ALASKA LEGISLATURE COMMITTEE FILES, 2003-2004 8672
11247 SENATE LABOR & COMMERCE

NPDB is often overstated by the generation of more than one report per physician. For example, cases in which a patient receives a payment from the insurance carrier, a payment from the CAT fund, and a payment from the physician, all for the same adverse event, have frequently been represented in the NPDB database by three separate reports. Therefore, three "occurrences" may be recorded even though they may all relate to a single incident.

MEDICAL MALPRACTICE INSURANCE

A STUDY OF MARKET CONDITIONS

DRAFT REPORT

PRESENTED TO THE NAIC'S PROPERTY AND CASUALTY (C) COMMITTEE

ERIC NORDMAN

DAVIN CERMAK

December 3, 2003

MEDICAL MALPRACTICE INSURANCE

A STUDY OF MARKET CONDITIONS

Table of Contents

List of Figures

List of Tables

INTRODUCTION

The NAIC decided that it was important to study the market conditions for medical professional liability insurance, often known as medical malpractice, in light of declining industrywide financial results, withdrawal of significant national carriers, and the financial decline of other individual medical malpractice insurance providers. In some states the market problems are so pronounced that access by the public to essential health care services has been affected. This is particularly true for trauma services and high-risk medical specialties such as neurosurgeons, obstetrics and neonatal care. While the NAIC members are hopeful that reasons for the rising prices and declining availability of coverage will be addressed, it recognizes that diversity of state tort laws and unique state market participants might make it difficult to do so on a national basis. Countrywide data has shown that medical malpractice insurance providers are finding it difficult to operate profitably. However, the financial results vary when one looks at individual state results. That offers hope for researchers as it allows them to review the characteristics of those states that have been successful in hopes of learning lessons that may be applied in other states that appear to be in crisis.

Since the late 1990s, there have been substantial rate increases for medical malpractice insurance in many states, while rates remained stable in others. These rapid increases led to complaints from the medical community about the affordability of coverage. This, coupled with the inability of physicians to pass these costs to patients because of managed care arrangements, has led to evidence that physicians have curtailed their practice in certain states or certain medical specialties to avoid these spiraling costs.

There appears to be general agreement that there is a problem, however, there is debate about causes and solutions.

This study is based on a review of historical data collected and compiled by the NAIC as well as a review of other studies of medical malpractice. In addition, a hearing was conducted by the NAIC's Market Conditions Working Group in an attempt to assess the extent of the problem, learn about various stakeholders perspectives and evaluate suggested solutions to address the situation. This report presents the findings and public policy recommendations of the Market Conditions Working Group. The principal researchers are NAIC Economist Davin D. Cermak, NAIC Director of Research Eric C. Nordman, CPCU, CIE, and Kenneth McDaniel, MBA, ARM, CFE (Fraud), of the Texas Department of Insurance. The role of the researchers was to gather the information and present their evaluation of the market to the Market Conditions Working Group so that the working group could develop the public policy recommendations. The recommendations contained in this report represent a consensus of the working group members.

MEDICAL PROFESSIONAL LIABILITY

Doctors and other health care providers are involved in the medical profession. As professionals, they are held by the public and the courts to a higher standard of care than if they operated in other businesses. In the medical arena, the courts commonly recognize physicians, nurses, dentists, and pharmacists and other highly trained practitioners as professionals. Professionals are generally expected to possess special knowledge or skills

the set them apart from the rest of society. This special knowledge and skill generally comes from a person's education and experience.[1] "Professionals are bound by law to (1) perform the services for which they were engaged and (2) perform these services in accordance with appropriate standards of care. The first duty is primarily contractual; the second duty arises from the principles of tort laws."[2]

Medical providers might be determined by a court to be liable if their action or inaction led to injury to a patient. Negligence occurs when harm results from a medical provider's failures to treat a patient to the same standard of care, as the patient would expect from a well-qualified medical professional.[3] This is the risk the medical provider seeks to insure when purchasing a medical liability policy.

It is important to note that there is a difference between medical malpractice and a bad medical result. Malpractice involves negligence on a medical provider's part. A bad outcome for the patient can occur from known and unavoidable medical risk, an unforeseeable adverse patient response or a medical misadventure that does not rise to the level of negligence. This complexity sets medical liability insurance apart from other liability coverages in that a higher percentage of premium dollars goes toward defense and cost containment expenses. Medical liability insurers spend substantial funds defending claims where there is a bad patient outcome not resulting from medical provider negligence.

---

[1] Malecki, et al; Commercial Liability Risk Management and Insurance. The American Institute for Property and Liability Underwriters. 2nd Ed. Chapter 12.
[2] Ibid.
[3] Ibid.

The Medical Professional Liability Insurance Market

For purposes of this report, medical liability will encompass insurance purchased by health care providers, hospitals, nursing homes and other institutions that provide health services. It is also important to know that many health care providers and health care institutions choose to retain the risk of loss from medical mistakes rather than transfer it through insurance. Sometimes self-insurance, as retention is commonly known, is combined with an excess insurance policy that attaches at some level of loss and indemnifies the policyholder above that amount. There are also state-specific, statutorily enabled mechanisms that effectively function as insurers and provide coverage for medical error.

In the insured markets, the predominant form of coverage offered is a claims-made policy. The evolution from occurrence policies to claims-made policies began during the medical malpractice crisis of 1975. An occurrence policy is a liability policy where the coverage trigger is based on when the event takes place (in medical malpractice, the occurrence of medical error that leads to harm). Coverage applies if the medical error occurred while the policy was in force, regardless of when reported to the insurer. In contrast, a claims-made policy is a liability policy where the coverage trigger is the reporting of a claim. Coverage applies if the medical error is reported to the insurer while the policy is in force. A medical misadventure must also occur within the current or prior policy period with the same insurer, unless an insured purchases prior acts coverage to extend coverage of medical error retroactively.

Medical malpractice insurers operate much like other types of insurers. They collect premiums from policyholders and assign them to either the unearned premium reserve or other reserves. When losses occur, they either pay the loss or establish a loss reserve. Funds remaining after expenses and taxes ultimately flow to surplus. The long time it takes to pay malpractice claims allows insurers an opportunity to earn investment income that helps offset the need for income from underwriting operations. Insurers are able to invest amounts held in surplus, unearned premium reserves and loss and loss adjustment expense reserves. Accounting rules require that insurers post their best estimate of the ultimate settlement value of reported, but unpaid losses. In addition, insurers are required to consider expected payments that have occurred, but are not yet reported (Incurred, But Not Reported or IBNR).

Loss adjustment expenses play a key role in medical liability coverage. Insurers are required to account for loss adjustment expenses in two separate categories—Defense and Cost Containment (DCC) and Adjusting and Other (AO). DCC expenses are particularly important in medical liability because many claims reported to insurers are determined to be noncompensable through negotiation or trial

It is important to note that property and casualty rates, including medical liability rates, are made on a prospective rather than a retrospective basis. Thus, a common claim that rising medical liability insurance rates are attributable to recoupment of prior losses is inaccurate. While increases in the frequency and severity of claims are recognized in

ratemaking, the rates charged are required to be neither excessive, nor inadequate nor unfairly discriminatory for the future period when they will be charged.

State Regulatory Systems

States vary widely in both regulatory framework and regulatory philosophy. **Table 1** provides definitions of the various regulatory frameworks that are in common use today. Seventeen jurisdictions employ a prior approval law for medical liability rates. Twenty-two states use a file and use system; nine have a use and file system. In Massachusetts, the commissioner of insurance sets rates for medical malpractice coverage. In Missouri, only informational filings are required. In Oregon, a flex rating system (modified prior approval) applies. A state can administer a file and use system with a waiting period in much the same way a state can administer a prior approval system with a deemer provision. Further, some states offer choices to insurers regarding the system that they wish to use for rate filing purposes.

Some researchers have studied the effects of different systems on the medical malpractice [NO FOOTNOTE?] market. Zuckerman, Bovbjerg and Sloan (27 Inquiry 130) found "clear evidence that requiring prior approval of premiums is an effective way of lowering physician malpractice costs" but cautioned that "the effectiveness of prior approval regulation in controlling premiums could have an adverse impact on the availability of insurance in the state..." Rizzo found that non-competitive rating laws have had little independent effect on underwriting results, but that direct medical malpractice insurers fare better in states with non-competitive rating laws that they do under competitive

rating laws.[4] Rizzo also found a stronger correlation between direct insurer market share and the loss ratio in competitive rating law states that that of insurers in non-competitive rating states.[5]

Non-Standard Market Mechanisms

Non-standard market mechanisms exist in medical liability insurance to fill voids left when standard, or primary, insurers cannot or will not insure a particular risk. Three major types of non-standard mechanisms provide significant amounts of coverage in the medical liability market. First and most prevalent are surplus lines insurers, which are exempt from rate and policy form regulation. Second is the residual market mechanism. Typically, these are mechanisms established either by state legislation or by the state insurance regulator. These mechanisms include state insurance funds, patient compensation funds (PCFs); state mandated insurance pools and joint underwriting associations (JUAs). The existence of residual market mechanisms in most states reflects policymakers' recognition that there is a need to ensure that medical liability coverage will be available where such coverage is mandatory or needed to provide stability to the market when availability or affordability is suspect. Third is a risk retention group established under the Federal Liability Risk Retention Act to offer medical liability insurance to medical provider/owners. Table 2 provides some useful definitions of the types of ownership identified in NAIC data.

---

[4] Rizzo, John. "The Impact of Medical Malpractice Insurance Rate Regulation." The Journal of Risk and Insurance 56.3 (1989): pg 482-499.
[5] Ibid. p. 482

Self-Insurance

Risk managers know self-insurance as retention. It occurs when a medical provider or a hospital chooses to pay for its own losses as they occur without involving an insurer or other risk transfer mechanism. Where a provider has no insurance or formal plan of retention, it is known simply as going bare. This is rare among physicians, as for the most part, retention is not an option for medical providers. To receive privileges to operate in a hospital, the medical provider is generally required by the hospital, or perhaps state law, to obtain approved professional liability insurance. The low frequency and high severity nature of medical professional liability makes the self-insurance option unattractive to most medical providers, even if hospitals or state government would accept that option. However, there are reportedly increasing numbers of nursing homes bare, without insurance.

Self-insurance may be a viable option for some large hospitals, nursing homes and other institutions that provide medical services. With assistance from a professional risk manager, a hospital or other large institution can establish a formal program where it sets aside adequate funds to pay for medical liability claims or pay claims as they occur and are adjudicated. There is no formal reporting mechanism to gather information about self-insured entities. The tax treatment by the IRS of funds held to pay claims is different when an entity is self-insured. Reserves for a self-insured cannot be set-aside on a tax-deferred basis until they are paid out to a claimant. This makes comparison of self-insured operations with those purchasing medical liability policies difficult. Further, there is no central source of information on self-insured operations.

Ratemaking for Medical Liability Insurance

The basic building blocks for medical malpractice rates are the same as that of other property and casualty insurance products. The rate consists of the loss costs, or pure premium, plus the expenses of the insurer and a factor for profit and contingencies. Insurers use historic (past) loss and expense information to forecast and adjust current rates to those needed for a future period.

Insurance Department Activity to Prevent Inadequate Rates

Since regulators are charged with assuring that rates are not excessive, inadequate, or unfairly discriminatory. It is incumbent on them to periodically review rate levels to see that they meet all three rating standards. This task is difficult as the typical workflow of an insurance department involves the review of rate filings that are developed and submitted by insurers at a time selected by the insurer. The task of the regulator is to review the filings received. If an insurer has not changed rates and does not choose to submit a new filing, there is a time lag between the period where inadequate rates might be charged and the discovery of the rate inadequacy. The regulatory framework further complicates this. There are not generally specific time periods where an insurer is obligated to make a rate filing. As a result, there are occasions where ir adequate rates are charged for a period of time.

It should also be noted that in many jurisdictions, a finding of rate inadequacy is allowed under some circumstances. The NAIC's Property and Casualty Model Rating Law (File

and Use Version) specifies "a rate is not inadequate unless such rate is clearly insufficient to sustain projected losses, expenses and special assessments in the class of business to which it applies and the use of such rate has or, if continued, will have the effect of substantially lessening competition or the tendency to create monopoly in any market." If the regulator is unable to prove that the inadequate rate will lead to insolvency or monopolistic behavior, in these jurisdictions, there is little that can be done.

Some attribute a perceived lack of attention to the inadequate rates as one cause of the underwriting cycle that is observed in all property and casualty lines of business. Some reports have been critical of insurance regulators for failure to intervene when rates are inadequate to pay for future losses.[6] The Americans for Insurance Reform observe that the "unwillingness of regulators to disapprove rates that are...inadequate—despite their statutory authority to do so—is also a cause of the cycle."[7] It is also a political problem for insurance regulators. Health care providers do not complain when rates are lower than they should be, however it would take a very strong person to order an insurer to raise rates when the regulator believes the rates are inadequate, and an insurer is not motivated to raise rates at that time.

The Role of Reserving and Possible Reserve Deficiencies

One of the most difficult and important tasks for the casualty actuary is the estimation of the necessary future dollars needed to cover the unpaid liabilities of the insurer to claimants. This task is of critical importance to a medical liability insurer. "Loss

[6] See July 23, 2002 letter from the Americans for Insurance Reform to the nation's insurance commissioners, Page 4.
[7] Ibid.

reserving is the term used to denote the actuarial process of estimating the needed amount of loss reserves. A loss reserve is a provision for an insurer's liability for claims" (Wiser, 197). **[FOOTNOTE?]** According to Wiser, the total loss reserve of an insurer is comprised of five elements:

- "Case reserves assigned to specific claims;
- A provision for future development on known claims;
- A provision for claims that re-open after they have been closed;
- A provision for claims that have occurred but have not yet been reported to the insurer; and
- A provision for claims that have been reported to the insurer but have not yet been recorded. (197)"

It should be noted that for most practical purposes, including financial reporting, the last four elements are combined into what is generally referred to as the broad definition of incurred but not reported (IBNR) losses.

A lengthy claim settlement process characterizes the medical liability insurance line of business. Thus it is critical for the casualty actuary to make the best estimate possible of the ultimate settlement value of all losses that the insurer faces. One of the key elements in medical liability claims is loss development. If juries in a particular jurisdiction change awarding patterns, all known claims tend to be adjusted accordingly by the insurer's claims department adjusters to reflect the new pattern of damage awards. Actuaries then rely on these revised estimates in their evaluations of the insurer's liabilities. This can result in significant increases in loss reserves if juries are tending toward larger damage awards. It should be noted that few claims actually go to trial, however the damages awarded by juries in those few trials affect the settlement agreements for the claims that do not go to trial. This is why the reserves on many known claims are adjusted.

Actuaries often use a process that involves the development and use of loss triangles where data is collected and compiled in what is known as a loss development triangle. The use of a loss development triangle assists the actuary in developing a best estimate of the ultimate settlement value on the claims. Various reports of claims -made years of data are reviewed annually as they change over time. Often eight or more years of loss development is used so that the actuary can calculate factors as the data changes over time. This process allows the actuary to apply factors to recent accident years that are based on historical loss development patterns of the insurer. The loss triangles can be applied to a variety of useful data sets. Some of the more common used data sets include: paid losses, incurred losses (typically paid losses + case reserves), closed claim counts, reported claim counts, etc. Thus, using historical valuations of the loss reserving accuracy of the insurer's claims personnel, the actuary can more accurately predict the ultimate settlement value of recent data years.

It should be noted that a similar process applies to the estimation of loss adjustment expense reserves. This can be an important component of pricing for medical liability insurance, as loss adjustment expenses are a major part of a medical liability premium.

THE PUBLIC HEARING ON MEDICAL MALPRACTICE

On March 8, 2003, the Market Conditions (C) Working Group held a public hearing on medical malpractice markets. The working group heard from three invited speakers. Dr. Donald Palmisano testified on behalf of the American Medical Association (AMA). Dr. Richard E. Anderson, President and CEO of The Doctors Company provided the perspective of a medical liability insurance provider. Jay Angoff, a Missouri attorney

provided a lawyer's perspective on behalf of the American Trial Lawyers Association (ATLA). Not surprisingly, there was not a consensus as to the causes of the medical malpractice crisis or appropriate remedies to address the situation.

The AMA recommends the adoption of a uniform federal approach to resolve the crisis. This would include prompt and fair compensation to patients that are injured when a medical provider breaches the generally accepted standard of care. The AMA believes that these injured patients should receive full payment for out-of-pocket "economic" losses and reasonable compensation for "non-economic" losses. The AMA supports the HEALTH Act (H.R. 5), which has passed the House of Representatives earlier this year. The AMA also supports reform that would encourage health care providers to report health care errors without fear of reprisal so they can be studied to improve patient safety and quality of care.

Dr. Anderson believed that California's MICRA reforms were effective in providing a balance between adequate patient compensation for negligence by health care providers and constrained costs of medical liability insurance. He believed that increasing severity of losses caused the current medical liability crisis. He presented statistical information from the Doctors Company to support his contentions. He blamed managed care for an erosion of trust that was present in doctor-patient relationships. He was also very supportive of patient safety efforts.

Jay Angoff believed that it was Proposition 103 that makes California's law work, not

MICRA. He provided statistics to indicate that caps of non-economic damages are ineffective. He believed that there were several causes to insurance underwriting cycles that could be addressed by insurance regulators. He observed that changes in insurers' investment performance, the cost of reinsurance, lack of diligent enforcement of rating laws by insurance regulators and the anti-trust exemption enjoyed by insurers were the primary reasons that underwriting cycles occur. He believed that if these four elements were addressed, the periodic wide swings in availability and affordability would be alleviated.

A complete transcript of the hearing along with accompanying slides for two of the speakers is available from the NAIC.

MARKET ANALYSES FROM OTHER STUDIES

Much research has been published examining market phenomenon of past as well as current medical malpractice insurance crises. Conning and Company, a consulting and actuarial firm, produced a series of strategic studies of the medical malpractice insurance industry. In 1994, it reviewed the state of the market and concluded that while profits had been strong for a number of years prior to the report, there was evidence that competitive pricing, increasing current-year claims experience, declining investment yields and declining loss reserve redundancies may reduce company profits in the future.[8] The study also found that markets were becoming less fragmented – insurers were having an

[8] Conning and Company, Challenges in Medical Malpractice: Capital, Consolidation, and Managed Care. Hartford, CT: Conning and Company, 1994.

increasingly difficult time writing specialized risks – and that volatility was increasing as new types of risks emerged.[9] Conning also argued that smaller insurers were experiencing increasing pressure to consolidate with other companies in order to survive in the increasingly competitive market.[10]

In 2000, Conning released another report that discussed the deteriorating conditions that the market had experienced.[11] Conning presented three conclusions about why the market had deteriorated. First, the industry was not prepared to deal with the competitive pressures and increasing loss severity and that many insurers appear unable to price, underwrite or manage losses.[12] Second, because insurers surveyed indicated that they both intended to raise rates and grow their business, the lack of clear and focused strategies to reduce claims cost paired with continued competition driven by market share growth goals, it would be unlikely that the potential increase in rates would be sufficient to make the industry profitable.[13] Third, the report suggests many of the industry's challenges are a result of an increased awareness of the occurrence of medical errors and frustration with increasing costs and reduced benefits of health insurance.[14]

In 2002, Conning released an even more extensive report than the 2000 report.[15] The report finds that the medical malpractice insurance market had deteriorated rapidly for

---

[9] Ibid.
[10] Ibid.
[11] Conning and Company, Medical Malpractice Insurance: Ills Diagnosed, Cures Elusive. Hartford, CT: Conning and Company, 2000.
[12] Ibid.
[13] Ibid.
[14] Ibid.
[15] Conning and Company, Medical Malpractice Insurance: A Prescription for Chaos. Hartford, CT: Conning and Company, 2001.

several reasons: volatile year-to-year change in premium; aggressive reserve takedowns and significant increases in equity investments in the bull market disappeared; rapidly deteriorating loss ratios as a result of dramatically increasing severity and claims payment as well as increasing defense and investigation costs; an increasing reliability on reinsurance; and the development of a large reserve deficiency.[16] The report also found that although all customer markets were producing very poor underwriting results by year-end 1999, commercial markets (i.e. hospitals, nursing homes and managed care organizations) had the greatest problems.[17] The research found that since the 1970s crisis, the market had divided into three separate segments of insurers, traditional insurers, provider-owned insurers, and captives and risk retention groups, each having their own business interests[18]. Conning also found that when it came to growth strategies, insurers that had the most difficult time in the market were those that grew most aggressively between 1992 and 1997 as well as traditional insurers that entered the medical malpractice market in the 1990s.[19] Conning identifies several factors that have historically contributed to the growth of medical malpractice that are anticipated to impact future growth: loss trends driven by innovation and technology; increased agreement on defined standards of care; increased spread of medical malpractice insurance; contingency fee lawyer reimbursements; citizen juries; and nature of tort pleadings in the US courts.[20] The report suggests that in coming years, three forces will define the changing medical malpractice market: reinsurance affordability and availability; the 'federalization' of health care oversight and managed care legislation or

[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] Ibid.
[20] Ibid.

court decisions; and the increased use of the Internet by consumers, providers and insurers.[21]

The Americans for Insurance Reform, examining how much money insurers have taken in and what they have paid out over a 30-year period, reported two major findings.[22] First, they found that the amount medical malpractice insurers have paid out, including all jury awards settlements, directly tracks the rates of medical inflation.[23] Second, they found that insurance premiums (in constant dollars) increase or decrease in direct relationship to the strength or weakness of the economy, reflecting the gains or losses experienced by the insurance industry's market investments and their perception of how much they can earn on the investment 'float' that doctors' premiums provide them.[24]

The American Medical Association (AMA) issued a 2002 report of the medical professional liability (PLI) market.[25] The report finds that while the underwriting cycle can account for the periodic nature of rate escalations, it does not fully account for the overall upward trend in premiums or the extremely high levels to which they rise.[26] These outcomes are attributable to trends in claims severity and other factors, such as jury awards and settlements and rate ranges by specialty and geography that drive those trends.[27].

---

[21] Ibid.
[22] Americans for Insurance Reform. Medical Malpractice Insurance: Stable Losses/Unstable Rates. New York: Americans for Insurance Reform, 2002.
[23] Ibid. p.1
[24] Ibid.
[25] American Medical Association. "Medical Professional Liability Insurance." Health Care Financial Trends Report. Chicago: American Medical Association, April 2002.
[26] Ibid.
[27] Ibid, p.5

In 1973, the Secretary of the US Department of Health, Education and Welfare (HEW) established a Commission to study the medical malpractice insurance market. The Commission published several findings and recommendations with respect to the insurance regulatory structure.[28] Many of these issues persist into the current medical liability crisis. At the time, the Commission found that medical liability was available and that the insurance market was competitive, even though individual practitioners may have more difficulty locating insurance sources.[29] With respect to rating making and rate classification, the Commission found that rates based on groups of physicians and institutions for rating purposes may not be equitable for all medical providers, and under some circumstances affect cost and availability, or in the best interests of the public.[30] The Commission also found inadequacies in the collection and analyses of appropriate data precluded the development of sound actuarial practices and rates and that state regulators are generally inadequately equipped to effectively monitor the medical liability ratemaking process.[31] The Commission recommended the NAIC work with the insurance industry to establish uniform statistical reporting system for medical malpractice insurance and that data be reported to a single data collection agent who will compile it, validate it and make it available to state insurance regulators, carriers and other interested parties.[32]

---

[28] United States. Department of Health, Education, and Welfare. Medical Malpractice: Report of the Secretary's Commission on Medical Malpractice. Washington, DC: GPO, 1973.
[29] Ibid. p. 38
[30] Ibid. p. 43.
[31] Ibid. p. 45
[32] Ibid.

In a 2003 report, the Government Accounting Office (GAO) examined the factors contributing to the current medical liability crisis.[33] It found that several factors could be attributed to the crisis in seven states that it studied. Those factors include: rapidly increasing claims; decreasing investment income; vigorous competition in the medical malpractice market; and rapidly increasing reinsurance rates for medical malpractice insurers. While the report to Congress did not recommend any executive action, it does recommend that Congress encourage NAIC and state insurance regulators to 'identify and collect additional data necessary to evaluate the frequency, severity, and causes of losses on medical malpractice claims.[34]

REVIEW OF MEDICAL MALPRACTICE INSURANCE MARKET, 1992-2002

Over the past several years, physician complaints about the increase in premiums have increased drastically. The American Medical Association (AMA) indicates that 19 states are currently experiencing a crisis in their medical liability insurance markets.[35] From an analysis perspective, insurance regulators are interested in understanding how effectively a market functions from two perspectives. The first is to determine whether or not the medical liability market is providing the consumer with a reliable product at an affordable price. The second is to make sure that insurers remain solvent to protect the integrity of the market as well as ensuring that consumers will have their claim paid when

[33] United States. General Accounting Office. Medical Malpractice Insurance: Multiple Factors Have Contributed to Increased Premium Rates. Washington, DC: GPO, 2002.
[34] Ibid. p. 7
[35] American Medical Association, States in Crisis (http://www.ama-assn.org/ama/pub/article/6282-7347.html)

needed.

Although the NAIC collects extensive financial data annually from most insurers in the U.S., several insurance providers are not required to file annual statement data to the NAIC, either because of exemptions granted by insurance regulators or because entities created by state laws are exempt from reporting data to the NAIC. Since the database used is known to be incomplete, analyses of this data will look at average values ~ in particular mean and median insurer values ~ to provide a picture of what the average insurer is facing in the market. It can be reasonably assumed that insurers not required to file annual statement data with the NAIC have similar experiences in the marketplace as those whom do.

There are also other caveats about the data that need to be considered. One concern is that affiliated insurers within an insurance group do not directly compete against one another; therefore it would be more appropriate to examine insurers on a by-group basis.[36] However, because of data limitations, this report examines insurers on a legal entity basis and not by group. The data also contains insurers that may have withdrawn from the market or suspended writing new business. These insurers continue to provide financial data to the NAIC but do not indicate their status in the market. With the caveats noted, it is the only national insurer financial database available.

Premium, Losses and Profitability

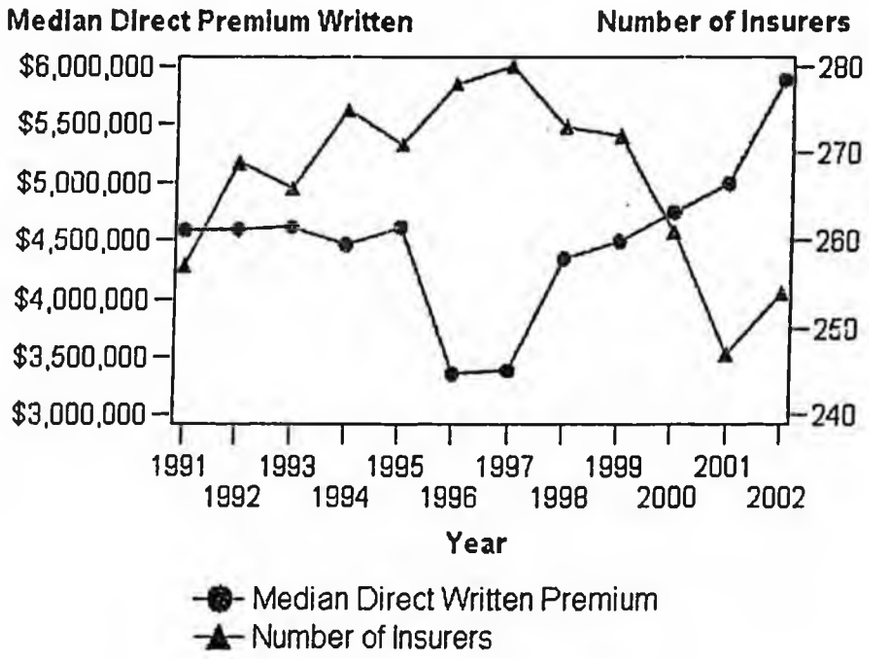
[36] The term 'insurer' refers to a legal entity writing medical liability insurance premium. This figure is based on insurers filing annual financial statements with the NAIC.

Long-run profitability is one of the most important indicators of market problems in an insurance market. Profits that are extraordinarily high over a period of years may indicate that competition in the market is stifled and prices are artificially high; that is that some insurers are able to charge higher rates than if there were additional insurers in the market driving prices down. Conversely, low profits over a number of years may indicate that there are competitors in the market charging inadequate prices in order to gain market share. It could also indicate an inability to raise premium to cover costs. An insurer's profitability is determined by the difference between its revenues and costs. This section will examine both of these components as well as the profitability of insurers.

Premium

Long-run premium growth in insurance markets is generally a constant phenomenon, but may fluctuate in the short-run. **Figure 1** shows the trend in median insurer countrywide direct premium written from 1991 to 2002, adjusted for overall inflation, as well as the number of insurers reporting medical liability insurance. The mid-1990s shows a period of growth in the number of insurers reporting medical liability insurance premium coupled with a decrease in the median insurer premium written, followed by number of years where the number of insurers decline while the median insurer premium increases.

Figure 1 - Countrywide Direct Premium Written
(In 2002 $USD)



Source: National Association of Insurance Commissioners.

Table 3 shows that, when adjusted for general inflation, the median insurer premium for an individual insurer was $4,588,622 in 1991 and $5,880,374 in 2002. Median insurer premium reached a low of $3,355,900 in 1996. Median insurer premium increased 75.22% between 1997 and 2002. Data from **Table 3** also shows a strong negative correlation (-0.7814) between the number of insurers reporting medical liability insurance premium and the median insurer premium. This may be because insurers have entered and exited the market because of competition for existing business and not opportunities for market growth.

Table 4 shows a large standard deviation relative to the mean across nearly all states in 2002. This indicates that several large insurers write a majority of the premiums written in the market. California had the highest median insurer premium written with

$1.375,828. North Dakota had the lowest median insurer premium written with $29,137. There is a strong positive correlation (0.7576) between the number of insurers and the median insurer direct written premium, indicating that the size of the market, as determined by premium volume, attract a larger number of insurers than states with smaller volumes of business.

Losses

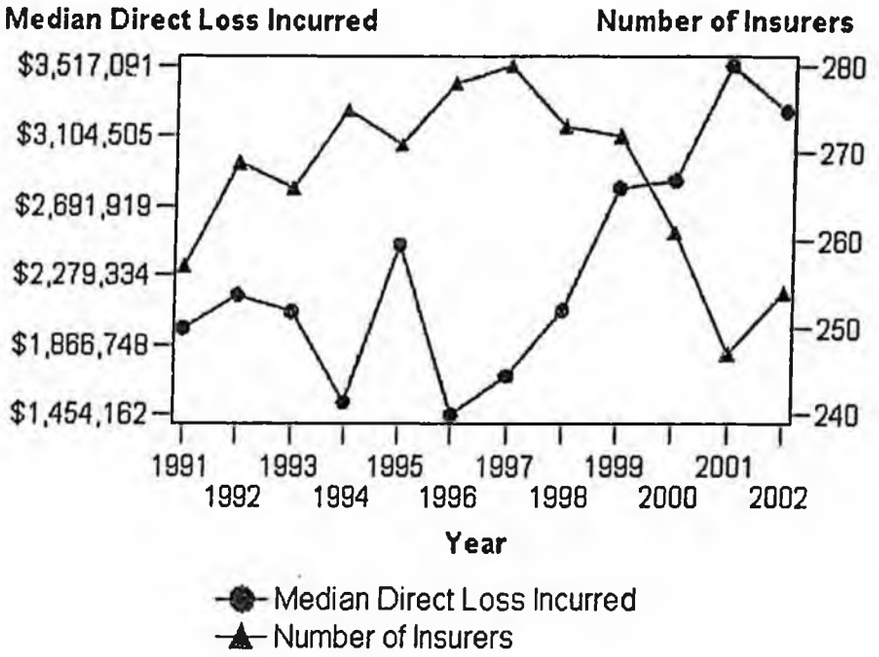
Losses are the major contributing factor in determining medical liability rates. Insurers consider historical patterns in both incurred loss and paid loss for ratemaking purposes. Incurred losses are the insurer's estimate of the total value of all its insurance claims received during the annual statement year. Paid losses are the actual losses paid by an insurer during the annual statement year regardless of when the claim was filed with the insurer.

Figure 2 shows the trend in inflation-adjusted median insurer direct losses incurred from 1991 to 2002 as well as the number of insurers reporting medical liability insurance. Median insurer incurred losses experienced strong variations in the early-1990s before smoothening out. The median insurer loss increased 123.5% from 1996 to 2001.[37] A major limitation on loss data is that it may take several years before many medical malpractice claims are submitted to an insurer. Since the data used in this analysis is reported on a calendar-year basis, incurred losses are recorded when they are filed with the insurer and not necessarily for the year that the claim occurred.

[37] Insurers included in this analysis had positive direct premium written during the year. Several insurers that no longer write direct medical liability insurance continue to provide loss data to the NAIC for several years after exiting the market.

Figure 2 – Countrywide Direct Losses Incurred

(In 2002 $USD)



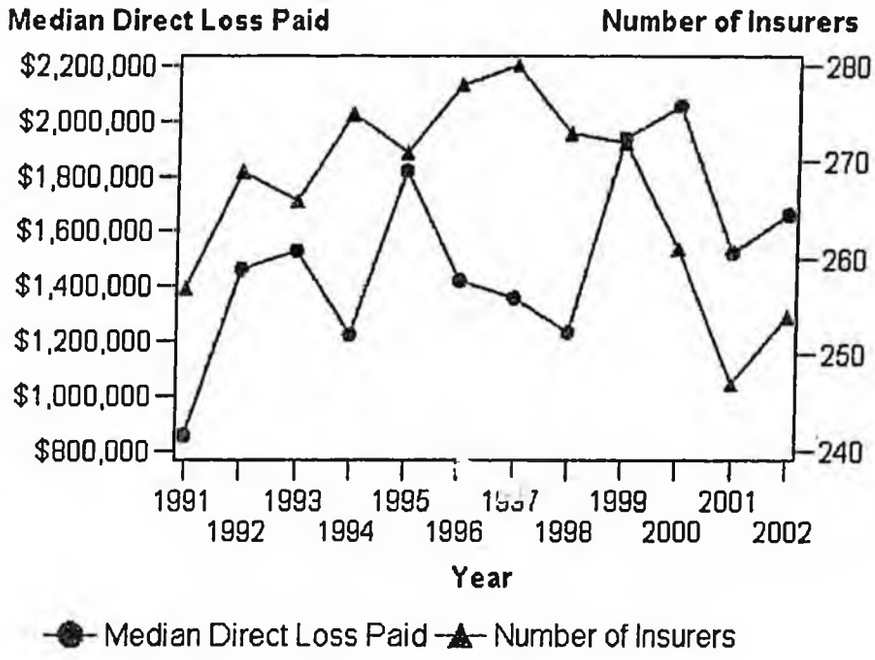
Source: National Association of Insurance Commissioners

Table 5 shows that inflation-adjusted median insurer direct losses incurred were $1,963,228 in 1991 and $3,250,035 in 2002. Median insurer incurred loss reached a low of $1,454,162 in 1994. The data shows a strong negative correlation (-0.7818) between the numbers of insurers reporting medical liability insurance premium and the median insurer incurred loss, indicating that insurers take on risk of other insurers when they enter the market.

Figure 3 shows the trend in median insurer direct losses paid for 1991 to 2002. Median insurer losses paid trended steadily upward, but with irregularity during the analysis period.

Figure 3 - Countrywide Direct Losses Paid

(In 2002 $USD)



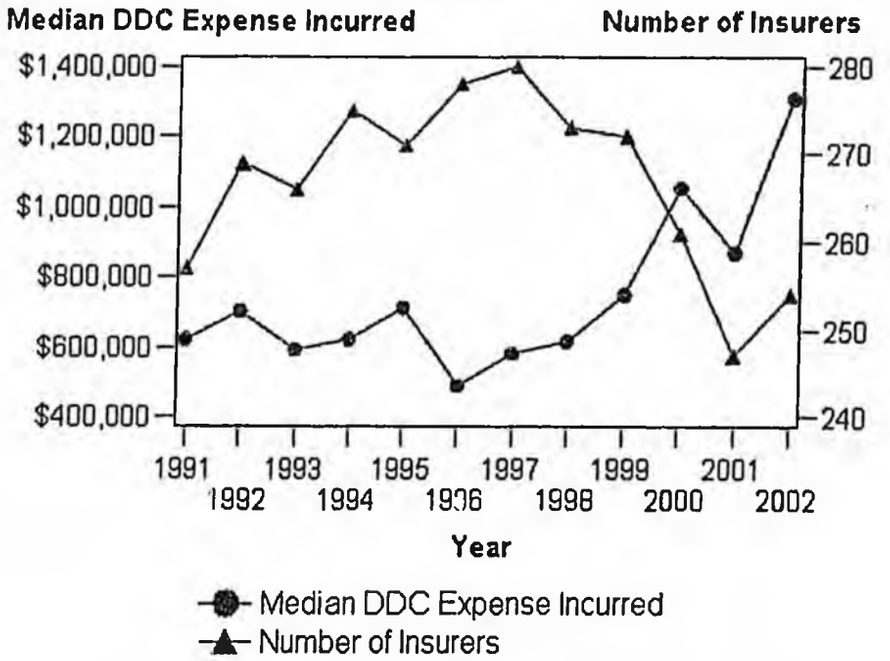
Source: National Association of Insurance Commissioners

Table 7 shows summary direct losses paid data countrywide. There is a weak negative correlation (-0.070) between the number of insurers and median insurer direct losses paid, indicating that something other than competitive forces determine whether or when an insurer pays a loss. **Table 8** shows direct losses paid by state in 2002. Most striking from this data is that in most states a majority of insurers reported little or no direct losses paid during the year. This result may be attributed to insurers that have recently left the market or possibly recent new entries. However, the data does not allow for the identification of these entities. These are probably insurers that have left the market or, less likely, recent new entries.

Loss and Other Expenses

Insurers incur other costs in addition to claims payments. One of the largest costs to medical liability insurers is defense cost and containment expense (DDE), also known as loss adjustment expense (LAE). These are expenses the insurer incurs as a result of adjusting a claim, researching the validity of a claim, or its costs for defending a claim in the event of litigation. **Figure 4** shows the trend in DDC expenses and number of insurers from 1991 to 2002. Median insurer DDC expenses incurred increased 167.3% between 1996 and 2002.

Figure 4 - Countrywide Defense and Cost Containment Expenses Incurred (In 2002 $USD)



Source: National Association of Insurance Commissioners

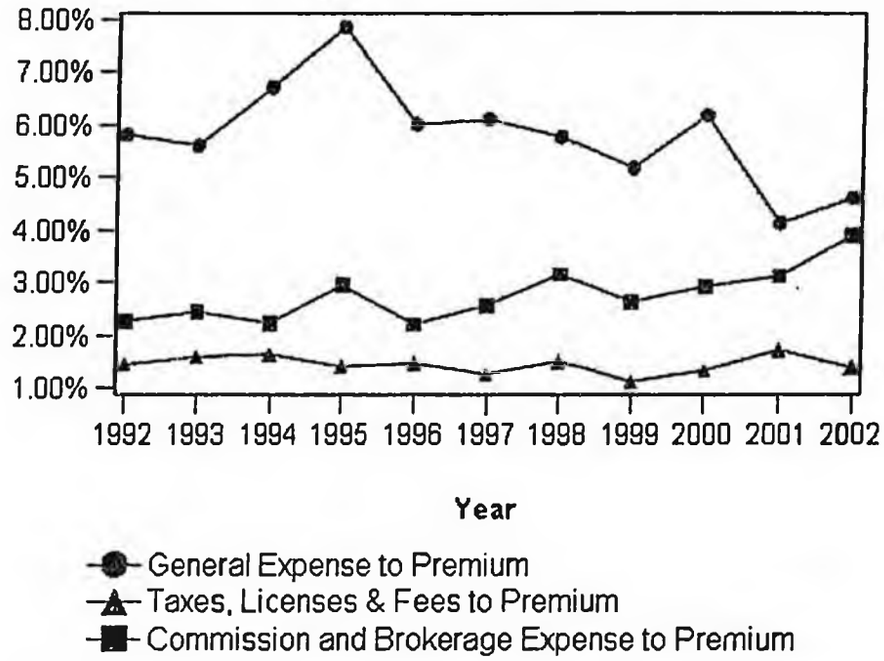
Table 9 shows that the inflation-adjusted median insurer DDC expenses were $857,547 and $1,660,748 in 1991 and 2002 respectively. The large standard deviations relative to

the mean and the disparity between the mean and median insurer DDC expenses indicate that there are a relatively few insurers with a large portion of DDC expenses. **Table 10** shows DDC expenses by state for 2002. California had the highest median insurer DDC expenses incurred with $312,897 and South Dakota with the lowest with $364. Evidence of large standard deviations relative to the mean and the difference between mean and median indicates that, in most states, a few large insurers incur most of the DDC expenses. The data shows a negative correlation (-0.6601) between the median insurer DDE expense incurred and the number of insurers reporting medical liability insurance. This may occur because as the number of insurers in the market decrease, the remaining insurers will assume a larger portion of the DDC expenses. An alternate explanation is that coverage for physicians, hospitals, and other high-risk exposures is concentrated in a few carriers per state.

Insurers also incur other expenses related to medical liability insurance. **Figure 5** shows inflation-adjusted trends in other expenses from 1992 to 2002 as a percent of earned premium. Median insurer general expenses to premium trended downward throughout this period, while median insurer commission and brokerage expenses to premium increased slightly. Median insurer taxes, licenses and fees have been relatively stable. The decreasing general expenses could be credited to cost-cutting efforts of insurers. **Table 11** shows the median insurer expenses in dollar terms as well as a percent of premium. Both taxes, licenses and fees expense (-0.7728) and commission and brokerage expense (-0.7703) show strong negative correlation to the number of insurers with written

premium. Median insurer general expenses show no significant correlation (0.1304) to the number of insurers reporting medical liability insurance.

Figure 5 - Countrywide Medical Malpractice Expenses to Premium



Source: National Association of Insurance Commissioners

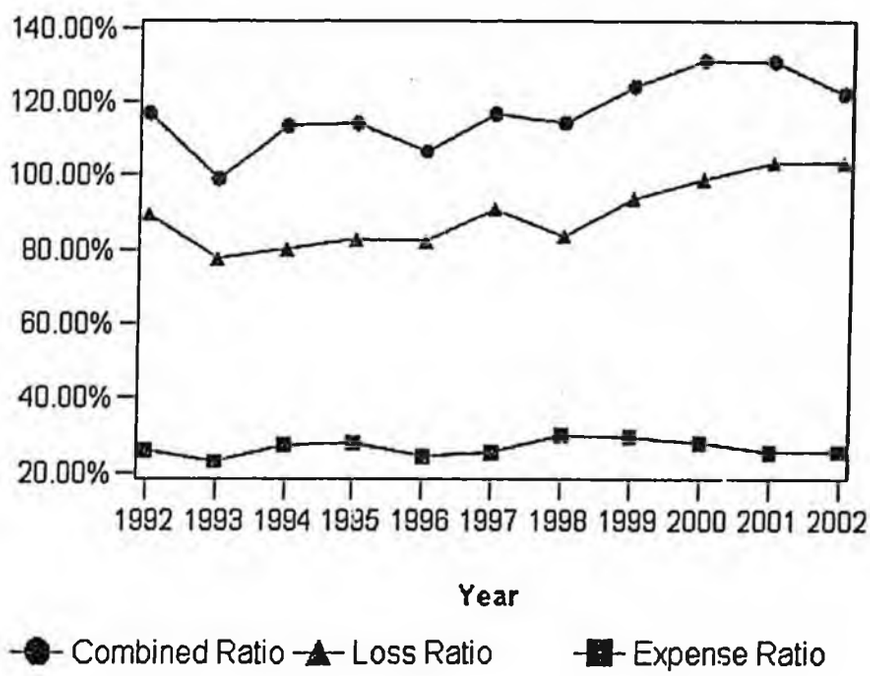
Profitability

Increased insurance prices can be caused by a number of things including higher loss and expense costs, lower interest rates, reserve adjustments, decreased competition and regulation. An important question is whether premiums have been sufficient to cover insurers' costs, including their cost of capital. Unfortunately, it is not easy to measure insurers' profitability for any specific line of insurance. Multi-line insurers do not confine their operations to one type of insurance, so it is necessary to allocate expenses and investment income from insurers' total operations to estimate profits for a specific line of

insurance. An additional complication is the fact that insurers' surplus by insurance line must be allocated in order to estimate total profits and a rate of return on net worth. Further, insurers report financial data primarily on a calendar-year basis, but calendar-year profits can be an imperfect measure of insurers' performance, as premiums are collected over the term of the policy, but claims payments associated with that policy term can stretch out over years.

Since insurer profitability is measured after considering reinsurance, the following analyses will look at factors on a net-of-reinsurance basis. **Figure 6** shows median insurer combined, loss and expense ratios from 1992 to 2001 on net insurance. Both the median insurer combined and loss ratios have steadily trended upwards since 1993. Median insurer expense ratios remained steady during the analysis period.

Figure 6 - Countrywide Medical Malpractice Combined, Loss and Expense Ratios



Source: National Association of Insurance Commissioners

Table 12 shows the median industry profitability results for medical liability from 1991 to 2001. The industry has experienced median insurer underwriting losses and median insurer pretax losses in each year of the analysis period. It has also experienced median insurer total losses in 2001 and 2002. Over the course of the analysis period the data shows that countrywide, medical liability insurance has not been consistently profitable for many insurers and that the market has become less profitable. The data covers all forms of medical liability, including some lines remaining profitable. This may obscure losses sustained by the many insurers specializing in physicians, hospitals, and nursing homes for 1997 through 2000.

Table 13 shows profitability results by state for 2002. Maximum and minimum earned premium were $888,290,000 and $6,891,000 respectively with a mean earned premium of $137,629,630 and a median insurer earned premium of $63,526,000. Maximum and minimum ratios of loss incurred to earned premium were 215.6% and 31.6% respectively with a mean ratio of 98.95% and a median ratio of 95.20%. Maximum and minimum ratios of loss adjustment expenses to earned premium were 96.4% and 18.8% respectively with a mean ratio of 36.3% and a median ratio of 34.0%. Maximum and minimum ratios of underwriting profits to earned premium were 12.7% to –214.9% respectively with a mean ratio of 57.87% and a median ratio of –53.1. The range of investment gains to earned premiums was 43.5% to 12.2% with mean and median ratios of 22.1% and 20.8% respectively. Return on net worth as a percent of earned premium

ranged from 16.6% to –44.6% with mean and median ratios of –6.41% and –5.5% respectively.

Understanding the limitations of measuring profitability directly, one can use several different tools to identify profitability. The traditional measure is the combined ratio, which is equal to the ratio of losses and loss adjustment expenses incurred to net premiums earned plus the ratio of general expenses and dividends to policyholders to net premium written. A combined ratio that exceeds 100 percent implies negative underwriting profits, i.e. premiums are less than loss costs and expenses.

Table 14 presents the combined ratio by state for 2002. The combined ratio ranges from 54.02% to 184.80% with a mean and median of 105.54% and 104.44% respectively. Loss adjustment expense - expenses incurred by an insurer to research, litigate and settle medical liability claims - is a significant expense to medical liability insurers. A comparison of loss adjustment expenses to premiums ranges from 6.32% to 47.68% with mean and median ratios of 24.97% and 24.90%. This means nearly one-fourth of the medical liability premium paid in 2002 was directed to LAE expenses.

The combined ratios do not reflect the investment income insurers earn on policyholders' funds held until claims are paid, nor the effect of federal taxes. The operating ratio partially adjusts for this to the degree that it reflects investment income attributable to insurance transactions, i.e. loss reserves, loss adjustment expense reserves and unearned premium reserves, albeit measured on a calendar-year basis. The operating ratio is equal

to the combined ratio minus the ratio of investment income attributable to insurance transactions to net earned premiums. A ratio in excess of 100 percent implies negative operating profits, i.e. premiums and investment income attributable to insurance transactions are insufficient to cover loss costs and expenses. Although the operating ratio provides more information than the combined ratio, it does not reflect federal income taxes or insurers' total return, which also includes investment income attributable to surplus. While an operating ratio in excess of 100 percent implies that insurers are not earning a return sufficient to cover their cost of capital, it is difficult to assess the extent of the deficiency without looking at total rate of return on net worth.

Table 15 shows the combined ratio, operating ratio and return on net worth data from the NAIC Profitability Report for 2002.[38] The investment gain as a percentage of earned premiums ranged from 6.78% to 33.66%, with a mean of 15.72% and a median of 15.08%. The operating ratio ranged from a low of 36.66% to a high of 168.49% with a mean and median of 89.82% and 90.00% respectively. Return on net worth in 2002 ranged from –6.80% to 4.85% with a mean of –0.74% and a median of –1.15%.

Industry Investments

Assets

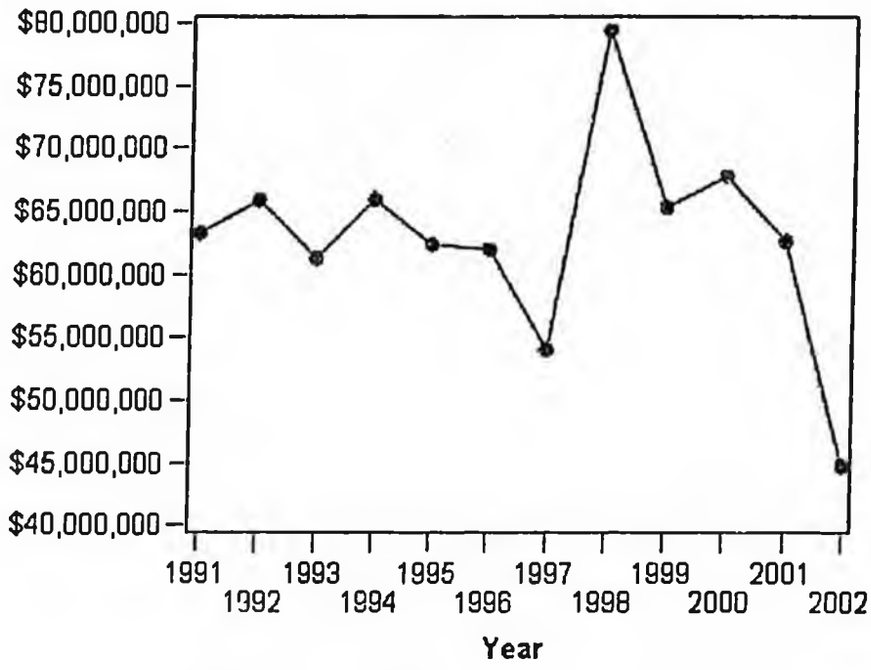
The values of assets an insurer reports are an important part of its market capacity. Capacity, or the ability to insure risk, is determined by the amount of insurer surplus, which is the difference between its assets and liabilities. Capacity defines whether an

[38] As of the draft of this report, the data from the NAIC Profitability Report is preliminary

insurer is able to continue writing its current business as well as add new risks to its portfolio. If assets are paid out in claims or their value declines, surplus also will decline proportionately, assuming liabilities have not changed. In the case of medical liability insurance in the past several years, the industry witnessed a period of declining increased claim payments, investment asset values, and increasing liabilities.

Figure 7 shows the trend in median insurer total invested asset values from 1991 to 2002, adjusted for inflation. The median insurer was relatively stable from 1991 to 1996. Since 1997, the median insurer has fluctuated greatly annually, reaching a high of $80 million in 1998 and then dropping to $45 million in 2002. Most leading indicators of stock and security value did not decline until 2001. Most leading indicators of stock and security value did not decline until 2001.

Figure 7 - Countrywide Median Insurer Invested Asset Values
Insurers with >50% of Business in Medical Liability Insurance
CPI_U Adjusted



Source: National Association of Insurance Commissioners.

Table 16 and show analysis of asset values for medical liability insurers from the 1991 to 2002 NAIC annual statements for insurers with at least 50% of their business written in medical liability. The large difference between the mean and median insurer values indicates that insurers with large assets earn a proportionately large share of the total investment income.

Table 17 and **Table 18** show the median insurer value of total assets held by these insurers increased throughout much of the 1990s, but has declined significantly since 2000. The percent of assets held in bonds remained steady throughout much of this period, only to decrease in 2002. While the median insurer value of bonds has decreased, the median insurer value of the cash and short-term investments has increased. This change is likely due to claims payments, insurers moving assets to shorter-term

investments, or both. The median insurer value of stocks increased during the late-1990s and then decreased in 2000. In 2002, the median insurer value of the common stock holdings was back to 1996 levels. However, from 1991 to 2002, the median insurer value of common stock never climbed above 5% of total invested assets. Cash and short-term investments decreased throughout the 1990s before starting to increase in 2001.

The proportion of assets invested by medical malpractice insurers in stocks is small. This means changes in surplus due to stock market losses are small compared to changes in the surplus due to reserve changes (e.g., if these companies suffered a 50 percent drop in the value of their stock portfolio, this would be equivalent to a 10 percent reserve deficiency). A 10 percent reserve deficiency is not an extraordinary event. However, a sudden 50% increase in reserves due to increased claims would be much more serious.

Capital Gains (Losses)

[TO BE ADDED.]

Investment Income

Future investment income is included in insurer premium rate calculations, which in effect subsidizes the losses an insurer expects. If the insurer miscalculates its expected income while its losses increase, it can increase its loss ratio, significantly in some cases.

Table 20 shows the summary information total investment income. The median insurer investment income has stayed relatively stable throughout the analysis period, but did

show a 52.7% decrease from 2000 to 2002. Again, the large difference between the mean and median values indicates there are a few insurers, likely large insurers by premium volume, which earn a large share of the aggregate investment income. **Table 21** shows trends in median insurer investment income by type of investment from 1991 to 2002. Most insurers in the medical liability market earn investment income from bonds and cash and short-term investments. Median insurer investment income from bonds grew through much of the 1990s before declining by 89.0% from 2000 to 2002. Median insurer investment income in cash and short-term bonds has risen 96.3% from 1997 to 2002. **Table 22** and **Table 23** show the total and median insurer investment income by type of asset, respectively, for the same period. Median insurer total investment income ranged between 8.47% and 10.81% from 1991 and 1997, but saw a significant decline beginning in 1998 through 2002. Again, investment income from bonds makes up a significant portion of this ratio. While investment income is included in the rate making process, significant changes in investment income have an overall small impact on total insurer income. For example, suppose that an insurer expects that for every $1.00 of premium it will earn an investment income of $0.08, such that:

Total Income = $1.00 + $.08

Suppose that investment income an insurer earned is 50% less than anticipated. The impact on its income is then:

Impact = -.04 / (1.00 + .08),

Impact = -.04 / 1.08 = -3.70%

Thus, a 50% decrease in investment income will decrease the insurer's income by 3.70%.

Given the relatively small impact of investment income on the overall income of insurers, this study concludes that underwriting losses, not a declining stock market, were the major factor influencing the rate increases experienced by physicians and health care providers. The U. S. General Accounting Office reached a similar conclusion in a report published in June 2003.[39]

Surplus Analysis

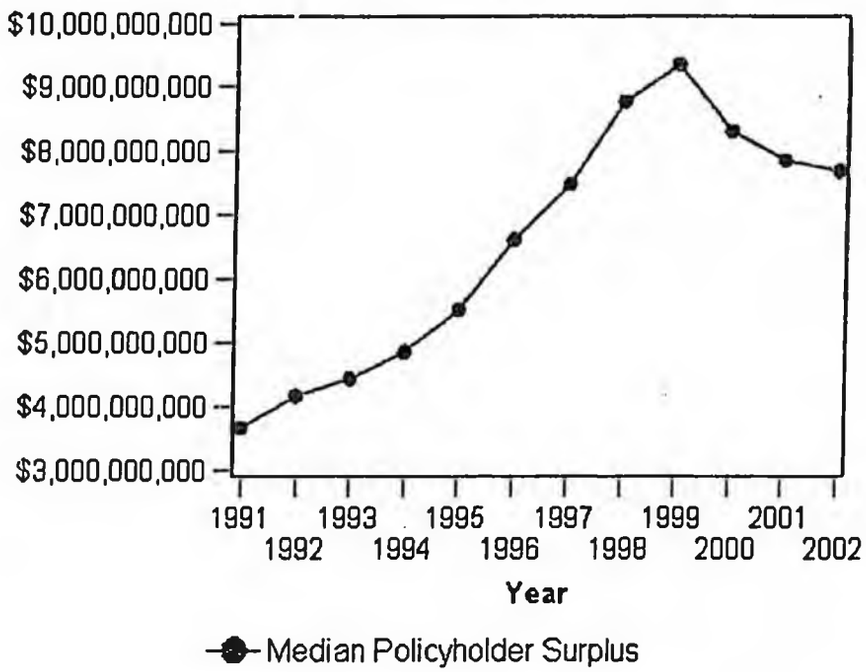
Insurer surplus analysis can provide information about two important aspects of an insurance market. First, the capacity of an insurer to provide insurance is reflected in its policyholder surplus. If surplus increases over time, this may indicate that insurers are more able to take on additional risks in the market. Conversely, if surplus decreases, it may indicate that insurers are unable to not only write new business, but may have problems renewing its existing business. Secondly, a company's surplus ratio – the ratio of policyholder surplus to total assets – gives an indication as to whether an insurer has adequate reserves for unexpected losses.

Figure 8 shows the trend in median insurer policyholder surplus from 1991 to 2002 for insurers reporting medical liability insurance premium adjusted for general inflation. The median insurer value increased 100% from 1991 to 2002, but decreased 17.73% between 1999 and 2002. The graph suggests that insurers were able to expand capacity throughout much of the 1990s, but then capacity declined after 1999.

---

[39] United States. General Accounting Office. Medical Malpractice Insurance: Multiple Factors Have Contributed to Increased Premium Rates. Washington, DC: GPO, 2002.

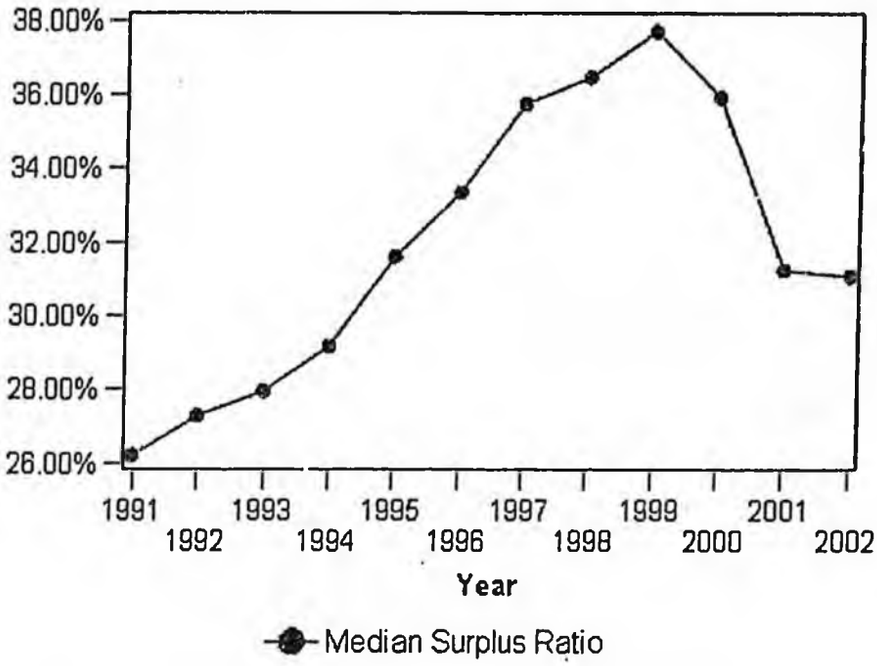
Figure 8 – Countrywide Median Insurer Policyholder Surplus



Source: National Association of Insurance Commissioners.

Table 24 shows additional detailed statistics on insurer surplus. The difference between the mean and median again suggest there are a few insurers in the market with large surplus and several with smaller amounts. Curiously, the number of insurers reporting medical liability is only slightly correlated with total surplus (0.1743) while there was a weak *negative* correlation with median insurer surplus (-0.0132). This seems counterintuitive since the first correlation indicates adding insurers in the market does not increase the capacity of the market. One possible explanation for these results would be that several large multi-line insurers with large surpluses have left the market while smaller single-line writers with smaller surpluses have entered the market to replace the larger insurers.

Figure 9 - Policyholder Surplus to Total Assets, Countrywide



Source: National Association of Insurance Commissioners.

Figure 9 shows the trend in the surplus ratio for 1991 to 2002 for medical liability insurers. Overall, the surplus ratio increased by only 18.58% from 1991 to 2002. However, the ratio increased 43.80% from 1991-1999 and declined 17.11% from 1999 to 2001. The surplus ratio suggests that insurers were able to prepare themselves relatively well for unexpected losses during much of the 1990s, but that ability decreased sharply beginning in 2002. **Table 25** shows detailed surplus ratio statistics. The data shows only weak correlations between the numbers of insurers reporting medical liability insurance premium with the mean surplus ratio (0.1168) and median surplus ratio (0.3467).

Reserve Analysis

[TO BE ADDED]

Reinsurance Analysis

Insurers enter into reinsurance contracts with other insurers to limit their exposure to potential losses. Generally, insurers entering into reinsurance treaties will share a proportionate amount of premium and potential losses with a reinsurer. Limiting exposure allows insurer with small market capitalization the opportunity to write business they would not be able to write themselves because of insufficient surplus. Capacity to write business can decline when primary insurers are no longer able to obtain reinsurance in the market. This usually occurs when reinsurers no longer have capacity themselves to expand their business or when they perceive a particular line of insurance as too risky to provide coverage at the contract price the primary insurer is offering.

[ANALYSIS TO BE ADDED]

Competition

Medical liability markets, however, tend to be more geographically restricted than most other insurance markets, which means insurers tend to write business within a particular region or state. According to the U. S. General Accounting Office, "physician-owned and/or operated insurers now cover 60 percent of the market."[40] There are now very few truly national medical malpractice carriers. **Table 27** shows the number of insurers reporting direct written premium and premium data by state for 2002. Examining the

[40] United States. General Accounting Office. Medical Malpractice Insurance: Multiple Factors Have Contributed to Increased Premium Rates. Washington, DC: GPO, 2002. p. 6.

number of companies reporting direct written premium to the NAIC, Illinois had the most with 102 insurers. Texas and Pennsylvania had the next largest number of insurers reporting direct premium with 99 and 95 respectively. New York had the most direct premium written with $1.08 billion. Florida and California were next with $825 million and $798 million of written premium respectively. These same three states also had the largest mean written premium per insurer with $14.8 million, $9.27 million and $9.06 million per insurer, respectively. When looking at the median value, California had the largest with half of its insurers reporting at least $1.27 million. Florida and New York were next with median premium of $940 thousand and $912 thousand respectively. These numbers do include some medical liability insurers known to have left the market.

Market concentration is measured typically in terms of 'concentration ratios', which represent the combined market share of some given number of the largest sellers, or in terms of the Herfindahl- Hirschman Index (HHI), the sum of the squares of the percentage market share of each firm. The HHI reflects both the distribution of the leading firms' market shares as well as the composition of the rest of the market. The HHI also weights the market shares of the larger firms more heavily, which better reflects their relative market power.

While neither economic theory nor experience establishes a critical level of concentration for the existence of oligopoly in a particular industry, the U.S. Justice Department has established merger guidelines for certain industries using the HHI (DOJ, 1984). Under these guidelines, a post-merger market with an HHI in excess of 1,800 is considered

highly concentrated. A proposed horizontal merger between two firms that would result in such a market is likely to provoke a challenge from the Justice Department, depending on other circumstances. A post-merger market with an HHI between 1,000 and 1,800 is considered moderately concentrated. A post-merger market with an HHI of less than 1,000 is not considered concentrated. A horizontal merger resulting in such a market is unlikely to encounter opposition.

The Justice Department looks at a number of additional factors in determining its position on a particular merger. It also should be pointed out that these criteria have been developed to evaluate mergers in national industries, broadly defined. The purpose here is to evaluate the structural competitiveness of medical liability insurance by state, which is more narrowly defined. There are a number of industries with HHI values in excess of 2,000 at the national level that are considered competitive. While Justice Department guidelines provide some perspective, they should not be used as absolute standards to determine the competitiveness of a market or to determine whether additional market regulation is warranted.

Table 27 shows concentration ratios and HHI values for the medical liability market countrywide for 1991-2002. Market concentration in the medical liability market increased slightly countrywide in the mid-1990s and began decreasing by the late-1990s, continuing through 2002. The number of insurers peaked in 1997 and then declined 10.6% between 1997 and 2001 and recovered slightly in 2002. While the number of insurers declined, it appears the largest insurers gained some market share during this

time.

While examining countrywide data over a period of years gives a general idea of how the competitive nature of the medical liability market has changed, examining statewide data tells more about whether a particular market may lack competition. This is particularly true in medical liability since companies tend to be geographical in nature. However, a word of caution is necessary when looking at statewide data insurers provide to the NAIC. The data contains many insurers, often captive insurers that do not actively write insurance in the market. Captive insurers may write insurance for a specific group of hospitals, nursing homes or medical specialties and hence do not directly compete for market share.[41] The data also includes insurers that may write insurance exclusively in certain markets, such as hospitals or certain medical specialties. Theoretically, a state may have many insurers indicating strong competition, but each insurer could have a monopoly in its niche market, thereby creating the appearance of competition. Additionally, some insurers may not write new business, for a variety of reasons, including surplus limitations that prevent them from market activity. These aspects should be taken into consideration when assessing the competitive nature of a market.

Table 28 compares market share for three different ranges and the HHI by state. The mean and median number of insurers reporting medical liability insurance premium was 65 and 61 respectively. Illinois had the most insurers with 102 and Alaska the fewest with 39. The mean and median market concentration of the four largest insurers was 65.9%

[41] Such insures may be indirectly competitive in some markets. For example, physicians may choose to leave a private practice for a facility that provides coverage through a captive or group policy because the physician feels coverage in the private practice has become prohibitively expensive.

and 67.1% respectively.[42] The range of market concentration ratios for the four largest insurers was 30.8% to 86.4%. The mean and median market concentration of the eight largest insurers was 80.4% and 81.0% respectively with a range of 55.1% to 93.6%. The mean and median market concentration of the 20 largest insurers was 94.4% and 95.3% respectively ranging between 85.0% and 99.2%. As would be expected from economic theory, there is an approximately inverse correlation between the numbers of insurers writing premium in a market with the concentration of business they write. In other words, states with a larger number of insurers writing business appear to have less market concentration among the largest insurers. It also appears that, from the data, states with smaller populations have more concentrated markets than states with larger populations.

The mean and median HHI was 1,877.61 and 1,617.38 respectively, ranging from 498.91 to 4338.19. Twenty-one states had a HHI greater than 1,800, which would be considered highly concentrated by the DOJ's guidelines for review of merging markets. Twenty-one states have a HHI between 1,000 and 1,800, which are considered moderately concentrated by the DOJ's guidelines. As discussed above, these numbers may be misleading because many of the insurers included in the HHI may not be writing new business, or are not directly competitive. If these insurers could be identified and removed from the HHI calculations, the indices would likely increase significantly. However, since captive insurers may indirectly compete in the market, it is reasonable to assume that the DOJ's guidelines for competitive markets would be at least indicative of the competitiveness of a particular market.

[42] Market concentration is calculated as the percent of market share of the four largest insurers to the rest of the market in terms of direct written premium.

Entries and Exits

The initial investment in physical facilities needed to start an insurance company is relatively small compared to more capital-intensive industries such as manufacturing. The minimum capital and surplus requirement to become licensed to write medical malpractice insurance in most states is $2 million or less, which is not a significant sum by itself in relation to most insurers' premium volume. However, there must be at least a dollar of surplus for every dollar of premium volume a new insurer intends to write. This raises the financial requirement considerably for a new insurer intending to acquire a significant market share in a large state. **Table 29** lists minimum capital and surplus requirements by state for medical liability insurers.

In addition, there are non-monetary barriers to entering the medical malpractice market. Some can be readily overcome, but others present more difficulty.

1. Regulatory constraint. A medical malpractice insurer may not sell across state lines without filing for license or eligibility. Rates and forms must be adjusted to local requirements.
2. Insured resistance. Insurers operating on a mutual or reciprocal exchange basis may face difficulty convincing member insureds to support moving to new markets, whether a new state or a different provider line. Insureds of provider-owned or operated insurers (60% of national medical malpractice market) may be averse to risking capital gathered over years in a home market.
3. Lack of specialty market experience. Underwriting, pricing, and defending claims

in a new market, whether new state or specialty, requires specialized and local knowledge.

4. Lack of locally knowledgeable staff. Staffing a start-up insurer or an expansion office means selecting from a small pool of experts. Employees skilled in the facets of operating a medical malpractice insurer are scarce on the national level and scarcer still in local markets.
5. Exit costs. The known cost of exiting a line of medical malpractice may be daunting to a start-up insurer or an existing insurer considering entry into a new market.
6. Pricing difficulty. Third party liability insurance is subject to socio-legal developments that can rapidly render assumptions on future losses obsolete. Medical malpractice is very volatile.
7. Adverse financial history. There have been three major medical malpractice crises since 1975, each with adverse financial effects on insurers of the time. The provider-owned or operated insurers mentioned above came into existence beginning with the 1975 crisis when traditional stock commercial insurers did not return in number to the medical malpractice market place.

There are other costs involved with exit. Unique to medical malpractice markets is the long tail associated with malpractice claims. It can take up to twenty years to run off all claims incurred during active participation in a medical malpractice market. This keeps insurers committed to claims expenditure long after premium income has ceased. Regulators further require that withdrawing insurers offer coverage for this run off to

non-renewed claims-made insureds, now a majority of medical malpractice policyholders. Insurers will also lose the value of any sunk investments they have made in establishing operations in the market from which they are withdrawing.

The prospect of such costs can sometimes serve as a deterrent to entry altogether. They also may induce insurers to sustain inadequate profits for a period while assessing the need to withdraw. **Table 30** and **Table 31** show the number of insurers entering and exiting the medical liability line countrywide and median by state, respectively, for 1992-2002.

Regulatory exit restrictions pose a different issue. A number of states impose some limitations on insurers' ability to withdraw from the market for liability lines. These restrictions take various forms including requirements to give policyholders advance notice, delayed withdrawal requirements, residual market assessment obligations and 'lock-in' provisions, i.e., prohibitions against selectively withdrawing from some lines of business while continuing to write others.

Standard vs. Non-standard Markets

Table 32 and **Table 33** provides 2002 medical liability direct premium written by state by type of company. Countrywide, stock insurers wrote 35.05 percent of all direct medical liability premiums. Mutual insurers and reciprocals wrote 19.28% and 14.81% respectively of the countrywide direct premium. Non-standard markets made up 30.45% of the direct premium written in 2002, with surplus lines insurers writing 24.60% of all

premiums countrywide. It should be noted that states do not require all insurers to report data to the NAIC. This is particularly true for medical professional liability.

Caution should also be taken when looking at data for risk retention groups. The NAIC does receive filings for such entities, but it is not known how many of these groups file annual statement data. This is likely a particular problem when analyzing state markets as opposed to countrywide analyses. Bear in mind also that surplus and excess lines insurers typically price products significantly higher than standard markets, so their relative premium volume likely does not equate to their percentage of exposures in the marketplace. The NAIC currently does not have data to examine this facet of the market, so such a statement remains hypothetical.

Availability

Availability is a very important aspect of insurance market performance. It is a general term that can be interpreted in various ways. In crisis periods, medical liability insurance coverage is often available through non-standard market mechanisms. However, this market presents a number of disadvantages and is generally not a desirable source of coverage. Availability in non-standard markets is not an indicator of medical malpractice market health.

A more meaningful indicator is the availability of medical liability coverage in the admitted market. Yet, even this variable is not easily quantifiable from readily available data. The number of insurance carriers willing to offer coverage and the terms they would

offer can vary dramatically among different medical specialties and states. A commonly used proxy for availability is the proportion of total premiums written through the residual market, which are shown in **Table 32** and **Table 33**. This is a less than perfect proxy for availability. Some risks may actually choose to obtain coverage through the residual markets when they could purchase coverage in the voluntary market.

Insurers contend that residual market growth and operating losses can be caused by inadequate voluntary market rates. If these insurers are unable to charge a premium to an insured sufficient to provide a fair return on investment, they may be disinclined to offer coverage. The greater the degree of rate inadequacy, in this view, the greater the number of insureds thrust into the residual market.

If premiums in the residual market are insufficient to cover losses and servicing carrier fees, then an operating deficit results. This deficit, in turn, may in some states be recovered through assessments on voluntary market insurers. To the extent that insurers are able to recover the assessments through higher voluntary market rates, the burden of the residual market is borne by purchasers of medical liability insurance from voluntary market insurers. This may increase purchaser incentives to self-insure, if that is a viable option. Alternatively, to the degree that insurers are not allowed to recover assessments through higher rates, insurers may be influenced to decrease their voluntary market business. This can lead to a situation in which growing residual market losses cause further shrinkage of the voluntary market, which in turn increases residual market losses. Regulators do not deny the potential for this cycle, but they also raise other issues about

performance of the residual market. There are concerns about the quality of service that residual market risks receive and the incentives servicing carriers have to properly administer policies and control costs.

Solvency

Solvency is critical to the integrity of the insurance contract. State insurance regulators' primary responsibility is to protect policyholders and claimants against insurer insolvencies. This responsibility is met through financial regulation and state guaranty funds.

State regulators seek to reduce, but not necessarily eliminate the incidence and cost of insolvencies. There is a presumed need to balance insolvency risk with the cost and availability of insurance. Some possibility of failure is inherent in a competitive market. State guaranty funds ensure that insurance claims are paid according to statutory benefit provisions. These insolvency costs are passed back to solvent insurers through assessments on premiums. Some states allow insurers to recoup guaranty fund assessments through higher rates while others allow premium tax offsets. Claimants may suffer inconvenience if forced to recover through a state guaranty fund, but insureds are insulated from most adverse effects unless a catastrophic claim has occurred. For former claims-made insureds, including retired providers, the risk is that they may lose run-off coverage and become exposed to uncovered suits.

Beginning in 1994, property and casualty insurers began submitting risk-based capital

filings annually to the NAIC. The risk-based capital system, established under the Risk-Based Capital for Insurers Model Act, uses a formula establishing a minimum capital (RBC) requirement for insurers based on the insurer's size and risk. Comparing the insurer's RBC requirement to its own statutory capital indicates whether an insurer is at risk of becoming insolvent. The model law allows regulators to intervene when capital requirements are not met.

Under the model act, the first level of regulatory intervention is the Company Action Level triggered when the total adjusted capital (TAC) to authorized control level (ACL) RBC falls below 200 percent. At this action level, insurers are required to submit an RBC Plan to the domiciliary regulator identifying both problems and corrective actions the insurer intends to take to bring its RBC level above 200 percent. The second level of regulatory intervention is the Regulatory Action Level triggered by a TAC to ACL RBC fall below 150 percent. The insurer is required to revise its RBC Plan and submit to the domiciliary regulator's request to perform examinations or analyses of its assets, liabilities and operations. The third action level, the Authorized Control Level, is triggered when the TAC to ACL RBC falls below 100 percent. At this level, the insurer must comply with the requirements of the first two levels. It also gives the domiciliary (home state) regulator the discretionary authority to place the insurer under regulatory control through its rehabilitation or liquidation act. The fourth and most severe level, Mandatory Control Level, is triggered when the TAC to ACL RBC falls below 70 percent. At this level, the company is placed under the control of the domiciliary regulator in accordance with the state's rehabilitation and liquidation act.

Table 34 shows the number of medical liability insurers that have reached RBC triggers since 1994, when the NAIC first began RBC filings. The number of insurers in each of the action levels remained consistent between 1994 and 2000. However, coinciding with the hardening insurance markets and recession in 2001, more insurers triggered the Mandatory Control Level than in past years. Surviving medical liability insurers may have been financially stronger during this period than in past crises. However, some hospitals report having to ease credentialing requirements as insurer rating services downgrade many insurers below A or excellent ratings.

Other Market Performance Dimensions

Prices, profit, availability and solvency are not the only dimensions of market performance that are of concern. Quality of service, efficiency and innovation are also important parameters in terms of how well markets are served. Unfortunately, it is difficult to obtain data or measure performance in these areas.

Quality of service encompasses a number of different variables including the accuracy/timeliness of policy issuance and rating adjustments, loss prevention and safety engineering and claims adjustment. In a competitive market, insurers should be spurred to provide the highest level of services commensurate with what insureds are willing to pay for these services. Insureds may differ in their demand or preference for different services. Consequently, insurers may differentiate themselves in terms of the level of service they provide based on insureds' preferences and adjust their rates accordingly.

Economists describe this type of market structure as monopolistic competition (Scherer, 1980, pp. 15-16).

Similarly, efficiency and innovation are important parameters, but are difficult to measure. Some analysts have used expense ratios (i.e. expenses divided by premiums) to measure efficiency, but expense ratios can be misleading for a number of reasons. Because statutory accounting requires insurers to book expenses when they are paid, as opposed to when related income is earned, expense ratios can be misleading when insurers are either growing or contracting. Lower expenses could also reflect diminished quality of service, rather than greater efficiency.

Innovation can be targeted at improving efficiency and lowering loss costs and expenses, developing new products and services or improving the insurers ability to more accurately manage estimates of future loss costs. Medical liability insurers face certain statutory and regulatory constraints in their ability to develop new products and services. Market pressures on prices may further induce some carriers to become more innovative.

SURVEY OF MARKET INTERVENTIONS

Tort Reform

Claims paid by medical liability insurers are based on the civil justice system of each state where they operate. Tort reform initiatives, particularly medical malpractice reform, generally refer to the variety of solutions states have introduced to change the legal environment for compensating claimants. The goal of these reforms is generally to limit

the frequency of lawsuits and/or the amount paid per claim. Reductions in these subsequently reduce costs to insurers, which in turn restrain premium increase over time.

In this section, we discuss several of the more common types of tort reform states have tried. It is also important to note that the U.S. Congress has considered legislation to enact specific tort reforms that would affect states in dramatically different ways. In fact, the House of Representatives passed the Help Efficient, Accessible Low-Cost, Timely Healthcare (HEALTH) Act of 2003. A similar bill was introduced in the Senate; however, no action has been taken on it. These bills contain damage limitations that would limit recovery of non-economic damages.

The US Department of Health and Human Services produced a report on the medical malpractice crisis in 2002.[43] The report argued that patient access to care and safety had been impacted by the most recent medical liability crisis.[44] The report also argued that health care costs had increased as a result of the crisis and the litigation system was responsible for the crisis.[45] The report also concluded that the crisis was less acute in states that had tort reforms in place.[46] The report recommends federal reforms that: improve the ability of patients to receive unlimited compensation for economic losses; cap recoveries for non-economic damages by a reasonable amount ($250,000); reserve punitive damages for cases that justify them; provide for payment of judgments over

[43] United States. Department of Health and Human Services. Confronting the New Health Crisis: Improving Health Care Quality and Lowering Costs By Fixing Our Medical Liability System. Washington, DC: GPO, 2002.
[44] Ibid. p. 2
[45] Ibid. p. 7
[46] Ibid. p. 14

time; provide that a case may not be brought more than three years following the date or injury or one year after the claimant discovers or, with reasonable diligence, should have discovered the injury; inform the jury if a plaintiff has another source of payment for the injury, such as health insurance; and provides that defendants pay any judgment in proportion to their fault, not on the basis of how deep their pockets are.[47]

There has been a significant amount of literature written on tort reform in general. The authors take very different approaches in their analysis. Much of the research focused on the impact of tort reform measures on claim costs to insurers and subsequently premium to consumers. Viscusi, et al (Journal of Risk and Uncertainty: 1993, p181-3) found that "tort reforms intended to constrain costs and enhance profitability did neither. Yet, these results suggest that premiums were dampened by the introduction of a reform measure." The authors offer two explanations for this observation. First, "if liability reforms stabilized insurance companies' expectations about the losses that would be experienced for policies currently being written, this could restrain premiums even though current losses are unaffected." Second, "the reform measures were correlated with states in crisis; there is the possibility that insurance was being rationed in those states." In contrast, Viscusi and Born (Journal of Legal Studies: 1995, p 496) found that "liability reforms increased insurer profitability (that is, decreased the loss ratios), where the main mechanism of influence was through decreasing losses. The quantile regression estimates imply that the greatest effects of liability reform are on the most unprofitable firms and that the effect is not uniform across the entire market." The authors also find that "the

[47] Ibid. p. 19

influence of the liability reform variables on loss ratio is accompanied by a comparable pattern of influence on loss levels. In contrast, premiums seem only modestly affected by the liability reform measures, so that the main mechanism has been to reduce the losses associated with policies as opposed to raising the price that can be charged." Viscusi and Born (Journal of Legal Studies: 1995, p 496) also state that "liability reform not only enhances profitability but also diminishes uncertainty by having its greatest effect" on the must unprofitable insurers. The AMA also found that professional liability insurance (PLI) premium increases are driven in large part by verdict awards and settlement costs and that the relative frequency of very large awards is increasing.[48] The report found that manual PLI rates for California, which caps damages, are less than half those in the largest states that do not have effect tort reform. The AMA offers three policy options: the most promising tort reform proposals may be those that focus on elements such as award caps; policy initiatives to stabilize supply, finances and operations of carriers may offer a more productive approach to mitigating PLI crises; and that local initiatives must take into account the local drivers of premium increases that predominate within individual jurisdictions.[49]

Hunter and Doroshow, in discussing the impact of tort reforms on medical malpractice insurance rates from 1985-1998, argue that tort law limits enacted since the liability insurance crisis of the mid-1980s have not lowered insurance rates in the ensuing years.[50] The authors also argue that states with little or no tort law restrictions have experienced

---

[48] Ibid, p.7
[49] American Medical Association. "Medical Professional Liability Insurance." Health Care Financial Trends Report. Chicago: American Medical Association, April 2002.
[50] Hunter, J. Robert, and Joanne Doroshow. Premium Deceit: The Failure of 'Tort Reform' to Cut Insurance Prices. New York: Center for Justice and Democracy, 2002.

the same level of insurance rates as those states that enacted severe restrictions on victims' rights.[51] In their analysis of tort reform impacts on medical malpractice rates, Hunter and Doroshow argue the existence of an "apparent difference between levels of tort law change and overall rate/loss cost impact."[52] Hunter and Doroshow (2002, p. 16) state "the underlying costs, which ultimately drive insurance prices, are impacted upwardly by mid-range medical malpractice tort law changes..." Hunter and Doroshow argue that "one reasonable conclusion is that no clear evidence of tort law change impacting insurance prices is determinable" from the data that was analyzed.[53] Zuckerman, Bovbjerg and Sloan found that "other than imposing caps or reducing the time available to initiate claims, tort reforms are not observed individually to lower premium."[54]

Another goal of tort reform measures are to reduce budgetary costs to health care providers. Danzon (Handbook of Health Economics, Volume 1: 2000, p 1371) argues that the outcome such reforms "is likely to result, at best, in simply shifting costs from medical providers to patients and taxpayers; at worst, total social costs may actually increase if, for example, deterrence incentives are weakened." Thorton (Applied Economics, 1999, pg 215) found that "tort signal effects appear to prompt primary care physicians to work longer hours in an effort to devote more time and attention to patients..." which "...may well reduce the incidence of negligence and increase the quality of care. Evidence from simulations also suggests that the impact of these

---

[51] Ibid. p. 2
[52] Ibid. p. 16
[53] Ibid. p. 17
[54] Zuckerman, Stephen, Randall R. Bovbjerg, and Frank Sloan. "Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums." Inquiry 27 (Summer 1990): p. 180.

defensive actions on utilization and fee, at the margin, may be relatively minor." Kessler and McClellan (NBER Working Paper No. 6346: 1998) found that their analysis results "suggest that reforms in law affect physicians' attitudes, both by reducing the probability of an encounter with the liability system and by changing the nature of the experience of being sued, for those physicians who defend against malpractice claims."

States have tried a variety of legislative changes to control medical malpractice insurance costs. Several of these are identified and discussed in the following subsections.

Several researchers have studied the impact of tort reforms enacted following prior medical liability crises. In 1986, the GAO performed a case study of six states (Arkansas, California, Florida, Indiana, New York and North Carolina) that had enacted tort reform measures following the crisis in the 1970s.[55] The study involved surveys of organizations representing physicians, hospitals, insurers and lawyers.[56] The study found that in two states, those groups surveyed believed that tort reforms had helped to moderate upward trends in the cost of insurance as well as the average amount paid per claim.[57] Those surveyed in the other four states felt that tort reforms had little effect in their states.

In a report to the Senate on the impact of tort reforms on medical malpractice frequency and severity following the medical malpractice crisis of the 1970s, Danzon reported that three studied reviewed suggest that caps on awards and collateral source offset had significantly reduced claims severity and that collateral source offset and shorter statute

[55] United States. General Accounting Office. Medical Malpractice: Six State Case Studies Show Claims and Insurance Costs Still Rise Despite Reforms. Washington, DC: GPO, 1986.
[56] Ibid. p. 2
[57] Ibid. p. 2

of repose have significantly reduced claim frequency.[58] Danzon also reported that arbitration statutes appeared to increase claims frequency and reduce average severity, while reforms including screening panels and limits on contingency fees appeared to have no systemic impact on claims frequency and severity.[59]

Viscusi et al. researched the impact of tort reforms following the 1980s medical liability crisis and found that insurance regulation variables had little apparent effect on medical liability insurance prices (Journal of Risk and Uncertainty 180) The study also found that while reforms modifying joint and several liability, limits on liability, limits on non-economic damages and limits on punitive damages did not constrain costs or enhance profitability, the reforms appeared to dampen changes in premium.

Viscusi and Born found that liability reforms on average, and in particular the damage cap provisions, contributed to a downward shift in the loss ratios, which implies a rise in the profitability of insurers.[60] They note that the effect is not uniform across all insurers, but that insurers that had been the least profitable benefited the most from reforms.[61] They also discovered that liability reforms were more influential on reducing losses and less so on increasing premiums.[62] The authors conclude that medical malpractice reform

---

[58] Danzon, Patricia M. The Effects of Tort Reforms on the Frequency and Severity of Medical Malpractice Claims: A Summary of Research Results. U.S. Senate Committee on the Judiciary. Washington, DC, March 26, 1986. p. 9.

[59] Ibid.

[60] Viscusi, W. Kip and Patricia Born. "Medical Malpractice Insurance in the Wake of Liability Reform." Journal of Legal Studies 24 (1995): p. 490

[61] Ibid.

[62] Ibid.

consequently generated a variety of diverse effects that one would expect from a sound reform agenda.[63]

Damage Limitations, Caps

Payments made to individuals to compensate for damages because of medical error are generally divided in two categories. First are economic damages. Economic damages usually consist of past and future medical expenses to provide care and rehabilitation and lost wages or earnings potential. These damages are measured in monetary terms, often using objective or third party standards such as wage receipts, medical bills, or expert estimates of degree of disability. The second major category is that of non-economic damages. Non-economic damages are not readily measurable and are subjective in nature. They consist of payments for such intangible damages as past and future pain and suffering, loss of consortium, mental anguish and in some cases, punitive damages.

Table 35 lists states that have enacted damage limitations. A few states enacted statutory limitations on total damages but much less frequently than limitations on non-economic damages. It is important to note that when evaluating a total damage limitation, one must be aware of how it is applied. For example, while Indiana's $1,250,000 is a cap on all damages regardless of cause or source, the $500,000 cap in Louisiana is for non-medical damages only. Further, there are other areas of tort law that affect the settlement outcome such as whether the cap applies on a per occurrence basis for each health care provider or health care institution individually or collectively.

---

[63] Ibid. p. 491

A more common approach is for states to limit non-economic damages that an injured party can receive. There are many who believe that the limitation on non-economic damages is the most effective single reform that a state can enact. It should be noted this contention is still the subject of debate. Doctors, hospitals and insurers tend to favor such limitations, while the plaintiffs' bar and many consumer advocates are opposed.

Studying the effect of non-economic damage limitations is very difficult, as there does not appear to be reliable data to base an effective evaluation. First, courts do not routinely require that judgments distinguish between economic and non-economic damages when a judge or jury decides a case. Further, if a settlement is negotiated out of court, the insurer and the parties to the agreement are not inclined to separate the economic and non-economic aspects of the settlement. It is safe to say that enacting a non-economic damages limitation will have an impact on settlements or adjudicated claims with award values that reach levels exceeding the threshold of limitation. For most states, there is ample evidence that juries have awarded significant amounts; however, evaluating actual cost savings requires analysis on data that does not exist. At best a rudimentary estimate could be performed.

Damage caps or limitations provide insurers and the marketplace with information about the maximum dollar amount of loss any one insurance claim can be awarded, generally for noneconomic damages. When insuring a physician, insurers will assess the probability that he/she will have a claim filed against them and estimate how much the claim will cost the insurer. Without caps, insurers are forced to estimate what courts will,

in the future, award a plaintiff in a medical liability case. Recent years have seen large variations in the amounts of damages awarded in some cases, making such predictions difficult and inaccurate. The implementation of caps allows insurers to more accurately predict its costs arising from a claim and adds some stability to insurance prices in the market.

Caps on damages have two major impacts on individuals who potentially have a medical malpractice claim. First, total caps, that is caps on economic, noneconomic and punitive damages, may not make enough money for medical care necessary to reverse damages caused by medical mistakes or for any ongoing or life-long treatments the injured party may need. Some argue that noneconomic caps, in some cases, may be insufficient to appropriately compensate a victim for the intangible effects of the injury that has occurred. Secondly, caps may create a case of adverse selection when it comes to pursuing a claim. Since the costs of researching and arguing a medical malpractice case can be very large, awards available once caps are introduced may not, in some cases, cover even the costs associated with pursuing a claim.

Caps on noneconomic damages have been researched more than any of the tort reforms reviewed in this report. Danzon (Handbook of Health Economics, Volume 1: 2000) found that "caps directly constrain only a small percentage of cases, because roughly five percent of cases account for 50 percent of dollars paid." Danzon (ibid.) goes on to say that limits "are unlikely to undermine deterrence, because very high awards are typically not used for rating individuals (as opposed to class) liability premiums, being viewed as random bad luck." The Employment Policy Foundation (2003) argues, "states without

effective ceilings on non-economic damages experienced increases in medical malpractice premiums 3.7 times greater than states with ceilings." The Government Accounting Office (Medical Malpractice Insurance, 2003, p 43) found that, because of data limitations, "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." Viscusi, et al (Inquiry: 1990, p 176), found that noneconomic caps had statistically significant effects on premium, frequency or severity.[64] Weiss (Medical Malpractice Caps: 2003) found that while caps on noneconomic damages did reduce insurer payout on claims, insurers continued to increase premiums, leading to the conclusion that more important factors such as medical inflation, the insurance business cycle, insufficient reserves, declining investment income, financial safety and supply and demand, drove the rise in medical malpractice premiums. Viscusi, et al (Journal of Risk and Uncertainty: 1993, p181) found that for the liability reform variables (specifically modified joint an several liability, limits on liability, noneconomic damages, or punitive damages, or other reforms) examined showed "no statistically significant effects appear on losses... Only one measure, limits on noneconomic damages, significantly depresses losses, resulting in a 14.7% decrease in 1985 loss levels." Ross (30 Ind. L Rev. 594), examining whether a state's independent interpretation of its equal protection laws should be considered when damage caps have been implemented, argues that caps "arbitrarily discriminate against those most severely injured. Furthermore, they are unlikely to effectuate their intended purpose of lowering malpractice insurance premiums and health care costs." Yoon (3 Amer. Law &

[64] The authors found that noneconomic damages were a significant at a 10% level of confidence when measured in the frequency and severity model.

Economics Review 199) found that "the average relative recovery by Alabama plaintiffs decreased by roughly $20,000 after the Alabama legislature enacted [total] damage caps and increased roughly double that amount after the Alabama Supreme Court ruled them unconstitutional." Sloan and Hoerger (4 Journal of Risk and Uncertainty 419) found that "more serious injuries were relatively undercompensated, and plaintiff who incurred high losses in cases in which defendants appeared to be innocent of wrongdoing were paid no more than those in which plaintiffs incurred a relatively minor loss. This undercuts the rationale for ceilings on payments for noneconomic loss or total loss." In an analysis of the effect of tort reforms on premiums stemming from the 1970s crisis, Zuckerman et al. found that; only reforms imposing a cap on the amount of physician liability or reducing the amount of time a plaintiff has to initiate a claim significantly lowered medical malpractice premiums; premium are lower in states that require prior approval of rates; and not as strong a link between the determinants of premiums, claims and awards as was expected.[65]

Collateral Source Rules

Collateral source rules are provisions that allow or require the introduction of evidence concerning the plaintiff's recovery of medical and disability expenses from "collateral sources" such as health insurance, workers' compensation, Social Security, auto insurance medical payments or no-fault coverage and disability insurance. This allows a jury to consider the other sources of compensation available to a plaintiff before setting an award amount. Some states also allow or require consideration of compensation

[65] Zuckerman, Stephen, Randall R. Bovbjerg, and Frank Sloan. "Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums." Inquiry 27 (Summer 1990): 167-182. p. 167/

received from multiple defendants as a collateral source of recovery. A number of other states, however, still observe the common-law collateral source rule that obligates a tortfeasor to pay the full amount of a plaintiff's damages without regard to whether other sources mitigated those losses. In these states, tort awards are not offset by compensation amounts received from other sources.

Collateral source rules recognize that double recovery for all or part of a plaintiff's damages unnecessarily adds to the expense of medical malpractice insurance. Changes to collateral source rules would be considered an effective tort reform if the changes provide just compensation while eliminating duplicative expenses. Limiting subrogation rights would provide that collateral benefit providers do not seek to recover the monies they contributed to the settlement. However, most health and disability policies have provisions stating that the policyholder must refund policy benefit payments to the insurer that that they also collect through the tort system. This theoretically would eliminate most double recovery situations. Under this situation, the issue of double recovery is eliminated. The issue then becomes whether the source of the payments to the plaintiff are made appropriately, i.e. whether the plaintiff should pay for a portion of the damages or whether the defendant is responsible for all of the damages.

The Secretary's Commission on Medical Malpractice recommended 1973 that an in-depth analysis be made to identify the cost of overlapping health insurance benefits and to identify methods of using resources to assure more complete coverage to all.[66] Danzon

[66] United States. Department of Health, Education, and Welfare. Medical Malpractice: Report of the Secretary's Commission on Medical Malpractice. Washington, DC: GPO, 1973.

(Handbook of Health Economics, Volume 1: 2000) argues that "collateral sources offset undermines deterrence by shifting costs from the tort defendant to other insurance programs and by reducing the plaintiff's incentive to bring a claim because of the lower expected award." Danzon (Journal of Law and Economics: 1984, Law and Contemporary Problems: 1986) found empirically that "collateral source offset rules have not only reduced claim severity but also claim frequency, consistent with the prediction that lower awards reduce the incentive to file." Viscusi, et al (Inquiry: 1990, p 176), found that neither permissible nor mandatory collateral offset had statistically significant effects on premium, frequency or severity.[67]

Periodic Payment of Future Damages

Traditionally, medical liability insurers have paid tort settlements as one lump-sum settlement equal to the expected value of future losses. Periodic settlements allow for tort settlements to be paid over a course of many years, typically the expected lifetime of the plaintiff. Currently, several states mandate periodic payments, where several others provide an option to do so, either by request of the parties involved or the courts depending on the state statute requirements. Periodic payments are typically funded by annuities purchased from insurance companies. These annuitized payment arrangements are known to most as structured settlements.

A medical malpractice insurer can benefit by spreading the payments out over a longer period. An unused portion may be returned to the funding insurer. An insurer could also

[67] The authors found that mandatory collateral offset was a significant at a 10% level of confidence when measured in the frequency and severity model.

purchase an annuity where the present value of the future stream of payments is much less that a lump sum indemnity of the damages. Periodic settlements thus allow insurers to more accurately predict its loss expenses, which in turn allows them to set more consistent insurance rates for insureds. Periodic settlements may also be advantageous to the claimant because it guarantees a fund stream that will not be dissipated and will be available for future needs of the claimant. On the other side of the coin, it can be argued that periodic settlements take away the claimant's right to be compensated fairly because the claimant may not outlive the term of the periodic payments, which would preclude the claimant from being 'made whole'. In the event that an insurer becomes insolvent and has periodic payments settlement obligations it cannot meet, the cost of that obligation then shifts to either the state guaranty fund or, in the event the insurer is not covered by such a fund, to the claimant in terms of lost payments.

Henderson (32 Ariz. L. Rev. 76), argues that a "well designed periodic-installment judgment plan offers a number of opportunities to make significant improvements in the way tort victims are compensated."

Legislative Strategy Regarding Bad Faith

Although every state's tort system is different, a common thread for insurers is the issue of bad faith. Insurers can be held liable for amounts that are in excess of the policy limit if the policyholder asks the insurer to settle with a claimant and the insurer proceeds to take the case to court and loses. Bad faith claims occur when the judgment against the policyholder exceeds the policy limit and the insurer foregoes the opportunity to settle at the policy limit or less. At the extreme, bad faith claims have the potential to be larger

than an insurer's surplus.

Perhaps more than any other element the insurance industry maintains that the bad faith provisions of law, currently found in many insurance codes, are subject to abuse by those representing people allegedly injured due to malpractice. Although the evidence is generally anecdotal, the insurance industry is united in its assertion that no medical malpractice reform would be effective without changing the ease with which bad faith allegations can be made. On the other hand, those representing victims allege that insurers were prone to play games with records, witnesses, and availability to delay legal proceedings. Interestingly, insurers also make the same allegations relative to victims and their representatives. Those representing victims also expressed concern that the financial strength of insurers could allow them to "wait-out" a victim for purposes of an inequitable settlement. The working group believes that those considering medical liability reform should evaluate possible changes to the laws regarding bad faith claims. The appendix contains a summary of changes recently made to Florida law related to bad faith claims.

Sykes (25 Journal of Legal Studies 443) concludes that "the courts seem to find tortuous conduct on the part of insurers who have bona fide disputes with their policyholders over the terms of the policy or over factual issues essential to the insured's right to recover. The ability of the courts to identify opportunistic behavior in such cases is very much in doubt, and the distinct possibility arises that bad faith doctrine here does little to police misconduct while doing much to cause uneconomic increases in the premiums that policyholders must pay."

Alternative Dispute Resolution & Mediation

There are many ways to resolve disputes between two parties. The traditional method for medical liability claims is for the courts to hear from both sides and have either a judge or a jury decide what damages, if any, should be awarded. At the other end of the spectrum, is a settlement offer. This is a very informal process where the insurer, with the health care provider's permission, makes an offer to the plaintiff to settle the case before a trial becomes necessary. There are other methods that fall somewhere between these two extremes. Taking advantage of them offers opportunities to save time and expenses that are associated with a full trial in a court of law.

Some argue that one of the significant cost drivers of medical liability insurance is the sympathy factor. In cases where there is an adverse medical outcome that is not the result of a medical error, it can be argued that a compassionate jury would like to find a way to compensate those who have experienced a bad medical outcome and tend to sympathize with the plight of the victim. Care must be taken to strike a balance between the interests of the health care providers and those that have been victims of true medical malpractice. Establishing a balanced pre-trail screening process offers the potential to save both parties expense dollars by sorting out those cases that are likely to lead to an award from those that are simply unfortunate medical outcomes.

Further, expert witness reforms may contain costs if high standards are maintained. One option may be to use medical experts to certify the validity of the claimant's case so that

non-meritorious claims are eliminated before they reach a court. This process may also aid in settlement discussion, as many facts will come to light early in the process so that an offer of settlement can be tendered on cases with merit before going to trial.

Typically, loss adjustment expenses are higher for medical liability insurance than for other liability lines of insurance. This offers the potential for some savings if efforts to constrain costs are successful. Possible loss adjustment controls include the use of mediation or other alternative dispute resolution processes. Mediation or arbitration can be a successful loss adjustment control strategy. A state could consider adopting mediation or arbitration standards that treat all parties fairly. This would begin with a disclosure designed to alert the patient that he is agreeing to arbitration in lieu of a jury trial if that is the case. The disclosure must be clear and concise and should be agreed to by all parties. Arbitration can be either binding or non-binding and these conditions must be disclosed in advance. Rules regarding arbitration should consider whether the parties each have appropriate bargaining strength and whether they can bind others to the arbitration result in the case of joint and several liability. It should be noted that if there is discord surrounding an arbitrated dispute and either party can take the case once arbitrated to court, it is possible that arbitration might create an added layer of bureaucracy and actually add to expenses rather than diminish them.

In 1973, the Secretary's Commission on Medical Malpractice recommended that persons other than attorneys and members of the profession involved in the disputes be included as members of any mediation board or panel.[68] Danzon (Handbook of Health Economics,

[68] United States. Department of Health, Education, and Welfare. Medical Malpractice: Report of the Secretary's Commission on Medical Malpractice. Washington, DC: GPO, 1973.

Volume 1: 2000) agues that "theory and evidence indicate that mandatory screening, without significant penalties for appeal and without the panel's findings being admissible evidence in court, may simply add an additional tier of delay and costs." Danzon (Handbook of Health Economics, Volume 1: 2000) also argues that an "early binding offer system, combined with the English rule [the side that wins a suit is entitled to recover its expenses], creates incentives for each part to act on their true information, whereas bluff and strategic manipulation are penalized. By contrast, screening and mediation, without significant penalties for strategic post-screening behavior, simply increase delay and costs." The ***authors*** (Impact of Legal Reforms on Malpractice Costs, p72-3) note that the reluctance to use alternative dispute resolution programs "when it is not mandatory, coupled with questions about its constitutionality when mandatory, suggests that binding alternative dispute resolution (ADR) is unlikely to have much of an impact on direct malpractice costs." Viscusi, et al (Inquiry: 1990, p 176), found that allowing arbitration agreements did not have a statistically significant effect on premium, frequency or severity. Nelson (10 Am. Journ Trial Advoc. 362) questions whether "statutorily mandated mediation panels achieve any useful purpose. These panels may merely add another costly level to an already expensive and cumbersome litigation process. On the other hand, legislative attempts to encourage settlement, such as H.R. 3084, may provide benefits to both health care consumers and providers." Farber and White (23 Journal of Legal Studies 805) conclude, "patients involved in cases initiated through incident reports are less litigious ("more peaceful") than patients who initiated cases on their own either through a complaint or a lawsuit." Farber and White (23 Journal of Legal Studies 805) found that cases "initiated by patients through the complaint

process are not resolved (dropped, settled, tried to a verdict) significantly different from cases initiated by lawsuits, controlling for observable case characteristics." Farber and White (23 Journal of Legal Studies 806) suggest that "the complaint process is a cost-effective "front-end" for the litigation process that provides information to patients regarding the quality of their medical care and, hence, the likelihood of negligence." Vidmar And Rice (78 Iowa L Rev. 897) examined the results of several jury and mediated court decisions and found "no support to the widely held view that jurors are more generous than judges or arbitrators in awarding noneconomic damages. Moreover, the data do not support the view that the reasoning of laypersons calculating the award is substantially different from that of legally trained persons." Stevens (50 Dispute Resolution Journal 65) argues that the "potential contributions of ADR in various dispute-management settings depend in important part on how its adjudication function fits in as an integral part of the larger alternative dispute management system with which it is associated. Arbitration of these disputes would greatly facilitate adopting contract (rather than tort) as the legal basis for claims. In turn, contract – coupled with grievance procedures and arbitration – would provide a superior dispute management system for malpractice disputes in HMOs."

Contingency Fee Limitation

Perhaps the most controversial reform involves limitations on attorney contingency fees. The lawyers for the plaintiff in medical liability cases are generally compensated on a contingency fee basis. In lieu of an hourly charge for services rendered, the attorney agrees to accept a percentage of the damage award if the lawsuit is successful. These

contingency fee arrangements can be as high as 50% of the award.

The arguments for contingency fee limitation are that it delivers more of the award to the person who sustained the injury and thus is fairer to victims of malpractice. Further, it helps weed out non-meritorious claims as attorneys are less inclined to take a chance on a doubtful recovery if their stake in the claim would be less. There are some who oppose contingency fee limitations. They argue that these limitations deny innocent victims their day in court as plaintiff's attorneys would be less inclined to take on cases with small potential dollar values regardless of its validity. Further, they say that it is unfair to attorneys to limit their earnings potential. While there are states that have implemented restrictions on the use of contingency fees, limiting the income of plaintiff attorneys is often a tough battle in a state legislature. California is an example of a state that has successfully implemented contingency fee limitations for medical liability insurance

Danzon (Handbook of Health Economics, Volume 1: 2000) found that "theoretical analysis predicts that the number of claims filed would be higher with a contingent fee, but appropriately so, because risk aversion would deter many plaintiffs from filing valid claims with an hourly fee." Danzon (Handbook of Health Economics, Volume 1: 2000) also found that the "objective of limits on contingent fees is unclear and effects of such limits on claims frequency and disposition... are uncertain." Danzon (Bell Journal of Economics: 2001) found that "given certain assumptions about the nature of competition, the contingent fee system induces the amount of attorney effort that would be chosen by a fully-informed, risk-neutral plaintiff who was paying an attorney by the hour." Danzon (Bell Journal of Economics: 2001) also states that if the "benchmark of optimal

expenditures on litigation is that which would be chosen by fully informed, risk-neutral plaintiffs, then regulation or prohibition of contingent fees will, if effective, result in suboptimal investment in pursuing claims." The Employment Policy Foundation (2003) argues, "if a claim is dropped before any cash settlement is offered, the plaintiff's lawyer gets nothing. The result is an increasingly prolonged and costly process of discovery that consumes physician's time, distracts them from patient care and raises the effort and cost of claims adjusters and defense attorneys on behalf of malpractice insurers." Viscusi, et al (Inquiry: 1990, p 176), found that attorney fee controls did not have a statistically significant effect on premium, frequency or severity. Public Citizen (Medical Misdiagnosis: 2003, p 22) argues that non-frivolous lawsuits are not common because of the costs associated with pursuing a medical malpractice case. Public Citizen (Medical Misdiagnosis: 2003, p 24) found in a review of several studies that there is a "consistent relationship between the severity of the injury and the size of the verdict. Uniformly the authors concluded that their findings did not support the contention that jury verdicts are frequently unpredictable and irrational." Spagnoli (19 Loyola Los Angeles L Rev 683) notes that while California courts have ruled that regulation on attorney's fees affect first amendment rights, "the court failed to conclusively establish that recognition of such rights would prevent regulation of all attorney fees." McMullen (1990 Journal of Dispute Resolution 384) states that "the effort to employ mediation as a method to resolve medical malpractice disputes" is hampered by the attorney's "standard philosophical map, the perceived economic threat, the lack of confidentiality laws, the lawyers' general lack of education in mediation, and the perception that mediation does not enforce social norms as well as the court system." Reames (62 Chi. Kent L. Rev. 271) argues,

"limitations on attorney fees proscribed by section 6146 [of the California Business and Professional Code] seriously abridge first amendment rights. By limiting contingency fees, the statute limits the number of qualified attorneys willing to petition on behalf of medical malpractice victims. Without a qualified attorney, a malpractice victim's right to petition for redress is a nullity."

Other Legislative Measures

There are several other measures that state legislatures might consider to help with the medical liability situation.

Special Courts

Kozak (19 Seton Hall Legis. J. 647) argues that "it is necessary for reform to focus on streamlining the [litigation] process by eliminating unnecessary or duplicative discovery, restricting the time to claims resolution, and screening claims before they have on opportunity to clog the court system."

The establishment of special courts dedicated to hearing medical liability disputes offers an opportunity for improvement. A jury is often not well positioned to make an informed decision about whether a medical error has occurred or to decide on an appropriate level of compensation. Further, judges who only occasionally hear a medical liability case are in no better position to make an informed decision than are juries. A remedy for that deficiency is the creation of special courts that are designed to hear medical liability cases exclusively. The judges in these special courts will, over time, gain a familiarity with

medical jargon and will have comparative experience from a variety of medical liability cases to serve as a common basis for evaluation of medical liability disputes. While this is not an immediate solution to a current crisis, over time establishment of a special court should prove beneficial.

Advance Notice of Claims

Another potential legislative remedy is the introduction of a requirement that the plaintiff provide advanced notice of a claim. A claimant could be required to given defendants advance notice of intent to file a suit. A time period should be specified. A 90-day period should be sufficient. During the advance time period, both sides are expected to perform due diligence regarding the potential claim. There are many who believe that this advance notice period would often result in settlement of meritorious cases. Further it provides attorneys from both sides an opportunity to meet and exchange documents that will help them resolve the matter.

Other Reforms

Poythress, Weiner and Schumacher (16 Law & Psych Rev 111) argue the "tort system's current punishment model should be revised in favor of an information-feedback model that clearly identifies the specific behaviors to be changed as the result of the finding of negligence. Fines for compensatory and/or punitive purposes will be much more effective in a framework in which the behaviors sanctioned are announced with sufficient precision that the defendant doctor and other members of the relevant profession can identify those practices that are unacceptable."

Patient Compensation Funds

One reform adopted in some states is the use of patient compensation funds (PCF). **Table 36** lists states that have enacted PCFs. States with PCFs cap health care provider claims at a specified monetary level. Further redress is available to injured parties through a PCF for amounts above the monetary cap. PCFs generally limit the dollar amount they will provide in compensation. Except for its cap, a PCF by itself does not necessarily alter a state's tort system.

Patient Compensation Funds offer certainty to health care providers and their insurers by establishing a limit on the magnitude of losses a health care provider must bear. The cap on loss severity adds predictability to pricing medical liability insurance coverage. If frequency does not rise, medical liability premiums should remain relatively stable. The challenge involved with establishing a PCF revolves around funding. The debate generally is whether funding should come from private or public sources. There are those who believe that PFCs are not a good solution, as they do not change the claiming dynamics.

In 1973, the Secretary's Commission on Medical Malpractice recommended federal funding for one or more demonstration projects in order to test and evaluate the feasibility of possible alternative medical injury compensation systems as well as a federal feasibility study of establishing a patient injury insurance program, similar to

workers' compensation insurance, to provide designated compensation benefits for injuries arising from health-care, whether caused by medical malpractice or not.[69]

Statutory Risk Sharing Mechanisms

State legislatures are often called to address availability and affordability of essential insurance products when the private sector fails to provide adequate coverage at prices acceptable to those paying the premium. It is generally the preference of state governments to allow the private sector to provide insurance coverage if it is willing to do so. Auto, property and workers' compensation insurance are the three most widely known examples of essential insurance coverage. Auto and workers' compensation are compulsory in most states. Property insurance is necessary for an economy to function, as financial institutions will not lend money if a person or business cannot secure the financial institution's interest through property insurance.

Medical liability insurance may be considered an essential insurance coverage as a medical care provider can lose hospital-attending privileges if insurance is unavailable. Thus, the health care system relies on the availability of affordable medical liability insurance. When coverage is unavailable or believed to be too expensive, medical care providers may consider limiting their practice, changing to a lower risk specialty, retiring or moving to another state with more favorable medical liability rates.

When the legislature senses that medical liability coverage is either unavailable or

[69] United States. Department of Health, Education, and Welfare. Medical Malpractice: Report of the Secretary's Commission on Medical Malpractice. Washington, DC: GPO, 1973.

unaffordable, one of the measures developed to remedy the situation is a risk-sharing mechanism. These are often residual market mechanisms that serve as a market of last resort. A common risk-sharing mechanism is the Joint Underwriting Association or JUA. A JUA typically is a risk sharing mechanism where the state either authorizes or requires one or more servicing carriers to issue medical liability policies to health care providers that are unable to obtain insurance from the voluntary market insurers. The premiums and losses associated with providing coverage through the JUA are shared by an association of the entire admitted market, or a significant portion of it. This is done through either assessment or a less common distribution of excess funds. The servicing carrier issues the policy, settles claims and provides other customary policyholder services. For that service, the servicing carrier is compensated at a fixed rate. A JUA is an effective means to provide coverage availability. JUA establishment by itself does not address the price or affordability of the insurance product. A JUA's insureds are usually those rejected by the voluntary market and may trend toward higher claims costs.

JUAs are valuable to a market because it provides a mechanism in which anyone that needs to obtain insurance coverage can do so. Insurance coverage from JUAs is typically more expensive than coverage in the traditional insurance market; hence these entities are used when there are availability issues in the market. JUAs have limited benefits in markets where affordability of existing coverage is the most pressing problem.

Alternative Treatment of Trauma Centers and High Risk Specialties

Access to essential health care is becoming an issue in some states for certain high-risk specialties. There is a much higher incidence of medical liability claims observed in