2005	2020	0.982	0.471	2.049	
	2006	1	2005	2020	1.004	0.488	2.066	
	2007	1	2005	2020	1.027	0.505	2.087	
	2008	0	2005	2020	1.049	0.521	2.113	
	2009	1	2005	2020	1.073	0.537	2.143	
	2010	1	2005	2020	1.097	0.552	2.178	
	2011	0	2005	2020	1.121	0.567	2.218	
	2012	1	2005	2020	1.146	0.580	2.265	
	2013	0	2005	2020	1.172	0.592	2.317	
	2014	0	2005	2020	1.198	0.604	2.376	
	2015	0	2005	2020	1.224	0.614	2.442	
	2016	2	2005	2020	1.252	0.623	2.515	
	2017	2	2005	2020	1.280	0.631	2.596	
	2018	0	2005	2020	1.308	0.637	2.685	
	2019	1	2005	2020	1.337	0.643	2.781	
	2020	1	2005	2020	1.367	0.647	2.887	



Oliver Wyman
1717 Arch Street
Philadelphia, PA 19103