Fields of Opportunities

STATE OF IOWA

THOMAS J. VILSACK
GOVERNOR

SALLY J. PEDERSON
LT. GOVERNOR

SUSAN E. VOSS
COMMISSIONER OF INSURANCE

MEMO

TO: Medical Malpractice Legislative Interim Committee
FROM: Susan E. Voss, Commissioner
DATE: November 29, 2005
RE: Additional Information Request

You requested additional information from this office concerning incurred losses, rate adequacy and profit for insurance companies doing business in Iowa. Your questions were based upon data presented by our office as well as that from a recent study by former Missouri Insurance Commissioner, Jay Angoff. This memo will address those concerns and provide you with additional information including attached reports and articles that may be of assistance to you in understanding the area of medical malpractice insurance and its complexities.

Initial Estimates of Incurred Losses

At the November 7, 2005 meetings, some estimates were mentioned regarding initial incurred loss estimates that were redundant by about 30% when compared to values nine years later. Medical malpractice is a long tailed line of business with final claim amounts often not known for many years. The amounts by which the initial incurred loss estimates differ from the final paid amounts can vary greatly. For some years such as those between 1986 and 1994, initial estimates were higher than estimates nine years later and thus show downward development as time elapses from the year the losses were incurred. Other years, such as 1981-1985 and many of the years after 1994 show upward development from the initial estimates. The attached graph illustrates how incurred loss estimates have changed over time.

Incurred losses can be used in ratemaking. The development pattern of the losses from one maturity to the next is taken into consideration. Development factors depend on the patterns seen in incurred losses as they mature towards the ultimate paid amounts. When appropriately used, neither high nor low reserves should distort rates.

Rate Adequacy and Profit

Premiums for insurance policies are designed to pay for losses covered by policies, expenses related to the losses, and company expenses. A profit and contingencies load is built into the rate. In determining a reasonable profit load, investment incomes derived from holding the premiums until claims are paid and from unearned premiums is considered.

When analyzing profitability or rate adequacy of a company or of a group of companies, one must be alert to any underlying changes (such as changing exposures) that could distort the results. Especially for long-tailed lines of business such as medical malpractice, changes in the amount of business written must be considered.

The attached example shows policies that were grossly under priced. For every $100 in premiums collected, $135 is paid in losses. The losses are paid out over ten years, similar to a medical malpractice payout pattern. By continuing to increase the number of policies written by 10% per year, it appears that loss ratios are consistently below 100% and leveling off. However, the $93,000 losses paid after 2014 (in the boxes) are not included in the calendar year loss ratios.

Informational Documents

Because of the complicated nature of medical malpractice, the long tail, upfront expenses, etc, I have attached an excellent article discussing medical malpractice from the American Academy of Actuaries magazine, "Contingencies." I believe this does a very good job of explaining the area of malpractice insurance and why comparing calendar year written premiums to calendar year paid losses is not an acceptable comparison.

In addition, I have attached for your review two lengthy articles concerning medical malpractice. One is a recent article from The New Yorker Magazine. The article is written by a doctor who became a medical malpractice plaintiff's attorney. While it does not directly discuss the issue of insurance, it is a timely article discussing the sensitive area of malpractice lawsuits. The second, lengthier report is a 2003 GAO study on Medical Malpractice Insurance. This is a more comprehensive review of the area of medical malpractice insurance from a national perspective.

Finally, a study conducted in Minnesota in the late 1980s was brought to our attention. The Commissioner of Insurance in 1988 conducted a study of closed medical malpractice claims in Minnesota. It is our understanding that based upon that study; the Minnesota Insurance Department ordered a refund of premiums collected. We have been asked to review that study and determine if such a study would be helpful in the Iowa market. Our office has requested a copy of the study for our internal review. Should we determine that such a study would be appropriate in Iowa, we will notify you.

In conclusion, the Division remains committed to seeing that carriers doing business in Iowa regardless of the type of coverage they are providing have set rates at a level that are appropriate for the risks being held. We are pleased to report that rate increases for the ensuing year are minimal at best with some carriers reducing rates. As we have stated before, we review rates in the medical malpractice area (unlike states such as Minnesota.) We are in the process of proposing legislation in the upcoming session to allow for the use of surplus in obtaining additional interest income. And, finally, we are seeking to bring additional carriers to the state of Iowa.

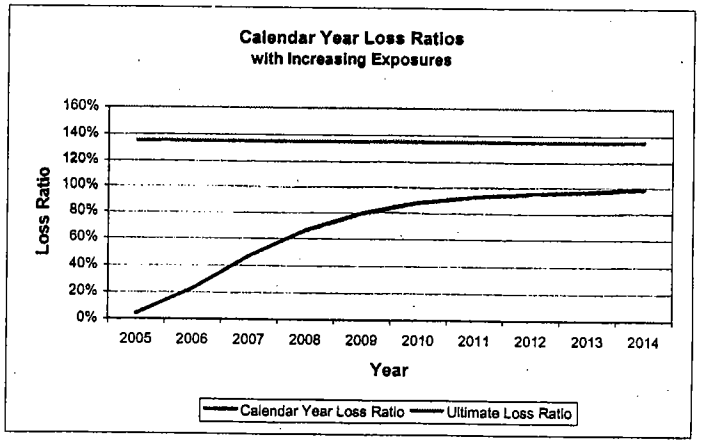
If the office can provide you additional information, please do not hesitate to contact us.

Sample Analysis of Long Tailed Line of Business

Assumed payout pattern
% of ultimate losses paid in...

1st year	2nd year	3rd year	4th year	5th year	6th year	7th year	8th year	9th year	10th year
3%	15%	22%	19%	14%	10%	6%	4%	3%	4%

year	# policies	premium per policy	total premium	ultimate loss ratio	total losses	calendar year losses	calendar year loss ratio
2005	100	$100	$10,000	135%	$13,500	$405	4%
2006	110	$100	$11,000	135%	$14,850	$2,471	22%
2007	121	$100	$12,100	135%	$16,335	$5,688	47%
2008	133	$100	$13,300	135%	$17,955	$8,821	66%
2009	146	$100	$14,600	135%	$19,710	$11,590	79%
2010	161	$100	$16,100	135%	$21,735	$14,091	88%
2011	177	$100	$17,700	135%	$23,895	$16,307	92%
2012	195	$100	$19,500	135%	$26,325	$18,479	95%
2013	215	$100	$21,500	135%	$29,025	$20,740	96%
2014	237	$100	$23,700	135%	$31,995	$23,375	99%
2015						$24,690	
2016						$21,913	
2017	10%	increase in exposures per year				$16,388	
2018	0%	increase in premiums per year				$11,358	
2019	0%	loss trend				$7,580	
2020						$4,826	
2021						$3,204	
2022						$2,121	
2023						$1,280	
					$215,325	$215,325	



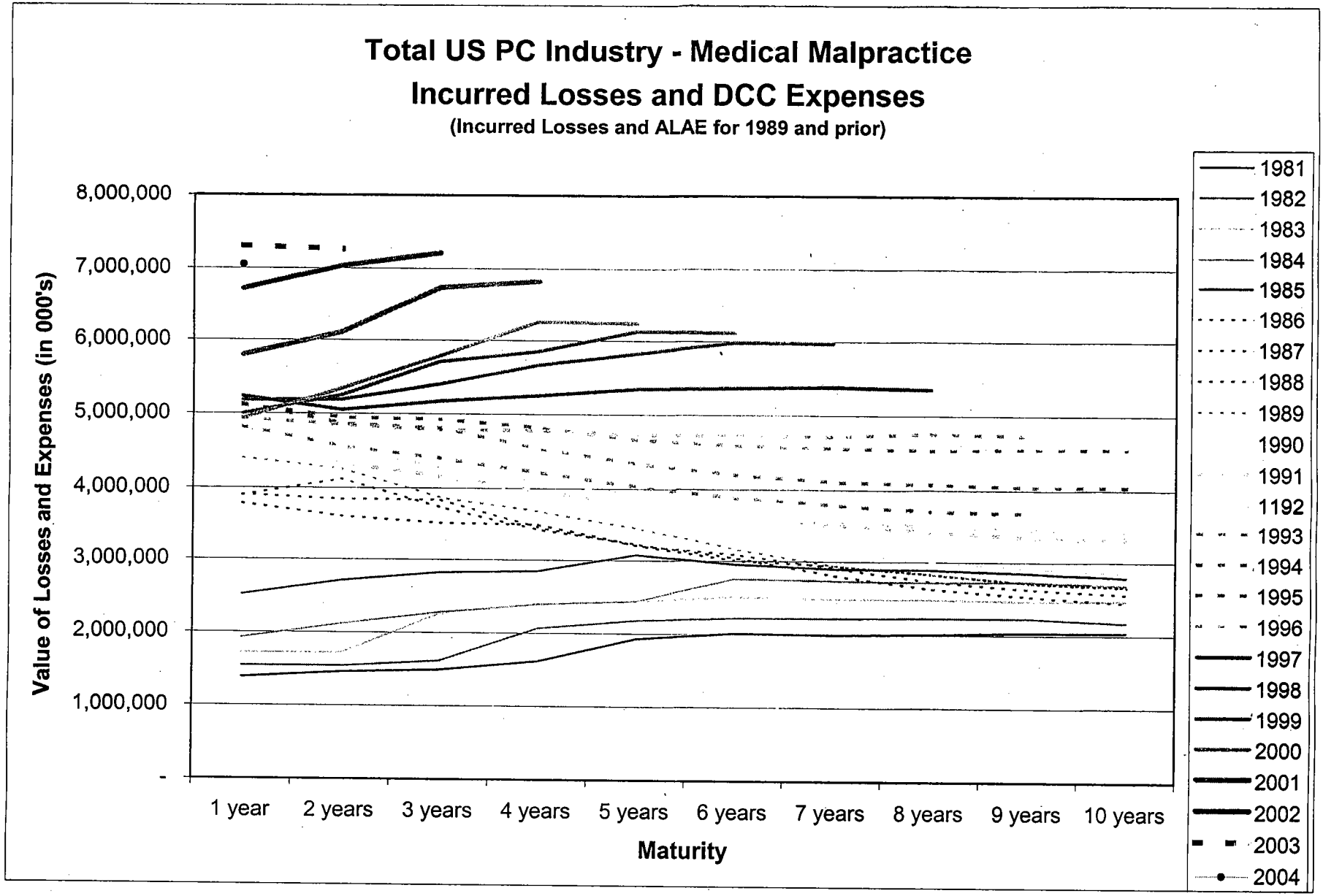
policy year	amount of total losses paid in calendar year 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2005	$405	$2,025	$2,970	$2,565	$1,890	$1,350	$810	$540	$405	$540									
2006		$446	$2,228	$3,267	$2,822	$2,079	$1,485	$891	$594	$446	$594								
2007			$490	$2,450	$3,594	$3,104	$2,287	$1,634	$980	$653	$490	$653							
2008				$539	$2,693	$3,950	$3,411	$2,514	$1,796	$1,077	$718	$539	$718						
2009					$591	$2,957	$4,336	$3,745	$2,759	$1,971	$1,183	$788	$591	$788					
2010						$652	$3,260	$4,782	$4,130	$3,043	$2,174	$1,304	$869	$652	$869				
2011							$717	$3,584	$5,257	$4,540	$3,345	$2,390	$1,434	$956	$717	$956			
2012								$790	$3,949	$5,792	$5,002	$3,686	$2,633	$1,580	$1,053	$790	$1,053		
2013									$871	$4,354	$6,386	$5,515	$4,064	$2,903	$1,742	$1,161	$871	$1,161	
2014										$960	$4,799	$7,039	$6,079	$4,479	$3,200	$1,920	$1,280	$960	$1,280
2015																			
	calendar year losses																		
	$405	$2,471	$5,688	$8,821	$11,590	$14,091	$16,307	$18,479	$20,740	$23,375	$24,690	$21,913	$16,388	$11,358	$7,580	$4,826	$3,204	$2,121	$1,280

Total US PC Industry - Medical Malpractice
Schedule P, Part 2F; Occurrence and Claims Made Policies
Best's Aggregates & Averages

Incurred Net Losses and Defense & Cost Containment Expenses
Reported at Year End (in 000's)*

Year in which Losses were Incurred	(a) Maturity 1 year	(b) Maturity Maximum	(c) Difference (a)-(b)	(d) % of 1st Year (c)/(a)
1981	1,387,182	2,031,924	(644,742)	-46%
1982	1,546,106	2,166,435	(620,329)	-40%
1983	1,723,220	2,463,501	(740,281)	-43%
1984	1,921,183	2,676,356	(755,173)	-39%
1985	2,510,213	2,783,821	(273,608)	-11%
1986	3,782,451	2,648,943	1,133,508	30%
1987	3,903,913	2,551,421	1,352,492	35%
1988	3,891,951	2,437,349	1,454,602	37%
1989	4,401,751	2,654,421	1,747,330	40%
1990	4,470,341	2,844,458	1,625,883	36%
1991	4,455,306	3,295,519	1,159,787	26%
1992	4,726,846	3,428,583	1,298,263	27%
1993**	4,785,521	3,636,581	1,148,940	24%
1994	5,130,500	4,039,466	1,091,034	21%
1995	5,115,949	4,554,181	561,768	11%
1996***	4,935,831	4,732,614	203,217	4%
1997***	5,231,192	5,355,862	(124,670)	-2%
1998***	5,176,249	5,970,981	(794,732)	-15%
1999***	4,996,898	6,113,698	(1,116,800)	-22%
2000***	4,927,837	6,232,069	(1,304,232)	-26%
2001***	5,795,303	6,814,934	(1,019,631)	-18%
2002***	6,701,665	7,207,934	(506,269)	-8%
2003***	7,301,177	7,258,601	42,576	1%

* Incurred Losses and Allocated Expenses Reported at Year End for 1989 and prior
** 1993 source not available; numbers from Jay Angoff letter
*** 10 years maturity for 1981-1995, 1 year less for each subsequent year


Total US PC Industry - Medical Malpractice
Incurred Losses and DCC Expenses
(Incurred Losses and ALAE for 1989 and prior)
Value of Losses and Expenses (in 000's)
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
-
1 year
2 years
3 years
4 years
5 years
6 years
7 years
8 years
9 years
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Maturity
1981
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2004

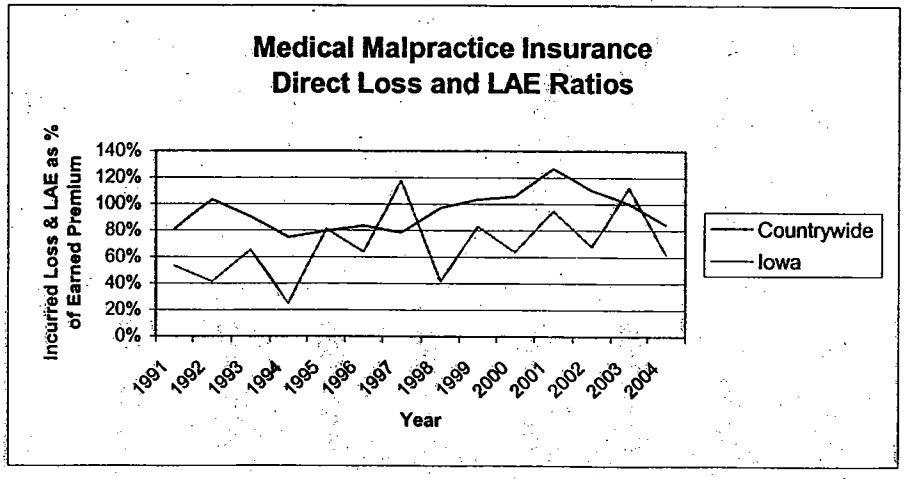
Summary of Medical Malpractice Insurance
1991-2004

Countrywide

Year	Direct Written Premium	Direct Premium Earned	Direct Losses Incurred	Loss Adjustment Expenses	Loss & LAE Ratio
1991	5,041,116,742	4,974,652,480	2,815,117,139	1,206,401,632	80.84%
1992	5,336,077,118	5,229,476,485	4,039,426,016	1,356,515,347	103.18%
1993	5,451,861,069	5,254,614,981	3,525,005,041	1,223,109,176	90.36%
1994	6,128,761,613	5,986,568,310	3,181,523,258	1,288,672,006	74.67%
1995	6,174,433,133	6,137,209,298	3,330,613,605	1,554,242,912	79.59%
1996	6,087,248,243	6,027,958,481	3,632,388,312	1,406,779,290	83.60%
1997	5,949,762,287	5,949,688,215	3,222,735,496	1,442,161,237	78.41%
1998	6,212,462,137	6,218,164,376	4,457,099,226	1,585,203,841	97.17%
1999	6,181,174,156	6,167,948,760	4,659,896,010	1,726,798,604	103.55%
2000	6,428,278,303	6,373,039,337	5,098,753,650	1,657,371,460	106.01%
2001	7,604,104,289	7,054,509,032	6,972,294,879	1,974,903,227	126.83%
2002	8,912,533,968	9,631,548,967	8,200,307,513	2,412,849,663	110.19%
2003	10,646,907,290	11,277,448,229	8,459,389,539	2,847,849,045	100.26%
2004	11,986,813,417	11,538,819,200	7,224,164,963	2,514,795,515	84.40%

Iowa

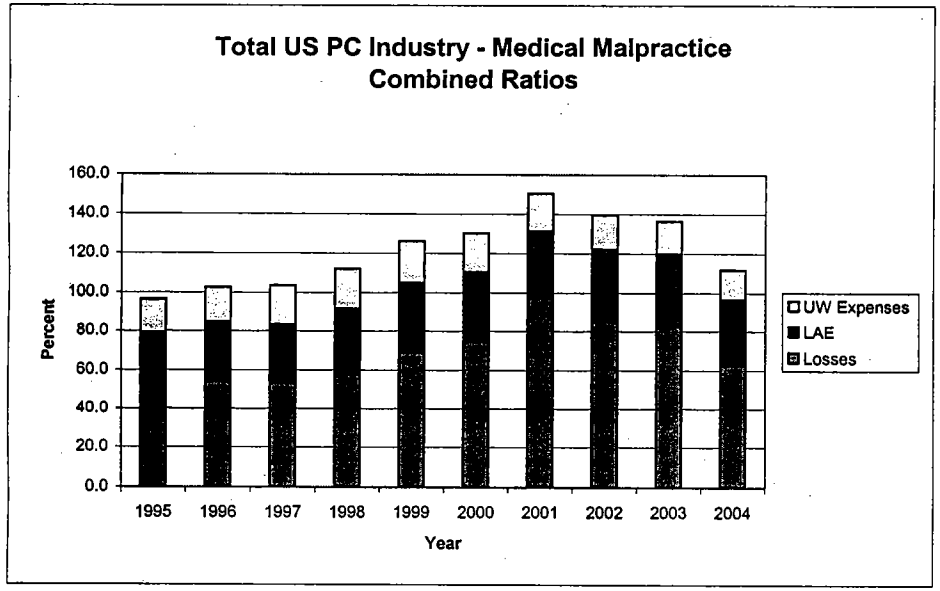
Year	Direct Written Premium	Direct Premium Earned	Direct Losses Incurred	Loss Adjustment Expenses	Loss & LAE Ratio
1991	48,728,109	44,115,906	17,263,875	6,196,477	53.18%
1992	50,125,908	48,329,493	16,704,034	3,310,780	41.41%
1993	50,410,782	50,720,331	26,567,976	6,526,625	65.25%
1994	46,123,258	43,132,344	6,236,293	4,335,202	24.51%
1995	45,660,579	45,166,060	30,272,665	6,329,584	81.04%
1996	42,932,845	42,303,209	18,904,540	8,054,175	63.73%
1997	42,203,383	43,638,233	44,722,808	6,559,979	117.52%
1998	43,216,649	45,131,303	13,795,113	4,876,168	41.37%
1999	47,154,159	47,209,193	31,514,080	7,653,576	82.97%
2000	51,344,540	54,637,751	29,858,497	4,920,070	63.65%
2001	62,079,611	58,803,890	45,299,639	10,309,847	94.57%
2002	72,085,105	72,247,654	38,009,711	10,965,286	67.79%
2003	84,069,177	78,917,423	69,946,915	18,843,076	112.51%
2004	99,537,871	95,963,495	47,364,007	12,504,609	62.39%

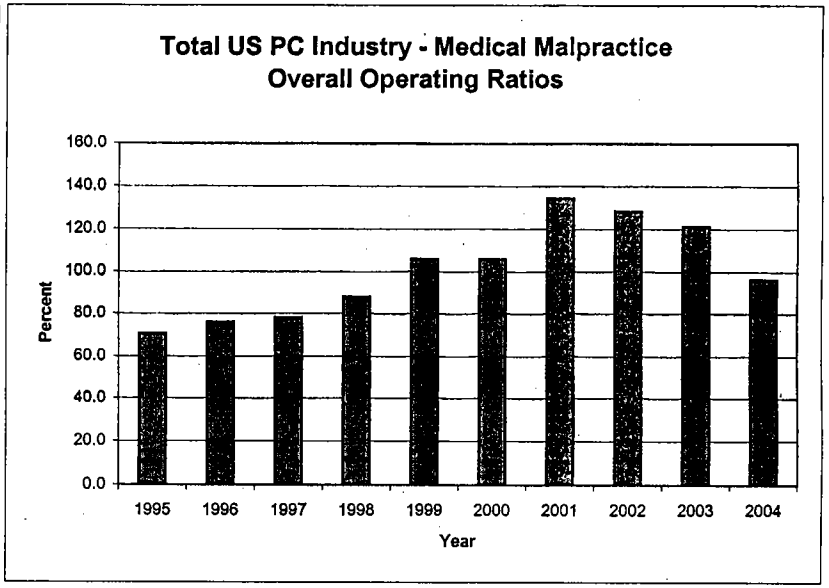


from NAIC 6/27/05 report

Total US PC Industry - Medical Malpractice
Best's Aggregates and Averages

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total Net Premiums Written (in 000's)	4,800,552	4,875,486	4,892,496	5,145,066	5,104,147	5,586,584	6,072,468	7,043,043	8,279,450	7,386,266
Total Net Premiums Earned (in 000's)	4,789,596	4,822,462	4,911,681	5,127,177	5,183,243	5,489,524	5,631,919	6,604,679	7,842,168	7,182,608
Pure Loss Ratio (IL/NEP)	47.3	54.1	53.3	57.7	68.8	74.4	97.4	84.9	82.7	62.5
Loss Adjustment Expenses / EP	31.6	30.4	29.9	33.7	36.1	36.0	33.7	37.1	37.1	34.0
Loss and LAE / EP	78.9	84.5	83.2	91.5	104.7	110.4	131.0	122.0	119.8	96.5
Commissions & Brokerage / WP	3.3	3.7	4.8	4.3	4.3	4.8	5.5	5.5	4.5	3.9
Other Acquisition Expenses / WP	3.3	4.0	4.9	4.0	4.4	4.0	3.4	3.1	3.3	3.2
General Expenses Incurred / WP	8.2	7.9	8.2	9.2	9.8	8.4	8.0	6.5	6.5	5.5
Taxes Incurred / WP	2.7	2.6	2.5	2.9	2.6	2.5	2.6	2.5	2.2	2.6
Underwriting Expense Ratio	17.5	18.1	20.3	20.5	21.1	19.8	19.6	17.6	16.6	15.2
Combined Ratio	96.4	102.6	103.5	111.9	125.8	130.1	150.7	139.5	136.5	111.7
Dividends to Policyholders Ratio	3.3	3.4	4.3	3.8	3.7	3.3	2.6	1.3	0.5	0.7
Combined Ratio after Dividends	99.7	106.0	107.9	115.7	129.5	133.5	153.3	140.8	136.9	112.3
Investment Gain on Funds & Other Income / EP	29.3	30.2	30.0	28.1	23.5	27.6	19.0	12.4	15.6	16.1
Overall Operating Ratio	70.5	75.8	77.9	87.7	106.0	105.9	134.3	128.4	121.3	96.3





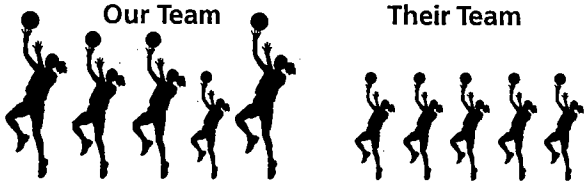
Understanding Insurance, Part I

Comparing Written Premium With Paid Losses

AS ACTUARIES, we like to think that our skills, professional training, and insurance expertise give us an edge in drawing reasonable conclusions and predicting with some degree of certainty the outcome of future insurable events. Not unexpectedly, actuaries occasionally attempt to apply their skills outside the realm of insurance. From coaching our children to watching professional athletes compete, the authors have attempted to use their actuarial skills in order to predict the outcomes of various sporting events.

It was with this sense of pride in the actuarial professional's quantification and forecasting skills that Rich walked into one of his 12-year-old daughter's basketball games last year. Within minutes he knew which team had the advantage, who was faster, who could only dribble with her right hand. He generously shared all his observations with the coach—who just loved to see him walk into the gym!

Then the day came when Rich realized that any advice he'd offered in the past would have no impact on the outcome of the game. The result was a near certainty. Here is what he saw when he entered the gym.



This wasn't going to be pretty. All skills aside, the height advantage of his daughter's team was too much for the opponents to overcome. Who among us would fail to draw a similar conclusion, given the importance of height in winning basketball games at such a young age? The objective information (e.g., years of NBA TV training) tells each of us that it's all over but the cheering.

Now, what if your daughter's coach was Magnum, P.I.? Suppose that Magnum learned with a little more investigation that the opposing coach had entered a team of short 18-year-old ringers in the 12-and-under tournament. Now wait a minute! Is that a fair contest? Surely the 18-year-old players have six years of additional experience, not to mention natural development on their side. This misrepresentation must be exposed for the sake of fairness.

Although we've exaggerated the age and height differences in Rich's example, many of us may remember the sad story of the Little League coach who doctored his pitcher's age in order to win big games in the Little League World Series. Age does matter!

Does this scenario sound familiar? Have we seen situations in which erroneous insurance conclusions are drawn because of improper comparisons? Have we seen situations in which investors, public officials, reporters, and consumers are misled by improper comparisons? Anyone who thinks baseball dominates the market of statistical comparisons (ERA, LOB, slugging average, etc.) should look at all the possible ways insurance data can be compared, used, or manipulated to illustrate different points.

As practicing actuaries, we have a tendency to hold many of the basic insurance concepts as self-evident or unwritten rules. For individuals who don't analyze insurance industry financials for a living, our unwritten rules are often difficult to understand and challenging to glean from a quick read of our current actuarial literature. That's why we've decided to prepare a series of articles directed at serving a broader public audience. The consistent theme in our series will be the proper matching of insurance revenues with insurance costs.

Our first topic will address the comparison of written premiums and paid losses, which has garnered some press lately in the ongoing medical malpractice tort reform debate. Sharp actuaries may notice that we've focused on the inverse of the traditional loss ratio, to be consistent with recent studies. Future topics will include some of the following themes:

- The impact of survivor bias on financial comparisons
- Losses and expenses as separate cost components
- Long-tail vs. short-tail lines of business
- The impact of inflation
- Steady-state vs. start-up vs. runoff operations.

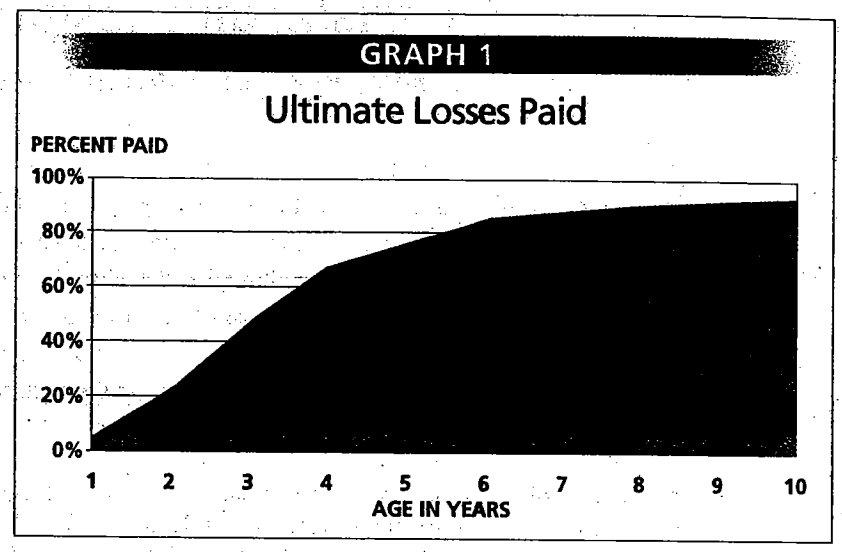
We hope the publics served by the actuarial profession find this series helpful in understanding several basic approaches to evaluating, and questioning, the implications and conclusions presented in any form of a study focusing on the insurance industry. Our series can't address all the applicable issues, interests, and considerations, but we

KEVIN M. BINGHAM is a senior manager at Deloitte Consulting LLP in Hartford, Conn., chairperson of the medical malpractice subcommittee and an official spokesperson for the American Academy of Actuaries in Washington. **RICHARD J. MARCKS** is a property/casualty actuary with the Connecticut insurance department in Hartford.

do believe that this series will help researchers and consumers of public studies make more informed decisions regarding the validity of the conclusions they read.

And when readers need more information, we hope they will reach out and ask an actuary about shocking conclusions and catchy ratios that may appear too good to be true. The actuarial resources are there. For public officials, their insurance departments are filled with qualified actuaries ready and able to provide a detailed review of each new study. The American Academy of Actuaries (www.actuary.org) and Casualty Actuarial Society (www.casact.org) are filled with volunteer actuaries and committees focusing on the important insurance issues of the day. Pick up the phone, and we believe our profession will answer the call.

GRAPH 1



Apples to Oranges

Given the considerable confusion in the news media over the past year regarding the reasonableness of comparing calendar-year written premiums to calendar-year paid losses, we thought we would start our series with a simple question: Are researchers comparing apples and oranges when they compare calendar-year written premiums to calendar-year paid losses?

First, some key assumptions and definitions. Calendar-year written premium equals the number of policies sold in the year, multiplied by the average premium per policy. Twenty percent of the premium charged to the customer is related to the insurer's expenses (premium taxes, commissions, etc.). Eighty percent of the premium charged (i.e., 100 percent minus 20 percent expense ratio) goes toward paying losses, claim investigation, medical examination, defense attorney fees, and fees/salaries for claim adjusters and others working on the defense of a claim. Finally, for illustrative purposes, we've selected a payout pattern from a line of business that generally takes a long time for claims to be submitted and settled (See Graph 1).

As one can see, only 4 percent of the ultimate medical malpractice payments are made in the first year. After three years, less than 50 percent of the medical malpractice payments have been

TABLE 1

Medical Malpractice—Long-Tail Example, Static Environment

YEAR	TOTAL WRITTEN PREMIUM	20% EXPENSE RATIO	TOTAL EXPECTED LOSSES	CALENDAR-YEAR PAYOUT					
				2000	2001	2002	2003	2004	2005
2000	25,000,000	5,000,000	20,000,000	791,144	3,757,936	4,776,534	3,636,990	2,390,627	1,589,785
2001	25,000,000	5,000,000	20,000,000		791,144	3,757,936	4,776,534	3,636,990	2,390,627
2002	25,000,000	5,000,000	20,000,000			791,144	3,757,936	4,776,534	3,636,990
2003	25,000,000	5,000,000	20,000,000				791,144	3,757,936	4,776,534
2004	25,000,000	5,000,000	20,000,000					791,144	3,757,936
2005	25,000,000	5,000,000	20,000,000						791,144
			Calendar-Year Paid Losses	791,144	4,549,080	9,325,614	12,962,604	15,353,231	16,943,016
			Report-Year Written Premium	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
			WP/PL Ratio	3160%	550%	268%	193%	163%	148%
			Written Premium Less Expenses	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
			WP (X-Expenses)/PL Ratio	2528%	440%	214%	154%	130%	118%
			Outstanding Loss Reserves	19,208,656	34,659,776	45,334,161	52,371,558	57,018,327	60,075,311

TABLE 2

Medical Malpractice—Long-Tail Example, Increase in Physician Exposure

YEAR	TOTAL WRITTEN PREMIUM	20% EXPENSE RATIO	TOTAL EXPECTED LOSSES	CALENDAR-YEAR PAYOUT					
				2000	2001	2002	2003	2004	2005
2000	25,000,000	5,000,000	20,000,000	791,144	3,757,936	4,776,534	3,636,990	2,390,627	1,589,785
2001	25,000,000	5,000,000	20,000,000		791,144	3,757,936	4,776,534	3,636,990	2,390,627
2002	25,000,000	5,000,000	20,000,000			791,144	3,757,936	4,776,534	3,636,990
2003	25,000,000	5,000,000	20,000,000				791.144	3,757,936	4,776,534
2004	100,000,000	20,000,000	80,000,000					3,164,577	15,031,743
2005	100,000,000	60,000,000	240,000,000						9,493,732
			Calendar-Year Paid Losses	791,144	4,549,080	9,325,614	12,962,604	17,726,664	36,919,411
			Report-Year Written Premium	25,000,000	25,000,000	25,000,000	25,000,000	100,000,000	300,000,000
			WP/PL Ratio	3160%	550%	268%	193%	564%	813%
			Written Premium Less Expenses	20,000,000	20,000,000	20,000,000	20,000,000	80,000,000	240,000,000
			WP (X-Expenses)/PL Ratio	2528%	440%	214%	154%	451%	650%
			Outstanding Loss Reserves	19,208,856	34,659,776	45,334,161	52,371,558	114,644,894	317,725,483

made. After 10 years, 6 percent of the medical malpractice claims still remain unpaid (the reason for the name "long tail").

Table 1 displays five years of calendar-year results assuming $25 million in written premium (e.g., 500 physicians x $50,000 average premium). In the example, we've assumed the insurance company charges rates that allow the company to break even over the five-year period and that all policies have been written on Jan. 1 (i.e., will be fully earned by year-end). Although most actuaries will develop instant heartburn reading the next few words, case reserves have been ignored.

In order for the medical malpractice line to reach a steady-state environment (WP/PL ratio = 125 percent or WP (X-expenses)/PL ratio = 100 percent), the analysis would have to extend beyond 15 years (the length of time it takes to pay out all medical malpractice claims for a single year of policies).

If one were to quote the WP/PL ratio in 2000, the medical malpractice ratio would say that WP exceeded paid losses by an amazing 3,160 percent. Using a more appropriate comparison excluding expenses, the ratio would still indicate that WP (X-expenses) exceeds paid losses by 2,528 percent. Can one infer from the above ratios that the company over priced its business by 2,528 percent in its first year of operation?

Absolutely not! Since losses pay out over multiple years and premiums are recorded entirely in the year written, the WP/PL ratio significantly mismatches the timing of the two cash flows. As a matter of fact, our example started with each policy priced to break even (i.e., written premium = paid losses + expenses). Therefore, it's obvious that the WP/PL ratio is a poor measure of premium adequacy. Even if a steady-state environment is reached, the ratio still produces an incorrect answer unless expenses are excluded from the comparison.

Table 2 illustrates the impact of significant exposure growth. In this example, the insurance company's insured physician count increases from 500 policies in 2003 to 2,000 policies in 2004 and 6,000 policies in 2005, with no change in the $50,000 average premium.

The WP (X-expenses)/PL ratio spikes to 451 percent in 2003 and 650 percent in 2004. Can one infer from the increase in the above ratios that the company overpriced its business by 451 percent to 650 percent in these years?

Of course not! Selling new policies in the current year results in significant premium growth, while the payout of losses associated with the newer policies is spread out over a number of future years. Another example of the significant timing mismatch.

Table 3 illustrates the impact of a company exiting the medical malpractice line of business, not a rare event over the past few years. The insurance company's insured physician count decreases from 500 policies in 2005 to 250 policies in 2006, 125 policies in 2007, 63 policies in 2008, and 10 policies in 2009, with no change in the $50,000 average premium.

The WP (X-expenses)/PL ratios decreases in 2009 to 4 percent. Can one infer from the decrease in the above ratio that the company drastically underpriced its business? Are paid losses really 2,351 percent higher than the premiums being charged to insurance customers?

No way! Since the company adds only $500,000 of written premium in 2009 (10 policies × $50,000), the roughly $9.4 million in loss payments on prior report years overwhelms the drastically reduced current-year premium. Even if the company has no policies left in 2010, it still must pay out over $22.6 million in outstanding loss reserves. Another significant timing mismatch.

TABLE 3

Medical Malpractice—Long-Tail Example, Runoff Environment

YEAR	TOTAL WRITTEN PREMIUM	20% EXPENSE RATIO	TOTAL EXPECTED LOSSES	CALENDAR-YEAR PAYOUT				
				2005	2006	2007	2008	2009
2000	25,000,000	5,000,000	20,000,000	1,589,785.	870,933	452,230	351,241	250,505
2001	25,000,000	5,000,000	20,000,000	2,390,527	1,599,785	870,933	452,230	351,241
2002	25,000,000	5,000,000	20,000,000	3,636,990	2,390,627	1,589,785	870,933	452,230
2003	25,000,000	5,000,000	20,000,000	4,776,534	3,636,990	2,390,627	1,589,785	870,933
2004	25,000,000	5,000,000	20,000,000	3,757,936	4,776,534	3,636,990	2,390,627	1,589,785
2005	25,000,000	5,000,000	20,000,000	791,144	3,757,936	4,776,534	3,636,990	2,390,627
2006	12,500,000	2,500,000	10,000,000		395,572	1,878,968	2,388,267	1,818,495
2007	6,250,000	1,250,000	5,000,000			197,786	939,484	1,194,134
2008	3,125,000	625,000	2,500,000				98,893	469,742
2009	500,000	100,000	400,000					15,823
			Calendar-Year Paid Losses	16,943,016	17,418,376	15,793,852	12,718,450	9,403,514
			Report-Year Written Premium	25,000,000	12,500,000	6,250,000	3,125,000	500,000
			WP/PL Ratio	148%	72%	40%	25%	5%
			Written Premium Less Expenses	20,000,000	10,000,000	5,000,000	2,500,000	400,000
			WP (X-Expenses)/PL Ratio	118%	57%	32%	20%	4%
			Outstanding Loss Reserves	60,075,311	52,656,935	41,863,082	31,644,632	22,641,118

Although we've provided some very simple examples, we think it's easy to see that the comparison of calendar-year written premiums to calendar-year paid losses is about as valuable as comparing apples to oranges. In order for the WP/PL ratio to work, one would have to find an insurance company where the premiums remained constant, expense ratios stayed fixed, and paid losses didn't vary. Given the fact that loss payments are volatile, inflation does exist, investment income fluctuates, case reserves can't be ignored, prior-year reserve estimates increase or decrease over time as more information is gathered, and exposures do fluctuate as companies decide to enter and exit the marketplace, the authors believe that the ratio of apples to oranges consumed by insurance company staff might produce information with as much predictive power as the ratio of WP/PL.

As we noted in our basketball example, age does matter. It's easy to comprehend that an 18-year-old basketball player is much more developed than a 12-year-old player. The basketball player develops skills over time through practice, effective coaching, playing in games, and the body's ability to grow. Similarly, paid losses develop over time as claims are filed; insurance adjusters research the circumstances of the claims; lawyers perform depositions; and claims close without payment, settle, or go to litigation. The proper matching of insurance revenues with insurance expenses must consider the age of the data, or else you'll end up watching a basketball game where one team (Paid Losses) is inappropriately matched against the older and more mature team (Written Premium). ●

Malpractice lawsuits help only a tiny fraction of injured patients, but medicine has offered no genuine alternative.

THE MALPRACTICE MESS

Who pays the price when patients sue doctors?

BY ATUL GAWANDE

It was an ordinary Monday at the Middlesex County Superior Court in Cambridge, Massachusetts. Fifty-two criminal cases and a hundred and forty-seven civil cases were in session. In Courtroom 6A, Daniel Kachoul was on trial for three counts of rape and three counts of assault. In Courtroom 10B, David Santiago was on trial for cocaine trafficking and illegal possession of a deadly weapon. In Courtroom 7B, a scheduling conference was being held for Minihan v. Wallinger, a civil claim of motor-vehicle negligence. And next door, in Courtroom 7A, Dr. Kenneth Reed faced charges of medical malpractice.

Reed was a Harvard-trained dermatologist with twenty-one years of experience, and he had never been sued for malpractice before. That day, he was being questioned about two office visits and a phone call that had taken place almost nine years earlier. Barbara Stanley, a fifty-eight-year-old woman, had come to see him in the summer of 1996 about a dark warty nodule a quarter-inch wide on her left thigh. In the office, under local anesthesia, Reed shaved off the top for a biopsy. The pathologist's report came back a few days later, with a near-certain diagnosis of skin cancer—a malignant melanoma. At a follow-up appointment, Reed told Stanley that the growth would have to be completely removed. This would require taking a two-centimetre margin—almost an inch—of healthy skin beyond the lesion. He was worried about metastasis, and recommended that the procedure be done immediately, but she balked. The excision that he outlined on her leg would have been three inches across, and she couldn't believe that a procedure so disfiguring was necessary. She said that she had a friend who had been given a diagnosis of cancer erroneously, and underwent unnecessary surgery. Reed pressed, though, and by the end of their discussion she allowed him to remove the visible tumor that remained on her thigh, only a half-inch excision, for a second biopsy. He, in turn, agreed to have another pathologist look at all the tissue and provide a second opinion.

To Reed's surprise, the new tissue specimen was found to contain no sign of cancer. And when the second pathologist, Dr. Wallace Clark, an eminent authority on melanoma, examined the first specimen he concluded that the initial cancer diagnosis was wrong. "I doubt if this is melanoma, but I cannot completely rule it out," his report said. Reed and Stanley spoke by phone on August 10, 1996, to go over the new findings.

None of this is under dispute; what's under dispute is what happened afterward. According to Barbara Stanley, Reed told her that she did not have a melanoma after all—the second opinion on the original biopsy "was negative"—and that no further surgery was required. That's not how Reed recalled the phone conversation. "I indicated to Barbara Stanley . . . that Dr. Wallace Clark felt that this was a benign lesion called a Spitz nevus, and that he could not be a hundred per cent sure it was not a melanoma," he testified. "I also explained to her that in Dr. Clark's opinion this lesion had been adequately treated, that follow-up would be necessary, and that Dr. Clark did not feel that further surgery was critical. I also explained to Barbara Stanley that this was in conflict with the previous pathology report, and that the most cautious way to approach this would be to allow me to [remove additional skin] for a two-centimetre margin." She told him, he said, that she didn't want more surgery. "At that point, I reëmphasized to Barbara Stanley that at least she should come in for regular follow-up." Unhappy with the care she received, she didn't return.

After two years, the growth reappeared. Stanley went to another doctor, and the pathology report came back with a clear diagnosis: a deeply invasive malignant melanoma. A complete excision, she was told, should probably have been done the first time around. When she finally did undergo the more radical procedure, the cancer had spread to lymph nodes in her groin. She was started on a yearlong course of chemotherapy. Five months later, she suffered a seizure. The cancer was now in her brain and her left lung. She had a course of brain and lung radiation. A few weeks after that, Barbara Stanley died.

But not before she had called a lawyer from her hospital bed. She found a full-page ad in the Yellow Pages for an attorney named Barry Lang, a specialist in medical-malpractice cases, and he visited her at her bedside that very day. She told him that she wanted to sue Kenneth Reed. Lang took the case. Six years later, on behalf of Barbara Stanley's children, he stood up in a Cambridge courtroom and called Reed as his first witness.

Malpractice suits are a feared, often infuriating, and common event in a doctor's life. (I have not faced a bona-fide malpractice suit, but I know to expect one.) The average doctor in a high-risk practice like surgery or obstetrics is sued about once every six years. Seventy per cent of the time, the suit is either dropped by the plaintiff or won in court. But the cost of defense is high, and when doctors lose, the average jury verdict is half a million dollars. General surgeons pay anywhere from thirty thousand to two hundred thousand dollars a year in malpractice-insurance premiums, depending on the litigation climate of the state they work in; neurosurgeons and obstetricians pay upward of fifty per cent more.

Every doctor, it seems, has a crazy-lawsuit story. My mother, a pediatrician, was once sued after a healthy two-

EDWARD SOREL

month-old she had seen for a routine checkup died of sudden infant death syndrome a week later. The lawsuit alleged that she should have prevented the death, even though a defining characteristic of SIDS is that it occurs without warning. One of my colleagues performed lifesaving surgery to remove a woman's pancreatic cancer only to be sued years later because she developed a chronic pain in her arm; the patient blamed it, implausibly, on potassium that she received by I.V. during recovery from the surgery. I have a crazy-lawsuit story of my own. In 1990, while I was in medical school, I was at a crowded Cambridge bus stop and an elderly woman tripped on my foot and broke her shoulder. I gave her my phone number, hoping that she would call me and let me know how she was doing. She gave the number to a lawyer, and when he found out that it was a medical-school exchange he tried to sue me for malpractice, alleging that I had failed to diagnose the woman's broken shoulder when I was trying to help her. (A marshal served me with a subpoena in physiology class.) When it became apparent that I was just a first-week medical student and hadn't been treating the woman, the court disallowed the case. The lawyer then sued me for half a million dollars, alleging that I'd run his client over with a bike. I didn't even have a bike, but it took a year and a half—and fifteen thousand dollars in legal fees—to prove it.

My trial had taken place in the same courtroom as Reed's trial, and a shudder went through me when I recognized it. Not all Americans, however, see the system the way doctors do, and I had come in an attempt to understand that gap in perspectives. In the courtroom gallery, I took a seat next to Ernie Browe, the son of Barbara Stanley. He was weary, he told me, after six years of excruciating delays. He works for a chemistry lab in Washington State and has had to take vacation time and money out of his savings to pay for hotels and flights—including for two trial dates that were postponed as soon as he arrived. "I wouldn't be here unless my mother asked me to, and she did before she died," he said. "She was angry, angry to have lost all those years because of Reed." He was glad that Reed was finally being called to account.

The dermatologist sat straight-backed and still in the witness chair as Lang fired questions at him. He was clearly trying not to get flustered. A friend of mine, a pediatric plastic surgeon who had had a malpractice suit go to trial, told me the instructions that his lawyer had given him for his court appearances: Don't wear anything flashy or expensive. Don't smile or joke or frown. Don't appear angry or uncomfortable, but don't appear overconfident or dismissive, either. How, then, are you supposed to look? Reed seemed to have concluded that the only choice was to look as blank as possible. He parsed every question for traps, but the strenuous effort to avoid mistakes only made him seem anxious and defensive.

"Wouldn't you agree," Lang asked, "that [melanoma] is very curable if it's excised before it has a chance to spread?" If a patient had asked this question, Reed would readily have said yes. But, with Lang asking, he paused, uncertain.

"It's hypothetical," Reed said.

Lang was clearly delighted with this sort of answer. Reed's biggest problem, though, was that he hadn't kept notes on his August 10th phone conversation with Barbara Stanley. He could produce no corroboration for his version of events. And, as Lang often reminded the jury, plaintiffs aren't required to prove beyond a reasonable doubt that the defendant has committed malpractice. Lang needed ten of twelve jurors to think only that it was more likely than not.

"You documented a telephone conversation that you had with Barbara Stanley on August 31st, isn't that correct?" Lang asked.

"That is correct."

"Your assistant documented a discussion that you had with Barbara Stanley on August 1st, right?"

"That is correct."

"You documented a telephone call with Malden Hospital, correct?"

"That is correct."

"You documented a telephone conversation on September 6th, when you gave Barbara Stanley a prescription for an infection, correct?"

"That is correct."

"So you made efforts and you had a habit of documenting patient interactions and telephone conversations, right?"

"That is correct."

Lang began to draw the threads together. "Exactly what Barbara Stanley needed, according to you, [was] a two-centimetre excision, right?"

"Which is what I instructed Ms. Stanley to do . . ."

"Yet you did not tell Dr. Hochman"—Stanley's internist—"that she needed a two-centimetre excision, right?"

"That is correct."

"But you want this jury to believe you told Barbara Stanley?"

"I want this jury to believe the truth—which is that I told Barbara Stanley she needed a two-centimetre excision."

Lang raised his voice. "You *should* have told Barbara Stanley that . . . isn't that correct?" He all but called Reed a perjurer.

"I did tell Barbara Stanley, repeatedly!" Reed protested. "But she refused." As the examination continued, Reed tried to keep his exasperation in check, and Lang did all he could to discredit him.

"In your entire career, Doctor, how many articles have you published in the literature?" Lang asked at another point.

"Three," Reed said.

Lang lifted his eyebrows, and stood with his mouth agape for two beats. "In twenty years' time, you've published three articles?"

Without documentation, Reed was in a hard spot, and Lang's examination made my skin crawl. I could easily picture myself on the stand being made to defend any number of cases in which things didn't turn out well and I hadn't got every last thing down on paper. Lang was sixty years old, bald, short, and loud. Spittle flew in droplets. He paced constantly, and rolled his eyes at Reed's protestations. He showed no deference and little courtesy. He was almost a stereotype of a malpractice lawyer—except in one respect, and that was the reason I'd come to watch this particular trial.

Barry Lang used to be a doctor. For twenty-three years, he had a successful practice as an orthopedic surgeon, with particular expertise in pediatric orthopedics. He'd even served as an expert witness on behalf of other surgeons. Then, in a turnabout, he went to law school, gave up his medical practice, and embarked on a new career suing doctors. Watching him, I wondered,

after all his experience did he understand something that the rest of us didn't?

I went to see Lang at his office in downtown Boston, on the tenth floor of 1 State Street, in the heart of the financial district. He welcomed me warmly, and I found that we spoke more as fellow-doctors than as potential adversaries. I asked why he had quit medicine to become a malpractice attorney. Was it for the money?

He laughed at the idea. Going into law "was a money disaster," he said. Starting out, he had expected at least some rewards. "I figured I'd get some cases, and if they were good the doctors would settle them quickly and get them out of the way. But no. I was incredibly naïve. No one ever settles before the actual court date. It doesn't matter how strong your evidence is. They always think they're in the right. Things can also change over time. And, given the choice of paying now or paying later, which would you rather do?"

He entered law practice, he said, because he thought he'd be good at it, because he thought he could help people, and because, after twenty-three years in medicine, he was burning out. "It used to be 'Two hip replacements today—yeah!' " he recalled. "Then it became 'Two hip replacements today—ugh.' "

When I spoke to his wife, Janet, she said that his decision to change careers shocked her. From the day she met him, when they were both undergraduates at Syracuse University, he'd never wanted to be anything other than a doctor. After medical school in Syracuse and an orthopedics residency at Temple University, he had built a busy orthopedics practice in New Bedford, Massachusetts, and had a fulfilling and varied life. Even when he enrolled in night classes at Southern New England School of Law, a few blocks from his office, his wife didn't think anything of it. He was, as she put it, "forever going to school." One year, he took English-literature classes at a local college. Another year, he took classes in Judaism. He took pilot lessons, and before long was entering airplane aerobatics competitions. Law school, too, began as another pastime—"It was just for kicks," he said.

After he finished, though, he took the bar exam and got his license. He was fifty years old. He'd been in orthopedics practice long enough to have saved a lot of money, and law had begun to seem much more interesting than medicine. In July, 1997, he handed his practice over to his startled partners, "and that was the end of it," he said.

He figured that the one thing he could offer was his medical expertise, and he tried to start his legal practice by defending physicians. But, because he had no experience, the major law firms that dealt with malpractice defense wouldn't take him, and the malpractice insurers in the state wouldn't send him cases. So he rented a small office and set up shop as a malpractice attorney for patients. He spent several thousand dollars a month for ads on television and in the phone book, dubbing himself "the Law Doctor." Then the phone calls came. Five years into his new career, his cases finally began going to trial. This is his eighth year as a malpractice attorney, and he has won settlements in at least thirty cases. Eight others went to trial, and he won half of them. Two weeks before the Reed trial, he won a four-hundred-thousand-dollar jury award for a woman whose main bile duct was injured during gallbladder surgery, forcing her to undergo several reconstructive operations. (Lang got more than a third of that award. Under Massachusetts state law, attorneys get no more than forty per cent of the first hundred and fifty thousand dollars, 33.3 per cent of the next hundred and fifty thousand, thirty per cent of the next two hundred thousand, and twenty-five per cent of anything over half a million.) Lang has at least sixty cases pending. If he had any money troubles, they are over.

Lang said that he gets ten to twelve calls a day, mostly from patients or their families, with some referrals from other lawyers who don't do malpractice. He turns most of them away. He wants a good case, and a good case has to have two things, he said. "No. 1, you need the doctor to be negligent. No. 2, you need the doctor to have caused damage." Many of the callers fail on both counts.

"This one to your liking, sir?"

"I had a call from one guy. He says, 'I was waiting in the emergency room for four hours. People were taken ahead of me, and I was really sick.' I say, 'Well, what happened as a result of that?' 'Nothing, but I shouldn't have to wait for four hours.' Well, that's ridiculous."

Some callers have received negligent care but suffered little harm. In a typical scenario, a woman sees her doctor about a lump in her breast and is told not to worry about it. Still concerned, she sees another doctor, gets a biopsy, and learns that she has cancer. "So she calls me up, and she wants to sue the first doctor," Lang said. "Well, the first doctor was negligent. But what are the damages?" She got a timely diagnosis and treatment. "The damages are nothing."

I asked him how great the prospective damages had to be to make the effort worth his while. "It's a gut thing," he said. His expenses on a case are typically forty to fifty thousand dollars. So he would almost never take, say, a dental case. "Is a jury going to give me fifty thousand dollars for the loss of a tooth? The answer is no." The bigger the damages, the better. As another attorney told me, "I'm looking for a phone number"—damages worth seven figures.

Another consideration is how the plaintiff will come across to jurors. Someone may have a great case on paper, but Lang listens with a jury in mind. Is this person articulate enough? Would he or she seem unreasonable or strange to others? Indeed, a number of malpractice attorneys I spoke to confirmed that the nature of the plaintiff, not just of the injury, was a key factor in the awarding of damages. Vernon Glenn, a highly successful trial attorney from Charleston, South Carolina, told me, "The ideal client is someone who matches the social, political, and cultural template of where you are." He told me about a case he had in Lexington County, South Carolina—a socially conservative, devoutly Christian county that went seventy-two per cent for George W. Bush in the last election and produces juries unsympathetic to malpractice lawyers. But his plaintiff was a white, Christian female in her thirties with three young children who had lost her husband—a hardworking, thirty-nine-year-old truck mechanic who loved NASCAR, had voted Republican for the past twenty years, and had built the addition to their country home himself—to a medical error. During routine abdominal surgery, doctors caused a bowel injury that they failed to notice until, days later, he collapsed and died. The woman was articulate and attractive, but not so good-looking as to put off a jury. She wasn't angry or vengeful, but was visibly grieving and in need of help. If the family hadn't spoken English, if the husband had a long history of mental illness or alcoholism or cigarette smoking, if they'd been involved in previous lawsuits or had a criminal record, Glenn might not have taken the case. As it was, "she was darn close to the perfect client," he said. The day before trial, the defendants settled for $2.4 million.

Out of sixty callers a week, Barry Lang might take the next step with two, and start reviewing the medical records for hard evidence of negligent care. Many law firms have a nurse or a nurse practitioner on staff to do the initial review. Lang himself gathers all the records, arranges them chronologically, and goes through them page by page.

There is a legal definition of negligence ("when a doctor has breached his or her duty of care"), but I wanted to know his practical definition of the term. Lang said that if he finds an error that resulted in harm, and the doctor could have avoided it, then, as far as he is concerned, the doctor was negligent.

To most doctors, this is an alarming definition. Given the difficulty of many cases—unclear diagnoses, delicate operations—we all have serious "complications" that might have been avoided. I told Lang about a few patients of mine: a man with severe bleeding after laparoscopic liver surgery, a patient who was left permanently hoarse after thyroid surgery, a woman whose breast cancer I failed to diagnose for months. All were difficult cases. But, in looking back on them, I also now see ways in which I could have done better. Would he sue me? If he could show a jury how I might

THE OWL'S NIGHT

Here is a present
that yesterday doesn't touch.
When we reached
the last of the trees we noticed that we
were no longer able to notice.
When we looked at the trucks
we saw absence heaping up its selected things,
and pouring out its eternal tent around us.

Here is a present
that yesterday doesn't touch.
Silk thread slips between the mulberry trees,
letters on the night's notebook.
Only moths light our boldness
descending to the hollow of strange words:
Was this miserable man my father?
Perhaps I'll consider my situation here. Perhaps
I'll give birth, now, to myself, with myself,
and choose for my name vertical letters.

Here is a present
sitting in time's emptiness staring
at the trace of those who pass on the river's stalk
polishing their flutes with air . . . Perhaps speech
will become transparent, so we'll see windows in it, open.
Perhaps time will hurry, with us
carrying our tomorrow in its luggage.

Here is a present
without time.
He didn't find anyone here, anyone who remembered
how we left the door, a gust of wind. Anyone who remembered
when we fell off yesterday. Yesterday
broke over the floor, shrapnel gathered together
by others, like mirrors for their image, after us.

Here is a present
without place.
Perhaps I'll consider my situation, and scream at
the owl's night: Was that miserable man
my father, who makes me carry the burden of his history?
Perhaps I'll change my name, and choose
my mother's expressions and her customs as they ought
to be: This way she'll be able to joke with me
whenever salt touches my blood. This way she'll be able to
take care of me whenever a nightingale bites my mouth.

Here is a present
fleeting.
Here strangers hang their guns on
the branches of an olive tree, prepare dinner
quickly, from tin cans, and leave
quickly, for their trucks.

—*Mahmoud Darwish*

(*Translated, from the Arabic, by Jeffrey Sacks.*)

have avoided harm, and if the damages were substantial, he said, "I would sue you in a flash." But what if I have a good record among surgeons, with generally excellent outcomes and conscientious care? That wouldn't matter, he said. The only thing that matters is what I did in the case in question.

Lang insists that he is not engaged in a crusade against doctors. He faced three malpractice lawsuits himself when he was a surgeon. One involved an arthroscopy that he performed on a young woman with torn cartilage in her knee from a sports injury. Several years later, he said, she sued because she developed arthritis in the knee—a known, often unavoidable outcome. Against his wishes, the insurer settled with the patient for what Lang called "nuisance money"—five thousand dollars or so—because it was cheaper than fighting the suit in court.

In another case, a manual laborer with a wrist injury that caused numbness in three fingers sued because Lang's attempted repair made the numbness worse and left him unable to work. Lang said that he'd warned the patient that this was a high-risk surgery. When he got in, he found the key nerves encased in a thick scar. Freeing them was exceedingly difficult—"like trying to peel Scotch tape off wallpaper," he said—and some nerve fibres were unavoidably pulled off. But the insurer wasn't certain that it would prevail at trial, and settled for three hundred thousand dollars. Both cases seemed unmerited, and Lang found them as exasperating as any other doctor would.

The third case, however, was the result of a clear error, and although it took place two decades ago, it still bothers him. "I could have done more," he told me. The patient was a man in his sixties whom Lang had scheduled for a knee replacement. A few days before the surgery, the man came to his office complaining of pain in his calf. Lang considered the possibility of a deep-vein thrombosis—a blood clot in the leg—but dismissed it as unlikely and ordered no further testing. The patient did have a D.V.T., though, and when the clot dislodged, two days later, it travelled to his lungs and killed him. Lang's insurer settled the case for about four hundred thousand dollars.

"If I had been on the plaintiff's side, would I have taken that case against me?" he said to me. "Yes."

Being sued was "devastating," Lang recalled. "It's an awful feeling. No physician purposely harms his patient." Yet he insists that, even at the time, he was philosophical about the cases. "Being sued, although it sort of sucks the bottom out of you, you have to understand that it's also the cost of doing business. I mean, everybody at some time in his life is negligent, whether he's a physician, an auto mechanic, or an accountant. Negligence occurs, and that's why you have insurance. If you leave the oven on at home and your house catches fire, you're negligent. It doesn't mean you're a criminal." In his view, the public has a reasonable expectation: if a physician causes someone serious harm from substandard care or an outright mistake, he or she should be held accountable for the consequences.

The cases that Lang faced as a doctor, however, seemed to me to epitomize the malpractice debate. Two of the three lawsuits against him appeared unfounded, and, whatever Lang says now, the cost in money and confidence to our system is nothing to dismiss. Yet one of them concerned a genuine error that cost a man his life. In such cases, what do doctors believe should be done for patients and their families?

Bill Franklin is a physician I know who has practiced at Massachusetts General Hospital, in Boston, for more than forty years. He is an expert in the treatment of severe, life-threatening allergies. He is also a father. Years ago, his son Peter, who was then a second-year student at Boston University School of Medicine, called to say that he was feeling sick. He had sweats, and a cough, and felt exhausted. Bill had him come to his office and looked him over. He didn't find anything, so he had his son get a chest X-ray. Later that day, the radiologist called. "We've got big trouble," he told Bill. The X-rays showed an enormous tumor filling Peter's chest, compressing his lungs from the middle and pushing outward. It was among the

"You just come home and neglect her at night. I'm the one who has to neglect her all day."

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largest the radiologist had encountered.

After he had pulled himself together, Bill Franklin called Peter at home to give him and his young wife the frightening news. They had two children and a small house, with a kitchen that they were in the midst of renovating. Their lives came to a halt. Peter was admitted to the hospital and a biopsy showed that he had Hodgkin's lymphoma. He was put on high-dose radiation therapy, with a beam widened to encompass his chest and neck. Still, Peter was determined to return to school. He scheduled his radiation sessions around his coursework, even after they paralyzed his left diaphragm and damaged his left lung, leaving him unable to breathe normally.

The tumor proved too large and extensive for a radiation cure. Portions of it had continued to grow, and it had spread to two lymph nodes in Peter's lower abdomen. The doctors told his father that it was one of the worst cases they had ever seen. Peter was going to need several months of chemotherapy. It would make him sick and leave him infertile, but, they said, it should work.

Bill Franklin couldn't understand how the tumor had got so large under everyone's eyes. Thinking back on Peter's care over the years, he remembered that four years earlier Peter's wisdom teeth had been removed. The surgery had been performed under general anesthesia, with an overnight stay at M.G.H., and a chest X-ray would have been taken. Franklin had one of the radiologists pull the old X-ray and take a second look. The mass was there, the radiologist told him. What's more, the original radiologist who had reviewed Peter's chest X-ray had seen it. "Further evaluation of this is recommended," the four-year-old report said. But the Franklins had never been told. The oral surgeon and the surgical resident had both written in Peter's chart that the X-ray was normal.

If the tumor had been treated then, Peter would almost certainly have been cured with radiation alone, and with considerably less-toxic doses. Now it seemed unlikely that he'd finish medical school, if he survived at all. Bill Franklin was beside himself. How could this have happened—to one of M.G.H.'s own, no less? How would Peter's wife and children be supported?

Thousands of people in similar circumstances file malpractice lawsuits in order to get answers to such questions. That's not what Bill Franklin wanted to do. The doctors involved in his son's case were colleagues and friends, and he was no fan of the malpractice system. He had himself been sued. He'd had a longtime patient with severe asthma whom he had put on steroids to ease her breathing during a bad spell. Her asthma had improved, but the high doses resulted in a prolonged dementia, and she had to be hospitalized. The lawsuit alleged that Franklin had been negligent in putting her on steroids, given the risks of the medication, and that he was therefore financially responsible for the aftermath. Franklin had been outraged. She'd had a life-threatening problem, and he'd given her the best care he could.

Now, as an M.G.H. staff member, he decided to see the hospital director. He asked for a small investigation into how the mistake had been made and how it might be prevented in the future; he also wanted to secure financial support for Peter's family. The director told him that he couldn't talk to him about the matter. He should get a lawyer, he said. Was there no other way, Franklin wanted to know. There wasn't.

Here's where we in medicine have failed. When something bad happens in the course of care and a patient and family want to know whether it was unavoidable or due to a terrible mistake, where are they to turn? Most people turn first to the doctors involved. But what if they aren't very responsive, or their explanations don't sound quite right? People often call an attorney just to get help in finding out what happened.

"Most people aren't sure what they're coming to me for," Vernon Glenn, the South Carolina trial attorney, told me. "The tipoff is often from nurses saying, 'This was just wrong. This should never have happened.' " The families ask him to have a look at the medical files. If the loss or injury is serious, he has an expert review the files. "More often than you would think, we'll say, 'Here's what happened. We don't think it's a case.' And they'll say, 'At least we know what happened now.' "

Malpractice attorneys are hardly the most impartial assessors of care, but medicine has offered no genuine alternative—because physicians are generally unwilling to take financial responsibility for the consequences of their mistakes. Indeed, the one argument that has per-

suaded many doctors to be more forthright about mistakes is that doing so might make patients less likely to sue.

What would most doctors do if someone close to them was hurt by a medical error? In a recent national survey, physicians and non-physicians were given the following case: A surgeon orders an antibiotic for a sixty-seven-year-old man undergoing surgery, failing to notice that the patient's chart says that he is allergic to the drug. The mistake is not caught until after the antibiotic is given, and, despite every effort, the patient dies as a result. What should be done? Unlike fifty per cent of the public, almost none of the physicians wanted the surgeon to lose his license. Medical care requires that a thousand critical steps go right every day, and none of us would have a license if we were punished every time we faltered. At the same time, fifty-five per cent of the physicians said that they would sue the surgeon for malpractice.

That's what Bill Franklin, with some trepidation, decided to do. Lawyer friends warned him that he might have to leave his position on staff if things didn't go well. He loved the hospital and his practice; Peter's oral surgeon was a friend. But his son had been harmed, and he felt that Peter and his young family were entitled to compensation for all that they had lost and suffered. Peter himself was against suing. He was afraid that a lawsuit might so antagonize his doctors that they would not treat him properly. But he was persuaded to go along with it.

At first, the Franklins were told that no lawyer would take the case. The error had been made four years earlier, and this put it beyond the state's three-year statute of limitations. As in most states at the time, one could not file a civil claim for an action long in the past—never mind that Peter didn't learn about the error until it was too late. Then they found a young Boston trial attorney named Michael Mone, who took the case all the way to the Massachusetts Supreme Court and, in 1980, won a change in the law. Franklin v. Massachusetts General Hospital et al. ruled that such time limits must start with the *discovery* of harm, and the precedent stands today. The change allowed the case to proceed.

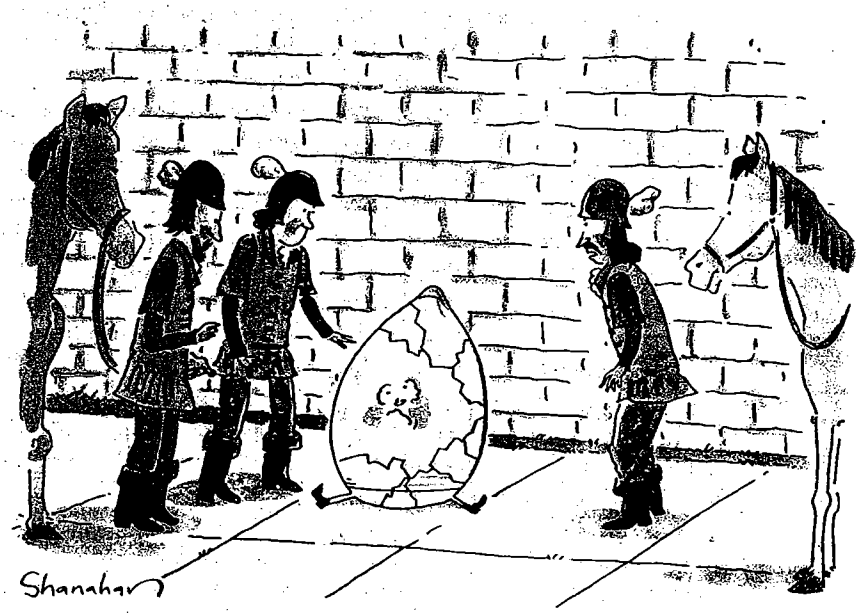
The trial was held in 1983, in the town of Dedham, in the same courthouse where, six decades earlier, the anarchists Sacco and Vanzetti had been convicted of murder. "I don't remember much about the trial—I've blocked it out," Bev Franklin, Peter's mother, says. "But I remember the room. And I remember Michael Mone saying those words we'd been waiting so long to hear: 'Ladies and gentlemen, this young man had a time bomb ticking in his chest. And for four years—*four years*—the doctors did nothing.'" The trial took four days. The jury found in favor of Peter, and awarded him six hundred thousand dollars.

Bill Franklin says that he never experienced any negative repercussions at the hospital. His colleagues seemed to understand, and Peter's doctors did their very best for him. Peter continued to attend medical school. At the end of that long year, after six full cycles of chemotherapy, the lymph nodes in his chest continued to harbor residual cancer. He was given a new chemotherapy regimen, which so weakened his immune system that he almost died of a viral lung infection. He was in the hospital for weeks, and was finally forced to take a leave from school. The virus left him short of breath whenever he did anything more strenuous than climb half a flight of stairs, and with burning nerve pain in his feet. His marriage slowly disintegrated; a disaster can either draw people together or pull them apart, and this one pulled Peter and his wife apart.

Yet Peter survived. He eventually completed medical school, and decided to go into radiology. To everyone's surprise, he was rejected by his top-choice residency programs. A dean at Boston University called the chairman of radiology at one of the programs to find out why. "This guy's a maverick! He's suing doctors!" was the reply. The dean told the chairman Peter's story and then asked, "If this was your son, what would you do?" Peter got in after that. He chose Boston University's program and, when he finished, he was asked to join the staff there. Soon, he was made a division chief. He remarried and is now a fifty-six-year-old expert on orthopedic imaging, with a brush mustache, a graying thatch of hair, and chronic lung and liver troubles from his chemotherapy. Four years ago, he started a teleradiology group that now interprets scans for a hundred and fifty centers across the country. He is also a specialist for professional sports teams, including the San Diego Chargers and the Chicago Bears.

He says that his ordeal has made him exceedingly careful in his work. He has set up a review committee to find and analyze errors. Nonetheless, the single biggest budget item for his group is malpractice insurance. As it happens, the most common kind of malpractice case in the country involves allegations that doctors have made the kind of error that Peter once faced—a missed or delayed diagnosis. I asked him how he felt about being responsible for a lawsuit that had made it easier to sue for such claims. He winced and paused to consider his answer.

"I think the malpractice system has run



"Thank goodness he was wearing a condom."

amok," he finally said. "I don't think that my little experience has anything to do with it—the system is just so rampant with problems. But, if you're damaged, you're damaged. If we screw up, I think we should eat it." Wasn't he contradicting himself? No, he said; the system was the contradiction. It helps few of the people who deserve compensation. His case was unusual, and even that involved a seven-year struggle before all the appeals and challenges were dismissed. At the same time, too many undeserving patients sue, imposing enormous expense and misery. The system, as he sees it, is fundamentally perverse.

The paradox at the heart of medical care is that it works so well, and yet never well enough. It routinely gives people years of health that they otherwise wouldn't have had. Death rates from heart disease have fallen by almost two-thirds since the nineteen-fifties. The survival rate among cancer patients is now almost seventy per cent. A century ago, ten in a hundred newborns and one in a hundred mothers died; today, just seven in a thousand newborns and fewer than one in ten thousand mothers do. But this has required drugs and machines and operations and, most of all, decisions that can as easily damage people as save them. It's precisely because of our enormous success that people are bound to wonder what went wrong when we fail.

As a surgeon, I will perform about four hundred operations in the next year—everything from emergency repair of strangulated groin hernias to removal of thyroid cancers. For about two per cent of patients—for eight, maybe ten, of them—things will not go well. They will develop life-threatening bleeding. Or I will damage a critical nerve. Or I will make a wrong diagnosis. Whatever Hippocrates may have said, sometimes we do harm. Studies of serious complications find that usually about half are unavoidable; and, in such cases, I might be able to find some small solace in knowing this. But in the other half I will simply have done something wrong, and my mistake may change someone's life forever. Society is still searching for an adequate way to understand these instances. Are doctors villains if we make mistakes? No, because then we all are. But we are tainted by the harm we cause.

I watch a lot of baseball, and I often find myself thinking about the third baseman's job. In a season, a third baseman will have about as many chances to throw a man out as I will to operate on people. The very best (players like Mike Lowell, Hank Blalock, and Bill Mueller) do this perfectly almost every time. But two per cent of the time even they drop the ball or throw it over the first baseman's head. No one playing a full season fails to make stupid errors. When he does, the fans hoot and jeer. If the player's error costs the game, the hooting will turn to yelling. Imagine, though, that if every time Bill Mueller threw and missed it cost or damaged the life of someone you cared about. One error leaves an old man with a tracheostomy; another puts a young woman in a wheelchair; another leaves a child brain-damaged for the rest of her days. His teammates would still commiserate, but the rest of us? Some will want to rush the field howling for Mueller's blood. Others will see all the saves he's made and forgive him his failures. Nobody, though, would see him in quite the same way again. And nobody would be happy to have the game go on as if nothing had happened. We'd want him to show sorrow, to take responsibility. We'd want the people he injured to be helped in a meaningful way.

This is our situation in medicine, and litigation has proved to be a singularly unsatisfactory solution. It is expensive, drawn-out, and painfully adversarial. It also helps very few people. Ninety-eight per cent of families that are hurt by medical errors don't sue. They are unable to find lawyers who think they would make good plaintiffs, or they are simply too daunted. Of those who do sue, most will lose. In the end, fewer than one in a hundred deserving families receive any money. The rest get nothing: no help, not even an apology.

There is an alternative approach, which was developed for people who have been injured by vaccines. Vaccines protect tens of millions of children, but every year one in ten thousand or so is harmed by side effects. Between 1980 and 1986, personal-injury lawyers filed damage claims valued at more than $3.5 billion against doctors and manufacturers. When they began to win, vaccine prices jumped and some manufacturers got out of the business. Vaccine stockpiles dwindled. Shortages appeared. So Congress stepped in. Vaccines now carry a seventy-five-cent surcharge (about fifteen per cent of total costs), which goes into a fund for children who are injured by them. The program does not waste effort trying to sort those who are injured through negligence from those who are injured through bad luck. An expert panel has enumerated the known injuries from vaccines, and, if you have one, the fund provides compensation for medical and other expenses. If you're not satisfied, you can sue in court. But few have. Since 1988, the program has paid out a total of $1.5 billion to injured patients. Because these costs are predictable and evenly distributed, vaccine manufacturers have not only returned to the market but produced new vaccines, including ones against hepatitis and chicken pox. The program also makes the data on manufacturers public—whereas legal settlements in medical cases are virtually always sealed from view. The system has flaws, but it has helped far more people than the courts would have.

The central problem with any system remotely as fair and efficient as this one is that, applied more broadly, it would be overwhelmed with cases. Even if each doctor had just one injured and deserving patient a year (a highly optimistic assumption), complete compensation would exceed the cost of providing universal health coverage in America. To be practical, the system would have to have firm and perhaps arbitrary-seeming limits on eligibility as well as on compensation. New Zealand has settled for a system like this. It has offered compensation for medical injuries that are rare (occurring in less than one per cent of cases) and severe (resulting in death or prolonged disability). As with America's vaccine fund, there is now no attempt to sort the victims of error from the victims of bad luck. For those who qualify, the program pays for lost income, medical needs, and, if there's a

permanent disability, an additional lump sum for the suffering endured. Payouts are made within nine months of filing. There are no mammoth, random windfalls, as there are in our system, but the public sees the amounts as reasonable, and there's no clamor to send these cases back to the courts.

The one defense of our malpractice system is that it has civilized the passions that arise when a doctor has done a devastating wrong. It may not be a rational system, but it does give people with the most heartbreaking injuries a means to fight. Every once in a while, it extracts enough money from a doctor to provide not just compensation but the satisfaction of a resounding punishment, fair or not. And although it does nothing for most plaintiffs, people whose loved ones have suffered complications do not then riot in hospital hallways, as clans have done in some countries.

We are in the midst of a flurry of efforts to "reform" our malpractice system. More than half of the states have enacted limits on the amount of money that juries can award someone who has been injured by a doctor, and Congress is considering a federal cap of two hundred and fifty thousand dollars on noneconomic damage awards. But none of this will make the system fairer or less frustrating for either doctors or patients. It simply puts an arbitrary limit on payments so that doctors' insurance premiums might, at least temporarily, be more affordable.

Whether a cap is enacted or not, I will pay at least half a million dollars in premiums in the next ten years. I would much rather see that money placed in an insurance fund for my patients who suffer complications from my care, even if the fund cannot be as generous as we'd like it to be. There's no real chance of this happening, though. Instead, we're forced to make do with what we have.

In Courtroom 7A of the Edward J. Sullivan Courthouse in Cambridge, after seven years of litigation; more than twenty thousand dollars in payments to medical experts; the procurement of bailiffs, court reporters, a judge, and two-hundred-and-fifty-dollar-an-hour defense attorneys; time on an overloaded court schedule; and the commandeered lives of fourteen jurors for almost two weeks, Barry Lang stood behind a lectern to make his closing argument on behalf of the estate of Barbara Stanley. "Dr. Reed is not a criminal," he told the jury. "But he was negligent, and his negligence was a key factor in causing Barbara Stanley's death."

It was not an open-and-shut case. Even in Lang's account, Reed was faced with a difficult medical problem: pathologists who contradicted each other about whether the first biopsy showed skin cancer; a second biopsy that failed to settle the issue; a distrusting patient who was angry with him, first for doing too much and then for doing too little. But, for the first time during the trial, Lang stopped his constant pacing. He spoke slowly and plainly. The story he told seemed lucid and coherent. In that fateful telephone conversation, he argued, Reed failed to offer Stanley the option of a more radical skin excision that might have saved her life.

Judge Kenneth Fishman then gave the jury its instructions. Stanley's son, Ernie Browe, sat in the front row of the gallery on one side, and Kenneth Reed sat a row back on the other. Both looked drained. When the judge finished, it was late in the afternoon, and everyone was dismissed for the day.

The next morning, the jury began its deliberations. Just before noon, the court officer announced that a verdict had been reached: Dr. Kenneth Reed was *not* negligent in his care of Barbara Stanley. Stanley's son slumped in his seat, looked down at the floor, and did not move for a long while. Barry Lang promptly stood up to put away his papers. "It was a tough case," he said. Reed was not there to hear the verdict. He had been seeing patients in his office all morning. ♦

THURSDAY-MORNING QUARTERBACK

United States General Accounting Office

GAO

Report to Congressional Requesters

June 2003

MEDICAL MALPRACTICE INSURANCE

Multiple Factors Have Contributed to Increased Premium Rates

GAO-03-702

Contents

Abbreviations

AMA	American Medical Association
CAP/MPT	Cooperative of American Physicians/ Mutual Protection Trust
CDI	California Department of Insurance
CPI	Consumer Price Index
DOI	Department of Insurance
FMA	Florida Medical Association
FPIC	First Professionals Insurance Company
JUA	Joint Underwriting Association
MACM	Medical Assurance Company of Mississippi
MIEC	Medical Insurance Exchange of California
MIIX	Medical Inter-Insurance Exchange
MLM	Medical Liability Monitor
MMIC	Midwest Medical Insurance Company
NAIC	National Association of Insurance Commissioners
NMIC	Nevada Mutual Insurance Company
NSCL	National Conference of State Legislatures
PIAA	Physician Insurers Association of America
PID	Pennsylvania Insurance Department
PMSLIC	Pennsylvania Medical Society Liability Insurance Company
SCPIE	Southern California Physicians Insurance Exchange
TMA	Texas Medical Association
TMLT	Texas Medical Liability Trust

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, D.C. 20548

June 27, 2003

Congressional Requesters

Since the late 1990s, premium rates for medical malpractice insurance have increased dramatically for physicians in certain specialties and states.[1] These increases have raised concerns that many physicians will no longer be able to afford malpractice insurance and may be forced to curtail or discontinue providing services. These concerns have been heightened as some large insurers, faced with declining profits, have either stopped selling medical malpractice insurance or reduced their operations in a number of states. But disagreement exists over the causes of increased premium rates and what, if anything, should be done in response to the current situation. For example, some have argued for tort reform as a means of lowering certain awards in medical malpractice lawsuits and advocate legislative changes at the state level designed to place a cap on such awards. Others have argued for medical reforms as a means of reducing the incidence of medical malpractice or for insurance reforms as a way to moderate premium rate increases.

In response to these concerns, you asked us to determine the reasons behind the recent increases in some medical malpractice insurance rates.[2] Our specific objectives were to (1) describe the extent of the increases in medical malpractice insurance rates, (2) analyze the factors that have contributed to the increases, and (3) identify changes in the medical malpractice insurance market that may make the current period of rising premium rates different from earlier periods of rate hikes. We will also

[1]Medical malpractice lawsuits are generally based on tort law, which includes both statutes and court decisions. A tort is a wrongful act or omission by an individual that causes harm to another individual. Typically, a malpractice tort would be based on the claim that the health care provider was negligent, had failed to meet the acceptable standard of care owed to the patient, and thus had caused injury to the patient.

[2]Some health care provider associations and others have expressed concern over medical malpractice insurance premium rates for nursing homes and hospitals, but this topic is outside the scope of our report.

issue a related report that describes the effect of rising malpractice premiums on access to health care and related issues.[3]

Recognizing that the medical malpractice market can vary considerably across states, as part of our review we judgmentally selected a sample of seven states—California, Florida, Minnesota, Mississippi, Nevada, Pennsylvania, and Texas—in order to conduct a more in depth review in each of those states. Our sample contains a mix of states based on the following characteristics: extent of any recent increases in premium rates, status as a "crisis state" according to the American Medical Association, presence of caps on noneconomic damages, state population, and aggregate loss ratios for medical malpractice insurers within the state. Except where noted otherwise, our analyses were limited to these states. Within each state, we spoke to one or both of the two largest and currently active medical malpractice insurers,[4] the state insurance regulator, and the state association of trial attorneys. In six states, we spoke to the state medical association, and in five states, we spoke to the state hospital association. To examine the extent of increases in medical malpractice insurance rates in our sample states, we reviewed annual survey data collected by a private company.[5] To analyze the factors contributing to the premium rate increases in our sample states as well as nationally, we reviewed data provided by medical malpractice insurers to state insurance regulators, the National Association of Insurance Commissioners (NAIC),[6]

[3]For other related GAO products, see the list at the end of this report.

[4]We determined the largest insurers in 2002 based on premiums written for calendar year 2001.

[5]The *Medical Liability Monitor* annually surveys providers of medical malpractice insurance to obtain their premium base rates for three different specialties: internal medicine, general surgery, and obstetrics/gynecology.

[6]NAIC is a voluntary association of the heads of each state insurance department, the District of Columbia, and four U.S. territories. NAIC assists state insurance regulators by providing guidance, model (or recommended) laws and guidelines, and information-sharing tools.

and A.M. Best[7] on insurers within our sample states as well as the 15 largest writers of medical malpractice insurance nationally in 2001 (whose combined market share nationally was approximately 64.3 percent). We also spoke with officials from professional actuarial and insurance organizations and national trial attorney and medical associations and reviewed their testimonies before Congress. In addition, we analyzed data on medical malpractice claims collected by insurers, state regulators, and others in our sample states as well as nationally.

To analyze how the national medical malpractice insurance market has changed since previous periods of rising premium rates, we reviewed studies published by NAIC, reviewed state insurance regulations and tort laws, and spoke to the insurers and state insurance departments in our sample states. We also spoke to officials from national professional actuarial, legal, and insurance organizations. Appendix I contains a more detailed description of our methodology.

Results in Brief

Since 1999, medical malpractice premium rates for physicians in some states have increased dramatically. Among the seven states that we analyzed, we found that both the extent of the increases and the premium levels varied greatly not only from state to state but across medical specialties and even among areas within states. For example, the largest writer of medical malpractice insurance in Florida increased premium rates for general surgeons in Dade County by approximately 75 percent from 1999 to 2002, while the largest insurer in Minnesota increased premium rates for the same specialty by about 2 percent over the same period. The resulting 2002 premium rate quoted by the insurer in Florida was $174,300 a year, more than 17 times the $10,140 premium rate quoted by the insurer in Minnesota. In addition, the Florida insurer quoted a rate for general surgeons outside Dade County of $89,000 a year for the same coverage, approximately 51 percent of the rate it quoted inside Dade County.

[7]A.M. Best is a rating agency that provides current or prospective investors, creditors, and policyholders with independent analyses of insurance companies' overall financial strength, creditworthiness, ability to pay claims, and company activities.

Multiple factors have contributed to the recent increases in medical malpractice premium rates in the seven states we analyzed. First, since 1998 insurers' losses on medical malpractice claims have increased rapidly in some states. For example, in Mississippi the amount insurers paid annually on medical malpractice claims, or paid losses,[8] increased by approximately 142 percent from 1998 to 2001 after adjusting for inflation.[9] We found that the increased losses appeared to be the greatest contributor to increased premium rates, but a lack of comprehensive data at the national and state levels on insurers' medical malpractice claims and the associated losses prevented us from fully analyzing the composition and causes of those losses. For example, data that would have allowed us to analyze claim severity at the insurer level on a state-by-state basis or determine how losses were broken down between economic and noneconomic damages were unavailable. Second, from 1998 through 2001 medical malpractice insurers experienced decreases in their investment income[10] as interest rates fell on the bonds that generally make up around 80 percent of these insurers' investment portfolios. While almost no medical malpractice insurers experienced net losses on their investment portfolios over this period, a decrease in investment income meant that income from insurance premiums had to cover a larger share of insurers' costs. Third, during the 1990s insurers competed vigorously for medical malpractice business, and several factors, including high investment returns, permitted them to offer prices that in hindsight, for some insurers, did not completely cover their ultimate losses on that business. As a result of this, some companies became insolvent or voluntarily left the market, reducing the downward competitive pressure on premium rates that had existed through the 1990s. Fourth, beginning in 2001 reinsurance rates for medical malpractice insurers also increased more rapidly than they had in

[8]Paid losses are the cash payments insurers made in a given period, such as a calendar year, on claims reported during both the current and previous years. Incurred losses include the insurer's expected costs for claims reported in that year and adjustments to the expected costs for claims reported in earlier years. In Mississippi, insurers' incurred losses increased approximately 197.5 percent from 1998 to 2001, after adjusting for inflation.

[9]We adjusted for inflation using the consumer price index (CPI). The CPI is a measure of the average change over time in the prices consumers pay for a basket of goods and services. This report uses the CPI-U, which is meant to reflect the spending patterns of urban consumers and covers about 87 percent of the total U.S. population.

[10]In general, state insurance regulators require insurers to reduce their requested premium rates in line with expected investment income. That is, the higher the expected income from investments, the more premium rates must be reduced.

the past, raising insurers' overall costs.[11] In combination, all of these factors contribute to the movement of the medical malpractice insurance market through cycles of hard and soft markets–similar to those experienced by the property-casualty insurance market as a whole–during which premium rates fluctuate.[12] Cycles in the medical malpractice market tend to be more extreme than in other insurance markets because of the longer period of time required to resolve medical malpractice claims, and factors such as changes in investment income and reduced competition can exacerbate the fluctuations.

While the medical malpractice insurance market as a whole had experienced periods of rapidly increasing premium rates during previous hard markets in the mid-1970s and mid-1980s, the market has changed considerably since then. These changes are largely the result of actions insurers, health care providers, and states have taken to address increasing premium rates. Beginning in the 1970s and 1980s, insurers began selling "claims-made" rather than "occurrence-based" policies,[13] enabling insurers to better predict losses for a particular year. Also in the 1970s, physicians, facing increasing premium rates and the departure of some insurers, began to form mutual nonprofit insurance companies. Such companies, which may have some cost and other advantages over commercial insurers, now comprise a significant portion of the medical malpractice insurance market. More recently, an increasing number of large hospitals and groups of hospitals or physicians have left the traditional commercial insurance market and begun to insure themselves in a variety of ways—for example, by self-insuring. While such arrangements can save money on administrative costs, hospitals and physicians insured through these arrangements assume greater financial responsibility for malpractice claims than they would under traditional insurance arrangements and thus may face a greater risk of insolvency. Finally, since periods of increasing

[11]Reinsurance is insurance for insurance companies, which insurance companies routinely use as a way to spread the risk associated with their insurance policies.

[12]Some industry officials have characterized hard markets as periods of rapidly rising premium rates, tightened underwriting standards, narrowed coverage, and the withdrawal of insurers from certain markets. Soft markets are characterized by relatively flat or slow-rising premium rates, less stringent underwriting standards, expanded coverage and strong competition among insurers.

[13]Claims-made policies cover claims reported during the year in which the policy is in effect. Occurrence-based policies cover claims arising out of events that occurred but may not have been reported during the year in which the policy was in effect. Most policies sold today are claims-made policies.

premium rates during the mid-1970s and mid-1980s, all states passed at least some laws designed to reduce medical malpractice premium rates. Some of these laws are designed to decrease insurers' losses on medical malpractice claims, while others are designed to more tightly control the premium rates insurers can charge. These changes make it difficult to predict how medical malpractice premiums might behave during future hard and soft markets.

This report includes a matter that Congress may want to consider as it looks for ways to improve the ability of Congress, state insurance regulators, and others to analyze the current and future medical malpractice insurance markets. Specifically, Congress may want to consider encouraging NAIC and state insurance regulators to identify and collect additional data necessary to evaluate the frequency,[14] severity,[15] and causes of losses on medical malpractice claims.

We received comments on a draft of this report from NAIC's Director of Research. The Director generally agreed with the report's findings and matters for congressional consideration, and provided technical comments that we have incorporated as appropriate. The Director's comments are discussed in greater detail at the end of this letter.

Background

Nearly all health care providers, such as physicians and hospitals, purchase insurance that covers expenses related to medical malpractice claims, including payments to claimants and legal expenses. The most common physician policies provide $1 million of coverage per incident and $3 million of coverage per year. Today the primary sellers of physician medical malpractice insurance are the physician-owned and/or operated insurance companies that, according to the Physician Insurers Association of America, insure approximately 60 percent of all physicians in private practice in the United States. Other health care providers may obtain coverage through commercial insurance companies, mutual coverage arrangements, or state-run insurance programs, or may self-insure (take responsibility for claims themselves). Most medical malpractice insurance policies offer claims-made coverage, which covers claims reported during

[14]Claim frequency is the number of claims per exposure unit, such as a single general practitioner.

[15]Claim severity is the average loss per claim.

the year in which the policy is in effect. A small and declining number of policies offer occurrence coverage, which covers all claims arising out of events that occurred during the year in which the policy was in effect.

Medical malpractice insurance operates much like other types of insurance, with insurers collecting premiums from policyholders in exchange for an agreement to defend and pay future claims within the limits set by the policy. Insurers invest the premiums they collect and use the income from those investments to reduce the amount of premium income that would have been required otherwise. Claims against a policyholder are recorded as expenses, or incurred losses, which are equal to the amount paid on those claims as well as the insurer's estimate of future losses on those same claims. The liability associated with the portion of these incurred losses that have not yet been paid by the insurer is collectively known as the insurer's loss reserve. In order to maintain financial soundness, insurers must maintain assets in excess of total liabilities—including loss reserves and reserves for premiums received but not yet earned[16]—to make up what is known as the insurer's surplus. State insurance departments monitor insurers' solvency by tracking, among other measures, the ratio of total annual premiums to this surplus. Medical malpractice insurers generally attempt to keep their surplus approximately equal to their annual premium income.

Medical malpractice insurers establish premium base rates for particular medical specialties within a state and sometimes for particular geographic regions within a state. Insurers may also offer discounts or add surcharges for the particular characteristics of policyholders, such as claim histories or whether they participate in risk-management programs. The premium rates are based on anticipated losses on claims and related expenses, expected investment income, the need to build a surplus, and, for for-profit insurers, the desire to earn a reasonable profit for shareholders. In most states the insurance regulators have the authority to approve or deny proposed changes to premium rates.

[16]Insurers collect premiums in advance for coverage during a future period of time, and as that period of time passes, those premiums are "earned." Premiums related to periods of time yet to pass are considered "unearned" and are a liability on the books of the insurer.

For several reasons, accurately predicting losses on medical malpractice claims is difficult. First, according to a national insurer association we spoke with, most medical malpractice claims take an average of more than 5 years to resolve, including discovering the malpractice, filing a claim, determining (through settlement or trial) payment responsibilities, if any, and paying the claim.[17] In addition, some claims may not be resolved for as long as 8 to 10 years. As a result, insurers often must estimate costs years in advance. Second, the range of potential losses is wide. Actuaries we spoke with told us that individual claims with similar characteristics can result in very different losses for the insurer, making it difficult to predict the ultimate cost of any single claim. Third, the predictive value of historical data is further limited by the often small pool of relevant policyholders. For example, a relevant pool of policyholders would be physicians practicing a particular specialty within a specific state and perhaps within a specific geographic area within that state. In smaller states, and for some of the less common but more risky specialties, this pool could be very small and provide only a limited amount of data that could be used to estimate future costs.

Medical malpractice insurance is regulated by state insurance departments and subject to state laws. That is, insurers selling medical malpractice insurance in a particular state are subject to that state's regulations for their operations within that state, and all claims within that state are subject to that state's tort laws. Insurance regulations can vary across states, creating differences in the way insurance rates are regulated. For example, one state insurance regulator we spoke with essentially let the insurance market determine appropriate rates, while another had an increased level of review, including approving specific company rates on a case-by-case basis. NAIC assists state insurance regulators in developing these regulations by providing guidance, model (or recommended) laws and guidelines, and information-sharing tools.

In response to concerns over rising premium rates, physicians, medical associations, and insurers have pushed for state and federal legislation that would, among other things, limit the amount of damages paid out on medical malpractice claims. A few states have passed legislation with such limitations over the past several years, and federal legislation is pending. On March 13, 2003, the House of Representatives passed the Help Efficient,

[17]Estimates of some individual insurers we spoke with ranged from around 3 years to over 5 years.

Accessible Low-Cost, Timely Healthcare (HEALTH) Act of 2003, which includes, among other things, a limit on certain types of damages in medical malpractice claims. On March 12, 2003, a similar bill of the same name was introduced in the Senate, but as of June 2003, no additional action had been taken.

Both the Extent of Increases in Medical Malpractice Premium Rates and the Rates Themselves Varied across Specialties and States

Beginning in 1999 and 2000, medical malpractice insurers in our seven sample states increased their premium rates[18] for the physician specialties of general surgery, internal medicine, and obstetrics/gynecology faster than they had since at least 1992. These specialties were the only ones for which data were available, and 1992 was the earliest year for which we could obtain comprehensive survey data.[19] However, both the extent of these changes and the level of the premium rates insurers charged varied greatly across medical specialties, states, and even areas within states. From 1999 through 2002, one large insurer raised rates more for internal medicine than for general surgery, while another raised rates 12 times more for general surgery than for internal medicine. Changes in premium base rates among some of the largest insurers in each state ranged from a reduction of about 9 percent for obstetricians and gynecologists insured by one California company to an increase of almost 170 percent for doctors in the

[18]In this report, premium rates are the base rates insurers submit to state regulators along with a schedule of potential deductions or additions related to the particular characteristics of policyholders. The actual premium rate insurers charge individual policyholders varies from the base rate. We could not determine the extent to which the actual premium rates charged varied from the base rates, but among some of the insurers we spoke with, the actual premium rates ranged from about 50 to 100 percent of the base rates over the past several years. Some market observers and participants also told us that the discounts have decreased over the last several years.

[19]All premium rate information in this report is based on survey data collected by the *Medical Liability Monitor*, a newsletter that, among other things, publishes the results of its annual surveys of the premium rates of medical malpractice insurers. Comprehensive survey data was available for years 1992 to 2002. The surveys, which are sent to medical malpractice insurers, request premium rates for each state or smaller region for a standard amount of coverage in three specialties—internal medicine, general surgery, and obstetrics/gynecology. The *Medical Liability Monitor* selected these in order to have data representative of low-, medium-, and high-risk specialties. In the survey results for 1999 through 2002, all 50 states were represented in the rate information that companies provided. The premium rates collected in the survey are base rates that do not reflect the discounts or the additional amounts insurers charge, so actual premium rates can vary from the premium rates given in the survey.

same specialty in one area of Pennsylvania.[20] At the same time, premium rates for the same amount of coverage for the same medical specialty varied by a factor of as much as 17 among states—that is, the rate in one state was 17 times higher than the rate in a different state.

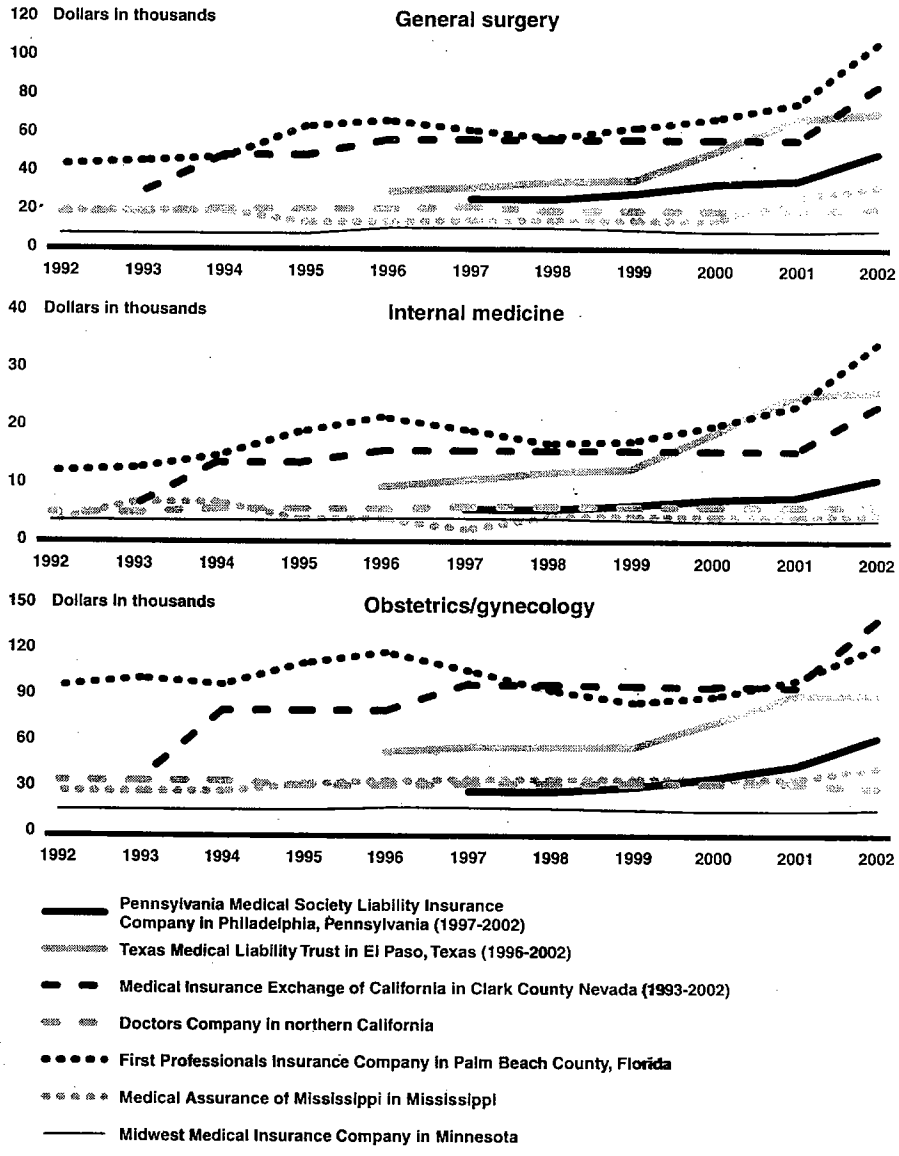
Premium Rates Have Grown Rapidly since 1998 for Certain Specialties in Some States

As figure 1 shows, premium base rates varied across our seven sample states from 1992 to 1998 but for most insurers remained relatively flat. Beginning in 1999 and 2000, however, most of these insurers began increasing their rates in larger increments. Many of the increases were dramatic, ranging as high as 165 percent, although some rates remained flat. Figure 2 shows the percentage increase in premium rates for the largest insurers in our seven sample states from 1999 through 2002.[21] In the Harrisburg area of Pennsylvania, for example, the largest insurer increased premium base rates dramatically for three specialties: obstetrics/gynecology (165 percent), general surgery (130 percent), and internal medicine (130 percent). At the same time, the consumer price index (CPI) increased by 10 percent. However, in California and Minnesota, premium base rates for the same specialties rose between 5 and 21 percent and in some cases fell slightly. The variations in the changes in premium base rates among our sample states appears to be consistent with the changes in states outside our sample, with insurers in some states raising premium rates rapidly after 1999 and insurers in other states raising them very little.

[20]In this report, premium rates shown for Pennsylvania include a surcharge for a mandatory professional liability catastrophe loss fund. Policies purchased from an insurer provide coverage up to a specific amount, and the loss fund then provides additional coverage. The amount required to be covered by insurers has been increasing and the amount covered by the loss fund has been decreasing. In 2002, insurers covered the first $500,000 of any claim, up to an annual limit of $1.5 million, while the loss fund covered an additional $400,000 per claim, up to an annual limit of $1.2 million.

[21]We determined the largest insurers in each of our seven sample states based on premiums written in 2001.

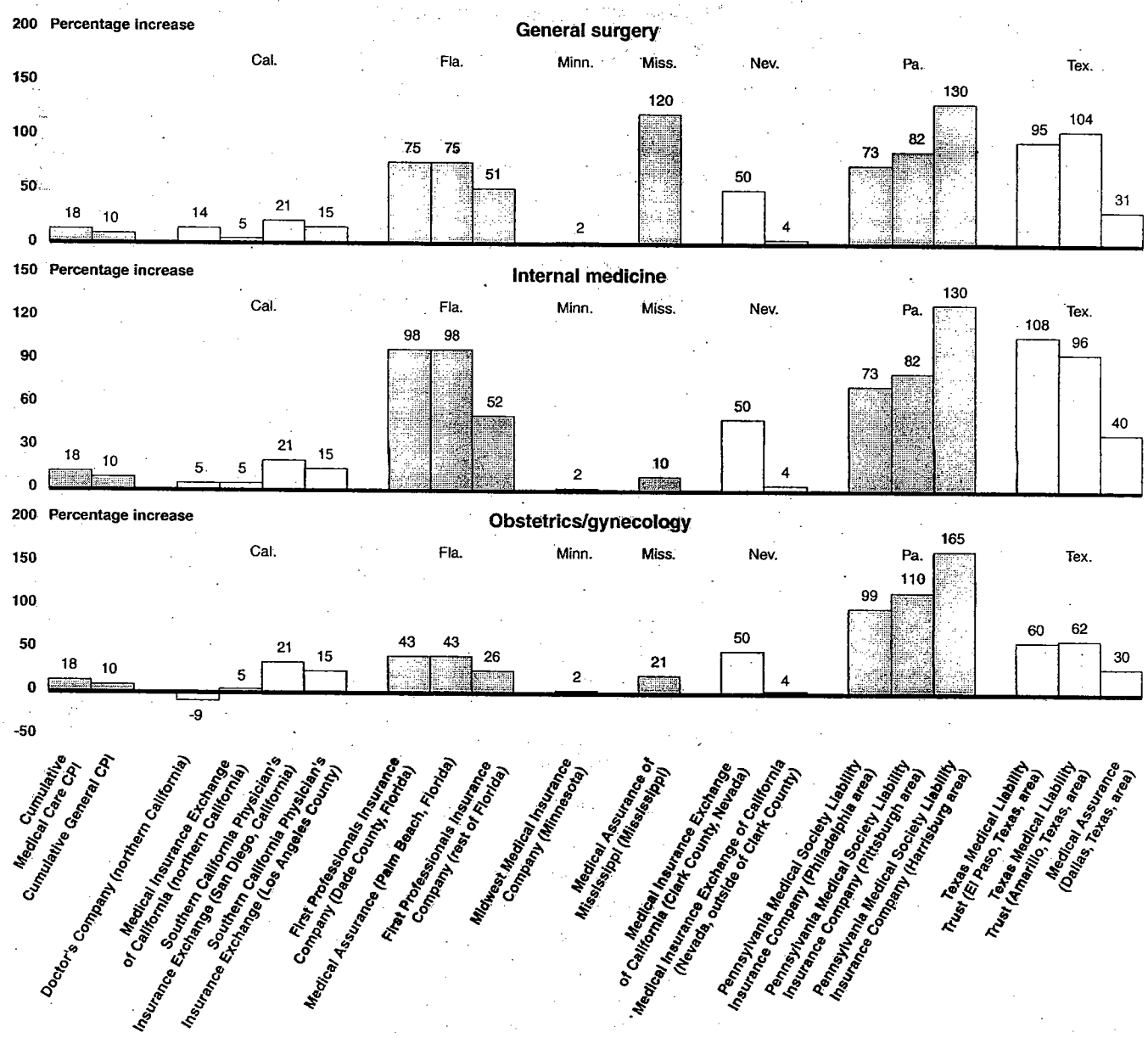
Figure 1: Premium Base Rates of the Largest Insurers in Seven Selected States for Three Medical Specialties, 1992–2002



Source: GAO analysis of annual surveys by the *Medical Liability Monitor.*

Note: Premium rates shown are annual premium rates for a claims-made policy with a cap of $1 million per incident and $3 million per year.

Figure 2: Percentage Changes in Premium Base Rates of the Largest Medical Malpractice Insurers in Seven Selected States for Three Medical Specialties, 1999–2002



Source: GAO analysis of annual surveys by the *Medical Liability Monitor.*

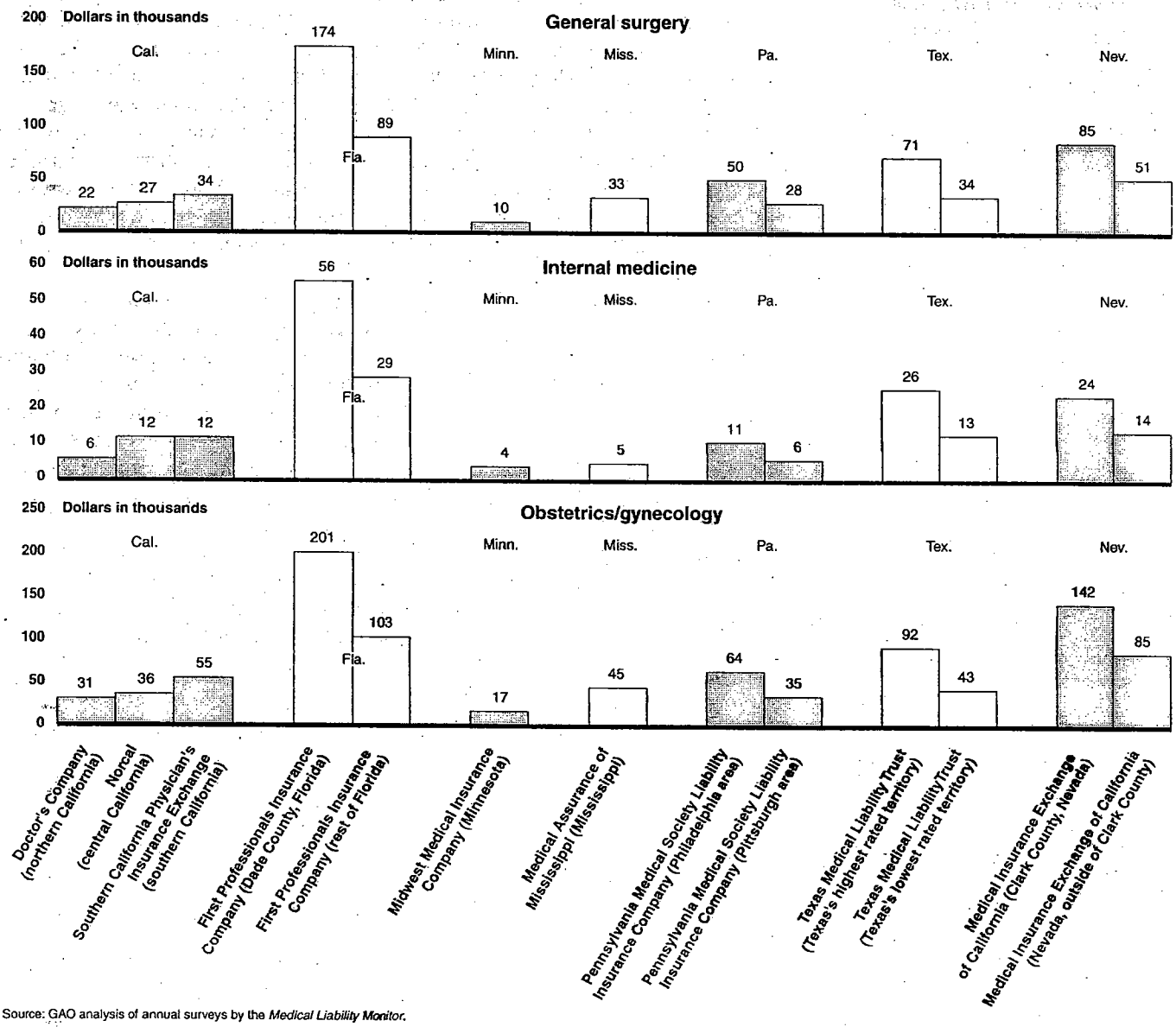
The Level of Premium Rates Also Varied across Specialties and States

We found that premium rates quoted by insurers in our seven sample states varied across medical specialties and states. According to some of the insurers and actuaries we spoke with, the differences in rates reflect the costs associated with medical malpractice claims against physicians in particular specialties. Specialties with a high risk of large or frequent losses on medical malpractice claims will have higher premium rates. For example, in 2002 the largest medical malpractice insurer in Texas quoted a base rate for the same level of coverage of $92,000 to obstetricians and gynecologists, $71,000 to general surgeons, and $26,000 to internists. Figure 3 shows the premium rates quoted by the largest medical malpractice insurers in our sample states for these three specialties.[22]

Premium rates quoted by insurers in our seven sample states for the same medical specialty also varied across states and geographic areas within states (see fig. 3). Some of the insurers and actuaries we spoke with told us that these variations also reflect differences in insurers' loss experiences in those venues. As figure 3 shows, the largest insurer in Florida quoted a premium base rate of $201,000 for obstetricians and gynecologists in Dade County, while the largest insurer in California quoted a premium based rate of $36,000 for similar physicians in northern California. Within Florida, the same large insurer quoted a premium base rate of $103,000 for obstetricians and gynecologists outside of Dade County—approximately 51 percent of the Dade County rate. Within Pennsylvania, the largest insurer quoted a premium base rate of $64,000 for doctors in Philadelphia—approximately 83 percent more than the rate it quoted outside the city.

[22]Not all of the insurers included in figs. 3 and 4 are the same, as data that would have allowed us to complete the same analyses for all of the insurers was not available.

Figure 3: 2002 Medical Malpractice Insurance Premium Base Rates of the Largest Insurers in Seven Selected States for Three Medical Specialties



Source: GAO analysis of annual surveys by the *Medical Liability Monitor*.

Note: Premium rates shown are annual premium base rates for coverage under a claims-made policy with a cap of $1 million per incident and $3 million per year.

Multiple Factors Have Contributed to the Increases in Medical Malpractice Premium Rates

Insurers' losses, declines in investment income, a less competitive climate, and climbing reinsurance rates have all contributed to rising premium rates. First, among our seven sample states, insurers' losses have increased rapidly in some states, increasing the amount that insurers expect to pay out on future claims. Second, on the national level insurers' investment income has decreased, so that insurance companies must increasingly rely on premiums to cover costs. Third, some large medical malpractice insurers have left the market in some states because selling policies was no longer profitable, reducing the downward competitive pressure on premium rates that existed through most of the 1990s. Last, reinsurance rates for some medical malpractice insurers in our seven sample states have increased substantially, increasing insurers' overall costs. In combination, all the factors affecting premium rates and the availability of medical malpractice insurance contribute to the medical malpractice insurance cycle of hard and soft markets. While predicting the length, size and turning points of a cycle may be impossible, it is clear that the relatively long period of time required to resolve medical malpractice claims makes the cycles more extreme in this market than in other insurance markets.

Increased Losses on Claims Are the Primary Contributor to Higher Medical Malpractice Premium Rates

Like premium increases, annual paid losses and incurred losses for the national medical malpractice insurance market began to rise more rapidly beginning in 1998.[23] After adjusting for inflation, we found that the average annual increase in paid losses from 1988 to 1997 was approximately 3.0 percent but that this rate rose to 8.2 percent from 1998 through 2001. Inflation-adjusted incurred losses decreased by an average annual rate of 3.7 percent from 1988 to 1997 but increased by 18.7 percent from 1998 to 2001. Figure 4 shows paid and incurred losses for the national medical malpractice market from 1975 to 2001, adjusted for inflation.

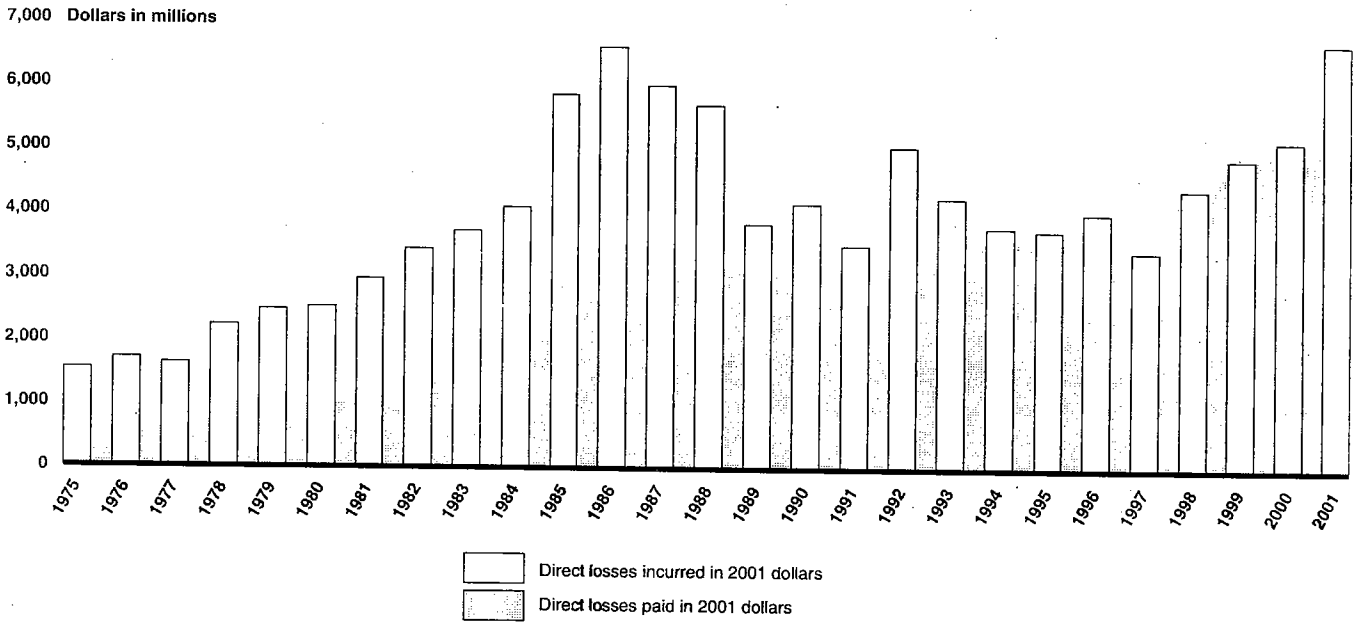
[23]Over the past several years, some large medical malpractice insurers in some states have become insolvent. Such insolvencies may have caused aggregate paid losses in those states to be understated to an unknown extent, because while the insurer may still be paying medical malpractice claims, they may no longer be reporting those payments to NAIC or state regulators.

Paid and incurred losses give different pictures of an insurer's loss experience, and examining both can help provide a better understanding of an insurer's losses.[24] Paid losses are the cash payments an insurer makes in a given year, irrespective of the year in which the claim giving rise to the payment occurred or was reported. Most payments made in any given year are for claims that were reported in previous years. In contrast, incurred losses in any single year reflect an insurer's expectations of the amounts that will be paid on claims reported in that year. Incurred losses for a given year will also reflect any adjustments an insurer makes to the expected amounts that must be paid out on claims reported during previous years. That is, as more information becomes available on a particular claim, the insurer may find that the original estimate was too high or too low and must make an adjustment. If the original estimate was too high, the adjustment will decrease incurred losses, but if the original estimate was too low, the adjustment will increase them.

Incurred losses are the largest component of medical malpractice insurers' costs. For the 15 largest medical malpractice insurers in 2001—whose combined market share nationally was approximately 64.3 percent—incurred losses (including both payments to plaintiffs to resolve claims and the costs associated with defending claims) comprised, on average, around 78 percent of the insurers' total expenses. Because insurers base their premium rates on their expected costs, their anticipated losses will therefore be the primary determinant of premium rates.

[24]According to at least one insurer, the best measure of the results from policies may be the ultimate paid losses on the claims reported that year, which insurers could compare to the premiums charged for the policies in question. However, as paid losses are not entirely known for at least 3 to 5 years after they claims are reported, such information is not completely available for the years 1998 through 2002.

Figure 4: Inflation-Adjusted Paid and Incurred Losses for the National Medical Malpractice Insurance Market, 1975–2001 (Using the CPI, in 2001 Dollars)

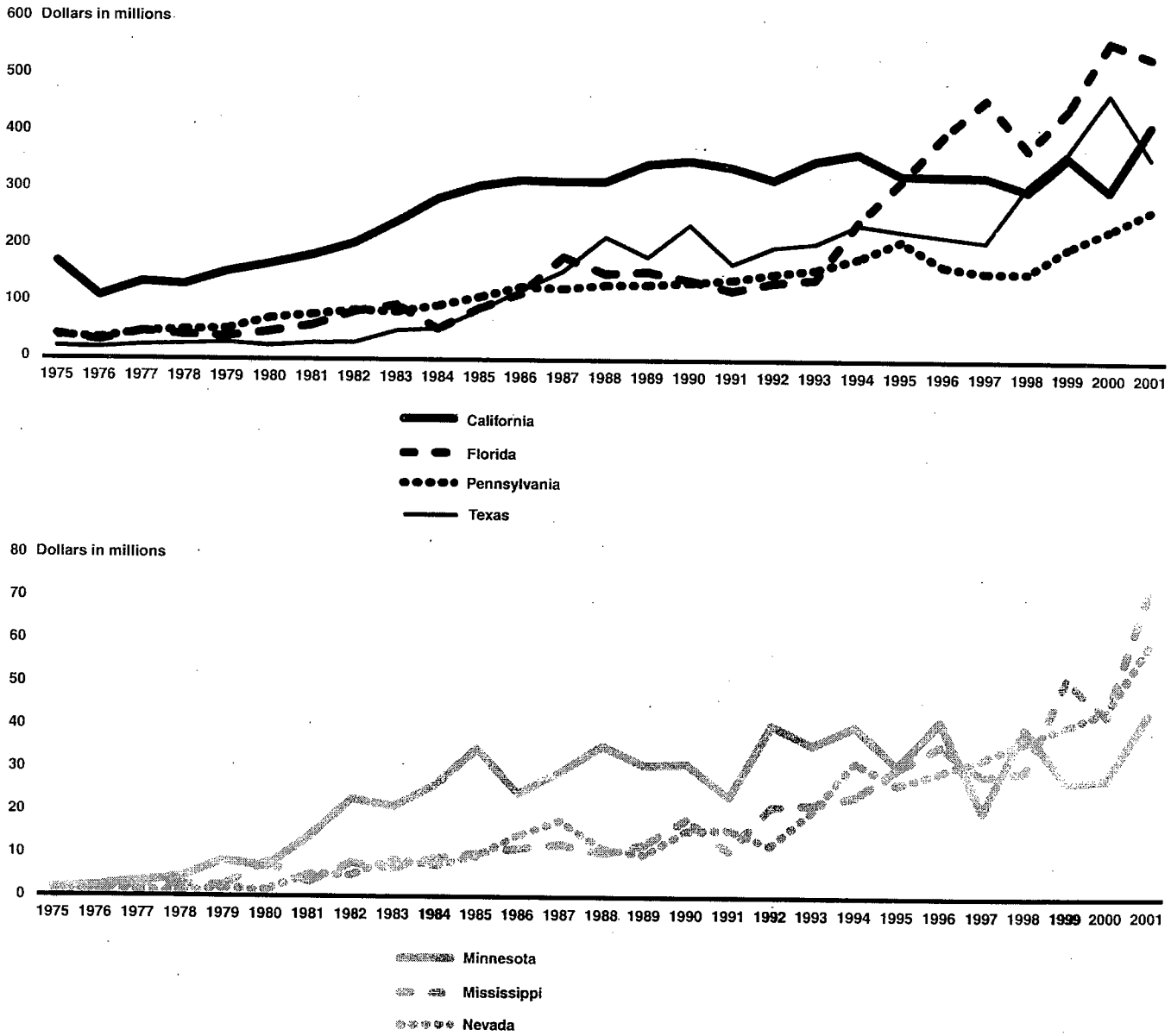


Source: GAO analysis of A.M. Best data.

The recent increases in both paid and incurred losses among our seven sample states varied considerably, with some states experiencing significantly higher increases than others. From 1998 to 2001, for example, paid losses in Pennsylvania and Mississippi increased by approximately 70.9 and 142.1 percent, respectively, while paid losses in California and Minnesota increased by approximately 38.7 and 8.7 percent, respectively (see fig. 5).[25] Because paid losses in any single year reflect primarily claims reported during previous years, these losses may not be representative of claims that were reported during the year the losses were paid.

[25]To better show annual changes in the states with smaller total losses, in both figs. 5 and 6 we have separated our seven sample states into two groups, those with smaller total losses and those with greater total losses.

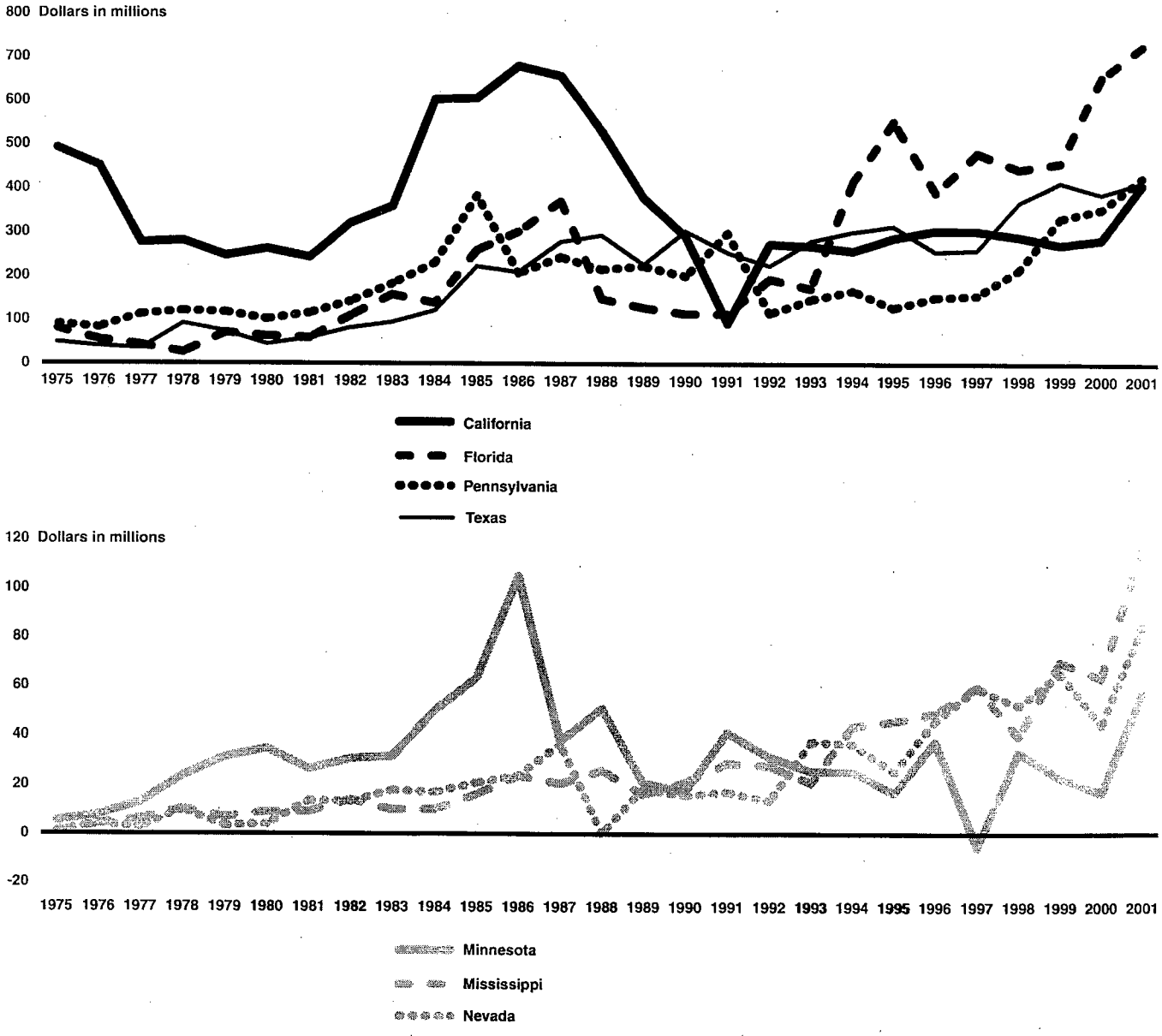
Figure 5: Inflation-Adjusted Aggregate Paid Losses for Medical Malpractice Insurers in Seven Selected States, 1975-2001 (Using the CPI, in 2001 Dollars)



Source: GAO analysis of A.M. Best data.

From 1998 to 2001, aggregate incurred losses increased by large amounts in almost all of our seven sample states. As shown in figure 6, the highest rates of increase in incurred losses over that period were experienced by insurers in Mississippi (197.5 percent) and Pennsylvania (97.2 percent). Even in California and Minnesota, states with lower paid losses from 1998 through 2001, insurers experienced increases in incurred losses of approximately 40.5 and 73.2 percent, respectively, over the same period. As noted above, incurred losses in any single year reflect insurers' expectations of future paid losses associated with claims reported in the current year—that is, claims that will be paid, on average, over the next 3 and one-half years (according to one industry association). And because insurers' incurred losses have increased recently, insurers are expecting their paid losses to increase over the next several years.

Figure 6: Inflation-Adjusted Aggregate Incurred Losses for Medical Malpractice Insurers in Seven Selected States, 1975-2001 (Using the CPI, in 2001 Dollars)



Source: GAO analysis of A.M. Best data.

Increased Losses Lead to Higher Premium Rates

According to actuaries and insurers we spoke with, increased paid losses raise premium rates in several ways. First, higher paid losses on claims reported in current or previous years can increase insurers' estimates of what they expect to pay out on future claims. Insurers then raise premium rates to match their expectations. In addition, large losses (particularly paid losses) on even one or a few individual claims can make it harder for insurers to predict the amount they might have to pay on future claims. Some insurers and actuaries we spoke with told us that when losses on claims are hard to predict, insurers will generally adopt more conservative expectations regarding losses—that is, they will assume losses will be toward the higher end of a predicted range of losses. Further, large losses on individual claims can raise plaintiffs' expectations for damages on similar claims, ultimately resulting in higher losses across both claims that are settled and those that go to trial. As described above, this tendency in turn can lead to higher expectations of future losses and thus to higher premium rates. Finally, an increase in the percentage of claims on which insurers must make payments can increase the amount that insurers expect to pay on each policy, resulting in higher premium rates. That is, insurers expecting to pay out money on a high percentage of claims may charge more for all policies in order to cover the expected increases.

Comprehensive Data on the Composition and Causes of Increased Losses Were Lacking

A lack of comprehensive data at the national and state levels on insurers' medical malpractice claims and the associated losses prevented us from fully analyzing both the composition and causes of those losses at the insurer level.[26] For example, comprehensive data that would have allowed us to fully analyze the severity of medical malpractice claims at the insurer level on a state-by-state basis did not exist. To begin with, data submitted by insurers to NAIC on the number of claims reported to insurers are not broken out by state. Rather, insurers that operate in a number of states report the number of claims for all their medical malpractice insurance policies nationwide. Also, while NAIC does collect data that can be used to measure the severity of claims paid in a single year (number of claims per state), NAIC began this effort only in 2000. As a result, we could not gather enough data to examine trends in the severity of paid claims from 1998 to 2002 at the insurer level. Similarly, comprehensive data did not exist that would have allowed us to analyze claim frequency on a state-by-state basis. As noted above, data that insurers submit to NAIC on the number of claims reported were not broken out by state prior to 2000. In addition, insurers do

[26]Some additional data on medical malpractice claims, not connected to individual insurers, were available and were analyzed in a separate report. See GAO-03-836.

not submit information on the number of policies in effect or the number of health care providers insured. Finally, medical associations we spoke with in our sample states had not compiled accurate data on the number of physicians practicing within those states. As a result, we could not analyze changes in the frequency of medical malpractice claims in our sample states at the insurer level.

Data that would have allowed us to analyze how losses were divided between settlements and trial verdicts or between economic and noneconomic damages were also not available. First, insurers do not submit information to NAIC on the portion of losses paid as part of settlements and the portion paid as the result of a trial verdict, and no other comprehensive source of such information exists. However, all eight insurers and one of the trial lawyers' associations we spoke with provided certain estimates about claims. The estimates of three insurers on the percentage of claims resulting in trial verdicts ranged from 5 to 7 percent. The estimates of four insurers and 1 state trial lawyers' association of the percentage of trial verdicts being decided in favor of the insured defendant ranged from 70 to 86 percent. The estimates of four insurers and one state trial lawyers' association of the portion of claims resulting in payment to the plaintiff ranged from 14 to 50 percent. Second, no comprehensive source of information exists on the breakdown of losses between economic damages, such as medical costs and lost wages, and noneconomic damages, such as compensation for pain and suffering. Several of the insurers and trial lawyers' associations we spoke with noted that settlement amounts are not formally divided between these two types of damages and that consistent, comprehensive information on trial judgments is not collected. Furthermore, while judgment amounts obtained at trial may be large, several of the insurers we spoke with said that they most often do not pay amounts beyond a policyholder's policy limits.[27] Data on the final amounts insurers pay out on individual judgments are not collected, although they are reported in the aggregate as part of paid losses in insurers' financial statements.

[27]Some insurers we spoke with told us that they can be liable for amounts beyond a policy's limits if the policyholder requests that the insurer settle with the plaintiff for an amount equal to or less than the policy limit, but the insurer takes the case to trial, loses, and a judgment is entered in an amount greater than the policy limits. Insurers in California, Florida, and Texas told us that payments beyond policy limits posed significant issues in their states.

While losses on medical malpractice claims increase as the cost of medical care and the value of lost wages rise, losses in some states have far outpaced such inflation. Insurance, legal, and medical industry officials we spoke with suggested a number of potential causes for such increases. These potential causes included a greater societal propensity to sue; a "lottery mentality," where a lawsuit is seen as an easy way to get a large sum of money; a sicker, older population; greater expectations for medical care because of improved technology; and a reduced quality of care and the breakdown of the doctor-patient relationship owing, for example, to factors such as the increasing prevalence of managed care organizations. While we could not analyze such potential causes for increased losses, understanding them would be useful in developing strategies to address increasing medical malpractice premium rates. That is, because losses on claims have such a profound effect on premium rates, understanding the reasons those losses have increased could make it easier to devise actions to control the rise in premium rates.[28]

Medical Malpractice Insurers' Investment Income Has Decreased

State laws restrict medical malpractice insurers to conservative investments, primarily bonds. In 2001, the 15 largest writers of medical malpractice insurance in the United States [29] invested, on average, around 79 percent of their investment assets in bonds, usually some combination of U.S. Treasury, municipal, and corporate bonds. While the performance of some bonds has surpassed that of the stock market as a whole since 2000, annual yields on selected bonds since 2000 have decreased steadily since then (table 1).

[28]State laws for resolving medical malpractice claims may also affect the extent to which losses increase in a particular state. The effect of state laws on losses and premium rates is discussed in greater detail in GAO-03-836.

[29]As reported by A.M. Best. These insurers included a combination of commercial companies and physician-owned nonprofit insurers. Some of these insurers sold more than one line of insurance, and changes in returns on investments might not be reflected equally in the premium rates in each of those lines.

Table 1: Annual Yields for Selected Bonds, 1995–2002, and Average Return on Investment Assets, 1997–2002, for the 15 Largest Writers of Medical Malpractice Insurance in 2001

	1995	1996	1997	1998	1999	2000	2001	2002
5-Year U.S. Treasury securities	6.38	6.18	6.22	5.15	5.55	6.16	4.56	3.82
10-Year U.S. Treasury securities	6.57	6.44	6.35	5.26	5.65	6.03	5.02	4.61
5-Year AAA-rated municipal bonds	4.57	4.41	4.34	3.97	4.18	4.72	3.63	3.16
10-Year AAA-rated municipal bonds	5.04	4.91	4.75	4.31	4.62	4.97	4.28	4.05
5-Year AAA-rated corporate bonds	6.71	6.49	6.52	5.61	6.17	6.96	5.24	4.45
10-Year AAA-rated corporate bonds	6.93	6.77	6.66	5.74	6.38	7.09	5.92	5.42
Average return on investment assets for 15 largest insurers	[a]	[a]	5.6	5.5	5.2	5.6	5.0	4.0[b]

Source: GAO analysis of data from A.M. Best, the Federal Reserve, and the Bond Market Association.

[a]Data for 1995 and 1996 were not readily available.

[b]Complete information was not available for the same companies in 2002. The 2002 average return on investment was estimated based on the average bond yield and the average ratio of the bond yield to the insurer's return on investment.

We analyzed the average investment returns of the 15 largest medical malpractice insurers of 2001 and found that the average return fell from about 5.6 percent in 2000 to an estimated 4.0 percent in 2002. However, none of the companies experienced a net loss on investments at least through 2001, the most recent year for which such data were available. Additionally, almost no medical malpractice insurers overall experienced net investment losses from 1997 to 2001.

Medical malpractice insurers are required by state insurance regulations to reflect expected investment income in their premium rates. That is, insurers are required to reduce their premium rates to consider the income they expect to earn on their investments. As a result, when insurers expect their returns on investments will be high, as returns were during most of the 1990s, premium rates can remain relatively low because investment income covers a larger share of losses on claims. Conversely, when insurers expect their returns on investments will be lower—as returns have been since around 2000—premium rates rise in order to cover a larger share of losses. During periods of relatively high investment income, insurers can lose money on the underwriting portion of their business yet

still make a profit. That is, losses from medical malpractice claims and the associated expenses may exceed premium income, but income from investments can still allow the insurer to operate profitably. Insurers are not allowed to increase premium rates to compensate for lower-than-expected returns on past investments but must consider only prospective income from investments.

None of the insurers that we consulted regarding this issue told us definitively how much the decreases in investment income had increased premium rates. But we can make a rough estimate of the relationship between return on investment and premium rates. When investment income decreases, holding all else constant, income from premium rates must increase by an equal amount in order for the insurer to maintain the same overall level of income. Thus the total amount of investment assets relative to premium income determines how much rates need to rise to compensate for lost investment income. Table 2 presents a hypothetical example. An insurer has $100,000 in investment assets and in the previous year received $25,000 in premium income, for a ratio of investment assets to premium income of 4 to 1. If the return on investments drops 1 percentage point and all else remains constant, the insurer must raise premium rates by 4 percent in order to compensate for the reduced investment income. If the return on investments drops by 2 percentage points, premium rates must rise by 8 percent to compensate.

Table 2: Hypothetical Example of How Premium Rates Change When the Return on Investments Falls

	Example 1	Example 2	Example 3
(a) Total investment assets	$100,000	$100,000	$100,000
(b) Original total premium income	$25,000	$25,000	$25,000
(c) Percentage point drop in return on investments	1%	2%	3%
(d) Drop in investment income [(a) x (c)]	$1,000	$2,000	$3,000
Total premium income required to make up for drop in investment income [(b) + (d)]	$26,000	$27,000	$28,000
Percentage increase in premium income required [(d) / (b) x 100]	4%	8%	12%

Source: GAO analysis.

Note: The examples given assume that all else holds constant and that the insurer must obtain the full amount of additional funds required in the following year, even though the insurer would earn interest on those funds and thus would not need to increase premium rates by the full amount. Such an assumption may overstate the extent to which premium rates must be increased. The examples also do not take into account the fact that insurers look prospectively at trends in interest rates when estimating their anticipated investment income. By not taking into account a downward trend in interest rates, such as the one that has existed since 2000, our examples may understate the needed increase.

This relationship can be applied to the 15 largest medical malpractice insurers—countrywide—from 2001. Data show that in 2001 the insurers' total investment assets were, on average, around 4.5 times as large as the amount of premium income they earned for that year. Applying the relationship established above and holding other factors constant, a drop of 1 percentage point in return on investments would translate into roughly a 4.5 percent increase in premium rates.[30] As a result, if nothing else changed, the approximately 1.6 percentage point drop in the return on investments these insurers experienced from 2000 through 2002 would have resulted in an increase in premium rates of around 7.2 percent over the same 2-year period.

[30]Insurers in states where it takes more time to resolve medical malpractice claims would be more affected by changes in interest rates than insurers in states where it takes less time to resolve claims.

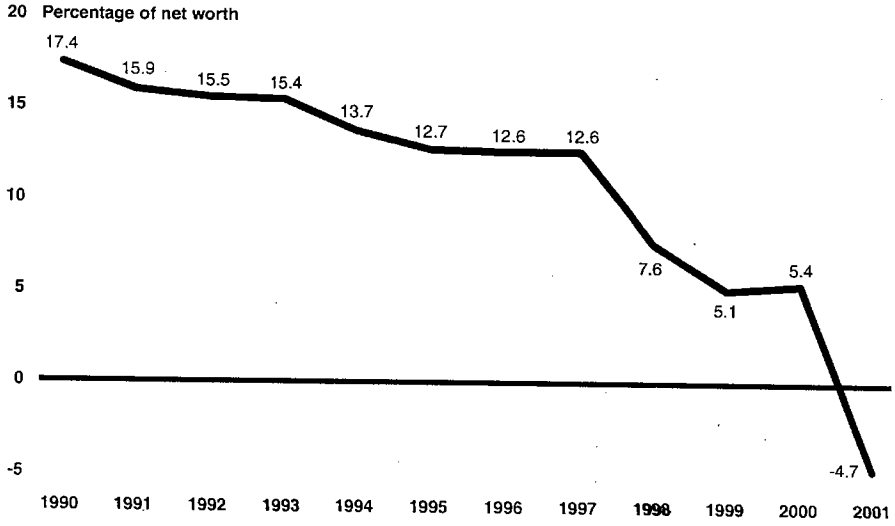
Downward Pressure on Premium Rates Has Decreased as Profitability Has Declined

Since 1999, the profitability of the medical malpractice insurance market as a whole has declined—even with increasing premium rates—causing some large insurers to pull out of this market, either in certain states or nationwide. Because fewer insurers are offering this insurance, there is less price competition and thus less downward pressure on premium rates. According to some industry and regulatory officials in our seven sample states, price competition during most of the 1990s kept premium rates from rising between 1992 and 1998, even though losses generally did rise. In some cases, rates actually fell. For example, during this period premium rates for obstetricians and gynecologists covered by the largest insurer in Florida—a state where these physicians are currently seeing rapid premium rate increases—actually decreased by approximately 3.1 percent. Some industry participants we spoke with told us that, in hindsight, premium rates charged by some insurers during this period may have been lower than they should have been and, after 1998, began rising to a level more in line with insurers' losses on claims. Some industry participants also pointed out that this pricing inadequacy was masked to some extent by insurers' adjustments to expected losses on claims reported during the late 1980s as well as their high investment income. For many insurers the incurred losses associated with the policies sold during the late 1980s turned out to be higher than the actual losses for the same policies, resulting in high levels of reserves. During the 1990s, as insurers eliminated these redundant reserves by adjusting their current loss reserves for these previous overestimates, current calendar year incurred losses fell and reported income increased. These adjustments, together with relatively high levels of investment income, allowed insurers to keep premium rates flat and still remain profitable.

Selling Medical Malpractice Insurance Has Become Less Profitable

Beginning in the late 1990s, medical malpractice insurers as a whole began to see their profits fall. Figure 7 shows the return on surplus—also called return on equity—for the medical malpractice insurance industry as a whole. Profitability began declining faster in 1998 and in 2001 dropped considerably even as premium rates were increasing in many states, resulting in a negative rate of return, or loss. Some of the factors pushing premium rates upward were also factors in insurers' declining profitability: higher losses on medical malpractice claims, higher reinsurance costs, and falling investment income.

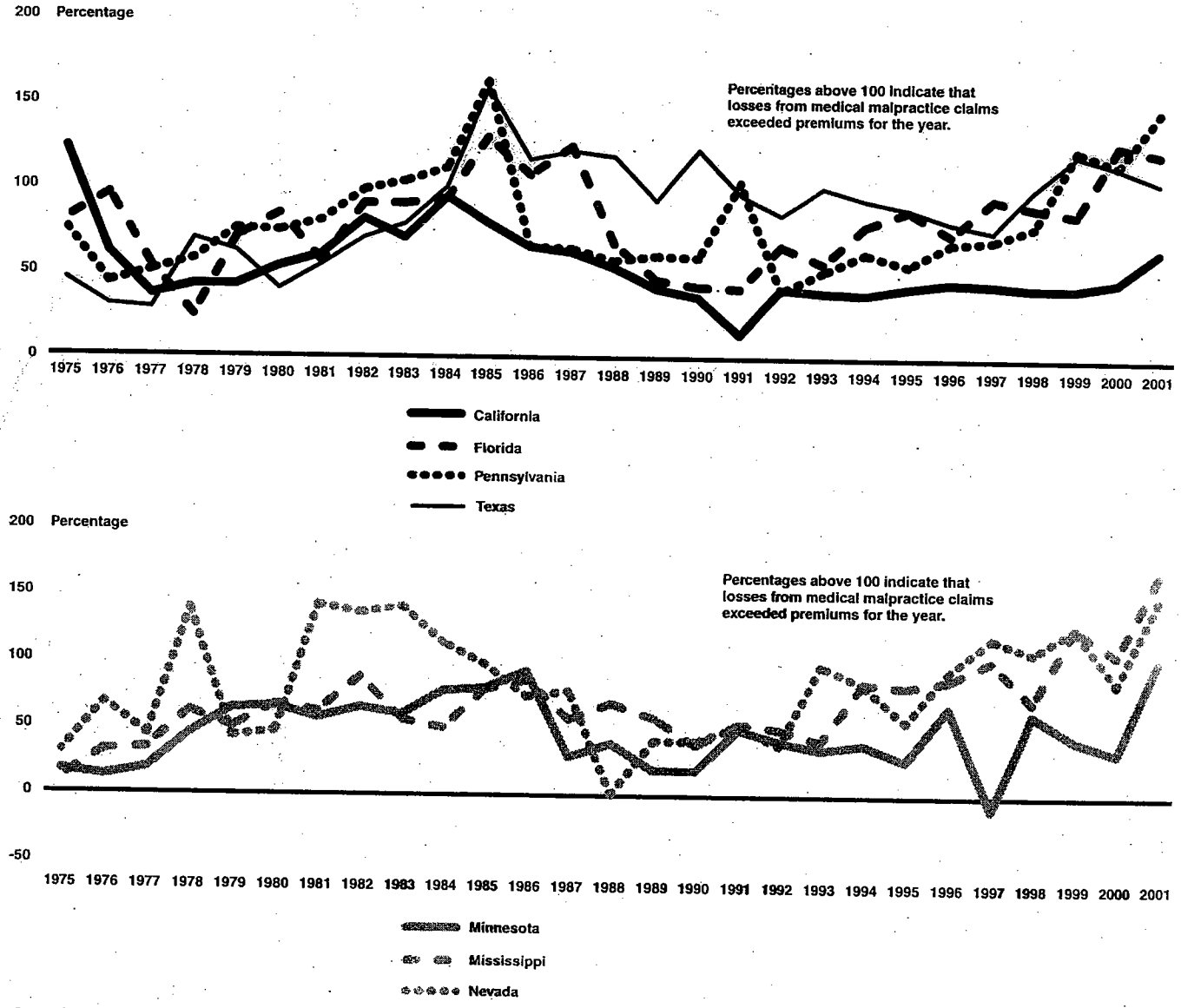
Figure 7: Net Profit or Loss as a Percentage of Net Worth for Medical Malpractice Insurance Companies Nationwide, 1990–2001



Source: GAO analysis of NAIC data.

Medical malpractice insurers in some of our sample states have experienced particularly low levels of profitability since around 1998 (see fig. 8). The loss ratio reported here is the ratio of incurred losses, not including other expenses (often referred to as loss adjustment expenses) related to resolving those claims, to the amount of premiums earned in a given year. Loss ratios above 100 percent indicate that an insurer has incurred more losses than premium payments, a sign of declining profitability. Loss ratios in all seven sample states have increased since 1998, and except for California, all had loss ratios of more than 100 percent for 2001.

Figure 8: Aggregate Incurred Losses as a Percentage of Premiums Earned for Medical Malpractice Insurers in Seven Selected States, 1975–2001



Source: GAO analysis of A.M. Best data.

Note: Incurred losses used in this figure do not include other expenses related to resolving claims or loss adjustment expenses.

As Profits Have Fallen, Insurers Have Left the Medical Malpractice Market

This declining profitability has caused some large insurers either to stop selling medical malpractice policies altogether or to reduce the number they sell. For example, beginning in 2002 the St. Paul Companies—previously the second-largest medical malpractice insurer in the United States—stopped writing all medical malpractice insurance because of declining profitability. In 2001, St. Paul had sold medical malpractice insurance in every state and was the largest or second-largest seller in 24 states. St. Paul was not alone. Other large insurers have also stopped selling medical malpractice insurance in since 1999: PHICO Insurance Company, which sold insurance primarily in six states, including Florida, Pennsylvania, and Texas; MIIX Insurance Company, which sold insurance primarily in five states, including New Jersey and Pennsylvania; and Reciprocal of America, which sold insurance primarily in six states, including Alabama, Mississippi, and Virginia. Other insurers reduced the number of states in which they sold medical malpractice insurance: SCPIE Indemnity Company, which in March 2003 essentially stopped selling insurance outside of California, and First Professionals Insurance Company, which has said that beginning in 2003 it will essentially stop selling insurance outside of Florida.

When a large insurer leaves a state insurance market, the supply of medical malpractice insurance decreases, and the remaining insurers may not need to compete as much on the basis of price. In addition, the remaining insurers are limited in the amount of insurance they can supply to fill the gap, because state insurance regulations limit the amount of insurance they can write relative to their surplus (the amount by which insurers' assets exceed their liabilities). For mutual, nonprofit insurers, increasing the surplus can be a slow process, because surplus must generally be built through profits or by obtaining additional funds from policyholders. Commercial insurers can obtain funds through capital markets, but even then, convincing investors to invest funds in medical malpractice insurance when profits are falling can be difficult.

Remaining Insurers Have Increased Prices to Reflect Expected Losses

According to industry participants and observers, as the competitive pressures on premium rates decreased, it appears that insurers were able to more easily and more quickly raise premium rates to a level more in line with their expected losses. That is, absent competitive pressure that may have caused insurers to keep premium rates at lower levels, which in hindsight were perhaps too low for the ultimate losses the insurers would have to pay, it appears that insurers were able to raise premium rates to match their loss expectations. As noted earlier, losses increased to a great

extent in some states, and thus some insurers may have increased premium rates dramatically.

While it appears clear that a reduction in price competition has allowed insurers to more easily and more quickly increase premium rates to a level more in line with insurers' expected losses, we identified at least three factors that seem to suggest that these premium rates are not inconsistent with expected losses. First, if the higher premium rates were above what was justified by insurers' expected losses, profitability would be increasing. But profits are not increasing, indicating that insurers are not charging and profiting from excessively high premium rates. Second, according to some industry participants we spoke with, physician-owned insurers have little incentive to overcharge their policyholders because those insurers generally return excess earnings to their policyholders in the form of dividends. Third, in most states the insurance regulators have the authority to deny premium rate increases they deem excessive. While the information that state regulators require insurers to submit as justification for premium rate increases varies across states, in general it includes data on expected losses.

Reinsurance Premium Rates Have Increased

A further reason for recent increases in medical malpractice premium rates in our seven sample states was that the cost of reinsurance for these insurers has also increased, increasing the total expenses that premium and other income must cover. Insurers in general purchase reinsurance, or excess loss coverage, to protect themselves against large unpredictable losses. Medical malpractice insurers, particularly smaller insurers, depend heavily on reinsurance because of the potential high payouts on medical malpractice claims.

Reinsurance industry officials and medical malpractice insurers we spoke with told us that reinsurance premium rates have increased for two reasons. First, reinsurance rates overall have increased as a result of reinsurers' losses related to the terrorist attacks of September 11, 2001. Second, reinsurers have seen higher losses from medical malpractice insurers and have raised rates to compensate for the increased risk associated with providing reinsurance to the medical malpractice market. Some insurers and industry participants told us that reinsurance premium rates had risen substantially since 1998, with the increases ranging from 50 to 100 percent. Other insurers told us that in order to keep their reinsurance premium rates down, they increased the dollar amount on any loss at which reinsurance would begin, essentially increasing the

deductible. Thus, while reinsurance rates may not have increased, the amount of risk the medical malpractice insurers carry did. One insurer estimated that while its reinsurance rates had increased approximately 50 percent from 2000 to 2002, this increase had resulted in only a 2 to 3 percent increase in medical malpractice premium rates.

The Medical Malpractice Insurance Market Moves through Hard and Soft Insurance Markets

All of the factors affecting premium rates and availability contribute to the length and amplitude of the medical malpractice insurance cycle. Like other property-casualty insurance markets, the medical malpractice market moves through cycles of "hard" and "soft" markets. Hard markets are generally characterized by rapidly rising premium rates, tightened underwriting standards, narrowed coverage, and often by the departure of some insurers from the market. In the medical malpractice market, some market observers have characterized the period from approximately 1998 to the present as a hard market. (Previous hard markets occurred during the mid-1970s and mid-1980s.) Soft markets are characterized by slowly rising premium rates, less stringent underwriting standards, expanded coverage, and strong competition among insurers. The medical malpractice market from 1990 to 1998 has been characterized as a soft market. According to a series of studies sponsored and published by NAIC in 1991, such cycles have been present in the property-casualty insurance market since at least 1926, and until the mid-1970s lasted for an average of approximately 6 years from the peak of one hard market to the next.[31] However, the cycle that began at the peak of the hard market in 1975 lasted for around 10 years. The current cycle has lasted for around 17 years—since 1985—and it is not yet clear that the current hard market has peaked.

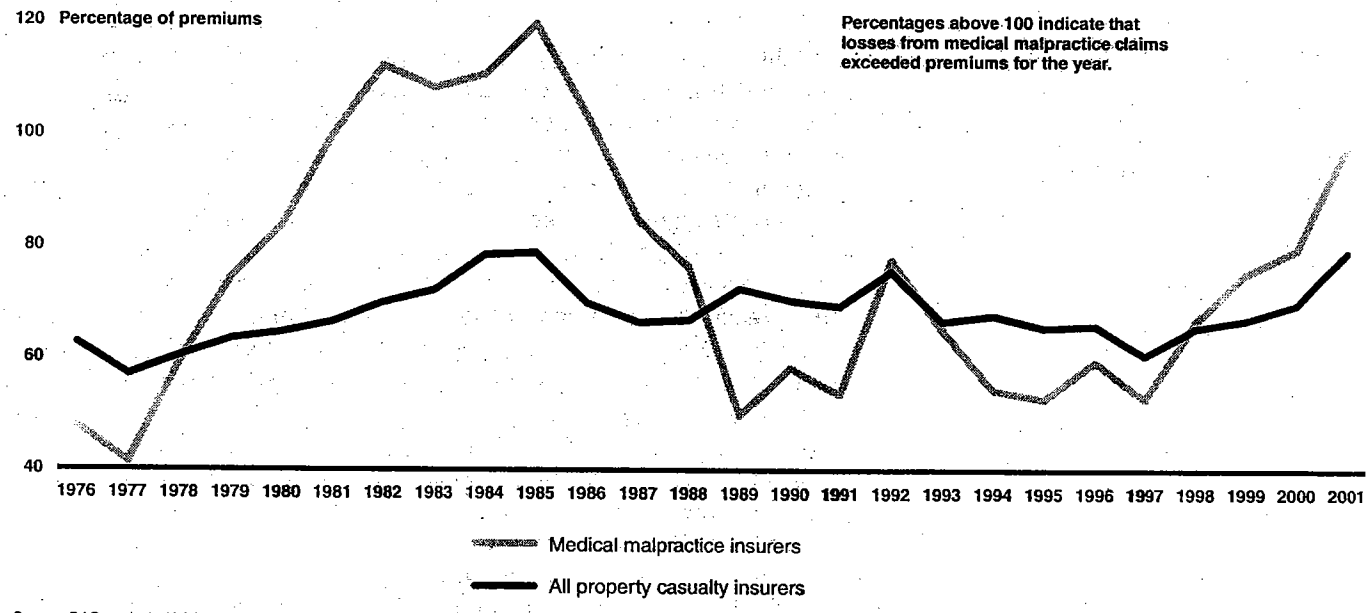
Cycles in the Medical Malpractice Market Tend to Be Volatile

The medical malpractice insurance market appears to roughly follow the same cycles as the overall property-casualty insurance market, but the cycles tend to be more volatile—that is, the swings are more extreme. We analyzed the swings in insurance cycles for the medical malpractice market and for the entire property-casualty insurance markets using annual loss ratios based on incurred losses (see fig. 9). Our analysis showed that annual loss ratios for medical malpractice insurers tended to swing higher or lower than those for property-casualty insurers as a whole, reflecting more extreme changes in insurers' expectations. Because premium rates

[31]National Association of Insurance Commissioners, *Cycles and Crises in Property/Casualty Insurance: Causes and Implications for Public Policy* (Kansas City, Mo.: 1991).

are based largely on insurers' expectations of losses, premium rates will fluctuate as well.

Figure 9: Incurred Losses as a Percentage of Premium Income for Medical Malpractice Insurers and Property-Casualty Insurers Nationwide, 1976–2001



Source: GAO analysis of A.M. Best and National Association of Insurance Commissioners data.

The medical malpractice insurance market is more volatile than the property-casualty insurance market as a whole because of the length of time involved in resolving medical malpractice claims and the volatility of the claims themselves. Several years may pass before insurers know and understand the profits and losses associated with policies sold in a single year. As a result, insurers may not know the full effects of a change in an underlying factor, such as losses or return on investments, for several years. So while insurers in other markets that do not have protracted claims resolutions can adjust loss estimates and premium rates more quickly to account for a change in an underlying factor, medical malpractice insurers may not be able to make adjustments for several years. In the interim, medical malpractice insurers may unknowingly be under- or over-pricing their policies.

When insurers do fully understand the effects of a change in an underlying factor, they may need to make large adjustments in loss estimates and premium rates. As a result, premium rates in the medical malpractice insurance market may move more sharply than premium rates in other lines of property-casualty insurance. For example, if insurers have been unknowingly overestimating their losses and overpricing their policies, as some insurers told us happened during the late 1980s, large liabilities build up to cover the losses. When the insurers realize their estimates have been too high, they must reduce those liabilities to reflect their losses accurately. Reducing liabilities also reduces incurred losses and therefore increases insurers' income, allowing insurers to charge lower premium rates even in the face of increased losses and still maintain profitable operations—a point some insurers made about the 1990s. But when the liability account has been reduced sufficiently and income is no longer increasing as a result of this adjustment, insurers may need to raise premium rates to stay profitable.

The competition that can exist during soft markets and periods of high investment income can further exacerbate swings in premium rates. As noted earlier, competition among insurers can put downward pressure on premium rates, even to the point at which the rates may, in hindsight, become inadequate to keep an insurer solvent. When the insurance market hardens, some insurers may leave the market, removing the downward pressure on premium rates and allowing insurers to raise premium rates to the level that would have existed without such competition. Because competition may have kept rates low, the resulting increase in premium rates that accompanies a transition to a hard market may be greater than it would have been otherwise.

According to some industry experts, periods of high investment income can bolster the downward pressure that exists during soft markets. That is, high investment income can contribute to the increased profitability of an insurance market. This profitability can, in turn, cause insurers to compete for market share in order to take advantage of that profitability, thereby forcing premium rates even lower. In addition, according to these industry experts, high investment income allows insurers to keep premium rates low for long periods of time, even in the face of increasing losses, because investment income can be used to replace premium income, allowing insurers to meet expenses. But if interest rates drop at the same time the market hardens (and reduced interest rates can be a contributor to the movement to hard market), insurers may have to increase premium rates

much more in a shorter period of time than they would have if investment income had not allowed premium rates to remain lower to begin with.

Predicting and Moderating the Cycle is Difficult

While the medical malpractice insurance market will likely move through more soft and hard markets in the future, predicting when such moves might occur or the extent of premium rate changes is virtually impossible. For example, the timing and extent of the unexpected changes in the losses that some researchers believe are responsible for hard markets are virtually impossible to predict. In addition, as we have seen, many factors affect premium rates, and it is just as difficult to predict the extent of any future changes these factors might undergo. While interest rates may be high during soft markets, it is not possible to predict how much higher they might be in the future and thus what effect they might have on premium rates. Predicting changes in losses on medical malpractice claims would be even harder, given the volatility of such losses. Further, some of the factors affecting premium rates, such as losses and competition, vary across states, and the effect of soft or hard markets on premium rates in one state could not be generalized to others. Finally, other conditions affecting premium rates have changed since earlier hard and soft markets, limiting our ability to make accurate comparisons between past and future market cycles.

Similarly, agreement does not exist on whether or how insurance cycles could be moderated. The NAIC studies mentioned above noted that the most likely primary causes of insurance cycles—changes in interest rates and losses—were not subject to direct insurer or regulatory control.[32] In addition, the studies also observed that underpricing by insurers during soft markets likely increases the severity of premium rate increases during the next hard market. But they did not agree on the question of using regulation to prevent such swings in premium rates. Such regulation could be difficult, for two reasons. First, because losses on medical malpractice claims are volatile and difficult to predict, regulators could have difficulty determining the appropriate level of premium rates to cover those losses. In addition, restricting premium rate increases during hardening markets could hurt insurer solvency and cause some insurers to withdraw from a market with an already declining supply of insurance.

[32]NAIC, *Cycles and Crises*.

The Medical Malpractice Insurance Market Has Changed since Previous Hard Markets

The medical malpractice insurance market as a whole has changed considerably since the hard markets of the mid-1970s and mid-1980s. These changes have taken place over time and have been the result primarily of actions insurers, health care providers, and state regulators have taken to address rising premium rates. For example, insurers have moved from occurrence-based to claims-made policies, physicians have formed mutual nonprofit insurance companies that have come to dominate the market, hospitals and groups of hospitals or physicians have increasingly chosen to self-insure, and states have passed laws designed to slow the increase in medical malpractice premium rates.

Beginning in the 1970s, Insurers Began Selling Claims-Made Rather Than Occurrence-Based Policies

In order to more accurately predict losses and set premium rates, in the mid-1970s most medical malpractice insurers began to change the type of insurance policy they offered to physicians from occurrence based to claims made. As we have noted, claims-made policies cover claims reported during the year the policy is in effect, while occurrence-based policies cover claims arising out of events that occurred during the year in which the policy was in effect. Because claims-made policies cover only reported claims, insurers can better estimate the payouts they will have to make in the future. Occurrence-based policies do not provide such certainty, because they leave insurers liable for claims related to the incidents that occurred during a given year, including those not yet reported to the insurer.

Claims-made policies can create difficulties for physicians needing or wanting to change insurers, however, because the physician rather than the insurer retains the risk of claims that have not yet been reported to the insurer. However, most companies today offer separate policies providing coverage for claims resulting from incidents that may have occurred but were not reported before the physician switched companies. The vast majority of policies in existence today are claims-made policies. In each of the seven states we studied, for example, the leading insurer's policies were predominantly (if not exclusively) claims-made. This change in the type of policy sold means that any changes to premium rates during future hard or soft markets may differ from such changes in previous such markets.

Beginning in the Mid-1970s, Groups of Physicians Joined Together to Form Mutual Insurance Companies

Faced with a surge in the frequency and severity of claims, many of the for-profit insurers left the medical malpractice insurance market in the mid-1970s. At the time, medical malpractice insurance was only a small portion of most of the insurers' overall business, so many companies chose simply to discontinue their medical malpractice lines. However, this market exodus led to a crisis of availability for physicians who wanted or needed professional liability insurance. In response to this unmet demand, physicians, often in connection with their state medical societies, joined together to form physician-owned insurance companies. Initially, physicians often needed to contribute capital in addition to their premiums so that the companies would meet state capitalization requirements.

These new physician-owned insurance companies differed from existing commercial carriers in several ways. First, the physician-owned companies wrote predominantly claims-made policies, which, as previously discussed, allowed the insurers to more accurately predict losses and set premium rates. Second, in their initial years the new companies themselves enjoyed significant short-term cost savings over commercial companies. Most medical malpractice claims take several years to be resolved, and the policies offered by the physician-owned companies covered only future incidents of malpractice, so the companies had no existing claims that needed to be paid immediately. The commercial companies' occurrence-based policies continued to provide coverage for malpractice that had occurred before the new physician-owned companies began offering policies. Thus the physician-owned companies would not incur the same level of obligations as the existing carriers for several years, allowing the physicians to pay an amount similar to the commercial premium and use much of that money as capital contributions to surplus. Physician-owned companies have several other advantages. To begin with, physician-owned companies have a cost advantage because they do not need to provide shareholders with profits. In addition, the physician-owned companies may have some underwriting advantages over the for-profit entities, such as an intimate knowledge of local doctors and hospitals and the legal customs and climate. Finally, several insurers told us that these physician-owned companies may have a different management philosophy than for-profit companies, one that places greater emphasis on risk management and thus lowers the incidence of claims. This philosophy may also extend to defending claims more aggressively than traditional insurers.

Physician-owned and/or operated[33] insurance companies have grown to dominate the medical malpractice insurance market, despite the fact that most of them have not had the same access to the traditional capital markets as for-profit insurers and therefore have had to build up their surplus through premiums and capital contributions. Although several physician-owned and/or operated insurance companies have expanded their geographic presence and lines of insurance in the last decade, most of these companies write insurance primarily in one state or a few states and usually sell only medical malpractice liability insurance. Further, many of the companies that had previously expanded have now retreated to their original area and insurance line. As a result of this continuing change in the composition of the medical malpractice insurance market, changes in premium rates in the next soft market may be different from previous markets, when commercial carriers dominated the market.

A Growing Number of Individual Hospitals and Hospital and Physician Groups Have Begun Self-Insuring

Over the past several years, an increasing number of individual hospitals and consortia of hospitals and physicians have begun to self-insure[34] in a variety of ways. Officials from the American Hospital Association estimated that 40 percent of its member hospitals are now self-insured. In states such as Florida that allow individual physicians to self-insure, individual health care providers are also insuring themselves. Other hospitals and groups of physicians are joining alternative risk-sharing mechanisms, such as risk retention groups[35] or trusts.[36] Although some hospitals and physicians have used these alternatives in the past, some industry experts we spoke to said that the increasing movement to such

[33]Some companies that were originally physician-owned have become publicly-held, physician-operated insurers. While those insurers must now earn profits to satisfy shareholders, and thus do not have all of the advantages that strictly physician-owned insurers have, public, physician-operated insurers may have certain other advantages, such as greater access to capital markets.

[34]In general, self-insurance involves protecting against loss by setting aside funds to cover potential claims rather than buying an insurance policy.

[35]A risk retention group is a state-chartered liability insurance company owned by its policyholders that can be formed as a stock or mutual insurance company. However, the Risk Retention Act of 1986 preempts certain aspects of state laws regulating the activities of risk retention groups.

[36]A trust consists of segregated accounts of health care entities that simply estimate liabilities and set aside funds to pay them. Some trusts are not required to have a surplus or reserves.

arrangements under the current market conditions indicates that some health care providers are having difficulty obtaining insurance in the traditional market.

While these arrangements could save money on the administrative costs of insurance, they do not change the underlying costs of claims. Hospitals and physicians insured through these arrangements often assume greater financial responsibility for malpractice than they would under traditional insurance arrangements and thus face a potentially greater risk of insolvency. Although self-insured hospitals generally use excess loss insurance for claims that exceed a certain amount, the hospitals must pay the entire amount up to that threshold. Rather than a known number of smaller payments on an insurance policy, the hospitals risk an unknown number of potentially larger payments. And the threshold for excess loss insurance is rising in a number of states. In Nevada, for example, some hospitals' excess loss insurance used to cover claim amounts in excess of $1 million but now covers amounts above $2 million, leaving self-insured hospitals with $1 million more exposure per claim. Self-insured physicians, who have no other coverage for large losses, risk their personal assets with every claim.

Hospitals and physicians are not the only ones more at risk under these alternative arrangements. Claimants seeking compensation for their injuries may have more difficulty obtaining payments from some of these alternative entities and self-insured hospitals and physicians, for several reasons. First, these entities and the self-insured are subject only to limited public oversight, as state insurance departments do not regulate them. Further, these entities do not participate in the state-run safety nets that pay claims for insolvent insurance companies (state guaranty funds). Once such a risk-sharing consortium fails, claimants may have no other recourse but to try to enforce judgments against physicians personally. But enforcing a judgment against a physician personally is generally more difficult than obtaining payment under an insurance policy from a solvent insurance company.

Data on these forms of insurance are sparse, so the extent to which physicians and hospitals are using such arrangements is difficult to measure. For example, NAIC and state insurance department data do not include information on self-insurance or on most alternative risk-sharing vehicles. In addition, one industry group has estimated that the information available from A.M. Best, a recognized industry data source, accounts for less than half the costs resulting from medical malpractice claims.[37] Like the growth of physician-owned insurance companies, however, the growth of such forms of insurance since the previous soft market may affect the extent to which premium rates change in the next soft market.

All States Have Passed Laws Designed to Reduce the Growth of Medical Malpractice Premium Rates

Since the medical malpractice crisis of the mid-1970s, all states have enacted some change in their laws in order to reduce upward pressure on medical malpractice premiums. Most of these changes are designed to reduce insurers' losses by limiting the number of claims filed, the size of awards and settlements, and the time and costs associated with resolving claims. Other changes are designed to help health care providers by more directly controlling premium rates. Appendix II contains a more detailed explanation of some of the types of legal changes that some states have made, and appendix III contains more detail on the relevant laws in our seven sample states.

Most of the state laws aimed at controlling premium rates attempt to reduce insurer losses related to medical malpractice claims. Many of these laws have similar provisions, the most controversial being the limitation, or cap, on subjective, nonmonetary losses such as pain and suffering (noneconomic damages). Several insurers and medical associations argue that such a cap will help control losses on medical malpractice claims and therefore moderate premium rate increases. But several trial lawyer and consumer rights associations argue that such caps will limit consumers' ability to collect appropriate compensation for their injuries and may not reduce medical malpractice premium rates.

A cap on noneconomic damages may decrease insurers' losses on claims by limiting the overall amount paid out by insurance companies, especially since noneconomic damages can be a substantial portion of losses on some claims. Further, such a limit may also decrease the number of claims

[37]Tillinghast-Towers Perrin, *U.S. Tort Costs: 2002 Update, Trends and Findings on the Costs of the U.S. Tort System* (Atlanta, Ga.: February 2003).

brought against health care providers. Plaintiffs' attorneys are usually paid based on a percentage of what the claimant recovers, and according to some trial attorneys we spoke with, attorneys may be less likely to represent injured parties with minor economic damages if noneconomic damages are limited.

Caps on noneconomic losses may have effects beyond reducing insurers' costs. In theory, for example, after the frequency and severity of losses have been reduced, insurers will decrease premium rates as well. Insurers may also be better able to predict what they will have to pay out in noneconomic damages because they can more easily estimate potential losses, reducing the uncertainty that can give rise to premium rate increases. Insurers reported that economic damages (generally medical costs and lost wages), are more predictable than noneconomic damages, which are generally meant to compensate for pain and suffering and thus are very difficult to quantify.

In addition to attempting to decrease losses on medical malpractice claims, two of our sample states have passed laws directly affecting premium rates and insurance regulations. In a 1988 referendum, California passed Proposition 103, which includes, among other things, a 20 percent rollback of prices[38] for all property-casualty insurers (including medical malpractice insurers), a 1-year moratorium on premium rate increases, and a provision granting consumers the right to challenge any commercial insurance rate increases greater than 15 percent. In 1995, Texas passed legislation that required many insurance carriers, including medical malpractice insurers, to reduce rates to a level deemed by the Texas Department of Insurance to be acceptable, allowing for a reasonable profit. Texas passed the legislation in conjunction with changes to Texas' tort system. The legislators wanted to avoid creating a windfall for insurers and believed that the companies would not lower premium rates on their own until the impact of the changes to the tort system could be actuarially determined.

Interested parties debate the impact these various measures may have had on premium rates. However, a lack of comprehensive data on losses at the insurance company level makes measuring the precise impact of the measures impossible. As noted earlier, in the vast majority of cases,

[38]The California Supreme Court allowed companies to decrease prices less than 20 percent if a company could show that the rollback would make it impossible to earn a reasonable profit.

existing data do not categorize losses on claims as economic or noneconomic, so it is not possible to quantify the impact of a cap on noneconomic damages on insurers' losses. Similarly, it is not possible to show exactly how much a cap would affect claim frequency or claims-handling costs. In addition, while most claims are settled and caps apply only to trial verdicts, some insurers and actuaries told us that limits on damages would still have an indirect impact on settlements by limiting potential damages should the claims go to trial. But given the limitations on measuring the impact of caps on trial verdicts, an indirect impact would be even more difficult to measure. Further, state laws differ dramatically, so comparing their impact is difficult. For example, limitations on damages can vary drastically in amount, type of damages covered, and how the limitations apply. Some states have caps of $250,000 on noneconomic damages, while other states have caps up to several times that amount. Moreover, some dollar limits change over time—for instance, because they are indexed to inflation—while others do not. Some states apply the cap to all damages, including economic damages, and some apply the cap "per occurrence" of malpractice. That is, the total amount collected by all parties injured by an act of medical malpractice cannot exceed the cap, regardless of how many physicians, hospitals, or other health care providers may be partially liable for the injuries. In contrast, for example, Nevada's recently passed limitations on damages allow multiple plaintiffs to collect the full limit from any number of responsible defendants.

The filing and resolution of medical malpractice claims is regulated, to a great extent, by states' tort and insurance laws. Changes to such laws can thus have a great effect on both the frequency and severity of those claims, which in turn can affect premium rates. Because many states have made changes to these laws, it is difficult to predict the extent to which premium rates might change in future markets.

Conclusions

Multiple factors have combined to increase medical malpractice premium rates over the past several years, but losses on medical malpractice claims appear to be the primary driver of increased premium rates in the long term. Such losses are by far the largest component of insurer costs, and in the long run, premium rates are set at a level designed to cover anticipated costs. However, the year-to-year increase in premium rates can vary substantially because of perceived future losses and a variety of other factors, including investment returns and reinsurance rates. Moreover, the market for medical malpractice insurance is not national, but depends on the varying framework of insurance, legal, and health care structures

within each of the states. As a result, both the extent and the effects of changes in losses and other insurance-related factors on premium rates also vary by state.

While losses aggregated for the industry as a whole have shown a relatively consistent upward trend over time, the loss experience of any single company is likely to vary from year to year and to increase more rapidly in some years than in others. At the same time, because of the long lag between collecting premium income and paying on claims, premium rates for the next year must be high enough to cover claims that will be reported that year, the majority of which will be paid over the next 3 to 5 years. And due to the volatility of the ultimate payouts on medical malpractice claims, it is difficult for insurers to predict the amount of those payouts with great certainty. As a result, changes in current losses can have large effects on perceived or estimated future losses and consequently on premium rates, because if insurers underestimate what will be needed to pay claims, they risk not only future profits but potentially their solvency.

However, factors other than losses–such as changes in investment income or the competitive environment–can also affect premium rate decisions in the short run. These factors can either amplify or reduce the effect of losses on premium rates. For example, high expected returns on investment may legitimately permit insurers to price insurance below the expected cost of paying claims. But incorrect projections of continuing high returns could cause insurers to continue to hold prices down for too long, even though underlying losses may be rising. When such factors affect most or all medical malpractice insurers, the result appears as a period of stable or falling premium rates or a period of sharply rising rates. When they alternate, these periods may describe the soft and hard phases of the medical malpractice insurance cycle.

Based on available data, as well as our discussions with insurance industry participants, a variety of factors combined to explain the malpractice insurance cycle that produced several years of relatively stable premium rates in the 1990s followed by the severe premium rate increases of the past few years. To begin with, insurer losses anticipated in the late 1980s did not materialize as projected, so insurers went into the 1990s with reserves and premium rates that proved to be higher than the actual losses they would experience. At the same time, insurers began a decade of high investment returns. This emerging profitability encouraged insurers to expand their market share, as both the downward adjustment of loss reserves and high investment returns increased insurers' income. As a result, insurers were

generally able to keep premium rates flat or even reduce them, although the medical malpractice market as a whole continued to experience modestly increasing underlying losses throughout the decade. Finally, by the mid- to late 1990s, as excess reserves were exhausted and investment income fell below expectations, insurers' profitability declined. Regulators found that some insurers were insolvent, with insufficient reserves and capital to pay future claims. In 2001, one of the two largest medical malpractice insurers, which sold insurance in almost every state, determined that medical malpractice was a line of insurance that was too unpredictable to be profitable over the long term. Alternatively, some companies decided that, at a minimum, they needed to reduce their size and consolidate their markets. These actions, taken together, reduced the availability of medical malpractice insurance, at least in some states, further exacerbating the insurance crisis. As a result of all of these factors, insurers continuing to sell medical malpractice insurance requested and received large rate increases in many states. It remains to be seen whether these increases will, as occurred in the 1980s, be found to have exceeded those necessary to pay for future claims losses, thus contributing to the beginning of the next insurance cycle.

While this explanation accounts for observed events in the market for medical malpractice insurance, it does not provide answers to other important questions about the market for medical malpractice insurance, including an explanation of the causes of rising losses over time. The data currently collected do not permit many of the analyses that would provide answers to these questions. This lack of data is due, in part, to the nature of NAIC's and states' regulatory reporting requirements for all lines of insurance, which focus primarily on the information needed to evaluate a company's solvency. Most insurance regulators do not collect the data that would allow analyses of the severity and frequency of medical malpractice claims for individual insurer operations within specific states. Moreover, insurers are generally not required to submit to NAIC or state regulators data that would show how insurers losses are divided between settlements and trial verdicts or between economic and noneconomic damages. Finally, the increasing use of insurance or self-insurance mechanisms that are not subject to state or NAIC reporting requirements further complicates a complete analysis. While more complete insurance data would help provide better answers to questions about how the medical malpractice insurance market is working, other data would be equally important for analyzing the underlying causes of rising malpractice losses and associated costs. These data relate to factors outside the insurance industry, such as policies, practices, and outcomes in both the medical and legal arenas.

However, collecting and analyzing such data were beyond the scope of this report.

Matter for Congressional Consideration

Health care providers have suffered through three medical malpractice insurance "crises" in the past 30 years. Each instance has generated competing claims about the extent of the problem, the causes, and the possible solutions. In each instance, a lack of necessary data has hindered and continues to hinder the efforts of Congress, state regulators, and others to carefully analyze the problem and the effectiveness of the solutions that have been tried. Because of the potential for future crises, and in order to facilitate the evaluation of legislative remedies put in place by various levels of government, Congress may want to consider taking steps to ensure that additional and better data are collected. Specifically, Congress may want to consider encouraging NAIC and state insurance regulators to identify the types of data that are necessary to properly evaluate the medical malpractice insurance market—specifically, the frequency, severity, and causes of losses—and begin collecting these data in a form that would allow appropriate analysis. Included in this process would be an analysis of the costs and benefits of collecting such data, as well as the extent to which some segments of this market are not captured by current data-gathering efforts. Such data could serve the interests of state and federal governments and allow both to better understand the causes of recurring crises in the medical malpractice insurance market and formulate the most appropriate and effective solutions.

NAIC Comments and Our Evaluation

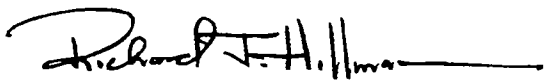
NAIC's Director of Research provided us with oral comments on a draft of this report. The Director generally agreed with the report's findings, conclusions, and matter for congressional consideration. Specifically, the Director agreed that the medical malpractice markets are not national in nature and vary widely with regard to their insurance markets, regulatory framework, legal environment, and health care structures. Furthermore, the Director stated that the medical malpractice insurance industry has shown an upward trend in losses over time and that this rise can be attributed to a variety of causes that are difficult to measure or quantify. The Director also said that he does not believe that excess profits by insurers are in evidence.

The Director told us that NAIC is working on a study of the medical malpractice marketplace that he hopes will be ready for distribution in the

summer of 2003. The Director stated that NAIC, like GAO, had identified many data limitations that make the study of this line of insurance difficult. As a result, the Director generally agreed with our matter for congressional consideration that Congress consider encouraging NAIC and state regulators to identify and collect additional information that could be used to properly evaluate the medical malpractice insurance market. The Director stated that while such efforts would require some additional resources, the costs would not be prohibitive and the efforts would provide needed information. The Director also provided technical comments, which we have incorporated into the report as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to the Chairmen of the Senate Committee on Governmental Affairs and its Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia; the Chairman of the House Committee on the Judiciary; and the Chairman of the House Committee on Energy and Commerce. We will also send copies of this report to other interested congressional committees and members, and we will make copies available to others on request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staffs have any questions regarding this report, please contact me or Lawrence Cluff at (202) 512-8678. Additional contributors are acknowledged in appendix IV.



Richard J. Hillman
Director, Financial Markets and
Community Investment

List of Requesters

The Honorable Richard J. Durbin
Ranking Minority Member
Subcommittee on Oversight of Government Managment,
the Federal Workforce, and the District of Columbia
Committee on Governmental Affairs
United States Senate

The Honorable John Conyers, Jr.
Ranking Minority Member
Committee on the Judiciary
House of Representatives

The Honorable John D. Dingell
Ranking Minority Member
Committee on Energy and Commerce
House of Representatives

The Honorable Marion Berry
The Honorable Joseph M. Hoeffel
The Honorable Alan B. Mollohan
The Honorable Dennis Moore
The Honorable Nick J. Rahall II
The Honorable Max Sandlin
House of Representatives

Scope and Methodology

Recognizing that the medical malpractice market can vary considerably across states, we judgmentally selected a sample of seven states in order to conduct a more in-depth review in each of those states. Except where otherwise noted, our analyses were limited to these states. We selected our sample so that we would have a mix of states based on the following characteristics: extent of recent increases in premium rates, status as an American Medical Association crisis state, presence of caps on noneconomic damages, state population, and aggregate loss ratio for medical malpractice insurers within the state. The states we selected were California, Florida, Minnesota, Mississippi, Nevada, Pennsylvania, and Texas. Within each state we spoke to one or both of the two largest and currently active sellers of medical malpractice insurance, the state insurance regulator, and the state association of trial attorneys. In six states, we spoke to the state medical association, and in five states, we spoke to the state hospital association. Due to time constraints, we did not speak to the medical or hospital associations in Texas or the hospital association in Florida. We used information obtained from these organizations to help answer each of our objectives and, as outlined below, also performed additional work for each objective.

To examine the extent of increases in medical malpractice insurance rates for the largest insurers in our sample states, we reviewed annual survey data on medical malpractice premium rates collected by a private data collection company. While individual insurers determine whether to respond to the survey, we believe the data to be representative for the three medical specialties for which the company collects data—internal medicine, general surgery, and obstetrics/gynecology—because of both the number of insurers responding to the survey and the states represented by them. The premium rates collected in the survey are base rates, which do not reflect discounts or additional charges by insurers, so the actual premium rates charged by insurers can vary from the premium rates collected in the survey. We could not determine the extent to which the actual premium rates charged varied from the base rates, but among the insurers we spoke with, the actual premium rates charged in 2001 and 2002 ranged from about 50 to 100 percent of the base rates. We did not test the reliability of the survey data.

To analyze the factors contributing to the premium rate increases in our sample states and other states, we examined data from state insurance regulators, the National Association of Insurance Commissioners (NAIC), A.M. Best, the Securities and Exchange Commission, and the Physician Insurers Association of America on insurers in our sample states as well as

the medical malpractice insurance market as a whole. We did not verify the reliability of these data. Where possible, we obtained data from 1975 to the present. As noted earlier in this report, comprehensive, reliable data that would have allowed us to quantify the effect of individual factors on medical malpractice premium rates did not exist. We also reviewed relevant academic studies and industry guidance. In addition, we spoke with officials from the insurers and state insurance departments in our sample states, as well as professional actuarial and insurance organizations. To analyze factors that were likely to vary among states—losses on medical malpractice claims, reinsurance rates, and competition among insurers—we reviewed data for one or both of the two largest and active medical malpractice insurers in our samples states. We also reviewed aggregate data on losses for all insurers in each state as well as the U.S. medical malpractice insurance market as a whole. To analyze factors that were likely to be common among medical malpractice insurers in all states—investment income and the presence of an insurance cycle—we reviewed either A.M Best data for the 15 largest medical malpractice insurers as of 2001 (whose combined market share nationally was approximately 64.3 percent), or NAIC data for all medical malpractice insurers reporting data to NAIC. Also as noted earlier in this report, data and scope limitations prevented us from fully analyzing the factors behind increased losses from medical malpractice claims.

To analyze how the national medical malpractice insurance market has changed since previous periods of rising premium rates, we reviewed studies published by NAIC; analyzed insurance industry data compiled by NAIC and A.M. Best; reviewed tort laws across all states and state insurance regulations; spoke with insurers and state insurance regulators in our sample states; and spoke with officials from national professional actuarial, insurance, legal, consumer rights, medical, and hospital organizations.

We conducted our work from July 2002 through June 2003 in accordance with generally accepted government auditing standards.

Legal Summary

Each state's tort laws generally govern the way in which medical malpractice claims or lawsuits are resolved. As discussed in this report, most state laws aimed at controlling premium rates attempt to reduce insurer losses related to medical malpractice claims. Although these laws take many different forms, they usually have at least some of the provisions summarized in this appendix. State courts have dealt differently with these kinds of provisions, and some states have found that some of these kinds of provisions are unconstitutional. The provisions summarized in this appendix are not the only ones that might impact the treatment of medical malpractice claims in states' tort systems.

Limits on Damages. Damages in medical malpractice cases usually consist of two categories, economic damages and noneconomic damages. (Although punitive damages can be available in cases of gross negligence and outrageous conduct of the health care provider, juries rarely award punitive damages in medical malpractice cases.) Economic damages generally consist of past and future monetary damages, such as lost wages or medical expenses. Noneconomic damages generally consist of past and future subjective, non-monetary loss, including pain, suffering, marital losses, and anguish. Although some states have limits on the total amount of damages recoverable in a medical malpractice suit, most states with limits, as well as pending federal legislation, have emphasized a limit only on noneconomic damages. As discussed in this report, limitations on damages can vary drastically in amount, type of damages covered, and application.

As mentioned in this report, limitations on damages can impact frequency of lawsuits as well. Plaintiffs' attorneys are usually paid based on a percentage of what the claimant recovers, and according to some trial attorneys we spoke to, attorneys may be less likely to represent an injured party with minor economic damages if noneconomic damages are limited. One consumer rights group told us that suits with limited economic damages are typical in cases where the plaintiff is not working and does not have substantial costs of future medical care.

Evidence of Collateral Source Payments. At common law, or without any legislative intervention, a plaintiff would be able to recover all damages sustained from a liable defendant, even if the plaintiff were going to receive money from other sources, called "collateral sources," like health insurance policies or Social Security. Some states have modified this common law rule with statutes that allow defendants to show that the claimant is going to receive funds from collateral sources that will

compensate the claimant for damages he or she is attempting to collect from the defendant. These statutes authorize, to various extents, decreasing the defendant's liability by the amount the claimant will receive from other sources. In the state summaries in appendix III, if a state has not modified the common law rule regarding collateral sources, the chart will say "no modification."

Joint and Several Liability. Joint and several liability is the common law rule that a plaintiff can collect the entire judgment from any liable defendant, regardless of how much of the harm that defendant's actions caused. Some states have eliminated joint and several liability, making each defendant responsible for only the amount or share of damage he or she caused the plaintiff. Other states have eliminated joint and several liability only for noneconomic damages. Some states have eliminated joint and several liability for defendants responsible for less than a specified percentage of the plaintiff's harm; for example, if a defendant is less than 50 percent responsible, that defendant might need to pay only for that percentage of the plaintiff's damages.

Attorney Contingency Fees. Most plaintiff attorneys are paid on a contingency fee basis. A contingency fee is one in which the lawyer, instead of charging an hourly fee for services, agrees to accept a percentage of the recovery if the plaintiff wins or settles. Some states have laws that limit attorney contingency fees. For example, in California a plaintiff's attorney can collect up to 40 percent of the first $50,000 recovered, 33 percent of the next $50,000 recovered, 25 percent of the next $500,000 recovered, and 15 percent of any amount exceeding $600,000. Provisions that decrease attorneys' financial incentives to accept cases could decrease the number of attorneys willing to take the cases. These limits were based on the belief that they would lead to more selective screening by plaintiffs' attorneys to ensure that the claims filed had merit. In the state summaries in appendix III, if a state does not have limits in place specifically for attorneys in medical malpractice cases, the chart will say "no modification."

Statute of Limitations. The amount of time a plaintiff has to file a claim is known as the "statute of limitations." Some states have reduced their statutes of limitations on medical malpractice claims. This decrease could limit the number of cases filed by claimants. Special time requirements for minors are not noted on the summaries in appendix III.

Periodic Payment of Damages. Defendants traditionally pay damages in a lump sum, even if they are being collected for future time periods, such as

future medical care or future lost wages. However, some states allow or require certain damages to be paid over time, such as over the life of the injured party or period of disability, either through the purchase of an annuity or through self-funding by institutional defendants. Some insurers we spoke with said that purchasing annuities can reduce insurers' costs, and that periodic payments better match damage payments to future medical costs and lost earnings incurred by injured parties, assuring that money will be available to the injured party in the future. A consumer rights group we spoke with told us that, because periodic payments stop at the death of an injured party, there may be unsatisfied medical bills at the time of the injured party's death.

Expert Certification. Many states require that medical experts certify in one way or another the validity of the claimant's case. These statutes are designed in part to keep cases without merit, also known as frivolous cases, out of court. Expert certification requirements also have the potential to get as many relevant facts out in the open as early as possible, so that settlement discussions are fruitful and it becomes unnecessary to take as many cases to trial, thus decreasing the claims-handling costs of the case.

Arbitration. Some states have enacted arbitration statutes that address medical malpractice claims specifically. Some of these statutes require that the arbitration agreement meets standards that are designed to alert the patient to the fact that he is waiving a jury trial through the use of a specific size of font, or by specifying the precise wording that must be contained in the agreement. Although most courts have held that medical malpractice claims can properly be submitted to arbitration, litigation involving the arbitration statutes has involved issues such as whether the patient knew he was waiving the right to a jury trial, whether the patient who agrees to arbitration had appropriate bargaining strength, and whether third parties have authority to bind others to arbitration.

By providing an option for arbitration, parties can avoid the larger expense of taking claims to court. However, some industry experts said that these arbitration provisions may not be binding and may result in the losing party deciding to take the case to court in any event, so arbitration can simply increase expenses without affecting the ultimate resolution of the dispute.

Advanced Notice of Claim. Advanced-notice-of-claim provisions require claimants to give defendants some period of time, 90 days for example, prior to filing suit in court. Some insurers and plaintiffs' attorneys we spoke with said that this requirement aids plaintiffs and defendants in resolving meritorious claims outside of the court system and allows plaintiffs' attorneys to obtain relevant records to determine whether a case has merit. However, another group we spoke to said that the advanced notice of claim provision in that group's state was ineffective.

Bad Faith Claims. As mentioned in this report, some insurers we spoke with told us that they can be liable for amounts beyond an insurance policy's limits, if the policyholder requests the insurer to settle with the plaintiff for an amount equal to or less than the policy limit, and the insurer takes the case to trial, loses, and a judgment is entered in an amount greater than the policy limits. Industry experts we spoke to said that, under those circumstances, the insurer could be liable for acting in "bad faith." In some states, like Nevada, this bad faith claim can be brought only by the insured physician; that is, the physician can seek payment from the insurance company if the physician has paid a plaintiff beyond a policy's limits. In contrast, in Florida, the plaintiff can sue a physician's insurer directly for the insurer's alleged improper conduct in medical malpractice cases. The difficulty of establishing that an insurer acted in bad faith varies according to state law. Insurers in three of our study states—Texas, California, and Florida—said that bad faith litigation was a substantial issue in their states.

State Summaries

This appendix describes the specific medical malpractice insurance environment in each the seven sample states we evaluated for this report. (See figs.10-16.)

Market Description

- Typical Coverage Type and Limit. This section summarizes the type of medical malpractice insurance coverage typically issued in the state, as well as the standard coverage limits of these policies. Coverage limits can range from $100,000/$300,000 to up to $2 million /$6 million. The lower number is the amount the insurer will pay per claim and the higher number is the total the insurer will pay in aggregate for all claims during a policy period. There are several types of insurance coverage available.
  - *Occurrence-based* insurance provides coverage for claims that arise from incidents that occur during the time the insurance policy is in force, even if the policy is not continued. Claims that arise from incidents occurring during the policy period that are reported after the policy's cancellation date are still covered in the future.
  - *Claims-made* insurance provides coverage for claims that arise from incidents that occur and are reported during the time the insurance policy is in force.
  - *Prior acts coverage* is a supplement to a claims-made policy that can be purchased from a new carrier when changing carriers. Prior acts coverage covers incidents that occurred prior to the switch to a new carrier but had not been previously reported.
  - *Tail coverage* is an option available from a former carrier to continue coverage for those dates that the claims-made coverage was in effect.
- Regional Differences. This section notes any major regional differences in premium rates quoted by insurers within the state using the base rate for general surgery as a comparison. The *Medical Liability Monitor* annually surveys providers of medical malpractice insurance to obtain their premium base rates for three specialties: internal medicine, obstetrics/gynecology, and general surgery. In the state summaries, descriptions of regional differences in premium rates are based on Medical Liability Monitor information.

- Frequency and Severity. This section describes the extent to which insurers and state regulators we spoke with believe frequency and severity are changing in each state. Frequency is usually defined as the number of claims per number of doctors, counting doctors in different specialties as more or fewer doctors depending on the risk associated with the specialty. Severity is the average loss to the insurer per claim.

Insurer Characteristics and Market Share

- Insurer Characteristics. This section describes the various types of insurers present in each of the states. In addition to traditional commercial insurance companies, the following entities or arrangements can provide liability protection:
  - *Physician insurer associations or physician mutuals* are physician owned and operated insurance companies that provide medical liability insurance.
  - *Reciprocals* are similar to mutuals, except that an attorney-in-fact often manages the reciprocal.
  - *Risk retention groups* are insurance companies owned by policyholders. Risk retention groups are organized under federal law—the Liability Risk Retention Act of 1986.
  - *Trusts* are a form of self-insurance and consist of segregated accounts of health care entities that estimate liabilities and set aside funds to cover them.
- Market Share. This section describes the medical malpractice market in each of the states. Recent changes in the market are also noted in this section.
- Joint Underwriting Association (JUA). This section details whether a state has created a JUA and the extent of its use. A JUA is a state-sponsored association of insurance companies formed with statutory approval from the state for the express purpose of providing certain insurance to the public.

Rate Regulation

This section describes the regulatory scheme employed by each state. Statutory requirements generally provide that insurance rates be adequate,

not excessive, and not unfairly discriminatory. The degree of regulation of medical malpractice insurance rates varies from state to state. States may have "prior approval" requirements in which all rates must be filed with the insurance department before use and must be either approved or disapproved by the department of insurance. Other states have "file and use" provisions in which the insurers must file their rates with the state's insurance department; however, the rates may be used without the department's prior approval.

State Tort Laws

This section identifies key components of each state's efforts to address the medical malpractice insurance situation by targeting ways in which medical malpractice claims are processed through the court system. The following legal provisions are summarized for each state:

- Limits on Damage Awards
- Collateral Source Rule
- Periodic Award Payments
- Pretrial Expert Certification
- Attorney Contingency Fees
- Joint and Several Liability
- Statute of Limitations
- Bad Faith Claims

Appendix II has a description of each of these provisions, in addition to other provisions that are not summarized herein, but that might impact medical malpractice claims. For the information on state provisions in appendix III, we relied upon a summary of state tort laws compiled by the National Conference of State Legislatures (NCSL) in October of 2002. We independently reviewed selected sections of the NCSL summary for accuracy, and supplemented the NCSL information with information from interviews with industry officials. The state laws summarized herein might have changed since the date of the NCSL publication. Additionally, as noted in appendix II, the state tort laws summarized in this appendix are not the

only ones that might impact the treatment of medical malpractice claims in states' tort systems.

Figure 10: California

California

Market description:

Typical coverage type and limit-- Coverage is predominately claims-made. Typical policy limits are $1 million per incident/$3 million cumulative for the policy year.

Regional differences-- Insurers generally divide California into two rating areas-northern and southern California. Insurers typically reported higher rates for general surgery in southern California counties.

Frequency and severity-- The California Department of Insurance (CDI) and insurers believe severity is increasing in California and has led to increases in insurer losses.

State specifics

Population:	33,871,648
Size (land area):	155,959 sq miles
Density:	217.2 pp/sq. mi

Insurer characteristics and market share:

Insurer characteristics-- The California Medical Association stated that most physicians in California purchase medical malpractice coverage from physician owned companies (Doctors Co., MIEC, Norcal), commercial carriers (SCIPIE), or CAP/MPT, a physician cooperative in which physicians assume responsibility for the liabilities.

Market share-- Based on A.M. Best and NAIC data, the companies with a 5% or more market share in California (2001) were Norcal (21%), SCIPIE (13%), Doctor's Co. (11%), CAP/MPT (9%), and Truck Insurance Exchange (6%).

Rate regulation:

Prior to 1988 and the passage of Proposition 103, California had an open filing system and had limited interaction with its malpractice insurers. Proposition 103 requires prior approval of insurer rates. Additionally, if a commercial carrier requests an increase of greater than 15 percent, the Commissioner of Insurance must grant a public hearing upon request. At the time of passage, insurers were also required to roll back their rates by giving a refund to their clients.

State tort laws:

Limits on damage awards-- $250,000 limit on noneconomic damages, applied per occurrence, and not indexed for inflation.

Collateral source rule-- Discretionary offset for collateral sources introduced at trial.

Periodic award payments-- Mandatory periodic payment of future damages over $50,000 (upon request).

Pretrial expert certification-- Generally, no expert certification is required for medical malpractice cases in California.

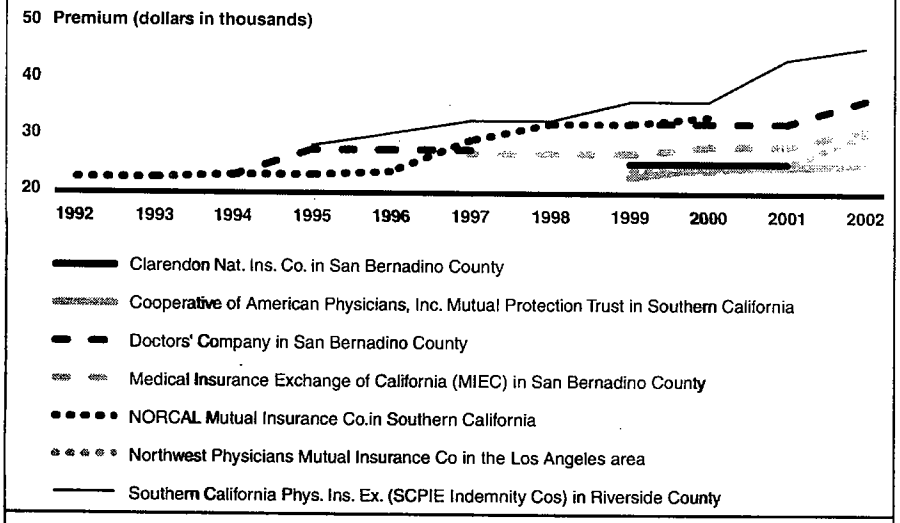
Attorney contingency fees-- Limited to 40% of the first $50,000, 33.3% of the next $50,000, and 25% of the next $500,000, and 15% of any amount exceeding $600,000.

Joint and several liability-- No joint and several liability for noneconomic damages.

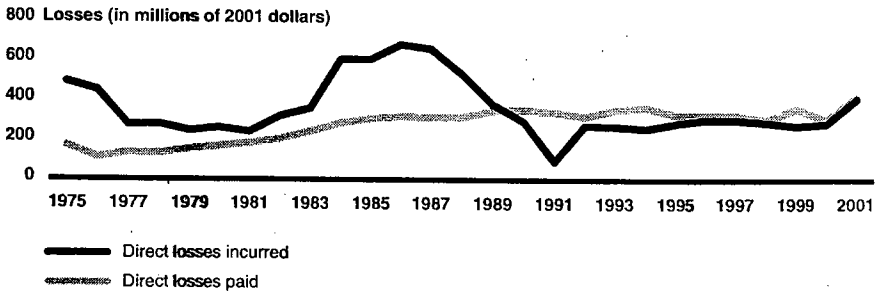
Statute of limitations-- Plaintiffs must file within one year of discovery of injury or within three years of the injury, whichever is first.

Bad faith claims-- Insurers consider this to be a significant problem in California.

Premium Rates: General Surgery for Seven California Insurers ($1M/$3M mature claims-made coverage)



Direct Losses Paid Compared to Direct Losses Incurred California 1975-2001



Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

Figure 11: Florida

Florida

Market description:

Typical coverage type and limit-- Many physicians are reducing the amount of coverage purchased. For example, in 2002, First Professionals Insurance Company (FPIC) sold almost exclusively claims-made policies with a $250,000 limit.

Regional differences-- Insurers typically reported higher rates for general surgery in Dade and Broward Counties. According to the Florida Medical Association (FMA), Dade County has the highest premium rates in the United States.

Frequency and severity-- FPIC believes claim frequency and severity have gone up significantly in the last several years, with frequency responsible for the increased insurer losses.

State specifics

Population:	15,982,378
Size (land area):	53,927 sq miles
Density:	296.4 pp/sq. mi

Insurer characteristics and market share:

Insurer characteristics-- FMA stated that very few insurers in Florida are currently physician owned. The state Department of Insurance (DOI) believes more hospitals are self-insuring, more doctors are using the state JUA, and many doctors are going without insurance. FPIC--currently writing in 6 states--will only write in Florida beginning in 2003.

Market share-- Based on A.M. Best and NAIC data, the companies with a 5% or more market share in Florida (2001) were FPIC (17%), Health Care Indemnity Inc. (14%), Pronational Insurance Company (9%), and Truck Insurance Exchange (5.4%).

Joint Underwriting Association-- Florida has a JUA, which acts as an insurer of last resort. The number of health care providers using the JUA has increased from around 20 in 2000 to 400 in 2001

Rate regulation:

Florida is a use and file state. There is no allowable deviation from the approved rate filing, which must include all possible adjustments to the base rate.

State tort laws:

Limits on damage awards-- Where parties agree to binding arbitration (requires defendant admit fault), noneconomic damages are limited to $250,000; where plaintiff refuses to arbitrate, noneconomic damages are limited to $350,000. The limits are applied per plaintiff.

Collateral source rule-- Mandatory offset of collateral sources by court, unless sources have subrogation rights.

Periodic award payments-- Periodic payment of future damages allowed if damages exceed $250,000.

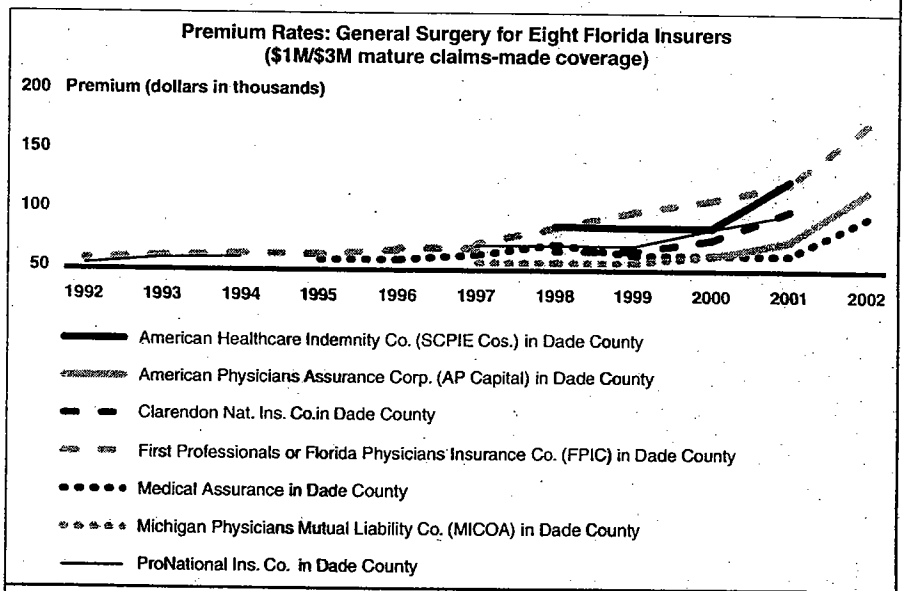
Pretrial expert certification-- Verified medical expert opinion required at the time of notice of intent to initiate litigation.

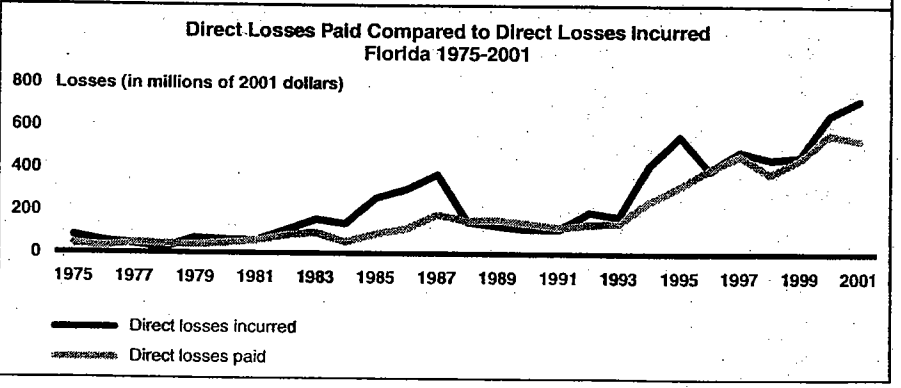
Attorney contingency fees-- Separate sliding scales for cases settling at various points of the judicial process.

Joint and several liability-- Sliding scale for defendant's responsibility, depending on whether plaintiff had any responsibility for harm and how responsible the defendant is for the harm. For example, if the plaintiff is not at fault and the defendant is less than 10% responsible, the defendant need not pay more than the percentage for which defendant was found responsible.

Statute of limitations-- Plaintiff must file within two years of occurrence or discovery, but not more than four years from occurrence.

Bad faith claims-- The Florida Department of Insurance said that bad faith lawsuits are having a significant impact on insurer losses and, therefore, on premium rates.





Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

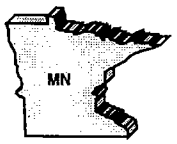
Figure 12: Minnesota

Minnesota

Market description:
Typical coverage type and limit-- Coverage is predominately claims-made. Typical policy limits are $1 million per incident/$3 million cumulative for the policy year, although some physicians purchase $2 million /$4 million coverage.
Regional differences-- Insurers typically treat Minnesota as single rating area.
Frequency and severity-- According to the Minnesota Medical Association (MMA), there has been a slight increase in the severity of claims in the past several years and no observed increase in frequency.

State specifics

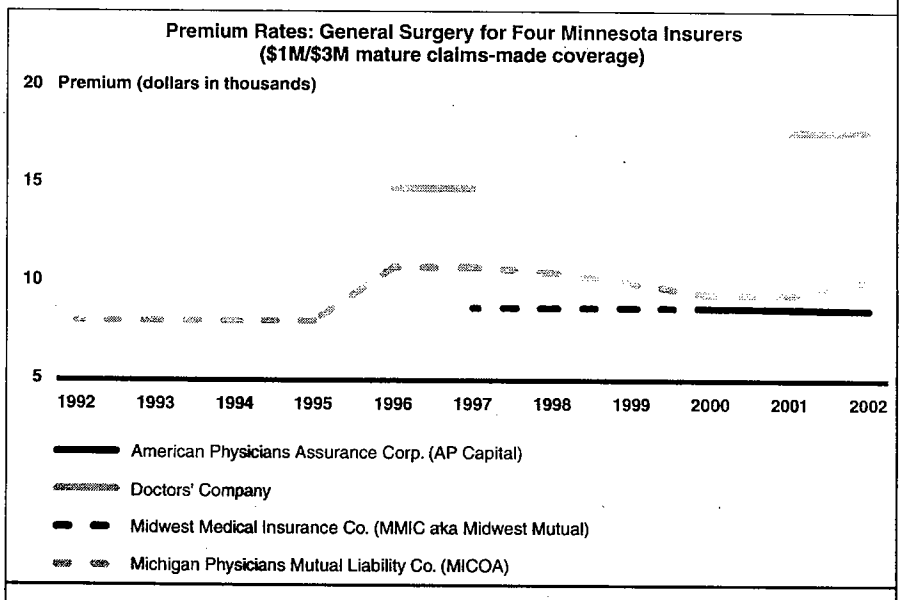
Population:	4,919,479
Size (land area):	79,610 sq miles
Density:	61.8 pp/sq. mi

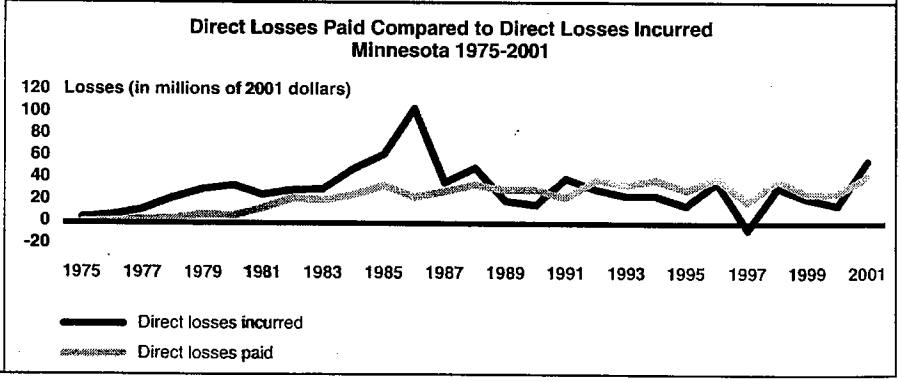


Insurer characteristics and market share:
Market share-- According to A.M. Best, the companies with a 5% or more market share in Minnesota in 2001 were Midwest Medical Insurance Company (51%) and St. Paul (26%). The St. Paul Companies recently discontinued their medical malpractice insurance line in Minnesota. Midwest Medical Insurance Company is now the leading medical malpractice insurer in Minnesota; it grew over 50% in the last two years.
Joint Underwriting Association-- In Minnesota, the JUA is considered the insurer of last resort. As of 1/2002, the JUA had 8 policies but by 10/2002 it had 168 policies, mostly for nursing homes.

Rate regulation:
The state regulatory body--Minnesota Department of Commerce--emphasizes the market itself as the most effective regulator of premium rates in the state. Minnesota has a file and use system. In 2001, Minnesota began to allow a "speed to market" filing procedure for companies that meet certain stability and history requirements.

State tort laws:
Limits on damage awards-- No limit on economic or noneconomic damages.
Collateral source rule-- Minnesota requires a mandatory offset of collateral sources by court if defendant introduces evidence of payments made to plaintiff.
Periodic award payments-- Allows discretionary periodic payment of future damages if damages exceed $100,000.
Pretrial expert certification-- With the initial filing, plaintiff's expert must certify defendant deviated from the applicable standard of care and that deviation caused plaintiff's injuries. After 180 days, expected trial expert must certify as to the substance of facts and opinions to which expert is expected to testify, and grounds to support those opinions.
Attorney contingency fees-- No modification.
Joint and several liability-- Defendant liable only for up to four times defendant's share of damages if less than 15% responsible for harm; if more than 15% responsible, defendant liable for entire amount of damages. After August 1, 2003, defendent liable for proportioned share of damages, if less than 50% responsible for harm; if more than 50% responsible, defendant liable for entire amount of damages.
Statute of limitations-- Plaintiff must file within two years of occurrence of malpractice or termination of treatment.
Bad faith claims-- Insurer and medical society did not say these cases were an issue in Minnesota.





Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

Figure 13: Mississippi

Mississippi

Market description:
Typical coverage type and limit-- The Mississippi Department of Insurance (DOI) stated that insurance in the state is typically claims made.
Regional differences-- Insurers typically treat Mississippi as a single rating area.
Frequency and severity-- The DOI and Medical Assurance Company of Mississippi (MACM) believe claim severity has grown significantly and has led to increased insurer losses.

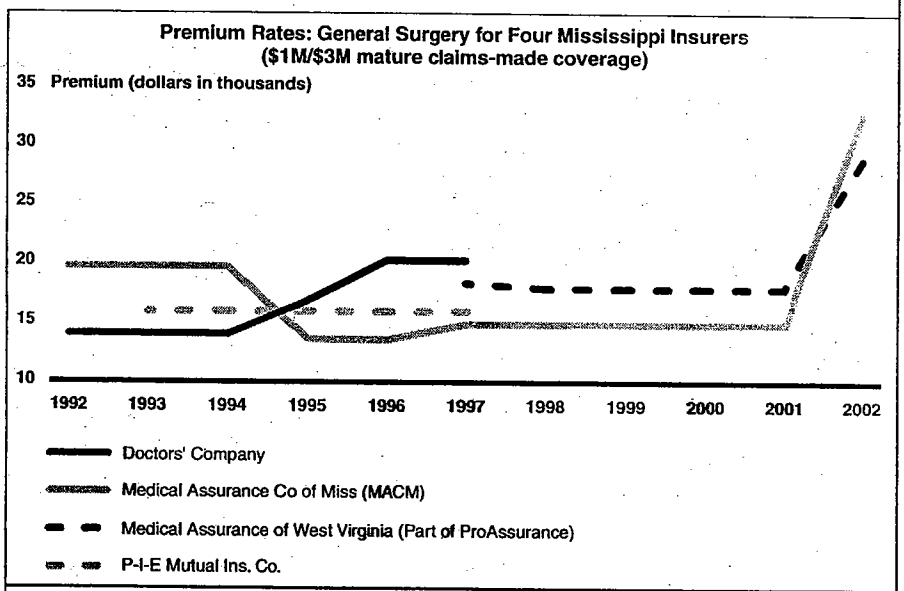
State specifics

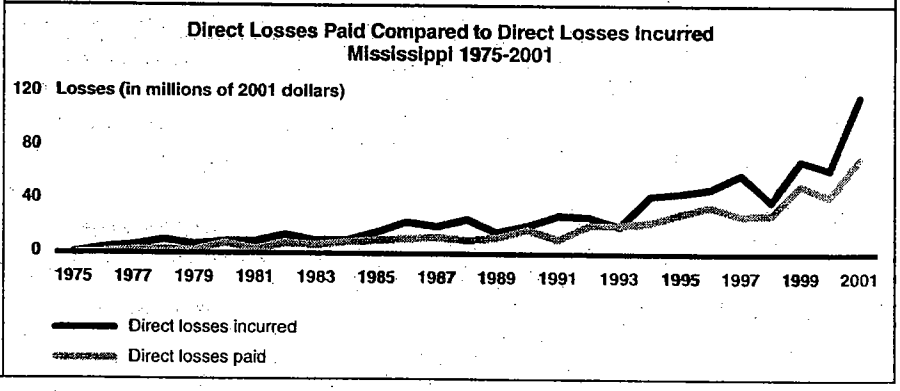
Population:	2,844,658
Size (land area):	46,907 sq miles
Density:	60.6 pp/sq. mi

Insurer characteristics and market share:
Insurer characteristics-- According to a 2003 DOI survey, some physicians are moving from the admitted market to the surplus market. DOI stated that some physicians are going without formal insurance right now and hospitals might be moving to form risk retention groups or self-insure, but that captives are not allowed under state law.
Market share-- Based on A.M. Best and NAIC data, the companies with a 5% or more market share in Mississippi (2001) were MACM (34%), Reciprocal of America (21%), St. Paul Companies (10%), Doctors Insurance Reciprocal (8%), and the Doctor's Company (6%). DOI stated that MACM is the largest writer in Mississippi with an estimated market share of 60 percent. Most licensed companies, including MACM are at no growth. Several companies--St. Paul, Reciprocal of America, ProAssurance--have pulled out of the market or are reducing exposure.
Joint Underwriting Association-- DOI is currently investigating whether a JUA would be worthwhile.

Rate regulation:
The DOI stated that most medical malpractice insurance in Mississippi is presently being written in the non-admitted market (surplus lines), which is not rate or form regulated. DOI does not regulate the rates or forms of MACM because it is a non-profit, mutual insurance corporation.

State tort laws:
Limits on damage awards-- $500,000 limit on noneconomic damages, increasing to $750,000 on July 1, 2011 and $1,000,000 on July 1, 2017; limit does not apply in disfigurement cases or at the judge's discretion.
Collateral source rule-- No modification.
Periodic award payments-- No provisions for such payments.
Pretrial expert certification-- Plaintiff's attorney must file a certificate of expert consultation, unless an exception to that general rule applies.
Attorney contingency fees-- No limitation.
Joint and several liability-- There is no joint and several liability for noneconomic damages in medical malpractice cases. For economic damages, Mississippi has a sliding scale, where defendants less than 30% responsible pay only their proportionate share, but defendants over 30% responsible pay up to 50% of economic damages.
Statute of limitations-- Plaintiff must file within two years of the malpractice of reasonable discovery of malpractice or seven years of the act.
Bad faith claims-- The insurer we spoke to said that it has not yet been sued for bad faith.





Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

Figure 14: Nevada

Nevada

Market description:

Typical coverage type and limit-- Most policies are claims-made, with the exception of a few physicians in low-risk specialties. In Nevada, most physicians are required to have $1 million/$3 million coverage.

Frequency and severity-- The State Department of Insurance (DOI) has closed-claim data indicating that frequency has increased over the past several years. The DOI believes this increase in severity is one of the main reasons insurer losses are increasing in Nevada. The Nevada State Medical Association does not believe frequency is increasing in Nevada.

Regional differences-- Insurers reporting to the Medical Liability Monitor survey typically charge higher premiums for general surgery in Las Vegas and Clark County.

State specifics

Population:	1,998,257
Size (land area):	109,826 sq miles
Density:	18.2 pp/sq. mi

Insurer characteristics and market composition:

Insurer characteristics-- In 2002, the state created Medical Liability Association of Nevada (MLAN). Although initially organized by the Insurance Commissioner, it will be an independent insurer and has the ability to convert to a mutual in the future. Also in 2002, Nevada Mutual Insurance Company (NMIC), a physician owned company, was formed and entered the market.

Market share-- Based on A.M. Best and NAIC data, the companies with a 5% or more market share in Nevada (2001) were St. Paul (32%), Health Care Indemnity Inc. (13%), the Doctors Company (9%), Physician Insurance Company of Wisconsin (6%), and Chicago Insurance Company (6%). St. Paul acquired Nevada Medical Liability Insurance (NMLI) in the mid 1990s, and captured a majority market share in Nevada. In December 2001, St. Paul announced it would be exiting the medical malpractice business.

Rate regulation:

The DOI requires prior approval of rates.

State tort laws:

Limits on damage awards-- $350,000 limit on noneconomic damages, with exception for cases of gross malpractice or special circumstances. Cap is applied per plaintiff and per defendant.

Collateral source rule-- Courts allow offsets in damages against health care providers in the amount received from a collateral source, including any prior payment by the defendant health care provider.

Periodic award payments-- Claimant may elect to receive award for future damages in a lump sum reduced to present value, if approved by the court, or by an annuity.

Pretrial expert certification-- Expert certification required to support allegations; expert must practice or have practiced in area similar to practice related to alleged malpractice.

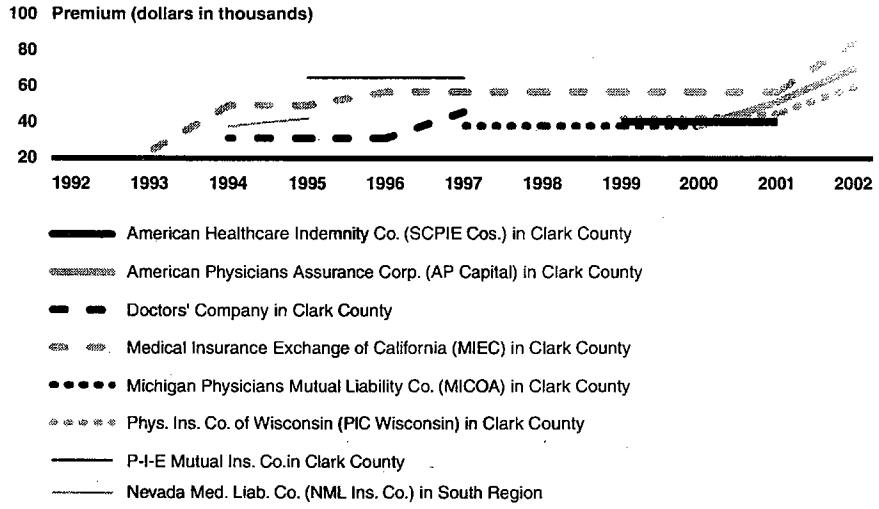
Attorney contingency fees-- No modification.

Joint and several liability-- There is no joint and several liability in Nevada in medical malpractice cases.

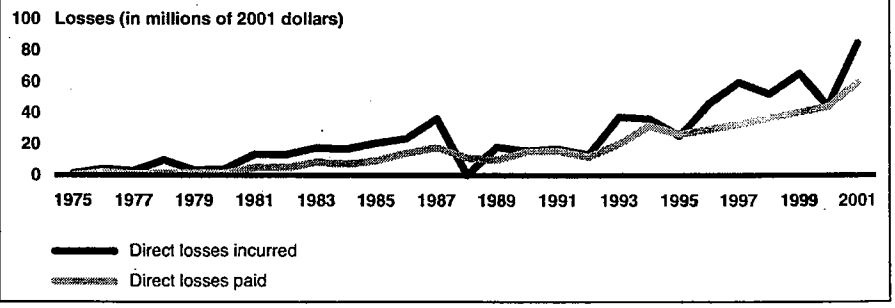
Statute of limitations-- Plaintiff must file within three years from the injury or two years from the discovery of the injury, whichever is first.

Bad faith claims-- The insurer we spoke to said it had not faced many bad faith claims in Nevada.

Premium Rates: General Surgery for Eight Nevada Insurers ($1M/$3M mature claims-made coverage)



Direct Losses Paid Compared to Direct Losses Incurred Nevada 1975-2001



Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

Figure 15: Pennsylvania

Pennsylvania

Market description:

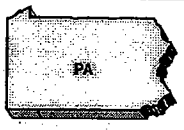
Typical coverage type and limit– Until recently, insurers in Pennsylvania were still offering occurrence coverage. By 2003, virtually all of the insurers in Pennsylvania will offer only claims-made policies. PA requires $500,000 of private insurance; Mcare–the state sponsored patient liability fund--will insure above this amount to $1.2 million.

Frequency and severity– The Pennsylvania Insurance Department (PID) believes severity has recently increased in PA. Both PID and Pennsylvania Medical Society Liability Insurance Company (PMSLIC) believe this change in severity is responsible for increasing insurer losses.

Regional differences– Most insurers charge higher rates for general surgery around Philadelphia.

State specifics

Population:	12,281,054
Size (land area):	44,817 sq miles
Density:	274 pp/sq. mi



Insurer characteristics and market share:

Insurer characteristics– As of 2002, the largest remaining medical malpractice insurer in the state is PMSLIC, a physician-owned stock company. Other entities writing in the state are commercial companies, the state Joint Underwriting Association, and self-insured academic health centers.

Market share– Based on A.M. Best and NAIC data, the companies with a 5% or more market share in Pennsylvania (2001) were PMSLIC (19%), MIIX Insurance Company (14%), Medical Protective Company (8%), TriCentury Insurance Company (6%), Lexington Insurance Company (5.2%), and VHA Risk Retention Group Inc. (5.1%). Several large medical malpractice insurersc–Phico, MIIX, and Princeton--will have ceased writing in Pennsylvania by the end of 2003.

Joint Underwriting Association– The JUA covers around 5 hospitals and 1500 physicians and expects 1,000 more physicians to seek coverage in the next year.

Rate regulation:

The PID generally utilizes a file and use system with the exception that it will review requests for more than a 10% increase in premium. PID only reviews small commercial risks-those under $25,000 in premium-and relies on the market to regulate large commercial risks.

State tort laws:

Limits on damage awards– No limit on economic or noneconomic damages.

Collateral source rule– No modification.

Periodic award payments– No specific provisions for periodic award payments.

Pretrial expert certification– Plaintiff's attorney must sign the original complaint, certifying that the attorney has contacted an expert who will attest to the plaintiff's case.

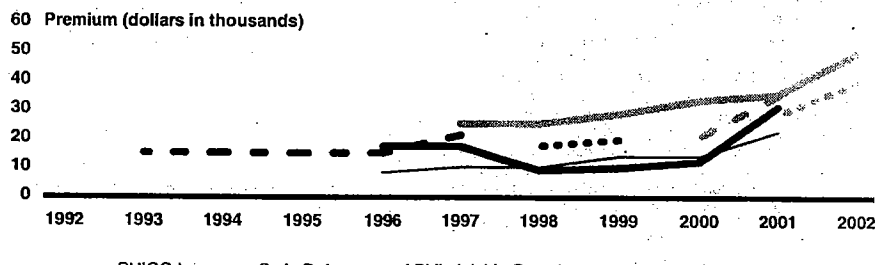
Attorney contingency fees– No modification.

Joint and several liability– If the defendant is less than 60% responsible for the harm, defendant is liable for only proportional share of ultimate judgment.

Statute of limitations– Plaintiff must file within two years of malpractice or discovery of injury.

Bad faith claims– The insurer we spoke to said that this was not a big issue in Pennsylvania.

Premium Rates: General Surgery for Seven Pennsylvania Insurers (mature claims-made coverage–see market description for coverage limits)



PHICO Insurance Co.in Delaware and Philadelphia Counties

Pennsylvania Medical Society Liability Insurance Co. (PMSLIC) in Philadelphia area

P-I-E Mutual Ins. Co.in Delaware and Philadelphia Counties

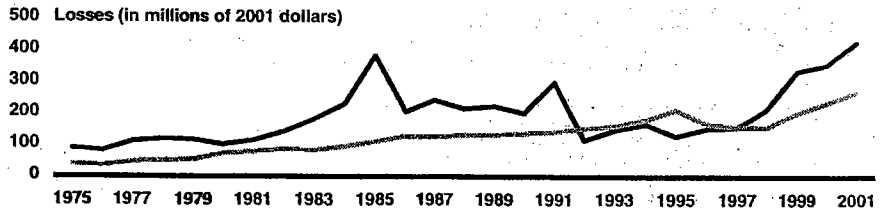
Clarendon Nat. Ins. Co. in Delaware and Philadelphia County

Professionals Advocate in Philadelphia and Delaware Counties

ProNational Ins. Co.in Philadelphia

Princeton Insurance Company

Direct Losses Paid Compared to Direct Losses Incurred Pennsylvania 1975-2001



Direct losses incurred

Direct losses paid

Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

Figure 16: Texas

Texas

Market description:

Typical coverage type and limit-- Majority of coverages written are claims made. Some physicians have recently lowered their coverage limits; many now have $500,000 rather than the $1 million.

Frequency and severity-- A Texas Medical Association (TMA) study has shown frequency and severity increasing in Texas. The Texas Department of Insurance (DOI) believes increases in both severity and frequency have led to increased insurer losses.

Regional differences-- Most insurers reporting to the Medical Liability Monitor survey charge higher rates for general surgery in urban areas such as Dallas and Houston, and the border county El Paso.

State specifics

Population:	20,851,820
Size (land area):	261,797 sq miles
Density:	79.6 pp/sq. mi

Insurer characteristics and market share:

Insurer characteristics-- Licensed medical malpractice insurance carriers cover one third of physicians, unlicensed Texas Medical Liability Trust (TMLT) covers one third, and one third are covered by alternative forms of insurance.

Market share-- Based on A.M. Best and NAIC data, the companies with a 5% or more market share in Texas (2001) were TMLT (22%), Health Care Inemnity Inc. (16%), and Medical Protective Company (10%). As of 2002 there were only four main writers of medical malpractice insurance in Texas, down from 17 in 2001. Some went out of business, others discontinued writing in Texas.

Joint Underwriting Association-- Formed in 1975, the state JUA grew from 100 to 1,800 policies from the late 1990s to January 2003.

Rate regulation:

Texas is a file and use state. In the mid 1990s, the state mandated a rollback in premiums.

State tort laws:

Limits on damage awards-- Approximately $1.3 million cap on noneconomic damages in wrongful death cases. Texas applies the limit per plaintiff, per defendant, and adjusts the limit for inflation.

Collateral source rule-- No modifications.

Periodic award payments-- No specific provision for periodic award payments.

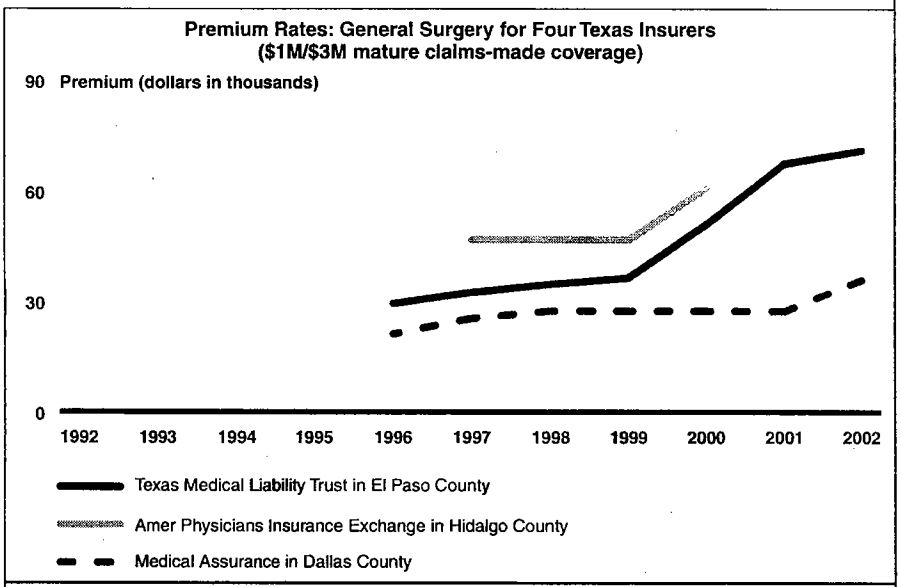
Pretrial expert certification-- Plaintiff must file either cash, a cost bond, or an expert report within 90 days of filing suit. Plaintiff must also serve expert report on each defendant within 180 days of filing suit.

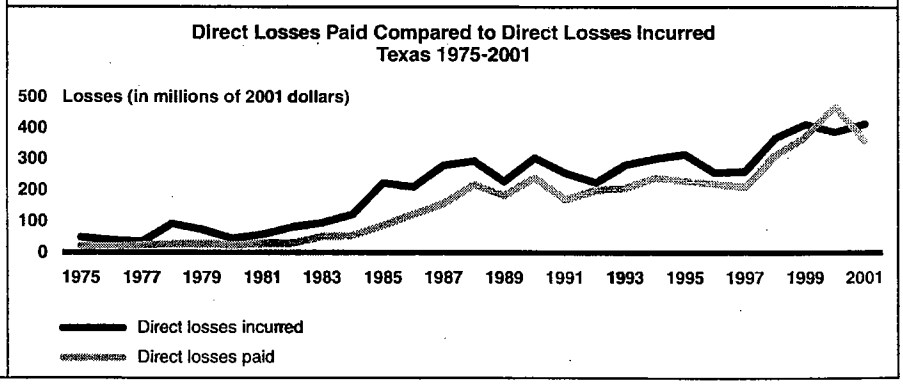
Attorney contingency fees-- No modification.

Joint and several liability-- Defendants can be liable for payment of entire award if they are at least 51% responsible for plaintiff's damages.

Statute of limitations-- Plaintiff must file the case within two years of occurrence or discovery of the malpractice.

Bad faith claims-- TMLT said bad faith claims are a significant problem.





Sources: U.S. Census Bureau, 2000 (top box); GAO analysis of *Medical Liability Monitor* data (middle box); GAO analysis of A.M. Best data (bottom box).

GAO Contacts and Staff Acknowledgments

GAO Contacts

Richard J. Hillman, (202) 512-8678
Lawrence Cluff, (202) 512-8023

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Related GAO Products

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