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Defending the Practice of Medicine

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A commentary from the June 14, 2004 *Archives of Internal Medicine*, by Richard E. Anderson, M.D., F.A.C.P., chairman and CEO of The Doctors Company, the first national physician-owned medical malpractice insurer. Dr. Anderson is a noted authority on medical malpractice insurance and jurisprudence.

Defending the Practice of Medicine

THERE IS LITTLE DOUBT about the following facts: Physicians across the United States have been confronted with alarming increases in the cost of malpractice insurance, and access to critical medical services is imperiled in many states. National media cover the closing of trauma centers and obstetrical suites and a number of state legislatures have met in special session to attempt to deal with the crisis. The American Medical Association has declared 18 states to be in crisis and predicts many more will follow.¹

Beyond the headlines, however, there are several questions that require answers:

1. Why have rate increases varied so much by venue and specialty?
2. Is the organized plaintiffs' bar correct when it argues that these effects have been caused not by an increase in litigation but by insurance company mismanagement and greed?
3. Are there effective actions that can be taken now to mitigate the problem?
4. What is the price of the status quo?

This Commentary reviews the extent of the malpractice insurance dilemma as it exists today, compares it with historical antecedents, analyzes the root causes, and suggests practical solutions that are available now.

THE CRISIS TODAY: LOSS OF CAPACITY

Capacity is the ability of an insurance company to accept risk, in other

words, to maintain adequate capital to pay the claims that arise from the acceptance of premium. More than \$1 billion of capacity was withdrawn from the medical malpractice insurance market in 2002. Most notable was the voluntary decision of the St Paul Insurance Company, St Paul, Minn, to cease offering medical malpractice coverage after posting nearly \$1,000,000,000 in medical malpractice claims losses in 2001.² This decision is striking given that the company has been the nation's largest malpractice carrier over the past 2 decades. In announcing its decision, St Paul's chief executive officer questioned whether medicine was any longer an insurable risk.² James Hurley, a prominent medical malpractice actuary, observed, "If St Paul thought they had the premium right they would probably have stayed in the business," meaning that risk of such insurance had become unpredictable.²

Even worse, over the past several years, a number of major malpractice insurers have filed for bankruptcy or been placed in receivership or run-off by regulators. This list includes large companies such as PHICO Insurance Company (Pennsylvania), PIE Mutual Insurance Company (Ohio), Frontier Pacific Insurance Company (California), Reliance Insurance Company (Pennsylvania), and MIIX Insurance Company (New Jersey), and a number of smaller carriers as well. In these instances, physicians may find themselves personally liable for claims that had already been submitted to the insurance company.

It is estimated that malpractice insurers will pay out approxi-

mately \$1.40 in claims losses and direct expenses for every dollar of premium collected in 2001 and 2002.³ Even with significant rate increases, it is projected that insurers will be forced to expend \$1.35 in claims costs and expenses for each premium dollar received in 2003.³ These figures are independent of investment gains or losses.

Mutual or reciprocal insurance companies, companies that are owned by the physician policyholders themselves, not outside shareholders, insure more than 60% of America's practicing physicians.⁴ The primary mission of these companies is to provide insurance protection for practicing physicians. Nonetheless, no company can long sustain losses of this magnitude and remain solvent, so premium rates have been forced sharply upward. Since 2000, mean rates across the country have increased between 10% and 20% annually.⁵ These averages obscure increases of 100% or more in some venues with unlimited liability in contrast to average increases of 5% to 10% in states that have passed effective tort reform statutes.⁵ In the states most severely affected, which include Pennsylvania, Nevada, West Virginia, Mississippi, Texas, and Florida, some physicians have been unable to find coverage at any price, or have been forced into state-run plans.⁶

EARLIER CRISES

Medical liability claims were fairly uncommon until the 1970s. In California, between 1968 and 1974, the number of malpractice claims doubled and the number of losses

Principal Provisions of MICRA

MICRA Provisions	What They Mean
1. \$250 000 limit on noneconomic damages; (ie, pain and suffering).	No limit on actual damages. Limits only payment for pain and suffering.
2. Periodic payment of awards in excess of \$50 000.	Damages are paid over the period they are intended to cover rather than as a lump sum.
3. Collateral source rule.	Prevents duplicate collection of damages already paid by a third party.
4. Contingency fee limitation.	Controls the size of contingency fees using a sliding scale. For a \$1 million award, an attorney is limited to \$221 000 plus expenses.

Abbreviation: MICRA, Medical Injury Compensation Reform Act of 1975.

in excess of \$300 000 increased 11-fold, from 3 to 34.⁷ Losses amounting to \$180 for each \$100 of premium⁷ led most commercial insurers to conclude that the practice of medicine was uninsurable, and they refused to provide malpractice insurance at any price. This resulted in a "crisis of availability" to which physicians responded emergently. Physicians selectively withheld medical services, and access to care was threatened throughout the state. A special session of the California legislature was called to deal with the crisis. The Medical Injury Compensation Reform Act of 1975 (MICRA) resulted (**Table**).

The 4 principal provisions of MICRA include a \$250 000 cap on noneconomic damages, a periodic payments provision, collateral source rule, and a sliding scale limitation on attorney contingency fees. These are discussed in more detail under "Solutions." With these reforms in hand, physicians organized their own dedicated insurance companies, which today cover most physicians in the state. Rate increases in California from 1975 to the present, have averaged less than 3% per year. In constant dollars, rates have fallen by 40% since 1975.⁸

Though the MICRA reforms of 1975 were seminal, other states have had similar experiences. Indiana passed comprehensive reforms at about the same time as California and today enjoys some of the lowest malpractice insurance rates in the country.⁹

Colorado rates have fallen 60% in constant dollars since the state passed comprehensive malpractice tort reforms in 1986 (The Doctors Company, unpublished data, 2002).

Physician-owned companies have been created in many states and today dominate the national market. Oregon illustrates the converse of the process, with rates increasing dramatically since the state supreme court invalidated a 12-year-old cap on noneconomic damages in 1999.⁹

UNIQUE ASPECTS OF TODAY'S MALPRACTICE ARENA

Frequency

The product of frequency and severity determines claims losses. Frequency is the likelihood of suit, expressed as the percentage of insured physicians with claims in a given year. Severity is the cost of the average claim but by extension also refers to the range of outlier claims.

Though frequency has changed little over the past few years, it has stabilized at extraordinarily high levels. On any given day, there are more than 120 000 malpractice actions pending against the physicians of the United States.¹⁰ One sixth of America's physicians report a claim every year (The Doctors Company, unpublished data, 2002). For high-risk specialties, the numbers are even larger. The average neurosurgeon reports a claim every other year (The Doctors Company, unpublished data, 2002). Expressed differently, 50% of America's neurosurgeons are sued every year. More than 30% of orthopedists, obstetricians, trauma surgeons, emergency department physicians, and plastic and reconstructive surgeons are sued every year (The Doctors Company, unpublished data, 2002).

Approximately 70% of all these claims are closed with no payment

to the plaintiff, but each one costs an average of \$22967 to defend,^{11,12} adding an enormous expense that must be calculated into the cost of insurance.

Severity

Despite these remarkable frequency numbers, it is severity that is driving the current crisis. Jury Verdict Research, Horsham, Pa, reports the median malpractice verdict had doubled to \$1 million between 1997 and 2000.¹² The Physician Insurers Association of America, Rockville, Md, reports that mean indemnities have increased by approximately 75% since 1995.⁴ Moreover, the incidence of \$1 000 000 indemnities has doubled since 1997 and now constitutes 8% of all paid claims⁴ and more than 30% of indemnity dollars (The Doctors Company, unpublished data, 2002).⁴

The outer limit of uncapped medical liability has increased to unprecedented numbers. Texas has reported a \$268 million verdict.¹³ Pennsylvania has had multiple judgments in excess of \$50 million.¹⁴ New York and Pennsylvania paid nearly \$1 billion in malpractice indemnity in 2000.¹⁵

The HMPS and IOM Report

The Institute of Medicine (IOM) report *To Err Is Human* captured national headlines for its assertion that 44 000 to 98 000 Americans die each year because of medical malpractice.¹⁶ These figures were taken from the Harvard Medical Practice Study (HMPS)¹⁷ and intentionally presented in a manner calculated to gain national attention.¹⁸ In truth, these numbers are based on extrapolations from fewer than 200 actual deaths in New York in 1984 and Colorado and Utah in 1992.^{17,19}

Despite this, even if taken at face value, the numbers represent a 55% decline in deaths due to medical error between 1984 and 1992 (from 98 000 to 55 000). This is notable given that the IOM report declared a stretch goal of a 50% reduction over 5 years in 1999.¹⁶ Nonetheless, the reports have created an impression of a national epi-

demic of malpractice and led to statements that physicians “kill” 80 000 patients per year²⁰ and that medical error is responsible for more deaths than motor vehicle crashes, breast cancer, or AIDS.¹⁶ Allegations like these make it easier for malpractice juries to believe the case in front of them represents grievous medical error rather than the unfortunate outcome of disease or injury.

There is a less widely quoted finding arising from the HMPS first reported in 1996.²¹ The authors found *no relationship* between the presence or absence of medical negligence and the outcome of malpractice litigation. Only the degree of injury predicted outcome, that is, more seriously injured patients, regardless of the cause of injury, were more likely to be indemnified.

This finding, combined with increasing severity, and the huge cost of outlier judgments, makes the prospective assessment of medical malpractice claims extremely difficult, and may lead to settlement of cases where liability is not clear. The HMPS also shows how, in venues with unlimited liability, severely injured patients may receive very large awards in the absence of physician culpability.

The Impossible Math of Large Verdicts

Another way to understand the problem created by jury awards based on injury rather than negligence is illustrated by the following calculation. The average cost of a wrongful death claim in the United States today is \$5.7 million. If a new drug saved 99 lives for every 1 lost because of adverse effects, a charge of \$57 000 per dose would be required solely to cover the cost of indemnity.²²

ALLEGATIONS OF THE PLAINTIFFS' BAR

Groups that would believe current levels of malpractice litigation are not excessive, or indeed should be higher, argue that today's high premiums are not caused by increasing claims costs but are the result of insurance company mismanagement and poor investments.^{23,24}

Flat Claims Losses

The arguments run as follows: First, it is alleged that claims costs have been flat, in sharp contradistinction to the data presented above. How is this possible? In one widely quoted report, the average cost of a malpractice claim is said to be \$8000.²⁵ This number is derived by including \$0 claims in the calculation. The more nonmeritorious claims in the system, the lower the cost of the average claim but the higher the total cost of litigation. Data from 2001 reflect an average cost of \$16 743 in expenses, primarily defense attorneys' fees, for each claim ultimately closed without payment.²⁶ The true mean average indemnity for a paid claim was \$310 000 in 2001.²⁶

Second, it has been argued that we should track paid, not incurred, losses.²⁷ Claims reported in a given policy year are said to be *incurred* in that year, even if no payment is made for several years. Insurers are required to set aside *reserves* to pay the future cost of incurred losses. Thus, premiums paid in a given year must be matched against that year's incurred losses and must be sufficient to cover all claims that are reported in that policy year, regardless of when the claim is actually paid. To do otherwise would potentially make the policyholder, not the insurance company, responsible for paying future losses. Since there is an average lag of 3½ years between the time a malpractice claim is incurred and the time it is paid, it is mandatory that incurred losses, not just paid losses, be properly reflected.

Finally, it is argued that once corrected for medical care inflation, malpractice losses are flat.²⁷ In reality, there is minimal correlation between the two. Only \$0.28 of every dollar of premium is paid in indemnity—the rest is consumed in attorneys' fees and administrative expenses.¹¹ Of the \$0.28 that goes to indemnity, only 20% is for medical expenses.¹¹ Thus, less than 6% (0.2×0.28) of malpractice premium costs are for health care, making medical costs a particularly unsuitable base for indexing. It should be noted that these arguments ig-

nore the data presented on frequency and severity.

Making Up for Stock Market Losses

Insurance is a highly regulated industry. Each carrier comes directly under the jurisdiction of the state department of insurance in which the company is domiciled. In addition, rate increases must be filed and, in most cases, approved in advance by insurance departments in each state for which they are to be effective. Insurance company investments are regulated by the state departments of insurance, rated for capital adequacy and efficiency under guidelines of the National Association of Insurance Commissioners, and carefully scrutinized by rating agencies such as AM Best and Standard & Poor's.

Virtually no medical liability insurance company has experienced capital losses in excess of investment income. Most have 80% or more of assets placed in investment grade bonds and less than 10% of assets in the stock market.

It is true that investment income has declined as interest rates have fallen. This is unavoidable. Commendably and appropriately, physician-owned malpractice carriers exercised their fiduciary responsibilities in managing member premium and used investment market profits to *subsidize* the cost of coverage. As interest rates have fallen, such subsidies are less available today. This means insurers must be certain loss costs closely approximate premium income to avoid insolvency.

For the entire decade between 1991 and 2000, property-casualty insurers averaged an investment return of 10.1% of premium. It is clearly not investment losses that have driven today's higher rates.²⁸

Rates Not Raised Sooner

Plaintiffs' lawyers allege that insurance companies were irresponsible in not raising rates earlier.²⁹ Instead, they collected inadequate premium, invested it in financial markets, and were caught short when these markets fell. This raises the

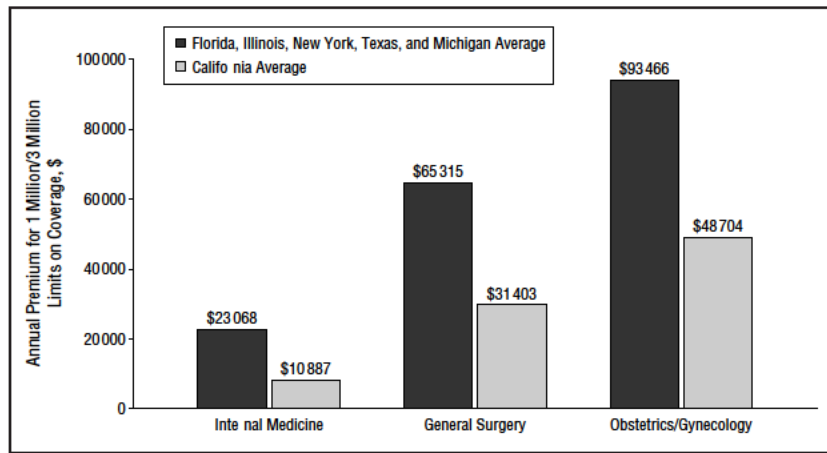


Figure 1. How California compares with 5 other populous states' average medical malpractice premiums. Chart based on figures in "Trends in 2002 Rates for Physicians' Medical Professional Liability Insurance."⁵

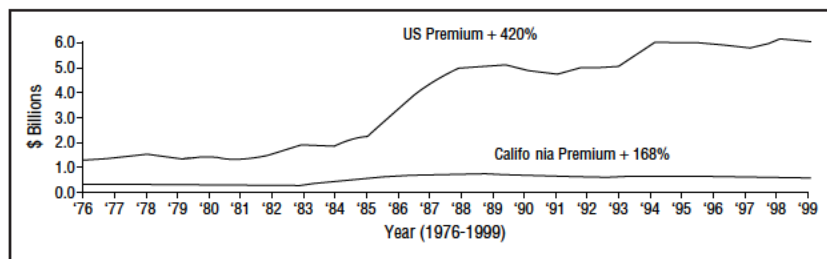


Figure 2. Direct savings from medical tort reform: California vs US premiums (1976-1999). Source: National Association of Insurance Commissioners 1999 Profitability Study.⁸

question, "Rates were low in relation to what?" The answer is claims losses. The use of investment proceeds to subsidize premiums directly benefits physician policyholders by keeping rates as low as possible. Having higher rates sooner would not have made them more palatable.

Meritorious Claims Not Settled

Another argument made by the plaintiffs' bar is that insurers fail to settle valid claims, exposing physicians to excessive jury verdicts.²⁹ However, in most cases, it is the physician, not the insurance company, who has the right to make a decision on settlement. This is as it should be and prevents the insurance company from settling claims out from under its policyholders. Also, physicians are ultimately vindicated in 70% to 80% of court cases. Should these claims all have been settled? Finally, is justice served by allowing jury verdicts that bear no relationship to "reasonable" settlement value?

SOLUTIONS

There is an abundance of evidence that effective tort reforms reduce malpractice premiums significantly (The Doctors Company, unpublished data, 2002).^{11,30-36} Statements that tort reforms have failed to do this are inevitably based on experience with limited changes in law that do not affect the crux of malpractice litigation.²⁷ California has 27 years' experience, and thus 27 years of data, on its MICRA statutes (**Figure 1**). The most important of the reforms is a \$250,000 cap on noneconomic damages. California does not limit awards for actual damages, but capping the so-called pain and suffering awards takes the lottery aspect out of malpractice litigation.

The second major MICRA reform is the collateral source rule. This prevents double collection for the same damages. For example, if an injured patient has already had lost wages or medical costs covered by disability or medical insurance, recovery is not duplicated in a mal-

practice award. This is equitable and rightly disallows use of the tort system, with its 72% transaction tax, as a mechanism for providing coverage of basic services.

The third MICRA reform is the provision for periodic payments. This allows damage awards to be paid over the period they are intended to cover. Such a rule means injured patients will actually receive payment in the time frame in which it is needed. Moreover, it allows the insurance system to accommodate even very large judgments without facing insolvency by taking advantage of the time value of money.

Fourth, there are some limits on attorneys' contingency fees. MICRA provides for a sliding scale; a plaintiff's attorney keeps 40% of the first \$50,000 of an award but "only" \$221,000 (plus expenses) of a \$1,000,000 judgment. This allows more of an award to actually reach the injured patient. The difference is significant. A patient with a \$1,000,000 award in a state with a contingency fee of 40% must give \$400,000 (plus expenses) to his or her attorney.

These reforms have reduced California malpractice premiums by 40% in constant dollars since 1975 or less than 3% per year uncorrected for inflation (The Doctors Company, unpublished data, 2002). On average, California's malpractice premiums have risen at a rate of only one third the national average (**Figure 2**).⁸ There are considerable data that a \$250,000 cap on noneconomic damages reduces malpractice premiums by 25% to 30%.^{11,31} and experience in California and elsewhere is confirmatory.

It is also instructive to review the experience of states that had caps on noneconomic damages that were invalidated by their state supreme courts. Ohio enacted MICRA-like reforms in 1975, but the Ohio Supreme Court nullified these in 1985. Malpractice insurance rates fell steadily until 1982 when the law was challenged in the courts. Since 1985, Ohio malpractice premiums have once again increased significantly and the state is dealing with a new malpractice crisis.^{30,37}

Oregon capped noneconomic damages at \$500,000 in 1987. The

Oregon Supreme Court nullified this law in 1998. By 2000, malpractice indemnities in the state had increased 400% compared with 1998.⁹

Those who cite data arguing the failure of tort reform to achieve these improvements point to states like Florida and Texas, whose reform packages have not included a \$250,000 cap on noneconomic damages and other key elements of the MICRA legislation.^{27,30,38} This merely demonstrates that ineffective reforms are ineffective.

COSTS

The tidal wave of litigation enacts a severe indirect toll on practicing physicians,^{39,40} forcing many to regard patients as potential adversaries and leading to the practice of defensive medicine. Even putting aside the emotional burden and the damage caused by physicians practicing angry or hurt, the dollar costs are enormous. Kessler and McClellan⁴¹ estimated the cost of defensive medicine at \$50 billion and argued that extending current malpractice reforms to all the states would reduce health care costs by 5% to 9%. The Department of Health and Human Services estimates the savings at \$60 to \$108 billion per year.¹¹

Since financing the cost of health care in the United States is today a zero sum game, these costs end up having a direct impact on care available for the uninsured and underinsured.^{4,11,33} Reasonable limits on noneconomic damages, by reducing both direct costs and the cost of defensive medicine, would save enough money to fund a prescription drug benefit for Medicare beneficiaries and facilitate insurance coverage for millions of uninsured Americans.¹¹

CONCLUSIONS

The crisis in medical malpractice insurance today is caused by the confluence of a number of factors. Foremost of these factors, is the rising cost of claims itself. The cost of the average claim has increased significantly, and the cost of outlier claims has reached levels unimagined even a few years ago. This increase in se-

verity, coupled with current levels of frequency, means virtually all practicing physicians in the United States are potential targets for a malpractice claim. Though most claims are found to be without merit, the cost of defense in actual dollars, as well as stress and distraction, is very high. Though physician-owned insurers have continued to offer coverage, the subsidized pricing made possible by the investment markets of the 1990s is no longer sustainable.

Price increases in the cost of malpractice insurance have been uneven but consistent with the nature of tort reform around the country. States such as California, Colorado, and Nebraska enjoy relatively low rates and stable insurance markets. States that persist in forcing physicians to accept unlimited liability for medical outcomes are faced with dramatic increases in premium levels, where coverage is available at all. Insurance markets are about mathematics, not magic. To pay unlimited judgments, insurers must charge correspondingly unlimited premiums. This increases the cost of health care directly and again through the toll of defensive medicine. Decreased access to necessary medical services follows.

There is considerable experience with tort reform in the United States. We know that the 4 key reforms in California's MICRA statutes are effective in reducing the cost of coverage, while preserving access to the courts for truly injured patients. We know that states without reform, states that have lost reforms (ie, Ohio and Oregon), or states that have ineffective reforms (ie, Florida and Texas [both states' legislatures are debating MICRA-like reforms at this writing]) will experience recurring crises until the problems are finally addressed.

There is scant relationship between malpractice litigation and physician negligence. The HMPS¹⁷ found only degree of injury to be correlated with the outcome of malpractice litigation. This strongly suggests that our system of medical-legal jurisprudence does not identify "bad" physicians and fails to contribute to attaining the ideal of improved medical outcomes expressed by the IOM.¹⁶

There are 27 years of evidence that the MICRA statutes can contribute significantly to a solution for the current crisis by facilitating sustainable insurance markets while still providing full indemnification for injured patients.

Richard E. Anderson, MD
The Doctors Company
185 Greenwood Rd
Napa, CA 94558
(e-mail: randerson@thedoctors.com)

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REFERENCES

1. American Medical Association. States in crisis: 18 states now in full-blown medical liability crisis. March 3, 2003. Available at: <http://www.ama-assn.org/ama/pub/article/1616-7340.html>. Accessed 2003.
2. St Paul to exit med mal, leaving large void. *BestWire* [serial online]. December 14, 2001. Available at: <http://www.3ambest.com/frames/frameserver.asp?site=news&tab=18&AltSrc=14&refnum=46515>. Accessed January 15, 2003.
3. Conning & Company. *Medical Malpractice Insurance: A Prescription for Chaos*. Hartford, Conn: Conning & Co Insurance Research & Publications; 2001.
4. *Harming Patient Access to Care: Implications of Excessive Litigation: Subcommittee on Health, Committee on Energy and Commerce, US House of Representatives*, 107th Cong, 2nd Sess (2002) (Presented by Richard E. Anderson, MD, FACP, Chairman of The Doctors Company for the Physician Insurers Association of America).
5. Trends in 2002 rates for physicians' medical professional liability insurance. *Medical Liability Monitor*. October 2002.
6. American Medical Association. Professional Liability Insurance Reform for Physicians. Available at: <http://www.ama-assn.org/ama/pub/article/6282-6003.html>. Accessed June 24, 2002.
7. Keene B. *California's Medical Malpractice Crisis*. Washington, DC: Health Care Liability Alliance; 2003. Available at: <http://www.hcla.org/cappa.htm>. Accessed January 16, 2003.
8. *National Association of Insurance Commissioners 1999 Profitability Study*. Kansas City, Mo: National Association of Insurance Commissioners; 1999.
9. Oregon Med Mal 1996-2001 (\$000s). Salem, Ore: NW Physicians Mutual Insurance Co; 2002.
10. Health Care Liability Alliance. *Health Care Lawsuits, Claim Payments on Upswing*. Washington, DC: Health Care Liability Alliance; 1995. Available at: <http://www.hcla.org/html/hcla042695.htm>. Accessed December 26, 2002.
11. US Department of Health and Human Services. *Confronting the New Health Care Crisis: Improving Health Care Quality and Lowering Costs by Fixing Our Medical Liability System*. Washington, DC: US Dept of Health and Human Services; July 24, 2002.

12. Bagin G. *Medical Malpractice Verdict and Settlement Study Released*. Horsham, Pa: Jury Verdict Research; March 22, 2002.
13. Model's jury award top verdict. *Lawyers Weekly USA*. January 8, 2001.
14. Guadagnino C. Malpractice awards surge in Pa. *Physician's News Digest*. January 2001.
15. Pennsylvania Medical Society. *Medical Malpractice Severity, 2000*. Harrisburg: Pennsylvania Medical Society; 2002.
16. Kohn LT, Corrigan JM, Donaldson MS. *To Err Is Human: Building a Safer Health Care System*. Washington, DC: Institute of Medicine; 1999.
17. Weiler PC, Hiatt HH, Newhouse JP, Johnson WG, Brennan TA, Leape LL. *A Measure of Malpractice*. Cambridge, Mass: Harvard University Press; 1993.
18. Mello MM, Brennan TA. Deterrence of medical errors: theory and evidence for malpractice reform. *Tex Law Rev*. 2002;80:1595-1637.
19. Thomas EJ, Studdert DM, Burstin HR, et al. Incidence and types of adverse events and negligent care in Utah and Colorado. *Med Care*. 2000;38:261-271.
20. Consumers Union. Press release. May 16, 1994.
21. Brennan TA, Sox CM, Burstin HR. Relation between negligent adverse events in the outcomes of medical malpractice litigation. *N Engl J Med*. 1996;335:1963-1967.
22. Freedman M. The Tort Mess. *Forbes*. May 13, 2002: 90. Available at: http://www.forbes.com/premium/archives/purchase.jhtml?storyURL=forbes/2002/0513/090.html&_requestid=23115. Accessed December 30, 2002.
23. Hunter JR. *Medical Malpractice Insurance: Stable Losses/Unstable Rates*. New York, NY: Americans for Insurance Reform; October 10, 2002.
24. American Medical Association. How can we resolve the liability crisis? leaders in medicine, law and insurance suggest solutions. *American Medical News*. November 4, 2002. Available at: <http://www.ama-assn.org/amednews/2002/11/04/prsa1104.htm>. Accessed 2002.
25. *California Restrictions on Malpractice Victims Have Not Affected Malpractice Premiums*. New York, NY: Center for Justice & Democracy; May 29, 2002.
26. Smarr LE. *Tort Law Reform in the USA*. Rockville, Md: Physician Insurers Association of America; October 12, 2002.
27. Hunter JR, Doroshov J. *Premium Deceit—The Failure of "Tort Reform" to Cut Insurance Prices*. New York, NY: Center for Justice & Democracy; 2002.
28. Hartwig R. Insurance information institute takes peek at 2003 forecast. *InsurJ*. December 19, 2002. Available at: <http://www.insurancejournal.com/news/national/2002/12/19/24982.htm>. Accessed December 2002.
29. Koch E. Guinn funds doctors' insurance. *Las Vegas Sun*. March 13, 2002. Available at: <http://www.lasvegassun.com/sunbin/stories/text/2002/mar/13/513169306.html>. Accessed 2002.
30. American Academy of Actuaries. Medical malpractice reform in California, Ohio and New York. *Contingencies*. September/October 1995:22-25.
31. American Academy of Actuaries. *Medical Malpractice Tort Reform: Lessons From the States*. Washington, DC: American Academy of Actuaries; 1996.
32. Biondi RS, Quintilian K. *Medical Liability Mutual Insurance Company Projected Effect on New York Professional Liability Costs of Capping Noneconomic Damages*. Seattle, Wash: Milliman & Robertson Inc; January 1995.
33. Hamm WG. *An Analysis of Harvey Rosenfield's Report: "California's MICRA"*. Emeryville, Calif: LECG Inc; May 6, 1997.
34. Smarr LE. *Tort Reform Update—CBO Scores Medical Malpractice Tort Reforms at \$1.5 Billion*. Rockville, Md: Physician Insurers Association of America; August 4, 1998.
35. Office of Technology Assessment. *Impact of Legal Reforms on Medical Malpractice Costs*. Washington, DC: US Congress Office of Technology Assessment; October 1995. Report OTA-BP-H-119.
36. Actuaries use states' experiences to argue for comprehensive malpractice reforms. *Health Legislation & Regulation*. November 27, 1996:47.
37. American Medical Association. *Excerpts of Reports Received by the American Tort Reform Association on the Crisis in Medical Liability*. Chicago, Ill: American Medical Association; 2002.
38. Speicher J. A surgical fix for medical malpractice. *Contingencies*. January/February 1997:51-53.
39. Charles SC, Wilbert JR, Franke KJ. Sued and non-sued physicians' self-reported reactions to malpractice litigation. *Am J Psychiatry*. 1985;142:437-440.
40. Anderson RE. Billions for defense: the pervasive nature of defensive medicine. *Arch Intern Med*. 1999;159:2399-2402.
41. Kessler DP, McClellan M. Do doctors practice defensive medicine? *Q J Econ*. 1996;111:353-390.