

WISCONSIN STATE
LEGISLATURE
COMMITTEE HEARING
RECORDS

2005-06

(session year)

Assembly

(Assembly, Senate or Joint)

**Task Force on
Medical
Malpractice
(ATF-MM)**

Sample:

Record of Comm. Proceedings ... RCP

- > 05hr_AC-Ed_RCP_pt01a
- > 05hr_AC-Ed_RCP_pt01b
- > 05hr_AC-Ed_RCP_pt02

> Appointments ... Appt

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> Clearinghouse Rules ... CRule

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> Committee Hearings ... CH

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> Committee Reports ... CR

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> Executive Sessions ... ES

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> Hearing Records ... HR

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> Miscellaneous ... Misc

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PCF WISCONSIN RISK

A Quarterly Publication of the State of Wisconsin Patients Compensation Fund
Spring 2004 • Volume 4, Issue 1

PATIENTS COMPENSATION CLAIMS EXPERIENCE

BY THERESA WEDEKIND
Director, Patients Compensation Fund

The American Medical Association lists Wisconsin as one of only six states in the country that is not in a medical malpractice crisis. The "Wisconsin factor," tort reform, and the Patients Compensation Fund (PCF) all contribute to Wisconsin's enviable situation.

The "Wisconsin factor" can best be described as the state's overall environment. It includes the availability and quality of healthcare, plus the amounts Wisconsin juries award. In Wisconsin, we have not seen the huge jury verdicts that have been reported in other states, although verdicts here occasionally range as high as three to eight million dollars.

The non-economic damages and wrongful death caps have contributed to Wisconsin's relatively stable medical malpractice environment. Since Act 10 was passed in 1995, the non-economic damages cap has resulted in an estimated \$88 million reduction in assessments collected from Fund participants through 2003. In addition, Wisconsin

does not allow punitive damages in medical malpractice claims, providing further protection for the state's healthcare providers.

The Patients Compensation Fund supplies healthcare workers with coverage above the current primary limits of \$1,000,000/\$3,000,000, while ensuring that funds are available to compensate injured patients.

In order for a claimant to recover from the Fund, the PCF must be a named defendant in the action. Since the inception of the PCF in 1975, there have been 4,944 claims filed in which the PCF was named. During this period, the PCF's total number of paid claims was 609, resulting in indemnity payments being made on only 12.3% of all claims filed. The total amount paid on those 609 claims was \$548,014,819.

Table I summarizes PCF loss payments by fiscal year since 1995. The PCF's fiscal year runs from July 1 through June 30.

TABLE I
AMOUNT AND NUMBER OF LOSSES PAID BY FISCAL YEAR

	Millions	Claims Paid
1995	\$24.1	25
1996	\$51.5	28
1997	\$34.7	16
1998	\$18.7	24
1999	\$19.9	28
2000	\$19.7	12
2001	\$39.6	22
2002	\$41.3*	15
2003	\$22.0	11

* Net loss payments totaled approximately \$35.3 million, after deducting \$5,993,923 recovered during fiscal 2002 on two losses paid in previous years.

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**TABLE 2
LOSS ADJUSTMENT EXPENSES PAID**

FISCAL YEAR	Millions
1995	\$2.0
1996	\$2.0
1997	\$2.7
1998	\$3.8
1999	\$2.7
2000	\$3.2
2001	\$2.8
2002	\$4.5
2003	\$4.2

* \$1.3 million of the fiscal 1998 total loss adjustment expenses paid represents a contingency fee paid as a result of a loss recovery by the PCF.
 ** Net loss adjustment expense payments totaled approximately \$4.1 million, after deducting \$382,820 recovered during fiscal 2002 on a loss paid in a previous year.

Loss adjustment expense payments, the cost of defending claims, are summarized in Table 2.

Fund claim payments can vary widely due to (1) the unlimited nature of PCF coverage, (2) the severity of patient injuries, and (3) the primary insurance limits in effect at the time of each incident. Table 3 categorizes PCF claim payments made from July 1, 1996 through June 30, 2003 by the size of payment.

**TABLE 3
RANGE OF FUND CLAIM PAYMENTS JULY 1, 1996 - JUNE 30, 2003**

PAYMENT RANGE	NUMBER OF CLAIMS
\$500,000 or less	54
\$500,001 - \$1,000,000	31
\$1,000,001 - \$2,000,000	14
\$2,000,001 - \$5,000,000	18
Greater than \$5,000,000	11
Total Claims Paid	128

Table 4 summarizes claims reported to the PCF by fiscal year since 1997. Claims are generally reported to the PCF six months to three years after the incidents occurred that gave rise to the claims. The applicable statute of limitations determines the deadline for filing a medical malpractice action.

When reading Table 4, please note that not all reported claims result in loss payments by the PCF. As stated

previously, approximately 87% of the PCF's closed claims have not involved a payment by the Fund. Claims may be closed with no PCF payment for the following reasons:

- Dismissal of claims, due to lack of negligence or cause or plaintiffs did not pursue case.
- Defense verdicts at trial.
- Claim settlements negotiated within the underlying insurer limits.

**TABLE 4
CLAIMS REPORTED BY FISCAL YEAR**

FISCAL YEAR	NUMBER OF REPORTED CLAIMS
1997	182
1998	161
1999	215
2000	246
2001	169
2002	182
2003	170

The PCF's experience at trial, as well as claim settlement history since fiscal 1999, is reported in Table 5. Trial losses may result in no PCF payment (verdict within primary carrier limits). Settlements represent cases negotiated to resolution out of court.

**TABLE 5
TRIAL AND SETTLEMENT HISTORY**

Number of Cases	1999	2000	2001	2002	2003
Tried-Won	20	17	26	18	32
Tried-Lost	12	7	10	9	5
Settled-Fund Payment	17	10	17	14	13
Settled-No Fund Payment*	25	30	41	63	44
Won or Settled Within Primary Limits	60.8%	73.4%	71.3%	77.9%	82.5%

* Settled within primary carrier limits.

Although the medical malpractice liability crisis is far from over in the United States, the PCF is a major factor in Wisconsin's relatively stable premiums and the state's reputation as a desirable place for physicians to practice. In addition to protecting healthcare providers against claims that exceed primary limits, the PCF's percentage of trials won or settled without incurring Fund payments has increased by nearly 36% over the past five years.

RATE COMPARISON WITH SURROUNDING STATES

Medical liability rate averages are lower in Wisconsin than in most surrounding states. The following two tables compare rates in Wisconsin and its five neighbors. The comparison uses published \$1,000,000/\$3,000,000 mature claims-made coverage rates and does not include PCF assessments. Wisconsin average rates are second only to Minnesota rates.

When possible, the rates of three companies writing in any one area were used to calculate an average. (In Michigan, the averages are based on the rates of two companies.)

Table 1 shows average rates for three specialties: Internal Medicine, General Surgery, and OB/GYN. Wisconsin, Iowa, and Minnesota rates are statewide, while Illinois, Michigan, and Ohio rates are broken out by major metropolitan area.

Table 2 expresses the same information as a relativity factor, comparing each rate to the Wisconsin average. For example, Chicago area Internal Medicine rates are four times higher than Wisconsin rates while Minnesota rates are 15 percent lower.

TABLE 1
AVERAGE \$1M/\$3M RATES BY SPECIALTY AND STATE

STATE / REGION	INTERNAL MEDICINE	GENERAL SURGERY	OB/GYN
Wisconsin	\$5,205	\$17,433	\$25,133
IL - Chicago area	\$26,060	\$68,218	\$103,789
IL - Peoria area	\$14,563	\$37,550	\$56,879
Iowa	\$6,570	\$21,145	\$35,191
MI - Detroit area	\$38,457	\$102,302	\$128,273
MI - Grand Rapids area	\$16,007	\$42,871	\$53,621
Minnesota	\$4,909	\$12,206	\$21,288
OH - Cincinnati area	\$11,115	\$39,338	\$60,261
OH - Cleveland area	\$19,503	\$69,311	\$106,882

Source: Trends in 2002 Rates for Physicians' Medical Professional Liability Insurance, *Medical Liability Monitor*, October, 2002.

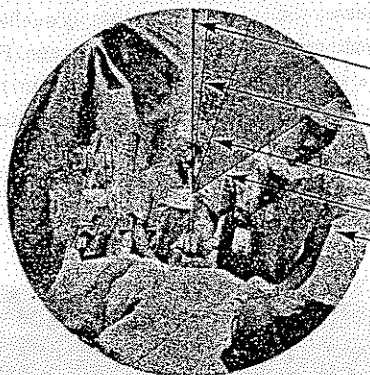
TABLE 2
AVERAGE \$1M/\$3M RATES COMPARED TO WISCONSIN RATES

STATE / REGION	INTERNAL MEDICINE	GENERAL SURGERY	OB/GYN
Wisconsin	1.0	1.0	1.0
IL - Chicago area	5.01	3.91	4.13
IL - Peoria area	2.80	2.15	2.26
Iowa	1.26	1.21	1.40
MI - Detroit area	7.39	5.87	5.10
MI - Grand Rapids area	3.08	2.46	2.13
Minnesota	0.94	0.70	0.85
OH - Cincinnati area	2.14	2.26	2.40
OH - Cleveland area	3.75	3.98	4.25

Source: Trends in 2002 Rates for Physicians' Medical Professional Liability Insurance, *Medical Liability Monitor*, October, 2002.

PCF PARTICIPANTS

As of December 31, 2003, Fund participants totaled 13,191. Participants included 11,145 physicians, 1,323 corporations, 492 nurse anesthetists, 118 hospitals with 27 affiliated nursing homes, 50 partnerships, 21 hospital-owned or controlled entities, 14 ambulatory surgery centers, and 1 cooperative.



FUND PARTICIPANTS

TYPE	QTY.	PERCENT
Ambulatory surgical centers and cooperatives	15	.1%
Hospitals, affiliated nursing homes & owned/controlled entities	166	1.3%
Nurse anesthetists	492	3.7%
Corporations & partnerships	1,373	10.4%
Physicians	11,145	84.5%
Total	13,191	100.0%

WISCONSIN PATIENTS COMPENSATION FUND

By **THERESA WEDEKIND**
Director, Patients Compensation Fund

The Fund was created in 1975 to provide excess medical malpractice insurance for Wisconsin healthcare providers. Its 13-member Board of Governors includes members of the public, the Commissioner of Insurance, and legal, insurance, hospital and medical representatives.

Administrative costs, operating costs, and claim payments are funded through assessments on participating healthcare providers. Participation is mandatory with exceptions for part-time physicians or those who practice primarily outside of Wisconsin. The Fund's annual administration budget is approximately \$750,000 and its operating budget is \$50,000,000.

In 2003, the Fund was protected by a new law that changes the Fund's legal name to the Injured Patients and Families Compensation Fund. The new name will be used primarily in legal documents. The law explicitly states that the Fund is held in trust exclusively for the benefit of healthcare providers and claimants and may not be spent for any other purpose of the state.

ABOUT WISCRISK

WiscRisk is published quarterly and circulated to more than 12,000 healthcare providers statewide. Designed to keep readers informed of trends in liability claims and loss prevention, this publication is prepared by the Risk Management Steering Committee for the Patients Compensation Fund.

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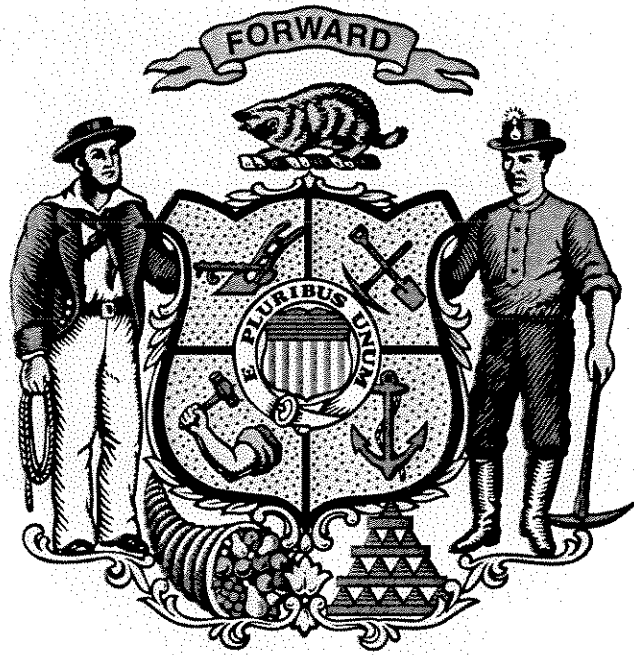
State of Wisconsin Injured Patients and Families Compensation Fund

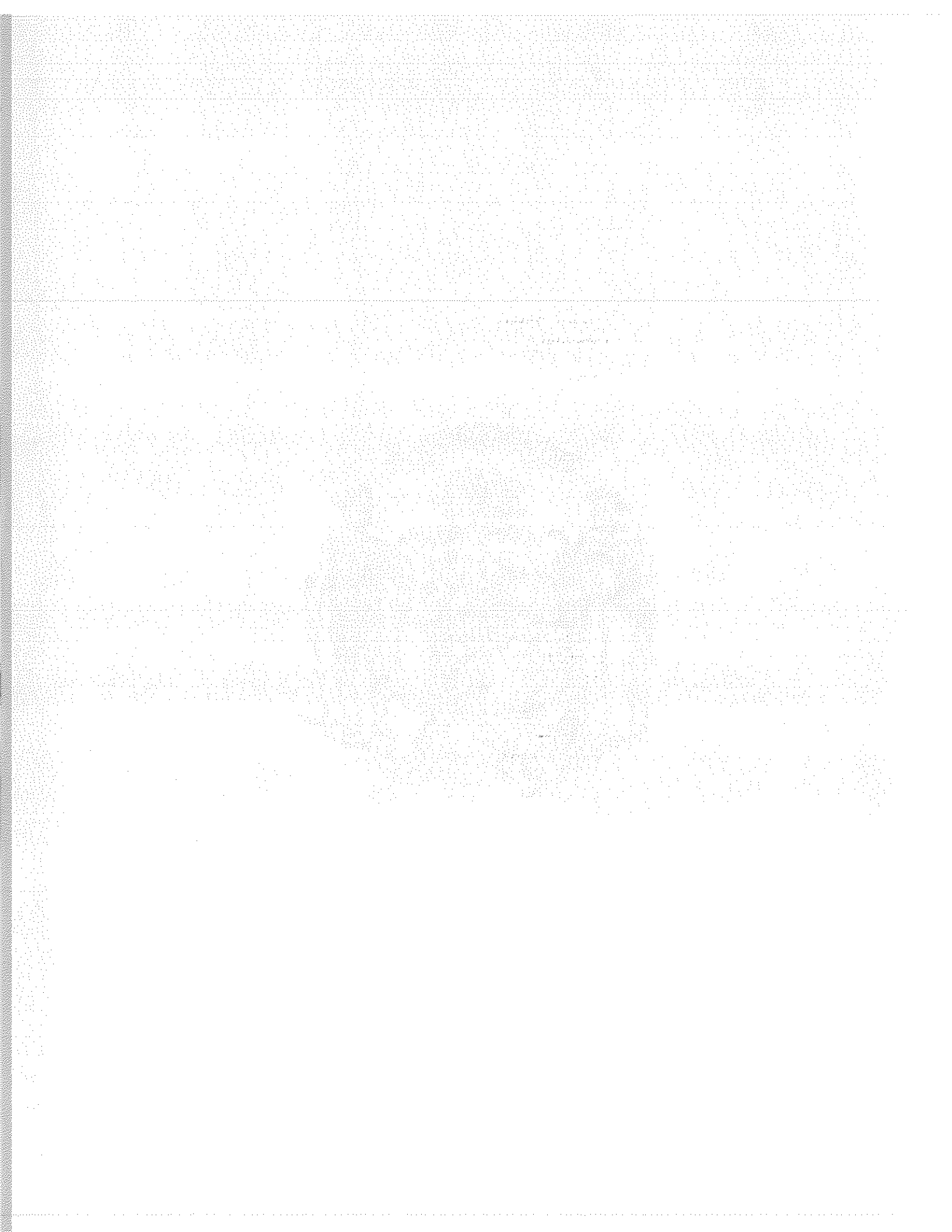
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RESEARCH REPORT #109-2
March 2005



The Perverse Nature of the Medical Liability System

It is commonly assumed that the medical liability system works as advertised: injured patients sue negligent doctors for compensation for their injuries. This assumption is the basis for arguments defending the current system. However, medical liability in practice differs greatly from theory because the system is ineffective at deterring negligent injuries and fails to justly compensate those truly harmed by negligent injuries, thereby providing compelling grounds for serious medical liability reform.

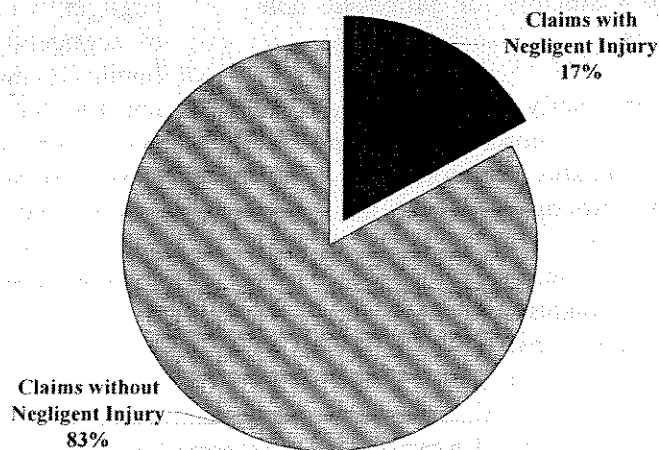
HITTING THE WRONG TARGET

Unfortunately, the medical liability system malfunctions on a fundamental level. Analyses of hospitalizations and medical liability claims reveal that close to 80 percent of medical liability claims are not associated with an injury caused by negligence. One study estimated that just 17 percent of medical liability claims involved a negligent injury. Another study put the figure at 15 percent. In other words, only about one in five medical liability claims actually involve negligence. In fact, more than half of all medical liability claims do not involve an injury at all.

At the same time, the vast majority of negligent medical injuries never materialize as liability claims. According to different studies, only about 3 percent of victims of medical malpractice actually file liability claims. The obvious implication from this fact is that the liability system fails to punish the vast majority of negligent medical injuries. While many of the negligent injuries that do not result in a claim are relatively minor, a significant number of non-litigated negligent injuries involve major disability.

The system is not completely dysfunctional, in the sense that negligent doctors are probably more likely to get sued than are non-negligent doctors. Yet the fact remains that the large majority of doctors who are sued for medical liability are not guilty of negligent care. One way to

Figure 1. Negligent Injuries in Medical Liability Claims



Source: Harvard Medical Practice Study.

summarize the effects of the current system is to say that some bad doctors get sued, but not everyone who is sued is a bad doctor.

Thus, the medical liability system largely penalizes doctors who have done nothing wrong, while at the same time fails to provide compensation to the vast majority of legitimate victims. Put another way, the bulk of the medical liability system is preoccupied with penalizing non-negligent doctors on behalf of claimants who lack a sound legal basis for their claims. As one critic has observed, "it is similar to a situation in which a traffic officer is giving tickets to large numbers of motorists who are not speeding, but failing to give tickets to many speeding motorists."

THE COST OF BEING SUED

Defenders of the current system sometime argue that since doctors usually prevail in medical liability trials, they suffer no adverse consequences if the system erroneously targets them. This argument is demonstrably false. For example, claims data show that even cases that are dropped or dismissed generate legal bills for the defendant that average nearly \$17,000 and legal defense costs in medical liability trials are virtually identically for guilty and non-guilty verdicts.

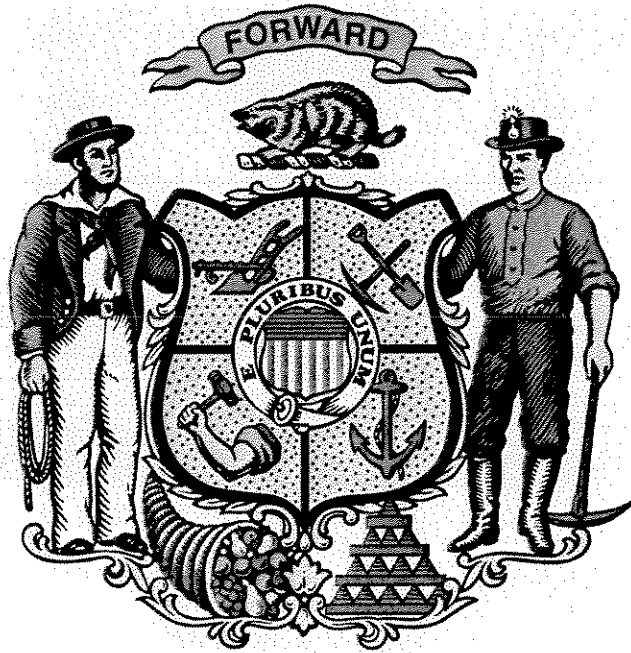
More importantly, merely being sued entails substantial costs aside from any payment to claimants. Doctors must devote a significant amount of time to the claim, such as meeting with lawyers, giving depositions, and time in court. Whereas payments to claimants are generally paid for by their insurance coverage, this time cost imposes direct financial losses due to time

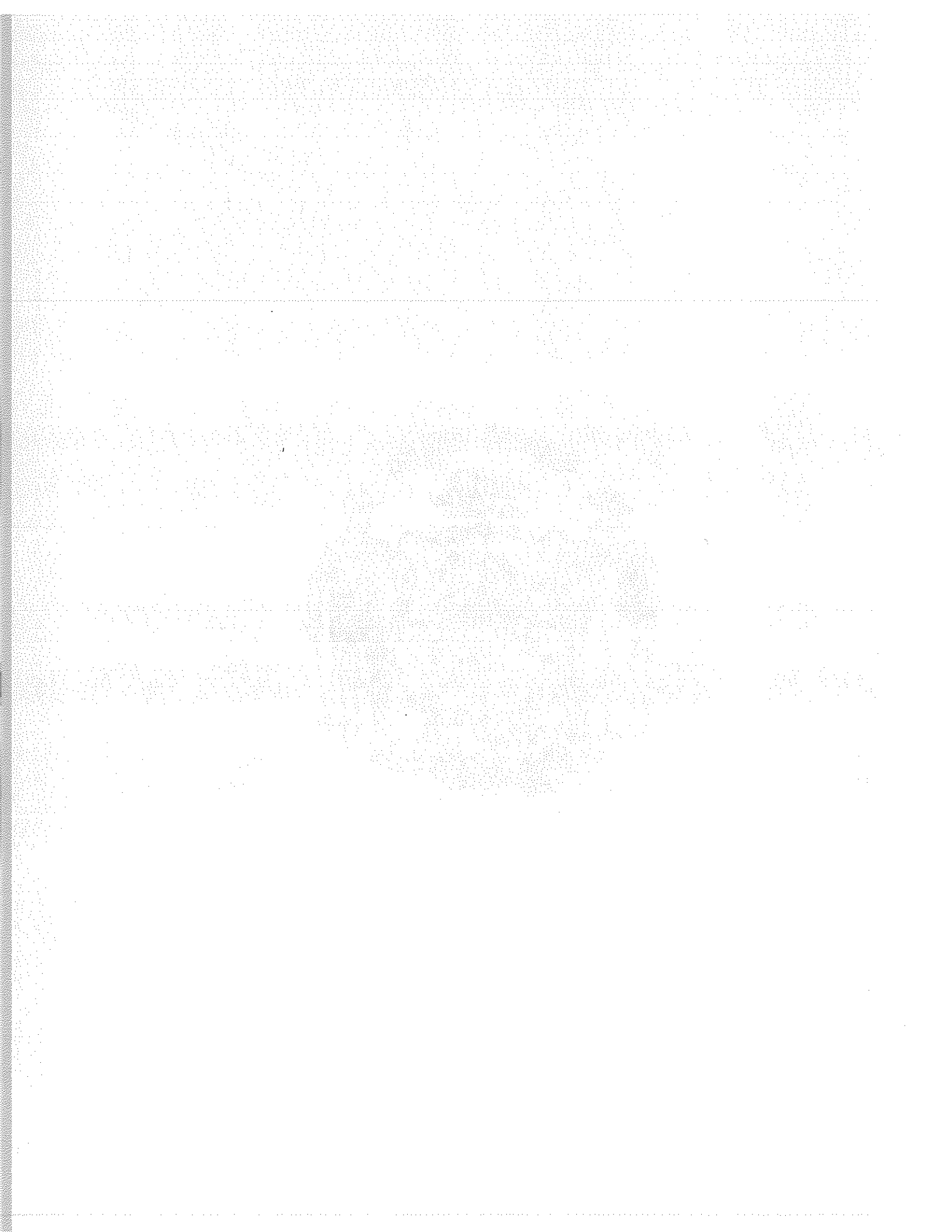
away from their practice. Similarly, even if doctors are exonerated in liability claims, they still can suffer damage to their reputation which bears financial consequences as well. Lastly, the act of being sued causes significant psychological stress, a non-financial cost that can never be reimbursed. Even if they have done nothing wrong, these costs constitute a substantial penalty for doctors who are sued.

CONCLUSION

In practice, the medical liability system departs dramatically from its two central goals of punishing negligent doctors (i.e., deterrence) and compensating patients with negligently-caused injuries. Given the facts noted above, two conclusions are apparent. First, the existing medical liability system is hamstrung in providing an effective deterrent to negligent injuries for the simple reasons that most negligent acts go unpunished and most doctors who are sued are not guilty of negligence. In the effort to punish the 3 percent of negligent injuries that actually result in a liability claim, the system ends up penalizing four innocent doctors for every one that is negligent. Second, the medical liability system fails to meet its goal of compensating the negligently injured because the vast majority of negligently-injured patients do not file a liability claim. If victims of negligence do not file liability claims, then the liability system cannot compensate them for their losses. In sum, the observable facts of the current medical liability system demonstrate that in practice, the system is both inefficient and ineffective at meeting its goals.

This Research Report is based in part on the Joint Economic Committee study *Liability for Medical Malpractice: Issues and Evidence* (May 2003). For a copy of this study, contact the JEC at (202) 226-3234 or visit the website www.house.gov/jec.







State of Wisconsin / OFFICE OF THE COMMISSIONER OF INSURANCE

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REPORT ON THE IMPACT OF 1995 WISCONSIN ACT 10

In accordance with s. 601.427 (9), Wis. Stat., I am pleased to submit this report to the Wisconsin State Assembly. The report, to be submitted to the Legislature within two years after the effective date of 1995 Wisconsin Act 10 (May 25, 1995) and within two years thereafter, is to evaluate the impact that Act 10 has had on the following:

- (a) The number of health care providers practicing in Wisconsin.
- (b) The fees that health care providers pay under s. 655.27 (3) Wis. Stat.
- (c) The premiums that health care providers pay for health care liability insurance.

EXPLANATION OF 1995 WISCONSIN ACT 10

Prior to the enactment of Act 10, there existed no cap on noneconomic damages in Wisconsin for medical malpractice claims since January 1, 1991. Previously, a cap of \$1,000,000 had been in effect for such claims filed between June 14, 1986 and December 31, 1990, per 1985 Wisconsin Act 340. This Act, however, had a sunset provision which eliminated the noneconomic cap as of January 1, 1991. After the effective date of the sunset provision, members of the Wisconsin Legislature sought to reintroduce noneconomic damages caps to Wisconsin in such bills as 1993 Senate Bill 215 and 1995 Assembly Bill 36. Assembly Bill 36 was passed by the Legislature to become 1995 Wisconsin Act 10.

Among its provisions, Act 10 established a maximum amount that a claimant may recover for noneconomic damages resulting from the negligence of a health care provider. Noneconomic damages are generally defined to include items such as pain and suffering, embarrassment, mental distress, and the loss of companionship and affection. The maximum amount for noneconomic damages was limited to \$350,000, and was to be adjusted "by the director of state courts to reflect changes in the consumer price index... with the adjusted limit to apply to awards subsequent to such adjustments." The indexed non-economic damage caps for each of the last four years were as follows:

2001	404,657
2002	410,322
2003	422,632
2004	432,352

IMPACT OF 1995 WISCONSIN ACT 10

Section 3 of Act 10 requires the Commissioner of Insurance to submit to the Legislature a report evaluating the impact that Act 10 has had on the number of health care providers practicing in Wisconsin, the fees that health care providers pay under s. 655.27 (3), Wis. Stat., and the premiums that health care providers pay for health care liability insurance from their primary insurance carriers. To assist the Legislature in its review of Act 10, the Commissioner's report was to include comparative statistics for these three areas for the year prior to enactment (1994) and the year(s) subsequent to enactment.

The required statistics have been compiled and are reported in the three attachments to this report:

Attachment 1 - This attachment displays the number of health care providers practicing in Wisconsin and participating in the Injured Patients & Families Compensation Fund (Fund). There are a certain number of providers who may be practicing in the state but who meet one or more of the criteria allowing them to exempt themselves from Fund participation. The data included in this attachment reflects both the number of health care providers participating in the Fund, and the number of providers who are licensed in Wisconsin, but have claimed exempt status for Fund purposes.

Attachment 2 - This attachment addresses the fees paid by health care providers under s. 655.27 (3), Wis. Stat., for fiscal years 1996-2005, and projected fees for fiscal year 2006. Annual Injured Patients & Families Compensation Fund (Fund) premium rates (fees) are set by the Board of Governors with the approval of the state legislature¹. The fee-setting process begins with an actuarial assessment of expected loss exposure based on prior years' experience. The other primary factor in determining annual fee adjustments is the overall financial position of the Fund. An actuarial consultant performs analyses of the Fund's loss experience and financial position and submits a report on actuarial indications to the Fund's Actuarial and Underwriting Committee. The Committee then makes a recommendation to the Board.

The actuarial consultants have estimated the expected reduction to the Fund's loss costs due to the cap on non-economic damages. This reduction to the expected loss costs has been incorporated in the funding level indications for the past nine Fund Years. The loss cost reduction imbedded in the funding level indications for the past nine years has resulted in an estimated \$180 million reduction in ultimate loss reserves.

The Fund fee changes over the last nine years have ranged from a decrease of 30% to an increase of 10.0%. As discussed above, a primary factor in the determination of rates is the prior years' loss experience. Medical malpractice claims are considered "long tail" due to the fact that losses are not generally realized until at least two to three years after the date of occurrence, and in many cases much longer. Due to this lag in the reporting and subsequent settlement of the claims, the information regarding prior years' experience used in the fee determination would most likely involve claims that occurred two or more years prior to the fee determination.

¹ The rates for 2005-2006 have been approved by the Injured Patients & Families Compensation Fund Board of Governors and are pending legislative approval.

Attachment 3 - Information regarding the rates health care providers pay for primary coverage is provided in this attachment. To provide the most up-to-date information for Attachment 3, the staff of the Fund has surveyed the five leading carriers of medical malpractice insurance writing primary policies for Fund participants. These five providers account for 81% of all primary level medical malpractice insurance written for Fund participants. The figures obtained are average premiums charged per physician class. Most of these companies classify health care providers into eight categories for the purposes of determining rates, while the Fund utilizes only four classes.

Review of the average premium page for each class noted the fluctuations were very similar to the Fund fee changes, until 1997 when the threshold at which the Fund attached was raised from \$400,000 to \$1,000,000. Effective July 1, 1997, the primary carrier provides the first \$1,000,000 of coverage per occurrence.

In evaluating any effect of Act 10 on the primary insurance premiums, it should be noted that in general, claims in which there are noneconomic damages awarded tend to be those claims which result in awards which historically have exceeded the primary insurance coverage limit. Any amount of a settlement or judgement in excess of the primary coverage is payable by the Fund. Prior to the increase in the threshold in 1997, the cap on noneconomic damages would most likely have had more of an impact to the Fund than the primary insurer, and would be reflected more in the Fund fees than in the primary insurance premiums. Since the increase in the threshold to \$1,000,000 per incident and \$3,000,000 aggregate, in 1997, the primary carriers are subject to more of an impact from the enactment of Wisconsin Act 10.

The primary carriers have reported that projected premiums are expected to remain approximately the same in the next year, with some variation in the different provider classifications. This is after a few years of steady increases which were due to a variety of factors including: reduced returns on investment, strengthening of outstanding loss reserves and the overall condition of the medical malpractice marketplace. No direct correlation can be drawn between the caps enacted in 1995 and current rate changes taking place in the primary market today. However rate stability could be dramatically impacted for both the Fund and primary carriers should the caps be removed and insurers face unlimited non-economic damages.

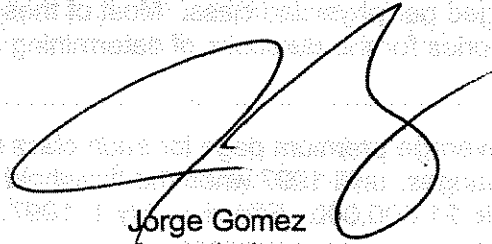
It is important to note that primary carriers perform actual underwriting of their applicants in rate determination, while the Fund assesses providers based solely upon the class in which their type of practice has been assigned. In performing underwriting, there are multiple factors in rate determination and changes in any of these factors can result in increases or decreases in premium. Therefore, it would be difficult to draw any conclusions from premium numbers based solely on the enactment of Wisconsin Act 10.

In summary, it is important to note that any analysis of the effects of the enactment of Wisconsin act 10 is very difficult due to several factors including:

Many of the payments made on claims are a result of a settlement and not a jury trial. The settlement amount takes into consideration the caps that exist; therefore there is no discernable amount that can be attributed to a reduction due to the caps.

It is not possible to determine the number of the claims that were not filed due to a limited amount of economic damages in addition to the caps.

To conclude, on the contrary, Wisconsin's malpractice marketplace is stable. Insurance is available and affordable, and patients who are harmed by malpractice occurrences are fully compensated for unlimited economic losses. Tort reform of 1995, along with well regulated primary carriers and a well managed and fully funded Patients Compensation Fund has resulted in the stable medical malpractice environment, and the availability of health care in Wisconsin.



Jorge Gomez
Commissioner

Health Care Providers Licensed in the State of Wisconsin Five year comparison

Year	Number of providers participating in the Fund	Number of providers claiming an exemption from Fund participation	Total number of Health Care Providers
2000	12,006	9,795	21,801
2001	12,344	9,159	21,503
2002	12,750	9,577	22,327
2003	13,191	9,103	22,294
2004	13,714	10,157	23,871

	Active Fund Participants by Provider Type						
	Physicians	CRNAs	Hospitals	Hospital Affiliated	Hospital Controlled	Ambulatory Surgery Centers	Health Care Partnerships
2000	10,088	416	117	32	22	10	52
2001	10,418	434	120	29	19	8	47
2002	10,767	455	122	28	22	10	52
2003	11,145	492	118	27	21	14	50
2004	11,603	490	127	30	23	17	53

Criteria that must be met to claim exemption from Fund participation include the following:

1. The provider practices for no more than 240 hours in Wisconsin in a fiscal year or;
2. The provider is employed by the state, a county or a municipality or;
3. The provider is a federal employee or;
4. The provider's principal place of practice is not in Wisconsin or;
5. The provider is retired or does not practice in Wisconsin but maintains a license.

**Injured Patients & Families Compensation Fund
Annual Fees Health Care Providers Pay Under s.655.27(3)Wis.Stat.**

Class	Projected											
	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	
1	2,923	3,215	2,647	2,721	2,531	1,898	1,538	1,461	1,534	1,227	859	
2	5,846	6,430	5,294	5,170	4,809	3,606	2,769	2,630	2,761	2,209	1,546	
3	12,569	13,825	11,382	11,292	10,504	7,877	6,385	6,063	6,366	5,092	3,565	
4	17,538	19,290	15,882	11,292	15,186	11,388	9,231	8,766	9,204	7,362	5,154	
Certified Nurse Anesthetist	749	824	678	678	631	475	378	359	377	302	211	
Part-time / Retired	731	804	662	680	632	475	385	365	384	307	215	
Resident Moonlighter	1,754	1,929	1,588	1,633	1,519	1,139	923	877	920	736	515	
Hospital (***) Ins. 17.28(4)(f)and(j)	185	203	167	167	155	116	93	88	92	74	52	
Nursing Home (per occupied bed)	35	38	31	31	29	22	17	16	17	14	10	
Interest Rate	0.05117	0.05425	0.05201	0.053363	0.04964	0.051428	0.06215	0.02683	0.0155	0.01025	0.01789	
Administration Fees (per quarter)	3	3	3	3	3	3	3	3	3	3	3	
Mediation Panel Fees	38	38	32	16	16	38	38	19	19	46	34	

*** Hospitals pay an additional amount per 100 outpatient visit assessment

**ACT 10 SURVEY RESULTS
AVERAGE PREMIUM CHARGED FOR PRIMARY COVERAGE***

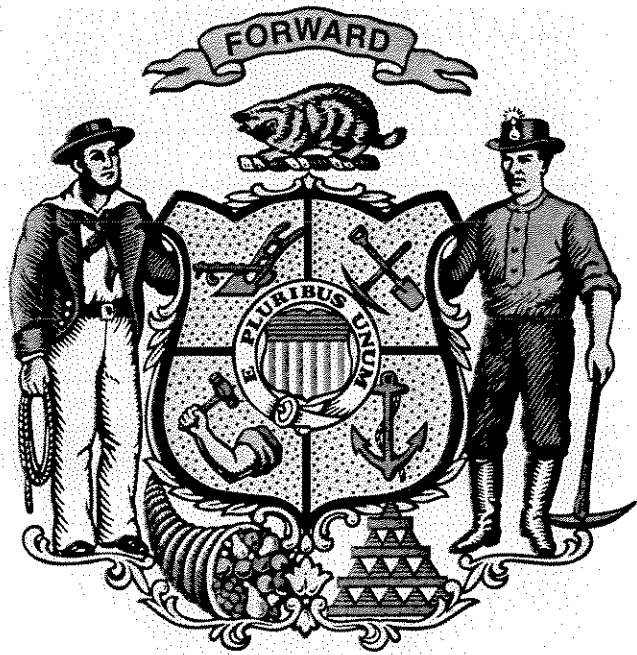
Class	2000-2005										2005			
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Projected Average Premium	Number of Providers		
Class 1	2,746	2,243	2,416	2,329	2,236	1,854	2,006	8,219,625	4,048	2,032	10,077,796	4,493	2,243	2,091
Class 2	4,219	4,050	3,946	4,119	3,845	2,208	2,453	8,981,861	2,974	3,020	11,602,556	3,558	3,261	3,368
Class 3	5,888	4,148	4,758	4,669	4,780	3,288	3,119	7,442,126	1,538	4,839	7,978,736	1,824	4,913	4,432
Class 4	6,772	4,716	4,493	7,221	7,199	3,911	4,752	4,093,031	827	4,949	4,771,775	739	6,457	5,592
Class 5	9,020	8,059	8,107	9,531	11,438	5,551	5,618	5,202,778	414	12,567	5,821,030	655	8,582	8,681
Class 6	13,360	11,923	12,637	11,896	14,015	11,233	10,579	2,985,241	312	9,600	3,010,272	319	9,437	11,243
Class 7	14,256	13,016	12,890	14,799	13,247	12,031	12,467	4,976,533	422	11,793	5,278,734	433	12,191	9,356
Class 8	18,187	16,257	21,426	14,615	15,555	18,920	14,748	1,752,403	120	14,603	1,909,009	135	14,141	15,575
Cert. Reg. Nurse Anesthetist	1,674	2,463	2,212	810	798	1,984	2,004	334,855	290	1,155	296,006	293	1,010	1,072
Part-time / Retired	2,332	2,097	1,509	1,760	1,794	1,889	1,832	11,273	2	5,637	6,640	1	6,640	6,640
Resident Moonlighter	1,889	1,442	2,371	988	1,088	1,213	985	27,590	31	890	36,953	30	1,232	1,628
Hospitals	3,630	6,841	9,773	11,057	12,816	53,492	76,015	4,374,307	83	52,702	5,221,402	89	58,667	112,310
TOTAL								48,411,623	11,059		55,810,909	12,369		

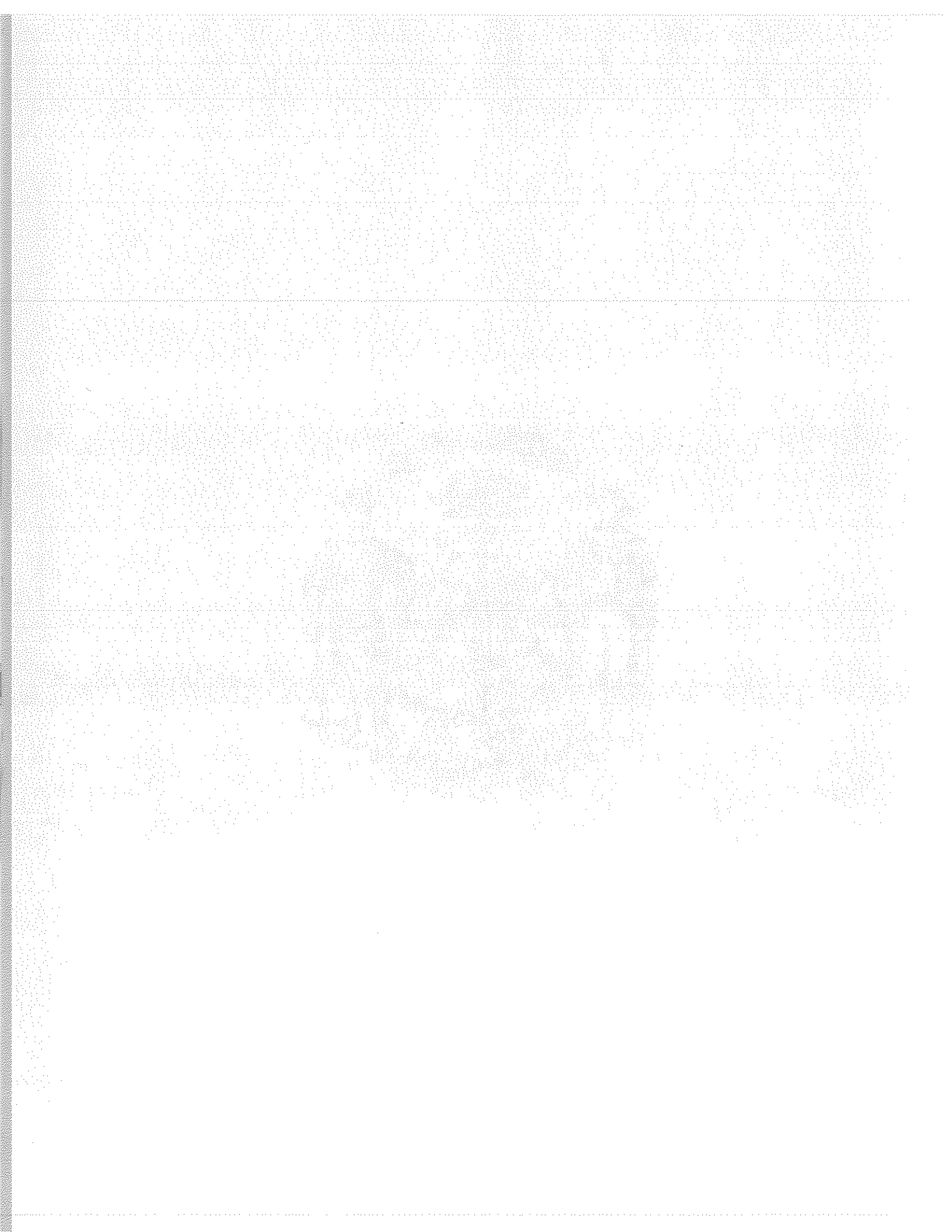
*Unaudited numbers provided by insurance carriers

DATE	DESCRIPTION	AMOUNT	BALANCE
1950-01-01	Balance		100.00
1950-01-15	Deposit	50.00	150.00
1950-02-01	Withdrawal	25.00	125.00
1950-02-15	Deposit	75.00	200.00
1950-03-01	Withdrawal	100.00	100.00
1950-03-15	Deposit	50.00	150.00
1950-04-01	Withdrawal	25.00	125.00
1950-04-15	Deposit	75.00	200.00
1950-05-01	Withdrawal	100.00	100.00
1950-05-15	Deposit	50.00	150.00
1950-06-01	Withdrawal	25.00	125.00
1950-06-15	Deposit	75.00	200.00
1950-07-01	Withdrawal	100.00	100.00
1950-07-15	Deposit	50.00	150.00
1950-08-01	Withdrawal	25.00	125.00
1950-08-15	Deposit	75.00	200.00
1950-09-01	Withdrawal	100.00	100.00
1950-09-15	Deposit	50.00	150.00
1950-10-01	Withdrawal	25.00	125.00
1950-10-15	Deposit	75.00	200.00
1950-11-01	Withdrawal	100.00	100.00
1950-11-15	Deposit	50.00	150.00
1950-12-01	Withdrawal	25.00	125.00
1950-12-15	Deposit	75.00	200.00
1951-01-01	Balance		100.00

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TRENDS

Have State Caps On Malpractice Awards Increased The Supply Of Physicians?

Data from U.S. counties indicate that rural areas feel the effects of caps most acutely and that the amount of the cap matters.

by William E. Encinosa and Fred J. Hellinger

ABSTRACT: Twenty-seven states have laws that cap payments for noneconomic damages in malpractice cases. In this study we examined whether these laws have increased the supply of physicians, using county-level data from all fifty states from 1985 to 2000. Counties in states with a cap had 2.2 percent more physicians per capita because of the cap, and rural counties in states with a cap had 3.2 percent more physicians per capita. Rural counties in states with a \$250,000 cap had 5.4 percent more obstetrician-gynecologists and 5.5 percent more surgical specialists per capita than did rural counties in states with a cap above \$250,000.

THERE IS MUCH EVIDENCE indicating that a state's legal environment influences the frequency and size of malpractice awards there.¹ Thus, it is reasonable to expect that the supply of physicians per capita and access to care would be greater in states with laws that limit payments in medical malpractice cases. Yet a recent report by the U.S. Government Accountability Office (GAO) did not find this to be the case.² However, the GAO report relied heavily on data from a relatively small number of interviews with providers in five states and on Medicare utilization data for only three procedures in these five states.

This study extends the findings of our earlier study examining how state laws that limit damages payments in malpractice cases affect the geographic distribution of physicians.³ The earlier study was released by the Agency for Healthcare Research and Quality (AHRQ) in July 2003. Using county-specific data from

1996 and 2000 to explain the geographic distribution of physicians across counties, it found that counties in states with caps on damages awards had more physicians per person than counties in states without caps. However, this finding was only a picture of physician supply after caps had been in place for a while (twenty-two states already had caps in place by 1996).

In this study we expanded our county analyses to include data from years both before and after most states had adopted caps (1985–2000). Twenty states introduced caps during this period, so we could conduct a before-and-after analysis of the effects of caps within each county. Moreover, our expanded study examined the impact of the size of the caps on the supply of physicians, the differential impact of caps on physician supply in rural and urban areas, and the impact of caps on the supply of two types of physicians that have been particularly hard hit by the surge in medical mal-

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practice premiums: surgeons and obstetrician-gynecologists (OB-GYNs).

Background On Malpractice Award Caps

Proponents of legislation that caps malpractice damages awards maintain that high malpractice rates are driving physicians out of business or to states where such awards are capped. They also maintain that excessive jury awards for pain and suffering, and for punitive damages, vary widely because there is no accepted process by which juries assign dollar values to these concepts.

Opponents of tort reform legislation that caps damages awards in malpractice cases (principally, trial lawyers and some consumer groups) maintain that poor quality of care and poor investments by insurance companies are to blame for the recent spike in malpractice insurance premiums. Opponents argue that caps will harm those patients who suffer the most harm and who need help the most. Recent evidence suggests that caps may be regressive and hurt low-wage workers, women, and the elderly—those who rely on the noneconomic damages portion of malpractice awards for adequate compensation.⁴ Opponents also maintain that medical malpractice claim payments are not the underlying cause of rapidly rising malpractice premiums.⁵

In March 2003 the U.S. House of Representatives passed a bill capping damages awards in medical malpractice cases (the Help Efficient, Accessible, Low-Cost, Timely Healthcare [HEALTH] Act of 2003, H.R. 5). However, on 9 July 2003, efforts to pass similar legislation in the U.S. Senate (the Patients First Act of 2003, S. 11) failed. Although President George W. Bush continues to support proposals that cap noneconomic damages payments at \$250,000 in malpractice cases, Congress has not yet passed such legislation.

The effort to adopt a federal cap on malpractice awards is largely a response to recent increases in malpractice premiums.⁶ Over the past two years, physicians in New Jersey, West Virginia, and Florida have carried out work stoppages in response to the rapid premium

increases and to support state legislation limiting payments for noneconomic damages in malpractice cases.⁷ Malpractice premium rates for internists, general surgeons, and OB-GYNs rose, on average, 25 percent, 25 percent, and 20 percent, respectively, in 2002.⁸ In some states, a few specialties have seen premium increases of as much as 75 percent.

In response, legislation limiting noneconomic damages awards in malpractice cases was signed into law in Nevada and Mississippi in 2002; in Florida, Ohio, and Texas in 2003; in Oklahoma in 2004; and in South Carolina in 2005.⁹ Twenty-seven states now have laws capping noneconomic damages or limiting total damages (Exhibit 1).¹⁰

Although there is relatively little information in the literature about the impact of caps on access, there are numerous studies of their impact on malpractice premiums. A number of studies based on data from the 1970s and 1980s have shown that tort reform laws that limit payments in malpractice cases result in lower premiums.¹¹ Moreover, a recent study by Kenneth Thorpe found that malpractice premiums in states with caps on malpractice awards are 17 percent lower on average than in states without caps.¹²

Indeed, malpractice premiums vary considerably across states. For example, in Florida, annual premiums for OB-GYNs ranged from \$143,000 to \$203,000 in 2001 (a year in which Florida had no cap). In contrast, in California, which has had a cap since 1975, annual premiums for OB-GYNs ranged from only \$23,000 to \$72,000. Similarly, annual premiums for surgeons in Florida ranged from \$63,000 to \$159,000, while in California they only ranged from \$14,000 to \$42,000.¹³

Such wide premium differences may eventually lead to disparities in access to physicians and particularly to surgeons and OB-GYNs.¹⁴ This study examined whether or not state caps enacted during 1985–2000 have increased the supply of physicians, surgeons, and OB-GYNs.

EXHIBIT 1**States With Caps On Malpractice Awards For Noneconomic Damages, 1975-2005**

State	Years with any cap	Years with \$250,000 cap
Alabama	1987-1991	
Alaska	1986-	
California	1975-	1975-
Colorado	1986-	1988-2003
Florida	1988-1991, 2003-	
Hawaii	1986-	
Idaho	1990-	2003-
Illinois	1995-1997	
Indiana ^a	1975-	
Kansas	1988-	1988-
Louisiana ^a	1975-	
Maryland	1986-	
Massachusetts	1986-	
Michigan	1986-	
Mississippi	2002-	
Missouri	1986-	
Montana	1995-	1995-
Nevada	2002-	
New Hampshire	1977-1980	1977-1980
New Mexico ^a	1976-	
North Dakota	1995-	
Ohio	1975-1994, 1997-1999, 2003-	1975-1994
Oklahoma	2004-	
Oregon	1987-1999	
South Carolina	2005-	
South Dakota	1986-	
Texas	1977-1988, 2003-	
Utah	1986-	1986-2002
Virginia ^a	1976-	
Washington	1986-1988	
West Virginia	1986-	2003-
Wisconsin	1985-	

SOURCES: National Conference of State Legislatures, *State Medical Liability Laws Table* (Washington: NCSL, October 2002 and October 2004); American Tort Reform Association, *State Laws on Medical Liability; Medical Liability Reform* (Washington: American Tort Reform Association, October 2002 and 13 July 2004); and McCullough, Campbell, and Lane, "Summary of Medical Malpractice Law," www.mcandl.com/states.html (18 April 2005).

NOTE: The year 2005 includes only January through April.

^aCap on total damages.

Trends In Physician Supply Under Tort Reform

Our data on the supply of physicians in counties in all states from 1970 to 2000 are from the Area Resource Files (ARF). The ARF is maintained by the Health Resources and Services Administration (HRSA). The ARF obtained data on physician supply from the

American Medical Association (AMA) Physician Masterfile, AMA distribution-of-physicians data, and the AMA Physician Specialty Microdata File.

Exhibit 2 examines trends in physician supply under the two eras of malpractice award caps. First, from Exhibit 1, there were seven states that enacted legislation capping

EXHIBIT 2**Trends in County Physician Supply For States With Caps On Malpractice Awards, 1970 (1975) And 2000**

All physicians	Median number of doctors per 100,000 county residents		
	1970 (75)	2000	Percent increase
No cap before 2000	122.40	224.36	83
Cap adopted in 1975-1977	132.69	246.61	86
Cap adopted in 1985-1987	108.23	218.41	102
Surgical specialists*			
No cap before 2000	32.39	41.74	29
Cap adopted in 1975-1977	37.20	43.03	16
Cap adopted in 1985-1987	29.32	42.37	45
OB-GYNs^{a,b}			
No cap before 2000	50.25	54.30	8
Cap adopted in 1975-1977	45.57	58.37	28
Cap adopted in 1985-1987	36.94	51.68	40

SOURCE: Area Resource File.

NOTES: Observations are weighted by the county population, except for the obstetrician-gynecologists (OB-GYNs) row, where observations are weighted by the county's female population ages 15-44.

*Data in the first column are for 1975.

^bOB-GYN supply is the number of OB-GYNs per 100,000 female county residents ages 15-44.

awards in 1975, 1976, or 1977 in response to the medical malpractice crisis of the early 1970s (not including the overturned cap in New Hampshire). Second, there were thirteen states that enacted laws implementing damages caps in malpractice cases in 1985, 1986, or 1987 in response to the medical malpractice crisis of the early 1980s (not including the overturned caps in Alabama, Florida, and Washington).

We found that there was an 83 percent increase in the median number of physicians per 100,000 residents from 1970 to 2000 in the states that never had a cap on malpractice awards before 2000. For the states that enacted caps in the 1970s, physician supply grew 86 percent, compared with 102 percent in states that passed caps between 1985 and 1987. Thus, the caps responding to the malpractice crisis of the 1980s appear to have had a much greater effect on physician supply than the caps set in place during the 1970s malpractice crisis.

A similar effect occurred with the supply of surgical specialists and OB-GYNs from 1975 to 2000. The median number of surgical specialists per 100,000 residents rose 45 percent under the 1980 caps, compared with 16 percent under the 1970 caps and 29 percent in states without caps. The median number of OB-GYNs per 100,000 females ages 15-44 grew 40 percent under the 1980 caps, compared with 28 percent under the 1970 caps and 8 percent for states without caps. Thus, caps in both eras had a strong impact on the supply of OB-GYNs.

Exhibit 3 examines the trend in rural physician supply with respect to the monetary size of the cap. Between 1970 and 2005 only nine states had caps set at \$250,000; all other caps were above that limit. Moreover, 40 percent of the population in states with caps faced a cap with a limit above \$400,000. Between 1975 and 2000 the median number of physicians per 100,000 residents of rural counties rose 48 percent for states with \$250,000 caps, compared

EXHIBIT 3

Trends In Rural-County Physician Supply In States With \$250,000 Caps On Malpractice Awards, 1975 And 2000

	Median number of rural doctors per 100,000 county residents		Percent increase
	1975	2000	
All rural physicians			
Cap equals \$250,000	60.61	89.65	48
Cap above \$250,000	49.34	71.26	44
Rural surgical specialists			
Cap equals \$250,000	19.23	27.09	41
Cap above \$250,000	16.81	22.00	31
Rural OB-GYNs*			
Cap equals \$250,000	23.87	38.30	61
Cap above \$250,000	24.61	36.57	49

SOURCE: Area Resource File.

NOTE: Observations are weighted by the county population, except for the obstetrician-gynecologists (OB-GYNs) row, where observations are weighted by the county's female population ages 15-44.

*OB-GYN supply is the number of OB-GYNs per 100,000 female county residents ages 15-44.

with 44 percent in states with caps above \$250,000. For surgical specialists the rates were 41 percent and 31 percent growth, respectively. For OB-GYNs (per 100,000 women ages 15-44), the rates were 61 percent and 49 percent growth, respectively.

Impact Of Malpractice Award Caps On Physician Supply

■ **Data.** We used data on county characteristics from the Area Resource Files. We used 23,593 county-year observations from eight years: 1985, 1986, 1990, 1994, 1995, 1998, 1999, and 2000, accounting for about 99 percent of the U.S. population. We excluded Alaska and the District of Columbia, and we examined three county-fixed-effects models of physician supply under tort reform.

■ **Methods.** First, following the work of Daniel Kessler and Mark McClellan on the effects of tort reform on defensive medicine spending, we used a difference-in-difference model to examine the "before" and "after" effects of state caps on overall physician supply and on rural physician supply.¹⁵ Using county fixed effects, we regressed the log of physician supply on state dummies indicating whether

or not the state had a cap during that year. Key results are presented in Exhibit 4. Because our data set began in 1985, we could not examine the impact of reforms adopted before that year. However, only five of the twenty-seven states with caps adopted their cap before 1985. In particular, we were able to examine the effects of the 1985-87 caps (passed during the second malpractice crisis) seen in Exhibit 2.

Second, as did Kessler and McClellan, we also employed a county-fixed-effects, dynamic model based on the time since adoption of the cap. Exhibit 4 shows (1) the effect of the first two years of a cap on the log of physician supply (compared with the omitted reference category—years without caps), and (2) the final effect of the remaining period of three or more years' experience with a cap.

Third, we used a county-fixed-effects difference-in-difference model to examine the effects of caps with a \$250,000 limit on damages on the supply of surgical specialists and OB-GYNs. In all three models we also examined the impact of caps in rural counties. About 72 percent of counties were in our rural sample; they accounted for 20 percent of the U.S. population.

EXHIBIT 4
Impact Of Malpractice Award Caps On County Physician Supply, All Counties And Rural Counties, 1985-2000

	Within-county percent increase in physician supply due to cap	
	All counties	Rural counties
State has a cap	2.18 ($p < .01$)	3.24 ($p < .01$)
Time since adoption of cap		
Years 1 and 2 of cap	0.50 ($p = .75$)	1.07 ($p = .59$)
Additional effects of years 3+ of cap	2.11 ($p < .01$)	2.94 ($p < .01$)

SOURCE: Area Resource File.

NOTES: Regression results are available at www.ahrq.gov/research/statecaps. Statistical findings denote difference from zero.

In all three models we used the following controls. Since each county has its own idiosyncratic socioeconomic, cultural, and political factors; regulations (other than caps); and tax rates, which might influence the supply of physicians and access to them, we included county dummy variables to capture these factors. This allowed us to identify the within-county effect of introducing a cap in each state. Also, dummy variables for each of the eight years were included to capture time trends.

We also controlled for four other state malpractice reforms: (1) collateral source rule reform—prevents payments for losses that have been compensated from other sources, such as workers' compensation; (2) prejudgment interest reform—limits payments for interest accruing on losses between the time the medical mishap occurred and the time the trial judgment was made; (3) joint and several liability reform—when there are codefendants, this limits each defendant's payments to the percentage of the harm for which the defendant is responsible; and (4) caps on punitive damages—limits payments to punish a defendant for intentional or malicious misconduct.

Finally, we controlled for factors that might affect the demand for physicians: health maintenance organization (HMO) enrollment in the state; whether the county had a medical school; county Medicare enrollment; county unemployment rate; county personal income; percentage of county that is black; county

birth rate among women ages 15-44; and county death rate for diseases such as heart disease, liver disease, cancer, influenza and pneumonia, and chronic obstructive pulmonary disease.¹⁶

■ **Empirical results.** Caps were responsible for a 2.18 percent within-county increase in the supply of physicians, or an increase of five physicians per 100,000 people (Exhibit 4). The effect of caps was larger in rural counties (3.24 percent). These effects occurred mainly three or more years after the cap had been in place. Other malpractice reforms, such as collateral source rule reform, prejudgment interest reform, joint and several liability reform, and caps on punitive damages, did not have an impact on the supply of doctors.

Compared with counties without caps, the caps with limits above \$250,000 had no significant within-county effect on the overall supply and rural supply of surgical specialists and OB-GYNs (Exhibit 5). The \$250,000 caps increased the overall supply of surgical specialists by 4.16 percent but had no effect on the overall supply of OB-GYNs.

The \$250,000 caps had a larger impact on rural counties than others. Slightly more than 7 percent of the rural sample was under a \$250,000 cap, and 28 percent of the rural sample was under a cap with a limit higher than \$250,000. For the rural population in states with caps, nearly half faced caps with limits above \$400,000. Caps with a \$250,000 limit increased the number of rural surgical special-

EXHIBIT 5

Impact Of \$250,000 Malpractice Award Caps On County Supply Of Surgical Specialists And Obstetrician-Gynecologists, 1985-2000

	Within-county percent increase in physician supply due to cap			
	Surgical specialists		OB-GYNs	
	All counties	Rural counties	All counties	Rural counties
Cap above \$250,000	NS	NS	NS	NS
Cap equals \$250,000	4.16 ($p = .01$)	5.51 ($p < .01$)	NS	5.42 ($p = .05$)

SOURCE: Area Resource File.

NOTES: Regression results are available at www.ahrq.gov/research/statecaps. Statistical findings denote difference from zero. NS is not significantly different from zero.

ists per residents by 5.51 percent compared with states without caps and those with caps above \$250,000. Similarly, a \$250,000 limit increased the number rural OB-GYN per female resident ages 15-44 by 5.42 percent compared to states without caps and those with caps above \$250,000.

Conclusions And Policy Implications

In this study we found that state caps on noneconomic damages awards in malpractice suits between 1985 and 2000 increased the supply of physicians. Moreover, the caps had a larger impact on physician supply in rural counties, and caps limiting malpractice awards to \$250,000 had a much larger effect on surgeons and OB-GYNs in rural areas than caps with limits above \$250,000. Twenty-seven states have caps on malpractice awards, but only five have caps with a \$250,000 limit on awards, and 40 percent of the U.S. population living in a state with a cap has one with a limit above \$400,000. Thus, a federal cap set at \$250,000 for noneconomic damages could have a beneficial impact on the supply of surgeons and OB-GYNs in rural areas.

■ **How robust are these results?** In a recent study of the impact of malpractice caps on physician supply, using state data from 1980-1998, Jonathan Klick and Thomas Stratmann similarly found that states that had adopted a cap had 3 percent more doctors per 100,000 residents than states that did not have

caps.¹⁷ However, their state-level analysis did not find any effect of \$250,000 caps as our county-level analysis did. In a more recent study, David Matsa found that malpractice liability caps did not increase the overall supply of physicians in all counties with a cap using county data from 1970-2000.¹⁸ However, he did find that malpractice caps increased physician supply by 3-5 percent from 1970 to 2000 for extremely rural areas (25 percent of counties, accounting for 3 percent of the population). We found effects for a much larger rural area (70 percent of counties, accounting for 20 percent of the population). Matsa's definition of *rural* was based on county population density, while ours was based on a U.S. Department of Agriculture measure. It is possible that Matsa found smaller effects of caps because he examined the impact of caps during both malpractice crises of the 1970s and 1980s combined, while we examined the impact of caps during the crisis of the 1980s only. Recall from Exhibit 2 that caps had a much larger effect on physician supply during the 1980s than in the 1970s. This lower impact of the 1970s caps might explain why Matsa found smaller effects than our analysis of 1985-2000.

We also found that other state malpractice laws did not affect physician supply. In particular, we found that the following laws (described earlier) did not have an effect: collateral source rule reform; prejudgment interest reforms; joint and several liability reform; and caps on punitive damages.

Although such laws may be related to physicians' decisions whether or not to practice in a given geographic area, they are not nearly as conspicuous as laws that cap payments. Moreover, three previous studies found laws that indirectly affect the level of malpractice damage awards (for example, laws permitting periodic payments or that abolish the common rule of joint and several liability) have less impact on the costs of defensive medicine and liability premiums than laws that directly limit malpractice damage awards.¹⁹

Finally, although the increased supply of physicians attributable to caps is likely to increase the availability of care for most residents, it is not clear what effect this has on the cost of care. Kessler and McClellan found that tort reforms such as reasonable limits on noneconomic damages can reduce health care costs by 5–9 percent without substantial effects on mortality or medical complications.²⁰ However, they examined only a few cardiac procedures for Medicare beneficiaries during three years (1984, 1987, and 1990). Thus, the impact of caps on noneconomic damages on health care costs should be the focus of future research.

This research was funded by the Agency for Healthcare Research and Quality (AHRQ). The views herein do not necessarily reflect the views or policies of AHRQ, or the U.S. Department of Health and Human Services.

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 19. Sloan et al., "Effects of Tort Reforms"; D.P. Kessler and M.B. McClellan, "How Liability Law Affects Medical Productivity," *Journal of Health Economics* 21, no. 6 (2002): 931-955; and Thorpe, "The Medical Malpractice 'Crisis'."
 20. Kessler and McClellan, "Do Doctors Practice Defensive Medicine?"

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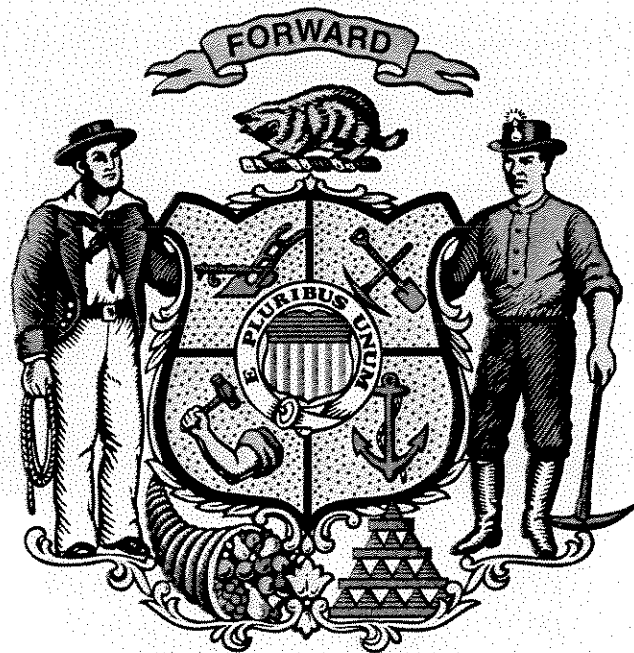
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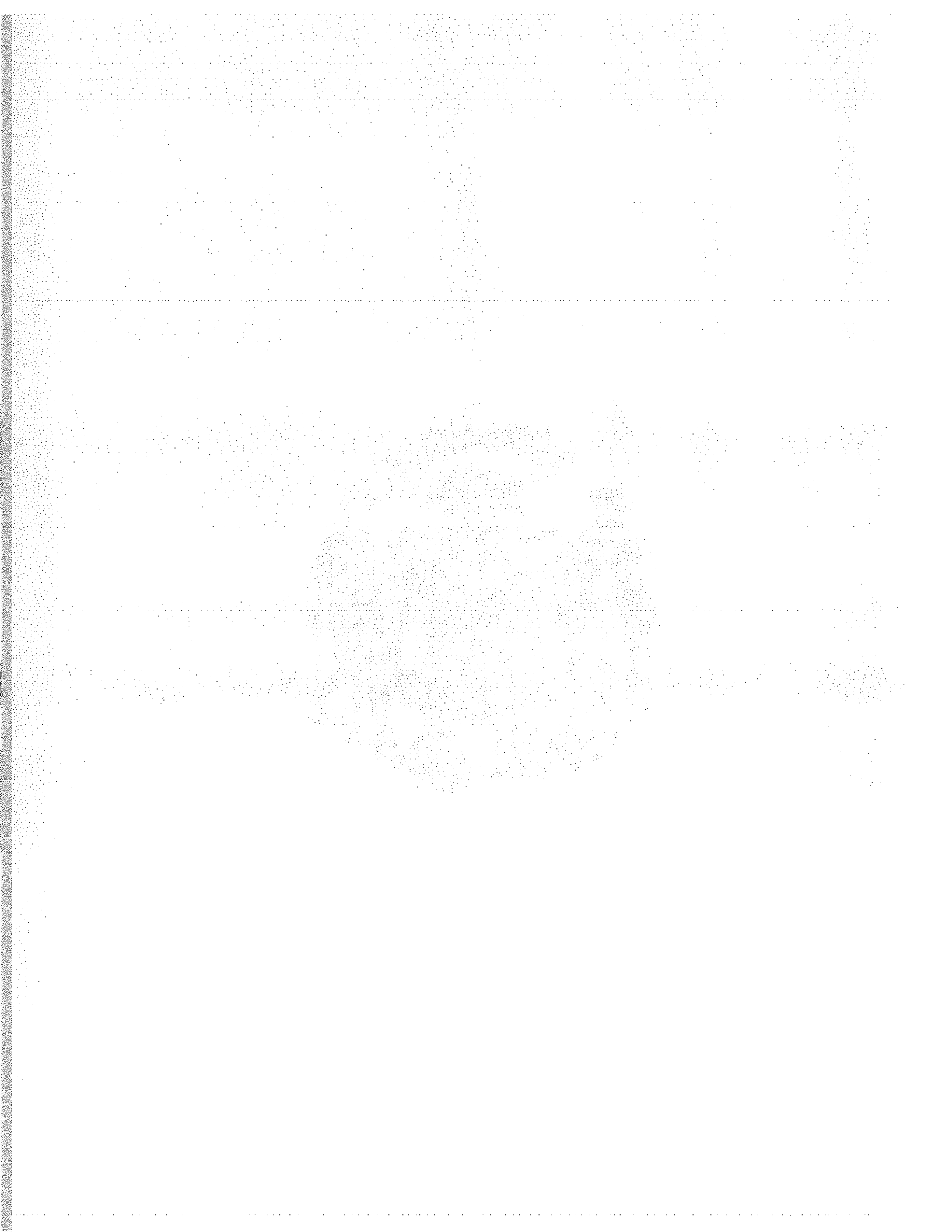
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TRENDS

The Growth Of Physician Medical Malpractice Payments: Evidence From The National Practitioner Data Bank

The growth of malpractice payments is less than previously thought.

by Amitabh Chandra, Shantanu Nundy, and Seth A. Seabury

ABSTRACT: We used data from the National Practitioner Data Bank (NPDB) to study the growth of physician malpractice payments. Judgments at trial account for 4 percent of all malpractice payments; settlements account for the remaining 96 percent. The average payment grew 52 percent between 1991 and 2003 (4 percent per year) and now exceeds \$12 per capita each year. These increases are consistent with increases in the cost of health care. A preoccupation with data on judgments, extreme awards, or specific specialties results in an incomplete understanding of the growth of physician malpractice payments.

INFLUENTIAL TRADE associations such as the American Medical Association (AMA) and the Physician Insurers Association of America (PIAA) have attributed the dramatic increase in physician malpractice insurance premiums to the growth in malpractice payments.¹ Other factors such as declines in insurers' investment income are acknowledged to have contributed to the new medical malpractice crisis; however, losses from rising malpractice payments are believed to be the primary contributor to the growth of malpractice premiums.² To restrict the growth of payments, both groups advocate a nationwide \$250,000 limit (cap) on noneconomic damages, a policy endorsed by President George W. Bush.³ Support for damages caps is largely driven by the belief that malpractice payment growth has been concentrated in the very largest awards.⁴

Discussions of the malpractice crisis often rely on restrictive subsets of malpractice data, so a precise description of the problem is lacking. The AMA has drawn attention to trends in jury verdicts, even though only a small fraction of malpractice cases are resolved at trial.⁵ This restriction overstates the size of payments, and by ignoring information on settlements, it may drastically understate the overall burden of malpractice payment. The PIAA's tabulations, while more complete in principle than those that only rely on jury verdicts, rely on data that are not publicly available. In this paper we establish new facts on the growth in malpractice payments made on behalf of physicians by using a national database of payments from judgments at trial and settlements during 1 January 1991–31 December 2003.

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Study Data And Methods

■ **Data and study sample.** All malpractice payments made on behalf of a licensed health care provider must be reported to the National Practitioner Data Bank (NPDB) within thirty days under the Health Care Quality Improvement Act of 1986.⁶ Noncompliance is subject to civil penalties codified in 42 USC 11131-11152.⁷ The NPDB has information on 250,137 such payments made between 1 September 1990 and 31 December 2003. We restricted our sample to the fifty states and excluded payments made for Washington, D.C.; areas with missing state information; and other U.S. territories (N = 3,200). The NPDB became operational late in 1990, so we deleted observations in this year (N = 2,132). We excluded payments that were linked to dentists, pharmacists, social workers, or nurses (N = 53,538). In a small fraction of payments (n = 10,823), there are multiple physician defendants (and thus multiple reports) but only the total payment by all defendants is reported. In these cases, we averaged the payment by the number of physicians involved.⁸

In the NPDB, 5 percent of payments are made by state funds in addition to other payments made by the primary insurer for the same incident (N = 9,919). We matched such payments based on an algorithm that used physician identifiers, state of work, state of licensure, area of malpractice, type of payment (judgment or settlement), and year of occurrence. We also experimented with using additional data fields to perform this match, but values were missing for many of these fields. Fund payments that could not be matched were retained in the data (N = 3,822). Because these cases were rare, we experimented with deleting them from the analysis. With the exception of Pennsylvania, which had 5,308 state fund payments (53 percent of all fund payments recorded in the NPDB), our results were essentially unchanged.

Our final sample consists of 184,506 payments made between 1 January 1991 and 31 December 2003 in the fifty states. Ninety-four percent of these were for physicians with a medical degree (MDs); the remaining 6 per-

cent were for osteopathic physicians (DOs). Each malpractice payment in the NPDB is classified in ten major categories of liability (such as surgery, diagnostics, obstetrics), which we used for our primary analysis.

Data on health care spending for 1991-2002 are from the National Health Accounts (NHA) published by the Centers for Medicare and Medicaid Services (CMS).⁹ We converted all payment amounts into 2000 dollars using the Implicit Gross Domestic Product (GDP) Price Deflator.¹⁰ Finally, data on state and national population levels by year for 1991-2003 come from the U.S. Census Bureau.¹¹

■ **Data quality and the role of the "corporate shield."** Most previous studies of malpractice awards used data from publications that recorded information on jury verdicts in local jurisdictions, known as "jury verdict reporters." Data from these reporters and the NPDB differ for several reasons, all of which make the NPDB better suited to our analysis. First, the reporters are not meant to cover the universe of awards; information is collected only on jury verdicts in local jurisdictions, and no data on settlements are included. Second, amounts recorded in the NPDB measure the amount of actual payments, not jury awards: If a jury awards a plaintiff \$1 million, that figure is recorded by a reporter; however, if a malpractice policyholder has coverage for only a smaller amount (which is what is paid by his or her insurer), if plaintiffs settle for a lower amount (to avoid appeals by the defendant), or if the jury award is reduced to comply with state damages caps, the NPDB will record the lower number—which is the number that is relevant for insurance premiums. Third, data from reporters record awards based on the year of the verdict, while the NPDB reports the year in which payments were made.

The NPDB has been the subject of criticism, from the PIAA in particular, but also from the U.S. Government Accountability Office (GAO).¹² One of the major points of criticism is the "corporate shield." This loophole renders payments made on behalf of a hospital or other corporation exempt from inclusion in the NPDB, as long as any individual practitioner is

dropped as part of a settlement agreement. We assessed the potential importance of this source of bias (which understates the number and severity of payments) by comparing jury verdicts reported in the NPDB with those from a data set compiled by the RAND Institute for Civil Justice (the Jury Verdict Database, or JVDB) for New York and California.¹³

Between 1991 and 1999 the JVDB data showed an average annual growth of awards against physicians of 3.9 percent in New York (an average of forty-two awards) and 4.3 percent in California (an average of thirty-five awards). Over the same time period the NPDB reported average annual growth of 13 percent in New York (an average of fifty-three awards) and 1.6 percent in California (an average of forty-three awards). For both states, the NPDB understates both the number of and growth in awards. The magnitude of underreporting is remarkably consistent (approximately 20 percent in both states). This estimate is best interpreted as an upper bound on the degree of underreporting, because the NPDB reports payments by date of payment, whereas the JVDB records them by date of verdict. The two dates will differ if a verdict occurred in one year but payments began in another year.

Other concerns about the NPDB include potential underreporting of restrictions on clinical privileges and the quality of certain data fields that are not relevant for our study.¹⁴ Despite its limitations, though, the NPDB is the most representative national and publicly available database on physician malpractice payments. Indeed, hospitals are required by law to query the malpractice histories of potential hires; in 2002 the databank was queried 1.12 million times, or more than 3,000 times a day.¹⁵ We emphasize that it would be misleading to infer anything about the occurrence of negligence from data on payments, because past work shows a weak correlation between a malpractice claim and negligence.¹⁶

■ **Study design.** We present trends in the number and average dollar amount of U.S. medical malpractice payments from 1991 to 2003. We report average payments per capita and the constituent components: frequency of

payments (number of payments per capita) and average conditional severity (average size of payment for claims where a payment was made); an increase in either component will increase per capita malpractice payments. We focused on these two measures because of the assertion in earlier research that they are the key components of malpractice pressure influencing the practice of defensive medicine.¹⁷

To explore the claim that growth in payments has been concentrated in the largest awards, we compared the growth of the mean payment to the growth in the top 10 percent of payments. If the distribution of payments has become more skewed, we would expect the observed growth at the top end of the distribution to exceed that of the average payment.

When one is considering the growth in malpractice payments, it is important to account for changes over time in the number of events that are at risk for litigation. The number of physicians or health care workers may seem like a natural proxy for health care use, but it could be affected by medical malpractice liability.¹⁸ We therefore used two different variables to control for use at the national level. The first was population, which is almost certainly exogenous to medical malpractice but ignores trends in the use of care.¹⁹ The second was total health care spending, which might not be exogenous to medical malpractice but should capture trends in the price and quantity of medical services. Note that there are no data in the NPDB that allow us to measure changes in litigiousness (that is, the number of claims—successful or unsuccessful—per capita). We report the number of dollars for payments as a function of total health spending and spending on physician and clinical services (the latter are probably more relevant for our data, given that the NPDB only reports payments on behalf of physicians).

Study Results

■ **Growth of malpractice payments.** The number of payments (which comprises the number of judgments and settlements) remained stable over the study period. The average payment amount (severity) grew 52 per-

cent in real dollars (an average annual growth rate of 4 percent) between 1991 and 2003 but only 6 percent between 2000 and 2003 (average, 1.6 percent). The top 10 percent of payments grew only 33 percent (2.6 percent annually) from 1991 to 2003. Thus, the growth in the middle of the malpractice distribution exceeded the growth at the top.

Comparing the numbers of judgments with the full sample of payments, we see that judgments account for less than 4 percent of all payments but are approximately 1.7–2.4 times larger than settlements, on average. The growth in the average payment has been larger for settlements than for judgments (Exhibit 1). However, growth in average payments is larger than growth in the most severe cases for both judgments and settlements; there has been no statistically significant increase in the top 10 percent of judgments.²⁰

In real dollars, payments per person grew 41 percent, from \$9.2 in 1991 to \$13.0 in 2001 (Exhibit 2), an annual rate of thirty-one cents per year (p value for trend < .001). The number

of payments per 100,000 people decreased slightly, from 5.2 to 5.0 (p value for trend < .026, data not shown). Exhibits 1 and 2 underscore the importance of including settlements with judgments; if we ignored settlements, per capita payments would be much smaller.

Malpractice payments have grown proportionately with health care spending (Exhibit 3). Payments per \$1,000 spent on physician and clinical services grew about 10.6 percent during the decade, compared with 6.8 percent for payments per \$1,000 spent on all health care.

■ **Growth by area of alleged malpractice.** Exhibit 4 reports the severity of payments for ten broad areas of alleged malpractice. Payments were highest in obstetrics; in fact, the severity of judgments in obstetrics has greatly increased since 1996, with average payments rising 40 percent, from \$697,000 to \$1,005,000 (p < .01). When obstetrics is excluded, the growth in severity from 1996–98 to 2001–03 is comparable with that from 1991–93 to 1996–98.

EXHIBIT 1
Change In Medical Malpractice Payments Made On Behalf Of Physicians, 1991–2003

Year	Judgments and settlements		
	Number of payments in NPDB	Average payment	Average payment for highest 10% of all payments
1991	13,365	\$173,018	\$ 867,792
1992	14,119	194,893	972,865
1993	14,151	197,152	955,292
1994	14,568	200,908	995,174
1995	13,511	207,863	999,689
1996	14,240	220,062	913,449
1997	13,845	219,881	973,642
1998	13,305	225,187	985,769
1999	14,175	232,711	1,050,898
2000	14,626	247,651	1,054,807
2001	15,694	258,965	1,130,976
2002	14,539	262,629	1,127,478
2003	14,368	263,101	1,155,031
Test for trend		p < .000	p < .000
1991–2003 growth		52.1% (4.0%)	33.1% (2.5%)
2000–2003 growth		6.2% (1.6%)	9.5% (2.4%)

EXHIBIT 1
Change In Medical Malpractice Payments Made On Behalf Of Physicians, 1991-2003
(cont.)

Year	Judgments		
	Number of payments in NPDB	Average payment	Average payment for highest 10% of all payments
1991	459	\$320,917	\$1,472,779
1992	413	398,890	2,111,009
1993	444	422,652	2,034,162
1994	419	353,326	1,542,976
1995	398	369,793	1,798,806
1996	578	387,264	1,634,023
1997	453	384,905	1,594,561
1998	401	425,663	1,764,773
1999	404	387,782	1,447,200
2000	537	474,821	1,840,507
2001	533	601,155	2,827,785
2002	411	488,020	1,903,668
2003	430	460,736	1,850,294
Test for trend		$p < .006$	$p < .295$
1991-2003 growth		43.6% (3.4%)	25.6% (2.0%)
2000-2003 growth		-3.0% (0.7%)	0.5% (0.1%)
Year	Settlements		
	Number of payments in NPDB	Average payment	Average payment for highest 10% of all payments
1991	12,906	\$167,758	\$ 853,373
1992	13,706	188,746	918,424
1993	13,707	189,847	894,590
1994	14,149	196,395	908,393
1995	13,113	202,948	997,338
1996	13,662	212,988	898,364
1997	13,392	214,298	945,389
1998	12,904	218,958	949,778
1999	13,771	228,162	1,015,759
2000	14,089	238,992	1,023,973
2001	15,161	246,935	1,064,999
2002	14,128	256,072	1,095,691
2003	13,938	257,004	1,080,121
Test for trend		$p < .000$	$p < .000$
1991-2003 growth		53.2% (4.1%)	26.6% (2.0%)
2000-2003 growth		7.5% (1.9%)	5.5% (1.4%)

SOURCE: Authors' tabulations based on data from the National Practitioner Data Bank (NPDB).

NOTES: Data are for all payments (judgments or settlements) involving a physician defendant in the fifty states between 1 January 1991 and 31 December 2003. All dollar values are converted to year 2000 dollars using the Implicit Gross Domestic Product (GDP) Price Deflator and are rounded to the nearest dollar. Numbers in parentheses are average annual growth rates.

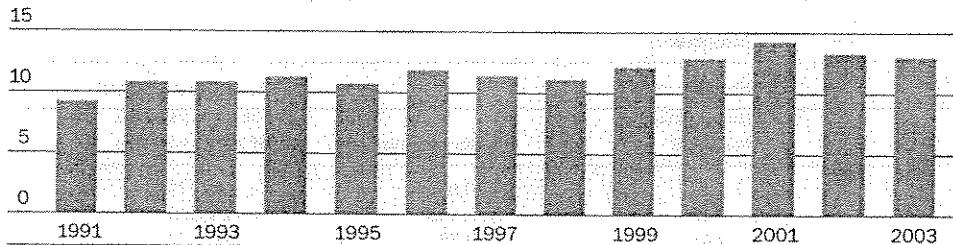
A focus on severity alone might lead to the spurious conclusion that areas of malpractice with the highest payments also account for the

largest share of malpractice dollars. However, an area with high severity might not account for a large portion of liability if the number of

EXHIBIT 2

Growth In Per Capita Medical Malpractice Payments, 1991-2003

Per capita payments (2000 dollars)



SOURCE: Authors' tabulations based on data from the National Practitioner Data Bank (NPDB).

NOTES: Data are for all payments (judgments or settlements) involving a physician defendant in the fifty states between 1 January 1991 and 31 December 2003. All dollar values are converted to year 2000 dollars using the Implicit Gross Domestic Product (GDP) Price Deflator and are rounded to the nearest dollar. Between 1993 and 2003, per capita malpractice dollars grew \$0.31 per year ($p < .001$).

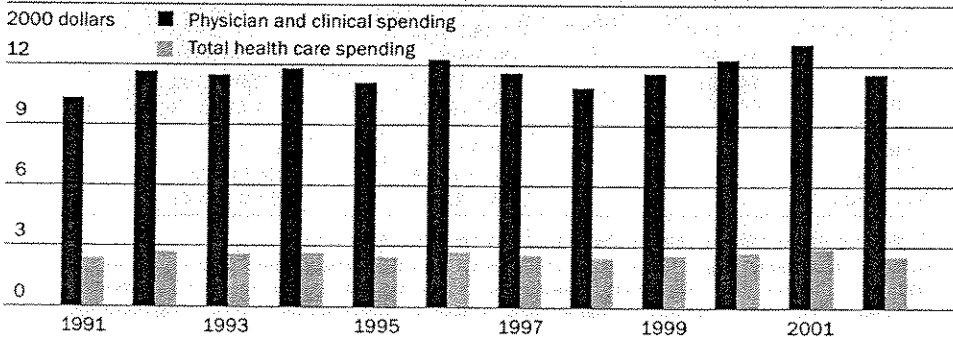
payments for that area is relatively small. Consistent with this hypothesis, Exhibit 5 demonstrates that the largest areas of total malpractice payments between 2001 and 2003 were diagnoses, surgery, and treatment. In this exhibit, payments in obstetrics are the most severe but are the fourth-largest contributor to all malpractice dollars. We have combined data from judgments and settlements but in unpublished work have verified that the two distributions are identical.²¹

We also examined the detailed distribution of malpractice payments in surgery and ob-

stetrics, because these specialties have high malpractice premiums and receive the most attention (data not shown). Contrary to anecdote, suits stemming from operating on the wrong body part or leaving foreign objects in the wound represent less than 5 percent of surgical payments. Likewise, in obstetrics, abandonment, improperly performed cesarean sections, and retained instruments are not major contributors to malpractice payments. The sum of all payments for these high-profile incidents accounts for less than 2 percent of total malpractice payments.

EXHIBIT 3

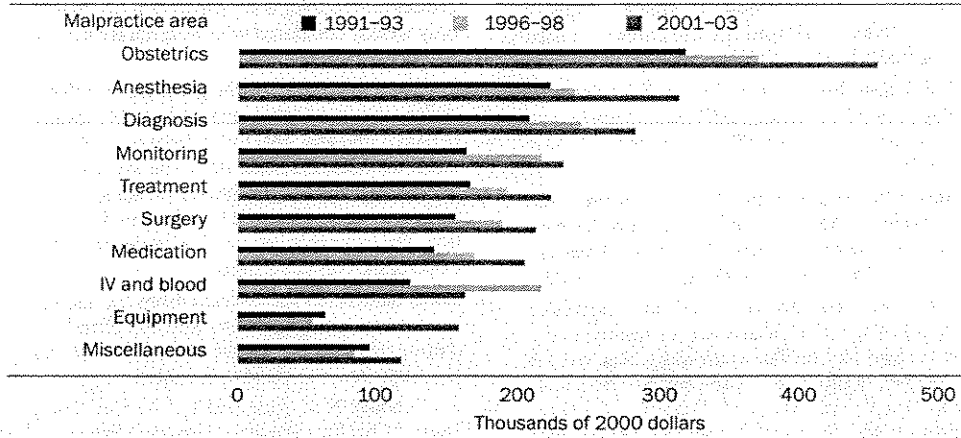
Malpractice Payments Per \$1,000 in Health Spending, 1991-2002



SOURCE: Authors' tabulations based on data from the National Practitioner Data Bank (NPDB) and data from the National Health Accounts, Centers for Medicare and Medicaid Services.

NOTES: Data are for all payments (judgments or settlements) involving a physician defendant in the fifty states between 1 January 1991 and 31 December 2002; National Health Accounts data are those for total health care spending and spending on physician and clinical services. All dollar values are converted to year 2000 dollars using the Implicit Gross Domestic Product (GDP) Price Deflator and are rounded to the nearest dollar.

EXHIBIT 4
Change In Average Malpractice Payments, By Area Of Alleged Malpractice, 1991-93, 1996-98, And 2001-03



SOURCE: Authors' tabulations based on data from the National Practitioner Data Bank (NPDB).
NOTES: Data are for all payments (judgments or settlements) involving a physician defendant in the fifty states between 1 January 1991 and 31 December 2003. All dollar values are converted to year 2000 dollars using the Implicit Gross Domestic Product (GDP) Price Deflator and are rounded to the nearest dollar.

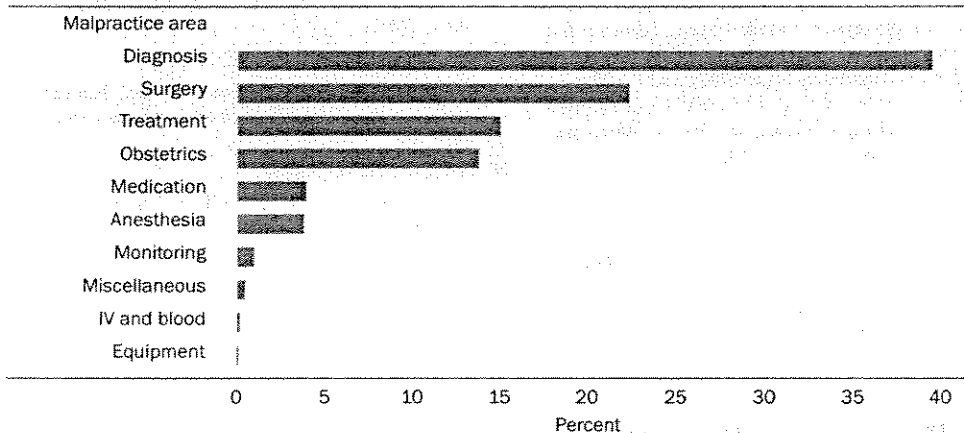
Discussion

The goal of our analysis was to describe the growth of physician malpractice payments—a factor widely believed to be the principal driver of the growth in malpractice premiums.

Our study uncovered several salient findings.

■ **Salient findings.** First, focusing exclusively on judgments provides an incomplete picture of malpractice trends; judgments account for less than 4 percent of all payments

EXHIBIT 5
Distribution Of Medical Malpractice Payments, By Area Of Alleged Malpractice, 2001-2003



SOURCE: Authors' tabulations based on data from the National Practitioner Data Bank (NPDB).
NOTES: Data are for all payments (judgments or settlements) involving a physician defendant in the fifty states between 1 January 2001 and 31 December 2003. All dollar values are converted to year 2000 dollars using the Implicit Gross Domestic Product (GDP) Price Deflator and are rounded to the nearest dollar.

- "Health Accounts," 17 March 2005, www.cms.hhs.gov/statistics/nhe/default.asp (6 May 2005).
10. Bureau of Economic Analysis, U.S. Department of Commerce, "Gross Domestic Product: Implicit Price Deflator," 28 April 2005, research.stlouisfed.org/fred2/data/GDPDEF.txt (6 May 2005).
 11. U.S. Census Bureau, "U.S. Census 2000, Resident Population," 25 January 2002, www.census.gov/population/www/cen2000/respop.html (6 May 2005).
 12. Smarr, "Statement of the Physician Insurers Association of America"; and GAO, *Major Improvements Are Needed to Enhance Data Bank's Reliability*, Pub. no. GAO-01-130 (Washington: GAO, 2000).
 13. We labeled the size of a medical malpractice award as "severity." This usage is standard in the economics and public health literatures; see, for example, Mello et al., "The New Medical Malpractice Crisis," and P.M. Danzon, "The Frequency and Severity of Medical Malpractice Claims: New Evidence," *Law and Contemporary Problems* 49, no. 2 (1986): 57-84. Our use of this word should not be seen as implying that there is an association with the severity of the alleged injury. Regarding the JVDB, see M.A. Peterson and G.L. Priest, *The Civil Jury: Trends in Trials and Verdicts, Cook County, Illinois, 1960-1979*, Pub. no. R-2881-ICJ (Santa Monica, Calif.: RAND, 1982).
 14. GAO, *Major Improvements Are Needed*.
 15. J.T. Hallinan, "Doctor Is Out: Attempt to Track Malpractice Cases Is Often Thwarted," *Wall Street Journal*, 27 August 2004.
 16. See, for example, A.R. Localio et al., "Relation between Malpractice Claims and Adverse Events Due to Negligence: Results of the Harvard Medical Practice Study III," *New England Journal of Medicine* 325, no. 5 (1991): 245-251; P.C. Weiler et al., *A Measure of Malpractice: Medical Injury, Malpractice Litigation, and Patient Compensation* (Cambridge, Mass.: Harvard University Press, 1993); and E.J. Thomas et al., "The Reliability of Medical Record Review for Estimating Adverse Event Rates," *Annals of Internal Medicine* 136, no. 11 (2002): 812-816.
 17. See, for example, D.P. Kessler and M.B. McClellan, "The Effects of Malpractice Pressure and Liability Reforms on Physicians' Perceptions of Medical Care," *Law and Contemporary Problems* 60, nos. 1-2 (1997): 81-106.
 18. D.P. Kessler and M.B. McClellan, "How Liability Law Affects Medical Productivity," *Journal of Health Economics* 21, no. 6 (2002): 931-955.
 19. We avoided using hospital days or physician visits (in lieu of population) for two reasons. First, the use of these services is affected by the liability climate. See D.P. Kessler and M.B. McClellan, "Do Doctors Practice Defensive Medicine?" *Quarterly Journal of Economics* 111, no. 2 (1996): 353-390. It is also difficult to argue that increases in use of health care services are completely captured by hospital days or physician visits. For example, increases in screening and procedure usage may be only weakly correlated with hospital days or the number of physicians.
 20. We have also looked at the presence of million-dollar awards, which increased from 143 awards between 1991 and 1993 to 168 between 2001 and 2003. Between 1991 and 2003, the average payment for a judgment conditional on being over \$1 million increased from \$1.8 million to \$2.0 million. The latter number could be understated because of the corporate shield.
 21. These tabulations are available from the authors on request; send e-mail to amitabh.chandra@dartmouth.edu. The tabulations for 1991-1993 are also very similar to those in Exhibit 5.
 22. S.A. Seabury, N.M. Pace, and R.T. Reville, "Forty Years of Civil Jury Verdicts," *Journal of Empirical Legal Studies* 1, no. 1 (2004): 1-15.
 23. B. Black et al., "Stability, Not Crisis: Medical Malpractice Claim Outcomes in Texas, 1988-2002," *Journal of Empirical Legal Studies* (forthcoming). Black and colleagues note that the number of claims was constant during the 1990s and that there was no statistically significant increase in the number jury awards. There does not appear to be a noticeable increase in the severity of payments, but there was a 4.3 percent (annual) increase in real defense costs associated with a claim.
 24. *Ibid.*
 25. K. Baicker and A. Chandra, "The Effect of Malpractice Liability on the Delivery of Health Care," in *Frontiers of Health Policy Research*, vol. 8, ed. D.M. Cutler and A.M. Garber (Cambridge, Mass.: MIT Press, 2005).
 26. Black et al., "Stability, Not Crisis."
 27. GAO, *Medical Malpractice Insurance*; and Baicker and Chandra, "The Effect of Malpractice Liability."
 28. GAO, *Medical Malpractice Insurance*.
 29. Baicker and Chandra, "The Effect of Malpractice Liability."