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RAND "THREE LEVEL" STUDY AND OTHER REPORTS

- 1) Report: Trends in Tort Litigation, 1987
- 2) Report: Costs and Compensation; Paid in Tort 1986 Litigation
- 3) Report: Contingent Fees for Personal Injury Litigation - 1980
- 4) Report: Medical Malpractice Liability Study - 1989

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AND OTHER REPORTS

Special Report

Trends in Tort Litigation

The Story Behind the Statistics

Deborah R. Hensler, Mary E. Vaiana,
James S. Kakalik, Mark A. Peterson

RAND

THE
INSTITUTE FOR
CIVIL JUSTICE

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The Institute for Civil Justice

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FOREWORD

During the last two years, the issue of tort reform has been vigorously debated in virtually every state legislature and in the U.S. Congress. Because the tort system directly affects the interests of the various parties to this debate, it is not surprising that the proponents and opponents of reform have sharply differing ideological positions. The more striking feature of the debate is the sharply differing perceptions of the underlying reality—perceptions buttressed by a bewildering array of seemingly contradictory statistics.

Proponents of reform cite numbers showing an explosion of lawsuits, jury verdicts that are "out of control," and a system where legal fees and expenses rival the amounts paid in compensation. Opponents marshal other data to show that the explosion of suits is a myth, that jury awards have been remarkably stable, and that the transactions costs of the system are reasonable given its objectives.

This report takes on the task of sorting out these conflicting claims and statistics. The task is a natural one for the Institute for Civil Justice—and not simply because both sides have used ICJ research to support their positions. The Institute has played a leading role in shifting the grounds for the debate from an exchange of anecdotes to presentation of empirical data to support assertions.

The central message of the report is that much of the confusion results from the implicit notion of a single, homogeneous tort liability system. This misperception is shared by policymakers and by proponents and opponents of reform who operate under the assumption that indicators of change along one dimension of the system reflect changes in the system as a whole. In fact, the tort liability system appears to consist of three separate systems. The report delineates these systems and suggests why they appear to be evolving in different directions. It proposes an explanation for why diverse statistical data have characterized the policy debate and provides an important framework for understanding the conflicting claims resulting from that debate.



Most ICJ publications present the findings of a single empirical study. However, as our research inventory has grown, we have frequently been asked to synthesize and interpret our findings. Until now, we have responded to these requests in legislative testimony or in professional journal articles—forums designed for relatively specialized audiences. With this report, the ICJ initiates a new series of publications, intended for a wider audience, that will synthesize the results of previous ICJ studies and place them in a broad policy context.

Kevin F. McCarthy
Director, The Institute for Civil Justice

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INTRODUCTION

Over the past two years, insurers, manufacturers, physicians, consumer advocates, and trial attorneys have vigorously debated the costs and benefits of the tort system as a mechanism for compensating and deterring injuries. The debate began with a perceived "insurance crisis." Liability insurance premiums, particularly for medical malpractice and commercial lines, increased sharply, and insurance for some kinds of activities became unavailable at any price.

While there was broad consensus that obtaining and paying for insurance was a pressing problem, there was little agreement about the cause or its solution. On the one hand, insurers linked rising rates and unavailability to trends in tort litigation, thus focusing attention on the legal system. In many states and at the federal level, insurers, manufacturers, health care professionals, and local government officials formed coalitions to support substantive changes in tort law. On the other hand, trial attorneys and consumer groups generally opposed these changes, arguing that what needed reform was not tort law, but poor management practices in the insurance industry.

It is hardly surprising that the proponents and opponents of what became known as "tort reform" held sharply differing positions. However, they also appeared to hold sharply differing views of reality.

Proponents of change argued that there has been an explosion of liability lawsuits in the past five years, that recent verdicts demonstrate that civil juries are "out of control," and that the monetary benefits delivered by the tort system to injured parties are overshadowed by the enormous costs of administering the system. Tort reform was needed to counteract these trends.

*The policy debate
over tort reform*

Opponents of tort reform argued that the litigation explosion is a myth, that jury awards have been basically stable for 25 years, and that the transactions costs of the system are acceptable, given the system's twin objectives of compensation and deterrence. Tort reform was not only unnecessary—it might be harmful to those whom the system is intended to serve.

*The statistical
debate . . .*

Each side presented statistical data that appeared to support its position. But the differences in the data cited were puzzling even to those wise in the ways of lying with statistics. Each side claimed to be accurately describing the tort litigation system, yet the two sides seemed to be talking about different worlds. A sample:

*. . . on the
litigation
explosion*

- Between 1977 and 1981, the number of civil lawsuits in state courts grew four times faster than the total U.S. population (Time, March 24, 1986, p. 20).
- The annual number of tort filings in 17 states rose 9 percent between 1978 and 1984; meanwhile, population in those states rose 8 percent ("The Manufactured Crisis," Medical Economics, November 10, 1986, p. 69).

*. . . on the
growth in amount
awarded*

- The average award in product liability and medical malpractice cases is now over a million dollars (Time, March 24, 1986).
- Between 1975 and 1984, the growth in the median medical malpractice award has been less than the rise in inflation. In product liability cases, the growth rate for median awards has exceeded the inflation rate, but not by much ("The Manufactured Crisis," p. 68).

Where does the truth lie?

*The worlds of
tort litigation*

Recent research on trends in tort litigation, conducted by The Institute for Civil Justice (ICJ)¹ at The RAND Corporation, suggests an explanation for the apparent discrepancies among the statistics: There is no longer, if there ever was, a single tort system. Instead, there are at least three types of tort litigation, each with its own distinct class of litigants, attorneys, and legal dynamics.

- The first is the world of routine personal injury torts, exemplified by auto suits. They occur frequently and usually involve modest injuries and relatively low

¹The Institute for Civil Justice was founded at RAND in 1979 to conduct independent, objective policy analysis and research on civil justice issues. RAND is a nonprofit institution; the ICJ is supported by pooled grants from corporations, including insurance and noninsurance organizations, private foundations, trade and professional associations, and individuals.

financial stakes. Settled law and routine procedures lend an air of stability to this world.

- The second is the world of high-stakes personal injury suits, such as product liability, malpractice, and business torts. Here the litigation itself is newer, the law is still evolving, and the stakes per case are larger and increasingly uncertain.
- The third is the world of mass latent injury cases, such as asbestos litigation, Dalkon Shield cases, and other suits arising from mass exposure to drugs, chemicals, or toxic substances. The lack of "fit" between traditional tort law and the facts of these cases leads many to view them as problematic.

Each of these worlds is characterized by a different litigation growth rate, jury verdict trend, and cost profile. Treating the three types of litigation together—as is done whenever overall statistics for tort litigation are reported—produces a distorted picture of tort litigation that does not accurately reflect the reality of any of these worlds. Inferences about trends in one area of litigation based on data drawn from another are also likely to be wrong. Just as the blind men who tried to identify an elephant by feeling different parts of it each perceived different realities—none of them an elephant!—statistical views of any one part of the litigation system are necessarily distorted. And the resulting controversy over whose statistics were *right* has diverted attention from the story behind the statistics: the changes taking place in different areas of litigation—changes that may well merit different types of policy responses.

In this report, we will review and explain the statistical evidence as we sketch a comprehensive picture of the three worlds of tort litigation, drawing on seven years of ICJ research. We will use this research to answer three questions that are at the heart of the recent debate on trends in tort litigation:

- How much litigation is there?
- Are jury awards stable or out of control?
- How much does litigation cost, and who gets the money?

*Treating three
worlds as one
invites distortion*

*Key questions to
be answered*

We will show how the answers to these questions differ depending on which world of litigation one examines. And we will suggest why litigation trends and outcomes in these worlds are increasingly divergent.

LITIGATION: HOW MUCH IS THERE?

It would be hard to find a wider range of opinions than those held, and strongly asserted, about the amount of litigation nationwide. Some observers claim the United States is witnessing a litigation explosion reflecting litigiousness unmatched anywhere in the world.¹ Others claim that recent statistics on court filings indicate stable, or very slowly increasing, litigation rates.² Yet others argue that many Americans with legitimate grievances do not pursue them in court because they lack the financial and social resources necessary to do so.³

The controversy

Why is there so much uncertainty and controversy about this basic question? Three reasons: (1) not enough good data; (2) confusion between litigiousness and amount of litigation; (3) description of different types of tort litigation. In this section, we will attempt to avoid these sources of confusion by examining the amount of litigation in each of the three worlds.

Three organizations are the source of the most commonly cited data in the debate over litigation rates: (1) the Administrative Office of the U.S. Courts, which yearly collects information about filings in the federal district courts; (2) the National Center for State Courts (NCSC), a private, nonprofit, court-supported organization that has been monitoring the amount of litigation in state courts across the country since the late 1970s; and (3) The Institute for Civil Justice, which does not itself collect or publish caseload statistics, but has reviewed and interpreted the available data in the course of its studies.

Data sources . . .

¹For example, see Elaine S. Knapp, "Who's to Blame? Insurers or Courts?" *State Government News*, Vol. 29, No. 3, March/April 1986; or "There Is a Litigation Explosion," *The National Law Journal*, May 19, 1986.

²David Burrow and John E. Collins, "Insurance Crisis—Texas Style: The Case for Insurance Reform," *St. Mary's Law Journal*, Vol. 18, No. 3, Winter 1987, pp. 760-761.

³"The Manufactured Crisis," *Medical Economics*, November 10, 1986, p. 61.

*... and data
problems*

The growth rate for federal filings is straightforward. The data from the Administrative Office of the Courts are complete and show that tort filings in federal courts grew at an average annual rate of 4 percent between 1981 and 1984. Unfortunately, however, federal filings are a very small part of total tort action. About 95 percent of the tort cases are filed in the state court system,⁴ but these data are incomplete. The NCSC is hampered in its recordkeeping because not all state courts distinguish tort litigation from other civil cases such as commercial and contract suits. Therefore, both the NCSC and all other users must extrapolate from the data available. The NCSC estimates an average annual growth of 2.3 percent in tort filings in state courts between 1981 and 1984; the comparable ICJ estimate is 3.9 percent.⁵

*Total amount of
tort litigation
nationwide is
growing slowly*

Whatever the slight differences among estimates, it is clear that the amount of tort litigation nationwide is growing relatively slowly. Indeed, when the rate is adjusted for population growth, it sinks (according to estimates by ICJ researchers) to a modest 3 percent. This number is not, by itself, a good measure of litigiousness. Such a measure would have to include other kinds of information—for example, whether the number of claims or grievances that could be litigated was growing. But it is a good measure of overall litigation activity.

*But growth
differs for
different case
types*

But the total amount of tort litigation nationwide is not the relevant statistic for policymakers. When we examine how much litigation occurs in different types of cases, we see significant differences. Figure 2.1 illustrates this point. It shows changes from 1975 to 1985 in the amount of tort litigation in the federal courts and in California state courts, one of the few state courts that tracks the personal injury caseload. The data for the federal caseload let us show separate results for auto, marine, and air cases, other nonproduct personal injury cases, and product liability. For California, we can distinguish only auto and other personal injury, a category that includes product liability,

⁴For further discussion, see James S. Kakalik and Nicholas M. Pace, *Costs and Compensation Paid in Tort Litigation*, The RAND Corporation, R-3391-ICJ, 1986, Chapter II.

⁵The ICJ estimation method is discussed in detail in Kakalik and Pace, 1986.

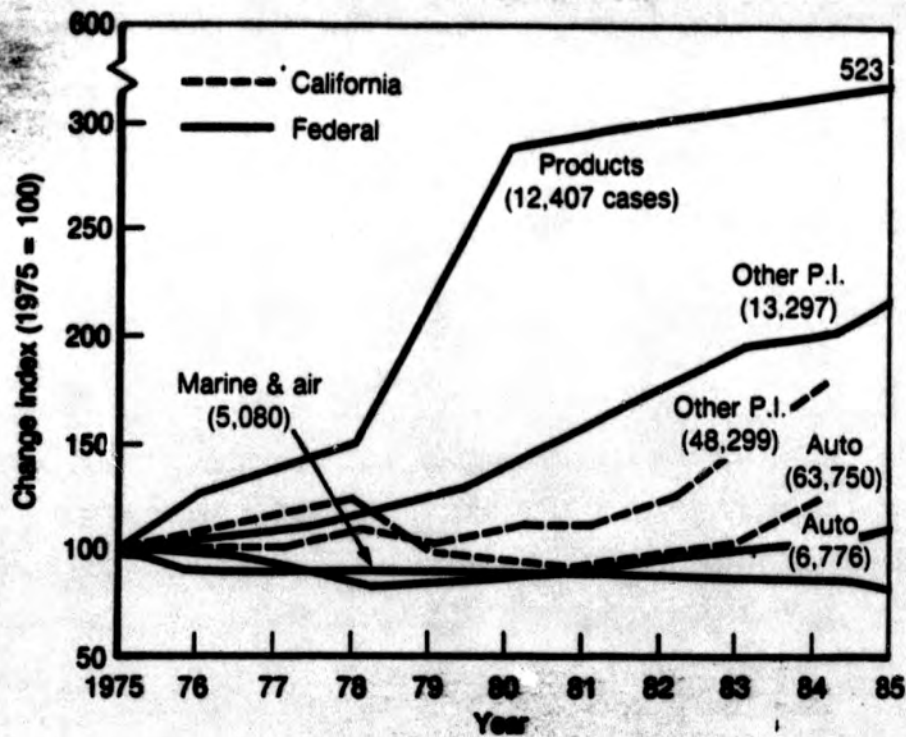


Fig. 2.1—Growth differs for different case types

medical malpractice, and a variety of other personal injury torts. We have used 1975 as the base year and calculated deviation from it.

Because there are only two categories, the California pattern is the simpler. The data for auto cases show a slight increase, which roughly mirrors population growth during this period; in other words, litigation in this area remained basically stable. However, the increase in other personal injury suits is much sharper and far outpaces population increases.⁶

*High-stakes
personal injury
suits are growing
faster*

⁶See Deborah R. Hensler, *Trends in California Tort Liability Litigation*, The RAND Corporation, P-7287-1CJ, March 1987.

Although the data from the federal courts are more diverse, the basic pattern is the same. The number of auto and marine and air cases was very stable over the entire period. However, other nonproduct personal injury cases grew rapidly and product liability cases have soared. It is the precipitousness of this last increase that has attracted so much media attention. It is unclear whether this quantum jump is because the federal courts are now getting a portion of these cases that used to be filed in state courts, or because asbestos cases and other mass latent injury suits are swelling the caseload. Probably both factors are operating, but we are unable to tease out their separate effects from these data.

A different measure of changing caseload is the composition of the caseload. Table 2.1 shows the shift in caseload for federal courts, California courts, and NCSC data for a group of state courts (California, Hawaii, Maryland, Michigan, and Texas) that report more detailed information about filings.

Table 2.1

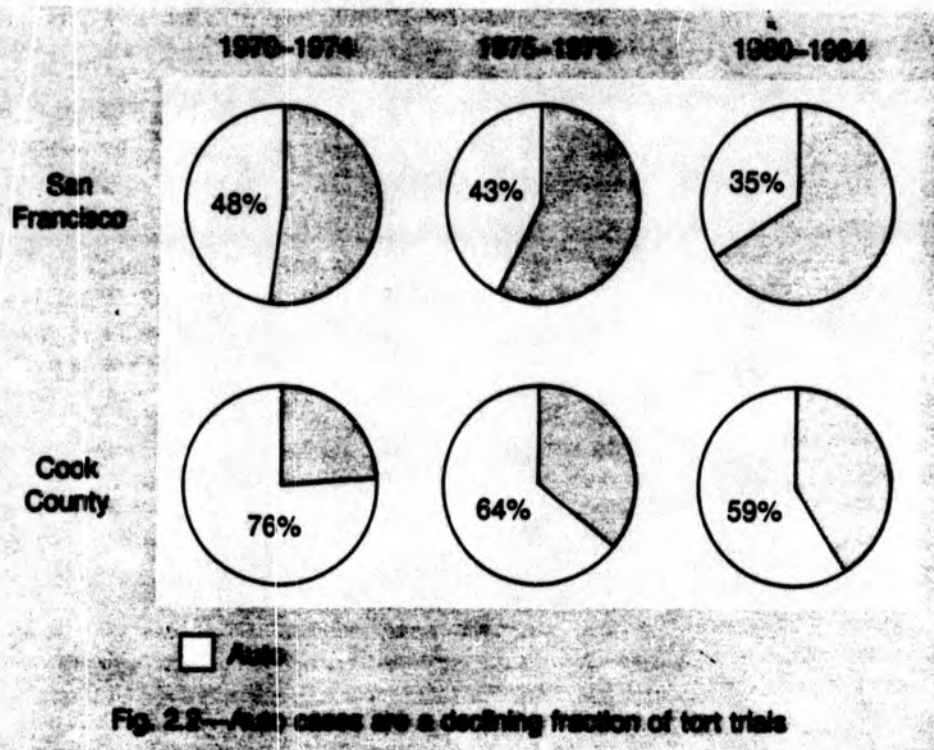
**AUTO CASES ARE A DECLINING
FRACTION OF TORT FILINGS**

	Percentage of Case Filings	
	1975	1985
Federal courts		
Auto	25	16
Non-auto	75	84
California	1975-1976	1984-1985
Auto	65	43
Non-auto	35	57
Five state courts^a	1980	1984
Auto	61	55
Non-auto	39	45

^aCalifornia, Hawaii, Maryland, Michigan, and Texas (NCSC).

Although the periods covered are not identical because some data are unavailable, we observe similar patterns. In every category, auto cases are a declining percentage of case filings.

For most courts, we are fortunate just to have data on filings. But the ICJ has been able to assemble data on tort trials in San Francisco and in Cook County, Illinois, for 1960-1984. These data allow us to analyze the composition of trial caseloads, as shown in Fig. 2.2.⁷ Throughout the period 1970-1984, Cook County tried a much larger percentage of auto cases than did San Francisco. However, in both jurisdictions, auto accident cases constitute a steadily declining slice of the caseload pie, falling from 48 percent to 35 percent in San Francisco, and from 76 percent to 59 percent in Cook County.



⁷Based on data from Mark A. Peterson, *Civil Juries in the 1980s: Trends in Jury Trials and Verdicts in California and Cook County, Illinois*, The RAND Corporation, R-3466-ICJ, 1987.

**Where the
explosion may
occur**

There is little ambiguity about the trends in the third category of cases—mass latent injuries. Data from asbestos and Dalkon Shield claims demonstrate truly explosive growth for these types of cases. For example, most experts estimate that there were about 16,000 asbestos worker injury claims in 1981; five years later, there were more than 30,000 asbestos cases in state and federal courts. In 1981, there were an estimated 7,500 lawsuits pending over injuries from Dalkon Shields. By 1986, after A. H. Robins, the manufacturer, had sought protection under Chapter 11, more than 325,000 claims had been submitted to the bankruptcy court.

Mass latent injury suits have this explosive quality for two reasons. First, some toxic substance litigation is concentrated in particular areas where that substance may have been used. For example, asbestos was widely used in certain industries—in shipbuilding on the east and west coasts and on the Gulf and in the petrochemical industry on the Gulf. Because of this geographical concentration, asbestos claims may flood the courts in some cities even though they might not constitute a very large percentage of the national caseload.

We have estimated the contribution of asbestos claims to judges' civil caseloads in a number of federal and state courts.⁸ For 1984, the percentages ranged from a low of about 7 percent in Northern California to highs of approximately 25 percent in Massachusetts and New Jersey.

Second, the statute of limitations defines a time window within which claims must be brought. If newly discovered evidence or a new legal ruling provides a new basis for claims, then a large number of people must file expeditiously. The system may well experience the results as an explosion.

As the metaphor suggests, this explosion of tort filings may be temporary—a bulge that the system slowly absorbs. But because these cases appear on the legal scene suddenly and in very large numbers, they contribute to a

⁸For details, see Deborah R. Hensler, William L.F. Felstiner, Molly Selvin, and Patricia A. Ebener, *Asbestos in the Courts: The Challenge of Mass Toxic Torts*, The RAND Corporation, R-3324-ICJ, 1985, p. 27.

general impression of hectic court activity and may well overwhelm courts in certain locations.

The answer to the question of how much tort litigation there really is depends critically on which world of litigation the data describe.

So how much tort litigation is there?

- *Auto accident cases are a steady or declining percentage of court action.*
- *Non-auto personal injury cases such as malpractice and product liability are growing moderately in state courts and more dramatically in federal courts.*
- *Mass latent injury cases have the potential for explosive growth as new evidence of harms is developed.*

JURY AWARDS: STABLE OR OUT OF CONTROL?

More statistical confusion

Some of the most memorable salvos of the insurance crisis war have been aimed at the amounts that juries award injured plaintiffs. And nowhere is the bewildering discrepancy between statistics so dramatic:

The average verdict in both product liability cases and medical malpractice cases is now more than \$1 million, and the number of million-dollar awards has been growing quickly. Between 1980 and 1984, it jumped nearly 200 percent to 401 (*The Wall Street Journal*, May 16, 1986).

The increase in awards is necessary to keep up with climbing health care costs. . . . The cost of inpatient, outpatient, and physician care has risen an average of almost 16 percent between 1978 and 1984. During that same period, verdict amounts rose only about 13 percent (*The Wall Street Journal*, April 8, 1987).

Is there a way to reconcile these viewpoints?

Which yardstick to use

The debate about jury awards has been further complicated by argument over the proper statistics to use in describing trends. The most frequently cited statistics are *medians* and *means*.

Median awards

The *median award* is the midpoint of the distribution of jury awards to the plaintiff. To compute the median, one simply lists all the awards in the jurisdiction under study in order of their dollar value and locates the award at the midpoint of the list. Medians are not affected by either extreme high or low values. Although it is possible for many of the values in a distribution to diverge significantly from the median, in the absence of other information, it is reasonable to guess that most of the values are not too much higher or lower than the median. For this reason, it has become popular to think of the median as indicating the "typical" jury award.¹ Trends in median awards indi-

¹A more accurate statistical indicator of the typical award would be the *mode*, which is the value that occurs most frequently.

cate whether the behavior of juries, in general, has changed.

The *mean award* is the statistical average of all jury awards. To compute it, one sums the dollar value of all awards to the plaintiff in the jurisdiction under study and divides by the number of these awards. A few very high or very low awards will skew the mean award; therefore, it may not be a good measure of what the typical jury is doing. However, it does provide the single most accurate estimate of the amount awarded to successful plaintiffs.

Mean awards

Both medians and means usually describe points in the distribution of dollar amounts in the cases that the plaintiffs have won. However, plaintiffs do not always win. A better estimate of *expected award* includes cases that they lose. We can calculate the expected award by multiplying the *average award* by the *probability of winning*, which is less than one. This expected award is the best available indicator of what plaintiffs can expect to win or defendants expect to lose in the relevant jurisdiction.

Expected awards

Since 1979, the ICJ has conducted a series of studies about the decisions of civil juries. We examined detailed data for more than 14,000 civil cases tried by juries in Cook County, Illinois, and San Francisco, California, between 1960 and 1984. Data were obtained by creating computer records of information published in periodic jury verdict reporters for each jurisdiction.² Each record identifies the court and judge, relevant dates, type of case, liability issues involved, number of plaintiffs and defendants, and offers and demands; it also provides data about a wide variety of characteristics of the trial, including information about each defendant, each plaintiff, the nature of the claim, the plaintiff's possible negligence, and the outcome of the trial. ICJ researchers have used this rich database to study:

ICJ jury verdict studies

²The *Jury Verdict Reporter*, published by Max Sonderby, is a private, weekly subscription newsletter for lawyers and insurance companies in the Chicago area. *Jury Verdicts Weekly*, published by Kenneth Raymond, is a similar newsletter describing civil cases reaching verdict in California.

Key issues studied

- kinds of cases tried and trends in outcomes³
- how juries compensated various types of personal injuries and how compensation changed over time⁴
- how jury verdicts are related to the characteristics of litigants⁵

We draw on these analyses in the following discussion of trends in jury awards. The data are specific to San Francisco and Cook County, and we would not expect to observe the same medians and means in all the jurisdictions in the country. Indeed, San Francisco and Cook County differ on some dimensions, as we discuss below. However, the data are valuable because they are currently the only data available in the United States that allow us to discuss long-term trends in trial outcomes. And the similarity of trends between the two jurisdictions leads us to believe that the trends we are observing may hold nationwide. Moreover, the difference—discussed below—between verdict amounts for automobile accident and other routine tort cases, on the one hand, and product liability and medical malpractice cases, on the other, are repeated in more than three-fourths of the 44 jurisdictions nationally for which *short-term* jury verdict data have been assembled.⁶

Overall, median awards haven't changed much . . .

Figure 3.1 shows that median tort awards, when adjusted for inflation, remained remarkably stable in both jurisdictions during the period 1960–1975. The median was virtually constant in Cook County. In San Francisco, there is

³Mark A. Peterson and George L. Priest, *The Civil Jury: Trends in Trials and Verdicts, Cook County, Illinois, 1960–1979*, The RAND Corporation, R-2881-ICJ, 1982; Michael G. Shanley and Mark A. Peterson, *Comparative Justice: Civil Jury Verdicts in San Francisco and Cook Counties, 1959–1980*, The RAND Corporation, R-3006-ICJ, 1983; Mark A. Peterson, *Civil Juries in the 1980s: Trends in Jury Trials and Verdicts in California and Cook County, Illinois*, The RAND Corporation, R-3466-ICJ, 1987.

⁴Mark A. Peterson, *Compensation of Injuries: Civil Jury Verdicts in Cook County*, The RAND Corporation, R-3011-ICJ, 1984.

⁵Audrey Chin and Mark A. Peterson, *Deep Pockets, Empty Pockets: Who Wins in Cook County Jury Trials?* The RAND Corporation, R-3249-ICJ, 1985.

⁶Stephen Daniels and Joanne Martin, "Jury Verdicts and the 'Crisis' in Civil Justice," *Justice System Journal*, Vol. 11, No. 3, Winter 1986. Daniels and Martin make a practice of reporting medians and interquartile ranges only.

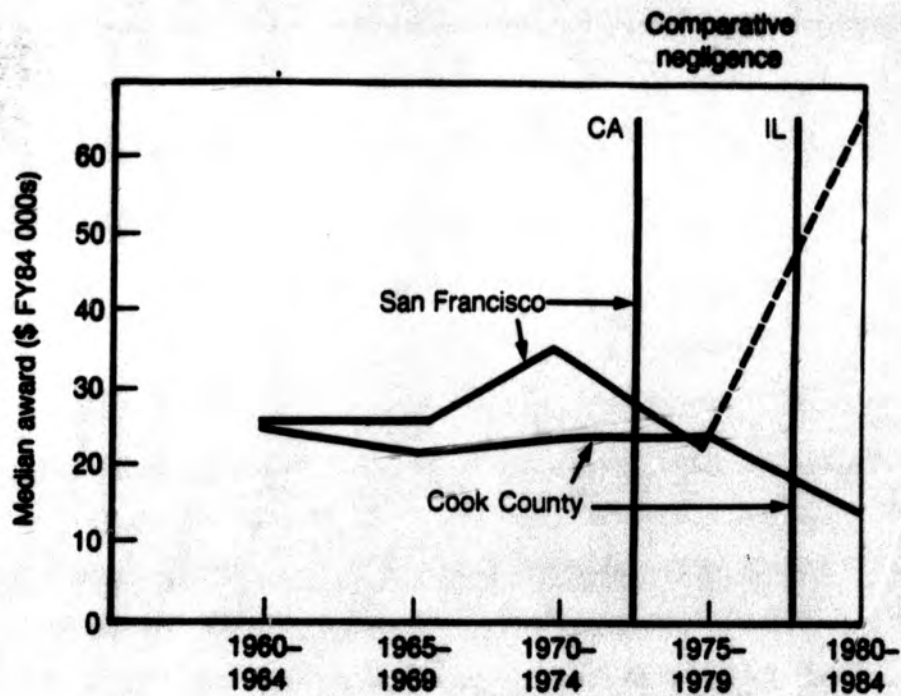


Fig. 3.1—Median tort awards are quite stable over time

more variation; nevertheless, in the period 1975-1979, the median award was slightly lower than it was in 1960.

In the 1980s, the median tort award (in constant dollars) changed in both jurisdictions. In Cook County it actually fell, but in San Francisco it rose dramatically. We believe that a change in the law—the substitution of a comparative negligence standard for contributory negligence—may be responsible for the decline in the median award in Cook County. More plaintiffs were winning awards, but the awards tended to be smaller, perhaps because they were reduced to reflect the plaintiffs' negligence. In San Francisco, changes in the composition of the trial caseload probably account for the change. The establishment of mandatory arbitration for smaller-value cases and an increase in the jurisdictional level of the lower

... but some recent changes are evident

court drove smaller-value cases out of the superior courts and caused a higher-value caseload overall.⁷

If our explanation of post-1980 trends in these jurisdictions is correct, then median awards have been strikingly stable over a 25-year period. As with the amount of litigation, however, this aggregate pattern changes when we examine the separate trends for auto vs. product liability cases (Fig. 3.2). The stable trend in medians persists for auto cases. However, the median for product cases has risen very sharply. The trend for medical malpractice suits (not shown in Fig. 3.2) is equally steep.

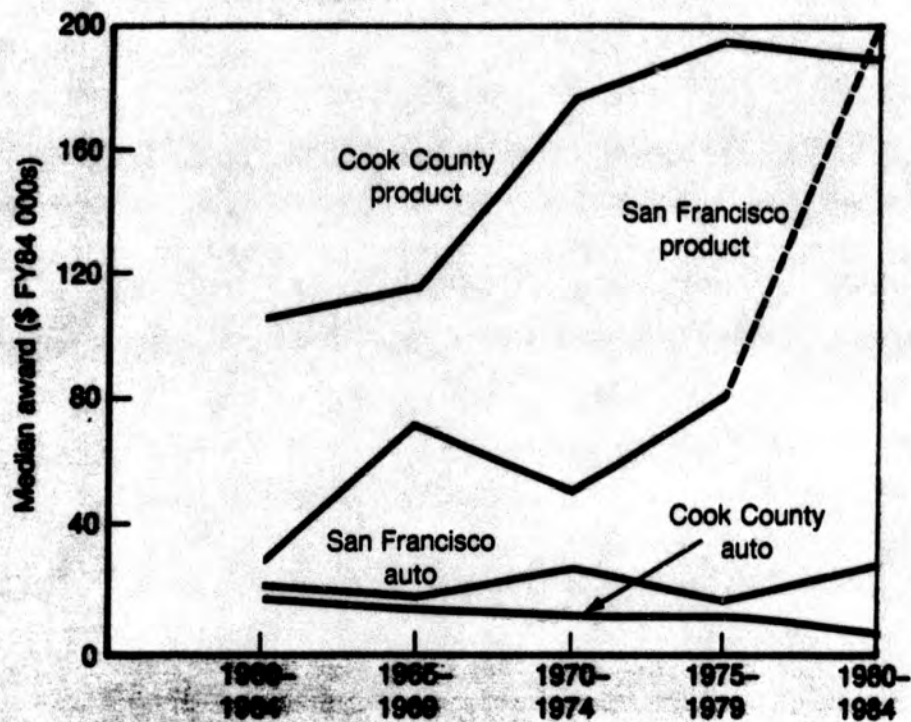


Fig. 3.2—Overall median for tort awards masks sharp differences

⁷These data are discussed in detail in Peterson, *Civil Juries in the 1980s*, 1987.

When we focus on the alternative yardstick—the mean—we find that average tort awards, adjusted for inflation, have increased sharply in both jurisdictions; the mean rose steadily in Cook County from \$59,000 during 1960–1964 to \$187,000 during 1980–1984 and in San Francisco from \$66,000 at the beginning of the period to \$302,000 during 1980–1984.

*Average awards
have risen sharply*

Figures 3.3 and 3.4 illustrate why the overall average award has risen so substantially. The average has increased even for routine, usually low-stakes cases such

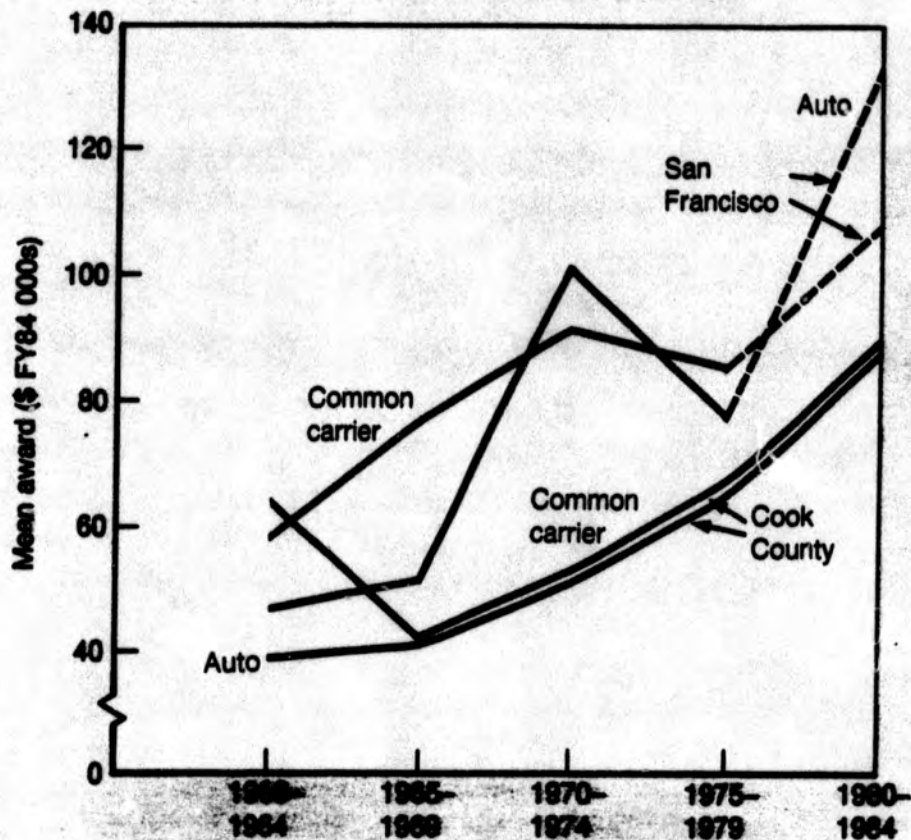


Fig. 3.3—Average auto and common carrier awards have risen for routine cases

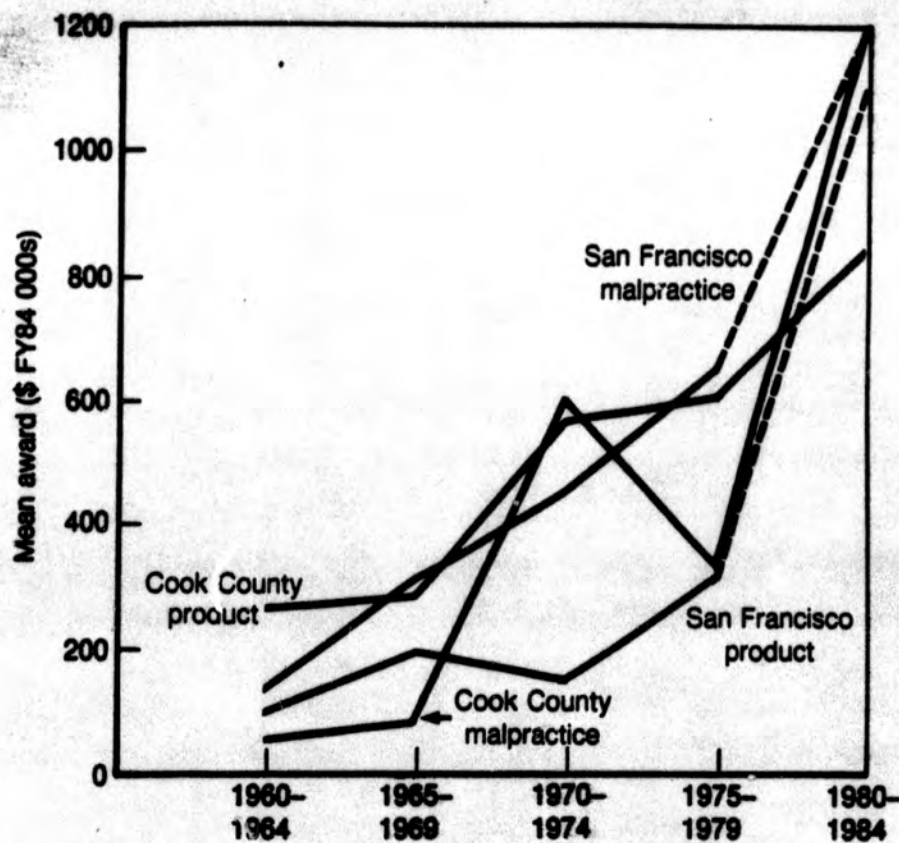


Fig. 3.4—Average award has risen sharply in malpractice and product liability cases

The chances of winning have increased

as auto. And in the case of high-stakes suits such as product liability and malpractice, the growth in the average award has been truly explosive, reflecting increases ranging from 200 to more than 1,000 percent.

The expected award is the product of the average award and the probability of winning. We have just examined two indicators of the trends in jury awards and seen substantial growth in the median award in all but the most routine cases and an increase in average awards across all types of cases. But plaintiffs do not always win. Has the probability of their doing so changed over time?

In the two jurisdictions that we studied, the answer is clearly "yes."⁶ For every type of liability case, Cook County plaintiffs were far more successful in the early 1980s than were plaintiffs twenty years earlier. For example, in the 1960s, plaintiffs won about one-fourth of product liability and malpractice cases. In the late 1970s, they won about one-third of such cases. By the 1980s, they were winning almost one-half of them. Plaintiffs in San Francisco also won more often in the 1980s, but the increase in their success rate is not as dramatic across all case types. In the 1970s, they won about one-third of all malpractice trials. Ten years later, they were winning more than one-half of them. For product liability cases, their success rate actually declined slightly over the period, but in the 1980s they were still winning more than one-half of these cases.

The increased probability of winning, coupled with the increase in average awards, results in higher expected awards. Figure 3.5 illustrates this increase as well as the differences among case types. The expected award for auto cases has risen from about \$25,000 to \$60,000-90,000 at the end of the period, but this move is dwarfed by the rocketing awards in product liability cases, which grew 400-900 percent between 1960 and 1984.

Judging from these data, there is little question that average jury awards are increasing in San Francisco and Cook County and that awards have increased more in high-stakes cases than in routine litigation. But are juries, or the jury system more generally, "out of control?" To answer that question we need more information because several other explanations also fit the data. For example:

Are juries "out of control?"

- *Jury awards might be changing because the cases coming before them are changing.*
- *Jury awards might be changing because juries are doing a better job of calculating the amounts necessary to compensate plaintiffs and deter defendants' negligent behavior.*
- *The jury trial system might be "correcting" any unreasonable or untoward awards through posttrial processes.*

⁶See Peterson, *Civil Juries in the 1980s*, 1987.

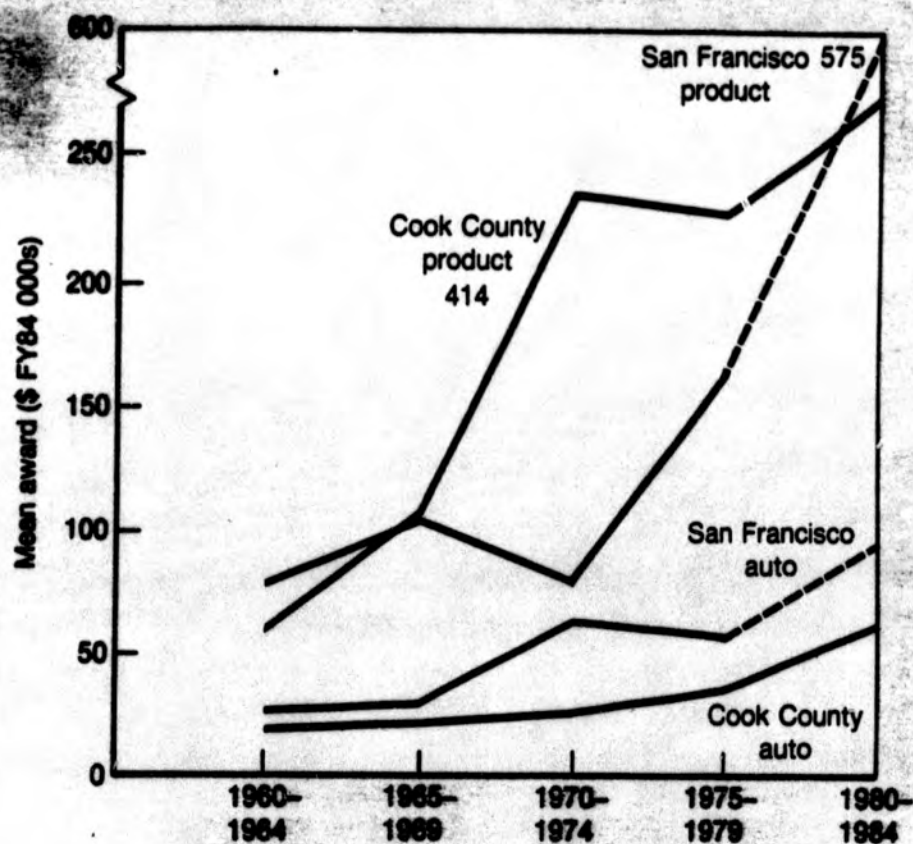


Fig. 3.5—Expected awards have risen

If any or all of these hypotheses hold true, we might conclude that whatever changes we observe in outcomes, juries are not "out of control."

Explaining jury behavior . . .

One way to figure out *why* jury awards are increasing is to perform a multivariate statistical analysis that measures how awards vary in relation to characteristics of cases, plaintiffs, and defendants. The database the ICJ has assembled for San Francisco and Cook County is uniquely suited for such analysis. Here's what we have found so far:

Juries are now seeing cases that involve more serious injuries and larger medical expenses than cases tried at the beginning of the period. To the extent that this is true, juries are not necessarily behaving differently—they are being confronted with different circumstances.⁹

*... trying
different kinds of
cases*

After we take into account the increase in both the seriousness of the injuries and the size of medical expenses, juries are still awarding more money for serious injuries than they did 25 years ago.¹⁰

*... awarding
more dollars for
serious injuries*

Our analyses show that juries are likely to award substantially more money in a product liability, malpractice, or work injury case than in an auto accident case for an injury of the same degree of severity. And the "premium" awarded to these kinds of cases has been increasing over time. Juries also award more money when the defendants are institutions or organizations rather than individuals—the "deep-pocket" effect. Since many, if not all, product liability cases and malpractice cases involve institutional defendants, the "premium" effect and the "deep-pocket" effect are often confounded. Nevertheless, we can detect a separate, statistically independent effect for deep-pocket defendants, even in cases that do not involve products or malpractice.¹¹

*... responding
differently to
cases from
different "worlds"
of litigation*

Do juries respond to cases differently because they are "irrational" or "capricious?" The answer is: We don't know. Juries might have "irrational" sympathies for people who are hurt on the job or "irrational" prejudices against corporate defendants. Or it may be that juries presented with product liability, malpractice, or work injury cases feel that the defendant had a special kind of public duty or care that should have been exercised, and that the "premium" awarded is a kind of deterrent signal.

We need to conduct research on *how* and *why* jurors reach their decisions—based on interviewing real jurors or individuals who hear and decide "mock jury" cases—before we can decide which of these explanations (or some other) is

⁹See Peterson, *Compensation of Injuries*, 1984.

¹⁰See Peterson, *Compensation of Injuries*, 1984.

¹¹See Chin and Peterson, *Deep Pockets, Empty Pockets*, 1985.

*What happens
after trial?*

correct. The ICJ is currently exploring the possibilities for such research.¹²

The civil justice system has a number of mechanisms for reducing jury awards, including trial judge adjustments in awards, retrials, and reversals on appeal. A recent ICJ study compared jury awards and ultimate payments in a sample of recently tried cases to see whether these mechanisms were having their intended effect of "correcting" untoward awards. The study involved 900 cases, tried between 1982 and 1984 in Cook County, in San Francisco, and in a group of smaller California cities, including urban, suburban, and rural communities. The sample included a full range of verdicts, from million-dollar awards to defense verdicts.¹³

About 80 percent of the trial verdicts remain unchanged; however, the verdicts that were reduced involved some of the largest rewards, and the reductions were substantial. As Fig. 3.6 shows, the reduced cases had awards more than three times the size of the sample average, and involved reductions of almost half the original award.

The reductions increased with the size of the award. Table 3.1 shows the average award and the ratio of the amount paid to the award for four different case categories. For cases less than \$100,000, the average reduction was only 7 percent. However, the percentage reduction increases steadily with award size, and, for cases over \$1 million, it amounts to almost 40 percent.

This suggests that awards most likely to be viewed as "excessive" by critics are most likely to be cut substantially. However, trials involving deep-pocket defendants and/or product liability suits had smaller reductions.

¹²Molly Selvin and Larry Picus, *The Debate over Jury Performance: Observations from a Recent Asbestos Case*, The RAND Corporation, R-3479-ICJ, 1987.

¹³Michael G. Shanley and Mark A. Peterson, *Posttrial Adjustments to Jury Awards*, The RAND Corporation, R-3511-ICJ, 1987. See also Peterson, *Civil Juries in the 1980s*, 1987.

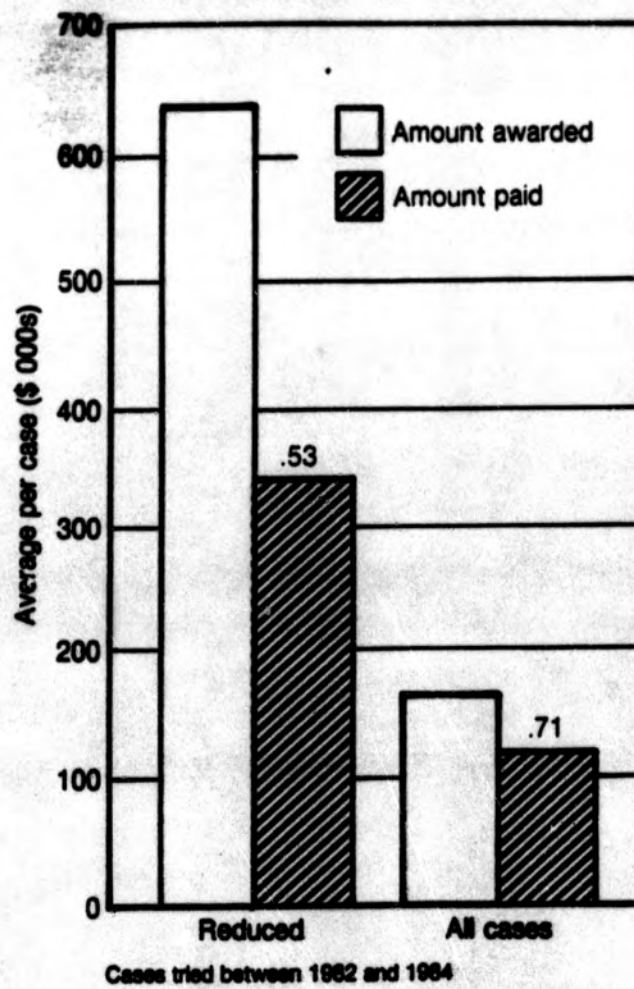


Fig. 3.6—Reduced cases involve large awards and significant reductions

Table 3.1

REDUCTIONS INCREASE WITH AWARD SIZE

Size of Award (\$)	Average Jury Award (\$000s)	Ratio Paid/Award
1-99 thousand	23	.93
100-999 thousand	314	.82
1-10 million	2,673	.68
10+ million	27,220	.57
All trials	161	.71

The bottom line

The answer to our initial question, Are jury awards stable or out of control? turns out to be complicated. It depends both on which world of litigation you look at and whether you are focusing on bottom-line results—jury awards—or the behavior behind them—jury decisionmaking processes.

- *Plaintiffs in auto cases involving modest injuries and expense continue to obtain modest awards and, at least in recent years, these awards generally hold after trial.*
- *Plaintiffs in product liability and malpractice cases are winning more frequently and obtaining higher awards.*
- *And deep-pocket defendants in product liability cases ultimately pay much, if not all of the awards against them, even after posttrial adjustments.*
- *Jury behavior seems more unpredictable, but this may simply be because we do not have a very good sense of why juries make the decisions they do.*

LITIGATION COSTS: HOW MUCH, TO WHOM?

"Litigation," says former Chief Justice Warren Burger, has become "too costly, too destructive and too inefficient."¹ Proponents of tort reform claim that the transactions costs of the system exceed the benefits provided in compensation to plaintiffs.

Perhaps the aspect of tort litigation that draws the most fire is the contingency fee. Critics complain that contingency fees, typically one-third of the award, are too high and encourage lawyers to take frivolous suits to court. Lawyers retort that contingency fees provide access to the courts for plaintiffs who cannot afford to pay hourly fees, and that the contingency arrangement is an appropriate way to cover the risks and expenses of lawyers, who receive nothing for their time when they do not obtain payment for their clients.

Although plaintiff attorneys get the most bad press, defense costs also draw their share of criticism. Defense attorneys charge by the hour, and there are no standards to suggest how many hours are appropriate for a case unless the defendants provide limits.

Unfortunately, there is no ready measure of the inherent reasonableness of the system's transactions costs. Especially when we focus on the tort system's goal of deterrence, we might encounter circumstances in which we find very high transactions costs acceptable. However, when we view the tort system as a compensation system, we would generally argue for costs that are lower, relative to compensation.

In any case, a first order of business is to determine how high the transactions costs really are and who is getting them. As with other basic issues in this area, the data are not readily available. Over the last five years, the ICJ has conducted a number of studies on the costs of litigation

*Transactions
costs—complaints
and rebuttals*

*Where the dollars
go*

¹The Wall Street Journal, May 18, 1986.

and the division of the payments.² Here are some aggregate numbers based on these studies.

- In 1985, the total expenditure nationwide for tort litigation terminated in state and federal courts of general jurisdiction was between \$29 and \$36 billion.³ This accounts for approximately 92 percent of all compensation paid in tort litigation.
- Of that total, \$16 to \$19 billion was spent for the various costs of the tort litigation system, not including the net compensation paid to plaintiffs.
- Plaintiffs were paid \$21 to \$25 billion in total compensation. After deducting their legal fees and expenses, which on average amount to about 30 percent of the total compensation, and the value of their time, they netted \$14 to \$16 billion in compensation.
- Defendants' legal fees and expenses totaled about \$4.7 to \$5.7 billion.

Figures 4.1, 4.2, and 4.3 disaggregate litigation costs for the three categories of cases that we have been examining: routine torts such as auto, higher-stakes cases such as product liability and malpractice, and asbestos cases as an example of mass latent injury torts.⁴

²James S. Kakalik and Abby Robyn, *Costs of the Civil Justice System: Court Expenditures for Processing Tort Cases*, The RAND Corporation, R-2888-ICJ, 1982; James S. Kakalik, Patricia A. Ebener, William L.F. Felstiner, and Michael G. Shanley, *Costs of Asbestos Litigation*, The RAND Corporation, R-3042-ICJ, 1983; J. S. Kakalik and R. L. Ross, *Costs of the Civil Justice System: Court Expenditures for Various Types of Civil Cases*, The RAND Corporation, R-2985-ICJ, 1983; James S. Kakalik, Patricia A. Ebener, William L.F. Felstiner, Gus W. Haggstrom, and Michael G. Shanley, *Variation in Asbestos Litigation Compensation and Expenses*, The RAND Corporation, R-3132-ICJ, 1984; Kakalik and Pace, *Costs and Compensation Paid in Tort Litigation*, 1986.

³We give a range of costs because we made two estimates. The first was top down, starting with the insurance industry's aggregate data on direct losses and expenses paid in 1985, adding self-insurance, and then deleting payments for claims that were not lawsuits. The second estimate was bottom up, starting with data from surveys of individual tort lawsuits, projecting the numbers to 1985, and deriving a national estimate by multiplying by the number of tort lawsuits terminated in 1985.

⁴Asbestos cost estimates are drawn from two reports dealing specifically with those cases: Kakalik et al., *Costs of Asbestos Litigation*, 1983, and Kakalik et al., *Variation in Asbestos Litigation Compensation and Expenses*, 1984.

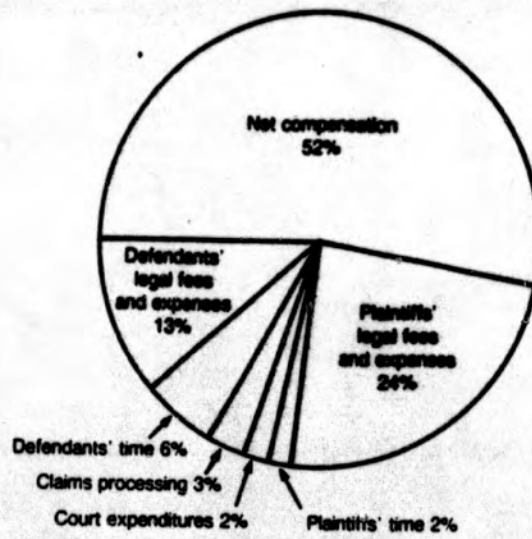


Fig. 4.1—Allocation of total auto tort litigation expenditures, 1985

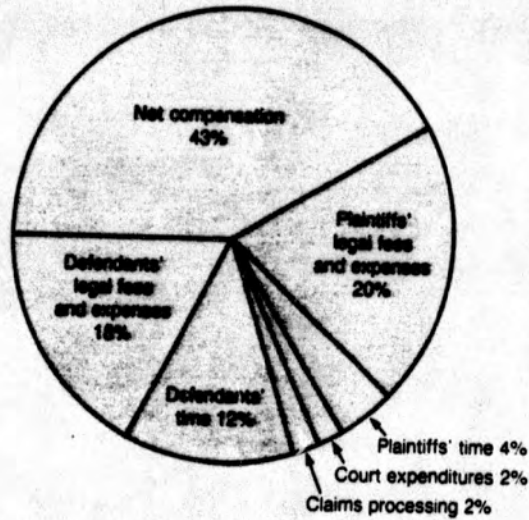


Fig. 4.2—Allocation of total non-auto tort litigation expenditures, 1985

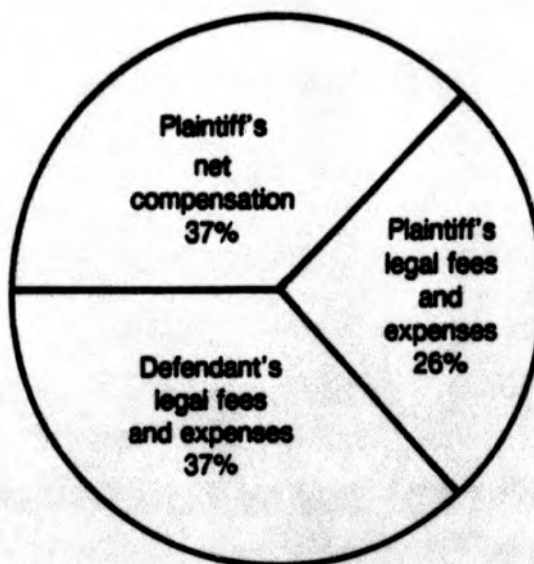


Fig. 4.3—Allocation of per-claim expenditures for asbestos claims closed before 8/82

Effect of case complexity

As we might expect, as the complexity of the case increases, plaintiffs net less and less in compensation. As the summary in Table 4.1 shows, plaintiffs' legal fees and expenses are a relatively stable proportion of expenditures, but defendants' legal fees and expenses increase in more complex cases.

Growth rate for transactions costs

Earlier we noted that the annual growth rate for the amount of tort litigation was approximately 3-4 percent. However, the growth rate in expenditures for the tort system has been higher. Between 1980 and 1985, the average growth rate in insured defendants' average legal fees and expenses paid per claim was about 6 percent for auto (i.e., less than the rate of inflation) and 15 percent for other tort claims.

Table 4.1

ALLOCATION OF LITIGATION EXPENDITURES: SUMMARY
(In percentage of totals)

Type of Case	Defendant Legal Fees	Plaintiff Legal Fees	Net Compensation to Plaintiff
Auto	19	26	52
Non-auto	30	24	43
Asbestos	37	26	37

Our snapshot of litigation in 1985 shows that the costs of litigation consumed about half of the \$29 to \$36 billion dollars that were spent on litigation. When we disaggregate these costs, we see that in more complex cases (non-auto torts) the costs of litigation were higher. In the case of asbestos claims, the only mass latent injury cases for which these data have been assembled, litigation costs constituted almost two-thirds of the total per-claim expenditures.

In sum . . .

THE STORY BEHIND THE STATISTICS

The emerging worlds of tort litigation

We now understand why the statistics bandied about in the insurance crisis debate generate more confusion than enlightenment. The characteristics we want to examine—for example, growth rates or award amounts—trend up in one kind of case, down in another. Aggregate statistics make it impossible to detect sources of change or stability. In many cases, statistic-bandiers on both sides of the crisis are right—they are just describing different parts of the system.

When we disaggregate the numbers, we can detect clear differences:

- Routine personal injury torts such as auto cases are growing slowly in frequency and costs, and their outcomes—inflation adjusted—have not changed much over the last 25 years.
- Higher-stakes torts such as malpractice and product liability are growing faster in frequency and costs, and their outcomes have increased dramatically over the past 25 years in the jurisdictions we have observed intensively, and substantially in the shorter five-year period for which we have national data.
- Mass latent injury torts, once identified, tend to explode in number, carry high transaction costs, and have highly uncertain outcomes.

We believe that these differences point to an important evolutionary process in the tort system that merits close policymaker attention. In Table 5.1, we characterize the three worlds of litigation that constitute important states in this evolution. Below we discuss these characteristics in more detail, drawing on our previous research and recent discussions with participants in the tort litigation process.

Routine personal injury torts

Auto accident cases epitomize this category. There is a huge volume of such cases, about half a million filed annually nationwide. Perhaps because they have been with us so long, there has been little recent change in the substantive law related to them since the adoption of no

Table 5.1

THE EVOLVING WORLDS OF TORT LITIGATION: CASE PROFILES

Auto and Other Ordinary Lawsuits	Product Liability, Malpractice, Business Torts	Mass Latent Injury Cases
• High volume • Stable law • Routinized • Increasing ADR • Modest stakes • Little deterrence potential • Slow growth in frequency, outcomes, costs	• Lower volume • Evolving law • Increasingly specialized • Heavy pretrial procedure • Little ADR • Large \$ potential per case • Deterrence is factor • Faster growth in frequency, outcomes, costs	• Concentrated in time and place • Problematic law • Small, highly specialized bar • Discovery critical • Procedural innovation • Enormous \$ stakes for parties • Deterrence is key issue • Highly uncertain in number, outcome, and costs

fault insurance provisions. Because of their high volume and the stability of law, it has been possible to routinize their processing and resolution. As a result, we have seen an increasing reliance on alternative dispute resolution procedures, particularly court arbitration programs, for these cases.¹

Most of these cases involve relatively modest injuries and small amounts of money, and the parties to the dispute are ordinary citizens rather than institutions. Except in cases of very serious injury, there is little basis for large awards,

¹For further discussion, see Deborah R. Hensler, "What We Know and Don't Know about Court-Administered Arbitration," *Judicature*, Vol. 69, No. 5, February-March 1986.

and the attorneys who handle them are not generally high-stakes litigators. Although the application of tort law to these cases is intended in principle to deter bad drivers, concerns about deterrence do not appear to motivate the attorneys who specialize in this area.

Because of these characteristics, auto lawsuits are not growing significantly. Increasingly, it appears, they are being settled elsewhere, in forums that produce stable, predictable outcomes. The use of alternative procedures and settlement mechanisms produces lower transaction costs than we observe in other tort litigation areas.

In sum, this world of tort litigation is the least problematic by most standards. It also remains the world in which the average citizen is mostly likely to become a participant.

*Higher-stakes
personal injury
torts*

Although these kinds of cases have received the lion's share of the attention in the recent tort debate, they are still relatively low volume by comparison with the auto cases.

But these cases differ from routine torts along many dimensions. The law with regard to product liability in particular has changed dramatically since the early 1960s with the adoption of strict liability—a principle that holds that manufacturers may be held liable for any injury that their products might cause. This expansion of the principle of liability has enabled more plaintiffs to bring suits. It has also provided the opportunity for the development of a highly specialized, well-capitalized corps of litigators on both the plaintiff and defense sides.

The stakes in these cases are usually higher than in auto torts, and because the law is perceived as volatile, the outcomes are often uncertain. To many scholars, attorneys, and litigants, deterrence is a central concern: The system has a clearly stated interest in trying to deter manufacturers from making bad products; to deter doctors from practicing bad medicine; to deter businesses from trying inappropriate practices. Plaintiff attorneys may be spurred by these concerns to invest substantial resources in developing cases. And because defendants—particularly manufacturers—may have an incentive to deter further suits over the same product, defending against these cases, rather

than settling them, is particularly attractive. As a result, pretrial discovery—with its associated costs in dollars and time—is a prominent feature of these cases. Alternative dispute resolution is not.

Because the evolution of the law in this area has expanded the grounds for bringing suits, it is not surprising that more suits are being brought. By their nature, these suits involve larger and more uncertain stakes than routine cases such as auto—the injuries are more serious, the defendants have more money, the plaintiff attorneys have invested more and stand to earn more. As a result, we observe higher and less predictable outcomes and higher transaction costs.

Mass latent injury torts are a special case of product liability torts, with special characteristics that justify treating them separately. Both substantive and procedural law in this area is evolving rapidly, and attorneys on both sides view the litigation process as problematic.² Pretrial maneuvering is extensive in these cases because the latency of the injuries produces knotty legal issues; discovery is usually prolonged and costly because attorneys must collect data over extended periods to substantiate charges that the manufacturer's product caused the injury. Because of the large number of claims, the rapid influx of cases into courts after the harm has been identified, and the characteristic geographical concentration of the cases, courts frequently experience overload problems that may lead to further delay and costs.

*Mass latent
injury torts*

Deterrence is seen as a critical issue in these torts. Indeed, concerns about deterrence have evoked missionary zeal on the part of some plaintiff attorneys. Defendants have been willing to invest huge amounts of resources because the trials may decide the future of their corporations.

Despite the fact that alternative dispute resolution procedures have not been widely adopted for ordinary product liability and malpractice suits, there has been considerable interest in innovative procedures for dealing with mass latent injury torts. We believe this interest stems

²See Hensler et al., *Asbestos in the Courts*, 1985.

from general agreement that the cost of processing these cases under the current system is excessive.

Mass latent injury torts are the most volatile world of tort litigation. Costs, dynamic legal environment, and the uncomfortable fit between these cases and the tort system conspire to make the number, outcome, and future costs of these suits highly uncertain.

*What the tort
evolution implies
for policy*

Unlike some of the statistical arguments used in the tort reform debate, the central policy implication of our discussion is clear: We need to know what part of the elephant we are patting. If we want to diagnose the system's ills and prescribe effective remedies, we must disaggregate the system. Researchers must ask sharper questions, target their inquiries, and look for appropriate data so that they do not make assumptions about one part of the system based on trends observed in another. Opinion leaders must be willing to consider the possibility that complex realities generate seemingly inconsistent data and ask what these data mean rather than rejecting them out of hand. And policymakers may need to consider more seriously specialized solutions tailored to special problems that characterize some torts, but not others. Most of all, we need to bring the perspective provided by the "three worlds" framework to bear on the current tort reform debate in the hopes of generating a little more light and a little less heat.

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R-2918-ICJ Workers' Compensation and Workplace Safety: Some Lessons from Economic Theory.
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R-2732-ICJ Court Efforts to Reduce Pretrial Delay: A National Inventory.
R-2732/1-ICJ Court Efforts to Reduce Pretrial Delay: A National Inventory. Executive Summary.

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RM-5631-DOT Putting the Analysis and Evaluation of Traffic Safety Measures into Perspective.

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ABSTRACTS

REPORTS

R-2023-MF Copyright Liability for Cable Television: Is Compulsory Licensing the Solution? S. M. Besen, W. G. Manning, B. M. Mitchell. February 1977.

Analyzes the historical background and the economic issues leading to the General Revision of the Copyright Act, which provides a compulsory license instead of full copyright liability. This license permits cable systems to carry those signals currently authorized for retransmission by the Federal Communications Commission upon payment of a specified percentage of revenues. The basic thesis of this report is that the adoption of compulsory licensing will aggravate the problems associated with distant signal importation. (1) A compulsory license is less efficient than full liability because the consumers' willingness to pay for programs is perceived only indirectly by program suppliers. (2) The lack of specificity in the guidelines for allocating the compulsory license fees among suppliers can only aggravate their revenue problems. (3) Whereas full liability would have provided a more enduring resolution of the copyright liability for cable, the General Revision provides only a temporary solution. 44 pp. Bibliog.

R-2028-PSEC Medical Malpractice: The Response of Physicians to Premium Increases in California. A. J. Lipson. November 1976.

Malpractice insurance increases have not yet seriously affected California's physician supply or services, but have spurred practice changes affecting availability, cost, and quality of care. Findings indicate the public is paying part of the cost in fee increases. Some physicians are going without insurance; some have made practice changes, such as family physicians reducing or limiting surgery and obstetrics. Rural areas are hardest hit by such changes. Medi-Cal data indicate no measurable decrease in physicians treating Medi-Cal patients or in services or visits. Total physician supply in and migration to California have not been reduced. The author suggests that ways be considered to make the rate structure more flexible and that the state monitor and document the impact of rate increases in terms of (1) practice changes, (2) residency and practice location choices, (3) malpractice insurance rates in other states, and (4) effect on physician provider participation and distribution of Medi-Cal patients among physicians. 172 pp.

R-2220-HCFA The California Health Facilities Commission: A Case Study of Government Regulation. A. J. Lipson. November 1977.

Examines California's attempts to create institutions and policies for containing health facility costs, a goal that has been elusive for both federal and state governments. Cost containment pressures prompted the hospital industry to sponsor legislation, enacted in 1971, creating the California Health Facilities Commission and empowering it to imple-

ment a mandatory accounting, reporting, and public disclosure system for hospitals and, later, for nursing homes. Unsuccessful attempts have been made both to expand the Commission's authority to regulate facility rates and capital expenditures, and to abolish it altogether. The study describes the history of these attempts and of the Commission's implementation of its statutory charge, analyzes the primary influences on the California health facility regulatory process, and draws conclusions about future state legislation and the role of state agencies, physicians, and consumers in cost containment. 250 pp. Ref.

R-2224-NEW The Courts as Educational Policymakers and Their Impact on Federal Programs. B. Levin. August 1977.

Examines recent legal developments in education and their impact on federal policy, as well as discussing ways in which the legislative and executive branches can facilitate rather than impede state compliance with court mandates. Topics covered: school finance reform, public aid to parochial schools, inclusion of the handicapped in public education, equal educational opportunity for pupils with varying needs, race and sex discrimination, protection of individual rights of students and teachers, procedural due process for students and teachers, liability of school officials under *Wood vs. Strickland*, collective bargaining, and limitation of the judicial process. Courts must continue to redress specific inequities, but Congress and the executive branch can also enact programs to aid certain groups, or provide incentives to states to correct inequities. They can also encourage states to act before the courts have acted, or can assist states to achieve compliance with court orders. 135 pp. Ref.

R-2340-NIH/RC Doctors, Damages and Deterrence: An Economic View of Medical Malpractice. W. B. Schwartz, N. K. Komesar. June 1978.

Damages awarded in a malpractice suit must be viewed not only as compensating the victim but also as deterring health-care providers from negligent behavior. Economic analysis of the malpractice system indicates that awards can send a signal to providers that informs them how much to invest in avoiding mishaps. The malpractice system is beset by difficulties, but not the ones commonly incriminated. The signal to the physician, as determined by the number of claims and the size of awards ("expected damages"), appears to be insufficient for ideal deterrence. Moreover, the deterrence signal is attenuated because malpractice premiums are set for groups of physicians, not for individuals according to their record of previous malpractice incidents. Replacing the present tort system with a no-fault insurance scheme would not necessarily be cheaper, and might well abolish the deterrent signal or distort clinical decisionmaking. 23 pp. Ref.

R-2409-RC The Index of Harm: A Measure for Comparing Occupational Risk across Industries. K. A. Solomon, S. C. Abraham. June 1979.

Explores the implications and potential uses of an index-of-harm methodology for comparing occupational risk across industries. A preliminary comparison showed that at current average levels of radiation exposure and based on the apparently low International Commission of Radiological Protection (ICRP) estimates of the dose-harm relationship, the radiological "industry" appears to be less risky than mining; agriculture, forestry, and fisheries; construction; transportation; and manufacturing. The calculations were based on the risk effects of six occupational harms—three nonradiological (death, accidental injury, and disease or illness) and three radiological (radiation-induced somatic effects, genetic effects, and somatic effects on the fetus or embryo of pregnant women)—and on five different assumptions about the relative importance or degree of aversion of the six harms. The index of harm is a potentially useful tool in quantifying the benefits of reducing occupational risk. 36 pp. Ref.

R-2458-HCFA Contingent Fees for Personal Injury Litigation. P. M. Danzon. June 1980.

Plaintiff attorneys on personal injury cases are typically paid a contingent fee. Contingent fees are widely believed to induce excessive litigation and are increasingly regulated. A theoretical analysis of contingent and hourly wage contracts shows that, with competition for cases, attorneys paid a contingent fee will devote the amount of effort that would be chosen by fully informed, risk-neutral plaintiffs paying by the hour: the net value of the claim to the plaintiff will be maximized. However, risk-averse plaintiffs will underinvest in the number of suits and amount spent per case, if attorneys must be paid by the hour. Estimates of the effects of limits on contingent fees are presented. If the benchmark of the optimum expenditure on litigation is that which would be chosen by fully informed, risk-neutral plaintiffs, the unconstrained contingent fee is likely to induce the closest approximation to this ideal. 45 pp. Ref.

R-2622-HCFA The Disposition of Medical Malpractice Claims. P. M. Danzon. June 1980.

A theoretical and empirical analysis of the disposition of malpractice claims compares the actual outcomes with the legal standard of payment equal to damages, if, and only if, negligence occurred. An economic model of the settlement process assumes that the litigants attempt to maximize wealth, subject to the legal standards of liability and damage, and the costs of litigating. The model predicts that awards in settlements out of court will reflect the expected verdict, the probability of the plaintiff's winning, and the costs of going to court. The probability of the plaintiff's winning in settlement will also reflect the probability of winning in court, the size of the expected verdict, and the costs of going to court. Evidence from three malpractice claims surveys is consistent with the legal standard but departs in ways predicted by the model. Characteristics of the injury, the plaintiff, and the defense influence the outcome. 72 pp. Bibliog.

R-2623-HCFA Why Are Malpractice Premiums So High—Or So Low? P. M. Danzon. June 1980.

An empirical analysis of malpractice premiums paid by physicians in 1976 shows that the huge range (\$75 to over \$50,000) reflects the multiplicative structure of rates. Rates are the product of state, specialty, and coverage differentials, which together account for roughly 60 percent of the total variation in premium. This implies that the rating structure recommended by the Insurance Services Office is widely followed. In this sample, state differentials account for a smaller fraction of the total variance than specialty differentials. About half the total state effect can be attributed to differences in the frequency and severity of claims, presence of a discovery rule (an indicator of risk), and operation of medical society programs. Further research is necessary to determine how far this rigid structure of rates interferes with the efficient functioning of the tort system. (See also R-2458, R-2622, R-2661.) 45 pp. Bibliog.

R-2716-ICJ The Law and Economics of Workers' Compensation: Policy Issues and Research Needs. L. Darling-Hammond, T. J. Kniesner. 1980.

This document presents a review of the major issues of current concern to insurers, employers, workers, and government agencies regarding workers' compensation law. The compensation system has changed rapidly and dramatically over the past decade, raising new questions and problems with each reform. The authors discuss the issues that have been identified by experts in the field and suggest areas for research that will help to clarify the effects of different options for reforming or redesigning the system in response to these concerns. A brief history of workers' compensation in the United States and description of the current status of the law and the system itself is presented. Then the report analyzes in more detail some of the economic issues presented. The final section presents some suggestions for future research. The suggestions are directed toward achieving a greater understanding of how the workers' compensation system produces its outcomes and how proposed reforms will affect these outcomes. 86 pp. Bibliog.

R-2716/1-ICJ The Law and Economics of Workers' Compensation. Policy Issues and Research Needs: Executive Summary. L. Darling-Hammond, T. J. Kniesner. 1980.

This is an executive summary of R-2716-ICJ. 16 pp.

R-2717-ICJ Models of Legal Decisionmaking. Research Design and Methods. D. A. Waterman, M. A. Peterson. 1981.

Describes how the application of rule-based computer models could provide valuable information to the settlement process in civil litigation. Models would be developed by asking lawyers and insurance company claims adjusters to describe how they try to settle specific cases. Reasons for litigators' actions on a broadly representative range of hypothetical cases could be translated into a series of "if-then" rules. Each rule would describe part of the litigator's decision as an interim conclusion reached for a given set of premises for subsequent rules. The rules would be incor-

porated in a computer program that attempts to reproduce litigators' reasoning processes. A limited prototype developed to explore the feasibility of such models is described. It indicates that at least some aspects of the settlement process can be described by such models, although further research is needed to develop more comprehensive models and to address technical issues. 55 pp. Ref.

R-2732-ICJ Court Efforts to Reduce Pretrial Delay: A National Inventory. P. A. Ebener, J. Wilson-Adler, M. Selvin, M. S. Yesley. 1981.

This report is an inventory of state and local trial court procedures to reduce pretrial delay of civil cases. It lists and describes techniques employed by the courts to combat pretrial delay in all 50 state court systems, as reported by court administrators at both the state and metropolitan levels. It includes observations by court officials on how much the measures adopted have really changed the prior situation, and what problems, if any, have arisen. The report describes how the procedures operate and also raises implementation issues for consideration by courts planning to adopt such techniques. 117 pp. Bibliog.

R-2732/1-ICJ Court Efforts to Reduce Pretrial Delay: A National Inventory. Executive Summary. P. A. Ebener, J. Wilson-Adler, M. Selvin, M. S. Yesley. 1981.

This is an executive summary of R-2732. 27 pp.

R-2733-ICJ Judicial Arbitration in California: The First Year. D. Hensler, A. J. Lipson, E. S. Rolph. 1981.

A study of the critical implementation phase of the California judicial arbitration program. The report begins by identifying the primary objectives of the program's supporters. The authors then describe the historical background of the adoption of mandatory arbitration in California, and the evolution of the program's design. The results of the exploratory analysis of the program's effects are then presented. Arbitration's potential for reducing court workload is examined. The costs of operating the program during the first year are analyzed and an approach to estimating the program's potential effect on court costs is presented. A discussion of the effects of arbitration on litigants, focusing on time to disposition, costs of litigation, and equity is given. The final section summarizes the findings and discusses how certain groups are likely to respond to the program in the future. The section concludes with a discussion of the research that will be needed for a comprehensive analysis of the costs and benefits of the judicial arbitration program. 120 pp.

R-2733/1-ICJ Judicial Arbitration in California: The First Year. Executive Summary. D. Hensler, A. J. Lipson, E. S. Rolph. 1981.

This is an executive summary of R-2733-ICJ.

R-2792-ICJ The Resolution of Medical Malpractice Claims: Modeling the Bargaining Process. P. M. Danzon, L. A. Lillard. 1982.

This report makes two contributions to the area of legal studies. First, it develops a methodology that permits estimation of a model of the process of dispute resolution, including outcomes in court and in out-of-court settlements. This methodology, including issues of statistical estimation and identification, is carefully detailed. Second, the report applies the model to data on medical malpractice claims. The model of dispute resolution is presented in Sec. II. Section III discusses statistical issues of estimation, parameter identification, and prediction. Section IV describes the malpractice data for 1974 and 1976 and briefly presents parameter estimates. The parameter estimates and their interpretation are discussed in detail in Sec. V. Section VI presents further implications of the estimates for tort reform, accounting for the distribution of dollar payments and the probability of winning in court. Concluding remarks appear in Sec. VII. 59 pp. Ref.

R-2793-ICJ The Resolution of Medical Malpractice Claims: Research Results and Policy Implications. P. M. Danzon, L. A. Lillard. 1982.

In the early 1970s, both the frequency of medical malpractice claims and the dollar awards to successful plaintiffs rose at unprecedented rates. In 1974-1975, the malpractice insurance crisis erupted. By the end of 1976, most state legislatures had enacted laws to deal with the perceived causes of the crisis. With only scant empirical evidence on the actual operation of the tort system and likely effects of any changes, however, legislators have had to rely on anecdote, subjective reasoning, and conventional wisdom. The research summarized in this report aims at rectifying that deficiency. It analyzes two computerized files on over 6,000 closed claims, using a computerized model of the bargaining behavior through which claims are resolved. It produced useful evidence on the actual operation of the malpractice system, including changes made during the crisis, and analytic tools that can be applied to understand dispute resolution in other contexts. 33 pp. Ref.

R-2870-ICJ/HCF The Frequency and Severity of Medical Malpractice Claims. P. M. Danzon. 1982.

The frequency and severity of medical malpractice claims increased dramatically in the late 1960s and early 1970s. In response to the malpractice crisis, many states enacted changes in tort law applicable to medical practitioners. This report presents some empirical evidence on the contribution of various factors to the diversity in the frequency and severity of claims across states and over time. Section II provides an overview of countrywide trends in claims for different lines of liability insurance and differences among states in malpractice litigation. Section III presents a theoretical model of the frequency and severity of medical malpractice claims. Section IV describes the data and methodological issues. Section V reports the empirical analysis of frequency of claims per capita, average severity per claim, and average claim cost per capita. Section VI analyzes the determinants of the post-1975 tort reform. Section VII summarizes the findings and policy implications. 52 pp. Bibliog.

R-2881-ICJ The Civil Jury: Trends in Trials and Verdicts, Cook County, Illinois, 1960-1979. M. A. Peterson, G. L. Priest. 1982.

This report presents the results of an extensive examination of the decisions made by litigants, courts, and juries in a large number of civil jury trials. It is based on detailed data on 9,000 civil cases that were tried before juries in Cook County, Illinois (the nation's second largest county), between 1960 and 1979. The information in the report details more than 9,000 civil suits tried to verdict. These include all civil suits for money damages other than those arising from automobile and common carrier accidents and a one-quarter random sample of automobile and common carrier cases. The report describes trends in the number of civil jury trials, in the proportion of cases in which defendants are found liable and in the size of awards to plaintiffs. These trends are analyzed separately for ten different types of civil cases. The report does not try to explain the trends nor to draw out their implications. This report is the first in a series that will use the data to delve into the underlying causes of the events. 73 pp. Bibliog.

R-2881/1-ICJ The Civil Jury: Trends in Trials and Verdicts, Cook County, Illinois, 1960-1979. Executive Summary. M. A. Peterson, G. L. Priest. 1982.

This is an executive summary of R-2881-ICJ. 14 pp.

R-2882-ICJ Cost-Benefit Analysis and Voluntary Safety Standards for Consumer Products. L. L. Johnson. 1982.

The purpose of this study is to explore the opportunities for expanding the use of cost-benefit analysis, to discuss the problems standing in the way, and to suggest experiments with it that can serve as benchmarks for further application. The study also recommends the collection of better product-hazard information; such information would be a valuable input if cost-benefit analysis is adopted, and if it is not, it could still serve as a partial substitute for such analysis in the formulation of future standards. Section II treats several topics as a foundation for the subsequent analysis. Section III discusses the relationships among costs, benefits, and the optimal level of product safety, and the difficulties of pursuing cost-benefit analysis. Section IV explores the very limited past use of cost-benefit analysis in developing voluntary standards. Section V addresses a particularly important problem in improving the quality of cost-benefit analysis—that of obtaining better hazard information. The concluding Section VI touches briefly on tradeoffs between devoting resources to cost-benefit analysis and devoting them to other approaches to help ensure the appropriate level of product safety. 71 pp. Bibliog.

R-2888-ICJ Costs of the Civil Justice System: Court Expenditures for Processing Tort Cases. J. S. Kakalik, A. Robyn. 1982.

This report deals with government expenditures for processing tort cases, drawing on available data from federal and state agencies. Section II presents data on average judge-time expended per tort cases filed, followed by data on the

total government expenditure per judge in Sec. III. The average government expenditure per tort case filed is calculated in Sec. IV by multiplying the judge-time per case times the total government expenditure for all types of personnel combined and other resources used per judge-minute. Finally, Sec. V estimates the nationwide total annual government expenditure for processing tort cases. 91 pp. Ref.

R-2904-ICJ Educational Policymaking through the Civil Justice System. P. T. Hill, D. L. Madey. 1982.

This report analyzes the use of the civil justice system to decide the allocation of public services, in particular the 1975 Education for All Handicapped Children Act. The authors found there were three effects of using civil justice procedures to allocate educational services: (1) effects on the courts are slight; (2) effects on school systems are real but limited; and (3) effects on handicapped children are positive—but some, especially those whose parents are willing to threaten litigation, benefit far more than others. The most important finding of the study is that the introduction of civil justice procedures has had an enormous effect on local school policy, despite the low volume of litigation. The authors drew two conclusions regarding the use of the civil justice system to decide the allocation of public services: (1) thanks to the introduction of civil justice methods, PL-94-142 is applied with far more rigorous attention to the rights and duties of school personnel and beneficiaries than are other federal education programs; and (2) despite the optimistic conclusions, the findings do not necessarily warrant the extension of civil justice procedures to other areas of local educational policy. 34 pp. Ref.

R-2918-ICJ Workers' Compensation and Workplace Safety: Some Lessons from Economic Theory. R. B. Victor, L. R. Cohen, C. E. Phelps. 1982.

This report uses the tools of economic theory to analyze how firms can be expected to respond to financial incentives. The report focuses on a statement that is usually assumed to be true and is repeated as conventional wisdom by many policymakers and the researchers who advise them: Increasing Workers' Compensation (WC) benefits induces a firm to increase safety. This report presents the results of a theoretical analysis of how WC financial incentives influence the safety decisions of rational profit-maximizing firms. The research suggests that although the common wisdom has a strong theoretical basis in many cases, it does not have it in all cases, and the empirical evidence fails to provide much support for it. The analysis explores the conditions under which increasing WC benefits may enhance, diminish, or leave unaffected employers' investments in safety. 64 pp. Bibliog.

R-2922-ICJ The Pace of Litigation: Conference Proceedings. J. W. Adler, W. L. F. Felstiner, D. Hensler, M. A. Peterson. 1982.

Reports the proceedings of a conference dealing with past and planned empirical investigation of the delay of litigation. The three sessions of the conference dealt with the pace of court activity; the pace of lawyer activity; and arbitration and the pace of litigation. Part I provides a synopsis

of conference proceedings and Part II a transcript of the talks and discussions which followed. 145 pp.

R-2979-ICJ Workers' Compensation and Workplace Safety: The Nature of Employer Financial Incentives. R. B. Victor. 1982.

This report provides, for the first time in convenient form, data and methods needed to examine the nature, size, and adequacy of Workers' Compensation (WC) financial incentives for prevention, and hence to evaluate the conventional wisdom about WC and safety. The report examines the WC financial incentives facing employers, under different insurance arrangements. The findings of the study demonstrate the sensitivity of incentives to the characteristics of each state's WC system, firm size, interest rates, and insurance arrangements. Other conclusions reached include: The conventional wisdom is that self-insured incentives exceed experience-rated insured incentives, but the reverse is often true; retrospective-rated incentives will typically exceed both self-insured and experience-rated incentives; and generalizations about the size of WC financial incentives should be made with great care. 68 pp. Bibliog.

R-2985-ICJ Costs of the Civil Justice System: Court Expenditures for Various Types of Civil Cases. J. S. Kalik, R. L. Ross. 1983.

This report analyzes the cost of processing domestic relations, mental health, probate and guardianship, property rights and condemnation, torts contracts and other civil complaints, and other civil petitions cases. Section II details the procedures for estimating and analyzing government expenditures for processing civil cases. Section III describes how the study derived the government expenditure per judge for each of the courts in the study—a necessary element in the cost-estimation procedure. Section IV reports the estimates of government expenditure and judge-time per civil case filed for various types of civil cases in state and federal courts. Finally, Sec. V provides estimates of the total nationwide government expenditure for processing civil cases. 125 pp.

R-3002-ICJ Managerial Judges. J. Resnik. 1982.

This report is a study of the recent development of case management by federal judges during both the pretrial and posttrial phases of litigation. After discussing the underlying assumptions about the traditional judicial role, the author gives a full description of how judges manage both phases of lawsuits. Next the author analyzes what is currently known about the results of pretrial management and what effect such management might have upon the traditional judicial role. Finally, the author sets forth the alternative routes which judicial reformers might follow. An appendix on the iconography of justice is included. 74 pp.

R-3006-ICJ Comparative Justice: Civil Jury Verdicts in San Francisco and Cook Counties, 1959-1980. M. Shanley, M. A. Peterson. 1983.

In this report, the authors describe San Francisco jury trials and jury verdicts during the 20-year period from 1960 through 1979, and compare trends and patterns with those

found in Cook County, Illinois. The data describe approximately 5,300 civil cases that were tried before juries in San Francisco County. These are then compared with an earlier study of Cook County civil jury trials. The study suggests that there is reasonable similarity in jury decisions over time and in different places. Although these results provide reassurance about juries, the frequency of these low-stakes cases raises questions about the economics of the civil justice system. However, most of the jury trials studied are probably economically justified for the parties. Although the analyses in this report cannot explain why, there was one important change in jury verdicts in both jurisdictions—the size of the largest awards. The size of the largest awards grew sharply in both jurisdictions. In both studies the authors found a general stability and consistency in jury decisions over time and across jurisdictions. 91 pp. Bibliog.

R-3011-ICJ Compensation of Injuries: Civil Jury Verdicts in Cook County. M. A. Peterson. 1984.

This report describes types of injuries and losses claimed by plaintiffs, changes in claims during the 1960s and 1970s, and relationships between juries' decisions and (1) plaintiff's physical injury, (2) the economic loss suffered by plaintiff, (3) the type of lawsuit brought, and (4) the year in which the case was tried. The findings show that neither the types of injuries claimed by plaintiffs nor the level of compensation for most injuries changed appreciably between 1960 and 1980. However, compensation for the small number of cases that involved unusually severe injuries grew in recent years. The findings also show that compensation for similar injuries differed by as much as four-fold among different types of law suits, and that such differences increased in the 1970s. The report offers explanations for why compensation might differ among types of suits and describes further research that will examine some of these possible explanations. 95 pp. Ref.

R-3013-ICJ New Tools for Reducing Civil Litigation Expenses. M. A. Peterson. 1983.

The resolution of civil liability claims is an expensive and uncertain process. Frequent parties to civil litigation face growing costs, but they might reduce the expense and uncertainty of litigation through new methods for using computers. Organizations that have experience in handling a large volume of civil litigation can use these methods to manage groups of cases and to organize single, complex cases. Four new methods for using computers—open claim analysis, closed claim analysis, decision analysis, and rule-based modeling—may reduce the direct costs of litigation and the indirect costs of uncertainty in evaluating civil claims. All four methods have been used to analyze and support decisions about litigation, but most have not been widely applied. This report describes the development, uses, and limitations of each method, so that insurance company claim departments, law firms, corporations, and other frequent parties to litigation can consider whether those methods might be of help. 40 pp. Ref.

R-3022-ICJ Designing Safer Products: Corporate Responses to Product Liability Law and Regulation. G. C. Eads, P. H. Reuter. 1983.

Analyzes ways in which firms have responded to recent changes in pressures to design safer products, using interviews with product safety officials in major manufacturers and extensive analysis of legal and scholarly literatures. Shifts to strict liability and more stringent regulation during the last 15 years have increased pressure to invest in safety assurance procedures, as evidenced by creation of new corporate product safety units. Regulation has been of more questionable effectiveness than has strict liability in inducing better design practices. Argues that federal product liability legislation will have marginal effect, despite the current variation in state law on the matter. Discusses the factors that influence the effectiveness of corporate product safety units and suggests that combining product safety with quality assurance may be the optimal strategy for a firm. 160 pp. Ref.

R-3032-ICJ The Selection of Disputes for Litigation. G. L. Priest, B. H. Klein. 1984.

This study addresses the relationship between litigated disputes and disputes settled before or during litigation by presenting a model of the litigation process in which the determinants of settlement and litigation are solely economic, including the expected costs to parties of favorable or adverse decisions, the information that parties possess about the likelihood of success at trial, and the direct costs of litigation and settlement. The most important assumption of the model is that potential litigants form rational estimates of the likely decision, whether it is based on applicable legal precedent or judicial or jury bias. From this proposition, the model shows that the disputes selected for litigation (as opposed to settlement) constitute neither a random nor a representative sample of the set of all disputes. 55 pp.

R-3042-ICJ Costs of Asbestos Litigation. J. S. Kalalik, P. A. Ebener, W. L. F. Felstiner, M. Shanley. 1983.

This report examines the money spent to resolve asbestos-related injury lawsuits: who pays it, who receives it, and for what purposes. After sketching the tangled context in which spending occurs for asbestos product liability litigation in the introduction, subsequent sections analyze the actual costs incurred by plaintiffs, defendants, and insurers in the course of processing asbestos suits to resolution. The analysis focuses on net compensation (money received by injured persons after deducting litigation expenses), and on defense and plaintiff expenses (money paid to operate the legal and insurance systems through which society decides who should receive how much compensation and arranges for actual payment). Finally, the authors total the expenditures and examine the ratio between litigation expense payments and net compensation (the "overhead" costs incurred in generating one dollar in payment to an injured person). 40 pp.

R-3050-ICJ Automobile Accident Compensation: Vol. 1, Who Pays How Much How Soon? J. E. Rolph, J. K. Hammitt, R. L. Houchens, S. S. Polin. 1985.

This study uses statistical methods to compare state automobile accident compensation systems by examining how likely an accident victim is to be paid, and the amount and timing of his payment. The study analyzes how various aspects of the tort system and of the no-fault systems, where present, affect these outcomes. Among its findings were (1) victims in no-fault states more often collect from first-party automobile insurance than victims in other states; (2) victims in no-fault states are more likely to receive some payment; and (3) there is more consistency in payments in no-fault states in that the total amount of compensation a victim receives for a given economic loss varies less. (See also R-3051-ICJ, R-3052-ICJ, R-3053-ICJ.) 33 pp. Bibliog.

R-3051-ICJ Automobile Accident Compensation: Vol. 2, Payments by Auto Insurers. J. K. Hammitt. 1985.

Automobile accident victims may receive financial compensation from several sources, depending on the rules of their state. This report analyzes closed insurance claims data to describe the effects of interstate differences in liability rules and insurance regulations on the compensation payments made under automobile no-fault and liability insurance policies. No-fault payments are usually equal to the claimant's economic loss, and no-fault claimants generally receive at least partial payment more quickly than liability-insurance claimants. Liability-insurance payments also cover most claimants' economic losses, and frequently include payment for general damages (e.g. pain and suffering) which, while highly variable, often exceed economic losses. Alternative liability rules have only modest effects on the number of victims who obtain payment under a liability policy. (See also R-3050-ICJ, R-3052-ICJ, R-3053-ICJ.) 121 pp. Ref.

R-3052-ICJ Automobile Accident Compensation: Vol. 3, Payments from All Sources. R. L. Houchens. 1985.

This report compares outcomes of compensation systems for victims of automobile accidents from three groups of states: (1) no-fault states, with no-fault legislation that restricts tort liability; (2) add-on states, in which no-fault legislation does not restrict tort liability; and (3) tort states, without no-fault legislation. Among the study's conclusions were the following: (1) the probability of an auto accident victim's receiving any payment for his losses is higher in add-on and no-fault states than in tort states; (2) the average payment to the victim is usually nearer his economic loss in no-fault states than it is in tort states and add-on states for small losses; (3) the employer is the single most frequent source for payment of wage loss, and pays exactly the amount of wage loss about eighty percent of the time; and (4) victims in no-fault states appear to have a better chance of getting some compensation for wage loss than do victims in tort states. (See also R-3050-ICJ, R-3051-ICJ, R-3053-ICJ.) 63 pp. Ref.

R-3053-ICJ Automobile Accident Compensation: Vol. 4, State Rules. J. K. Hammitt, R. L. Houchens, S. S. Polin, J. E. Rolph. 1985.

The rules governing the sources of financial compensation that are available to accident victims vary widely between states. This report catalogues and explains the current lia-

bility rules and insurance regulations in all fifty states. As an aid to understanding the patterns of rules within states, it classifies the states into ten groups, using a refinement of the traditional tort/no-fault/add-on system. (See also R-3050-ICJ, R-3051-ICJ, R-3052-ICJ.) 61 pp. Ref.

R-3071-ICJ Simple Justice: How Litigants Fare in the Pittsburgh Court Arbitration Program. J. W. Adler, D. Hensler, C. E. Nelson, G. J. Rest. 1983.

This report examines the arbitration program of the Pittsburgh (Allegheny County) Court of Common Pleas which at the time of the study applied to cases of \$10,000 or less. Section II describes how arbitration works in Pittsburgh and analyzes the characteristics of the arbitration caseload. Section III analyzes the objective outcomes of arbitration: the distribution of wins and losses, the amounts of money awarded to different types of cases and litigants, the pattern of appeals, the distribution of appeal outcomes, and the costs associated with taking a case to arbitration hearing and through the appeal process. In Sec. IV the authors discuss litigants' views of arbitration. Also described are litigants' assessments of the "fairness" of the arbitration process and of the appropriateness of case outcomes, their level of satisfaction, and the role or perceptions of procedural fairness in determining litigant satisfaction. Section V assesses the uses and limitations of court-administered arbitration programs, drawing on the results of the previous sections. 152 pp. Ref.

R-3084-ICJ Regulating the Content and Volume of Litigation: An Economic Analysis. G. L. Priest. 1983.

In recent years, courts and legislatures have used rules that shift liability for court costs and attorneys' fees to plaintiffs or defendants to achieve two different objectives: to encourage litigation by particular plaintiffs (in civil rights, pollution, and consumer litigation), and to regulate the volume of litigation (most commonly to encourage settlement). These goals are contradictory and in conflict in a recent Supreme Court case, *Delta Air Lines, Inc. vs. August*. This essay discusses the distributive effects of these rules and their effects on the rate of litigation. The analysis expands other recent treatments by considering offer-of-judgment rules and the parties' strategic actions. 21 pp.

R-3132-ICJ Variation in Asbestos Litigation Compensation and Expenses. J. S. Kakalik, P. A. Ebener, W. L. F. Felstiner, G. W. Haggstrom, M. Shanley. 1984.

This report analyzes characteristics of individual claims that explain variation in compensation and expenses. The first section describes the research approach and sketches the tangled context in which spending occurs for asbestos product liability litigation. Section II presents data on the characteristics of closed claims and on the actual compensation paid and expenses incurred by plaintiffs, defendants, and insurers in 1980-1982. Section III focuses on explaining the variation in total compensation. Sections IV, V, and VI, respectively, analyze claim characteristics that help explain why certain claims receive no compensation, identify which claims proceed to trial instead of being closed before trial, and identify which claims result in punitive awards. Sections VII and VIII analyze the variations in defense and

plaintiff litigation expenses. Finally, Section IX totals the expenditures and examines the ratio between litigation expense payments and net compensation. 91 pp.

R-3166-ICJ Managing the Unmanageable: A History of Civil Delay in the Los Angeles Superior Court. M. Selvin, P. A. Ebener. 1984.

This study of civil delay and congestion in the Los Angeles Superior Court since the early twentieth century is an effort to provide an empirical basis for determining the extent to which these problems have worsened over the years. It considers (1) whether civil delay has increased steadily; (2) whether sources of delay are the same now as in the past; (3) effectiveness of innovations the court has introduced in the past to improve the situation; (4) larger institutional or political forces that may have influenced the effectiveness of any procedural innovation; and (5) how delay in Los Angeles courts compares with that of other metropolitan trial courts. The authors do not find a conclusive explanation for the recent increases in civil delay in Los Angeles, but believe that changes in the characteristics of the civil caseload may have contributed to increased delay, and find that this conclusion applies to other metropolitan areas as well. They conclude that the court should focus its delay-reduction efforts on adding to its existing resources and more effectively allocating the resources it does have to its most time-consuming cases. 172 pp. Bibliog.

R-3167-ICJ Introducing Court-Annexed Arbitration: A Policymaker's Guide. E. S. Rolph. 1984.

Court-annexed arbitration is a court-run dispute resolution process to which cases that meet some specified criteria are involuntarily assigned. Arbitrators hear the case and render awards that are not binding, however, as a litigant may always request a trial. In the last decade, court-annexed arbitration has gained popularity as a means of handling small civil cases. Using in-depth analysis of arbitration in several courts, and survey results from a remaining group of courts, this report summarizes the variety of program design alternatives, assesses the probable implications of choosing one set of alternatives over another, and discusses methods that courts adopting arbitration might use to evaluate its effectiveness. 113 pp. Bibliog.

R-3249-ICJ Deep Pockets, Empty Pockets: Who Wins in Cook County Jury Trials. A. W. Chin, M. A. Peterson. 1985.

This report examines how different types of parties fared in over 9,000 civil jury trials in Cook County, Illinois, between 1959 and 1979. It builds on two previous studies of civil jury trials, *The Civil Jury: Trends in Trials and Verdicts*, Cook County, Illinois 1960-1979, R-2881-ICJ, and *Compensation of Injuries: Civil Jury Verdicts in Cook County*, R-3011-ICJ. These studies found substantial disparities in outcomes for different types of lawsuits, even after the types and seriousness of plaintiffs' injuries and the amount of claimed economic losses were accounted for. The analyses in the present report describe variations in outcomes for different types of litigants, and find that corporate defendants paid damage awards that were one-third larger than those that individual defendants had to pay. Govern-

ment defendants paid even more than corporations in most of their lawsuits. However, corporations fared worse than all other defendants in lawsuits where plaintiffs claimed very severe injuries. Among individual litigants, blacks lost more often than whites, both as plaintiffs and defendants, and black plaintiffs received smaller awards. Black defendants, however, paid less than their white counterparts. 108 pp. Ref.

R-3311-ICJ Punitive Damages: Empirical Findings. M. A. Peterson, S. Sarma, M. Shanley. 1987.

Based on cases that reached jury verdict in Cook County, Illinois, and San Francisco, California, from 1960 to 1984, this report presents analytically derived answers to questions surrounding the award of punitive damages: (1) how frequently punitive damages are awarded in civil suits, (2) what types of cases and defendants are most subject to such awards, and (3) what proportion of the monies awarded in punitive damages is actually paid out. The findings confirm trends for which there had only been anecdotal evidence: The incidence of punitive damage awards (measured by proportion of cases in which such awards are made) and the amount of money (measured in constant 1984 dollars) awarded for punitive purposes have increased substantially over the years. Corporate defendants are in fact more likely than individuals or public agencies to be the target of such awards. Many damage awards are significantly reduced and only about half of the dollars awarded are ultimately paid subsequent to award at the trial court level. 68 pp. Ref.

R-3324-ICJ Asbestos in the Courts: The Challenge of Mass Toxic Torts. D. Hensler, W. L. F. Felstiner, M. Selvin, P. A. Ebener. 1985.

This report presents the results of a study of how the civil justice system has dealt with the challenges presented by asbestos litigation. Its sections describe (1) the characteristics of asbestos litigation, both at the individual case level and at the aggregate level; (2) the way in which the court system has approached the three critical tasks of litigation—substantive decisionmaking, preparing cases for trial, and disposing of cases; and (3) the implications of the findings. Based on their observations of the asbestos litigation process, the authors review the strengths and weaknesses of the tort system as a mechanism for resolving mass toxic torts, consider changes that might strengthen the system, and suggest a mechanism for formulating new policies. 128 pp. Bibliog.

R-3391-ICJ Costs and Compensation Paid in Tort Litigation. J. S. Kakalik, N. M. Pace. 1986.

This study was undertaken to answer the following questions: What was the total expenditure nationwide for tort litigation terminated in state and federal courts of general jurisdiction in 1985? How much of the total was spent for the various costs of the tort litigation system: plaintiffs' and defendants' legal fees and other litigation expenses, the value of litigants' time spent on the lawsuits, the value of time spent by insurance personnel, and the costs of operating the courts? How much of the total was net compensation to plaintiffs? How do litigation costs and compensation

paid differ for torts involving motor vehicles and for all other torts? How fast is the tort system growing? The study indicates that plaintiffs with tort lawsuits in state and federal courts of general jurisdiction received approximately half of the \$27 billion to \$34 billion spent in 1985. The costs of litigation consumed the other half. 157 pp.

R-3410-ICJ New Evidence on the Frequency and Severity of Medical Malpractice Claims. P. M. Danzon. 1986.

This report updates an earlier analysis (R-2870-ICJ/HCF) of the effects of demographic, medical, and legal factors on the frequency and severity of medical malpractice claims. Using claims data from 1975–1984, the author analyzes the effects of tort reform on malpractice claims after taking into account the effects of other variables that have previously been shown to correlate with claims frequency and severity. The evidence from the study suggests that the last round of tort reforms affected the frequency and severity of malpractice claims over the decade 1975–1984 in a way broadly consistent with theory and previous evidence. Claim frequency per physician has grown at roughly 10 percent a year and severity has increased at twice the consumer price inflation rate. Nevertheless, tort changes have had some effect. States that enacted shorter statutes of limitations and set outer limits on discovery rules have had less growth in claim frequency than would otherwise have been predicted. States with statutes permitting or mandating the offset of collateral benefits had 14 percent fewer claims, and 11 to 18 percent smaller payouts, than would otherwise have been predicted. States with caps on awards have reduced severity by 23 percent. Arbitration statutes appear to have increased claim frequency but reduced average severity. 35 pp.

R-3421-ICJ Costs and Compensation Paid in Aviation Accident Litigation. J. S. Kakalik, E. M. King, M. Traynor, P. A. Ebener, L. O. Picus. 1988.

Based on a review of more than 2,000 U.S. airline aviation accident death cases from 1970 to 1984, this report describes the characteristics of the decedents and compares the compensation paid to their survivors with the levels of economic loss they suffered. The study found that the plaintiffs received 71 percent in net compensation, and 29 percent went for transactions costs. The findings indicate that airline accident litigation has higher transactions costs, but a lower ratio of transactions costs to total expenditures than tort litigation in general. (See also R-3549, R-3551, R-3585, R-3684, N-2773.) 150 pp.

R-3466-ICJ Civil Juries in the 1980s: Trends in Jury Trials and Verdicts in California and Cook County, Illinois. M. A. Peterson. 1987.

This report extends earlier efforts to document and analyze the outcomes produced by the civil justice system based on studies of civil jury trials in Cook County, Illinois, and San Francisco County, California. First, the report updates the earlier work by incorporating data for the years 1980 through 1984. Second, it expands the scope of the study to include the entire state of California. Past patterns in jury awards continued in Cook County during the 1980s: The

size of most jury awards did not increase (the median actually fell), but large jury awards, and therefore the average, increased sharply. The pattern that prevailed in both jurisdictions during the 1960s and 1970s, however, changed in San Francisco: There was a substantial increase in the size of awards during the 1980s across the entire range of cases tried in state and federal courts. Unlike past findings, the increase was not restricted to a few very large awards. The average award increased as in previous years, but median awards also increased to triple the median of the late 1970s. 62 pp. Ref.

R-3473-ICJ The Debate over Jury Performance: Observations from a Recent Asbestos Case. M. Selvin, L. O. Picus. 1987.

Recent verdicts in lawsuits arising from widespread exposure to toxic substances and large compensatory and punitive awards in traditional liability cases have revived debates and complaints about the competency of lay jurors. This case study describes an interview conducted with the jury that decided an asbestos products liability case in Texas in 1984. After deliberating one day, the jury found each defendant liable and awarded the four plaintiffs \$7.9 million. The legal issues raised in the Newman trial, the claims made, and the witnesses and evidence on each side are typical of those raised in other asbestos jury trials. According to experimental research, jurors do not have full or accurate memories for trial testimony. The Newman panel behavior is consonant with experimentally based observations, but that does not explain why the panel reached its specific decision. In some ways, most notably how it computed its large compensatory damage awards, its behavior was inconsistent with previous findings about jury behavior. 110 pp. Bibliog.

R-3511-ICJ Posttrial Adjustments to Jury Awards. M. Shanley, M. A. Peterson. 1987.

Motivated by the recent national debate on the growth of jury awards, this report examines how jury awards change after trial. It considers not just tort actions, but all civil suits for money damages. For all types of cases, it (1) compares jury awards to final payments, (2) examines how results vary by award size, and (3) studies whether results differ by case characteristics. The authors find that, in the locales studied, defendants paid out an average proportion of 0.71 of the amount the jury originally awarded. Further, reductions were generally greater among cases with the largest awards. However, some sizable awards were not lowered, and results differed significantly depending on the characteristics of the case. The findings suggest that the system works already in much the same way that the current proposals for legal change are intended to work, namely by affecting "excessive" awards. 76 pp. Ref.

R-3549-ICJ Computing Economic Loss in Cases of Wrongful Death. E. M. King, J. P. Smith. 1988.

This report outlines a new method for computing economic loss in cases of wrongful death. The authors use the human capital (or lost economic output) approach because it dominates actual litigation. In this conceptual model, economic loss is the value of the decedent's lost future productivity,

market and nonmarket. The methodology includes seven elements: (1) base-year incomes, (2) salary growth, (3) worklife discounts, (4) nonmarket loss, (5) personal consumption offset, (6) taxes, and (7) discount rates. The methodology can be applied in a wide range of tort cases besides wrongful death. (See also R-3421, R-3551, R-3585, R-3684, N-2773.) 124 pp. Bibliog.

R-3551-ICJ Economic Loss and Compensation in Aviation Accidents. E. M. King, J. P. Smith. 1988.

This report considers wrongful-death litigation resulting from aviation accidents. It compares benchmark measures of economic loss and loss to survivors with the compensation that beneficiaries actually received. The findings indicate that for the years under study, the tort system did not fully compensate survivors for the losses they suffered from air accidents; similarly harmed individuals were not treated the same; compensation paid through the tort system does not significantly add to safety incentives; and compensation and recovery rates have risen dramatically over the years under study. (See also R-3421, R-3549, R-3585, R-3684, N-2773.) 123 pp.

R-3554-ICJ Assessing the Effects of Tort Reforms. S. J. Carroll, N. M. Pace. 1987.

This report offers a framework for assessing the effects of tort reforms. It attempts to provide a coherent structure for systematically thinking about how research can contribute to the policy debate over tort reform. It identifies four basic policy issues critical to assessing the effects of tort reforms on the tort system: (1) how soon we can expect to see effects of reforms; (2) whether reforms have affected the outcomes of disputes; (3) who won, who lost, and how much; and (4) whether reforms have affected economic behavior. The author points out that the kinds of data needed to assess the effects of reform are generally not available, and suggests that three types of new data collection systems need to be considered: (1) systematic efforts to obtain data from insurers and self-insured defendants on the aggregate outcomes of liability claims; (2) special surveys of claimants, the bar, and insurers to obtain the detailed individual claim information needed to identify the winners and losers in the reformed system; and (3) systems for collecting information both on the other factors that affect the behavior of participants in the tort system, and on economic outcomes and injuries. 72 pp.

R-3583-ICJ Trends in Tort Litigation: The Story Behind the Statistics. D. Hensler, M. E. Vaiana, J. S. Kalklik, M. A. Peterson. 1987.

This *Special Report* from The RAND Corporation's Institute for Civil Justice (ICJ) draws on seven years of ICJ research to consider three issues at the heart of the recent debate on trends in tort litigation: (1) how much litigation there is; (2) whether jury awards are stable or out of control; and (3) how much litigation costs and who gets the money. The research suggests that discrepancies among the statistics on tort litigation can be explained by the fact that there is no longer, if there ever was, a single tort system. Instead, there are at least three types of tort litigation, each with its own class of litigants, attorneys, and legal dynam-

ics. The three types of torts are routine personal injury torts (e.g., auto suits), high-stakes personal injury torts (e.g., product liability, malpractice, and business suits), and mass latent injury cases (e.g., asbestos litigation). Each of these areas is characterized by a different litigation growth rate, jury verdict trend, and cost profile, and treating them together—as is done whenever overall statistics for tort litigation are reported—produces a distorted picture. 34 pp.

R-3585-ICJ Dispute Resolution Following Airplane Crashes. E. M. King, J. P. Smith. 1988.

This report summarizes results of legal actions that claimants pursued to recover their losses in major aviation accidents. In particular, it attempts to determine why some cases settle early and others do not. The authors describe the elements that distinguish air-crash litigation. They discuss the simple correlation between economic loss suffered and litigation process pursued, the theory behind the empirical models, and the operational definition of the empirical variables. The analysis indicates that, where large losses to survivors were involved, claimants were more likely to sue, to go to trial, and to have longer time to closure, indicating that the stakes are important in determining which cases make greater demands on the tort system. (See also R-3421, R-3549, R-3551, R-3684, N-2773.) 56 pp. Bibliog.

R-3602-ICJ The Legal and Economic Consequences of Wrongful Termination. J. N. Dertouzos, E. Holland, P. A. Ebener. 1988.

Although there has been an uproar over wrongful termination litigation, the aggregate legal costs are not large, even compared with the number of involuntarily terminated employees who are not otherwise protected by collective bargaining agreements, civil service regulations, or explicit employment contracts. The direct costs may understate the effects of wrongful termination suits. The fear of such suits could prevent managers from being flexible in adjusting to business cycles, new investment opportunities, or evolving technologies. In response to wrongful termination suits, administrative costs may rise substantially. Costly procedural changes could be balanced by benefits stemming from more efficient utilization of human resources, making everyone better off. 73 pp. Ref.

R-3668-ICJ Product Liability and the Business Sector: Litigation Trends in Federal Courts. T. Dungworth. 1988.

This report analyzes the product liability litigation that occurred in federal district courts from mid-1973 through mid-1986. It attempts to clarify the debate over whether product liability litigation has involved thousands of companies and products and therefore damaged U.S. business, or whether such litigation has consisted primarily of "epidemics" of suits limited to a few products and affecting only a few businesses. It considers how many companies have been involved in federal product liability litigation and to which industry groups they belong; and it examines the patterns exhibited by federal product liability filings since the mid-1970s. The most important general conclusion is that there is significant diversity among defendants, among industries, and even within industries. In particular, a dis-

inction must be drawn between the tiny number of defendants named in thousands of suits, and the thousands of defendants named only once or twice. Policy and law developed to deal with the situation must recognize that an approach that seems suitable for one facet of litigation may be inappropriate for another. 79 pp.

R-3676-ICJ Alternative Adjudication: An Evaluation of the New Jersey Automobile Arbitration Program. R. J. MacCoun, E. A. Lind, D. Hensler, D. L. Bryant, P. A. Ebener. 1988.

In 1985, New Jersey implemented a statewide program of mandatory court-administered arbitration of automobile injury lawsuits. In order to evaluate the program, the Institute for Civil Justice (ICJ) examined court records for a random sample of more than 1,000 auto negligence cases filed in either 1983 (pre-arbitration) or 1985 (post-arbitration), and surveyed approximately 300 litigants and 400 attorneys. No significant changes in trial rates or litigation costs were found. However, the program has had some unanticipated effects. Cases that are assigned to the program are significantly less likely to settle privately without a third-party hearing and, on average, take significantly longer to terminate than in the pre-arbitration period. Both litigants and attorneys evaluate arbitration hearings quite favorably. It appears that the program is providing disputants greater access to third-party hearings, but not greater efficiency. 134 pp. Ref.

R-3684-ICJ Executive Summaries of the Aviation Accident Study. J. S. Kakalik, E. M. King, J. P. Smith, M. Traynor, P. A. Ebener, L. O. Picus. 1988.

In 1985, RAND's Institute for Civil Justice undertook a detailed study of aviation accident litigation in the United States. This report summarizes the resulting four detailed study reports. It describes the characteristics of the decedents and the litigation, and provides data on compensation paid, litigation costs, and economic losses suffered. The report compares the economic losses and transactions costs with the amount of compensation paid. The findings indicate that airlines and other defendants compensated victims' survivors for less than half of their average economic loss. The findings also indicate that aviation accident litigation has higher transactions costs than tort litigation in general, but a lower ratio of transactions costs to total expenditures. (See also R-3421, R-3549, R-3551, R-3585, N-2773.) 64 pp.

R-3708-ICJ The Perception of Justice: Tort Litigants' Views of Trial, Court-Annexed Arbitration, and Judicial Settlement Conferences. E. A. Lind, R. J. MacCoun, P. A. Ebener, W. L. F. Felstiner, D. Hensler, J. Resnik, T. R. Tyler. 1989.

This report investigates the attitudes and perceptions of individual plaintiffs and defendants in personal-injury tort cases in three state courts. Specifically, it investigates how tort litigants' impressions of fairness and satisfaction with their experiences in the civil justice system are affected by hearing procedures, case events, and the litigation process. The authors found that the three third-party procedures studied—trial, court-annexed arbitration, and judicial

settlement—differed considerably in the procedural fairness and satisfaction ratings they engendered: arbitration hearings and trials were viewed more favorably than were settlement conferences. The findings suggest that improvements in perceived justice and satisfaction are more likely to come from changes in the tone of the judicial process than from innovations designed to cut costs or reduce delay. Further, innovations intended to reduce costs and delay should not do so at the expense of those qualities of the judicial process that are more important to litigants. 93 pp. Ref.

R-3838-ICJ Understanding Superfund: A Progress Report. J. P. Acton. 1989.

The Superfund program, established by Congress in 1980 and reauthorized in 1986, is intended to handle emergencies arising from the release of hazardous wastes, to provide long-term cleanup for a limited number of sites, and to encourage more responsible disposal of hazardous wastes in the future. This report provides an overview of the Superfund program, its legal basis, and its sources of funds; presents a concise description of incentives and the major administrative steps taken in their application; provides an overview of the major indicators of program effect based on public data available from the Environmental Protection Agency and other selected sources; presents a short interpretation of some of the most interesting or puzzling findings; and outlines statistics and attempts to capture costs and activities for each of the major groups participating in the Superfund process. 65 pp. Ref.

NOTES

N-1725-HHS Some Statistical Evidence on Merit Rating in Medical Malpractice Insurance. J. E. Rolph. June 1981.

Merit rating is not widely used in setting medical malpractice insurance premiums. A statistical analysis of two different datasets shows that actual malpractice claims experience is inconsistent with the notion that claims occur randomly among physicians within each specialty class. Consequently, a statistical model allowing physician specific claims propensities is fit to a recent dataset. Calculations using this model indicate that the additional effect of four years of a physician's claims experience on his or her expected claims rate is comparable to the effect of knowing the physician's medical specialty. Consequently, merit rating deserves more serious attention in medical malpractice insurance. 23 pp. Ref.

N-1735-NSF The Distribution of Power in the U.S. Supreme Court. A. Q. Frank, L. S. Shapley. July 1981.

The distribution of power among the nine justices of the U.S. Supreme Court is calculated using techniques of factor analysis in conjunction with a generalized Shapley-Shubik power index that takes into account the ideological or philosophical profiles of the voters. A three-dimensional profile

space is constructed, based on data from the 1977-78 term. It is found that, because of his central position in this space, Justice Powell has the highest probability—about 35 percent—of being pivotal in a typical decision. 27 pp. Ref.

N-1985-ICJ Court-Administered Arbitration: An Alternative for Consumer Dispute Resolution. D. Hensler, J. W. Adler, G. J. Rest. February 1983.

This Note presents the preliminary results of a year-long study of the Pittsburgh (Allegheny County Court of Common Pleas) arbitration program. It seeks to understand how litigants fare in such a program, which seeks to deliver "rough justice" in a highly efficient fashion. This Note summarizes the findings to date, highlighting issues that may be of particular concern to those interested in consumer dispute resolution. The findings are based on analyses of court record data for a sample of cases filed in arbitration in 1980 and 1981, and on interviews with litigants whose cases were heard in 1982. 25 pp. Ref.

N-1984-ICJ Jury Awards and Prejudgment Interest in Tort Cases. S. J. Carroll. May 1983.

This Note reports the preliminary results of research which empirically examines issues central to the prejudgment interest policy debate. The work thus far establishes that juries are implicitly awarding prejudgment interest. The analysis is based on data on all awards returned in civil jury trials in the federal, state, and municipal courts in Cook County, Illinois, from 1960 to 1979 relating to injuries arising from automobile accidents (1,349 cases). Controlling for the severity of injury, it was found that, on average, juries increased awards over and above inflation as measured by the Consumer Price Index at a rate of 3.7 percent per year for the time between injury and trial. Overall, juries implicitly provide prejudgment interest at a rate equal to the underlying inflation rate plus 3.7 percent per year. The Note addresses the implication of these effects for the policy debate about prejudgment interest. 47 pp.

N-2086-ICJ California Enacts Prejudgment Interest: A Case Study of Legislative Action. A. J. Lipson. January 1984.

This Note presents a case study of one of the most controversial actions of the 1981-1982 California legislative sessions: passage of mandatory prejudgment interest on personal injury awards (SB 203). This law entitles successful plaintiffs to interest, which accrues prior to judgment from the date of the first offer to compromise which is exceeded by judgment, to the date of the satisfaction of the judgment. The study sheds some light on the politics of tort reform in California. Section II reviews the major contested issues and how they were received in the legislature. Section III analyzes the political dynamics that help to explain passage of this bill, considers the role of analysis in the debate, and finally draws some conclusions and generalizations from the exercise. 31 pp.

N-2186-ICJ Court-Ordered Arbitration: The California Experience. E. S. Rolph, D. Hensler. July 1984.

This Note, a shortened version of a study published as R-2733-ICJ, examines the experimental court-ordered arbitration program established in California in 1979, in an effort to determine whether court-ordered arbitration reduces court congestion and backlogs; whether it cuts costs, by how much, and to whom; and whether participants, both litigants and attorneys, like the program. The authors found California's year-old program to be a modest success: it provides some objective benefits, particularly to courts, and it seems to hurt no one. 18 pp. Ref.

N-2257-ICJ Court-Annexed Arbitration: The National Picture. P. A. Ebener, D. M. Betancourt. February 1985.

This Note reports the findings of a national survey to determine the current status of court-annexed arbitration among state and federal trial courts, and is an update of a similar survey conducted by The Institute for Civil Justice in 1980, and published as R-2732-ICJ. Since then, the number of jurisdictions around the country that authorize court-annexed arbitration has doubled. Currently sixteen states have authorized arbitration programs and all but two of those have active programs under way in one or more major courts. On the federal side, eight additional districts are implementing court-annexed arbitration programs, bringing the total to ten. There is considerable variation among the programs: the upper limit on the value of cases eligible for the program varies from \$3,000 in Alaska to \$150,000 in a number of the federal district courts. Other features, such as the disincentive to appeal arbitrator awards, the number of arbitrators and their rate of compensation also vary among jurisdictions. Eight more states are considering court-annexed arbitration programs, and 26 states reported that current demand on judicial resources did not warrant such a program. Appendixes provide copies of authorizing legislation and examples of state and local court rules. 350 pp.

N-2342-ICJ Punitive Damages: Preliminary Empirical Findings. M. A. Peterson. August 1985.

This Note presents preliminary information on punitive damages awarded between 1959 and 1984 by juries in Cook County, Illinois, and San Francisco County, California. Findings confirm widespread perceptions that punitive awards have become both more frequent and larger, although only 45 percent of large punitive awards were actually paid by defendants. Punitive awards occur most frequently in trials involving intentional tort claims (assault, discrimination, and defamation), but trends have been stable for those cases. Punitive awards are less frequent for business torts or breach-of-contract claims, but the number and size of such awards have grown steadily, increasing greatly in the 1980s. Punitive awards were rare for personal injury cases based on negligence or strict liability but increased greatly in the 1980s in Cook County. Most punitive awards were against individual defendants, but businesses were assessed far larger awards. 49 pp. Ref.

N-2418-ICJ Limiting Liability for Automobile Accidents: Are No-Fault Tort Thresholds Effective? J. K. Hammit, J. E. Rolph. October 1985.

"No-fault" automobile insurance plans are designed to supplant the tort system by requiring motorists to purchase no-fault insurance and allowing victims to file liability insurance claims and tort suits only if their injuries exceed a legislated "tort threshold." While thresholds vary among states, many are satisfied if the victim incurs medical expenses as low as a few hundred dollars. Using insurance claims data, the authors estimate the effectiveness of several states' thresholds. They find that tort thresholds are surprisingly effective: modest tort thresholds reduce the number of successful tort claimants by half, and the strictest thresholds may exclude nine-tenths of potential claimants. Moreover, they find little evidence of claimants "padding" their claims to exceed the dollar thresholds. This Note is a reprint of an article that appeared in *Law & Policy* in October 1985. 15 pp. Ref.

N-2444-ICJ What We Know and Don't Know About Court-Administered Arbitration. D. Hensler. March 1986.

This Note, a reprint of an article that originally appeared in the February-March 1986 issue of *Judicature*, summarizes the results of research conducted by the Institute for Civil Justice in the area of court-administered arbitration. It describes what has been learned to date, and identifies some issues that remain to be examined: (1) the kinds of cases that are not good candidates for arbitration; (2) the factors that affect decisions to appeal; (3) the effect of arbitration on settlement; and (4) the effect of arbitration on the practice of law. 8 pp.

N-2671-ICJ Getting Inside the Black Box: Toward a Better Understanding of Civil Jury Behavior. R. J. MacCoun. December 1987.

This paper advocates the use of systematic empirical research on civil jury behavior as an important tool in the policymaking process. The author discusses the methods that have been used for studying jury behavior, summarizes major findings of previous research (primarily on criminal juries), and considers what various research strategies can contribute to our understanding of jury behavior. In particular, he emphasizes the importance of mock jury experiments for explaining patterns identified in archival analyses and for testing the effects of proposed policy changes. In addition, he outlines four topics that should be given high priority on the research agenda: (1) identify the processes that have brought about the apparent patterns of inequity identified in archival analyses of jury verdicts; (2) examine the relationship between damages and liability; (3) study the effect of special or itemized verdict forms on the deliberation process, and how accurately they represent the jurors' actual judgments; and (4) assist the courts in improving the structure of the trial and the decision task. 49 pp. Ref.

N-2773-ICJ Aviation Accident Litigation Survey: Data Collection Forms. J. S. Kakalik, E. M. King, M. Traynor, P. A. Ebener, L. O. Picus. 1988.

In 1985, RAND's Institute for Civil Justice undertook a detailed study of aviation accident litigation in the United States. The study covered the general character of aviation accident litigation; reviewed the underlying principles and procedures used to compute the economic loss associated

with individual decedents; described the characteristics of the decedents and compared the compensation paid to their survivors with the levels of economic loss they suffered; and analyzed the legal and economic determinants of the litigation decisions that plaintiffs and defendants faced. This Note contains the forms used to compile the data used in the various analyses. (See also R-3421, R-3549, R-3551, R-3585, R-3684.) 85 pp.

N-2805-ICJ Resolution of Mass Torts: Toward a Framework for Evaluation of Aggregative Procedures. M. A. Peterson, M. Selvin. 1988.

The civil justice system is increasingly being asked to resolve disputes between large aggregations of plaintiffs and defendants. This mass litigation is placing considerable strain on a system whose formal and informal procedures and practices are based on expectations about traditional disputants that no longer necessarily hold. Some formal mechanisms, such as class actions and multidistricting, have been devised to deal with certain classes of mass litigation, but there are questions about when and how they should be applied. This Note presents the Institute for Civil Justice's (ICJ) agenda for a program of research on mass tort litigation, and the results of ICJ work to date. The analysis explores the effects of aggregation on the characteristics, course, and outcome of mass litigation. 70 pp. Ref.

N-2807-ICJ The Economic Consequences of Expanded Corporate Liability: An Exploratory Study. P. H. Reuter. November 1988.

The legal liabilities facing U.S. corporations have expanded substantially over the last decade. Traditional liabilities, notably those associated with defective products, have become more stringent, while new liabilities, particularly those associated with hazardous waste disposal and the discharge of employees, have emerged. The corporate sector has expressed considerable concern about the impact of these new liabilities on the economic performance of the nation, arguing that they have significantly reduced the productivity and international competitiveness of U.S. firms. This Note presents a framework for analyzing how expanded liability might affect such outcomes as productivity and international competitiveness and offers some preliminary evidence on the impact of expanded liabilities on the behavior of corporations. The Note is based in part on a review of existing studies, and it also incorporates the results of interviews with a number of corporate officials involved in liability-related matters. 54 pp. Ref.

N-2903-ICJ Judicial Arbitration in California: An Update. D. L. Bryant. June 1989.

In 1979, California instituted one of the most ambitious court-based alternative dispute-resolution programs in the country. In an effort to reduce congestion on the civil trial calendars, the legislature required litigants in the state's largest courts to submit their cases to nonbinding arbitration. Over the years, the jurisdiction of the program has been expanded, so that all cases involving money damages of \$50,000 or less that are filed in the state's 16 largest court jurisdictions must attempt arbitration before they will be allowed to proceed to trial. This Note reports the

findings of a 1987 survey of court officials undertaken to determine the status of California's judicial arbitration program. It also describes how local courts have implemented the program, analyzes selected program outcomes, and examines program trends. 48 pp.

RAND MEMORANDA

RM-5631-DOT Putting the Analysis and Evaluation of Traffic Safety Measures into Perspective. M. Wohl. April 1968.

An appraisal of the benefits and costs of traffic safety measures, both in aggregative and differential terms. Operationally, the traffic safety problem is to determine the aggregate levels of benefit and cost associated with the adoption of safety measures and to determine who will benefit from these measures and how much, and who will pay for them and how much. An examination of three safety measures—seat belts, side-marker lights, and controls on drinking drivers—shows that (1) safety per se should not be viewed in isolation; (2) society should not regard safety as a necessary good regardless of all else; (3) governmental intervention or control is not always necessary and, in some cases, may tend to undermine the public welfare; (4) the mere lack of safety progress on the part of the automotive industry does not indicate a lack of proper motives; and (5) equity issues surround the traffic safety problem. (See also RM-5632, RM-5633, RM-5634, RM-5635, RM-5636, RM-5637.) 51 pp.

RM-5634-DOT Vehicle Safety: Why the Market Did Not Encourage It and How It Might Be Made To Do So. A. Carlin. April 1968.

An analysis of the reasons why the market mechanism has not proved effective in promoting vehicle safety and of possible ways that market forces might be used to create a greater demand for safety in the future. Because consumers have shown little interest in vehicle safety features and because manufacturers have found that safety doesn't sell, the market has not operated to raise safety standards. This situation might be changed (1) by increasing the public's ability to distinguish the relative safety of different models of cars by either a hierarchy of easily understood Federal vehicle safety standards or direct comparisons or ranking of relative vehicle safety; or (2) by creating greater incentives for the public to demand safer cars or to install and use safety equipment. (See also RM-5631, RM-5632, RM-5633, RM-5635, RM-5636, RM-5637.) 28 pp.

RM-5636-DOT Medical Problems and Physical Fitness as Related to Occurrence of Traffic Accidents. H. H. Mitchell. April 1968.

A survey of the literature on medical problems and physical fitness as they relate to the occurrence of traffic accidents. The published data do not provide sufficient evidence for an estimate to be made of the contribution of various medical conditions to the accident rate. There are also insufficient

quantitative studies to form a rational basis for action by regulatory authority in charge of licensure for driving. If done at all, the current screening of drivers before licensure is apparently based on qualitative medical judgment. It is suggested that controlled studies be made to evaluate the contribution to the accident problem of the various medical conditions that might be significant, for example, epilepsy, diabetes, cardiac disease. These studies should determine the effect on the accident rate of removal of specified categories of diseased individuals. Particular attention should be paid to the number of licenses that would have to be denied for each category studied. (See also RM-5631, RM-5632, RM-5633, RM-5634, RM-5635, RM-5637.) 30 pp.

RM-5873-DOT Safety in Transportation: The Role of Government, Law, and Insurance. L. B. Lave. April 1969.

An analysis of how an optimal level of transportation safety can be achieved in terms of various roles of current institutions. Transportation safety results from the interaction of passengers, government, law, and insurance. The unique role each plays in optimizing safety is investigated with the ultimate objective of identifying the role of government and regulation in accomplishing society's safety goals. While liability laws and insurance have well-defined roles in optimizing transportation safety, government is something of a residual claimant. Depending on the particular circumstances, government might be called upon to do nothing or to settle everything by fiat. It is reasonable to assert that whenever there are important deviations from optimal safety, government has some obligation to find a way of correcting the situation. The solutions open to government take three basic forms: help perfect the market directly, create institutions to perfect the market, or correct the deviation by fiat. 44 pp.

RM-6309-FF Cable Television: The Problem of Local Monopoly. R. A. Posner. May 1970.

This study probes advantages and disadvantages of alternative forms of local cable television regulation. With the scramble among cable operators for municipal franchises growing, so is concern about local monopoly—the potential for abridging the public interest through excessively high subscriber fees and direct channeling of huge profits into the hands of cable companies who successfully compete for the right to "wire up" individual communities. Among variants of the franchise approach discussed: city governments could require reasonable subscription fees, place a ceiling on profits, or require a suitable array of services. The author urges a period of experimentation with a variety of the options available for both preventing monopoly prices and capturing monopoly profits for the public—and, because of current uncertainty over future CATV characteristics, for examining the actual extent of the monopoly problem. 42 pp.

PAPERS

P-4285 Law as a Tool of Directed Social Change: A Framework for Policymaking. Y. Dror. January 1970.

The use of law as a tool for directed social change is widespread in all contemporary societies, but systematic procedures and understanding are lacking. Only a complex multivariable behavioral analysis can provide the knowledge necessary for wise policy recommendations. The task requires mixed teams of lawyers, social scientists, and policy analysts at various points in the social guidance cluster—the legislature, the executive, research organizations, and universities. It also calls for changes in the policymaking system to permit utilization of the work of such teams, through a broader, more systematic approach to policymaking in general. This, in turn, requires changes in higher education to provide (1) analytical and social science training in the law schools, and (2) special institutes at which interested lawyers, social scientists, and policy analysts acquire a grounding in each other's skills. (Prepared for publication in *The American Behavioral Scientist*, Spring 1970.) 12 pp.

P-4448 Comparing Behavior at Various Computer Display Consoles in Time-Shared Legal Information. J. H. Carlisle. September 1970.

An experiment at Yale Law School in searching for legal precedents on the Mead Data Central time-shared information retrieval system. Subjects used either a teletype or the complicated-to-use CCI video console to access the 300,000,000 character Ohio Bar Association database. The UCLA BIOMED multiple discriminant program was used to analyze the results. Contrary to expectations, subjects spent more time at the video console, despite the longer transmission time of the teletype. More cases were retrieved and browsed at the video console, relevance scores were higher, and subjects were more satisfied. They also made 300 percent more errors. Relevance correlated highly with number of cases retrieved and negatively with time spent searching—contrary to the beliefs of system designers who limit retrieval to save time. Those who retrieved least information took the longest time and achieved the lowest relevance scores. The negative relation between time and relevance is even more marked for the video console users. 46 pp. Ref.

P-4709 The Design and Evaluation of Experimental Court Reforms. J. B. Jennings. October 1971.

As new ideas are generated for dealing with court congestion and other criminal justice problems, those that appear to be the most promising must eventually be tested in practice. However, it is difficult to determine whether there is any resulting improvement. Accordingly, this paper is addressed to considerations of experimental design, the selection of evaluation criteria, the measurement of court performance, and the assessment of the results of such a test. The principles introduced are discussed in terms of an ongoing evaluation of a major internal reorganization of the New York City criminal court. 21 pp.

P-4732 A Theory of Court Scheduling. J. B. Jennings. October 1971.

A relatively simple, analytical model of court scheduling is introduced and analyzed. The model is based on a representation of the process by which cases not disposed of at any appearance are scheduled for another appearance. This representation, although deterministic, possesses many of the important properties of court operations. Using this model, analytical expressions are derived for the number of cases scheduled to appear in each portion of the court each day, the steady-state calendar size in each part, the sizes of future calendars and case backlogs, and the average duration of and the average number of appearances made by each case. In addition, the effect of a dependence of certain processing parameters on the number of cases scheduled is investigated. 46 pp.

P-4928 Public Policy, Public Good, and the Law. P. L. Szanton. December 1972.

American government, formerly concerned with regulating private behavior, has increasingly undertaken a more positive role: to improve schooling, build housing, provide health care, and the like. In doing so, it has normally relied not on the imposition of regulation, but on the allocation of resources. Accordingly, many governmental positions formerly filled by lawyers are now occupied by persons with quantitative analytic backgrounds. This paper examines the contributions lawyers may still make to public policy and public good. It concludes that (1) elective offices will continue to be dominated by lawyers, (2) lawyers have important perspectives to contribute to policy-making, (3) a large percentage of the professionals available for government service will continue to be lawyers, (4) the private practice of law is entering a period in which needed reform will be possible, and (5) lawyers will need greater familiarity with quantitative analysis and the techniques of planning and management. 13 pp. Ref.

P-5041 Evaluating Administrative Court Reforms. J. B. Jennings. June 1973.

A set of broad administrative objectives is tentatively suggested for a criminal court. Some of these are aimed at improving the quality of justice, some at reducing the burden imposed by administrative procedures on individuals and agencies, and some at increasing efficiency. The success of any administrative reform should be evaluated in terms of a precise set of objectives such as these. While, in many instances, the evaluation must be subjective in nature, a set of objective criteria, or measures of performance, should be used wherever possible. Appendix I is a glossary of court-related terms used. Appendix II derives three formulas for estimating case flow through the courts, developed for and used by the Criminal Court of the City of New York. 26 pp.

P-5526 The Relationship between Medical Malpractice and Quality of Care. R. H. Brook, R. L. Brutoco, K. N. Williams. October 1975.

Examines the impact of present and future malpractice systems on the quality of medical care. The paper is divided into four parts: (1) consideration of quality-of-care constructs; (2) an overview of those issues of medical malpractice which are pertinent to quality-of-care considerations; (3) examination of the relationship, both theoretical and empirical, between malpractice and quality-of-care; and (4) development of policy and research suggestions for understanding and altering the current malpractice system. The idea was advanced that sanctions on providers for malpractice should be separate from mechanisms for reimbursement of patients for injuries from that malpractice. The current Professional Standards Review Organization program should be strengthened by including both the public and health providers other than physicians, by covering both ambulatory and hospital care, and by extending its authority to sanction providers. 39 pp. Ref.

P-5752 Results of YLS Survey on Specialization/Relicensing. M. A. Peterson. November 1976.

A survey of readers of *Barrister Magazine* shows support among young lawyers for programs to recognize legal specialties and relicense lawyers. Respondents valued specialization both as a means for providing better legal services and as an attractive feature for lawyers. They showed a strong preference for programs of certification rather than self-designation, requiring attendance at continuing legal education courses and some form of screening to determine which lawyers should be recognized as specialists. Most were willing to grant recognized specialists special opportunities to inform the public of their specialty status. Despite this support for specialization programs, some lawyers indicated concern that specialization programs would adversely affect their own practice. There was also strong support for relicensing programs. Most felt that lawyers need to improve or refresh their substantive knowledge of the law and the professional skills used in legal practice. They also supported mandatory continuing education courses to improve the quality of legal practice. 14 pp.

P-5766 Causes of the Medical Malpractice Insurance Crisis: Risks and Regulations. P. Munch. December 1976.

Analyzes the causes of the recent dramatic increase in malpractice insurance rates and contraction of the market in risk spreading, exemplified by the withdrawal of commercial carriers from some states, the growth of physician-owned mutuals, and the switch from an occurrence to a claims made policy form. Some of these institutional changes appear consistent with an efficient market response to the changed nature of the risk involved in writing malpractice insurance—in particular, increased frequency and severity of claims, instability of the sociolegal environment, depletion of insurers' net worth, and lower mean and higher variance of return on reserves. Total withdrawal of commercial carriers can only be explained by regulatory control of rates and reserve requirements, exacerbated by medical society resistance to selective underwriting, deductibles, and experience rating. 38 pp. Bibliog.

P-5877-1 Experience Rating in Medical Malpractice Insurance. C. E. Phelps. June 1978.

Argues that experience-rate pricing of medical malpractice insurance could be a useful quality-control device by forcing bad doctors to pay insurance rates reflecting the true costs of malpractice. Available data show that, for four years, 8,000 physicians in Los Angeles sustained 575 suits annually. There were 46 physicians sued four or more times. If all 8,000 doctors had identical probabilities of being sued, the number with four consecutive years of suits would be .21, not 46. If 2,000 of the 8,000 are in high-risk specialties, then of the 2,000 only four are expected to sustain four suits, not 46. The data demonstrate dramatically that the doctors with multiple suits were indeed drawn from a different distribution than their colleagues. The author concludes with some conjectures on why doctors continue to choose malpractice insurance that does not reflect actual claims histories. 7 pp.

P-5885 Some Comments on De Facto Limits on Liability. K. A. Solomon, D. Okrent. June 1977.

An overview of large technological systems in society to ascertain the prevalence of situations that can lead to catastrophic effects where the resultant liabilities far exceed the insurance or assets subject to suit in court, thereby imposing de facto limits on liability. Several potential situations are examined, including dam rupture, aircraft crash into a sports stadium, chemical plant accident, shipping disaster, and a toxic drug disaster. These events are estimated to have annual probabilities similar to or larger than a major nuclear accident. All are found to involve potential liability far exceeding the available resources, whether they be insurance, corporation assets, or government revenues. If limits on liability represent an important problem for society, the problem is general and should be dealt with from that perspective. 24 pp. Ref.

P-5921 Costs and Benefits of the Tort System if Viewed as a Compensation System. P. Munch. June 1977.

Compares the costs of operating the tort liability system for four major branches of tort law: product liability, automobile liability, workers' compensation, and medical malpractice. Liability premium costs are compared to the relevant industry revenue and the estimated cost of injuries. The allocation of the premium dollar among claimants, claimant and defense litigation costs, and insurance overhead is estimated. The paper is not intended as an overall evaluation of the tort system since it excludes such items as any reduction in injuries attributable to the deterrent effect of liability for negligence, and other costs not reflected in insurance premiums. 95 pp. Bibliog.

P-5940 More on Insurance and Catastrophic Events: Can We Expect De Facto Limits on Liability Recoveries? K. A. Solomon, C. Whipple, D. Okrent. March 1978.

Reviews large technological systems to locate situations that have potential for catastrophes in which liabilities exceed insurance or assets, thereby imposing de facto limits on liability recoveries. Such events as an LNG explosion in a population center, or massive nuclear reactor accident

near a population center are found to involve potential liability far exceeding available resources, whether they be insurance, corporate assets, or the annual budget of the Federal Disaster Assistance Administration. Liability limits, whether by law or de facto in nature, appear to be prevalent in society. They represent a problem which should be solved in a coordinated way, and include other issues that have been raised, such as the possible loss of incentive for safety improvements. 26 pp. Ref.

P-5948 The Youngest Minority: Are They Competent To Waive Their Constitutional Rights? S. T. Brewer. March 1978.

Discusses the constitutional rights accorded to juvenile offenders. The author asserts that concern for a juvenile's needs rather than his rights deprives him of the constitutional right to fairness and due process of law accorded to adult offenders. A defense often raised in juvenile confession cases is that a minor is not competent to waive his constitutional privilege against self-incrimination. The rationale behind this proposition is that a minor is generally regarded as unable to enter into legal transactions and is presumed to lack the requisite intelligence to make a valid waiver. The author urges that stricter criteria should be established for a waiver to be held valid. A juvenile often doesn't know the importance of confessions in gaining convictions until he has provided the state with its best evidence against him. 22 pp. Ref.

P-5975 Witnesses' Perception of Meaning. M. A. Peterson. August 1977.

Subjects presented with a videotape of a fight and disruption perceived the event in terms of meaningful generalizations. The conclusions that subjects formed remained stable over 28 days. In contrast, detailed memory rapidly deteriorated for subjects who were not required to rehearse their memory of the event. As a result, subjects increasingly reported recognizing details that supported and apparently were inferred from their general conclusions. The study showed that subjects' conclusions about meaning affect their selective attention to detail, and subjects who expected violence and disruption formed more certain general conclusions. Finally, the study indicated that repeated rehearsal may promote and even enhance accurate memory for meaningful information. Among rehearsing subjects accuracy of recognition for meaningful information showed a significant quadratic trend—increasing through seven days before returning to the original level after 28 days. Over the same period accuracy for irrelevant information showed the usual negatively accelerated trend. 16 pp. Ref.

P-6037 The Chicano/Illegal-Alien Civil Liberties Interface. A. Gandara. November 1977.

Examines how concern over illegal Mexican migration has resulted in judicial and statutory responses that constrain the constitutional and civil rights of Chicanos. The author reviews major Supreme Court decisions which resulted in judicial approval of violations of the fourth amendment right of persons to be free from unreasonable searches and seizures if those persons appear to be of Mexican ancestry. Also reviewed is the Carter amnesty plan which intends to

make hiring of illegal aliens unlawful, thereby raising Chicano concern that employers would be deterred from hiring Chicanos as well. The Carter plan addresses this concern by calling for full enforcement of existing anti-discrimination laws. The author points out that the protection against employment discrimination offered by the Civil Rights Act of 1964 or the broader Act of 1866 is insufficient or uncertain and that the Carter plan should be modified to include specific statutory protection against such discrimination. (A Spanish language version is available in P-6037/1.) 17 pp. Ref.

P-6349 Solvency Regulation in the Property/Casualty Insurance Industry. P. Munch, D.E. Smallwood. June 1979.

Outlines current policy issues relating to solvency regulation, describes existing regulation and then estimates its effects. Cross section analysis is used to estimate the effect of regulations on the number of companies operating in a state and the frequency of insolvencies. Minimum capital requirements appear to reduce the number of insolvencies only by deterring small firms with a higher probability of failing from entering the market. Other forms of regulation have no effect on entry or insolvencies. The value of solvency regulation to consumers thus depends on whether the net value of firms that are deterred from entry is positive and exceeds the administrative cost of regulation. Comparison of the characteristics of solvent and insolvent firms provides evidence that is consistent with a model of insolvency as the (unlucky) outcome of wealth-maximising risk taking, rather than simple fraud. 73 pp. Bibliog.

P-6693 A Suggestion for Improving the Research Methodology of Rule-Based Modeling. S. W. Salant. December 1981.

This paper explains why the methodology proposed by Waterman and Peterson (R-2717-ICJ) to study the process of legal settlements is vulnerable to the same criticism that Lucas has made so forcefully about econometric policy evaluations. It goes on to propose an alternative methodology which does not suffer from this weakness. The alternative involves viewing the settlement process as a game. The paper assumes familiarity with neither Lucas' critique nor the theory of games. A companion paper (P-6809) illustrates how to implement the methodology proposed here. It considers strategic interactions in the settlement of personal injury claims in which information about the severity of the injury is known (and known to be known) only to the injured party. 16 pp. Ref.

P-6800 Settlement Out of Court: The Disposition of Medical Malpractice Claims. P. M. Danzon, L. A. Lillard. July 1982.

The main purpose of this paper is to present empirical estimates of a model of the disposition of claims through the courts. A second purpose of the paper is to provide evidence relevant to the policy debate over tort reform. The theoretical model is described in Sec. 2. Section 3 discusses estimation and describes the data. Section 4 reports empirical results, including goodness of fit of the model and parameter estimates. Section 5 provides estimates of the

probability of winning at verdict for cases settled out of court. Section 6 analyzes the discrepancy between mean award at verdict and settlement and the extremely skewed distribution of dollar payout. Section 7 discusses the effects of actual and hypothetical tort reforms and simulates their ramifications on the entire disposition process. Section 8 contains concluding remarks. 55 pp.

P-6809 Litigation of Questioned Settlement Claims: A Bayesian-Nash-Equilibrium Approach. S. W. Salant, G. J. Rest. December 1982.

Before reforms in legal procedures are implemented, their consequences should be thoroughly explored. In this paper, the authors present a methodology for evaluating the consequences of changes in legal procedures. They consider legal settlements of personal injury disputes. Even though there are assumed to exist out-of-court settlements which both plaintiff and defendant would prefer to a court fight if they had complete information, such settlements may fail to occur because the defendant lacks complete information about the extent of the plaintiff's injuries and sometimes challenges demands he suspects to be inflated. The authors treat adversarial behavior in the settlement process as the strategic interaction of players in a game of incomplete information. To illustrate the value of the methodology, the authors conclude by showing how a seemingly innocuous exogenous change in legal procedures has a surprising qualitative effect on the behavior of defendants and consequently on how frequently cases go to trial. 27 pp. Ref.

P-6857 The Effect of Item Sequence on Bar Examination Scores. S. P. Klein, R. Bolus. April 1983.

This study investigated the degree to which scores on a test of certain legal research skills correlated with scores on the essay and multiple choice portions of a state's bar exam and with various background characteristics, including racial/ethnic group. Results indicated the Research Test reliably measured skills that were only partially correlated with those assessed by the regular bar exam. Research Test scores were more highly related to indexes of the ability to practice law than the traditional measures of lawyering skill. As a result of these findings, the bar exam now includes a Research Test. 5 pp.

P-6879 Measuring Legal Research Skills on a Bar Examination. S. P. Klein. May 1983.

Reports on an investigation of whether MBE and essay scores in bar examinations were good predictors of how well applicants could perform some of the day-to-day tasks that are required of practicing attorneys. One part of this study involved assessing the relationship between bar exam scores on a test that was designed to measure certain important legal research skills. The study also investigated whether differences in performance level among racial groups on the Research Test paralleled differences among these groups on the bar exam and whether Research Test scores were related to an applicant's legal training and experience. The findings indicate that the inclusion of a Research Test on the bar exam could make a small but important difference in who passes. And, while the use of a Research Test would not narrow the gaps in average perfor-

mance level among racial groups, neither would it increase the difference among these groups. 6 pp.

P-6895 Relationship of Bar Examinations to Performance Tests of Lawyering Skills. S. P. Klein. July 1983.

The relationship between scores on a typical bar exam and the ability to practice law was investigated with 485 applicants who took the bar exam and a two-day performance test involving basic oral and written legal tasks. Results indicated the two types of measures assessed similar but not identical skills. 6 pp.

P-6924 Experimental Studies of Bargaining as Analogues of Civil Disputes. J. P. Kahan. November 1983.

This paper reviews recent studies of experimental bargaining, largely conducted in social psychological laboratories, to obtain findings that might prove helpful to understanding the process of civil dispute resolution. Three research areas are surveyed: (1) the effect of third party intervention, (2) the effect of having representatives bargain in the stead of the central parties, and (3) the effect of negotiating multiple issues as packages. For each of these areas, the studies provide generalizations that suggest ways in which civil disputes might be more efficaciously settled. 42 pp. Ref.

P-6959 How Trial Fees Would Affect Civil Justice. C. P. Rydell. April 1984.

This analysis estimates how charging litigants, instead of taxpayers, for civil trials would affect the civil justice system in general, and poor people in particular. The analysis focuses on the economic impacts of trial fees: the monetary gains and losses experienced by plaintiffs, defendants, and taxpayers when trial fees are instituted. The study develops two models, one using a game-theory approach, the other a differential expectations perspective. The conclusion is that the effects of trial fees on plaintiffs and defendants are not very large (less than seven percent), due to the small proportion of civil cases that actually go to trial, and the relatively small size of court costs compared to total litigation costs (lawyer costs are much larger than court costs). 46 pp. Ref.

P-6963-ICJ Court-Annexed Arbitration in the State Trial Court System. D. Hensler. February 1984.

Research effort has been directed toward investigating the use of court-annexed arbitration in the state trial courts, and evaluating the effectiveness of this type of arbitration for managing the civil caseload and alleviating the burdens that the litigation process places on private citizens who bring their disputes to the courts for resolution. The testimony presented by the author to the U.S. Senate Judiciary Committee Subcommittee on the Courts deals with four topics: (1) the spread of court-annexed arbitration through the state trial court system; (2) variations in the design of court-arbitration programs nationwide; (3) the effectiveness of arbitration in reducing court congestion; and (4) how arbitration affects litigants. 12 pp.

P-7027-ICJ Reforming the Civil Litigation Process: How Court Arbitration May Help. D. Hensler. August 1984.

This paper, originally published in the *New Jersey Bell Journal*, Summer 1984, describes some factors contributing to the congestion, delay, and expense that currently trouble the country's civil courts. It describes court-administered arbitration, an approach that is being tested to resolve a broad range of civil cases involving money damages: personal injury and property damage suits, breach of contract cases, and collection disputes. It reviews the results of two RAND Institute for Civil Justice studies on the effectiveness of court-annexed arbitration, which found, among other things, that there were significant cost reductions, and there was a high degree of satisfaction with arbitration procedures among attorneys and litigants. 10 pp.

P-7057-RGI Comparative Negligence and Jury Behavior. M. Shanley. February 1985.

The law of comparative negligence provides that juries divide damages between the plaintiff and negligent defendants according to relative fault. The predecessor to this law, still in effect in nine states, is the contributory negligence law, which states that plaintiffs who contribute to their own injury in any way, should receive nothing. This paper examines the effect of the comparative negligence law with respect to the increase in awards to plaintiffs who take their case to trial. It analyzes 675 auto accident trials in San Francisco County in the 1970s, about half of which took place under the old contributory negligence law, and half under the new comparative negligence law. The analysis shows that the actual effect of the comparative negligence law is smaller than the potential effect, because juries don't strictly follow either law, but that it is still considerably higher than what current conventional wisdom would predict. 89 pp. Bibliog.

P-7073-ICJ Evaluating Civil Claims: An Expert Systems Approach. D. A. Waterman, M. A. Peterson. March 1985.

This paper, a reprint of an article that originally appeared in Vol. 1 of the journal *Expert Systems*, describes the authors' current work in applying expert systems, a sophisticated form of computer modeling, to describe reasoning involved in settlement of civil liability claims. The authors studied how lawyers and adjusters evaluate civil claims in the product liability area, and developed a schema that organizes the facts and issues of a case. The schema, and a large set of rules they use to elaborate the schema, form the basis for an expert system that models legal decisionmaking. This system, called LDS, can help both researchers and litigators understand better how claim evaluation takes place since it provides a basis for generating and organizing hypotheses about litigators' methods for making settlements. The findings suggest that rule-based expert systems can be developed and used to understand decisions involved in civil litigation; this information can be translated into the if-then rules of a rule-based model, and that model can capture much of the richness and flexibility of legal reasoning. 12 pp. Ref.

P-7089-ICJ Designing Safer Products: Corporate Responses to Product Liability Law and Regulation. G. C. Eads, P. H. Reuter. June 1985.

This paper, which appeared in the *Journal of Products Liability*, Vol. 7, 1985, is excerpted from a larger study with the same title, published as RAND report R-3022-ICJ. It analyzes ways in which firms have responded to recent changes in pressures to design safer products, based on interviews with product safety officials in major manufacturers and extensive analysis of legal and scholarly literature. Shifts to strict liability and more stringent regulation during the last 15 years have increased pressure to invest in safety assurance procedures, as evidenced by the creation of new corporate product safety units. Regulation has been of more questionable effectiveness than has strict liability in inducing better design practices. The authors argue that federal product liability legislation will have marginal effect, despite the current variation in state law on the matter; discuss the factors that influence the effectiveness of corporate product safety units; and suggest that combining product safety with quality assurance may be the optimal strategy for a firm. 32 pp. Ref.

P-7166 The Public Trust Doctrine in 1985. M. Selvin. December 1985.

This paper, originally written as a preface for the 1986 publication of the author's dissertation by Garland Publications, reviews developments in public trust litigation during the time since the dissertation was completed in 1978. The public trust doctrine states that tidelands and certain other lands and waters are held in trust by the citizens of the various sovereign states and municipalities, to be used only for the benefit of the general public. Recent trust litigation has focused, as before, on water-related resources including tidelands, beaches, lakes, and streams. Nonetheless, state courts have rendered several significant decisions during the past seven years, largely in California and New Jersey, expanding and in some instances limiting permissible trust uses of and trusteeship responsibilities over traditional trust properties, and extending the reach of the doctrine to resources not previously clothed with trust protections. 21 pp.

P-7180-ICJ The Impact of Fee Arrangement on Lawyer Effort. H. M. Kritzer, W. L. F. Felstiner, A. Sarat, D. M. Trubek. January 1986.

This paper focuses on the impact of fee arrangement on the amount of time lawyers are likely to devote to civil cases ("effort"). Drawing on data collected by the Civil Litigation Research Project, the authors compare the behavior of lawyers working on an hourly fee basis with the behavior of contingent fee lawyers. Like previous work on this issue, the paper finds that fee arrangement does influence the amount of effort lawyers devote to a given case. However, contrary to previous work, the analysis indicates that the impact is not a simple one on hours worked; there is a more complex effect on a number of aspects of lawyers' behavior. Together these produce an effect on hours that varies by size of case. For modest cases (with stakes of \$6000 or less), contingent fee lawyers spend less time on a case than hourly fee lawyers. Yet the authors find no statis-

tically significant evidence of a differential in effort for larger cases but rather an indication that, if there is an effect, it may be in the opposite direction. 28 pp. Ref.

P-7189-ICJ Some Observations on the Need for Tort Reform. G. H. Shubert. January 1986.

This paper was originally presented to the National Conference of State Legislatures in Denver, Colorado, in January 1986, and in an earlier version to the Public Policy Institute in Albany, New York, in November 1985. It draws on studies of civil court congestion and delay, alternative dispute resolution, the public costs of civil litigation, asbestos-related litigation, punitive damages, and medical malpractice. The author explores the relevance of policy research to tort reform, and concludes that the underlying problem with the civil justice system is the inability to decide whether we in the United States want to have a pure compensatory system, in which everyone is compensated for every injury no matter what its cause, or a fault-based liability system, in which compensation is limited in a strict way, in a comparative way, or in a contributory way to those who have caused the injury. 11 pp.

P-7210-ICJ Summary of Research Results on the Tort Liability System. D. Hensler. March 1986.

This paper was originally presented as testimony before the Consumer Subcommittee of the Senate Committee on Commerce, Science, and Transportation in February 1986. It presents results of research conducted by the Institute for Civil Justice relevant to the product liability system. It considers five areas of research: (1) trends in civil jury verdicts, particularly as they relate to product liability lawsuits; (2) effects of product liability lawsuits on corporate behavior; (3) public expenditures to process tort liability suits; (4) special problems posed by mass toxic lawsuits; and (5) the use of alternative dispute resolution procedures for resolving tort cases. 11 pp. Ref.

P-7211-ICJ The Effects of Tort Reforms on the Frequency and Severity of Medical Malpractice Claims: A Summary of Research Results. P. M. Danzon. March 1986.

This paper, originally presented as testimony before the Committee on the Judiciary of the United States Senate, reviews the results of three studies on the frequency and severity of medical malpractice claims. The findings of the three studies suggest that caps on awards and collateral source offset have significantly reduced claims severity; and collateral source offset and shorter statutes of repose have significantly reduced claims frequency. The author cautions that, from a public policy perspective, the goal of tort reform should not be simply to reduce the costs of claims and of malpractice insurance. Rather, reforms should be evaluated in the broader context of the fundamental purposes of the tort system, which are deterrence of medical negligence and efficient compensation of its victims. 11 pp. Ref.

P-7212-1 Refinements of Sequential Equilibrium in a Legal Settlements Game. J. K. Cave. March 1987.

This paper applies several refinements of sequential equilibrium to a signaling game of legal settlement, in which the informed plaintiff has a continuum of pure strategies. The principal results are that (1) such refinements can greatly reduce the scope of equilibrium behavior; (2) there is no necessary connection between divine and perfect equilibria; and (3) perfect, divine, and proper equilibria of games with continuous pure strategy spaces may use weakly dominated strategies with positive probability. 33 pp. Ref.

P-7222-ICJ A Summary of Research Results: Trends and Patterns in Civil Jury Verdicts. M. A. Peterson. March 1986.

This paper was originally presented as testimony before the Subcommittee on Oversight of the United States House of Representatives Committee on Ways and Means. It draws on the author's analysis of civil jury verdicts rendered between 1960 and 1979 in Cook County, Illinois, and San Francisco, California. The testimony focuses on trends and patterns over time, and on how the type of liability, nature and circumstances of injury, and characteristics of plaintiffs and defendants affect the outcomes of civil jury trials. 6 pp. Ref.

P-7241-ICJ Changes in the Tort System: Helping Inform the Policy Debate. G. H. Shubert. June 1986.

This paper is extracted from the Director's Report in the Institute for Civil Justice's (ICJ) *Report on the First Six Program Years, April 1980-March 1986*. It reviews findings of the ICJ's research on the civil justice system regarding (1) civil jury verdicts, (2) the private and public costs of civil litigation, and (3) the effectiveness of the processes of the system. This research underlines the need for policymakers to anticipate the impacts of legislative changes on costs, outcomes, and processes. In addition, it emphasizes the need to build into every reform the capacity to evaluate its actual impact and to provide for subsequent correction. 4 pp.

P-7243-ICJ Costs and Compensation Paid in Tort Litigation: Testimony Before the Joint Economic Committee of the U.S. Congress. J. S. Kakalik, N. M. Pace. July 1986.

This paper is the text of testimony presented before the subcommittee on Trade, Productivity, and Economic Growth of the Joint Economic Committee of the U.S. Congress on July 29, 1986. It summarizes preliminary results of RAND research undertaken to provide empirical evidence on the following issues: (1) the total expenditure for tort litigation in state and federal courts in 1985; (2) the proportion of costs that went to plaintiffs' and defendants' legal fees and other litigation expenses, the value of time spent by both litigants and insurance personnel, and the costs of operating the courts; (3) what proportion of the total was net compensation to plaintiffs; (4) the difference in litigation costs and compensation for torts involving motor vehicles and all other torts; and (5) the rate at which the tort system is growing. The study indicates that plaintiffs with tort lawsuits in state and federal courts of general jurisdiction received approximately half of the \$27 to \$34 billion spent in 1985. The costs of litigation consumed the other half. 10 pp.

P-7271-ICJ Summary of Research Results on Product Liability. D. Hensler. October 1986.

This paper is an edited transcript of written testimony delivered in October 1986 to the United States Senate Judiciary Committee. The author summarizes the results of empirical research conducted by the Institute for Civil Justice on four topics relevant to the discussion of the product liability system, including trends in litigation, expenditures for liability cases, the effects of product liability lawsuits on corporate behavior, and the special problems of mass toxic torts. 13 pp. Ref.

P-7272-ICJ Failing Faith: Adjudicatory Procedure in Decline. J. Resnik. February 1987.

This paper, reprinted from *The University of Chicago Law Review*, Vol. 53, No. 2, 1986, discusses the changes in federal litigation during the almost fifty years that the Federal Rules of Civil Procedure have been in effect. The paper considers why the drafters of the Rules did what they did, how the Rules in turn helped to create the environment that has given rise to the contemporary criticism of civil litigation, and how they might be revised. The author suggests that any revisions of the Rules ought to be undertaken with the intent of preserving their accomplishments, including ready access to the judicial apparatus. 67 pp.

P-7287-ICJ Trends in California Tort Liability Litigation. D. Hensler. March 1987.

This paper, testimony presented before the California State Legislature's Assembly Select Committee on Insurance, covers trends in liability litigation in California. Over the past decade personal injury lawsuits filed statewide have increased substantially. Automobile accident filing rates are roughly equal to population increase, but the rate of increase in other types of lawsuits has considerably outstripped population growth. A smaller fraction of personal injury lawsuits are fully contested, and the number of such cases tried to verdict has dropped in San Francisco, and probably elsewhere. Recent San Francisco verdicts are similar to those in other major jurisdictions. Increases in jury awards have been higher for product liability and medical malpractice cases—a significant proportion of the personal injury caseload—than for the slower-growing automobile accident cases. The vast majority of cases are settled, not tried. Although most practitioners assume that settlement amounts in personal injury cases are strongly influenced by jury verdicts, no comprehensive study examines how such trends are related to trends in settlement. The growth in jury verdicts has probably been reflected in trends in total compensation. 13 pp.

P-7411 Multiple Damages in Private Antitrust Suits. J. K. Cave. February 1988.

Stephen Salant's analysis of multiple damages for private antitrust suits ("Treble Damage Awards in Private Lawsuits for Price Fixing," *Journal of Political Economy*, December 1987) is generalized. The neutrality result that multiple damages do not affect production is shown to hold for a wide range of expected penalty and cost functions, provided indemnification is complete and consumers expect penalties

to be a multiple of quantity purchased. If consumers receive less than the cartel pays, neutrality is much less likely. 9 pp. Ref.

P-7418-ICJ Due Process: A Public Dimension. J. Resnik. March 1988.

This paper originally appeared in *The University of Florida Law Review*, Vol. 39, No. 2 (Spring 1987), and was presented at the "Conference on Procedural Due Process: Liberty and Justice," University of Florida, February 13-14, 1987. The author explores the public dimension of the due process theory: the role of the public in the adjudicative process, and the function of the adjudicative process for the public. The author considers the role the public plays as an audience, the modes of adjudication, the problems associated with public access, and the forms of public participation. 27 pp.

P-7419-ICJ Judging Consent. J. Resnik. 1986.

This paper was originally presented at a symposium on consent decrees, and appeared in the *University of Chicago Legal Forum*, Vol. 1987. It explores the growing interest in consent decrees, by which lawsuits are resolved with the issuance of a judgment or decree, entered with the agreement of the parties. Arguments have been made that consent decrees are more economical than adjudicated decrees and achieve greater rates of compliance, but the empirical bases for such claims have not yet been established. The author examines the standard arguments for consent decrees and considers the role of judges in reviewing and entering them. She discusses the fact that judges must rely on the involved parties to present sufficient information for judging the adequacy of an agreement. The author concludes that, in many cases (e.g., class actions), judges must determine the adequacy of either the representation of the decree or of the settlement itself. However, as judicial involvement in crafting settlements grows, the ability of judges to make disinterested determinations of the adequacy of settlements diminishes. 60 pp.

P-7441 The End of Employment-at-Will: Legal and Economic Costs. J. N. Dertouzos. May 1988.

In the past, employers have had almost complete discretion in firing employees. But as a result of recent judicial decisions, employment-at-will is eroding. This paper discusses the implications of, and the changes brought about by, these decisions; judicial theories; and how the specter of litigation can affect the workplace. It also discusses and extrapolates statistical evidence on wrongful termination trials and post-trial adjustments. Despite tremendous publicity given big jury awards, the annual cost of jury trials amounts to only about \$2.56 per worker, and the average legal cost associated with involuntary discharge of an at-will employee is only about \$200. Finally, the paper suggests proposals for judicial and workplace reform. 36 pp. Ref.

SOME OBSERVATIONS ON THE NEED FOR TORT REFORM

Gustave H. Shubert

January 1986

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The Institute for Civil Justice, established within The Rand Corporation in 1979, performs independent, objective policy analysis and research on the American civil justice system. The Institute's principal purpose is to help make the civil justice system more efficient and more equitable by supplying policymakers with the results of empirically based, analytic research.

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The Institute examines the policies that shape the civil justice system, the behavior of the people who participate in it, the operation of its institutions, and its effects on the nation's social and economic systems. Its work describes and assesses the current civil justice system; analyzes how this system has changed over time and may change in the future; evaluates recent and pending reforms in it; and carries out experiments and demonstrations. The Institute builds on a long tradition of Rand research characterized by an interdisciplinary, empirical approach to public policy issues and rigorous standards of quality, objectivity, and independence.

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The Rand Corporation
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PREFACE

This paper is an edited transcript of a speech made by Gustave H. Shubert, Director of The Institute for Civil Justice, to the National Conference of State Legislatures in Denver, Colorado, in January, 1986. An earlier version of the talk was presented to the Public Policy Institute in Albany, New York, November, 1985.

The work described in this paper is part of the research program of The Institute for Civil Justice. The paper draws on studies of civil court congestion and delay, alternative dispute resolution, the public costs of civil litigation, asbestos-related litigation, punitive damages, and medical malpractice. It explores the relevance of policy research to a subject of much current public debate: tort reform.

SOME OBSERVATIONS ON THE NEED FOR TORT REFORM

Gustave H. Shubert

BACKGROUND

I am here to talk about the need for reform in the civil justice system. There has been a lot of discussion this morning about legislative action, about the need for change in the insurance industry, and about the need for changes in business practices. My task is to set the background and describe the need for reform; I leave it to others to deal with potential courses of action.

In considering the problems of the civil justice system, problems with which all of us here today are concerned, I am reminded of my experience with the Air Force in Korea: One night, the lights went out and North Korean and Chinese troops started pouring over the fence of the base. I happened to be on the command net and heard the Base Commander, who had been rousted out from the Officers' Club, saying, "Colonel Jones, Colonel Jones, where are you? Where is that base defense plan I asked you to design last month?" That plan, of course, had never been prepared.

I think we are finding ourselves in a similar situation with regard to civil justice today. Plans aside, even the basic, fundamental information necessary to understand the need for reform has not yet been developed.

When we started The Institute for Civil Justice within The Rand Corporation in 1979 (I think most of you will agree that the problems we are talking about were with us in 1979 and before), there was virtually no systematic knowledge of the civil justice system or its operations. There was a feeling of general unease in certain sectors, particularly in the insurance industry, about the absence of information necessary to understand the operations of the system. On the one hand, there were the academics who were outlining rather elegant--but largely data-free--theories of legal behavior. At the other end of the spectrum, there was some information available on the operations of courtrooms--how many

jurors to impanel if one wanted to have three juries per week for so many weeks and so forth--but the entire area between these extremes was devoid of systematic research.

THE WORK OF THE INSTITUTE FOR CIVIL JUSTICE

Our job at Rand and at The Institute for Civil Justice is to try to fill that gap as much as we can to develop an understanding of the relationships between the various factors and the various players that comprise the civil justice system. The ICJ has focused on trying to understand the fairness of the system, the efficiency of the system, and its overall effectiveness. Translating that into researchers' terms:

- We are concerned with the outcomes the system has been producing: Are they consistent with the law? How do they vary as the law evolves? Have they been changing over time? What are some of their potential policy implications?
- We are concerned with the benefits and costs of the system: Who's paying what to whom--both in terms of compensation and in terms of transactions costs? What is the distribution of costs and benefits among various segments of our society?
- We are concerned with the overall effectiveness of the process by which outcomes are reached, costs incurred, and benefits distributed.

Then, knowing as much as we can and trying to accrue knowledge about these key issues as we go along, we disseminate information to those, like yourselves, who are concerned with the need for reform to help you decide what changes are needed and to perceive the ways in which they can be achieved.

I would like to convey to you this morning a few pieces of information about what we have learned in each of these areas--outcomes, costs, and timeliness--and to draw out some of the implications that I see for the important matters you are here to consider.

Research on Outcomes

First, let me deal with the question of outcomes. When we began our work, we found that there had been no data gathered in any systematic way pertaining to the outcomes the system is producing over time. We were confronted with anecdotal information, on the one hand, from people who would argue that the American jury was out of control, awarding more and more money to less and less deserving people all the time. Conversely, we encountered arguments that the American jury is the backbone of the civil justice system; that the jury is responsible and predictable; and, therefore, that the jury should be retained and enhanced as the fundamental basis of our civil justice system. These arguments had one common characteristic: Neither one had a shred of empirical evidence to support it.

So we began to examine what the American jury has been doing for the past 20 years. We found that, in terms of aggregate performance over time in Cook County and in San Francisco (the two areas that we chose for intensive study, developing the first longitudinal data bases regarding civil suits for money damages ever assembled in this country) the *median* jury award has remained essentially constant (in constant dollars) for 20 years. Considering only those cases in which the plaintiff prevailed, the fiftieth percentile award has been flat. In fact, in Cook County the median has actually decreased somewhat, hovering around the level of \$7,900 in 1979 dollars. That doesn't look like much to get excited about. However, when we looked at *average* awards, we found that toward the middle of the period the average award began to take off at an ever-increasing pace. This divergence between the average and median awards was accounted for almost exclusively by the top ten percent of cases. I will come back to the implication I draw from that in just a minute.

In these studies we found a number of other things. For example, in both Cook County and San Francisco, juries systematically inflate awards from between the time of filing and the time an award is made. So we have, in effect, juries awarding implicit prejudgment interest at the prevailing rate of inflation during the interval between filing and award.

Furthermore, we found that the circumstances of an injury affect the compensation awarded--something that I believe is not the intent of the law. The loss of two legs in an automobile accident, for example, is "worth" an average of \$250,000 in compensation. In contrast, the same loss to the same kind of plaintiff, but resulting from a workplace accident, brings an average compensation of \$750,000. Now we are not talking about punitive damages here: We are talking just about compensatory awards.

In another analysis, we examined the relationship between the nature of the litigants and the kinds of compensation that are awarded. We found in Cook County, for example, that blacks win less often, and, when they win, they obtain lower awards.

We also found a relationship (in both Cook and San Francisco Counties) between the apparent wealth of the defendant and the amount of compensation awarded by the jury for serious injuries. (Nothing in this field, it seems, is simple: We found no such "deep pocket" effect for relatively minor injuries.) Some of you probably know this intuitively or anecdotally. But to my knowledge, this is the first time that any attempt has been made to test the so-called "deep pocket" theory systematically and to see whether there is, in fact, any direct association between the size of awards and the characteristics of the plaintiff and defendant.

We are now examining carefully the phenomenon of punitive damages. We are assessing the characteristics of cases in which punitive damages occur and attempting to understand the implications of trends in punitives for the future. We are also attempting to estimate the effects of punitive damages on corporate decisionmaking, corporate behavior and the propensity to settle, as well as the amounts that are agreed upon.

The bottom line that I draw from our studies of the outcomes produced by the civil justice system is that one ought to focus on where the difficulty is. That difficulty seems to us to be primarily in the area of large, complex cases--the cases that are, in effect, new types of litigation for our system--cases involving product liability, professional malpractice of various kinds, suits against government, and

litigation in the area of business and contracts. The vast bulk of civil cases--the small suits (the fender-bender types, if you will)--seem to be proceeding relatively normally as far as verdicts are concerned. And recall that it is true that at the median, awards have remained (in constant dollars) relatively constant over time. It is in the area of the new types of litigation that the problems we have been talking about so far today are occurring, and it is in this area, I believe, they are likely to continue.

Research on Costs

What about costs? The first question we asked was: How do we, as citizens, value the services performed for us by the civil justice system--as expressed by our expenditures of tax dollars? What share of our public resources do we allocate toward supporting this system in the United States? This is, after all, the system dedicated to resolving all of our noncriminal disputes--disputes between individuals, between organizations, and between organizations and individuals.

The ICJ developed a method for assessing the costs of the civil justice system to the public--to you and me as taxpayers. We found that on an annual operating basis, we in the United States at the federal, state, and local levels are devoting about \$2.2 billion per year to operating that system. Now you might say, "That sounds like an awful lot of money to me," or you might say, "When I compare that amount of money with what we put into other public systems in this country, it doesn't look like much--in fact it looks rather small." The point I want to make is that at least we now know where our priorities are, expressed in dollar terms. We are finally in a position to ask and answer meaningfully questions about the significance of changes in public funding and whether increases in funding to improve the quality of that system would strain our overall resources.

With regard to private costs, we began by analyzing private costs of asbestos litigation. This is an important area in and of itself, but also because we believe it is a precursor of future massive toxic torts litigation. I think our results are reasonably well known by now. If you visualize a pipeline into which we put money at one end and see compensation coming out the other, that pipeline starts with a total

expenditure of about \$95,000--the full private-dollar input into the civil justice system for the average case. There is an immediate draw-down of \$35,000, about 37 percent of that initial amount, for defense costs--legal fees and related costs of corporations engaged in litigation. The remaining \$60,000 is paid to the plaintiff. The plaintiff, in turn, spends about \$25,000--about 40 percent--of what he recovers (26 percent of the total) on his legal fees and costs. The plaintiff himself, then, ends up with about \$35,000--37 percent of all the funds expended. So of all the monies spent, the injured parties net just a little more than a third of the total. These results raise two bottom-line questions in the cost area: Is it appropriate to spend nearly twice as much money determining how much should go to whom as is eventually provided in compensation to injured parties; and, would an increase in public resources, including some spent on thought about the problem, help reduce the extraordinary expenses that we are encountering in the private sector in the process of awarding compensation?

Research on Process

That brings me to the area of the overall effectiveness of the process. Here I will focus on the problems of congestion and delay and of the quest for alternatives that will lead to more efficient ways of resolving our disputes. Effectiveness, of course, must be measured in many dimensions, not just in terms of timeliness.

Court congestion and delay are problems that are widely known and discussed. When we began our work on them, we reached for the book entitled *Congestion and Delay: What We Are Doing About It*, and found that it had yet to be written. There was no data base in this country concerning the problem, either at the state or national level, that explained what the problem was, what its dimensions were, and what was being done about it. The ICJ, in effect, began putting that book together, and by providing our findings to officials of the judiciary in all the states and throughout the federal court system, we helped them to better understand their problems and all the different remedies that were being tried, or had been tried, or were being considered, to deal with congestion and delay.

We analyzed the history of congestion and delay in the Los Angeles Superior Court, the largest single trial court in the United States--one in which the mean time to trial is now about 48 months. Although attempts have been made again and again to deal with congestion and delay in the Los Angeles Superior Court, none of these efforts have had lasting effect. (I do not mean to point a finger at this particular court; jurisdictions across the country have attempted to reduce backlogs with little permanent effect on time-to-trial or on caseload.)

We believe the explanation lies in the changing composition of the caseload in the Los Angeles Superior Court--a change which my earlier remarks about the "new litigation" foreshadowed. Since World War II, the Los Angeles Superior Court has evolved from essentially a debt-collection mechanism to an institution primarily concerned with personal injury litigation: handling product liability and medical malpractice suits of increasing scientific and technological complexity; and grappling with the problem of asbestos litigation, of which Los Angeles is a major center. In short, the case mix has gone from one which required considerably less than one judge-day per trial to one which currently calls for more than three judge-days per trial, without consciously recognizing the causes and without adjusting its management mechanisms to accommodate them. The ICJ is now working with the Los Angeles Superior Court to see if together we can discover some answers to that problem--answers that will provide for handling routine cases in a prompt, efficient, and low-cost way; and, at the same time, permit targeting of complex litigation for special channeling and treatment to process those cases expeditiously, fairly, and at less cost to the parties and the public.

We have concluded that there are indeed better ways. If one understands the system, if one develops the facts about the system, it is possible to make it work better.

One further illustration: As we began the Institute in 1979, California initiated a mandatory judicial arbitration program in an effort to avoid the conventional and congested litigation track by shunting cases through an alternative dispute resolution mechanism. We evaluated the first year's experience with that program, and I think

there is a very important lesson that flows from that analysis. We found that in the large districts in California, a system designed as an alternative intended to save time and money was costing *more* and taking *longer*--yet no one was aware of these effects. We were able to identify the factors responsible for this counter-intuitive and perverse effect. Our work led to legislation which sought to correct these effects. Now the system is operating more efficiently and at less cost.

The bottom-line message I want to leave with you here is that there are dangers in whatever reforms you seek--dangers of unintended effects that may, indeed, be perverse. I emphasize the need to not only watch what you are doing, but also the equally important need to monitor the results and the impacts of what you have done.

THE NEED FOR REFORM

Is there a need for reform? What do I draw out of our work? It seems to me that:

- When you have radical changes in the types of litigation that you are attempting to handle;
- When the outcomes reflect the consequences of those changes;
- When you see that the *public* costs of settling even routine disputes through jury trials exceed the stakes (the average jury trial in this country costs taxpayers around \$8,000--not including the costs to the parties--and the median verdict in Cook County is around \$7,900. As Chief Justice Burger has been saying for the last couple of years, when you have a system where the process costs more than the stakes, you have a system that is not operating as efficiently as it might.);
- When you find that you have a mean time to trial of five years or more;
- When you find your alternatives are costing more and taking longer;

we must conclude that change may indeed be necessary.

Furthermore, we have a system that appears to prevent actions that everyone in this room would agree are socially desirable. Here I am talking about a system that withholds compensation where compensation is deserved, or provides compensation on an irrational, random, or unfair basis. I am talking about a system which, for example, delays (and even

prevents) through its rules--and some of the derivatives of those rules--the cleanup of toxic waste sites and causes all kinds of perverse behavior.

Let me give you two cross-cutting examples to conclude this discussion about what research has to say about the problem--something about asbestos in the courts and something about medical malpractice.

Example--Asbestos in the Courts

The ICJ has just published a document dealing with asbestos litigation, and I would like to sum up what I think that report says about our civil justice system. At the beginning of the period of asbestos litigation the system had strong, positive aspects. It provided incentives for lawyers to seek compensation for injured parties when the outcomes were very uncertain and the financial rewards of seeking that compensation were far from clear. The system demonstrated its flexibility, its capacity to absorb new knowledge, at least within some limits, and its ability to incorporate this knowledge into the legal process; and it demonstrated that it held at least the promise of deterring behavior which was known to be potentially hazardous and injurious. But as the asbestos litigation system entered its current phase--the "mega-plaintiff/mega-defendant" phase--we are processing thousands of cases, taking thousands or hundreds of thousands of man-years, with expenditures in the billions of dollars, and the weaknesses of the system, I think, have begun to overshadow its strengths.

We have a system in which plaintiffs, who may or may not be injured, have cases filed over which they have essentially no control. We have a system which idealizes individualized justice, but in fact delivers justice by the carload, where the individual is submerged in the batch processing of hundreds, sometimes even thousands, of cases. We have a system in which the incentives to lawyers provided by the rules and by the outgrowths of those rules are often conflicting and transcend the interests of the people they represent. We find that the rules themselves are frequently inappropriate, or at least, inconsistent. States like New York, with a two-year statute of limitations, make it virtually impossible to seek compensation for any long-term disease, such as those associated with asbestos--whereas other

states with much longer statutes do permit recovery. We find that the litigation is virtually endless: Since there are 20 defense firms per case on average, representing 20 defendants, the same issues are litigated 20 times in each case. These cases go on day after day, week after week, month after month on a repetitive basis.

The procedures used in these cases are tailored to trials, trials which almost never take place, as opposed to settlements which eventually do. Dispositions are slow, outcomes are inconsistent. Judges themselves are responding to their own incentive systems, which tell them to avoid handling these dirty, protracted, difficult, and acrimonious cases that are often appealed. No judge has a strong incentive to subject himself to the appeal process. The dispositions, as I mentioned, are not just slow, they are glacial. So to put some flesh on the bones for the need for reform, I think it is fair to say that in this area, outcomes are affected by considerations outside as well as inside the law. One is left with only one question about the need for reform: Will it work?

Example--Medical Malpractice

That brings me to the medical malpractice policy research conducted by The Institute for Civil Justice. Here we sought to determine whether the reforms introduced in response to the medical malpractice situation of the mid-1970s had any effect; and if they did, whether or not they were the intended effects. We can give a qualified "yes" to these questions. On the whole, in those states that took action through their legislatures to dampen medical malpractice activity in contrast to states which did not, suits were less likely to be filed; when they were filed, they were more likely to be dropped; if they were pursued, they were more likely to be settled rather than tried--and settled for a lesser amount.

As we went through the various measures that were legislated, however, we found substantial variation in the effects observed. For example, simply relaxing the collateral source rule, which many had thought would have a profound effect on this litigation, seemed to have no statistically significant effect at all. Here was a reform measure which, like California's initial approach to arbitration, did not have

its intended effects. Mandatory inclusion of payments from collateral sources, on the other hand, did have a significant effect. The lesson from all of this certainly is not, "Don't try for improvement." Rather, the lesson that I draw from this is: Try to estimate in advance as best you can the impact of legislation on costs, outcomes, and process, and build into every reform measure--or every measure for change--the capacity to evaluate the impact of that change; to provide, if you will, for some mid-course correction that will be available if these reforms are not having their intended effect.

CONCLUSION

People with more authority than I--people who are on the firing line--told you earlier this morning that we are in tough times. This is not just a consequence of an "insurance problem," although I believe the current insurance situation is, in part, a high-profile symptom of the maladies of our civil justice system. That symptom may turn out in the long run to be a benefit: (1) if it forces attention to the problem from those who are responsible for policy changes, be they chief executive officers, legislators, the bar, or the judiciary; (2) if it forces us to understand the system and how it operates; and (3) if it enables us to produce constructive changes toward fairer, more efficient, and more effective resolution of our civil disputes and forces us to make rational choices among the options we are confronted with today.

I think underlying all our problems with the civil justice system is the inability of this country to decide whether it wants to have a pure compensatory system or whether it wants to have a fault-based liability system. We can't decide whether everybody should be compensated for every injury no matter what its cause, or whether we want compensation to be limited in a strict way, in a comparative way, or in a contributory way to those who have caused the injury. My personal assessment is that we are experiencing the disadvantages of trying to operate both systems in tandem, the worst of both worlds. We are attempting to compensate everyone within a fault-based system and we are incurring huge social overhead costs by attempting to do so. I believe it is time to focus on that overall choice and to be rational in doing so.



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Costs and Compensation Paid in Tort Litigation

James S. Kakalik, Nicholas M. Pace

1986



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Foreword

How much does the current system of compensating people for injury cost? How much of the money spent ultimately reaches injured parties' pockets? These questions are central to the controversy concerning the tort system today, and answers to them are fundamental to changes in the system as well as to measuring the system's efficiency and effectiveness.

Until now, both critics and supporters of the tort system could only speculate about system-wide costs and compensation based on fragmentary and inconsistent evidence. Recognizing the importance of these issues early on, the ICJ has been assembling and analyzing comprehensive cost and compensation information since its inception. An early study (J. Kakalik and A. Robyn, *Costs of the Civil Justice System: Court Expenditures for Processing Tort Cases*, R-2888-ICJ, 1982) presented detailed estimates of court costs to process tort cases—public costs borne directly by the taxpayers. Subsequently, *Costs of Asbestos Litigation* (J. Kakalik et al., R-3042-ICJ, 1983) set forth the costs of asbestos litigation borne by private parties, confirming the dominance of private over public costs and establishing the dominance of transactions costs over compensation awarded for this type of litigation. In this report for the first time we have calculated the total annual bill for resolving tort lawsuits brought in courts of general jurisdiction.

This report presents the overall annual costs of the tort litigation system in 1985, the components of those costs, and the compensation awarded. It shows that about 37 percent of the costs of resolving such lawsuits was spent on the legal fees and expenses of both sides. Another 15 percent was attributable to the value of the time that plaintiffs and defendants spend on litigation and that insurers spent on processing underlying claims. A scant 2 percent was used to defray the costs of the courts. Thus when all these transaction costs were paid, plaintiffs retained about 46 percent of every dollar spent to compensate them for their injuries.

Although this report provides useful information about how much is spent on tort liability litigation, how this amount has changed in recent

years as the system has evolved, and how compensation-to-cost ratios differ for different types of tort lawsuits, it leaves many important questions unanswered. In particular, the report does not attempt to tell us whether the estimated \$30 billion spent annually on tort litigation is "too much" or "too little" in relation to the benefits delivered—an issue of values as well as efficiency. Nor does it address the issue of the tort liability system's effectiveness vis-à-vis other systems for compensating injury that exist or might be imagined. But by providing a clear answer to the questions "how much does it cost, how much does it compensate" the study lays essential groundwork for those who seek to answer questions of efficiency, value, and cost-effectiveness.

Gustave H. Shubert
Director
The Institute for Civil Justice

Executive Summary

COSTS AND COMPENSATION PAID IN TORT LITIGATION

Scope of this Study

Many people are concerned over the amount of society's resources being expended on civil liability litigation. But as with many long-standing issues, neither critics nor defenders of the tort system have had much solid evidence to support their views. Instead, anecdotes abound and misinformation is plentiful. The facts are hard to gather because most litigation costs and compensation payments are private expenditures, and are not reported publicly.

We undertook this study to provide empirical evidence on the following issues:

- What was the total expenditure nationwide for tort litigation¹ that was terminated in state and federal courts of general jurisdiction in 1985?
- How much of the total was spent for the various costs of the tort litigation system: plaintiffs' and defendants' legal fees and other litigation expenses, the value of litigants' time spent on their lawsuits, the value of time spent by insurance personnel, and the costs of operating the courts?
- How much of the total consisted of net compensation to plaintiffs?
- How do litigation costs and compensation paid differ for torts involving motor vehicles and all other torts?
- How fast is the tort system growing?

¹Cases involving civil wrong or injury, other than breach of contract, for which the court may provide damages, e.g., cases involving personal injury, death, or property damage.

We do not pass judgment on whether the costs of tort litigation and the compensation paid are too high or too low, nor do we make any policy recommendations for reforming the civil justice system. Indeed, we draw no conclusions on whether the system should undergo reform. Making such conclusions or recommendations would necessitate additional research on the costs of alternative reforms and on the benefits of the current court system and alternative systems.

This study focuses on lawsuits filed in federal district courts and in state trial courts of general jurisdiction—which account for about 92 percent of all compensation paid in tort litigation—because the most reliable data derive from those cases. The study excludes: (1) all expenditures for insured and self-insured claims that did not involve lawsuits, and (2) all expenditures for small claims and for tort litigation in courts of limited jurisdiction.

The study presents a range for the total bill for our current tort litigation system. We made two estimates. We used available published and unpublished information from the insurance industry, data from surveys of lawsuits and claims, and information on the number of lawsuits terminated in 1985. We made our first estimate from the top down, starting with the insurance industry's aggregate data on direct losses and expenses paid in 1985, adding self-insurance, and then deleting payments for claims that were not lawsuits. We made our second estimate from the bottom up, starting with data from surveys of individual tort lawsuits, appropriately projecting the numbers to 1985, and then multiplying by the number of tort lawsuits terminated in 1985 to make a national estimate.

OUR NATION'S BILL: TOTAL COSTS AND COMPENSATION PAID IN TORT LITIGATION

We estimate that the total expenditure nationwide for tort litigation terminated in state and federal courts of general jurisdiction in 1985 was between \$29 billion and \$36 billion. These expenditures for the approximately 866,000 tort lawsuits terminated annually in state and federal courts of general jurisdiction² include compensation paid to plaintiffs, legal fees and related expenses for both plaintiffs and defendants, insurance company claims-processing costs for claims in suit,

²Approximately 866,000 tort lawsuits were terminated in state and federal courts of general jurisdiction in 1985: 827,000 in state courts and 39,000 in federal courts. Tort litigation related to motor vehicles constituted just over half of the total case terminations. Tort cases filed in 1985 were slightly higher: 869,000 in state and 42,000 in federal courts.

the value of litigants' time spent, and the costs of operating the court system for these cases.

Since our \$29 billion and \$36 billion estimates are based on information of varying accuracy from several sources, neither can be taken as exact. However, although they were made using very different methods and using different sources for much of their data, they are similar enough to give us confidence that they are reasonably accurate.

We believe the true figure lies between our two estimates. The \$29 billion estimate, based primarily on insurance industry data, is probably somewhat low because it includes data from the major lines of insurance that pay for liability litigation (the auto liability, medical malpractice, general liability, and multiperil insurance lines) but excludes the relatively small liability expenditures buried in other lines of insurance (such as the marine and boiler and machinery lines). The \$36 billion estimate, based primarily on lawsuit survey data, is probably somewhat high because the survey response rate in the Civil Litigation Research Project was somewhat higher for lawsuits with higher amounts of litigation activity (and presumably higher costs).³ Lacking sufficient data to adjust our estimates to account for these factors, we therefore present a range of estimates.

TOTAL COSTS OF TORT LITIGATION

Of the \$29 to \$36 billion, an estimated \$16 to \$19 billion was spent for the various costs of the tort litigation system, not including the net compensation paid to plaintiffs:

The breakdown of the total costs for defendants, plaintiffs, and the courts is as follows:

Defendants' Costs of Litigation

Defendants' total costs were an estimated \$8 billion to \$10 billion: \$4.7 to \$5.7 billion for legal fees and related expenses, \$0.8 billion for insurance company costs of processing claims in suit, and about \$2.5 to \$3.5 billion representing the value of defendants' nonlawyer time and other expenses. (See Table S.1.)

³See David M. Trubek et al., *Civil Litigation Research Project Final Report: Vol. 1, Studying the Civil Litigation Process: The CLRP Experience*, University of Wisconsin Law School, Madison, March 1983, p. I-120. Court records showed that the median case in the sample had 11 legal "events," while there were 13 legal events for the median case with a completed lawyer interview.

Table S.1

**DEFENDANTS' COSTS OF TORT LITIGATION TERMINATED
IN STATE AND FEDERAL COURTS OF GENERAL
JURISDICTION IN 1985**
(In \$ billion)

Type of Cost	Estimate 1, Primarily Based on Insurance Industry Data	Estimate 2, Primarily Based on Lawsuit Survey Data
Defendants' legal fees and expenses	4.7	5.7
Claims-processing cost for lawsuits	0.8	0.8
Value of defendants' time and other expenses	2.5	3.5
Total	8.0	10.0

The average⁴ tort lawsuit closed in 1985 resulted in an estimated \$5,400 to \$6,600 in defendants' legal fees and related expenses.

Plaintiffs' Costs of Litigation

Out of the total compensation that plaintiffs received, they paid \$6 billion to \$8 billion in legal fees and expenses, and the value of plaintiffs' time spent on the litigation was about \$1 billion. (See Table S.2.)

The average tort lawsuit concluded in 1985 resulted in an estimated \$7,300 to \$8,800 in plaintiffs' legal fees and expenses, which was approximately 30 to 31 percent of total compensation paid to plaintiffs.

Court Expenditures

Court expenditures are defined as those by any level of government (federal, state, or local) for processing tort cases in the court system. The total court expenditure nationwide, net of court fees paid by tort litigants, was an estimated \$0.5 billion.

⁴Throughout this report, the term "average" is defined as the arithmetic mean, and zero values always are included in the calculation. The average should not be interpreted as the typical value or as the median, which is the value below and above which there are an equal number of data values.

Table S.2

**PLAINTIFFS' COSTS OF TORT LITIGATION TERMINATED
IN STATE AND FEDERAL COURTS OF GENERAL
JURISDICTION IN 1985**
(In \$ billion)

Type of Cost	Estimate 1, Primarily Based on Insurance Industry Data	Estimate 2, Primarily Based on Lawsuit Survey Data
Plaintiffs' legal fees and expenses	6.3	7.6
Value of plaintiffs' time and other expenses	0.7	1.1
Total	7.0	8.7

**COMPENSATION PAID IN COMPARISON WITH TOTAL
COSTS OF TORT LITIGATION**

Of the \$29 to \$36 billion total national expenditure in 1985, plaintiffs received \$21 to \$25 billion in total compensation, or about \$14 to \$16 billion in net compensation, after deducting all their litigation costs. (See Table S.3.)

The average total compensation paid per lawsuit concluded in 1985 in a court of general jurisdiction was in the range of \$24,000 to \$29,000. This average includes all tried, settled, and dismissed lawsuits.

Table S.3

**COMPENSATION PAID IN COMPARISON WITH TOTAL COSTS OF
TORT LITIGATION TERMINATED IN STATE AND FEDERAL
COURTS OF GENERAL JURISDICTION IN 1985**
(In \$ billion)

Type of Expenditure	Plaintiffs	Defendants	Courts	Total
Total compensation	20.7-25.1	20.7-25.1	NA	NA
Total costs of litigation	7.0-8.7	8.0-10.0	0.5	15.5-19.2
Net compensation	13.7-16.4	NA	NA	13.7-16.4
Total expenditure	NA	28.7-35.1	0.5	29.2-35.6

NOTES: The first number in the range is the RAND estimate primarily based on insurance industry data, and the second number is the RAND estimate primarily based on lawsuit survey data.

NA = not applicable.

To deliver this \$14 to \$16 billion in net compensation, the tort litigation system expended \$16 to \$19 billion in transaction costs. These costs included \$11 to \$13 billion in combined defendants' and plaintiffs' legal fees and expenses, \$0.5 billion in court expenditures, and an additional \$4 to \$5 billion in the value of the time spent by litigants and their employees.

In sum, of all the money paid in compensation and legal fees and related expenses of tort litigation, the injured plaintiff receives approximately 56 percent in net compensation. The litigation system consumes the rest. If we add the value of the time spent by the litigants to the costs, the injured parties' net compensation sinks to 46 percent of the total expenditures.⁵ All the components of expenditures are shown graphically in Fig. S.1.

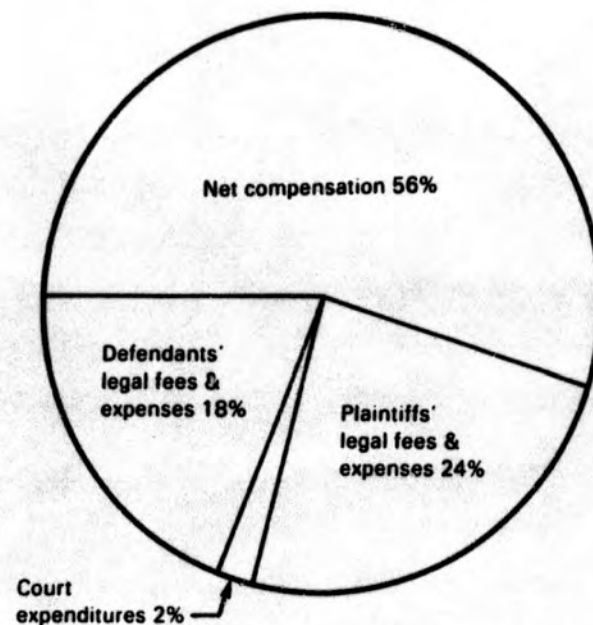
COMPARISON OF AUTO TORT AND OTHER TORT LITIGATION EXPENDITURES

How do litigation costs and compensation differ between torts involving motor vehicles and all other torts? Auto torts accounted for about half of all tort filings in courts of general jurisdiction in 1985, and also about half of the total compensation paid. (See Table S.4.)

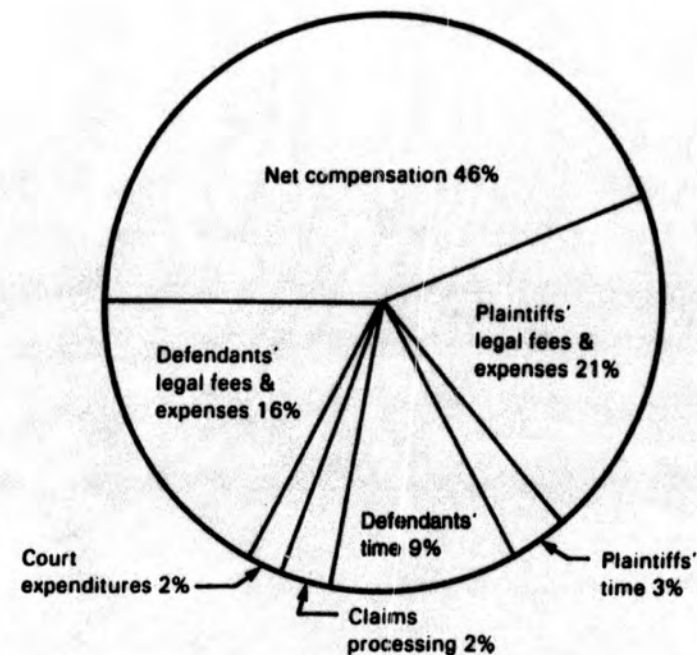
The legal fees and expenses paid by plaintiffs as a percent of total compensation were essentially the same for auto tort (31 percent) and other tort cases (30 percent). However, defendants' costs of litigation differ significantly. For auto tort cases, which are usually relatively straightforward, defense legal fees and expenses were an estimated 16 percent of total compensation. For other (nonauto) tort cases, which are often more complex, defense legal fees and expenses were much higher—28 percent of total compensation paid.

The plaintiffs' net compensation as a percentage of the total expenditures was 52 percent for auto torts and 43 percent for all other torts. This difference primarily reflects the relatively higher defendants' litigation costs for nonauto torts. All the components of auto and other tort litigation expenditures are shown graphically in Fig. S.2.

⁵Our two estimation techniques yielded similar results. The most important number, the plaintiffs' net compensation as a percentage of the total expenditures, was 47 percent using one method and 46 percent using the other.



Percentages of total expenditures
excluding value of litigants'
time and claims processing



Percentages of total expenditures
including value of litigants'
time and claims processing

NOTE: Totals may not sum to 100 due to rounding.

Fig. S.1—Costs and compensation paid for the average tort lawsuit
terminated in 1985 (average gross compensation
paid = \$24,000 to \$29,000)

Table S.4

**AUTO AND OTHER TORTS: COSTS OF LITIGATION AND
COMPENSATION PAID IN STATE AND FEDERAL
COURTS OF GENERAL JURISDICTION IN 1985**
(In \$ billion)

Type of Expenditure	All Torts	Auto Torts	Other Torts
Costs to plaintiffs	7.8	3.3	4.5
Costs to defendants	9.0	2.8	6.2
Court expenditures	0.5	0.2	0.3
Total costs of litigation	17.3	6.3	11.0
Net compensation paid	15.1	6.9	8.2
Total expenditures	32.4	13.2	19.2

NOTE: Dollars shown are the average of Estimates 1 and 2.

GROWTH OF THE TORT SYSTEM

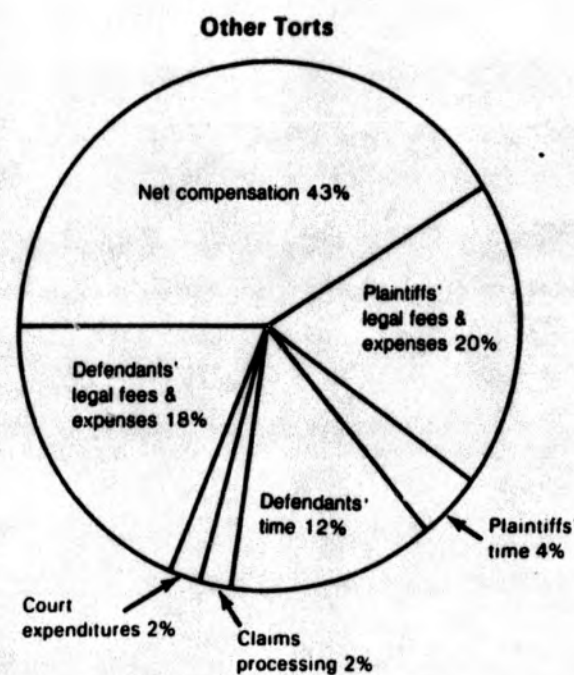
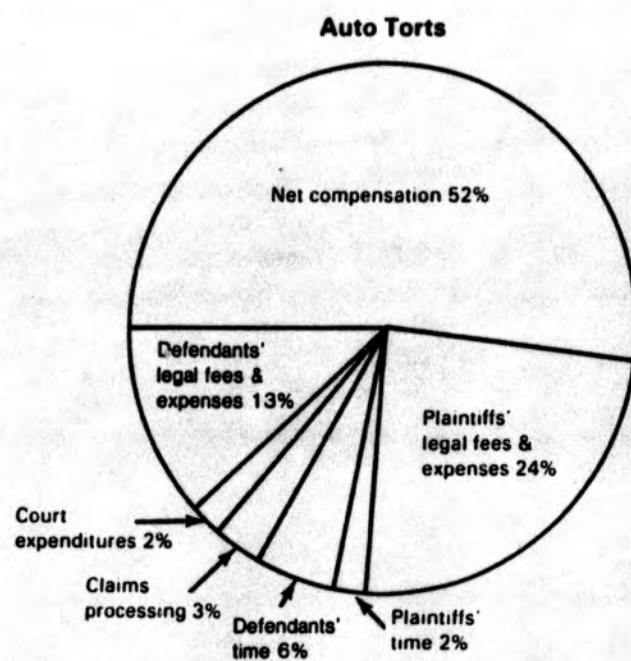
Although the main focus of our study has been analysis of litigation costs and compensation paid on cases terminated in 1985, in the course of our research we also compiled some data on the rate of growth in the tort system.

That growth rate depends on what part of the system you are considering. In terms of tort lawsuits filed, we estimate that the annual growth rate has averaged 3.9 percent since 1981—about 3.0 percent per capita.

The growth rate in the expenditures for the tort system has been higher. Although we do not have precise data on that rate for tort lawsuits, we can get a reasonable idea of that rate by looking at the growth rate in amounts paid per claim by insurers over the last five years. The following figures include both claims involving lawsuits and claims for which no lawsuit had been filed.⁶

The average annual growth rate in average compensation paid per liability claim over the past five years has been about 12 percent for auto claims and 14 percent for other tort claims—considerably higher than the 7 percent average growth in the Consumer Price Index during the same years. The average growth rate in insured defendants' average legal fees and expenses paid per liability claim over the past five years has been about 6 percent for auto and 15 percent for other tort claims. Thus, other nonauto tort expenditures per claim are growing faster than auto tort expenditures per claim.

⁶Of all insured liability compensation paid in 1985, we estimated 50 percent was paid for claims involving lawsuits.



NOTE: Percentages are based on the average of two estimates, and may not sum to 100 due to rounding.

Fig. S.2—Costs and compensation paid for the average auto and other tort lawsuit terminated in 1985

Because compensation payments and litigation expenditures are growing, the expenditures on cases filed in 1985 will be higher than they were on cases terminated in 1985.

SUMMARY

Plaintiffs with tort lawsuits terminated in 1985 in state and federal courts of general jurisdiction received approximately half of the \$29 to \$36 billion spent. The costs of litigation consumed the other half.

CONTINGENT FEES FOR PERSONAL INJURY LITIGATION

**PREPARED FOR THE HEALTH CARE FINANCING ADMINISTRATION,
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**

PATRICIA MUNCH DANZON

**R-2458-HCFA
JUNE 1980**

Rand
SANTA MONICA, CA. 90406

PREFACE

The research reported here was funded by the Health Care Financing Administration, U.S. Department of Health, Education, and Welfare, under Contract No. 600-76-0150, "An Economic Analysis of Medical Malpractice." Other Rand work performed under this contract includes a study of the disposition of malpractice claims (R-2622-HCFA), an analysis of the determinants of the frequency of malpractice claims (R-2661-HCFA/ICJ), and an examination of the level of malpractice insurance premiums (R-2623-HCFA).

Contingent fees are the typical form of payment for plaintiff attorneys on personal injury cases. Several states have imposed restrictions on contingent fees as one among several measures enacted in response to the growing cost of malpractice claims. This report presents a theoretical analysis of contingent and hourly wage contracts. The analysis is used to show the effect of these different forms of contract on the amount of litigation and to identify the probable effects of restrictions on contingent fees.

SUMMARY

Contingent fees are the typical mode of payment for plaintiff attorneys in personal injury litigation. Under a contingent contract, the attorney's fee is contingent on the outcome of the case: If the plaintiff wins, the attorney is paid some predetermined fraction of the award; if the plaintiff loses, the attorney receives no fee. Under an hourly wage contract, the plaintiff pays the attorney an hourly rate for his time, regardless of the outcome of the case. Thus, the contingent fee shifts the risk of zero return on the investment in litigation from the plaintiff to the attorney.

There is a long tradition of hostility toward contingent fees. A number of states have recently restricted their use in medical malpractice cases, in response to the rise in frequency and severity of malpractice claims. Opponents of contingent fees claim that giving lawyers the right to finance litigation makes them stir up cases, hoping for excessive financial reward. They also claim that the lawyer's financial stake creates a conflict of interest between lawyer and plaintiff. Proponents argue that by shifting the risk to the lawyer, contingent fees give legal recourse to plaintiffs who have legitimate claims but are unwilling to risk investing in an hourly wage contract. Further, they contend that by making the fee depend on the amount of recovery, contingent contracts align the interests of attorney and client. This alignment is particularly important when the client lacks the expertise to assess the lawyer's performance.

There is no conclusive theoretical analysis and little empirical evidence to support claims on either side of the debate. Yet, to the extent that fee arrangements affect the number of outcomes of suits filed, they affect the efficiency of the tort system in the performance of its dual functions of deterring negligent behavior and compensating people injured through negligence.

The purposes of this study are to clarify the debate over contingent fees and to determine the probable effects of restrictions on contingent fees on the frequency and severity of claims. The study analyzes the incentives created by the alternative assignment of risk

under the hourly and contingent contracts. The analysis assumes that attitudes toward risk affect the willingness of plaintiffs and attorneys to engage in litigation with uncertain payoff. Plaintiffs and attorneys may be averse to risk, or may prefer risk, or may be neutral to risk. A risk-averse person is one who would not participate in a lottery if the odds of winning were only even. A risk-preferring person would be willing to participate in a 50-50 lottery. A risk-neutral person is indifferent to the 50-50 lottery. In the medical malpractice context, a risk-averse plaintiff would not bring suit if the expected cost of litigation were as great as the expected award (i.e., the possibility of winning times the amount of the award).

The contractual assignment of risk and the parties' risk preference affect the number of cases that will be filed, the attorney's effort per case, and hence the probability of winning and size of award. If plaintiffs and attorneys are risk-neutral, the frequency of claims, the average gross recovery, and the plaintiff's probability of winning will be unaffected by the type of contract: The amount of litigation will be that necessary to maximize the net recovery of plaintiffs. The division of gross recovery into the net to the plaintiff and fee to the attorney is also unaffected, on average, over all plaintiffs. However, on cases won the actual fee is higher, hence net recovery is lower with a contingent fee than with an hourly wage contract. Obviously, on cases lost, the fee and therefore the plaintiff's out-of-pocket loss are zero.

Under the more plausible assumption that plaintiffs are typically risk-averse and lawyers risk-neutral, the frequency of claims, average gross recovery, and plaintiff's probability of winning will be lower with an hourly wage than with a contingent fee. This is because with an hourly rate, the plaintiff finances the litigation and bears the risk of zero return. With an hourly contract, the risk-averse plaintiff will spend less than is necessary to maximize the net value of his claim.

The analysis disputes the allegation that contingent fees result in excessive (above competitive) rewards for attorneys. Rational allocation of time by an attorney between contingent fee and hourly rate cases and market competition both act to control fees. True, the actual fee on cases won will exceed the value of time spent on those cases. However, the excess is compensation for the ex ante risk of receiving no

fee. What little empirical evidence is available confirms that, averaging over cases won and lost, the effective hourly earnings of attorneys paid on a contingent basis are similar to the hourly earnings of defense attorneys paid by the hour. This is consistent with competition and elimination of risk aversion from the contingent fee sector. Competition will tend to drive attorneys who are risk-averse out of the contingent fee sector. The risk-averse attorney would require an expected fee that exceeds the value of his time, whereas a risk-preferring attorney would accept a fee that is less than the value of his time. Thus, risk aversion on the part of the attorney tends to reduce the net recovery of the client, and risk preference tends to increase it.

Evidence on the ratio of legal costs to average award suggests that returns to attorney effort diminish more rapidly for the defense than for the plaintiff in severe injury cases. One implication of this asymmetry in the "judicial production function" is that a reduction in attorney wage rates will tend to induce a greater increase in the efforts of plaintiffs' attorneys and, hence, lead to an increase in the size of awards and plaintiff win rates. This factor may have contributed to the increase in frequency and severity of claims and pro-plaintiff shift in the law in recent years.

Constraints on the minimum time necessary to process a case may bar cases with low expected recovery from suit. This effect is independent of the type of fee contract: If small cases are barred from the judicial process, it is because of the high fixed costs, not the contingent fee system. Ceilings on the contingent fee percentage may significantly reduce the number of hours an attorney will spend on a case and effectively bar certain cases from trial. The types of cases likely to be affected are (1) cases of severe injury but uncertain evidence of negligence, (2) cases with low expected payoff (minor injuries), and (3) cases where the plaintiff is highly risk-averse. All these factors contribute to a relatively large fee percentage, in the absence of constraints.

Restriction on contingent fees would also tend to be regressive, deterring low- and middle-income plaintiffs from filing even meritorious

suits. Risk aversion, low wealth, and high borrowing costs all create obstacles to filing that a contingent fee reduces but may not totally eliminate. For example, a person with average risk aversion but assets of less than \$20,000 would be unwilling to hire an attorney on an hourly basis to handle a malpractice suit yielding the average award of \$29,456 (1977 data), even with a high probability of winning. Thus, in the absence of the contingent fee, the number of cases filed would certainly be less. Conversely, the common allegation that the contingent fee induces attorneys to bring claims with little legal merit has no basis in logic. The fact that the fee depends on winning provides an incentive to screen out cases with little legal merit--an incentive that is lacking with an hourly fee.

If ceilings or outright prohibition of contingent fees are intended to reduce the amount paid out through the malpractice liability system, they will probably be successful. However, if the socially optimal level of litigation is that which would be undertaken by a fully informed, risk-neutral plaintiff, the unconstrained contingent fee is likely to yield the closest approximation to this ideal. Without contingent fees, plaintiff risk aversion will produce a suboptimal investment in litigation and hence suboptimal deterrence and compensation. Even if the explicit policy objective were to reduce frequency of suits, size of awards, and expenditure on litigation, it is doubtful that limiting contingent fees is an efficient means of achieving these results.

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THE IMPACT OF FEE ARRANGEMENT ON LAWYER EFFORT

HERBERT M. KRITZER*
WILLIAM L.F. FELSTINER
AUSTIN SARAT
DAVID M. TRUBEK

This paper focuses on the impact of fee arrangement on the amount of time lawyers are likely to devote to civil cases ("effort"). Drawing upon data collected by the Civil Litigation Research Project, we compare the behavior of lawyers working on an hourly fee basis with the behavior of contingent fee lawyers. Like previous work on this issue, the paper finds that fee arrangement does influence the amount of effort lawyers devote to a given case. However, contrary to previous work, the analysis indicates that the effect is not a simple effect on hours worked but a more complex effect on a number of aspects of lawyers' behavior. Together these produce an effect on hours that varies by size of case. For modest cases (with stakes of \$5,000 or less), contingent fee lawyers spend less time on a case than hourly fee lawyers. Yet we find no statistically significant evidence of a differential in effort for larger cases but rather an indication that, if there is an effect, it may be in the opposite direction.

In recent years there has been considerable discussion of the impact that various fee arrangements have on the nature of the services lawyers provide for their clients. In particular, a number of scholars have drawn on economic theory to model the effect of fee arrangements on lawyer behavior. Several of these theoretical studies reach the conclusion that lawyers paid on a contingent fee basis will spend fewer hours on a case than would be optimal for the client. They also suggest that lawyers paid on an hourly basis will put in more than the optimal number of hours. These analyses are used, in some cases, to draw policy conclusions about the contingent fee contract.

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Except for Rosenthal's (1974) study of sixty cases, which does lend some support to the theoretical analyses, there have been no systematic empirical tests of these propositions. This paper presents an analysis of the effects of fee arrangement on lawyer behavior based on data drawn from interviews with 371 hourly fee lawyers and 267 contingent fee lawyers who worked on cases selected randomly from twelve state and federal courts.

I. THEORETICAL BACKGROUND

Lawyers are the primary mechanism connecting the citizenry to the legal order. Traditionally, they are pictured as neutral professionals who work only to advance the interests of their clients. This image has been called into question, however, by recent theoretical inquiries that focus on the economic incentives and personal goals lawyers bring to their work. Particular attention has been given to the effect of fee arrangement on the work that lawyers do for specific clients. Typically, the concern has focused on the implications of hourly versus contingent fee arrangements (see Franklin *et al.*, 1961; MacKinnon, 1964; Schwartz and Mitchell, 1970; Rosenthal, 1974; Clermont and Curriuan, 1978; Danzon, 1981; See, 1984), though Johnson's (1980-81) recent discussion of the impact of fee arrangement extends the analysis to various forms of third-party payment.

The argument about fee effects typically uses a hypothetical benchmark to appraise the performance of lawyers under different fee arrangements. Johnson (1980-81: 570), for example, uses the concept of an "alter ego" lawyer—one who is motivated entirely by the client's best interest and will, therefore, provide the amount of effort a fully informed client would authorize the lawyer to make. In Johnson's words, the lawyer "will invest additional resources . . . in a given case [assuming complete information] until *maximum net benefits* are achieved for the client."

These theories suggest that hourly fee lawyers will tend to deviate from the alter ego standard by investing greater resources than is in the best interests of the client, whereas contingent fee lawyers will tend to deviate in the other direction, investing fewer resources than the client might want. The usual explanation for this postulated behavior derives from the economic incentives that lawyers who handle litigation are assumed to face. For example, an hourly fee lawyer who has surplus time is expected to spend more time on a case than the

case warrants (as measured by the alter ego benchmark) because she can charge the client for time that would otherwise produce no income. In contrast, the contingent fee lawyer with more work than time available is expected to underinvest in some cases in order to work more on other cases that promise greater financial rewards. Rosenthal's (1974) study of sixty personal injury cases in New York, the only published empirical evidence about the potential conflict of interest created by different kinds of fee arrangement, appears to support the view that contingent fee lawyers "underinvest."¹

There are some fundamental problems with this over/under investment hypothesis. The first is that the analysis assumes too simple a model of how lawyer behavior and fee arrangement may interact. Lawyers are seen as agents who are exclusively motivated by economic self-interest and whose efforts in a given case (measured by the hours they spend) are *directly* and solely affected by the economic incentives presented by the fee arrangement under which they work. These assumptions are questionable.

While all (or most) lawyers are sensitive to economic concerns, and some no doubt fit the image of self-interested income maximizers at the heart of the over/under investment hypothesis, such a picture is a gross oversimplification. Certainly, lawyers may and frequently do temper economic interest with other competing values, including professional standards and a sense of responsibility to the client (cf. Kritzer, 1984). Thus, hourly fee lawyers may be well aware of the costs to the client of their services and incorporate the client's financial concerns into their time-allocation plans, even if formally they are free to bill as many hours as the case demands. On the other hand, contingent fee lawyers are not necessarily going to take short cuts and omit important activities just because, on the narrowest cost-benefit calculus, they themselves may not gain as much from the marginal effort in this case as in another they are handling. Even if they were tempted to do so, the necessity to secure client consent to follow certain courses of action would limit such inclinations.²

¹ This situation arises because there is a tendency for the return per hour of lawyer time to decrease rapidly after a certain threshold is reached. For example, a lawyer might be able to get a \$6,000 settlement after 20 hours of work; going to trial might double the recovery but might easily require another 40 hours of work. In this example, assuming a one-third contingent fee, the settlement would yield an hourly rate of \$100 while going to trial would produce an hourly rate of \$67.

² A client's ability (or inability) to pay a substantial fee may check the amount of effort the lawyer devotes to the case. Furthermore, hourly fee

Furthermore, when economic incentives do have an impact on lawyer effort, the effect may be less direct than the literature implies; fee arrangement may affect other factors, which themselves directly influence effort. If such is the case, it is impossible to understand fully the significance—or lack thereof—of a fee arrangement unless one takes into account the mediating effect of the other factors. Thus, it has been suggested that clients' attitudes toward the amount of time lawyers spend on cases should differ with the fee arrangement they employ. Where the lawyer is hired on a contingent fee, the client, it is said, should exercise control to be sure that *enough* time is spent on a case (Rosenthal, 1974). Where an hourly fee is used, however, clients are advised to make certain that lawyers do not put in *too much* time (Wessel, 1976). Were clients actually to follow such advice, fee arrangements would play a role in determining lawyer effort, but only through their influence on the nature and degree of the control exercised by clients.

The second problem with the over/under investment hypothesis is with the idea of using the "alter ego" lawyer's effort as the benchmark against which to measure contingent fee versus hourly fee hours. The additional resources that Johnson's alter ego lawyer decides to invest are measured by the marginal "costs to the litigants"—with more resources invested as long as their expected return is greater than those costs (Johnson, 1980-81: 570). This is, in principle, a relatively straightforward proposition with respect to the hourly fee lawyer. But for the client who has retained a lawyer on a contingent fee basis it is less satisfactory because there are no marginal costs to the litigant. Johnson's conclusion that the client's gains in such a circumstance are greatest when the recovery is greatest simply reflects the fact that lawyer hours are not a cost to such a client.³

Thus, we do not believe that the concept of the alter ego lawyer is helpful in analyzing the relative amounts of effort hourly fee and contingent fee lawyers devote to cases. An alternative approach to looking at the question of the impact of

lawyers may have other clients they charge at a higher rate (or who are repeat clients), and they will not overinvest on client A's case because they would prefer to spend more time on client B's.

³ This analysis represents something of a simplification because the client typically must pay expenses in addition to the contingent fee, and each marginal increase in time may involve some marginal increase in expenses. However, we have shown elsewhere (Kritzer *et al.*, 1984) that in most cases expenses represent less than 10% of the overall lawyer's bill.

fee arrangement on lawyer effort is to start with the simple hypothesis that if the argument about over and under investment is correct, we would expect a contingent fee lawyer to expend less effort than an hourly fee lawyer, *all other influences on effort being held constant*. If such an effort gap could be found, it would lend support to concerns about too much or too little effort, though one would not be able to state definitively whether the contingent fee lawyer was underinvesting, the hourly fee lawyer was overinvesting, or some combination of the two was occurring.⁴ Nonetheless, we would be much further along in our efforts to understand how fee arrangement affects lawyer effort. This is the analysis that we present below.

The next two sections describe the data and methodology we have used, followed by the results of our analysis of the relationship between fee arrangement and lawyer effort.

II. DATA

The data used in our analysis are drawn from court records and from hour-long interviews with the lawyers involved in the cases represented in the court records. Since we are interested in lawyer behavior, the lawyer rather than the case is the unit of analysis, and each case may be included more than once if interviews were conducted with more than one lawyer in that case.⁵ The interviews were conducted about two years after the close of the case discussed. Even though the attorneys were

⁴ We should point out that the "services" provided by the contingent fee lawyer may differ in important ways from those of the hourly fee lawyer. First, the contingent fee lawyer is providing a "risk-bearing" service. That is, a part of the contingent fee can be seen as payment for assuming the risk that there will be no (or very low) recovery in the case; alternatively, one might argue that the risk is a part of the overhead that the lawyer must bear, and hence the effective hourly rate must include that element of overhead. Second, the contingent fee lawyer virtually never receives any compensation until the case is completed and thus can be said to provide a financing service; while it is not uncommon for hourly fee lawyers to defer billing until a case is concluded (we have no specific information on the frequency of this practice), it is likely that on the average, the financing aspect of the hourly fee lawyer's charge is significantly lower than for the contingent fee lawyer.

⁵ There are a relatively small number of cases where more than one respondent is included for the same side of a case. Replicating the analyses "within" each side while randomly excluding the "extra" cases produced no change in our findings (see Trubek *et al.*, 1983b: II-103). When we contrast the two fee types, there is more of a problem since there are many cases with both a contingent fee plaintiff's lawyer and an hourly fee defendant's lawyer. However, we believe this is a nonproblem because the thrust of our findings is that the regression models for the two fee arrangements are different, and the inclusion of respondents from the same case should tend to pull the two equations together; thus we have, if anything, understated the differences in the regression coefficients.

asked to review their case files, the interview information may have been influenced to some degree by the recall process. The cases are drawn from twelve courts in five federal judicial districts: Eastern Wisconsin, Eastern Pennsylvania, Central California, New Mexico, and South Carolina. This analysis sample includes interviews with 371 hourly fee lawyers⁶ and 267 contingent fee lawyers from cases randomly selected from the twelve state and federal courts.⁷ Detailed information on the data collection can be found in Kritzer (1980-81), Kritzer *et al.* (1981), or Trubek *et al.* (1983b).

In order to analyze the data we had collected, we needed to deal with a number of "missing data" problems. First, we had to drop a substantial number of respondents (and thus cases) from the analysis. Naturally, we could not include cases where we lacked information on the number of hours the lawyer spent on the case (79 respondents). We also decided to drop cases where the respondents could, or did, not supply us with a money value for the amount at stake (our "stakes" variable—388 respondents).⁸ The result of our decision to drop cases with "missing" stakes data is that the regression subsample used below differs from our overall lawyer sample.

A comparison of the included and excluded cases showed that on many parameters the regression subset is not significantly different from the overall sample. However, there are some differences worth noting: the set of cases that have monetary stakes information and are thus included in the regression sample (1) are weighted more heavily toward tort and contract cases and include fewer divorce, regulation, and public law cases; (2) contain more state cases; and (3) include a higher percentage of lawyers who represent plaintiffs and work on a contingent fee basis. Our conclusions are drawn only from this subset of cases and should be interpreted accordingly.⁹

⁶ A small number of lawyers in our sample (about 1%) were paid on some combination of percentage and time; they were treated as hourly fee lawyers for purposes of the analysis below (see Clermont and Currihan, 1978).

⁷ Data were originally collected on 1649 cases; from these cases, we obtained hour-long, detailed interviews with 1382 lawyers (plus 430 very brief interviews covering additional cases in the sample; see Kritzer, 1980-81: 520, for more detail on why this was done).

⁸ We felt that stakes were sufficiently important in explaining hours that an analysis which omitted this variable would be of little value (and we were unable to find a way to fill in missing data on stakes). As we discuss below, we needed the stakes variable to adjust for a methodological problem inherent in data on litigation.

⁹ We did not have data on all the other variables for all the cases that remain in the regression subset. Since we could not eliminate all cases with missing data and retain an adequate sample, we estimated these missing items using means or medians. We omitted 26 respondents for whom we had

Although our analysis follows previous work in focusing on two types of fee arrangement—hourly fee and contingent fee lawyers—there are at least three “pure” types of fee arrangements for litigation-related work: the hourly fee, the contingent fee, and the flat, or fixed, fee, which is set in advance of the work.¹⁰ By and large individuals, who are usually plaintiffs,¹¹ hire lawyers on a contingent fee basis (with the major exception of divorce cases); organizations usually hire lawyers on a straight hourly basis. Only a small proportion of cases—typically small, simple ones involving individuals or small organizations—involve flat fee arrangements. Reflecting their relative scarcity in practice, the incidence of flat fee cases in our sample was too small for separate analysis.

III. METHODOLOGY

The methodology used in our analysis first tests the assumption that if the type of fee arrangement had no effect on the amount of lawyer effort, we should find that, controlling for the other factors that influence lawyer effort, hourly fee and contingent fee lawyers spend the same amount of time on a case. The basis of that test, and of the rest of our analysis, is a general model of the time allocation process. The model on which the analysis is based includes five clusters of variables: (I) the process of interaction among the parties, (II) case characteristics, (III) participant characteristics, (IV) participant goals, and (V) processing and case management characteristics. These clusters include a total of 30 variables. The individual variables are described in capsule form in Table 1; more detail may be found in the Appendix.

missing data items we did not feel that we could “fill in.” To avoid artificially depressing the variance in our data, we added a normally distributed random number to each of the means or medians that replaced missing data. Missing data were filled in this way for 1% or fewer of our cases except for the lawyer specialization variable, where 4% of the respondents had missing data.

¹⁰ A fourth arrangement, which few lawyers admit to using, might be described as “what the case is worth” (i.e., a subjective judgment regarding what the client is willing to pay). In addition to the “pure” types of fee arrangements, there are many combinations (e.g., hourly fee adjusted for results, which combines the hourly and the contingent arrangements). These may or may not be made explicit to the client.

¹¹ An early study of litigation suggested that individuals were usually defendants (Wanner, 1974; 1975). A more recent analysis indicates that if uncontested collections cases and divorce cases are omitted and if insurance companies are treated as the real defendant in tort cases where insurance is present, individuals are almost always plaintiffs (Grossman *et al.*, 1982).

Table 1. Summary Descriptions of the Variables in the Lawyer Effort Model

Cluster	Variable	Type	Description	means (and standard deviations)		expected direction ^a
				hourly	contingent	
PARTY INTERACTION (measures of pretrial activities by the other side)						
1	Pleadings	count ^b	number of pleading documents filed by other side	1.47 (1.13)	1.30 (1.29)	+
2	Motions	count	number of motions initiated by other side	0.63 (1.19)	0.86 (1.60)	+
3	Discovery	count	number of discovery events (depositions, motions, etc.) initiated by other side	2.14 (3.13)	2.18 (3.21)	+
4	Briefs	count	number of briefs filed by other side	0.70 (1.30)	0.62 (1.37)	+
CASE CHARACTERISTICS						
5	Stakes ^c	lawyer's estimate	lawyer's estimate of what her client should have been willing to accept or to do to settle the case	\$11,449 (\$7,334)	\$14,390 (\$6,567)	+
6	Complexity	lawyer's estimate	lawyer's subjective estimate of the complexity of the case (five-point scale)	2.39 (1.11)	2.53 (1.19)	+
7	Duration	count	number of days from filing to termination	422.84 (283.46)	418.97 (295.46)	+
PARTICIPANT CHARACTERISTICS						
8	Client Type	dummy	1 for individuals; 0 for organizations (as indicated by the court record)	0.29 (0.45)	0.84 (0.37)	-
LAWYER CHARACTERISTICS						
9	Specialization	factor score	indicator of degree to which the case fell within an area that the lawyer considered to be her specialty	0.08 (0.90)	0.06 (0.85)	-
10	Law School Performance	factor score	indicator of lawyer's performance based on rank in class and participation on law review	0.06 (0.69)	-0.03 (0.65)	-
11	General Experience	count	number of years lawyer has been practicing law	11.46 (8.93)	10.03 (9.06)	-
12	Litigation Experience	—	proportion of time devoted to litigation	68.31 (27.39)	66.26 (23.96)	-
13	Personal Capacity	factor score	measure based on items taken from Robinson and Shaver's (1989: 102-5) scale	0.04 (0.67)	-0.04 (0.65)	-
14	Craftsmanship	lawyer's estimate	lawyer's sense of professional craftsmanship (three-point scale)	2.51 (0.69)	2.50 (0.68)	+
PARTICIPANT GOALS						
Client Goals						
15	Get Most/Pay Least	dichotomy	client sought to get the most or pay the least (coded 1); client did not have this goal (coded 0)	0.44 (0.50)	0.32 (0.47)	+
16	Get Fair/Pay Fair	dichotomy	client sought to get a fair amount or pay a fair amount (coded 1); client did not have this goal (coded 0)	0.32 (0.47)	0.49 (0.50)	-

Table 1
(continued)

Cluster	Variable	Type	Description	means (and standard deviations)		expected direction ^a
				hourly	contingent	
<i>Lawyer Goals (as measured by reasons lawyer took the case)</i>						
17	Challenge	factor score	lawyer took case because it presented a challenge	-0.09 (0.85)	0.08 (0.88)	+
18	Public Service	factor score	lawyer took case because it provided an opportunity to serve the public or because of sympathy for the client	-0.15 (0.71)	0.06 (0.67)	0
19	Professional Visibility	factor score	the case would increase the lawyer's community standing or improve her position in the firm	0.03 (0.72)	0.05 (0.68)	+
20	Making Money	factor score	the case was taken because of the amount of money that could be earned	-0.08 (0.59)	0.25 (0.66)	-
21	Service to Regular Client	dichotomy	the lawyer took the case to provide service to a regular client	0.62 (0.48)	0.16 (0.36)	0
PROCESSING AND CASE MANAGEMENT						
22	Type of Court	dichotomy	federal court (1); state court (0)	0.56 (0.50)	0.45 (0.50)	0
23	Settlement Discussions	dichotomy	did occur (1); did not occur (0)	0.90 (0.30)	0.90 (0.30)	-
24	Trial	dichotomy	case did go to trial (1); case did not go to trial (0)	0.12 (0.32)	0.12 (0.32)	+
25	Pretrial Events SOP	factor score	use of standard operating procedures for pretrial activities such as pleadings, motions, and discovery	0.01 (0.99)	-0.84 (1.01)	-
26	Estimating Case Value SOP	factor score	use of standard operating procedures for estimating the value of the case	-0.02 (0.97)	-0.05 (1.02)	-
27	Plan for Motions	dichotomy	lawyer used a plan for motions (1); no plan used (0)	0.19 (0.40)	0.13 (0.34)	-
28	Plan for Settlement	dichotomy	lawyer used a plan for obtaining a settlement (1); no plan used (0)	0.70 (0.46)	0.68 (0.47)	-
29	Plan for Discovery	dichotomy	lawyer used a plan in conducting discovery (1); no plan used (0)	0.60 (0.49)	0.64 (0.48)	-
30	Client Control and Participation	factor score	client sought to exercise control over the lawyer's activity and to participate actively in decision-making regarding the case	0.20 (0.72)	-0.23 (0.71)	+ or -

^aA "+" indicates that a positive relationship is expected; a "-" indicates a negative relationship; and a "0" indicates that the direction of the relationship is not hypothesized in advance.

^b"Count" indicates that the variable was a simple count of some type of event or some other discrete entity (e.g., days—for duration).

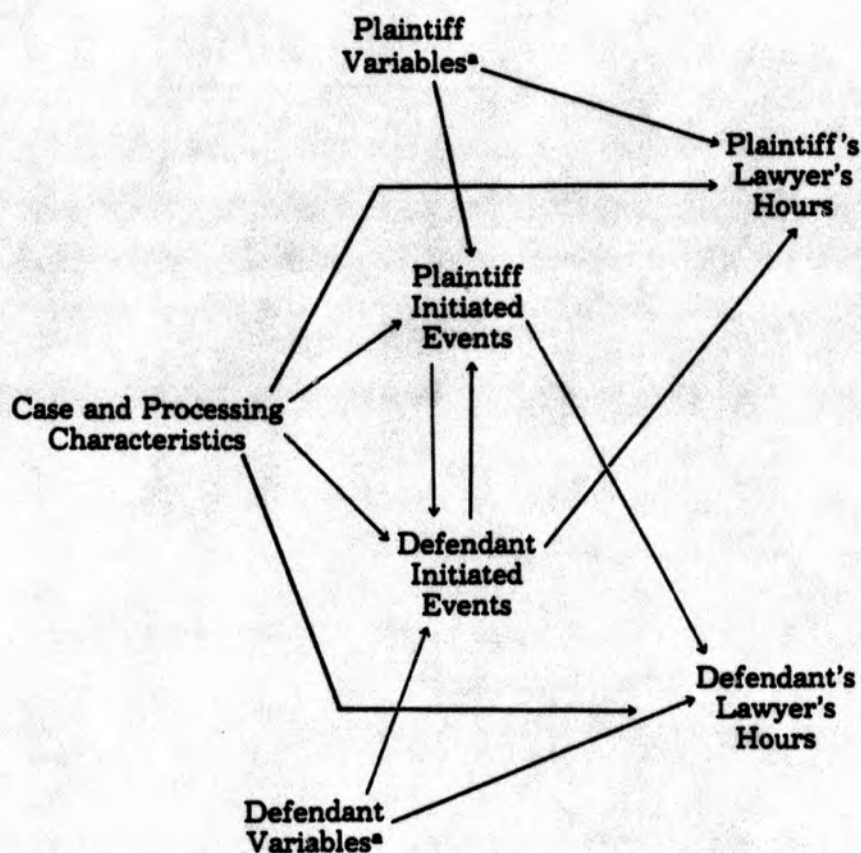
^cIn the actual analysis, stakes was adjusted for nonlinearity; the particular adjustment used was to take the square root of stakes.

Although common sense would suggest that the amount at *stake* in the case should be the most important determinant of the amount of time spent on the case by lawyers, we do not treat stakes as the *primary* determinant of the level of lawyer effort (although we do recognize its importance and include it as one of the case characteristics).¹² Lawyers often fail to spend

¹² At the start of our research, we did see stakes as the primary factor, with the other variables serving as modifiers of the basic relationship (Trubek, 1980-81). See Trubek *et al.* (1983b) or Kritzer *et al.* (1984) for a discussion of how this view came to be modified.

as much time on a case as the stakes may seem to warrant because the case settles before that effort has been expended. As we see it, therefore, stakes do not push the investment process along; rather they tend to place a cap on it.

Figure 1. Interaction Model of Lawyer Effort



- * The "party" variables include nature of participants, participant goals, and case management indicators.

It is not the stakes but the action of side A that is the primary determinant of the action of side B, and vice versa. Figure 1 suggests an image of this action-reaction model. Each lawyer's effort is a function of (1) the other side's action, (2) case and processing characteristics, and (3) "party" variables (i.e., goals, characteristics, and management efforts). A full analysis of this model would seek to account for each side's level of lawyer effort, each side's "initiatives," and each side's

goals and management decisions. The notion of interaction built into this model is intuitively pleasing because it is consistent with dispute processing in an adversary process like the American civil justice system. Because our purpose is to explain the "end variable," effort, we need focus only on the linkages in the model leading directly to the hours lawyers put in.¹³

We tested our theoretical model by linear regression analysis.¹⁴ This statistical technique allows us to measure the

¹³ The analysis of initiatives would be greatly complicated by the two-way linkage shown in Figure 1. It would also require a type of data set that is almost impossible to obtain (see Kritzer, 1980-81: 506, 520-21).

¹⁴ Before applying linear regression, we checked our independent variables for curvilinear relationships with the dependent variable, hours worked. The only variable for which curvilinearity appeared to be a significant problem was stakes. A curvilinear form made intuitive sense because one would expect, for example, that the difference between the time taken by two cases, one with \$2,000 at stake and the other with \$10,000 at stake, would be greater than the difference in the time taken by two cases, one with \$102,000 at stake and the other with \$110,000 at stake. A number of transformations were examined to adjust for this curvilinearity. Using the square root of the "raw" stakes measures seemed to work best; thus, all the analyses reported below use the square root of stakes rather than the original value.

We also checked our data for multicollinearity, outliers, and heteroscedasticity and found all three. We examined all our predictor variables for possible multicollinearity (high intercorrelations) and found problems only for our original standard operating procedure indicators (which included separate indicators regarding SOPs for estimating case value, discovery, motions, and pleadings). The SOP variables used in the analysis, (25) pretrial events SOP and (26) estimating case value SOP, were factor scores created in order to alleviate this problem (we started with four SOP indicators).

To examine the impact of outliers (occasional "big cases" picked up by our random sampling procedure) on our results, we performed the regression analysis with and without the outliers in the data set. Outliers were defined as those cases requiring more than 500 hours of lawyer time, involving more than \$250,000, taking more than 1500 days from filing to termination, or having more than 20 discovery events, 10 motions, or 10 briefs. For the hourly fee lawyers the inclusion or exclusion of the outliers had minimal impact on our results, but for the contingent fee lawyers the impact of outliers was clearly noticeable. For the sake of consistency, we omitted outliers for both hourly and contingent fee lawyers.

The last problem we had to deal with was heteroscedasticity, a violation of the assumption in regression analysis that the variance of the equation "error term" (i.e., the difference between the observed and predicted values of the dependent variable) be constant for all systematically identifiable subsets of observations. Heteroscedasticity tends to lower severely the power of significance tests. Common sense suggests that one should expect a greater range of predictive error for big cases than for small cases; this is consistent with the notion that stakes serve to "cap" the level of investment of time (and money) in a case. To adjust for the heteroscedasticity in our data, we applied an adjustment factor to each observation; this yielded a set of "corrected" regression equations. The specific adjustment used was to divide all of the variables for each case by the square root of stakes. For more detail on the rationale for the procedure, see Hilton (1976: 95-100). For most analytic purposes, the "corrected" results were employed, and it is these results that we generally report below.

independent effect of each explanatory variable holding the effect of the other variables constant. The dependent variable is lawyer's hours. The independent variables are the variables in the clusters specified in our model. It is important to note that the number of lawyer hours we report in our analysis below represents estimates based on our statistical model. Since we could not obtain samples with identical cases (except for fee arrangement), we have "created" such cases statistically using linear regression.

It became clear almost from the start of our analysis that hourly fee lawyers behaved rather differently from contingent fee lawyers—so differently, as reflected in the coefficients of many of our dependent variables, that it is statistically inappropriate to include fee arrangement as just another variable in our regression equations.¹⁵ We thus estimated two separate equations—one for hourly fee lawyers and the other for contingent fee lawyers. The amount of variance explained by the models was very similar for the two sets of lawyers. As shown in Table 2, R^2 is .494 for hourly lawyers and .525 for contingent fee lawyers.¹⁶ Also, three clusters of variables have important influences on hours for each group; two of these are the same for both types of lawyers (party interaction and participant goals). However, the third important variable type differs for the two (processing decisions for hourly fee lawyers and case characteristics for contingent fee lawyers). The

¹⁵ If it were not for the fact that the coefficient sets for hourly and contingent fee lawyers differed significantly, we could have tested the hypothesis that one group of lawyers spent significantly more time than the other by simply adding a dummy variable for fee arrangement to the equation. In the course of the analysis, we did this just to see what would happen; the *t*-statistics for the corrected and uncorrected forms (606 degrees of freedom) were 0.35 and 0.41, respectively, neither of which indicates statistical significance.

Given that the coefficients are in fact different for the two subgroups of lawyers, the effort gap will vary depending upon the specific values the other predictor variables take on. Consequently, one cannot speak of a single value for the effort gap, but must talk about the effort gap for a given situation. If there were only one predictor variable, say stakes, then one could talk about ranges of stakes where the gap does exist and about ranges where there is no gap. See Rogosa (1980) or Friedrich (1982) for more detail on the issues involved. Suffice it to say that there is no way to vary systematically the 30 variables we use; consequently, we will focus on a more limited set of situations.

¹⁶ Since our goal in assessing the overall fit is to look at the "best" fit we can get, we have used the R^2 from the uncorrected (ordinary least squares) regression estimates. Because of the mathematics of the correction for heteroscedasticity, the uncorrected estimate of the equation will always yield a better fit for the equation than will the "corrected" (weighted least squares) regression estimates (see Hilton, 1976: 100). On the other hand, the corrected estimates yield the best information regarding the significance of the contribution of individual variables or groups of variables.

relative importance of the influence of the different explanatory variables is also often substantially different. These differences can be seen in Table 3, though we will defer discussion of the specific differences until later.

Table 2. Summary of Regression Results for Hourly and Contingent Fee Lawyers

Main Group	Subgroup	df	Hourly ^a				Contingent ^b			
			F	p	R ² change	R ² change per df	F	p	R ² change	R ² change per df
I. PARTY INTERACTION (A)		4	11.01	.0001	.05806	.015	4.43	.0018	.06530	.014
II. CASE CHARACTERISTICS (B)		3	7.37	.0001	.02879	.008	13.97	.0001	.11602	.038
III. NATURE OF PARTICIPANTS		7	2.48	.0170	.02288	.005	1.05	.3963	.02280	.003
	C. Client Type	1	0.26	.6123	.00034	.000	4.70	.0312	.01487	.015
	D. Lawyer Characteristics	6	2.65	.0158	.02095	.003	0.40	.8762	.00795	.001
IV. PARTICIPANT GOALS		7	11.04	.0001	.10194	.015	2.87	.0111	.05843	.008
	E. Client Goals	2	15.41	.0001	.04053	.020	3.84	.0239	.02395	.012
	F. Lawyer Goals	5	9.28	.0001	.06117	.012	2.15	.0806	.03362	.007
V. PROCESSING AND MANAGEMENT		9	6.52	.0001	.07748	.008	0.74	.8740	.02072	.002
	G. Processing Decisions	3	6.36	.0003	.02517	.008	1.09	.3561	.01018	.003
	H. Case Management	6	7.85	.0001	.06216	.010	0.71	.6457	.01321	.002
R ²			.49362				.52535			

^aN = 371

^bN = 287

These differences mean that the cases in our samples for the two types of fee arrangements are not generally equivalent, making a comparison between the two groups, other things being equal, more difficult. We make our initial hourly fee/contingent fee comparison, therefore, using three separate estimates: we estimate (a) the time expended by both groups on the "average" contingent fee lawyer case (i.e., the difference between the hours spent by the two groups when each of the explanatory variables is set at its mean value for contingent fee lawyers); (b) the time spent by both groups on the average hourly fee lawyer case (estimated the same way); and (c) the time spent by both groups on the "average" case for the two groups of lawyers combined.

Before presenting the results of these procedures, we must discuss a final methodological complication. As we said earlier, contingent fee lawyers usually represent plaintiffs. Hourly fee lawyers are somewhat more evenly divided: in our sample 71 percent of the hourly fee lawyers represent defendants. This difference raises the question of whether our efforts to measure the effects of fee arrangement might reflect, at least in part, differences between how plaintiffs' and defendants' counsel approach cases. Since contingent fee defendants' counsel are

rare or nonexistent, we cannot carry out the analysis with strict controls for side. We can, however, compare three groups—contingent fee lawyers, hourly fee plaintiffs' lawyers, and hourly fee defendants' lawyers—to try to sort out this question. If hourly fee plaintiffs' lawyers more closely resemble hourly fee defendants' lawyers than contingent fee lawyers, we can tentatively attribute the difference more to fee arrangement than to side.¹⁷

Table 3 presents, in addition to regression results for both sets of lawyers, the equivalent results for hourly fee lawyers broken down by side. Unfortunately, the implications of the breakdown are not clear. In part this reflects the small sample size for hourly fee plaintiffs and collinearity problems (i.e., correlations among the independent variables) that appear to exist *within* these two subgroups.¹⁸ The results for hourly plaintiffs' lawyers appear to fall somewhere between those of hourly defendants' lawyers and contingent fee lawyers. For some variables, hourly plaintiffs' lawyers are closer to hourly defendants' lawyers while on others they are closer to contingent fee lawyers. Consequently, although our observed effects may reflect some influence of side, we can say with a high degree of confidence that there is a fee arrangement effect in addition to any effects of side.¹⁹

¹⁷ One might at first glance be concerned that the results we have presented represent the peculiarities of personal injury litigation since common wisdom is that contingent fees and personal injury cases "go together." This is in fact true, but in a different way than is commonly believed. The table below shows tabulations for the number of respondents by area of law, fee arrangement, and side (for hourly fee lawyers).

	Torts only	Contract only	Both Tort and Contract	Neither Tort nor Contract
Contingent Fee	210	64	20	42
Hourly Fee Plaintiff	14	90	4	35
Hourly Fee Defendant	142	95	15	54

As the table shows, while most tort plaintiffs hire lawyers on a contingent fee basis, many cases not involving torts are handled by contingent fee lawyers as well (see also MacKinnon, 1964: 25-28). Thus, the results reported above for contingent fee lawyers do not simply reflect the peculiarities of personal injury litigation.

¹⁸ The problem of multicollinearity accounts for some of the apparently bizarre results in Table 3 (e.g., the large negative coefficient of the trial variable for hourly plaintiffs' lawyers).

¹⁹ This conclusion is reinforced by a global hypothesis test, also known as a Chow test (see note 26 below). The test showed that hourly fee plaintiffs' lawyers differed in a statistically significant way from both of the other two groups. The significance tests were done with both corrected and uncorrected data:

Table 3. Detailed Regression Results for Hourly and Contingent Fee Lawyers

	Contingent		All Hourly		Hourly Plaintiff		Hourly Defendant	
	b	std. error	b	std. error	b	std. error	b	std. error
I. PARTY INTERACTION								
A. Party Interaction								
1. Pleadings	-2.004	1.684	-2.675	1.875	-4.274	2.782	-4.348	3.022
2. Motions	.145	1.744	-1.085	1.730	5.650	4.151	-.412	2.037
3. Discovery	2.885***	0.881	2.731***	0.832	4.527**	1.787	4.325***	1.046
4. Briefs	4.119*	2.262	8.851***	1.912	4.205	4.889	7.580***	2.201
II. CASE CHARACTERISTICS								
B. Case Characteristics								
5. Stakes	.310***	0.048	.232***	0.051	.234**	.088	.303**	.082
6. Complexity	5.963***	1.798	3.780**	1.465	20.728***	4.222	1.777	1.612
7. Duration	.012*	.006	.013*	0.006	-.002	.018	.001	.007
III. NATURE OF PARTICIPANTS								
C. Client Type								
8. Individual/Organization	-9.440*	4.354	-1.949	3.843	-15.742*	8.124	-5.508	4.531
D. Lawyer Characteristics								
9. Specialization	2.455	2.143	1.872	1.794	-8.048	4.738	3.430	2.014
10. Law School Performance	2.710	2.793	3.442	2.118	-1.336	4.291	6.076**	2.578
11. General Experience	-.038	0.182	-.009	0.179	-.135	0.458	-.070	0.205
12. Litigation Experience	-.038	0.089	.037	0.062	.034	0.128	.088	0.073
13. Personal Capacity	1.144	2.354	-1.228	2.388	-10.770	7.238	1.950	2.694
14. Craftsmanship	-.052	2.170	7.028**	2.357	6.637	6.781	9.447***	2.702
IV. PARTICIPANT GOALS								
E. Client Goals								
15. Get Most/Pay Least	-9.931*	4.359	-18.352***	3.718	-22.539*	13.644	-21.185***	4.223
16. Get Fair/Pay Fair	0.983	3.581	-20.486***	4.259	-13.908*	7.855	-27.488***	5.685
F. Lawyer Goals								
17. Challenge	2.540	2.089	.909	1.898	0.178	5.983	2.889	2.124
18. Public Service	2.944	2.483	-11.017***	2.309	-3.252	4.993	-13.550**	2.805
19. Professional Visibility	0.620	2.578	6.185***	2.043	-5.483	6.087	8.180**	2.383
20. Make Money	3.165	2.480	1.185	2.043	10.020	6.916	0.741	3.022
21. Service to Regular Client	-13.238**	5.119	3.214	3.394	-14.287	9.423	11.037**	4.088
V. PROCESSING AND MANAGEMENT								
G. Processing Decisions								
22. State/Federal	0.341	4.181	14.116***	3.373	0.583	8.785	13.314***	4.008
23. Trial	-.055	6.705	4.637	5.714	-52.285**	21.483	2.372	5.971
24. Settlement Discussions	10.842	6.094	3.022	5.739	15.318	17.935	-1.371	6.895
H. Case Management								
25. Pretrial Events SOP	0.986	1.708	2.676*	1.505	-2.644	3.844	1.763	1.773
26. Estimating Case Value SOP	0.972	1.562	1.397	1.580	-4.251	3.746	.045	1.870
27. Plan for Motions	-11.389	6.725	11.109**	4.029	6.603	11.443	9.127**	4.429
28. Plan for Settlement	-3.487	3.755	-7.281*	3.671	-3.711	8.942	21.423***	3.910
29. Plan for Discovery	-1.179	3.488	15.921***	3.325	5.088	18.545	-9.131*	3.983
30. Client Control and Participation	1.750	2.404	-4.691*	2.192	2.935	4.916	-6.804**	2.519
CONSTANT	-3.335		-21.473		-35.983		-19.098	

*p < .05

**p < .01

***p < .001

	corrected			uncorrected	
	df	F	p	F	p
Contingent versus (hourly plaintiff)	31/313	1.509	.0441	2.039	.0013
Hourly defendant versus (hourly plaintiff)	31/309	2.274	.0002	2.005	.0011

IV. RESULTS

Our estimates²⁰ of the number of hours an hourly fee lawyer and a contingent fee lawyer will spend on the three prototypical cases—the average hourly fee case, the average contingent fee case, and the overall average case—are shown in Table 4. As can be seen, the differences are not substantial. Nor is the direction of effect consistent. For the average contingent fee case, the contingent fee lawyer is expected to spend slightly more time than the hourly fee lawyer (51 versus 48 hours). For the average hourly fee case, the hourly fee lawyer is expected to spend substantially more time (51 versus 42 hours) than the contingent fee lawyer. The overall average is a reflection of the other two combined—the hourly lawyer spends somewhat more time, but not as much more as for the hourly fee average case (50 versus 46 hours).

Table 4. Predicted Number of Hours for the "Typical" Case

	Hourly Fee Lawyer	Contingent Fee Lawyer
"Average" Hourly Fee Case	50.6	42.1
"Average" Contingent Fee Case	47.9	50.7
Overall "Average" Case	49.5	45.7

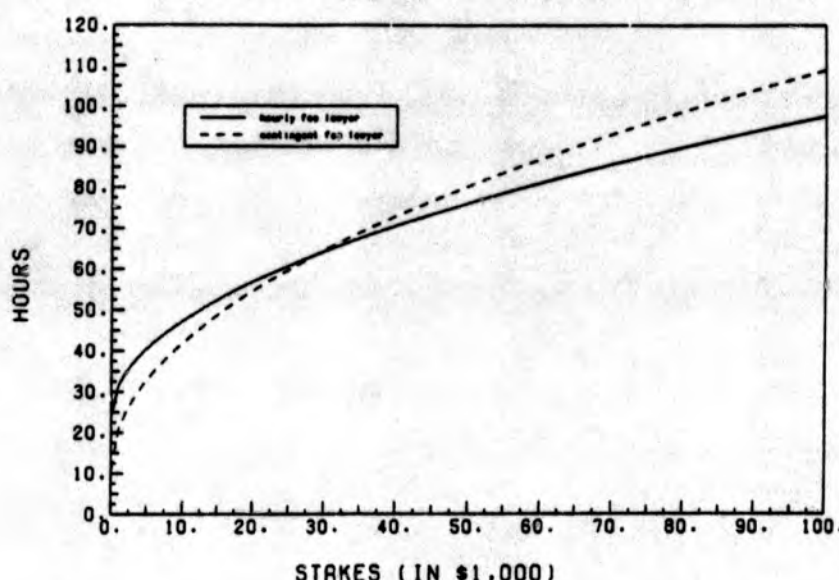
When we disaggregate the impact of fee arrangement by size of stakes (holding all other variables at their mean value for both types of fee arrangement taken together), the interesting pattern shown in Figure 2 appears.²¹ The solid line represents our estimate of the average time investment of hourly fee lawyers, controlling for the other variables in our model, and the broken line represents the estimate for

²⁰ In making our estimates, we have retained our original model rather than discarding the nonsignificant variables in Table 3. We have chosen to do this for theoretical reasons; namely, we believe that our basic model is correct on theoretical grounds, and we prefer not to risk the problems created by misspecification arising from the omission of variables, particularly since there is less danger from misspecification by inclusion than from misspecification by exclusion (see Deegan, 1974; 1976).

²¹ We have selected stakes as the case characteristic to vary because it seemed to us that in most discussions of litigation, the first question that is typically asked is, "what's at stake?" Moreover, most discussions relating to "access to justice" raise the question of "modest" cases (typically under \$10,000), and the problem of providing legal services and other dispute processing services in such cases (see, for example, Johnson *et al.*, 1978).

contingent fee lawyers.²² What Figure 2 suggests is that contingent fee lawyers put in less effort for small cases than do hourly fee lawyers, but they put in *more* time for "big" cases. Such behavior would be economically rational. The contingent fee lawyer's potential return is closely related to the potential recovery (i.e., stakes), and if a greater effort with a "big" case will substantially increase the recovery, lawyers would be behaving rationally in expending more effort.

Figure 2. Expected Lawyer Time by Stakes



Before we can draw any conclusions with confidence, we must see whether the differences shown in the figure are statistically significant.²³ To do this we relied upon the

²² The reason that the lines curve even though the regression equation is linear is that the predictive equation uses the square root of stakes, whereas Figure 2 uses the untransformed version of stakes.

²³ There is another problem with this interpretation as well. While it is rational for the contingent fee lawyer to spend more time on a big case than she would spend on a small case, it is not altogether clear why she would spend more time than the hourly fee lawyer. It may be that the contingent fee lawyer spends more time on big cases because she does not have to justify her time expenditure to the client and can behave in a risk-neutral fashion while the hourly fee lawyer has clients who are more likely to be risk-averse and thus unwilling to risk having to pay for all the time that the lawyer might reasonably spend on the case. The problem with this explanation is that the hourly fee lawyer is very likely to be representing an organization, which, as a "repeat player" (see Galanter, 1974) in the litigation game, should behave in a risk-neutral fashion. Also, one could argue that it is the contingent fee lawyer who should be risk-averse, since the lawyer stands to receive no compensation if she loses the case (though if she has no other cases to work on, the value of the lost time is minimal).

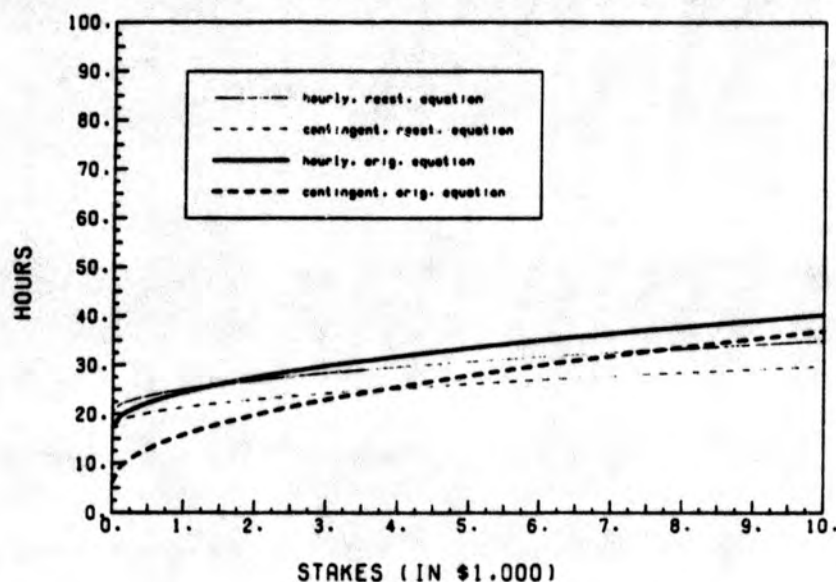
sampling errors of the estimated means for lawyer hours for \$1,000 increments in stakes (from zero to \$100,000). These sampling errors are a function of the deviation of the particular stakes value from the mean of stakes; the sampling errors are smallest near the mean and increase rapidly as the distance from the mean increases. Let us denote the estimated mean of lawyer hours for fee lawyers as $\hat{\mu}_H$ and its sampling errors as $\hat{\sigma}_H$; the corresponding estimates for contingent fee lawyers are $\hat{\mu}_C$ and $\hat{\sigma}_C$. The test statistic for a given value of stakes is a t-statistic:

$$t = \frac{\hat{\mu}_H - \hat{\mu}_C}{\sqrt{\hat{\sigma}_H^2 + \hat{\sigma}_C^2}}$$

A separate test statistic is computed for each value of stakes.

Using the test, we obtain significant differences only for stakes of \$6,000 or less. At the last point of statistical significance, \$6,000, the gap in lawyer effort is about 7 hours—32 hours for hourly fee lawyers versus 25 hours for contingent fee lawyers. To look more closely at the stakes range for which fee arrangement does have a significant effect on overall hours, we recomputed the value for the two curves using the mean values for cases \$10,000 and under. The revised curves, shown as the heavy lines (solid for hourly, broken for percentage) in Figure 3, are essentially the same as for the equivalent portion

Figure 3. Expected Lawyer Time by Stakes for Small Cases



of Figure 2, since the shape of the curve is determined by the coefficient for stakes. We then reestimated the regression equations using \$10,000 and under cases only, and once again recomputed the curves (shown as the lighter pair of lines in Figure 3). This pair of lines differs from the other pair in two regards. First, they are virtually parallel to one another (i.e., the gap between the lines changes little as stakes move from zero to \$10,000). This is because there is little difference in the stakes coefficients in the \$10,000 and under regressions. Second, they rise at a much slower pace. Elsewhere we have reported that we found little or no relationship between effort and stakes when the analysis is limited to cases involving \$10,000 or less (Kritzer *et al.*, 1984), and this is what is showing up here. Nonetheless, for both pairs of curves, the line for contingent fee lawyers falls below that for hourly fee lawyers, which is consistent with our finding that there is an "effort gap" for cases in the lower stakes range.

Although we have found a statistically significant difference in effort only for cases with relatively modest amounts, this finding is not unimportant. First, as we have reported elsewhere (Trubek *et al.*, 1983a), the median case in state courts (based on cases terminated in 1978), where well over 95 percent of civil cases are filed (cf. Flango *et al.*, 1983: 5), involves about \$4,500 (even after eliminating "small claim" type cases involving less than \$1,000). Thus, our analysis indicates that for something over 50 percent of the civil suits for money damages filed in the United States, lawyers working on a contingent fee basis would put in significantly less time than would lawyers working on an hourly fee basis.²⁴ Second, as we noted in our discussion of the significance test we employed, the power of the test is greatest in the range in the vicinity of the mean, and thus the lack of significant differences for larger cases may be an artifact of the reduced power of the test.

The absolute size of the gap is not great—7 hours. In relative terms, however, it is sizable—nearly 22 percent of what hourly lawyers spend on a typical \$6,000 case. Should we be concerned about this difference? The answer depends on whether the time differential makes a difference in case

²⁴ Some lawyer activity produces costs other than fees; for instance, medical examinations unconnected to treatment or the stenographic and travel costs of depositions. If such costs were generally relevant in small cases, which we doubt, plaintiffs might secure larger net recoveries with lawyers who did less for them if the difference in effort avoided such costs.

outcome.²⁵

Whether or not the "effort gap" is important in terms of outcome, it is clear that fee arrangement has an important impact on lawyer behavior. The kinds of variables influencing lawyers differ depending on the fee arrangement, even though the overall ability of our model of lawyer effort to account for that effort was about the same for hourly fee and contingent fee lawyers.²⁶ These differences were summarized in Table 2 (which shows the relative influence of the variable clusters). Let us now turn to a more detailed examination of the results shown in Table 3 (looking at the coefficients for contingent fee lawyers and the overall coefficients for hourly fee lawyers).

Both groups of lawyers are influenced by party interaction variables and by participant goals. However, there are major differences *within* the clusters (i.e., which individual variables are important and how important they are). For example, the variable in the party interaction cluster that has the biggest impact for hourly fee lawyers, the number of briefs filed by the other side, also has the largest impact for contingent fee lawyers, but the impact is only half as large in the latter case. In the case characteristics group, all the variables are significant for both groups, but the impact of both stakes and complexity is larger for contingent fee lawyers. Few of the nature of participants variables have an influence for either group of lawyers, but the ones that do are different. Client type is significant for contingent fee lawyers while craftsmanship is significant for hourly fee lawyers. Participant goals are much more important for hourly fee lawyers, both in terms of the number of statistically significant coefficients and in terms of the magnitude of the effects of the individual variables. For example, both the indicators of client goals are significant for hourly fee lawyers, whereas only one is significant for contingent fee lawyers (and that one is about half the size of the corresponding coefficient for hourly fee

²⁵ We have conducted some analyses of case outcomes (see Kritzer *et al.*, 1985) and have been unable to detect any relationship between outcomes and effort for contingent fee lawyers. This analysis has not explored, to date, the influence of relative effort (i.e., the impact of the opposing party's lawyer's effort).

²⁶ Even though the differences are quite clear, it is worthwhile to test formally the hypothesis that the set of coefficients for hourly fee lawyers differs from the set for contingent fee lawyers. This was done using the method described by Specht and Warren (1976), which is also known as the Chow test. The test was done for both the corrected and uncorrected form of the equation. Both tests produced highly significant F statistics (30 and 576 degrees of freedom), 2.118 for the corrected form ($p < .001$) and 1.878 for the uncorrected form ($p < .01$).

lawyers). None of the processing and management variables are significant for contingent fee lawyers whereas most are significant for hourly fee lawyers; furthermore, the values of the coefficients differ sharply for the two groups.²⁷ The one variable that was expected to have different effects for the two groups of lawyers, client control, has the expected effect for hourly fee lawyers, but has no significant influence (though the sign is in the predicted direction) for contingent fee lawyers.²⁸

The time allocation of hourly fee and contingent fee lawyers is dependent on different factors. Contingent fee lawyers appear to be highly sensitive to the potential productivity of their time and are less affected by craft-oriented factors. This effect can be seen in two variables: craftsmanship and response to opposing party's briefs. The contingent fee lawyer does spend time in response to the opposing side's briefs, but that response involves half as much time per brief as the response of hourly fee lawyers.²⁹ While the hourly fee lawyer is strongly influenced by commitment to craftsmanship, the contingent fee lawyer is not. On the other hand, the level of effort of contingent fee lawyers goes up at a faster rate as the level of stakes increases than that of hourly fee lawyers. In other words, the contingent fee lawyer appears sensitive to the potential return to be achieved from a case, which is closely related to the stakes. The hourly fee lawyer's return from a case is not as tied to stakes, and other types of considerations (e.g., the client's goals, the nature of the forum, etc.) have a greater influence.

Before turning to our conclusions, we should briefly explore the *side* versus *fee arrangement* question as reflected in the results shown in Table 3. As we noted previously, the effect of some variables is dissimilar for hourly fee defendants' and plaintiffs' lawyers while for other variables it is the contingent and hourly plaintiffs' lawyers who have dissimilar

²⁷ We should note that the difference in significance cannot be attributed to the smaller sample size for contingent fee lawyers. With one exception, even if the contingent fee lawyer sample were as large as the hourly fee sample (and everything else were unchanged), the coefficients would not differ significantly from zero; the one exception is *plan for motions*, and there the sign of the coefficient is different.

²⁸ One variable that we have not considered in this analysis is area of law; one might expect that defense lawyers in personal injury cases would differ from other hourly fee lawyers. Where we included area of law as a variable, we found that it exerted no significant influence over and above the effects represented by the other variables in the model (Kritzer et al., 1984).

²⁹ We should note, however, that this might be a "side" effect; as shown in Table 3, the contingent fee coefficient is virtually identical in magnitude to that for the hourly plaintiff, though the latter is not statistically significant.

coefficients. To be more specific, we find substantial differences based on side for court (state versus federal), plan for settlement, client control and participation, and briefs; we find substantial differences based on fee arrangement for discovery events, stakes, and client goals (get most/pay least and get fair/pay fair). For this latter set, the differences are consistent with what the arguments about fee arrangements would lead one to expect: contingent fee lawyers are more sensitive to stakes (which determine their expected return), put in less time on discovery (i.e., try to reduce their time), and are less concerned with their clients' goals. At the same time, the side-based dissimilarities tend to muddy the picture: e.g., where we had strong theoretical reasons to expect contingent fee lawyers and hourly fee lawyers to be influenced differently by client control and participation, the differences we find seem to be side-related; although we found that contingent fee lawyers put in less time than hourly fee lawyers responding to discovery, when it comes to briefs, the differences that we seem to find are between defendants' lawyers and plaintiffs' lawyers (irrespective of fee arrangement). Despite this "haziness," Table 3 shows some clear differences between hourly and contingent fee lawyers, and those differences make theoretical sense.

V. CONCLUSIONS

Simple hypotheses about the relationship between fee arrangements and the way lawyers handle civil cases are misleading, at best. Where such models predict that, other things being equal, contingent fee lawyers would always spend less time on a case than hourly fee lawyers, our data show that this effect occurs only in cases involving less than \$10,000; above that level (if anything) the opposite effect appears to be occurring. Moreover, where simple models suggest that fee arrangements affect lawyer behavior directly, we have found that the effects, when they exist, are more indirect and work through other variables, which themselves must be taken into account before one can understand what difference fee arrangements will make in any particular case.

Second, our analysis suggests that even if contingent fee lawyers and hourly fee lawyers spend similar amounts of time on cases, the factors that affect time allocation differ. Thus, contingent fee lawyers seem to be more sensitive to the productivity of their time and are less influenced by purely craft-oriented considerations. As the amount of money at stake

in a case goes up, the contingent fee lawyer seems to be willing to invest relatively more time in cases.

More than anything else, our study points to the need for additional conceptual and empirical work on fee arrangements before anything definitive can be said about the policy issues that are typically addressed in the literature. We have pointed out that the assumptions underlying some of the criticisms of the contingent fee are questionable. Even if contingent fee lawyers do spend less time on cases than would hourly fee lawyers, the client is still benefited by a low cost, low risk opportunity to pursue a claim which would otherwise be unavailable. When one finds, as we did, that the alleged effort gap may not always exist, there is further reason to question the policy conclusions that have been drawn so far.³⁰

This rationale does not lead to an unqualified defense of the contingent fee against the criticisms that have been leveled at it. We do find an effort gap for many of the cases brought in civil courts. But we do not know whether this gap affects case outcomes, nor do we know whether any lesser outcomes can be justified by offsetting advantages of the contingent fee to the client. Thus, while the study clarifies some empirical and policy issues in the debate over fee arrangements, it certainly does not settle them.

APPENDIX: VARIABLE MEASUREMENT

The specific indicators for each of the variables that our model suggests would be important in accounting for lawyer effort and their construction have previously been reported in detail (see Kritzer *et al.*, 1984). Here we simply summarize the indicators used for each of the clusters.

The variable to be explained is the number of hours that the lawyer(s) reported having worked on the case; if more than one lawyer within a firm had worked on a case, we combined the time for all of the lawyers to arrive at a single figure.

The independent variables were grouped into five separate clusters. The first cluster of explanatory variables was designed to measure *party interaction*. As indicators of interaction, we used counts of each of four types of court events that were initiated by the *other* side; these indicators were chosen because a principal vehicle of the action-reaction process is the formal initiation of activities such as discovery and motions (both procedural and substantive). Our

³⁰ Another policy question concerns the propriety of the fees earned by contingent fee lawyers in "big" cases (see Grady, 1976). Our analysis does not speak directly to that question.

assumption was that each event required a response that would result in the expenditure of lawyer time. Four separate measures were created by counting four distinct types of events: *pleadings* (1),³¹ *nondiscovery motions* (2), *discovery events* including depositions, interrogatories, discovery motions, and the like (3), and *briefs* (4).

The second cluster of explanatory variables measures *case characteristics*. These include measures of the amount of money at stake, the complexity of the case, and the length of time from the date of filing to the date of termination (through judgment or dismissal by whatever means and/or for whatever reason). We have already noted the reasons why we expected *stakes* (5) to be an important determinant of the time invested. The implications of *complexity* (6) also appear intuitively obvious: cases vary in the ease with which questions of law may be answered and proof made. The more complex the law involved, or the more difficult the problems of proof, the more time it should take to conduct the litigation. Our measure of complexity was based on lawyer responses to a question in which they were asked to rate the complexity of the case on a five-point scale. Finally, we expected that the length of time a case took from the filing of the complaint to the termination of the suit would have an independent effect on the number of hours lawyers put in. Cases that stretch over long periods of time may require a lawyer periodically to refresh her memory and may also lead her to "find" things to do. We measured *duration* (7) as the number of days that elapsed from the filing of the case to its termination.

Our third cluster of independent variables deals with the *nature of the participants* (i.e., the lawyers and their clients). We classified clients—*client type* (8)—as individuals or organizations because the literature suggests (Galanter, 1974) that organizations will devote more resources to litigation than individuals. This may, at least in part, reflect the ability of organizations to subsidize legal fees by deducting them as a business expense from taxable income, which is not ordinarily possible for individual litigants.

With respect to lawyers, our information was more extensive. We created six separate indicators designed to measure variation in lawyer characteristics. *Specialization* (9) measures whether the case in our sample fell within the lawyer's specialty or not. *Law school performance* (10) is the lawyer's self-report performance as a law student (i.e., rank in class and participation on the law review). Amount of *general experience* (11) is the number of years the lawyer had been practicing law. *Litigation experience* (12) is the proportion of the lawyer's time devoted to litigation. *Personal capacity* (13) is a measure of the lawyer's feelings of efficacy based on a standard measure. Lastly, *craftsmanship* (14) is the likelihood (self-reported) of spending extra time to make marginal improvements on legal documents; the more likely this was, the higher the "craftsmanship" score. We expected the first five lawyer characteristic variables, which measure ability and self-confidence, to be inversely related to the amount of time lawyers spent on cases. More experienced,

³¹ The numbers and letters in parentheses are variable numbers and subset flags that we use to index the tables.

specialized, and confident lawyers should not have to spend as much time on cases as attorneys who were newer to the field of law, the courtroom, or to practice in general. The craftsmanship variable was expected to work the other way. One would expect lawyers who are more oriented toward "craftsmanship" to spend more time on their cases, other things equal.

Our fourth cluster of independent variables relates to the *participants' goals*; these we measured for both lawyers and clients using data from the lawyers. We asked lawyers what they thought their *clients' goals* were in the case. The "goals" variable, in a sense, modifies the "stakes" variable. We expected the lawyer whose clients wanted to get the most (or pay the least) to put in more time on a case than the lawyer in an otherwise identical case whose client only wanted "fairness." We assumed that those clients (about 24% of our respondents' clients) who mentioned neither "*get most/pay least*" (15) nor "*get fair/pay fair*" (16) but did mention something else (in response to the open-ended question that we had asked) were primarily concerned with goals other than money.

Since lawyers may have their own motives, which might affect the amount of time they spend on cases, we also asked our respondents why they had taken the case in question. From their answers, we constructed five *lawyer goal* variables designed to measure the predominance of different factors in the lawyer's decision to take the case. These are:

challenge (17)—did the case present a challenge; was it intellectually interesting?

public service (18)—did it provide an opportunity for service to the public; was it taken because of sympathy for the client?

professional visibility (19)—would the case increase the attorney's community standing, improve her position in the firm, create publicity for the firm?

making money (20)—was the case taken primarily for the amount of money the lawyer would earn?

service to regular client (21)—did the lawyer take the case simply to service a regular client?

We felt that variations in these goals were likely to affect hours worked, but we did not have strong expectations concerning the nature of some of the other goals. For example, we thought that the professional visibility and challenge goals might lead to more hours than the making money goal, but we had no *a priori* expectations about the direction of the "public service" variable's effect.

The final cluster of variables we constructed related to the processing and management of the case. During a case a number of key *processing decisions* are made which might affect lawyer effort. The decision whether to file in *state or federal* (22) court, assuming a choice exists, can have an effect because different courts may have different rules and norms that affect the amount of effort required to process a case. Decisions to engage in *settlement discussions* (23) and to take a case to *trial* (24)³² may also have an impact on lawyer effort.

³² The trial variable is taken from the court record and indicates whether a trial was started, even if the case settled during trial.

We expected lawyers to vary in the *case management* techniques they used and that these differences might affect the hours they put in. We used three indicators: standard operating procedures (SOPs), plans, and client control. We thought that the lawyers who developed standard operating procedures (e.g., the use of preprinted forms, computer programs, and the like) for *estimating case value* (26) and for *pretrial events* (25) would be able to reduce the number of hours spent on a case, other things being equal. Explicit planning should also increase lawyer efficiency and thus decrease time spent: *plans for motions* (27), *plans for settlement* (28), and *plans for discovery* (29) indicate whether or not the lawyer reported planning in advance for the activities in question.

We thought *client control and participation* (30) would influence hours spent, but that the effect would differ for hourly fee lawyers and contingent fee lawyers. Following Johnson (1980-81), we thought that hourly fee clients would most often want to reduce the hours spent by their lawyers and contingent fee clients would try to increase the time spent by their lawyers. For these reasons we expected that a high level of client control for hourly fee lawyers would reduce the number of hours those lawyers worked on a case, other things equal. In contrast, we expected that for contingent fee lawyers high client control would lead to an increase in the number of hours the lawyer would work on the case (see Rosenthal, 1974). We measured the client control variable using the lawyers' descriptions of (a) reporting procedures to the client and (b) the client's participation in the key decisions in the case.

Our complete model includes the dependent variable "hours" and the 30 independent variables that we thought might explain variation in hours expended. In developing our model, we had to rely on "empirical feel" as well as on existing theory since the available theory was incomplete and largely untested. Table 1 sets forth all the variables described above, including measurement method, summary statistics, and the expected direction of the relationship (0 designates variables for which we had no expectation of the direction of the possible effects).

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ABOUT THE AUTHORS

WILLIAM L.F. FELSTINER is Senior Behavioral Scientist at the Institute for Civil Justice, Rand Corporation, Santa Monica, California.

HERBERT M. KRITZER is Professor of Political Science at the University of Wisconsin-Madison. His major research is civil justice, and in recent years he has authored or coauthored articles in *American Bar Foundation Research Journal*, *UCLA Law Review*, *Law & Society Review*, *Journal of Politics*, *Judicature*, *Justice System Journal*, *American Behavioral Scientist*, *Policy Studies Journal*, and *Law and Contemporary Problems*. He is currently working on an analysis of the negotiation process in ordinary civil litigation.

AUSTIN SARAT is Professor of Political Science at Amherst College and for 1985-86 will be a Visiting Fellow at the Centre for Socio-legal Studies at Oxford University. He has published articles on the emergence and transformation of disputes, access to justice, and the costs of civil litigation. He is currently studying lawyer/client interaction, the transmission of legal ideology, and the generation and processing of products liability and mass injury litigation.

DAVID M. TRUBEK is Voss-Bascom Professor and Director of the Institute for Legal Studies at the University of Wisconsin-Madison. He served as the Director of the Civil Litigation Research Project, and has published on disputes processing, social theory and law, public interest law and public advocacy, and third world legal studies.

Medical Malpractice Experience of Physicians

Predictable or Haphazard?

Frank A. Sloan, PhD; Paula M. Mergenhausen, PhD; W. Bradley Burfield, MA;
Randall R. Bovbjerg, JD; Mahmud Hassan, MBA, PhD

This study uses a large malpractice database from Florida to assess the concentration of losses among physicians, predictability of claims experience, characteristics of physicians with favorable vs unfavorable experience, and effects of claims experience on physicians' practice decisions and on actions taken by the state's licensing board. Most payments by insurers involved a comparatively small number of physicians. Physicians with relatively prestigious credentials had no better, and on some indicators, worse claims experience. If anything, physicians with adverse claims experience were less likely to make subsequent changes in their practice, such as quitting practice or moving to another state. Physicians with very poor claims histories were more likely to have complaints filed against them with the Florida licensing board, but the sanctions against physicians with either poor or excellent histories were not severe. Physicians with adverse claims experience from incidents that arose between 1975 and 1980 had appreciably worse claims experience from incidents that arose during 1981 to 1983.

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MEDICAL malpractice is in its second decade of "crisis," a crisis that has medical, insurance, legal, and public policy dimensions.¹ Physicians frequently complain about the increased threat of lawsuits and the substantial rise in premiums. Moreover, it is said that some physicians are refusing to accept high-risk patients, retiring earlier, leaving certain fields such as obstetrics, and ordering more tests than medically neces-

sary in order to defend themselves in the event of a lawsuit.^{2,3}

Questions naturally arise about the relationship of physicians' competence and malpractice experience. Some observers fear that a few "bad apples" among physicians cause the lion's share

See also p 3320.

of malpractice suits. Others contend that the best physicians are most likely to face lawsuits—those willing to provide high-risk care to litigious patients.

All physicians have been affected by the threat of malpractice claims and most have had claims filed against them.

However, some physicians have much worse claims experience than others. This study addresses the following issues relevant to the randomness of claims and the appropriate reaction to it: What fraction of total malpractice payments on behalf of insured physicians is accounted for by the physicians with the largest payments? How does the concentration of payments compare across risk classes? How well does claims history predict future claims? What are the characteristics of physicians with adverse claims histories? To what extent does an adverse claims history predict future decisions by physicians about their specialty, movement to another state, and retirement? Are physicians with bad claims experience more likely to be brought up for disciplinary action by the state licensing board?

METHODS

Data Sources

Most data for this study came from the Florida Medical Professional Liability Insurance Claims file, which contained all claims closed in Florida between 1975 and the first quarter of 1988. The data were reported to the Florida Department of Insurance and made available for public use. We selected only claims against physicians for analysis. We used the physician's name as well as the indemnity and associated expenses paid on each physician's claim. The physician's name was needed to match claims with data on all US physi-

From the Health Policy Center, Vanderbilt University, Nashville, Tenn (Dr Sloan, Mergenhausen, and Hassan); American Medical Association, Chicago, Ill (Mr Burfield); and Urban Institute, Washington, DC (Mr Bovbjerg). Dr Hassan is now at the University of Alabama—Birmingham.

Reprint requests to Health Policy Center, Vanderbilt University, Box 1503-Station B, Nashville, TN 37235 (Dr Sloan).

cians obtained from the American Medical Association's Physician Masterfile.⁴

To analyze claims experience, we first aligned claims with the time they occurred and other relevant factors. We constructed an incident-year file, reallocating claims from year of closure to time of occurrence. (We could not develop a file based on the year the claim was filed because year-of-filing information was not requested by the Florida Department of Insurance for claims closed before 1985.)

The year a claim closes is a poor reference date for two reasons. First, it fails to match claims experience with risk factors during years of exposure to claims. Claims often are closed several years after an incident actually occurred.⁵ Thus, a claim's closing date would provide an inappropriate match with exposure, because a physician could have left the state or retired and still have claims closing several years later. Second, incidents with the highest payments typically take the longest to close. Therefore, a physician's history based on a file of closed claims could substantially underrepresent high-payment cases for those physicians who had more recently started practice in the state. We based our analysis on data from between 1975 and 1980 because this period provided an adequate time span for analysis and gave the latest incidents 8 years in which to close. Previous research indicates that 98% of claims in Florida during that period closed within 8 years.⁶

Physicians' characteristics between 1975 and 1980 from the American Medical Association's Physician Masterfile were merged with the claims file. Only physicians who practiced in the state of Florida for at least 3 years between 1975 and 1980 were included. Using this minimum experience avoids the type of random fluctuation that might result from a single year's unusual experience. The merger produced a physician claims history file that included the number of incidents that resulted in claims for each physician for each exposure-year between 1975 and 1980, indemnity payments and other insurer defense costs per exposure-year for each physician (year for which the physician was providing at least some patient care in the state of Florida), and other selected physicians' characteristics. We dropped closed claims that did not appear to be true claims. Sometimes physicians report an incident to an insurance company purely as a precautionary measure. If the insurer did not spend any money on the case or show any other indication of effort in defense of the claim, we dropped the claim from our analysis.

We focused on three categories of physician specialty—one low risk and two high risk—as designated by the majority of insurance carriers between 1975 and 1980. The low-risk group consisted of several medical and other low-risk specialties—allergy and immunology, dermatology, internal medicine, pathology, pediatrics, psychiatry, public health, and rheumatology. We subsequently refer to this as the *medical specialty group*. One high-risk group consisted of obstetrics and gynecology and anesthesiology (hereafter called the *obstetrics-anesthesiology group*); and the second, orthopedic surgery, plastic surgery, and neurosurgery (hereafter referred to as the *surgical specialty group*).

Classification of Physicians into Four Payment Groups

We classified physicians in each specialty group into "no-payment," "low-payment," "high-payment," and "very high-payment" physicians based on claims that originated between 1975 and 1980 as follows: (1) *no payment*—physicians with no incidents between 1975 and 1980 that resulted in indemnity or associated loss expense; (2) *low payment*—physicians with one or more incidents between 1975 and 1980 and indemnity plus associated loss expense at or less than the mean for the specialty group; (3) *high payment*—physicians with one incident and indemnity plus associated loss expense greater than the specialty group mean; and (4) *very high payment*—physicians with two or more incidents and indemnity plus associated loss expense greater than the specialty group mean. This same breakdown was also done substituting median for mean values, although we do not report the median results here.

Determinants of Claims Experience

To determine factors associated with adverse vs favorable claims experience between 1975 and 1980, we performed multinomial logit analysis.⁷ This form of regression analysis is used when the dependent variable is defined in terms of several mutually exclusive alternatives. In our application, we defined three categories for each specialty: no payment, low payment, and high and very high payment collapsed into a single group. Independent variables consisted of the physician's education characteristics, practice characteristics, and sex. We estimated separate equations for each of the three specialty groups. When characteristics varied by year, we used the characteristics for the physician's last exposure-year between 1975 and 1980.

Physicians' Education Characteristics.—These were (1) year of medical school graduation—before 1938, between 1938 and 1968, and after 1968; (2) board-certification status; (3) country of medical school—developed English-speaking (including the United States and Canada), developed non-English speaking, and less developed; and (4) medical school ranking, represented by a variable distinguishing graduates of the top one third of US medical schools as ranked by the 1977 *Gourman Report*⁸ from graduates of other schools, both domestic and foreign.

Physicians' Practice Characteristics.—These were (1) number of direct patient care hours per week in three categories—40 hours per week or less, 41 to 60 hours per week, and more than 60 hours per week; (2) whether the physician engaged in research; (3) whether the physician taught; (4) solo vs nonsolo practice; and (5) primary employment of the physician—medical resident, administration, research or teaching, or direct patient care. Direct patient care was further subdivided into self-employed, government, other, or unclassified.

Other.—Location of practice was divided into six areas in Florida (1) all nonmetropolitan standard metropolitan statistical area (SMSA) counties; (2) metropolitan counties in northern Florida other than Jacksonville; (3) Jacksonville SMSA; (4) Orlando, Daytona Beach, Lakeland-Winter Haven, and Melbourne-Titusville-Palm Bay SMSAs; (5) southern central Florida SMSAs other than those previously mentioned; and (6) Miami-Hialeah, Fort Lauderdale-Pompano Beach, and West Palm Beach-Boca Raton-Delray Beach SMSAs. We also included explanatory variables to distinguish among detailed specialties within each of the three broad specialty groupings.

Other Claims-Related Analyses

Responses to Claims Experience.—For all four payment groups, we assessed whether there was a systematic relationship between claims experience with incidents between 1975 and 1980 and specialty, location, and retirement decisions. To isolate the effect of previous claims experience on such decisions, we estimated logit regressions for each type of decision with the following explanatory variables: the payment groups, year of graduation, sex, specialty, whether the physician was a medical student, and board-certification status. We also investigated whether the licensing authority in Florida, the Department of Professional Regulation, was more likely to receive complaints

Table 1.—Distributions of Payments per Exposure-Year by Specialty Group (in 1987 Dollars)

	Medical Specialties			Obstetrics-Anesthesiology			Surgical Specialties		
	Lower Boundary Value, \$	Total Payments, %	Total Physicians, %	Lower Boundary Value, \$	Total Payments, %	Total Physicians, %	Lower Boundary Value, \$	Total Payments, %	Total Physicians, %
Zero payments	0	0.0	85.2	0	0.0	65.7	0	0.0	51.8
\$1-median	1	1.5	7.3	1	1.4	17.1	1	2.1	24.0
Median-mean	1120	12.4	4.5	2010	12.0	11.0	2743	14.4	15.2
>Mean, 1 claim	8929	49.7	1.7	20514	17.4	1.7	16318	9.3	1.4
>Mean, >1 claim	8929	26.4	1.3	20514	69.2	4.5	16318	74.2	7.8
Total	...	100.0	100.0	...	100.0	100.0	...	100.0	100.0
No. of observations	3837	...	...	1302	...	...	796	...	...

about the physicians with the most adverse claims experience and what the disposition of the complaints was. Because the department had to look up records of each physician individually, we limited this latter analysis to the 166 physicians with the most adverse claims experience in the three specialty groups—the very high-payment group—and a comparison group of 166 randomly selected physicians in the same specialties who had no incidents between 1975 and 1980 that resulted in payments.

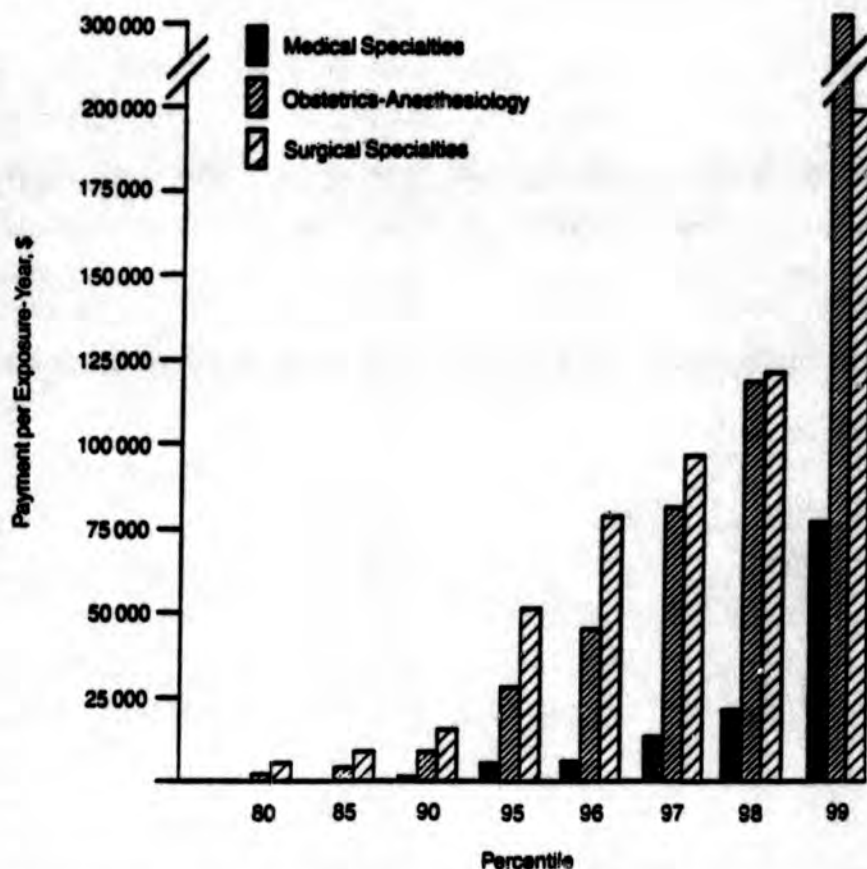
Prediction of Payments Based on Incidents From 1981 to 1983.—We compared mean payments by insurers for all four payment groups defined on the basis of incidents between 1975 and 1980 with their mean payments from incidents during 1981 to 1983. In this way, we could determine whether experience in the earlier period is predictive of experience during the later period.

RESULTS

Concentration of Payments

Having a claim was a relatively rare event for physicians in the low-risk, medical specialty group (Table 1). Eighty-five percent of such physicians had not even one incident that resulted in some payment (indemnity payment and/or associated loss expense) between 1975 and 1980. By contrast, 66% of the obstetrics-anesthesiology group and 52% of the surgical specialty group had no such incidents. Payments were often low as well; only small amounts were spent for claims against many physicians who did have claims.

In all three groups, a large share of the total payment by malpractice insurers involved a comparatively small number of physicians (Table 1). More than 85% of the payment for physicians in the medical specialty group were made on behalf of only 3% of physicians (1.7%+1.3%). Payments in the other two specialty groups were slightly less concentrated. In the obstetrics-anesthesiology group, more than 85% of payments were incurred by approximately



The payment per exposure-year: various percentiles of payment distribution.

6% of physicians. For the surgical specialty group, three fourths of the total payment was made on behalf of 7.8% of physicians.

The median annual payment on behalf of physicians with payments was low, ranging from slightly more than \$1000 for the medical group to almost \$3000 for the surgical group. Payments near or below the median were often for the cost of defense rather than for compensating claimants. Mean annual payments were considerably higher than medians, reflecting the skewed distribution of dollars toward large cases; they ranged from approximately \$9000

to \$21 000 per year. Physicians in the very high-payment group (greater than the mean and more than one claim) incurred substantial losses. Mean annual payments for the physicians in this category were \$38 000 for the medical specialties, \$109 000 for the obstetrics-anesthesiology group, and \$75 000 for the surgical specialties group (not shown).

To examine the concentration of insurance losses from another perspective, we arrayed physicians according to annual spending on their behalf (Figure). For the obstetrics-anesthesiology group, the top 1% of physicians incurred a payment per exposure year of approx-

Table 2.—Predicted Probabilities by Group*

	Medical Specialists			Obstetrics-Anesthesiology			Surgical Specialists		
	No Payment	Low Payment	High and Very High Payment	No Payment	Low Payment	High and Very High Payment	No Payment	Low Payment	High and Very High Payment
Physicians' education characteristics									
Year of medical school graduation									
Before 1938	0.867	0.029†	0.004‡	0.732	0.243	0.025	0.657	0.203	0.140
1938-1968	0.857	0.110	0.033	0.652	0.288	0.060	0.523	0.374	0.103
After 1968	0.827	0.148	0.027	0.667	0.289	0.084	0.482	0.488	0.082
Board certified									
Yes	0.848	0.124	0.028	0.611	0.314†	0.075‡	0.475	0.433†	0.092
No	0.858	0.110	0.031	0.719	0.235	0.046	0.672	0.244	0.084
Medical school country									
Developed non-English	0.828	0.134	0.037	0.705	0.243	0.052	0.288	0.629†	0.084
Less developed	0.808	0.108	0.085	0.686	0.281	0.074	0.481	0.480	0.079
Developed English	0.880	0.120	0.030	0.661	0.280	0.059	0.535	0.372	0.093
Medical school ranking									
Top one-third, Gourman	0.857	0.116	0.027	0.671	0.285	0.084	0.578	0.381	0.061‡
Other	0.851	0.119	0.030	0.662	0.238	0.090	0.483	0.408	0.111
Physicians' practice characteristics									
Non-SMSA	0.848	0.137	0.014	0.585	0.368	0.047	0.508	0.405	0.086
Northern SMSA	0.862	0.117	0.031§	0.680	0.277	0.063‡	0.516	0.382	0.099‡
Southern SMSA	0.827	0.119	0.054	0.630	0.290	0.075	0.477	0.375	0.148
Direct patient care hours									
≤40 h/wk	0.670	0.108	0.022	0.781	0.172†	0.037	0.680	0.290‡	0.060‡
41-60 h/wk	0.863	0.121	0.028	0.642	0.298	0.060	0.567	0.388	0.084†
>61 h/wk	0.642	0.121	0.037	0.607	0.330	0.063	0.438	0.423	0.141
Medical research									
No	0.880	0.120	0.030	0.661	0.278	0.061	0.516	0.388	0.086
Yes	0.861	0.111	0.038	0.640	0.297	0.063	0.512	0.388	0.120
Medical teaching									
No	0.861	0.115	0.034	0.663	0.280	0.057	0.525	0.411	0.084‡
Yes	0.863	0.121	0.028	0.648	0.284	0.067	0.503	0.373	0.124
Solo practice									
Yes	0.848	0.117	0.034	0.678	0.254	0.067	0.530	0.383	0.087†
No	0.863	0.119	0.028	0.648	0.298	0.068	0.514	0.388	0.088
Primary specialty									
Allergy/immunology	0.841	0.119	0.040	...	...	...	...	...	...
Rheumatology	0.671	0.108	0.023	...	...	...	...	...	...
Psychiatry	0.937	0.058†	0.008†	...	...	...	...	...	...
Pathology	0.855	0.088‡	0.046	...	...	...	...	...	...
Dermatology	0.825	0.135	0.040	...	...	...	...	...	...
Public health	0.915	0.085	0.000	...	...	...	...	...	...
Pediatrics	0.788	0.144	0.068†	...	...	...	...	...	...
Internal medicine	0.808	0.147	0.047	...	...	...	...	...	...
Anesthesiology	...	...	...	0.751	0.211†	0.038†	...	...	...
Obstetrics/gynecology	...	...	...	0.582	0.335	0.083	...	...	...
Neurosurgery	...	...	...	...	...	...	0.482	0.313	0.205‡
Plastic surgery	...	...	...	...	...	...	0.575	0.385	0.040‡
Orthopedic surgery	...	...	...	...	...	...	0.501	0.408	0.093
Sex									
F	0.888	0.102	0.010‡	0.687	0.280	0.013	0.677	0.323	0.000
M	0.847	0.120	0.033	0.651	0.280	0.069	0.513	0.382	0.085

*The significance levels indicate the underlying parameter estimates were statistically significant in the logit regressions. The last category under a heading was the omitted reference group (eg, after 1968 for year of graduation).

† $P \leq .01$ (two-tailed test).

‡ $P \leq .05$ (two-tailed test).

§The northern standard metropolitan statistical areas (SMSAs) taken as a group are statistically significant from the reference group ($P \leq .01$). In our regression analysis, we included separate variables for various northern SMSAs (see text). Our statistical test measures differences in two log-likelihood ratios, with and without northern SMSA variables.

imately \$300 000, nearly \$2 million for the incident period between 1975 and 1980. By contrast, for such physicians at the top 10% of the payment distribution, the mean dropped to approximately \$10 000 per year. For the surgical group, the top 1% incurred approximately \$200 000 per year. Payments for

the medical specialists were less skewed, but skewed nevertheless.

Sources of Variation in Claims Experience

The logit analysis revealed several systematic relationships between physicians' characteristics and their claims

experience. Because the logit coefficients cannot be directly interpreted, we show predicted probabilities of being in the no-, low-, and high- and very high-payment categories as particular characteristics are varied (Table 2). To examine the effect of a particular characteristic on the probabilities of assign-

Table 3.—Effects of Malpractice Experience Between 1975 and 1980 on Physicians' Practice Decisions Between 1980 and 1987

Group*	% Distribution						Total
	Active in Florida, Same Specialty†	Active in Florida, Different Specialty	Active in Other State, Same Specialty	Active in Other State, Different Specialty	Retired, Semiretired, or Non-Patient Care	Died or Disabled	
No payment (N=4622)	65.8	7.4	8.5	2.0	10.5	5.8	100.0
Low payment (N=1133)	61.2§	7.6	3.2§§	0.4§§§	4.9§§§	2.7§§§	100.0
High payment (N=98)	79.6§	6.1	3.1	0.0	6.1	5.1	100.0
Very high payment (N=168)	80.3§	6.5	4.8	0.6	4.8§	3.0	100.0

*The reference group is "no payment."

†We did not estimate a separate equation for this category.

§Statistically significant difference based on difference of means tests.

§§Statistically significant corresponding results from the payment variable coefficients in the regressions.

§§§P<.01 (two-tailed test).

§§§§P<.05 (two-tailed test).

ment to each payment category, we set the other independent variables equal to their sample mean values. To conserve space, we assess only the changes in probabilities associated with key independent variables. (Full regression results are available in an unpublished appendix. See National Auxiliary Publications Service [NAPS] document 04723 for five pages of supplementary material.)

Several of the physicians' characteristics had statistically significant effects on whether a physician had no, low, or high and very high payments. Having some characteristics made a substantial difference to the payment group to which the physician belonged, but the effect of many characteristics on the probability of belonging to a particular payment group was small.

Physicians with relatively prestigious credentials had no better experience and, according to some indicators, worse experience than did physicians with less prestigious credentials. Board-certified physicians in the obstetrics-anesthesiology and surgical specialties groups, but not in the medical specialties group, were more likely to have claims filed against them than were their non-board-certified counterparts. For example, among obstetricians and anesthesiologists, being board certified increased the probability of being in the high- and very high-payment group from .05 to .08 and decreased the probability of being in the no-payment category from .72 to .61. Surgeons from the top third of medical schools were less likely to be in the high- and very high-payment group, the only statistically significant difference for this characteristic.

Physicians with degrees from less developed countries had about the same claims experience as others, including physicians with US and Canadian de-

grees. The only major difference in claims experience by country of graduation was in the surgical specialty group. With one exception (the surgical group), ranking of medical school seems unimportant.

In general, older physicians were less likely to have claims filed against them. However, year of graduation only had a statistically significant effect in the medical specialties group.

Holding other factors constant, there were no statistically significant differences between the claims experience of physicians who engaged in some research or some teaching and the experience of those not engaged in these activities. Differences between physicians in solo vs group practice were small and generally not statistically significant. Physicians in the obstetrics-anesthesiology group and surgical specialty group who were involved in more than 60 hours of direct patient care per week tended to incur more claims and more costly claims than physicians with shorter workweeks. There was no relationship between length of workweek and malpractice payments for the medical specialty group.

Particularly in view of the publicity about the malpractice problem in southern Florida and the higher premiums charged there, we expected to find geographic differences in the claims experience among Florida physicians. In fact, we found only a few systematic patterns by location within Florida given the other explanatory variables in the equations. For purposes of assessing predicted probabilities, we combined the SMSAs into two categories—northern and southern—and compared them with one non-SMSA category. The estimated marginal probabilities in Table 2 suggest surprisingly small differences between metropolitan (SMSA) and non-metropolitan areas within the state.

Female physicians in the obstetrics-anesthesiology group and the medical specialties tended to have a more favorable claims experience than their male counterparts, other factors held constant. Because of the paucity of female surgeons, statistical power is lacking, but, even for this group, being a woman raised the probability of having no incidents with claims between 1975 and 1980 from .51 to .68. Not surprisingly, we found differences by specialty in the probabilities of being associated with particular payment groups.

Change in Physicians' Specialty and Location and Retirement Decisions Between 1980 and 1987.—Physicians with paid claims and/or associated loss expense because of incidents between 1975 and 1980 were less likely to make subsequent major changes in their practices (Table 3). This was true even after adjusting for other likely determinants—year of graduation, specialty, whether the physician was a medical resident, sex, and board-certification status. The percentages shown in Table 3 are not adjusted for the effects of these covariates; taking the covariates into account does not affect our conclusion. (See appendix available from NAPS.)

The major differences among physicians in various payment categories were in the percentages of physicians who remained in Florida but changed specialty and of those who were retired, semiretired, or switched from patient to non-patient care. Virtually all of the specialty changes for obstetrician-gynecologists involved dropping obstetrics. In general, the changes for the low-, high-, and very high-payment groups were quite similar, but were quite different from changes made by the no-payment group.

Malpractice Experience and Decisions of Professional Licensure

Table 4.—Malpractice Experience and Decisions of the Professional Licensure Board

% of Department of Professional Regulation Decisions						
	Total	Cases Dismissed	Letter of Guidance	Probation	License Temporarily Suspended	License Revoked
No payment (N=106)	4.3* (n=7)	1.2 (n=2)	1.9* (n=3)	0.0	0.6 (n=1)	0.6 (n=1)
Very high payment (N=166)	8.4 (n=14)	0.6 (n=1)	4.8 (n=8)	2.4 (n=4)	0.0	0.0

*Difference between no-payment sample and very high-payment population, $P < .05$ (two-tailed test). We dropped two physicians from the very high-payment group in the process of matching specialties.

Board.—Twice as many of the very high-payment physicians (14 [8.4%]) as no-payment sample physicians (7 [4.2%]) had complaints filed against them with the Florida Department of Professional Regulation that were closed between 1980 and 1983 (Table 4). The difference in proportions is statistically significant ($P < .05$). However, the majority of the sanctions against both groups were not severe. None of the very high-payment physicians had their licenses revoked or suspended.

Ability of Claims Experience From Incidents Between 1975 and 1980 to Predict Claims Experience From Later Incidents.—Claims and payment experience from incidents between 1975 and 1980 does predict experience from incidents that occurred later (Table 5).

To assess the relationship between past and future experience, we, as before, assigned each physician to one of the four payment groups, defined on the basis of losses attributable to incidents that occurred between 1975 and 1980. For each previously identified payment group, we computed (1) the fraction of physicians with some loss attributable to incidents from 1981 to 1983, and (2) for those with some loss during this second period, the mean payment per exposure-year. The frequency distribution of payments is approximately lognormal. Since one cannot take the logarithm of 0 and the lognormal distribution is only defined for positive values, for testing purposes, we separated the distribution into these two parts.

As with incidents between 1975 and 1980, the very high-payment group had by far the highest claims frequency that arose out of incidents from 1981 to 1983. Although the high-payment group's claims frequency from 1981 to 1983 was less than the claims frequency for the low-payment group, this was also true for incidents between 1975 and 1980. All three payment groups had far higher claims frequency than the no-payment (reference) group. Similarly, while nearly half of the very high-payment physicians incurred some loss on care rendered during 1981 to 1983, only 15% of no-payment physicians incurred

Table 5.—Claims Frequency and Payment Experience Between 1975 and 1980 vs 1981 to 1983

Category Based on 1975-1980 Experience	1975-1980		1981-1983		
	Claims per Exposure-Year	Mean Payment per Exposure-Year, \$	Claims per Exposure-Year	Fraction of Physicians With Payment	Mean Payment per Exposure-Year for Physicians With Payment*
No payment (N=3873)	0.000	0.0	0.073	0.15	29815
Low payment (N=1089)	0.282	2822	0.204†	0.36†	33882
High payment (N=82)	0.183	47806	0.141†	0.38†	44275
Very high payment (N=157)	0.814	75484	0.331†	0.46†	65886†

*Test of significance based on means of logarithm of payment.

† $P < .01$ (one-tailed test).

‡ $P < .05$ (one-tailed test).

some loss. Low- and high-payment physicians fell in between. Mean payment per exposure-year for those with some loss was more than twice as high for the very high-payment as for the no-payment physicians. Considering differences among groups in the fraction with some payment, there was a sevenfold difference in payment between the very high- and the no-payment groups that arose from incidents during 1981 to 1983 ($0.46 \times \$65,886$ vs $0.15 \times \$29,815$).

COMMENT

Our results show that malpractice claims are quite frequent for physicians in the surgical specialties we examined compared with the medical specialties. Approximately half of these surgeons in Florida had at least one claim filed against them in 6 years. Claims frequency alone (although widely used in rating by insurers in other lines, such as automobile, property, and liability⁹) is a rather misleading indicator of the cost of insuring a physician for medical malpractice. In Florida, claims closed with payments of \$300,000 or more to claimants (not counting associated loss expense) accounted for approximately 68% of total indemnity payments, but only 11% of total closed claims. Moreover, these large payments were concentrated on relatively few physicians. Almost all payments for compensation and associated costs went to cover losses incurred by a handful of physicians.

Persistence of High-Expense Categorization

When we followed the experience from 1981 to 1983 for our payment groups between 1975 and 1980, we found that differences in mean payments for the various payment groups remained. This persistence suggests that, at the group level at least, future payments within specialty are predictable. If anything, our comparisons understate the differences in payments attributable to the period from 1981 to 1983 since some claims, especially larger ones, had not closed by 1983, the most recent year for which data were available at the time we conducted our analysis. It is plausible that the very high-payment physicians incurred a disproportionate share of these claims that were still open.

Claims Experience and Quality

The link between claims experience and quality is difficult to establish, and our data do not yield conclusive results on the issue. We performed the following three tests: first, we compared claims experience with physician's credentials, such as board-certification status, prestige of medical school attended, and country of medical school.

Our analysis found few relationships with these supposed indicators of quality. In the case of board certification, we found that board-certified physicians often had more adverse claims experi-

ence. We found no consistent results with regard to foreign medical school graduates, medical school ranking, or solo practice. These findings are consistent with previous analyses of foreign medical graduates' experience,^{1,2} and comparisons of group vs solo practitioners.³ Physicians with more recent degrees may be more up-to-date. We found no evidence that recent graduates had more favorable claims experience; some of our evidence suggests exactly the opposite.

Second, we considered a "market test" of whether physicians with adverse 1970s claims experience were more likely thereafter to change specialties, enter retirement or semiretirement, or leave the state. Perhaps bad physicians are forced to change by their patients, their hospitals, or their insurers. The main difference we detected was that physicians with the most favorable claims experience were more likely to leave Florida for practice in another state. They were also somewhat more likely to retire or to change from patient to non-patient care. Thus, either the physicians with adverse experience were not considered "bad" or the market enforcement mechanisms did not work in this way. Perhaps, opportunities that face those with adverse experience are limited.

Third, we applied a "regulatory test" of whether physicians with adverse claims experience were more likely to face subsequent discipline by the state licensing board. Indeed, such physicians were more likely to receive letters of guidance and probation. On the other hand, none of the physicians with the most adverse claims experience had their licenses suspended or revoked, and fewer than 10% of these physicians were disciplined in any manner. This pattern is consistent with two opposing hypotheses: perhaps physicians with adverse claims experience are not bad physicians. Bad claims experience may reflect taking on harder cases or a litigious client. Perhaps such physicians are bad, but the licensing system failed

to act. Unfortunately, the data did not permit a rigorous examination of these possibilities.

Traditionally, state medical boards have been reluctant to address physician incompetence.¹¹ In 1986, the Florida licensing board handled more complaints than any state except New York.¹² So, if anything, this board has been relatively active.

Some but not all of our findings are consistent with the view that physicians with adverse experience are competent physicians. Our results regarding board certification suggest that physicians with high payments may have provided more complex procedures. Perhaps older physicians, who have a better malpractice record on average, provide fewer technologically sophisticated and risky services. If physicians, their practice content, and their patients were homogeneous, one would expect physicians engaged in research and teaching to do poorly, given these explanations. However, holding other factors constant, we found little difference between them and other physicians. Female physicians had a better track record than male physicians. This difference seems more likely to reflect a patient-physician practice style that is less conducive to claims than to indicate that male physicians take the risky cases. If physicians, their practice content, and their patients were homogeneous, one would expect physicians who work more to have greater exposure to adverse outcomes and hence to have a worse malpractice record. We found some evidence that losses rise with an increased number of hours worked per week. Clearly, there is an important need for careful research to determine why physicians differ in claims experience.

From an insurance perspective, it is important to know that the past predicts the future. This study shows considerable variation in expected losses within the groups commonly used for underwriting purposes by medical malpractice insurers.

The Health Care Quality Improvement Act of 1988 requires that any entity that makes payment under an insurance policy or a self-insured plan must report the physician's name, the amount paid, and a description of the incident to a national data bank.¹³ Empirical evidence available up to now, including our study however, does not demonstrate that claims experience is a valid indicator of physician quality, although it does correlate with future claims. A recent report by the US Office of Technology Assessment¹⁴ suggests that malpractice information available from the data bank might be validly used for quality screening purposes by hospitals, licensing boards, and others. Data collected pursuant to the act might be useful for replicating an analysis like ours, but definitively linking physicians' malpractice experience with their quality of care will require more information, such as data regarding patient-physician relationships and practice-specific information regarding procedure and patient mix. Such information cannot be obtained from closed malpractice claims.

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See National Auxiliary Publications document 04728 for five pages of supplementary material. Order from NAPS c/o Microfilm Publications, PO Box 3513, Grand Central Station, New York, NY 10108-3513. Remit with your order, not under separate cover, in US funds only, \$7.75 for photocopies or \$4 for microfiche. Outside the United States or Canada, add postage of \$4.50 for the first 20 pages and \$1 for each 10 pages of material thereafter. The postage charge for any microfiche order is \$1.50. Institutions and organizations may order by purchase order. However, there is a billing and handling charge for this service of \$15, plus any applicable postage.

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FINAL REPORT
MEDICAL MALPRACTICE LIABILITY STUDY

SUBMITTED TO:
THE LEGISLATIVE COUNCIL
THE STATE OF MAINE

JUNE 6, 1989

PUBLIC HEALTH RESOURCE GROUP, INC.
P.O. BOX 5068 60 YORK STREET
PORTLAND, MAINE 04101
(207) 761-7093

MEDICAL MALPRACTICE LIABILITY STUDY

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The Public Health Resource Group (PHR) Study Team for this project included:

Ronald D. Deprez, Ph. D., MPH
David D. Gregory, L.L.M.
David Hemenway, Ph.D.
Peter Hiam L.L.B.
Wendy K. Mariner, L.L.M., MPH
Daniel Meyer, Ph.D.
Daniel K. Onion, M.D., MPH

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SECTION I: EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION:

The Report of the Commission To Examine Problems of Tort Litigation and Liability Insurance in Maine (delivered to the Maine Legislature in December of 1987) concluded that there was not enough evidence from other State reforms of the 1970's to warrant additional tort reforms aimed at the liability insurance problem in Maine. As a result, while many reforms were offered few were approved by the Legislature and none brought substantial change to the tort system.

Since that report, the price of medical malpractice insurance premiums has continued to rise along with concerns about reduced access to medical care amid reports that physicians were reducing or stopping their services due to high insurance premiums. A renewed effort was undertaken to address this problem with several legislative proposals aimed at changing the tort system, setting up a patient compensation fund, expanding the membership and powers of the Board of Registration in Medicine, and subsidizing the insurance premiums of physicians in rural Maine.

In March of 1989, recognizing the seriousness of both the problem and the intended solutions, the Legislative Council contracted with the Public Health Resource Group of Portland, Maine to conduct an independent study of these issues by the end of May 1989. The aims of this study were to identify the current problems of both medical malpractice liability insurance and access to care in Maine, evaluate selected tort changes enacted

by the Legislature in 1986, and provide an assessment of policy options passed in other states which have demonstrated some measure of success in controlling premiums rates for medical malpractice insurance while assuring access to medical care.

The report that follows addresses each of these areas. In addition to a description of the insurance and access problems in Maine, it focuses on three policy areas that as a whole impact on the medical malpractice liability system: tort changes, insurance regulations, and medical system practices (in particular licensure, standards of care, hospital practice privileges, and Medicaid fee limits).

MALPRACTICE INSURANCE:

Based on the limited information available from the two major medical malpractice liability insurers conducting business in Maine, Medical Mutual Insurance Co.(MMIC) and the St. Paul Companies, premium rates for basic and specialty coverage have been rising to record proportions for Maine physicians over the last ten years. For example, between 1984 and 1988 premium rates for MMIC physicians more than doubled on average. Moreover, premium rates are erratic, going from a substantial decrease in one year to a significant increase the next. They are somewhat lower than the rates for most urban and many rural states. It is noteworthy, however, that premiums as a proportion of gross income are higher in Maine (11%) compared to the nation (6.2%).

Frequency of claims per 100 physicians insured are currently below average for the nation as a whole while claims severity is equal to the national average. Loss ratios for the State are somewhat higher than national averages indicating that premiums collected appear to cover the expected losses. These high loss ratios are due to the targeted and observed loss ratios for MMIC and possibly indicate an unusually conservative approach to reserves. This, combined with the high surpluses generated in recent years, brings into question the practice of computing expected losses and reserves, and their use of reinsurance. Forty percent of the premiums collected by MMIC goes to cover the cost of reinsurance and suggests the current reinsurance system needs review. The proportion of settlements going to legal fees to defend physicians amount to between 40 and 50% of the dollars paid out.

From the data, it is apparent that the frequency, severity, and losses as a percentage of income do not indicate that the liability insurance problem in Maine is out of control. It does suggest that more efficient methods of estimating reserves, reinsuring, and obtaining legal services could reduce the price of premiums for policy holders while continuing to provide high quality coverage. These are areas where policy changes could achieve savings to the insurance industry and ultimately the rate payers.

ACCESS TO MEDICAL CARE:

Based on secondary data and a physician survey conducted as part of this study, Maine has experienced and will continue to experience a decline of approximately 4% per year in physicians who provide obstetrical services. This decline is occurring primarily among Family Physicians and mostly in urban areas of the state. In the future, however, rural areas are expected to experience the same trend. The principal factors reported by physicians as responsible for this decline are the price of medical malpractice insurance and fear of a malpractice suit. Regardless of the size of the pool of physicians practicing obstetrics, the number providing services to Medicaid recipients is not declining any faster than the number providing services to other patients. However, the volume of Medicaid patients being treated by Obstetricians and all other medical doctors except Family Physicians is declining.

While the number of physicians available to provide obstetrical care is declining, the extent to which access to obstetrical services has been adversely affected is not known. While a decline in access in rural areas due to malpractice insurance may have occurred prior to this study and may be observed again if rates continue to climb, it is not apparent from the data available to the study.

In urban areas, the size of the obstetrical physician population is declining, but obstetrical services are available at hospital-based clinics and in family practice residencies. If

insurance rates continue to climb and Medicaid fees remain below market prices, more Family Physicians are likely to drop obstetrics leaving a serious access problem for Medicaid recipients. Family Physicians are the only group of physicians who have increased their volume of Medicaid patients over the past three years.

TORT REFORMS:

Changes in the tort system have been a major focus of efforts to reduce claims frequency, improve claims disposition efficiency, reduce claims processing costs, lower premium rates, and improve access to medical care. It is generally assumed that the price of insurance should decrease with any reduction in claims and that physicians will be more willing to practice with lower insurance premiums. The results of completed evaluations of tort reforms do not demonstrate convincing evidence to confirm these assumptions.

It is not yet clear whether tort reforms actually have succeeded in reducing the price of insurance or the frequency or severity of claims, or whether they will succeed in reducing or stabilizing premiums or claims in the future. It is also not known whether these parameters would have increased more than they have in the absence of the reforms. Moreover, since a significant number of the reforms in other states have been ruled unconstitutional, have not been put into effect, have been repealed, or have been allowed to expire, they may not have been operational long enough to have a clearly measurable effect.

It is difficult to isolate the effect of any single reform. Many other factors, such as the distribution of illness, physicians' capabilities, biotechnology, peer review and risk management programs, litigation strategy, public attitudes towards risk and compensation, and insurance rate-making procedures, all may contribute to the number of claims filed, their outcome, and the price of insurance. It is far easier to estimate the effect of certain reforms on the frequency or severity of claims than on the price of insurance or the willingness of physicians to practice certain high risk specialties. Caps on awards have reasonable potential to limit the dollar volume of high-stakes claims (as well as introduce some consistency into estimates of damages). Limits on contingency fees may increase the proportion of compensation actually retained by injured patients, but may leave patients with meritorious claims for small amounts without representation.

The effect of screening panels is perhaps the most difficult to predict, largely because their effectiveness depends on procedural details such as the permitted use of their decisions in court and the panel's authority to expedite the process. They may help to identify meritorious claims and encourage early settlement, but they may also increase the time and expense of resolving claims and discourage attorneys from accepting meritorious claims which are likely to result in small settlements.

The results of Maine's prelitigation screening panels, operational for over two years, are still uncertain. Information from court officials indicate that the panels have been useful in reducing the number of potential defendants named in a suit. Defendant attorneys like them perhaps because they have been largely successful in cases presented to panels thus far. Plaintiff attorneys would prefer to avoid them and go directly to court. Both agree that it is too soon to make a judgment on the goals stated in the statute that created them. At the same time, defendant attorney costs show they are competitive with similar costs of voluntary settlements and are well below the costs of a trial.

There is little doubt that the tort system can be an inefficient and expensive system of dispute resolution. Other systems have been suggested to replace it entirely, but no state has enacted or implemented such a system to date. The Vermont Legislature is currently considering a version of the American Medical Association's model fault-based administrative system. It will be years before any evidence is available on the impact of this approach.

Any effort to improve the efficiency of the tort system and reduce its cost should be welcome. Virtually all such measures, however, operate by shifting the probability of success somewhat from one party to the other. Efforts to reduce costs by limiting the number of claims that are actionable, the grounds

for liability, or the amount of damages recoverable all increase the probability that some injured persons will go uncompensated. Efforts to increase the mechanisms to better identify meritorious claims may increase the complexity, time, and expense of decision making. Thus, it is necessary to evaluate reforms in light of all the goals they may affect.

Changes in the tort system must also be consistent with constitutional requirements particularly rights of due process and equal protection of the law, access to the judicial system, and trial by jury. Most procedural changes in litigation suggested by the current legislative proposals are likely to be upheld if challenged, based on standards of the Maine Constitution. Placing a maximum limit on recoverable damages is the most constitutionally suspect of all current tort reform proposals.

At the same time, it is clear that changes made specifically for medical malpractice cases are most likely to be successfully challenged for exclusivity since the reasons for their adoption generally apply to other areas of tort law notably product liability. Medical malpractice cases concern only about 15% of all tort actions. Thus, before altering tort law, the Legislature should have good reason to believe that the changes proposed will, in fact, achieve the desired goals and should be careful to avoid drawing unjustifiable distinctions among tort claimants and tort defendants. The right to trial by jury, guaranteed to plaintiffs and defendants in tort cases, is deeply rooted in the

Constitution of Maine, and policies aimed at limiting the right, while probably constitutional, will have broad ramifications.

INSURANCE CHANGES:

Significant savings are possible in medical malpractice insurance even without reducing the number of claims brought or causing financial injury to insurers. Obtaining these savings will require more vigorous public (regulatory) oversight of the medical malpractice insurance industry in Maine. Specifically, a data base of Maine's claims, settlements, and insurance practices is essential if the insurance Superintendent is to have the data necessary to carry out oversight functions and if the Legislature and general public are to have the information necessary to evaluate both the Superintendent's and the industry's actions.

A principal role of the government in a regulated industry such as insurance is to get insurers to manage their business as efficiently as possible and provide a quality product to consumers at a reasonable price and with a fair return on investment. Inefficiency in malpractice insurance comes from a number of sources. To guard against the insurance industry's practice of understating investment income, the Superintendent of Insurance should be authorized and directed to promulgate an investment income model. Insurers have little incentive to control their expenses as long as rate increases can be passed on to policy holders. Expenses incurred by the leading two medical malpractice insurers make up a significant proportion of premiums. To ensure efficiency, the Legislature might require

that the Superintendent of Insurance mandate that insurers demonstrate an effective cost control program.

To minimize disruption in the marketplace due to unstable fluctuations in the price of insurance, the Legislature could authorize the Insurance Superintendent to spread the effect of substantial rate changes over a three-year period. To spread the risk of claims payments and resulting increases in premiums to those policy holders responsible, the Legislature might consider implementing a merit rating system, a system of deductibles, or both.

Finally, the heavy reliance by MMIC on reinsurance promotes inefficiencies because reinsurance is a costly product and reinsurers are not subject to effective State regulation. Significant savings could be achieved if the Superintendent of Insurance were directed by the Legislature to set standards for reinsurance limits which, to the extent feasible, reduce dependency on outside reinsurance. Secondly, the Legislature should consider a patient compensation fund such as that suggested in L. D. 762.

The insurance industry, like the medical care system, is based on trust that consumers give to providers. The integrity of the system demands that the income of policy holders be fully accountable and used as efficiently as possible. Actions to assure this outcome will have as much impact on the malpractice

problem as reduced rates.

MEDICAL SERVICES:

Patricia Danzon has conducted extensive research on effects of the 1976 tort reforms on frequency and severity of claims and other outcomes. When claims began to decline in the late 1970's following the medical malpractice "crisis" of that period, it was her opinion and that of other experts that the reforms passed by many states had less to do with the decline than the response by the medical profession to improving peer review and other efforts aimed at preventing the number of malpractice incidents.

Activities in several areas have been taking place in Maine and the Nation which show promise of improving quality of health care and reducing incidents of malpractice. There are others the Maine Legislature might consider. One 1986 reform charged the Board of Registration in Medicine with investigating any physician who had three or more malpractice claims over a ten-year period which resulted in a monetary settlement. This policy led to investigation of only seven physicians over a ten-year period. The Legislature could create an ombudsman capability within the Board which would serve to defuse potential complaints prior to their being elevated to a claim. Additional investigatory capability for the Board could be initiated, as called for in L.D. 1407, to follow up on complaints that come through an ombudsman office. Requiring the Board to collect additional information on the voluntary or involuntary loss of hospital privileges in or outside of Maine is also warranted before

licensing physicians or before hospitals grant privileges.

In addition to improved licensure standards, care standards have been proposed by JCAHO, selected hospitals in Maine, and MMIC as a means of improving quality and reducing the likelihood of malpractice suits. While physicians on both sides of this issue argue the merits of supposed "cook-book" medicine, this approach continues to develop as a potentially viable method of accomplishing these ends. The Legislature might consider endorsement of this approach as well as educational activities promulgated by the Maine Medical Assessment Program.

CONCLUSIONS:

There are many approaches to controlling rising and unstable medical malpractice liability insurance premiums in Maine and their effect on access to care. These include changes in the tort system, the insurance regulatory system, and the medical care delivery system. To target one while ignoring the others will create disequilibrium and lead to policies likely to fall far short of the mark. Each has some merit and some drawbacks. Each needs to be addressed with a realistic understanding of what will be gained and what will be lost. It was no surprise to many experts that the St. Paul Companies decided to lower their premiums due in part to a reduction in expected reserve demand for outstanding claims. Considering past history, however, the medical malpractice issue is likely to revisit Maine in a very few years. The severity of the problem at that time will depend on how comprehensive an approach the Legislature takes now.

MEDICAL MALPRACTICE INSURANCE IN MAINE

THE PRICE OF MEDICAL MALPRACTICE INSURANCE:

This section will describe, with available information, key dimensions of the malpractice insurance problem in Maine including the price of liability premiums, the frequency and severity of claims, and settlements brought in Maine during the last four years. There are two insurance firms which sell over 90% of the medical malpractice policies in Maine. They are St. Paul Insurance Companies of St. Paul, Minnesota and Medical Mutual Insurance Company of Maine (MMIC). In 1988, Medical Mutual insured over 1172 Maine physicians and one of Maine 36 nongovernmental hospitals. In 1988, St. Paul's insured almost all of the remaining hospitals and 665 physicians. There are approximately 1800 licensed and active physicians in Maine.

Recent physician sponsored efforts to address the medical malpractice liability system are primarily responses to the price of medical liability insurance, particularly price instability, as well as threat of malpractice suits. Both have motivated physician groups to seek tort changes, challenge insurance rate increases, alter their medical practice patterns, increase peer and quality reviews, and develop alternative malpractice dispute resolution systems. As the discussion of medical care access will show, it is price coupled with the fear of being sued that has motivated physicians to reduce or stop obstetrical services.

In nearly every one of the last ten years, the price of medical liability insurance nationwide has outstripped rises in overall inflation as well as inflation in the medical marketplace. For example, nationwide medical malpractice liability premiums were 75% higher in 1986 than 1983 while the Consumer Price Index rose 10.1% during this period and the Medical Care Index rose 21.3% (Rosenbach & Stone, 1988). Yet, in some years the price has actually gone down demonstrating the price volatility of this product.

Medical malpractice liability premiums in Maine have experienced similar increases (and decreases). This has occurred despite the fact that Medical Mutual Insurance Company of Maine, a physician owned insurance company organized in Maine in the latter 1970's, now controls two thirds of the physician market for liability insurance. The average premium for liability insurance in 1984 for MMIC physicians was \$6,447. In 1988, the average premium was \$13,978--a 117% increase. Some of this increase is due to increased coverage limits, however, much is due to other factors, notably, increased claims, claims severity, reinsurance costs and the cost of conducting business. Data in Table 1 is indicative of the rising and unstable price of this product in Maine during the last ten years.

At the same time, it should be noted that the average price of a claims made insurance policy in Maine (a claims made policy insures a physician only for the year in which it is purchased) is still lower than most urban, large states and many rural

states. As of July, 1988, the price in Maine for a class 4 doctor/mature claims made policy at \$1-3 million coverage limits from St. Paul's was \$16,968. In California, the price for the same policy was \$39,281; in Michigan \$29,753; in West Virginia \$27,218; in New Jersey \$27,179; and, in Arkansas \$18,916. Regionally, Vermont's rate (\$15,704) was slightly lower than Maine's while Connecticut's (\$19,199) was somewhat higher.

TABLE 1
LIABILITY PREMIUM RATE INCREASES

Medical Mutual of Maine Increase/(Decrease)	St. Paul's Increase/(Decrease)
1979 (20%)	Reduction of 25% for year 1 insured; Increase of 16% for year 5 insured; Increases from 0 to 16% for years 2, 3, and 4.
1980 0%	0%
1981 20%	50%
1982 15%	20%
1983 21.3%	Increase in rates, changes in classifications.
1984 14.4%	20%
1985 30%	30%
1986 24.4%	22%
1987 16%	31%
1988 9.2%	11%
1989 No filing yet	(22%)

Data Source: Medical Mutual of Maine & The St. Paul Companies

Price as a function of physician income is perhaps a more equitable way to compare premium rates since both the price of insurance and physician incomes vary widely across specialties, states, and regions. Nationwide, malpractice premiums were 6.2% of physicians' gross practice income in 1986. The percentage was 4.0% in 1983, an increase of 57%. (Rosenbach & Stone, 1988) The survey of Maine physicians conducted as part of this study, indicates that the current (1989) average malpractice premium payment for Maine physicians who paid their own premiums was 11% of their 1988 gross practice income. For Family Physicians as a

SECTION II: MEDICAL MALPRACTICE INSURANCE PROBLEM IN MAINE

specialty, it was 5.7%; for specialists in obstetrics and gynecology, it was 22%; and for Doctors of Osteopathy it was 11%.

CLAIMS, LITIGATION EXPENSES AND THE PRICE OF INSURANCE:

A number of factors affect the price of medical liability insurance coverage, and it is not within the scope of this study to analyze them for Maine. The major factors thought to influence the price of insurance include the frequency and severity of claims, return on investment, the cost of conducting business, insurer loss to premiums ratios, urbanization, access to attorneys, rates of iatronic injuries, and the regulatory system. There is a presumed relationship between the frequency and severity of claims, the price of insurance, and access to medical care.

The product of claims frequency times severity along with incurred losses and expenses (transaction costs) all figure into the price insurance companies charge for their products. Reduction in these are expected to reduce the price of medical malpractice premiums. Insurance rates for Maine are currently calculated primarily using nationwide claims and severity data. However, it is important to compare Maine's rates of claims frequency and severity experience to national data to determine the status of the insurance problem in Maine. TABLE 2 compares these figures.

For the period, frequency of claims (the number of claims divided by the number of insured in any one year) were higher in Maine compared to countrywide data (the 42 states in which The St. Paul Companies sells medical malpractice insurance). The trend in recent years is lower than the national. Severity of claims (the amount of all past and expected claims settlements including expenses divided by the number of claims) in Maine has been inconsistent compared to countrywide severity data. In earlier years, it was lower; in the last two years, it was higher. Maine's average for the past five years is about equal to the rest of the country. However, it is increasing both for Maine and the country.

These data suggest that frequency is lower in Maine but severity may be increasing at a more rapid pace than the rest of the country. The Maine experience of the two insurers are very different and raise some question about the allocation of reserves to cover expected losses and expenses. This is demonstrated by the loss ratios experience by the two insurers.

A loss ratio is the proportion of the premium dollars that go to pay for claims in any one year. It includes both the amount of money actually paid out in settlements and expenses and the amount set aside for claims yet to be paid. A loss ratio is derived by dividing the sum of total losses (paid and reserved) by the amount of earned premium. Insurance companies gauge their premiums on a target loss ratio so as to produce enough funds, which, in addition to investment income, permit them to cover their losses and expenses in order to earn a profit or surplus.

Table 2

Medical Malpractice Liability Study
Maine/Countrywide Claims Frequency & Severity

Year	Number of Insured	Claims	Claims per 100 Insureds	Incurred Loss & Expense	Severity*
1984	1703	275	16.15	\$5,144,585	\$18,708
1985	1766	270	15.29	\$6,161,693	\$22,821
1986	1809	225	12.44	\$7,715,217	\$34,290
1987	1799	200	11.12	\$9,054,750	\$45,274
1988	1837	199	10.83	\$11,296,318	\$56,765
Totals/Ave.	8914	1169	13.11	\$39,372,563	\$33,681

	Countrywide Frequency	Countrywide Severity
1984	111	\$25,091
1985	111	\$28,962
1986	121	\$34,150
1987	141	\$37,019
1988	121	\$39,298
Total/Ave.	121	\$32,904

Data Source- St. Paul; MedMutual, Exhibit C-1w from St. Paul
* Severity is Total Incurred L&E/Claims. Loss limit is capped at \$200,000 for St. Paul data (Maine and Countrywide)

For example, St. Paul's targeted loss ratio is 75%. For Medical Mutual the target loss ratio is approximately, 105%. Nationwide, the average loss ratio is between 70-80%.

Table 3 presents Maine loss ratio data for the period 1984-88. The overall loss ratio for the period is 93%, above both the target ratio for St. Paul and the national average and below that of Medical Mutual. Table 4 provides the same information only for the St. Paul Companies. Their loss ratio, while fluctuating, has been decreasing over the past four years to where the average is at their targeted amount. The fluctuations in the year-to-year rates express the difficulty of estimating annual premiums rates.

MMIC loss ratios, however, have increased steadily over the past five years from 89.4 in 1984 to 100.14 in 1988 with a five year average of 100.06. It is beyond the scope of this study to examine why the loss ratios of MMIC are that high. We suspect it is due in part to increases in the amount of reserves set aside to pay for claims. In 1985, there were 368 open claims at MMIC (claims made, but not settled). The average reserve set aside for these claims was \$40,558. In 1988, there were 233 open claims but the amount of reserves for these claims amounted to \$85,088 per claim. Thus, claims are decreasing while reserves are increasing.

One way of looking at the cost of claims to insurance companies is to analyze payments for claims settled in any one year regardless of the incident year. This also can indicate if there is an upward trend in monetary awards from both the courts and insurance company settlements. A table of this data was included in the Draft Report for the three year period 1986-88. This information came from the Maine Bureau of Insurance and indicated there were no trends in the proportion of cases settled with a payment during this period (it was 19% for each of the last three years) nor in the amount of total losses. An upward trend was suggested in the average paid loss and the average paid loss expense (legal fees and expert witness fees). However, following a review of this data with insurers and the Bureau indicated that there were substantial errors with it so it could not be used. Data such as this is needed for an understanding of this problem.

CONCLUSIONS:

This Section has presented information on the growth of insurance premiums and insurance factors that are responsible in part for this growth. The cost of insurance to Maine physicians is less than many other states but accounts for a higher percentage of their income, on average. While the frequency and severity of claims in Maine does not significantly differ from the rest of the country, loss ratios are higher than expected. This is due to the high loss ratios experienced by MMIC and suggests that their reserving practices may be overly conservative. However, it will take further study to resolve this issue. Based on the data presented, the liability insurance problem in Maine does not appear out of control.

TABLE 3

Medical Malpractice Liability Insurance
Loss Ratio (Maine)
(St. Paul; MedMutual Combined)

Year	Earned Premiums	Claims	Incurred Loss & Loss Expense	Loss ratio
1984	\$5,373,117	275	\$5,144,585	95.75
1985	\$6,866,157	270	\$6,161,693	89.74
1986	\$8,201,852	225	\$7,715,217	94.07
1987	\$9,806,186	200	\$9,054,750	92.34
1988	\$11,918,849	199	\$11,296,318	94.78
Totals	\$42,166,161	1169	\$39,372,563	93.37

Data Source- The St. Paul Companies; Med Mutual of Maine

Table 4

Maine Premiums, Losses and Loss Ratio
The St. Paul Companies
(Limited to first \$200,000)

Year	Earned Premiums	Claims	Incurred Loss & Loss Expense	Loss Ratio
1983	\$1,593,733	83	\$1,423,198	89.30
1984	\$2,037,816	115	\$2,162,484	106.12
1985	\$2,831,642	93	\$2,608,644	92.12
1986	\$3,451,575	77	\$3,272,820	94.82
1987	\$3,592,896	61	\$1,398,976	37.88
1988*	\$2,267,045	62	\$1,426,317	62.92
Totals	\$18,141,752	491	\$13,718,756	75.62

Data Source- St. Paul rate filings, Exhibits 2A & 2B

* One-half year of data

SECTION III: ACCESS TO CARE PROBLEM IN MAINE

ACCESS TO CARE PROBLEM IN MAINE

INTRODUCTION:

The problem of access to medical services is complex. Lack of health insurance, transportation, knowledge of services, and availability of providers all affect access to medical care. A primary purpose of state legislative responses to the medical malpractice liability insurance issue has been to ensure consumer access to medical services.

Legislators are concerned that if insurance rates for providers continue to rise, the number of providers available to all or certain classes of patients will decline, thus intensifying the present access problem that has resulted in part by the erosion of health insurance in the 1980's. The medical malpractice liability crisis of the 1970's was primarily a crisis in availability of liability insurance- at least in Maine. The present "crisis" is one of insurance affordability. The effect on access is the same. If medical practitioners cannot afford to buy malpractice coverage for all or part of the services they provide, fewer practitioners will be available to provide those services, and access will decline.

This is of particular concern in rural areas where there are fewer providers per capita. In the published literature, in testimony before governmental bodies, and in press reports, it has been consistently argued that the price malpractice insurance is having a profound effect on the availability of medical care, particularly obstetrical care, and particularly in rural areas. However, while there is some evidence of reduced availability, there is no clear evidence of its effect on access or medical outcomes.

Physician participation rates in the Medicaid Program have been declining in this country in both urban and rural settings. A study published in 1984 designed to determine the factors responsible for low participation rates found that states with higher Medicaid fees and less administrative requirements red tape had higher participation rates (Mitchell and Schurman, 1984). For obstetrical services, however, the professional liability problem may be a more perverse and difficult problem than Medicaid fees in reducing participation. In Maine and the nation, obstetricians have the highest average annual incidence of claims, (Adams and Zuckerman, 1984; MMIC, St. Paul Companies data, 1989). Since Medicaid women tend to be at higher risk for a poor birth outcome, higher fees alone may have little affect on participation rates for this specialty.

There is evidence both from Maine and other states that high risk women do not have equal access to prenatal care specialists (PNC) (Onion and Mockapetris, 1988; Rosenblatt and Detering, 1988; USM,

1984). In a recent study of Maine hospital discharge data for the 1982-84 period, Onion and Mockapetris found that women at high risk for a poor birth outcome were less likely to have access to an Obstetrician or board certified Family Physician. Moreover this occurred more often in urban than rural areas of Maine.

In testimony before the U.S. House Subcommittee on Human Resources and Intergovernmental Relations, Assistant DHHS Secretary Robert Helms stated that high risk women are less likely to obtain early prenatal care despite substantial Federal and state funding (Helms; 1987). The incidence of both late prenatal care and no prenatal care has actually increased over the past few years. A sample survey of Maine women who delivered live infants from February 1 to August 1, 1983 found that Medicaid mothers were less likely to receive adequate PNC than privately insured women. From these and other data, it appears that women most in need of high quality prenatal care and those who have most to gain from the services of specialists have more difficulty gaining access to these services.

In addition to health insurance, there are a number of patient and medical care system barriers which limit access to prenatal care (ANA; 1987). Two major barriers are rural location and poverty. Rural areas are more likely to lack adequate care systems, (social and income support services, providers, and transportation systems). Moreover, transportation is the most significant barrier to women seeking PNC in Maine (USM, 1984), and this factor is almost three times greater among Medicaid women.

A 1988 study of physicians in Washington state found that changes in the practice of obstetrical care has been most evident among Family Physicians the most. Half of those surveyed either discontinued or reduced the volume of their obstetrical practices (Rosenblatt and Detering, 1988). Malpractice concerns were the principal reasons given for those changes with increased premiums and fear of suit the most prominent. These same factors were most likely to influence changes in obstetrical care among Family Physicians nationally, based on a recent study by Kruse et al. (1989).

At the same time, reductions in availability of obstetrical care providers need not result in care being delivered by less qualified physicians. For example, the Washington state study found that those Family Physicians who continued to practice obstetrics were more likely to be young, residency trained, board certified, and working in a more rural county than Family Physicians who left obstetrics (Rosenblatt and Detering, 1988).

PHYSICIAN AVAILABILITY IN MAINE:

Has Maine has also experienced a decline in family physicians who practice obstetrics? Data from surveys conducted in 1984 and in 1986 by the Maine Chapter of the American Academy of Family Physicians suggest there has been a 23% reduction in the proportion of Family Physicians delivering babies, from 62.5% in

1984 to 48% in 1986.

In order to obtain more complete information in Maine on the availability of medical care providers and other potential access problems that may result from rising medical malpractice liability insurance premiums, a scientific survey of physicians was conducted as part of this study. The primary purpose of the survey was to determine the extent to which physicians were reducing or stopping the practice of medicine and whether malpractice liability insurance premiums and/or fear of malpractice suits were factors in these decisions. There were, however, other reasons this survey was conducted. The Legislature wanted to know how Medicaid recipients, as a class of patients, were being affected by the liability insurance problem. They also wanted information about physician involvement in malpractice suits and trends in the price of liability insurance compared to physician income.

The scope of the survey was restricted to the availability of obstetrical services in Maine. This decision was based on many considerations. Obstetrics is considered a marker for availability of other medical services. Reductions in obstetrical providers may lead to reductions in prenatal care for pregnant women which has clear implications for the incidence of poor prenatal outcomes. Furthermore, national and state-level research conducted elsewhere suggests that the medical malpractice crisis has most significantly affected obstetrical services.

A sample of 621 physicians was selected to receive the survey, a copy of which can be found as ATTACHMENT A. Physicians in the sample included all providers who, in the 1988 DHS Physician Manpower Resource Inventory, listed their primary specialty as Obstetrics/Gynecology; Family Practice; or who indicated their secondary specialty as obstetrics regardless of their primary specialty; or were Doctors of Osteopathy. Although it is known from other data that there were approximately 225 physicians who delivered babies in Maine last year, the sample included all physicians who were trained to provide obstetrical services or who claimed they were providing them in 1988. This was done to find out who left the practice and why.

The survey was developed using a number of questions from similar national and state surveys and a number of questions developed specifically for this project. Leaders of each provider group surveyed (Obstetricians, Family Physicians and Osteopathic Physicians) provided us with constructive comments on the contents and wording of survey questions. These same leaders endorsed the survey and requested completion of the survey in the letter that accompanied its mailing.

Of the 621 surveys sent out, as of May 24, 1989, 386 have been returned as valid surveys, while another 37 have been returned by the post office as undeliverable or returned with notification that the person has retired from the practice of medicine or is deceased. Thus the response rate as of that date

was 66%. (An additional 40 responses have been received since.) An analysis of respondents and nonrespondents was conducted on the first 279 responses. This analysis is found in the appended as ATTACHMENT B. The results indicate very slight differences between respondents and nonrespondents on age, sex, urban/rural residence, specialty and other factors.

DECLINE IN OBSTETRICAL PROVIDERS:

Overall fourteen percent of those surveyed indicated that they had stopped practicing obstetrics. Between 1987 and 1989 physicians have left the practice of obstetrics at the rate of approximately 4% per year. Those who have stopped practicing obstetrics in this time period are overwhelmingly Family Physicians and located primarily in urban, rather than rural areas of Maine. Those physicians who have reduced or stopped practicing obstetrics have done so primarily as a result of rising malpractice insurance premiums and the fear of malpractice suits.

Overall, 42% of those physicians surveyed indicated they were practicing obstetrics in 1987. In 1988, this declined to 39% and in 1989 to 34%. This represents a 19% decrease over the 3 year period. The rate of decline among Family Physicians as a specialty for this period was 31%. Family Physicians represents 82% of all physicians who stopped practicing obstetrics during this period. See Table 1.

The physicians who stopped practicing obstetrics between 1987 and 1988 are young (average age 39) and averaged 30 deliveries a year. The average age of physicians who continued practicing obstetrics in 1988 was 43 and they averaged 72 deliveries a year. The average age and annual deliveries for Family Physicians who continued obstetrics in 1988 was 39 and 35 respectively.

There was a 26% decline during this period among physicians who had been practicing obstetrics in one of Maine's three Standard Metropolitan Statistical Areas (SMSA), Portland, Lewiston-Auburn, and Bangor. Rural non-SMSA's saw a 17% decline during this period. At the same time the proportion of physicians practicing obstetrics in rural areas of Maine was higher than those practicing in an SMSA.

Can Maine expect to experience a continued decline in the number of physicians providing obstetrical services. Based on the response to a question as to whether physicians planned to drop obstetrics in 1990 and 1991, the decline will continue but at a slower rate (3% in 1990 and 1% in 1991). Unlike the current trend, most of those who plan to drop obstetrics in 1990 are rural-based physicians rather than urban-based. However, a large proportion (27%) of those currently providing obstetrical services are not sure yet about their plans for continuing these services.

TABLE 1

MEDICAL MALPRACTICE LIABILITY STUDY

Survey of Maine Physicians - 1989

QUESTION 3 (a,b,c)	Type of Practice								Total	
	Family Practice		OB/GYN		Other MD		DO			
Births - 1987										
None	102	55%	15	27%	39	80%	50	78%	206	58%
1 - 49	60	32%			9	18%	8	13%	77	22%
50 - 149	25	13%	16	29%			6	9%	47	13%
150 or more			24	44%	1	2%			25	7%
Total	187	100%	55	100%	49	100%	64	100%	355	100%
Births - 1988										
None	116	62%	12	22%	39	80%	50	78%	217	61%
1 - 49	58	31%	1	2%	9	18%	10	16%	78	22%
50 - 149	14	7%	18	33%	1	2%	3	5%	36	10%
150 or more			24	44%			1	2%	25	7%
Total	188	100%	55	100%	49	100%	64	100%	356	100%
Births - 1989										
None	130	69%	13	24%	41	84%	52	81%	236	66%
1 - 49	44	23%	2	4%	7	14%	8	13%	61	17%
50 - 149	13	7%	14	25%	1	2%	2	3%	30	8%
150 or more	1	1%	26	47%			2	3%	29	8%
Total	188	100%	55	100%	49	100%	64	100%	356	100%

Question 3: Please estimate how many deliveries you personally attended in : 1987 1988 Estimated total for 1989.

CHANGES IN OBSTETRICAL SERVICES:

Physicians were also asked if they had made any changes in their obstetrical practices since January of 1987. Among those who had changed, the two biggest changes were reducing or stopping obstetrical services care to Medicaid patients (34%) and high risk patients (32%). This was followed by reducing or stopping care for the uninsured (27%), and limiting the number of obstetrical patients accepted (19%). Among the specialties, Obstetricians were more likely to have reduced their care to Medicaid patients (66%) followed by Doctors of Osteopathy (50%), and Family Physicians (25%). In urban areas 41% of the physicians reported reducing or stopping services compared to 29% of the rural physicians.

Those who had reduced or stopped their obstetrical practice were then asked to indicate the most important reasons why. Of those who responded (N=178) 68 or 38% indicated the most important reason was the cost of malpractice insurance, 42 or 24% listed the most important reason as concern over a malpractice suit and 26 or 15% listed the inconvenience of obstetrics. It is noteworthy that only 17 or 10% listed Medicaid fee limits as the most important reason for reducing or stopping obstetrical care. These results did not vary substantially by specialty or rural/urban location.

SERVICES TO MEDICAID PATIENTS:

The number of physicians who practice obstetrics in Maine has declined over the last few years based on these data. However, women on Medicaid and in need of obstetrical services do not appear to have been affected to a greater extent than women with or without private insurance. The proportion of physicians who continue to treat Medicaid obstetrical patients has remained somewhat constant declining by only three percentage points over the last three years—from 74% in 1987 to 71% in 1989. This reduction is principally due to Obstetricians and Osteopathic Physicians stopping services to Medicaid patients. Among the Family Physicians who continue to provide obstetrical services, there has been an increase in participation in the Medicaid Program.

There has been some decline in the volume of Medicaid patients which make up a physicians obstetrical practice. This has occurred among Obstetricians and Osteopathic physicians but not among Family Physicians or other physicians surveyed although the number of these physicians answering this question was small. See Table 2. When asked about practice policy regarding the limitation of care to Medicaid obstetrical patients, 16% of the Family Physicians limit the number of Medicaid patients in their practice. Seventy-one percent of the Obstetricians and all of the Doctors of Osteopathy who treat Medicaid patients have a limit on the number of these patients in their practice.

TABLE 2

MEDICAL MALPRACTICE LIABILITY STUDY

Survey of Maine Physicians - 1989

QUESTION 6 (a,b,c)	Speciality								Total	
	Family Practice		OB/GYN		Other MD		DO			
% Medicaid Babies 1987										
Zero	14	22%	11	27%	3	38%	5	33%	33	26%
1 to 25	15	24%	21	51%	2	25%	7	47%	45	35%
26 to 50	23	37%	8	20%	1	13%	3	20%	35	28%
51 plus	11	17%	1	2%	2	25%			14	11%
Total	63	100%	41	100%	8	100%	15	100%	127	100%
% Medicaid babies 1988										
Zero	14	22%	11	27%	3	38%	6	40%	34	27%
1 to 25	16	25%	25	61%	2	25%	5	33%	48	38%
26 to 50	22	35%	4	10%	1	13%	4	27%	31	24%
51 plus	11	17%	1	2%	2	25%			14	11%
Total	63	100%	41	100%	8	100%	15	100%	127	100%
Expected % Medicaid Babies 1989										
Zero	15	24%	13	32%	3	43%	6	40%	37	29%
1 to 25	14	22%	23	56%	1	14%	7	47%	45	36%
26 to 50	23	37%	4	10%	1	14%	2	13%	30	24%
51 plus	11	17%	1	2%	2	29%			14	11%
Total	63	100%	41	100%	7	100%	15	100%	126	100%

Question 6: Medicaid patients make up what percentage of your obstetrics practice during 1987, 1988 and estimated 1989: (Please exclude those you were called on for delivery only.)

Inadequate reimbursement is the most important reason mentioned for limiting the number of Medicaid patients in their practice or providing only care back-up services. Forty two percent of those responding to this question cited this as the most important reason, while 25% cited the lack of patient compliance as the most important reason. Only 10% listed fear of a malpractice suit as the most important reason why they limit obstetrical services to Medicaid patients. There was very little difference in these factors by location or specialty.

CONCLUSIONS:

Based on the information from the physician survey Maine has experienced and will continue to experience a decline in physicians who provide obstetrical services. This decline is occurring primarily among Family Physicians and mostly in urban areas of the state. However, in the future the rural areas will experience the same trend. The principal factors cited for this decline are the cost of malpractice insurance and the fear of a suit. While the size of the pool of physicians practicing obstetrics is declining, the proportion of those continuing to provide services to the Medicaid patients has declined only slightly. Nevertheless, the volume of Medicaid patients who make up the practice of these physicians is declining at a higher rate. However, Family Physicians are an exception to this trend.

This information suggests that obstetrical patients in urban areas may have to look harder to find medical care. Given the increased availability of care generally in urban areas, they are likely to find it although for poorer patients it may be at the specialty clinics in the larger hospitals. In rural areas, the data does not suggest a problem of reduced medical care availability. However, a serious decline in physicians available to treat obstetrical patients in rural areas may still come if insurance premium rates continue to climb. In urban areas, increased insurance rates coupled with Medicaid reimbursements are likely to create an access problem among the Medicaid population if more Family Physicians drop obstetrics. They are the only group of the physicians who have increased their volume of Medicaid patients.

Based on this information it cannot be demonstrated that Maine faces a medical care "crisis" in availability and access to medical care due to rising medical malpractice insurance premiums. It can be demonstrated that Medicaid patients have increasingly limited options for their obstetrical care and this is due in part to the inadequacy of reimbursement fees for these services.

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SECTION IV: TORT REFORMS

- A. Evaluating The Effect of Tort Reform Legislation
- B. Constitutionality In Maine

EVALUATING THE EFFECT OF TORT REFORM LEGISLATION:

INTRODUCTION:

In this section data on malpractice tort reforms passed by states in the past 10 years has been evaluated for evidence of their effect on insurance premium rates and access to care. We have relied on secondary information from recent initiatives in other states. For this evaluation, it had been planned to use information that was to be available from the first-round of effectiveness studies funded by the Robert Wood Johnson Foundation; However, the planned release of this information was postponed from April to October of this year. For the evaluation of the tort changes in Maine passed in 1986, primary data generated from the courts, insurance companies, and attorney interviews have been used.

Like most other states, the State of Maine enacted changes in the medical malpractice and liability insurance system in 1986 (P.L. 1986, C. 804) to achieve four general goals: (1) to improve the efficiency of the tort system in compensating medical injuries caused by provider negligence and deterring avoidable injuries; (2) to reduce medical errors and resulting injury to patients; (3) to make medical malpractice insurance more available and affordable to health care providers; and (4) to ensure the availability of essential health care services to the residents of Maine.

It is generally believed that mechanisms intended to reduce the number of medical malpractice claims brought against health care providers or to identify meritorious claims for expeditious resolution reduce the costs of defending such claims (transaction costs). Since both claims frequency and transaction costs figure into the price insurance companies charge for their products, reductions in these areas are expected to reduce the price of medical malpractice premiums. With stable or reduced insurance premiums, health care providers could afford to continue in practice and provide essential care to the people of Maine.

While the 1986 Maine reform measures have not been in effect long enough to assess their long-term success in achieving the four goals, evaluations of the effects of similar reforms in other states may suggest their probability of effectiveness. In evaluating the effect of tort reform, it is useful to remember that no single reform is likely to achieve all of the possible goals that may exist for the health care system, dispute resolution system, and financing systems. To adequately evaluate one reform, therefore, it is necessary to identify clearly not only the goal intended to accomplish, but also the effects it may have, either directly or indirectly, on other areas. It is also useful to distinguish between the goals of a particular reform measure and the goals of tort law itself, for the two may conflict. For example, one goal of the tort system is compensating persons injured by the negligence of others. If one goal of tort reform is to reduce the cost of compensating patients, this might be accomplished simply by reducing the type

or amount of compensation payable in tort actions. Thus, success in reducing the costs of tort litigation may undermine the tort law goal of compensating injured persons.

Reforms intended to reduce the costs of the medical malpractice system should also be evaluated in relation to the savings they may produce, including prevention of injuries. Danzon has suggested that "From a public policy perspective, the problem is one of designing liability rules and insurance mechanisms that minimize the total costs of injuries, including the utility costs of injuries, the resource costs of prevention, and the overhead costs of effecting compensation."¹

The reforms enacted across the country in the wake of the 1985-1986 malpractice crisis were directed primarily at improving the operation of the tort system, rather than reducing the incidence of medical error or improving the availability of affordable insurance.² Most states enacting such reforms did so in the belief that a tighter, more efficient tort system would lead insurers to moderate the price of insurance and make it available to physicians needed to deliver essential care in the state. Several states enacted new requirements for reporting insurance data and information about malpractice claims against physicians. Nonetheless, the bulk of reforms were tort reforms reminiscent of those enacted in the mid-1970's.

The immediate purpose of these tort reforms was to reduce either the frequency (number) of malpractice claims or the amount (severity) of any settlement or judgment on claims made. These measures can be classified into four categories: ³

1. Measures intended to limit the number of claims eligible to enter the tort system :

Shortened statutes of limitation.

Requirements that plaintiffs pay legal fees and costs for bringing nonmeritorious claims.

Limitations on contingency fees payable to plaintiffs' lawyers.

2. Measures intended to increase the plaintiff's burden of proving a claim:

Limitations on the use of res ipsa loquitur (which infers negligence in certain circumstances).

Narrowing the applicable standard of care to more local standards.

Speciality qualification requirements for expert witnesses.

3. Measures intended to expedite or replace the process of claims resolution:

Requirements for disclosing expert witnesses.

Pretrial screening mechanisms.

Encouragement of arbitration as an alternative to litigation.

4. Measures intended to reduce the amount of awards:

Elimination of ad damnum clauses (requesting large damages in the initial complaint).

Requirements for structured or periodic (in lieu of lump sum) payment of awards.

Collateral source rule modifications.

Limitations or caps on the amount of awards (either the total amount recoverable or the amount recoverable for non-economic damages or pain and suffering).

In spite of the attention to medical malpractice in recent years, empirical evaluations of the effects of tort reform remain limited, both in number and in generalizability. Studies reported to date focus mostly on the legal effects of specific reforms, the frequency of claims or the amount of awards paid. Few have been designed to assess the effect of reforms on the price of insurance or the willingness of physicians to continue to provide specific kinds of care. So while they can tell us the effect of reform on frequency and severity of claim, their effect on reducing or stabilizing insurance premiums or increasing access to care remains in doubt.

In reviewing the empirical findings of these studies, two caveats are in order. Most studies use statistical regression models with data from many states to identify the degree to which generic reforms explain increases or decreases in claim frequency or severity or premium rates. Since the reforms enacted in different states varied significantly in their details and these details cannot be captured in a single quantifiable measure, the results may contain unavoidable errors.⁴ In addition, the majority of studies published to date were conducted shortly after reforms were enacted and offer only short-term conclusions which may overestimate or underestimate the effect of the reforms. Long-term effects remain under study. In short, at this time one cannot really tell what the effect of tort reforms will be.

In its December 1986 report on claims and insurance costs in six states, the GAO "identified no studies conducted in the six states to measure the effect of any specific tort reforms."⁵ The GAO itself did not attempt to isolate the effect of particular reforms. Instead, it interviewed groups of officials and other

interested organizations in each of the six states. None of the groups interviewed believed that the tort reforms enacted had any major effect on any aspect of the malpractice problem in Arkansas, New York, or North Carolina, or Florida.

Some Florida officials thought it too early to assess the 1985 and 1986 reforms. Four of six interest groups in Indiana believed their 1975 reform legislation (especially its \$500,000 cap on total awards and the pretrial screening panels procedure) was a significant factor in stabilizing malpractice insurance premiums. Groups surveyed in California believed its reforms helped stabilize the size of awards and the price of insurance, although both have increased since 1980.

The GAO study may be evidence of the need to allow reform measures several years to produce any effect. As shown in TABLE 1, the frequency of claims continued to rise in the six states studied between 1980 and 1984 (although the increase for hospitals was less) even though reforms initiated in the mid-1970's had been in effect for many years. Moreover, the price of premiums rose even more dramatically during the same period. See Table 2. The experience of these states contrasts with that of Minnesota, North Dakota, and South Dakota. A study by the Minnesota Insurance Commissioner of virtually all closed claims in those three states from 1982 to 1987 found that premiums for physicians more than tripled (from \$23 million to \$71 million per year) despite unchanging claim frequency (about 11.6 claims per 100 insureds, quite similar to the national average for St. Paul's insured physicians) and declining loss payments and loss expense.⁶ These studies suggest that reforms

may not yet have had much effect on the frequency of claims and have not had any effect in lowering insurance premiums.

Indiana University School of Law is currently conducting a study of the impact of tort reform in Indiana on the availability of obstetrical services. A preliminary comparison of the number of obstetricians per 1,000 live births in several states between 1970 and 1985 indicates that Indiana's experience does not differ significantly from that of several midwestern states or the nation as a whole.⁷ Final results of the study are not expected until late summer 1989.

STATUTES OF LIMITATIONS

Changes in state statutes of limitations to reduce the time within which a claim must be filed or forfeited have been found to reduce both claim frequency and claim severity. Using multiple regression analysis, Danzon's 1986 Rand Corporation sponsored study of claims closed nationwide from 1975 through 1984, found that claims frequency decreased by eight percent.⁸ The number of paid claims decreased between 6% and 7% in states

TABLE 1

Frequency, Severity and Costs of Claims in Selected States

	St. Paul US	AR	CA	FL	IN	NY	NC
Claims Per 100 Physicians:							
1980	10.6	6.6	20.4	20.8	5.3	27.1	7.5 (1987)
1984	16.5	8.6	26.0	26.1	10.2	35.7	8.9
Claims per 100 occupied hosp. beds:							
1980		1.2	8.6	2.1	2.2	7.5	1.5
1984		1.2	10.1	2.4	2.4	8.7	1.9
Average paid claim for physicians:							
1980		\$31,619	\$32,963	\$80,556		\$46,789	\$36,064
1984		\$51,685	\$61,774	\$140,594	↓ 18%	\$104,810	\$62,043*
Average paid claim for hospitals:							
1980		\$12,00	\$13,025		\$7,146	\$90,577	\$7,098
1984		\$18,345	\$24,874		\$11,244	\$68,917	\$20,091
Insurers average cost of defending claims against physicians:							
1980		\$2,714	\$2,384				\$2,216
1984		\$5,269	\$9,358		18%	16%	\$4,772
--against hospitals:							
1980		\$2,263	\$3,422				\$3,193
1984		\$4,120	\$5,608		19%	18%	\$5,704

*Reflects a \$6.3 million award in 1985; until 1982, largest NC award was \$100,000.

Source: U.S. General Accounting Office. Medical Malpractice: Six State Case Studies Show Claims and Insurance Costs Still Rise Despite Reforms (1986).

TABLE 2

**Percent Increase in Malpractice Insurance Rates
for Selected Specialties Between
January 1, 1980 and January 1, 1986**

	AR	CA ^a	FL ^a	IN ^a	NY ⁱ	NC
General practice (minor surgery) ('80-'86)	58	173	199	93	335	239
Internal medicine (minor surgery) ('80-'86)	58	61	199	93	326	239
General surgery ('80-'86)	80	88	256	56	175	306
Anesthesiology ('80-'86)	61	35	217	56	96	262
Obstetrics/gynecology ('80-'86)	147	140	395	116	345	547
Orthopedic surgery ('80-'86)	50	88	198	83	216	241
Neurosurgery ('80-'86)	136	113	370	96	273	438

^aComputation based on rates obtained from the state's leading insurer of physicians for the predominately purchased coverage limits and policy form for the rating territory in which there was the greatest total number of physicians insured.

^bIn Florida, percentage increases between March 1, 1980, and January 1, 1986.

^cComputation based on rates applicable to Southern California.

^dComputation based on rates applicable to the entire state, except for Dade and Broward Counties

^eComputation based on rates that include surcharge to participate in the Patient's Compensation Fund. On January 1, 1980, the surcharge rate was 10 percent of the provider's premium for basic insurance coverage. On January 1, 1986, the surcharge rate was 75 percent

^fComputation based on rates applicable to the entire state except Nassau, Suffolk, Bronx, Kings, Queens, Richmond, Rockland, Sullivan, New York, Orange, Ulster, and Westchester Counties

Source: U.S. Congress, General Accounting Office. Medical Malpractice: Six State Case Studies Show Claims and Insurance Costs Rise Despite Reforms 15 (1986).

that reduced the limitations period by one (1) year. Since most claims are filed within 3 years of injury, the reduction is more effective with respect to statutes of limitation that are less than 5 years. Most states already have special statutes of limitation requiring medical malpractice claims for injury to adults to be brought within 2 or 3 years of injury, while other personal injury claims may be brought typically within 6 years.

JOINT AND SEVERAL LIABILITY:

The doctrine of joint and several liability means that a plaintiff who is successful in a malpractice suit may recover all damages from any defendant found at all liable for the injury. This is intended to provide the plaintiff with a mechanism to collect damages regardless of the distribution of fault. While this eases the collection process for injured patients, it may occasionally place a disproportionate burden on a defendant who is only minimally at fault. Ordinarily, such a defendant who has paid a judgment is entitled to recover from his co-defendants who were also at fault. But, if they are insolvent or immune from suit, the right is meaningless. Insolvency and immunity from suit are probably rare in the professional malpractice context.

No reported study could be found in which abolition of the doctrine of joint and several liability affected either the frequency or severity of claims or the price of insurance. Since the doctrine is essentially a means of allocating risk in satisfying judgments, abolishing it simply shifts the risk of non-recovery from a negligent defendant to the injured plaintiff. As long as liability is based on fault, the fairness of requiring one defendant to pay more in damages than he/she is personally responsible for causing must be questioned. At the same time, abolition of the doctrine does not appear to have substantial potential for reducing the amount paid on claims unless more than a handful of health care providers had no insurance or were significantly underinsured and were otherwise judgment proof. This is unlikely in Maine, although it has been reported that some hospitals are currently underinsured.

LAWYERS CONTINGENCY FEES:

Arguments for and against contingency fees are well-known. Proponents claim that they provide access to the legal system and effective representation for plaintiffs who could not otherwise afford to pursue a claim, and that they deter frivolous suits by placing the plaintiff's lawyer at financial risk. Interestingly, some citizens groups in England are advocating a similar payment system in order to obtain representation for injured persons.² Critics argue that they encourage and prolong litigation and drive up the cost, leaving less for the injured patient.

There is little empirical evidence specifically assessing these positions. A study conducted for the Secretary's Commission on

Medical Malpractice in the early 1970's found that plaintiffs' lawyers accepted only one out of eight cases presented to them for representation.¹⁰ It has been suggested that, today, lawyers are likely to reject cases in which anticipated damages are less than \$50,000.¹¹ Based on these studies and interviews conducted with Maine attorneys as part of this study, it is difficult to assess the extent to which the rejection of potential cases is attributable to the merits of the claim or to the financial cost and recovery expected.

Danzon's studies of legislative reform focused on the effect of regulating contingency fees on the rate of claims made and payments received. Her 1983 study, using 1974 and 1976 closed claims data, tentatively found that contingency fee limits reduced the amount of settlements (severity) by 9%, reduced the percentage of cases litigated to verdict by 1.5%, and increased the percentage of cases dropped by five percent.¹² However, Danzon's later 1986 study using data for the 10 years before 1985 found no systematic effect on either the number of claims filed or the size of awards.¹³

In addition, Danzon also found that there was no association between the number of attorneys in a state and the frequency of claims there. Instead, the single most important factor contributing to the rate of claims was urbanization, which increased the number of claims filed, but paradoxically decreased the number of claims paid.

COLLATERAL SOURCE PAYMENTS:

This doctrine permits plaintiffs to receive compensation for injury expenses from several sources such as health and disability insurance in addition to that awarded from a settlement. The collateral source rule prohibits introducing into evidence at trial any information about such collateral sources of compensation or reducing any award made against the defendant from other sources. In many cases, patients who receive tort awards are required to repay their health insurance for amounts expended in their behalf, but enforcement of such requirements is uncertain. Danzon's 1986 study found that states that permit or require offsetting damage awards by collateral benefits received reduced the average amount of paid claims by 11% to 18% and the frequency of claims by fourteen percent.¹⁴

CAPS ON PAYMENT AMOUNTS:

Limitations or caps on the maximum amount payable to a successful claimant probably have the most direct effect in reducing the dollar amount paid as a result of a court decision or private settlement. Many states have enacted statutory caps on either the amount payable for non-economic damages (pain, suffering, and disfigurement) or the total amount of the award (including past and future medical expenses, lost wages, and other actual monetary losses). Danzon's 1986 study found that the average

payment was reduced by 23% in states that enacted caps on all or part of awards payable.¹⁵ At the same time, there is no clear evidence that caps have reduce liability insurance premiums.

Caps appear to affect a small number of cases--those with the largest awards. Danzon found that 5% of the claims closed with payment between 1979 and 1985 accounted for 50% of the total dollars paid. Thus, caps do effectively limit the total amount paid by insurers. They may also contribute greater predictability to future liability estimates by setting an outside limit on some or all of the damages payable. However, because they serve to reduce only those awards that would exceed the cap, they may have little effect in states where awards already rarely exceed the cap.

A preliminary report of an ongoing study of tort reform in Indiana, where total damages are limited to \$500,000, noted that the median payment per closed claim was \$446,000.¹⁶ Since the maximum of \$500,000 was paid in one-third of the claims, the report expressed concern that "some large claims may be inadequately compensated." In cases where medical expenses and lost wages approached \$500,000, there would be little left to pay general damages after deducting attorneys fees.

Some states have placed limitations on non-economic damages rather than caps on total awards because the former does not prevent recovery of out-of-pocket expenses and lost earnings. Moreover, it has been reported that non-economic damages account for a substantial proportion of the total award in cases with the largest recoveries. For example, the GAO reported that in a national sample of 1984 claims, only 5% of the paid claims included noneconomic damages over \$100,000, but the amount of such noneconomic damages accounted for 42% of the dollar value of total payment.¹⁷ Thus, arguably, limiting non-economic damages appears to make awards more predictable without depriving injured parties of compensation for economic losses.

SCREENING PANELS:

Section 2851 of the P.L. 1986, Ch.804 states that the purposes of prelitigation screening panels are: (1) to identify claims which merit compensation; (2) to encourage early resolution of those claims prior to the commencement of a lawsuit; and (3) to encourage early withdrawal or dismissal of nonmeritorious claims. We are not aware of any definitive studies evaluating the merits of claims before screening panels. Such a study would require extensive medical and legal assessments of each case. There are, however, a few descriptive studies of the time required to resolve claims and the extent to which panels may encourage early resolution, which are the second and third objectives of Maine's panel system.

In 1986, the U.S. General Accounting Office reported that a majority of consumer groups believed that panels decreased the

time required to resolve claims and reduced the number of claims going to trial.¹⁸ However, the research completed to date does not provide definitive evidence either to support or refute that belief. Few researchers have been able to collect adequate information to assess whether the panels are achieving their various purposes.¹⁹ The National Center for State Courts, in its 1980 study of the Arizona system, suggested that the panels were not yet effective in speeding up the resolution of claims, but cautioned that the information was not complete enough to permit a definite conclusion as to whether the panels should be retained.²⁰

Danzon has found that screening panels had no demonstrable effect on the frequency or severity of claims.²¹ On the other hand, Sloan found that mandatory screening panels had a statistically significant association with lower malpractice insurance premiums for ophthalmologists, orthopedic surgeons, and non-surgical general practitioners.²² Interestingly, this was the only reform measure he found to have any effect on premiums.

Indiana established a pretrial medical review panel procedure in 1975 to make non-binding determinations of whether a provider adhered to the proper standard of care in individual cases.²³ Until 1985, no action against any health care provider could be commenced in court until the panel had considered the case and rendered an opinion. In 1985, the statute was amended to permit two exceptions to the prescreening requirement. Claimants can go directly to court if (1) they seek no more than \$15,000 in damages (in which case recovery of more than \$15,000 is barred), or (2) all parties agree to bypass the panel (an apparently rare event). In addition, a provider who is not insured by the state's Patient Compensation Fund may be sued in court without the panel process and is not protected by the state's \$500,000 cap on damages.

A recent report on Indiana's medical panel system offers some useful information.²⁴ Claims are filed with the Insurance Commissioner who notifies the health care providers named. The parties themselves choose the medical review panel chair (who must be an attorney but has no vote). The claimant and defendant each choose a health care provider member who in turn selects the third member, also a health care provider. There does not appear to be any entity with authority to control or expedite panel proceedings. While the statute requires the panel to render its expert opinion within 180 days after the members are selected, the time limit is unenforceable and, in practice, cases may remain in process for more than one or two years. Most of the time is spent on discovery. Table 3 summarizes the panel experience between 1975 and 1987.

According to the Report, panels have rendered opinions in 22% of the cases filed. The panels found "malpractice" in 11.5% of these cases and no malpractice in 74% of such cases. There is

TABLE 3
Indiana Medical Review Panel Experience
Status of Claims Filed

	#Claims Filed each Year	Claims Pending	Settled/ Withdrawn before Opinion	Panel Opinion Rendered	Settled After Panel Opinion	Judgment Paid
1975	1	0	1	0	0	0
1976	18	2	8	7	1	0
1977	141	10	71	44	6	10
1978	272	18	150	80	12	12
1979	318	24	153	103	5	33
1980	400	67	187	108	9	29
1981	431	100	166	136	2	27
1982	555	146	185	165	9	50
1983	626	205	169	201	7	44
1984	687	330	166	155	2	34
1985	78	571	128	60	1	20
1986	683	635	37	2	0	9
TOT:	4,912	2,108	1,421	1,061	54	268
% of total	100%	43%	29%	22%	4%	5%

Source: Indiana Dept. of Insurance, Patients Compensation Authority, 1986 Year End Report

suggestive (not yet hard) evidence that the panels may reduce the proportion of claims that go to court. The Report noted that plaintiffs' attorneys feel that a panel opinion finding no malpractice will influence any subsequent court action and these may encourage pretrial settlement. One Indiana insurance company asserted that only 2% of the claims filed against it go to court. The GAO reported that the average amount of paid claims in Indiana declined between 1980 and 1984.²⁵

Indiana University School of Law's current study of the effect of Indiana's pretrial medical review panel on the incidence of court filed claims under \$15,000 will not be completed for several months. Preliminary results indicate that a high proportion of cases are settled or otherwise disposed of during the panel process.²⁶ The panel process may be helped greatly by the active support of the State's medical societies which have encouraged participation in the process by well-respected, qualified physicians. The Report identified three main difficulties with panel review: (1) the likelihood of lengthy proceedings that delay claims resolution; (2) the absence of any central authority to monitor the process and enforce time limitations; and (3) the absence of a mechanism to collect data and evaluate the effect of the panels.

A recent report published by the Risk Management Foundation of the Harvard Medical Institutions provides a somewhat different, but also positive, picture of the Massachusetts pretrial screening panel experience.²⁷ All claims alleging medical malpractice have been required to be submitted to a tribunal since January 1976.²⁸ Tribunals consist of a superior court justice, a physician, and an attorney who decide whether the claimant's evidence "is sufficient to raise a legitimate question of liability appropriate for judicial inquiry." If the tribunal finds insufficient evidence, the claimant may not proceed to court without posting a bond to cover expenses. Under the law as amended in 1986, tribunal findings may be used as evidence relevant to determine whether the claim was frivolous.

The Risk Management Foundation (RMF), which is the second largest insurer of physicians and hospitals in Massachusetts, (the Massachusetts Joint Underwriting Association is the first) reviewed all 675 claims against 1164 of its insured physicians that were heard by tribunals from 1978 through 1987. About 34% of the tribunal decisions were for defendants, with 66% for plaintiffs during this 10-year period. Almost half (45%) of the cases in which the tribunals decided for the defendant were dismissed because the plaintiff failed to post the bond required to proceed to court. The State's Joint Underwriting Association had more than four times as many physicians involved in tribunals as RMF during the past five years. Their experience was similar to that of RMF, however. More than one-third of the tribunal decisions were in favor of the physician or hospital; about 47% of these were dismissed for failure to post bond.

The report notes that nearly 1 out of 6 defendants was dismissed from a claim after the tribunal process and concludes that the tribunals function effectively as a screening mechanism. It does not include data on the costs or length of the tribunal process. Possible problems with the system include some difficulty in locating physician panel members, especially for the increasing proportion of cases brought against high risk specialities. To avoid bias, the physician panel member must practice outside the defendant's county of practice or residence. Since most claims originate in Boston, it is increasingly difficult to find physicians who practice outside Boston to serve on a panel.

Maryland has required all malpractice claims exceeding \$5,000 to be submitted to a pretrial screening panel (appropriately named the Health Claims Arbitration Office) since 1977. Three-person panels, consisting of an attorney as Chair, a health care provider and a layperson, determine liability and award damages, although either party may obtain a trial *de novo* in court thereafter. Preliminary results of a John Hopkins University study of the screening process's effect on claims frequency indicated that by 1985, approximately 2.3% of claims proceeded to trial.²⁹ During the decade before screening panels were required, 9% of claims were resolved by jury verdict. More than half (55%) of the claims studied that were closed from 1977 to 1985 were disposed of without using the screening process. The average time required to resolve a claim was estimated to be no more than 22 months. This compares favorably with GAO's national study findings of 25 months for 1984. However, the length of time required to resolve claims in Maryland before institution of the screening panels was not available for comparison.

The Maryland study also indicated that almost 10% of claims filed with the screening panel were decided in favor of the claimant. This represents about 40% of those claims that completed a panel hearing, a larger percentage of decisions for claimants than ordinarily occurs in jury trials. Twenty-three percent of claims that completed a panel hearing went on to a jury trial. Panel decisions were upheld in 72% of these cases. The average panel award was \$289,561, while the average jury award was \$412,532. Insurer claims data showed that only 28% of all claims were closed with payment, compared with 43% in the GAO's 1984 national study.

MAINE SCREENING PANELS:

The study group conducted some preliminary research on the conduct of the screening panels in Maine focusing on the extent of their use by the Bar, their cost in relation to nonpanel suits, how they have affected the practice of attorneys who use them, and claims results. A structured survey was conducted with eight attorneys (four plaintiff and four defendant), the State Court Administrator, the Superior Court

Justice in charge of the panels, and a claims administrator from the St. Paul Companies. The attorney survey instrument is included in ATTACHMENT C. The Maine panel system and the survey results are described in ATTACHMENT D and summarized below.

PANEL USE AND RESULTS:

Between January 1, 1987 and April 13, 1989, 232 notices of medical malpractice complaints had been filed with the Superior Court. 32 panel hearings have been held. Insurance company data confirm that panel hearing decisions have been made in favor of defendants at a rate at least twice that of plaintiffs. Of the 18 cases involving Medical Mutual defendants, 12 had unanimous rulings in favor of the defendants and six resulted in split decisions. An indemnity of \$7,000 has been paid by Medical Mutual in only one of these six claims to date. According to St. Paul's data, no panel decisions have resulted in favor of the plaintiffs and no indemnity payments have been made as a result of screening panel hearings. However, a number of cases were settled before final decisions were rendered.

The costs of panel use were considered by some as a detriment, especially where they may be incurred in addition to trial costs. Discovery is the legal term used to describe the various pretrial procedures that are used by one party to obtain facts and information about the case from the other party in order to assist in trial preparation. In most litigation cases, discovery requires considerable time and expense at the pretrial phase. The extent of discovery permitted during the panel process is likely to affect both the cost and the length of the proceedings. The law provides that if a party applies to the Chairman, he/she may permit "reasonable discovery." The term "reasonable discovery" is vague, however, and the attorneys and Justice McCarthy are not certain how much discovery preparation for the screening panel hearing is allowed, will be allowed, and should be allowed. All respondents considered this an important issue. Rules on the amount of discovery that will be allowed in preparation for panel hearings have been difficult to develop. A system of setting the amount of discovery has been developed, but it depends on the good faith agreement of the attorneys involved. However, if the attorneys choose to conduct full discovery, they must agree that it can be used at trial.

To date the average loss expense to insurers for panel hearings has been \$9,169 for the Medical Mutual cases. This is lower than the average loss expense of a voluntary settlement (\$11,327) or a case that is won by defendant after trial (\$33,789). Yet it is higher than the average loss expense for a defendant that is dismissed from an action prior to a settlement. According to Panel Chairman Justice McCarthy, one of the benefits of the panels is to reduce the number of defendants named in a case. Judging from these data alone, the cost of the panel is high for this outcome but low in relation to the voluntary settlement or

trial outcomes. One difficulty in assessing the effectiveness of the panels using these data is that one cannot tell the extent to which the cost of panel hearing will be added to or substituted for settlement and litigation costs.

Plaintiff attorneys interviewed were uniformly opposed to the panels and say they will always waive their use if the defense agrees. While both defense and plaintiff attorneys reserved judgment on the panels until more time has elapsed, both said they appeared to be disposing of cases earlier in the process. Plaintiff attorneys say that panel use may result in their refusing meritorious cases because the settlement will not cover expenses if the case has to go to both panel and trial.

CONCLUSIONS:

Nationwide the price of malpractice insurance has continued to climb, with some variations, over the period 1980 to 1988. Rate increases for OB/GYNs ranged from 116% in Indiana to 547% in North Carolina between 1980 and 1986. Moreover, the average cost incurred by insurers to defend a claim has increased over the same period. Some of this may be attributable to a continuing rise in the incidence of claims, although the increases vary from none (e.g. Minnesota) to substantial (e.g. Indiana), while in some states the rate of claims against hospitals has remained stable. In general, the dollar amount of the average paid claim has increased, although in Indiana it decreased for physicians and in New York it decreased somewhat for claims against hospitals.

Interestingly, in late April, the Wall Street Journal reported that several insurance companies plan to decrease premium rates this year.³⁰ The reasons cited by insurers for the decrease are a reduction in the number of claims filed since the mid-1980's and a decrease in rate of increase in settlement costs. Others suggest that tort reforms like caps on damages have helped. Still others say that fewer claims are being brought because litigation is becoming too complex and expensive, jury awards to plaintiffs are decreasing both in number and amount, and lawyers are refusing to take smaller cases. Some fear that this reduction may parallel the slight decline in insurance rates that took place in the late 1970's, and that rates will climb again in the future. They note that current settlements may reflect the lower inflation rates in the early 1980's when many of the injuries now being settled occurred, and that future health care cost inflation will bring a rise in the expenses incurred by claimants that seek compensation.

It is not yet clear whether tort reforms actually have succeeded in reducing the price of insurance or the frequency or severity of claims, or whether they will succeed in reducing or stabilizing premiums or claims in the future. It is also not known whether these parameters would have increased more in the

absence of the reforms. Moreover, since a significant number of the reforms in other states have been ruled unconstitutional, have not been put into effect, or have been repealed or allowed to expire, they may not have been operational long enough to have a clearly measurable effect. It is difficult to isolate the effect of any single reform. Many other factors, such as the distribution of illness, physicians' capabilities, biotechnology, peer review and risk management programs, litigation strategy, public attitudes towards risk and compensation, and insurance rate making procedures, all may contribute to the number of claims filed, their outcome, and the price of insurance.

It is far easier to estimate the effect of certain reforms on the frequency or severity of claims than on the price of insurance or the willingness of physicians to practice certain high risk specialties. Caps on awards certainly do limit the dollar volume of high-stakes claims (as well as introduce some consistency into estimates of damages), but may undercompensate claimants with extensive losses. Limits on contingency fees may increase the proportion of compensation actually retained by injured patients, but may leave patients with meritorious claims for small amounts without representation. The effect of screening panels is perhaps the most difficult to predict. They may help to identify meritorious claims and encourage early settlement, but they may also increase transaction costs. It appears that the appeal of screening panels varies with the particular composition of the panels, the uses that can be made of their decisions in subsequent court proceedings, and the efficiency of their operation.

There is little doubt that resolving tort claims through a jury trial can be an inefficient and expensive system of dispute resolution. Any effort to improve its efficiency and reduce its cost, while not sacrificing its benefits, should be welcome. Virtually all such measures, however, operate by shifting the probability of success somewhat from one party to the other. All dispute resolution systems produce some false positives and false negatives. Efforts to reduce costs (and false positives) by limiting the number of claims that are actionable, the grounds for liability, or the amount of damages recoverable all increase the probability that some eligible persons will go uncompensated (false negatives). Efforts to decrease both the false positives and false negatives by refining the mechanism to better identify meritorious claims may increase the complexity, time and expense of decision-making. At this point, it cannot be demonstrated whether most tort reform will do what is being asked of them, namely to reduce insurance premiums or increase availability of care.

For these reasons, new tort reforms at this time, are questionable policy options to reduce insurance premiums and to insure medical care availability. Ongoing studies to be completed during the next two years may provide a clearer picture

of the trends in claims frequency and severity in states that have and have not enacted reforms. None, however, expects to be able to demonstrate any direct relationship between tort reform and the price of insurance.

If reforms are contemplated, the Legislature might consider designing them to expire after a fixed period, say five years if the price of insurance and the availability of essential medical services do not improve by some measure satisfactory to the Legislature. In this way, reforms that serve no purpose will not remain in effect to engender continued controversy. Moreover, under such a system, it will be far easier to evaluate the effectiveness of particular reforms in achieving their goals for the health care system in the future.

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CONSTITUTIONALITY OF TORT REFORM

INTRODUCTION:

An elementary precept of our government is that Acts of the Legislature must conform to the constitutions of Maine and the United States. Accordingly, the Legislature should give thoughtful attention to the constitutionality of proposed legislation, particularly in times of perceived crisis when fundamental values may, all the more casually, be overlooked. Evidence of today's medical malpractice crisis can be seen in the high price of liability insurance largely, although by no means exclusively, for physicians and other health-care practitioners. High insurance costs, like other free-market forces, affect human behavior and thus can produce unplanned and undesirable dislocations in availability of health care and other social pursuits. Among the remedies currently being considered by the Legislature are reforms in the rules and procedures of tort liability.

Tort reform legislation must accord with constitutional principles of due process of law, equal protection of the law, taking of property, and the right to trial by jury among others. When the Supreme Judicial Court assesses Legislative Acts against those constitutional values, it does so on the premise of a strong presumption in favor of constitutionality. The Court thereby extends great deference to the Legislature's judgment. Perhaps the most far-reaching example of sweeping changes in tort law sustained by the Supreme Judicial Court is the Maine Workers' Compensation Act. See *Milkman's Case*, 118 ME. 172, 106 Atl. 606 (1919). As a general matter, both the substantive and procedural rules of tort law were originally adopted as preferred policy choices either by the courts as rules of common law or by the Legislature as plain expressions of State policy. Because those rules were not compelled by the State or Federal Constitution, they may be changed at will. On the most general level, therefore, the conclusion is that legislative changes of tort rules and procedures will most probably be held by the courts to be constitutional. However, specific changes made may violate constitutional principles.

Constitutional standards are less, not more, exacting than standards of wisdom and good policy which legislators commonly apply. For that reason, no citizen legislator should be deterred from considering constitutional questions. Although the answers are matters of judgment to which the courts have the final say, ideas in the constitution are not the special providence of lawyers and judges, but are well within ordinary thoughtful citizens' reach. The Maine Constitution's due-process and equal-protection clauses provide:

No person shall be deprived of life, liberty, or property without due process of law, nor be denied the equal protection of the laws [Me. Const. art. 1, S6-A]

Due process embodies a principle of basic rationality: "whether the means employed are appropriate to the achievement of the objective." *State v. National Advertising Co.*, 409 A.2d 1277, 1288 (Me. 1979). Equal protection embodies a principle of treating like cases alike, an idea of evenhandedness: "a classification must not be arbitrary." *Portland Pipe Line Corp. v. Environmental Improvement Commission*, 307 A.2d 1,22 (Me. 1973). If a distinction between two groups is "based upon actual differences bearing a substantial relation to the public purpose sought to be advanced by such discrimination . . . it is not a violation of equal protection guarantees." (*Ibid.*) Most legislators are routinely forced to think about these two basic ideas because they bear as much on questions of policy as on constitutional law. Any conscientious legislator will question what a particular reform of tort law will do, whether it is a reasonable means of achieving the objective sought and whether the bill draws distinctions which are justifiable.

Constitutionally-based court litigation is the typical method of asserting the rights protected by the law of torts. Tort litigation, however, like democracy, may not be pristinely efficient. The Maine Constitution provides:

In all civil suits ...the parties shall have a right to trial by jury, except in cases where it has heretofore been otherwise practiced ... [Me. Const. art. 1, S20]

Both the plaintiff and defendant in a civil suit have a right to trial by jury. Juries composed of ordinary Maine citizens represent the public in deciding private disputes just as legislators represent the public in deciding issues of policy. Jurors find the facts, apply the statutory and common law under instructions from the court, and decide the damages.

Whether proposed changes in tort law are constitutional is a different question from whether those measures are wise and should be enacted. Tort rules and procedures are supposed to be designed to achieve justice. The rules of tort law were supposedly evolved to protect the best interests of all Maine citizens, both those who seek redress for injuries suffered by them and those who may have to pay for the damages done. Before some principle of tort liability is jettisoned, one should be sure that it was a mistake from its inception (that it did not achieve the justice originally supposed) or that it has outlived its usefulness (that its ill effects outweigh the good). Otherwise, today's solutions will be tomorrow's problems. States which have retreated from earlier-enacted tort reforms have learned that lesson by experience.

TORT LIABILITY:

Joint and several liability and the collateral source rule have been the focus of policy changes in tort liability. The first makes all defendants who are liable for a plaintiff's injuries answerable for the entire damage. (Joint and several liability has no effect on how defendants divide responsibility for paying among themselves, a matter governed by rules of contribution and indemnity.) The second, the collateral source rule, says that benefits obtained by a plaintiff, including his own insurance, workers compensation payments, and donations from family and friends, are not credited to a tort defendant to reduce the amount of the damages to be paid. (Collateral benefits may counterbalance a plaintiff's inability to recover litigation costs including attorneys' fees.) No serious constitutional objection could be raised to reversing either rule.

If a proposed change in tort law bears no more than a speculative relation to legislative goals of lowering insurance rates or increasing availability of quality health care, for instance, then it will founder on the idea expressed in the Constitution as due process of law. For example, reversing the rule of joint and several liability with an aim of reducing medical malpractice insurance premiums or increasing availability of quality health care bears little demonstrable relation to the goal because the rule does not figure prominently in malpractice cases. As discussed in Section IV-A, little evidence exists to prove that tort reforms achieve their desired goals.

If a change would unjustifiably discriminate against persons injured in one way rather than another or discriminate in favor of a special class of defendants, then it will conflict with the idea expressed as equal protection of the laws. Should the victim of a physician's negligence be required to subtract from his recovery the health insurance benefits he has already paid while the victim of an automobile driver's negligence is not so required? Can the distinction be justified? While abolishing the collateral source rule entirely may be constitutional, see *Johnson v. Farmers Union Central Exchange, Inc.*, 414 N.W. 2d 425 (Minn. App. 1987), repealing the rule only for medical malpractice may violate equal protection of the laws. See *Farley v. Engelken*, 740 P.2d 1058, 1068 (Kan. 1987) ("the classifications created . . . treat both negligent health care providers and their victims differently from other persons similarly situated"). Cf. *Austin v. Litvak*, 682 P.2d 41, 53 (Colo. 1984); *Kenyon v. Hammer*, 688 P.2d 961 (Ariz. 1984) (statutes of limitation deny equal protection when applied to undiscoverable injuries). The Supreme Courts of New Hampshire and Rhode Island have held that certain tort-law changes could not be restricted to medical-malpractice actions without violating equal protection of the laws. See *Carson v. Mauer*, 424 A.2d 825 (N.H. 1980); *Boucher v. Sayeed*, 459 A.2d 87 (R.I. 1983).

To decide whether Maine citizens would be better served by reversing the rules of joint and several liability and of collateral source would require analyzing why those rules were thought to be proper means of promoting the ends of justice and thinking about the effects of reversal. Should an arsonist, for instance, obtain the benefits of his victim's fire insurance or be credited with the value of money and goods collected to help a family put out of their home? Eliminating the collateral source rule would have those effects.

PRETRIAL PROCEDURES:

Similarly, changing pretrial procedures, such as shortening the time within which a claim must be asserted (Statute of Limitations), imposing notice requirements, or requiring mediation or pretrial screening, should not be susceptible to serious constitutional challenge even if they increase the difficulty of asserting perfectly valid tort claims. See, e.g., *Miller v. Fallon*, 134 Me. 145, 147-48 (1936) (sustaining reduced statute of limitation for medical malpractice actions); *Thut v. Grant*, 281 A.2d 1 (Me. 1971) (sustaining replacement of bastardy act with paternity act); *Giberson v. Quinn*, 445 A.2d 1007, 1009 (Me. 1982) ("It is beyond dispute that the state may erect reasonable procedural requirements to the exercise of a right to an adjudication," sustaining ten-day notice requirement for hearing on suspending a driver's license.) The primary issues in all such cases are policy issues. Would Maine citizens benefit under the proposed changes and would the changes be likely to produce the desired results such as reduced insurance costs without inhibiting meritorious claims?

LIMITING DAMAGES:

Opinions are divided on whether maximum limits on damages or "caps" violate the Constitutional right to trial by jury. See *Fein v. Permanente Medical Group*, 695 P.2d 665 (Calif. 1985) (upholding limit on noneconomic damages); *Hoffman v. United States*, 767 F.2d 1431 (9th Cir. 1985) (upholding limit on noneconomic damages); *Etheridge v. Medical Center Hospitals*, 376 S.E. 2d 525 (Va. 1989) (upholding limit on medical-malpractice damages); *Johnson v. St. Vincent Hospital, Inc.*, 404 N.E. 2d 585 (Ind. 1980) (upholding limit on medical-malpractice damages); *Lucas v. United States*, 757 S.W. 2d 687 (Texas 1988) (statutory limit on medical-malpractice damages unconstitutional); *Kansas Malpractice Victims Coalition v. Bell*, 757 P.2d 251 (Kan. 1988) (limit on medical-malpractice damages denies right to jury trial); *Smith v. Department of Insurance*, 507 S.2d 1080 (Fla. 1987) (limit on noneconomic damages unconstitutional); *Richardson v. Carnegie Library Restaurant, Inc.*, 763 P.2d 1153 (N.M. 1988) (damage limit in dramshop act denies equal protection).

Any statutory figure establishing maximum damages is bound to be arbitrary. When applied to actual losses, especially provable noneconomic losses, statutory limits inescapably intrude upon the jury's traditional function in civil suits to assess damages

based on facts proven at trial. Moreover, a damage limit, by definition, gives a wrongdoer an immunity allowing him to inflict harm above the limit without obligation to redress the harm done.

The cap works only where the actual damages exceed the amount that a negligent defendant is required to pay. In effect, the limit takes property from the victim and gives it to the wrongdoer [Cf. Me. Const. art. 1, S.21 ("Private property shall not be taken for public uses without just compensation . . .").] (Damage limits in purely statutory actions, such as wrongful death, dramshop violations, and claims against the state, are distinguishable because the Legislature has in effect eliminated a common law immunity up to but not above the damage ceiling.) Maximum limitations on recovery of actual damages will therefore raise grave constitutional doubts.

Confining a damage limit to a disfavored class of injured persons, such as medical-malpractice plaintiffs, just compounds the constitutional hazard, to say nothing of the problems of policy. Should a person disabled for life by negligent surgery be treated differently from a person identically injured by someone's negligent use of a firearm? The Legislature must consider this question of policy: Are jury awards in Maine so excessive, so uncontrolled by the courts' case-by-case review of jury verdicts, to warrant a statutory limit? Evidence of excessive verdicts in Maine is hard to find.

SUPPORT PROGRAMS:

Finally, positive legislative support programs, such as patient compensation funds or malpractice insurance subsidies, would most probably withstand constitutional challenge. In comparable matters, the Supreme Judicial Court has deferred to the Legislature's judgment on the wisdom of compensation funds and subsidizing private enterprises to achieve broad public purposes. See *Portland Pipe Line Corp. v. Environmental Improvement Commission*, 307 A.2d 1, 24-25 (Me. 1973) (oil spill compensation fund); *Common cause v. State*, 455 A.2d 1, 20-26 (Me. 1983) (Waterfront development and rent-free lease of facilities to private corporation to promote employment).

CONCLUSION:

The Legislature can constitutionally change most rules of tort law and procedures of tort litigation. Placing a maximum limit on recoverable damages is the most constitutionally-suspect of all current tort reform proposals. Before tinkering with tort law, the Legislature should have some good reason to think that the changes proposed will achieve the desired goals and should also be careful to avoid drawing unjustifiable distinctions among tort claimants and among tort defendants. The right to trial by jury, guaranteed to plaintiffs and defendants in tort cases, is deeply rooted in the Constitution of Maine and its infringement, while constitutional, may not be wise policy.

SECTION V: RATE SETTING PRACTICES AND POLICY OPTIONS

RATE SETTING PRACTICES AND POLICY OPTIONS

HOW MEDICAL MALPRACTICE RATES ARE SET:

Although the detailed steps involved in setting medical malpractice rates are laborious and complex, the goals and the general methods are readily understood. Sellers of insurance obligate themselves to accept the financial consequences of certain risks of their insured. If insurers are to remain in business, they must be able to collect enough premiums to cover their claims payments and their expenses and to provide a profit. The rate setting process is the method by which insurers make these estimates.

Medical malpractice insurance poses particularly difficult challenges to the rate setter. First, unlike physical damage insurance, payment of medical malpractice claims may not take place until many years after the policy has been issued and the premium collected. It is usually these claims which are largest and if they result in a monetary settlement, a significant portion is likely to be covered by reinsurance.

When a company is notified of a claim, it establishes a reserve to cover its expected costs, but because this is such a "long tail" type of coverage, the correctness of the reserve may remain unknown for years. Secondly, there are so few claims and so few large claims payments in Maine that the data are volatile and may lack sufficient statistical credibility. The companies, therefore, depend to some degree on data from other jurisdictions which may not accurately reflect Maine experience.

Since 1976, only "claims made" medical malpractice policies have been sold in Maine. A claims made policy covers only those claims of which the company has received notification during the policy year. A policyholder who does not renew such a policy becomes liable for claims made after the expiration of the policy arising from events that took place during the policy period. To avoid this risk of future claims, a person can buy insurance which provides "tail" coverage. This coverage is usually purchased when a physician switches from one insurer to another, thereby obtaining coverage for the period when the physician was under the former insurance policy.

Medical malpractice premiums are used to pay claims costs, expenses, and to provide a profit to the insurance company. Insurance companies must estimate what claims costs and expenses are likely to be. First, companies group their policyholders into classes of similar risks, usually by practice specialty. Then, to estimate expected claims losses for each class, insurers examine the historical changes in pure premium that have taken place over a multi-year period. Pure premium consists of claims payments and reserves made for cases reported, but not yet settled as well as any expenses incurred in settling cases (known as allocated loss adjustment expense or "ALAE").

Pure premium is the product of the frequency and severity of claims. Company actuaries choose among a number of possible statistical methods to project expected pure premium trends. In making such projections, the rate setter should take into account conditions affecting frequency or severity which existed in the historical period, but which are expected to differ in the projection period as well as new conditions likely to affect severity or frequency of claims in the projection period. An obvious example of the latter is the effect of changes to the Medical Malpractice and Liability Insurance System passed by the Legislature in 1986 (P.L. 1986, Chapter 804).

The next step in setting rates is to add expenses to pure premium. These expenses include commissions, company incurred acquisition expenses, taxes, licenses, fees and general administrative expenses. As in the case of projecting pure premium, the companies make their expense estimates on the basis of past experience.

Insurers invest the premiums they receive and keep them invested until they are used to pay losses or expenses. In a long-tail line such as medical malpractice, many premium dollars remain invested for years. It is recognized that the rate setting process should include an adjustment to the rate to reflect this investment income. However, what method to use to reflect an appropriate amount of such future income is in dispute. Until now, the Maine Bureau of Insurance has accepted the industry's approach, one which does not reflect the income which the industry actually receives from its investment of premiums.

In the absence of full and accurate cash flow data, it is impossible for the Bureau to know how much income is available for investment. The question may be of less relevance to medical mutual companies, such as the Medical Mutual Insurance Company of Maine (MMIC), because the insured physicians will presumably benefit from investment income by a reduced rate in the form of dividends or by their ownership of the company. It should be noted, however, that the history of mutual companies shows that they have frequently maintained large surpluses and have not been subject to effective control by the policyholders. MMIC is a case in point. Its surplus has nearly doubled in each of the last two years. With 9.2 million dollars surplus in 1988, its premium to surplus ratio is now almost 1:1 which means that the company has between two and three times the amount of surplus generally considered to be adequate.

Medical malpractice rates are set for a basic level of coverage such as \$100,000/300,000 limits. This rate is then adjusted by a so-called "increased limits factor" to reflect the added risk to the insurer of policies with higher than the basic limits. As St. Paul's noted in its April 28, 1988 filing, [Increased limits factors are difficult to compute from actual data because of the great statistical variations of large losses.] In the absence of sufficient data, rate setters use various theoretical models to arrive at increased limits factors

which include the use of countrywide data.

Periodically, insurers analyze the class "relativities" to ensure that each class of insured contributes its fair share of premium based on its claim experience. Although changes in class relativities do not affect the overall premium amount, they can combine with rate changes to produce large rate fluctuations for classes of insured in a single year.

It is common for insurance companies to spread their risks to other companies by the process of reinsurance. Companies selling reinsurance products are beyond effective regulatory oversight by state regulators. In the case of MMIC, because its business is limited to writing medical malpractice in Maine, the company has found it advisable to reinsure its larger risks. Approximately forty percent of MMIC's exposure is reinsured. It uses two reinsurers, and there is now (unlike in the recent past) a competitive market for reinsurance.

St. Paul's, as do most other writers of medical malpractice insurance, attempts to collect enough premium to include a profit. A recent MMIC filing states that MMIC has not included any amount which was intended to add to surplus. For companies which do attempt to make a profit, the filings express their plans in terms of a target rate of return. In selecting such a target, companies take into account the risk posed by the line of insurance and comparable rates of return in other lines of insurance.

INSURANCE SYSTEM OPTIONS TO REDUCE OR STABILIZE RATES:

In suggesting changes that will tend to reduce or stabilize medical malpractice rates, one should bear in mind that any system must provide sufficient premium to pay a company's losses and expected losses, its reasonable expenses, and a reasonable profit. Any rate-setting system which does not meet these needs would either be struck down by a court as biased rate making or would lead to withdrawal of insurers from the market.

Those who complain about medical malpractice rate increases are affected by two related phenomena: large rate increases over time and rapid annual rate fluctuations. Insurers recognize that sudden rate changes, up or down, are disruptive; but because of the volatility of medical malpractice data, insurers have not succeeded in avoiding such market disruptions. The following considerations are designed to address both issues.

A. Stronger Oversight By The Insurance Bureau:

Rate Filings: Maine, like many other states, employs a "file and use" system for most insurance products. Medical malpractice rates go into effect thirty days after they are filed with the Bureau of Insurance. The Bureau sometimes approves filings without the scrutiny afforded by a public hearing as was the case with the most recent St. Paul's Companies filing. Moreover, the Bureau makes no filing of its own so that even if it holds a

hearing, it is limited to the largely passive role of approving or disapproving the filing on the basis of the filings before it. The problem is compounded by the fact that filings by parties other than the insurer are generally limited in scope to the particular interest of the filing organization. The Bureau's August 1, 1988 decision on St. Paul's filing provides explicit recognition of this problem. For example, considering the reasonableness of St. Paul's target rate of return, the hearing officer notes that there was no evidence in the record upon which a different rate of return could be determined. The Legislature might effect a stronger oversight role for the Bureau of Insurance by considering passage of statutory amendments such as:

1. That a hearing be required to be held for every medical malpractice rate filing.
2. That medical malpractice rate filings become effective only after a hearing and decision.
3. That the Bureau of Insurance be empowered to make advisory filings in response to filings by medical malpractice companies and that the Bureau use expert witnesses at the hearings to support the Bureau's filings. The costs of such activities should be made accessible to the insurers.

Investment Income: Because the treatment of investment income can have a substantial impact on rates in a long-tail line like medical malpractice insurance, it would be advisable to provide the Bureau with explicit statutory authority and a mandate to take such income fully into account. Therefore, the Legislature could consider the addition of the following to the insurance statutes:

That the Superintendent of Insurance shall develop and periodically update a model for estimating investment income earned in the business of medical malpractice which takes into account both risk and market rates of return and that no filing is to be approved that does not substantially meet the income projections of such model.

Closed Claim Studies: Not only does the Bureau of Insurance lack alternative recommendations by experts at hearings, but it is forced to rely on industry data, much of which is not based on Maine claims. Recently the Minnesota Insurance Commissioner issued a report based on a detailed study of all medical malpractice claims in three states over a six year period. Although the insurance industry disputes his conclusion that the industry has consistently and substantially overestimated losses and has thus over-reserved, the data developed in the study will be useful for anyone setting or reviewing rates. Therefore, the Legislature might consider additions to the insurance statutes:

1. That the Superintendent of Insurance be directed to undertake a periodic detailed study of all medical

malpractice claims in Maine as well as whatever additional claims deemed to be advisable in other jurisdictions relied upon in the filings of the insurers and to issue reports thereon. The costs of such studies and reports shall be assessed to the insurers.

2. That the Superintendent of Insurance be directed, at least every five years, to undertake a study of the reserving practices of writers of medical malpractice insurance in Maine.

B. Minimizing Disruption:

The fact that St. Paul's proposed almost a 20% increase in rates in 1988 and has proposed an approximately 20% decrease in 1989 demonstrates the extreme rate volatility in this line of insurance. Such rate changes not only alarm policyholders, but make it difficult for them to make financial plans. The Legislature might consider an expression of public policy to avoid market disruption in medical malpractice. The following additions to the insurance statutes could affect this:

1. That it is the intent of the insurance laws that changes in medical malpractice rates not be so great as to be disruptive and that in regulating this line of insurance the Superintendent take such reasonable steps as is possible to avoid disruption including limiting the amount that class relativities may be changed at any one time.
2. That to prevent market disruption which would be caused by the size of a proposed change in rates, the Superintendent be authorized to spread the adjustment over a period not to exceed three years, to the extent that such action does not threaten the financial stability of the insurer.

C. Steps To Improve Efficiency Of Insurers:

A large portion of medical malpractice premiums is used to pay company expenses. In fact, it is remarkable how few premium dollars are actually used to pay claims. For example, Schedule P of MMIC's 1988 Annual Statement shows that in the ten-year period ending December 31, 1988, MMIC made loss payments of \$6,185,994. In that same period, the company's expenses were almost exactly the same amount, or \$6,011,000. Historically, such expenses have been accepted in rate filings without serious challenge; however, the reasonableness of expenses should not be accepted unless the company demonstrates that it has in place an adequate program to control them. The Legislature could consider the adoption of an amendment to the Maine insurance laws to provide a requirement similar to that imposed in Massachusetts, on filings by Blue Cross Blue Shield (Mass. G.L.c. 176A, s.6) and on private passenger automobile filings (Mass. G.L.c. 175, s.113b).

That the Superintendent, on the basis of information provided in every medical malpractice filing, determine whether the company making the filing utilizes adequate programs to control costs and expenses, in accordance with standards to be determined and approved by the Superintendent. At a minimum, such programs shall be designed to have a material impact on premium charges by reducing costs and expenses. No filing shall be approved if the Superintendent determines that the filing is deficient or that the programs are inadequate.

D. Merit Rating:

Classification of risks are not necessarily limited to medical specialties. The insured can also be classified according to the degree of claims risk determined by prior claims experience. However, because there are relatively few claims payments, a merit rating system would not be likely to result in a significant moderation of rates for those in the lowest risk classifications. If it chooses to do so, the Legislature could direct the Superintendent to require merit rating plans.

E. Removing Risk from the Insurance System:

One well known way of reducing insurance rates is to make the insured share some of the risk. The use of copayments or deductibles does not reduce the risk--except to the extent that the insured is thereby encouraged to be more careful. However, such a shift of risk does make those whose actions result in claims losses pay relatively more than those without a history of such claims. Moreover, any reduction in the risk covered by insurance eliminates some of the expenses and profits built into insurance rates. Perhaps because many people are not familiar with the nature and purpose of insurance, it is frequently difficult to persuade individuals to accept part of the insurance risk even when the potential loss would not be financially embarrassing and when it would be likely to save them money. The Legislature may wish to consider mandating a minimum deductible, such as \$5,000, to remove some of the costs from the insurance system.

CONCLUSIONS:

There is an opportunity to realize savings in medical malpractice insurance premiums without causing financial injury to insurers. To obtain these saving will require a more vigorous public (regulatory) oversight of the medical malpractice insurance industry in Maine. Specifically, it will require that the Superintendent of Insurance implement existing and new powers voted by the Legislature including the development of a database of Maine's claims, settlements, and insurance practices. These data are essential if the Bureau is going to have the information

SECTION VI: MEDICAL SERVICE REFORMS

A. Medicaid Fees

B. Medical Review Provisions

necessary to carry out these functions and if the Legislature and general public are going to oversee both the Superintendent's and insurance industry activity.

Promoting efficiency is a principal role of government in a regulated industry such as insurance. To guard against inefficiency, which comes from the insurance industry practice of understating investment income, the Superintendent of Insurance should be authorized and directed to promulgate an investment income model. To guard against the present lack of incentive to control expenses, the Legislature might require that the Superintendent of Insurance mandate that insurers demonstrate an effective cost control program prior to rate increases.

To promote efficiency in the reinsurance needs of MMIC and achieve premium savings, the Legislature could direct the Superintendent of Insurance to set standards for reinsurance which, to the extent feasible, reduce dependency on outside reinsurance. Secondly, the Legislature could consider a patient compensation fund such as that suggested in L.D. 762.

To minimize disruption in the marketplace due to unstable fluctuations in the price of insurance, the Legislature could authorize the Insurance Superintendent to spread the effect of significant rate increases over a three year period. To spread the risk of claims payment and resulting increases in premiums to those policy holders responsible, the Legislature might consider implementing a merit rating system or a system of deductibles.

The insurance industry like the medical care system is based on trust that consumers give to providers. The integrity of the system demands that the income of policy holders be fully accountable and used as efficiently as possible. Actions to assure this outcome will have as much impact on the malpractice problem as reduced rates.

MEDICAID FEES

It is apparent from the literature and from the results of the physician survey that the difficulties Medicaid recipients have in obtaining medical care are due in part to the lower reimbursement fees for services to these patients compared to those insured by Blue Cross or commercial insurers. Inadequate reimbursement was the primary reason physicians gave for not treating or limiting Medicaid patients in their practices. Other factors include administrative paperwork and physician concern over perceived noncompliance of Medicaid patients. Transportation was also a problem as cited from a recent study of Medicaid recipients in Maine (USM, 1984).

While the access issue for Medicaid recipients is complex, removing the price barrier could alleviate one of its primary obstacles. It would not guarantee physician participation in the Medicaid program. However, it could act as an incentive for those already in the Medicaid program to remain, particularly Family Physicians who provide much of the obstetrical care to these patients. Since both the price of medical malpractice insurance premiums and the fear of being sued are the principal reasons physicians give for dropping obstetrics, policies aimed at reducing these could have a positive effect on access for all classes of patients including Medicaid recipients.

Since the early 1980's, states have been afforded significant leeway in running their Medicaid Programs. This gives the Legislative and the Executive Branches of government more authority in the program's structure and management. Currently the Legislature has an ongoing Commission on Access to Medical Care. That Commission could be charged with developing a plan to meet the potential access problems of Medicaid recipients for the Legislature. Developing the plan with the State Medicaid Agency (Bureau of Medical Services) and its Physician Advisory Committee on Medicaid would be advantageous.

MEDICAL REVIEW PROVISIONS

INTRODUCTION:

This section of the report describes current practices in Maine relative to improvement in the quality of medical care and subsequent reduced likelihood of malpractice incidents. It includes discussion of professional licensure, performance review, hospital policies relative to credentialing and privileges, and developing standards for care. These considerations must be put into the broader context of what is taking place at the National level which may have significant impact on Maine's medical malpractice and health care delivery problems as well as on solutions in the not too distant future.

Patricia Danzon has conducted extensive research on the 1976 tort reforms' effect on frequency and severity of claims and other outcomes. When claims began to decline in the late 1970's following the medical malpractice crisis of that period, it was her opinion and that of other experts that the reforms passed by many states had less to do with the decline than the response by the medical profession to improve peer review and other efforts aimed at preventing the number of malpractice incidents. Activities on several fronts have been implemented in Maine's health care delivery system which show promise of improving quality of care and reducing incidents of malpractice. There are several others that the Legislature might encourage.

NATIONAL CHANGES:

A recently released report, For the Health of a Nation, by The National Leadership Commission on Health Care, indicates that serious strains in the health care system "are raising the frustrations of all who participate in it. Physicians are concerned about outside parties intruding on their clinical decisions and damaging the doctor-patient relationship. Hospitals find it increasingly difficult to cope with pressures for cost containment and with rapidly changing laws and regulations. Government and major private payers are trying with limited success to control rising costs. Patients are faced with higher costs, but they don't see care improving sufficiently to justify their increasing payments--and they continue to present the system with ever-increasing demands." (National Leadership Commission on Health Care) The report also suggests that these strains will be exacerbated by the rapidly aging population in the United States, the AIDS epidemic, and the continuing technology explosion which spawns more and more new treatments, which, though often beneficial, are also costly.

The National Leadership Commission sets forth a strategy to address these serious health care problems, problems which they deem unnecessary since the United States has the knowledge to solve them now. There will always be some art and some uncertainty in the medical profession since science expands continually into new areas and because each patient presents a unique set of problems. That is also precisely why it is not

possible at this time to delineate hard-and-fast rules to which physicians must adhere without seriously restricting the delivery of health care in this country.

PHYSICIAN LICENSURE:

The Board of Registration in Medicine is responsible for new licensing of allopathic physicians in Maine and ensures that minimal training standards and qualifications are met. A 60-90 day background check on training and experience is made on all applicants. All hospitals where privileges were reported by applicants are independently contacted by the Board to confirm these reports. The Board also requests that applicants disclose hospital privilege reduction/revocations which may have taken place in other states.

The Board requires all physicians licensed in Maine (5,900 of whom 2,100 currently practice in Maine), at every biennial re-registration, to report under penalty of license revocation any malpractice paid claims against them since the preceding registration. These reports are subject to review by the Board and investigated through contact with the malpractice insurance company by the Executive Director. Reports which are deemed by the Board as not due to negligence or incompetence are designated on a consent list as such. Those potentially due to negligence or incompetence are referred to the Attorney General's office for investigation. A similar review is made of all claims paid notices received by the Board from other sources.

The Board maintains files of qualitative data from a variety of sources which are subject to similar review. These include reports submitted by hospitals and individual physicians received

under their respective obligations to report suspected impaired physicians, mandatory hospital reports of reductions or revocation of privileges (voluntary reductions need not be reported), and reports of incidence or notice of establishment of reserve accounts by malpractice insurers. In addition, consumer complaints (15-20 per Board meeting) are reviewed for possible action. Other more subjective reports from informal sources are also filed. Action can only be undertaken in response to legally-mandated requirements or when sufficient evidence is available to warrant review by the Board for possible recommendation to the Attorney General's office for investigation.

The Board of Osteopathic Examiners and Registration is responsible for licensure and relicensure of osteopathic physicians in Maine. Initial licensure procedures are similar to those described for allopaths with checks of past education, training, and experience done routinely based on information not only from the applicants, but prior institutions as well. There are currently 400 osteopathic physicians licensed in Maine and 270 who are actively practicing in the State according to the Board's Executive Secretary. Relicensure of osteopaths is

required yearly and reportedly close attention is paid by the Board of Examiners to any reports received relative any physician who has been disciplined, suspended, or had privileges curtailed or revoked. The Board has remedial action available at the Attorney General's Office if further investigation is required.

Changes in the medical malpractice liability law passed in 1986 by the Maine State Legislature (PL 1986 C.804) required the State Superintendent of Insurance to send notice of all first dollar claims paid by any carrier to the Boards. The Boards must review any physician who has three such claims in ten years. The Executive Director of the Board of Registration in Medicine indicated that this practice has been followed since 1978. Out of the 230 settled/awarded malpractice cases reported since 1978 against allopaths, only seven have been reviewed under this mechanism since 1980. Five were prior to or during 1986; the two more recent cases are pending. All five closed cases have resulted in loss of license to practice in Maine either through voluntary withdrawal or administrative court procedure. Specific data are not available relative to osteopathic practitioners; however, indications are that the numbers are very small and would follow the allopathic trend. It does not appear that rates of physician review have increased since the reforms of 1986.

These data also suggest that speculation by some (FAIR, 1988) that a small number of physicians are responsible for most of the cases may not be true in Maine since only seven out of approximately 3,000 physicians who have practiced in Maine during this period have had three or more claims in ten years resulting in monetary settlements. Most of this speculation is based on calculations of total money awards. A few very large cases settled against a few physicians account for most of the total monetary outlay. For example, a Washington Post study quoted by FAIR in 1988 stated that 1% of Maryland's physicians insured by its largest malpractice carrier were responsible for 54% of paid claims and legal costs. Since very large claims against a few physicians (at one case each) could account for a large proportion of the total amount, such analyses do not address the bad-apple hypothesis. Multiple claims settled against individual physicians do not appear to be the most effective indicators for identifying those most at risk for malpractice suits.

There is misunderstanding of many of the differences between malpractice settled/awarded claims and actual negligent or incompetent physicians. The Boards have no power over the volume of malpractice suits and cannot formally act until allegations result in paid claims. While the Board's Executive Director had no suggestions for changes in the Board's current oversight rules or procedures that would result in changes in malpractice suits, filed or settled, other members of the Board suggested that there could be changes to improve the Board's ability to gather other information, such as requiring hospitals to report "Failures to Renew" privileges and encouraging other health care personnel (nursing and other staff) to report incidents to the Board.

There is a general concern about defensive medicine and its relationship to access, overall cost of care, and its limited impact on malpractice suits. This concern may be germane to practice standards as well. One action taken by other states has been to require notification to the Board of licensure of voluntary withdrawals, under threat of disciplinary action, as well as administrative reductions/revocations of hospital privileges. This may be a loophole which allows physicians to relocate and resume practice which would be impossible at the previous location.

OPTIONS FOR STRENGTHENING PHYSICIAN LICENSURE:

The method used by Maine in structuring its professional licensing boards is to rely on the Attorney General's office for investigatory and disciplinary actions. Some Board members feel this restricts the Board to statutory legal responses to evidence brought to its attention by the Superintendent of Insurance, hospitals, consumers, and individual physicians rather than permit it to actively search and review for incompetence. Regardless, some restructuring might be considered to permit the Board to play a more active role.

The 1986 medical malpractice liability reforms allowed the Board of Registration in Medicine to increase dues in order to create a more active investigative staff as some other states have done. This apparently has not yet happened. L.D. 1407 (which is currently under consideration) is designed to address this concern mandating a budget to include funding for one full-time investigator in the Attorney General's office per 1,000 medical doctors. Relatively few consumer complaints appear to be handled by the Board.

A potential consideration would be to create an Ombudsman's Office to investigate consumer concerns. All consumer inquiries throughout the State could be handled through that office, and perhaps reduce the number of suits filed. (It is also possible, however, that this process could do exactly the opposite.) This office could provide an additional source of data when reviewing complaints about individual physicians. Such an office would require an (800) telephone number, appropriate public education, and more staff, but could provide an early warning system regarding physicians at high risk for future malpractice suits. The Board would need some mechanism to ensure appropriate medical input regarding the investigative procedures such as awareness of confidential nature of physician/patient relationship. Some features of this recommendation are included in L.D. 1407, but not the toll-free 800 number.

Secondly, qualitative data reviews by the Boards of Licensure could be formalized through the development of written guidelines for collection and use of these data. Regional physician teams might be established to contact physicians reported or suspected of substance abuse problems even in the absence of actual malpractice evidence. Such activities may happen on an informal basis now, but no guidelines are used.

Thirdly, Board policy changes could be encouraged for increased use of lesser penalties (probation and/or censure) combined with written guidelines for increased monitoring of physicians disciplined under these actions. L.D. 1407 requires yearly reporting of such activities to the Legislature.

HOSPITAL RESPONSES TO MALPRACTICE:

In order for a hospital to be accredited by the Joint Commission on Accreditation of Hospital Organizations (JCAHO), a number of policies and procedures must be in place relative to risk management. These include hospital licensure, physician credentialing procedures, ongoing quality assurance programs, morbidity and mortality reviews, and other educational programs.

A. Credentialing:

Each hospital establishes its own methods of credentialing physicians on its staff. These are usually administered by a committee which depends on recommendations from subcommittees specific to individual specialties such as internal medicine, OB/GYN, family practice, and surgery. Training, past hospital experience, and procedures are reviewed. When approved by the Credentials Committee, recommendations are then reviewed by the medical staff and the executive board.

The increased supply of physicians, especially in more populous areas of Maine, has allowed this process to become more rigorous. In most hospitals, board certification in the appropriate specialty is required for active hospital privileges. Policies currently regulate the extent of privileges (surgical/invasive procedures) as well as steps to rescind privileges. Hospitals are required to report suspension or required reduction in privileges to the licensing Board. The threat of such action often results in voluntary reduction or relinquishing of privileges neither of which is required to be reported. This approach may be seen as either facilitating quality control, (avoiding legal entanglements and allowing hospitals to negotiate rather than formalize removal) or as a loophole which may result in moving the physician to another locale without addressing competence issues. New JCAHO requirements will require physicians to report such voluntary actions when applying for new or renewed privileges.

B. Quality Assurance Activities:

Traditionally, hospitals have focused on how care was delivered. Only recently have they begun to measure the impact of that care on patient outcomes. Currently, hospitals are mandated by the JCAHO, as well as Federal and State government, to monitor the quality of care they provide and must document these activities. In Maine, each hospital must have a quality assurance plan with written policies and procedures. These are locally developed and thus vary by institution. Generally, committees are set up to monitor specific aspects of care such as medical record review

(ensure appropriate documentation), tissue committee, infection control, and tumor board. The committees meet periodically and review findings. Proposals for changes in policies or procedures are submitted to the administration or Medical Directors.

Hospitals must also submit to a review of Medicare services conducted by the Maine Professional Review Organization (PRO) which includes utilization reviews (Are people being appropriately hospitalized?) as well as quality reviews (Are appropriate antibiotics being used?). Hospitals receive a summary of findings and physicians are given individual performance profiles. If received by the hospitals, these individual physician reports might provide useful information highlighting patterns of inappropriate care since potential quality problems can be identified such as patients with unplanned return to surgery during a single admission, multiple blood transfusions during a surgical stay, and hospital-acquired infections to name a few.

In general, quality assurance activities are most effective in terms of affecting provider performance if the providers themselves are involved in setting the quality standards. In-hospital quality assurance activities are limited, however, by the time and money required to effectively monitor care.

C. Morbidity/Mortality Reviews:

Medical staff departments of hospitals (surgery, internal medicine, family medicine) conduct periodic meetings at which each death and any unusual morbidity are discussed. While these have been criticized as ineffective (see Millman, 1983)¹, they theoretically create an opportunity for peer review and continuing education. Such meetings can result in medical record review by the Chief of Service and can lead to a peer review hearing if deemed appropriate. Hospitals are not required to report such hearings unless they result in a disciplinary reduction in privileges.

D. Other Educational Activities:

Hospitals host educational sessions for their medical staffs in a variety of formats usually including case conferences, noon presentations by internal and external experts, and other variations.

E. Risk Management Plans:

In addition to these activities, hospitals have risk management plans which range in scope and quality from patient advocate/complaint departments to more comprehensive monitoring of problems and early intervention. Some critics see these as mostly public relations, but insurers are attracted to these approaches to anticipating problems.

OPTIONS FOR STRENGTHENING HOSPITAL REVIEW:

Hospitals could receive individual physician as well as aggregate data from Medicare PRO reviews. This would allow closer monitoring and might lead to earlier identification of problem providers. Discovery issues in cases of disciplinary action need to be considered.

Secondly, each hospital staff could develop practice standards and use hospital quality assurance staff to compare actual care against such standards. It is thought that Statewide standards would be less likely to be adhered to and thus have less likelihood of having an impact on actual performance.

PROFESSIONAL STANDARDS:

There is a great deal of activity taking place at the National level as well as at various state levels relative to health care in general and the accessibility, cost, and quality of health care in particular. The National Leadership Commission on Health Care in its 1989 Report, For the Health of a Nation, indicates that there is insufficient information on the quality and outcomes of medical services and insufficient means of monitoring the quality of care and fostering its improvement. Citing studies showing large regional variations in the use of medical services that seem not to be based on medical need as well as stories of unnecessary and equivocal care in the use of inappropriate and excessive procedures, the Commission reports that this is not an isolated problem, but is generic to the whole health care system. In their words, the nation's quality control systems are at best rudimentary. Patients particularly have few tools to help them assess the quality and appropriateness of their treatment.

As part of the Commission's proposal to respond to the serious problems of quality health care, and others, in this country, it sets forth a nine point strategy which includes specific recommendations relevant to professional standards of care. Five recommendations out of the nine in this Report are included herewith which may impact on quality of care and malpractice issues:

1. Greatly increase research on the appropriateness, effectiveness, and quality of care and publicize the results widely to help patients, provider, and payers assess treatment.
2. Control costs by reducing the amount of inappropriate care as a result of the expanded research and National guidelines.
3. Develop a strong public-private partnership to improve quality and control costs by coordinating the expanded research on appropriateness and quality and disseminating the results through health professional and other appropriate organizations.

4. Develop and continually update National guidelines to enable practitioners, patients, and payers to make more informed decisions.
5. Promote nationwide the current, promising State reforms in malpractice and consider new Federal initiatives if necessary.

In addition to this call by a broadly-based group of distinguished leaders to establish National guidelines for health care, the Physician Payment Review Commission, created by law in 1986 to advise government on the reform of Medicare's physician payment methods, recommends that "the federal government actively encourage the development and dissemination of practice guidelines so that they are incorporated into physicians' practices, made available to patients, and used as the basis for coverage and payment, and for medical-review criteria by hospital medical staffs, carriers, and PROs." (Inglehart, 1989)

In Maine, if the intent is to improve quality with a National or community standard, educational research in medical settings indicates that a method which directly involves each practitioner would be the most effective. The Maine Medical Assessment Foundation (MMAF) has created a model program using exactly this type of local data collection and review process. (Wennberg, et al, 1988) In creating quality standards for hospital care, issues of the overall cost and effectiveness of standards appropriate to each institution's setting and population must also be considered. It would, therefore, seem appropriate to continue to encourage activities such as MMAF's which are both statewide and locally-based and have the capability to provide real data on which procedures are effective. This holds potential for reducing the number of procedures and ultimately malpractice risk.

Additionally, Medical Mutual Insurance Company, a physician-owned and operated malpractice insurer in Maine, has taken a statewide approach with its insured physicians by recommending guidelines of practice in three clinical areas: anesthesia, diagnosis of breast cancer, and obstetrics. The program began in January of 1988 and no data are yet available on its effects. MMIC has requested that physicians it insures and who practice in these specialties follow the proposed standards or document why they were not followed. Physicians who get sued and have not followed the standards or documented the reasons for not following them will be covered by the company, but will likely be dropped in the following year. The standards are based on those of the National organizations for each specialty. They are adopted following review (and revision) by internal MMIC physician committees. MMIC plans to adopt additional standards for other procedures and services. Physicians have, however, expressed concern about coverage if guidelines are not followed or adequately documented. Health services research studies indicate that it is impossible to rely on any one source of

information (medical record, patient report, physician report) for a valid reflection of what takes place in clinical encounters (Gerbert and Hargreaves, 1986),

CONCLUSIONS:

A number of ideas have been set forth for consideration relative to strengthening physician licensure procedures; monitoring and, hopefully, improving quality of care; and developing written guidelines to serve as a baseline for quality medical care. It is important to keep in mind that any approach to malpractice which attempts to be preventive, using some method of quality assurance, has multiple unresolved issues. Is quality the most cost effective care, most expensive care, best care, or usual practice? Is quality related to outcome? Despite National Medical Specialty Board promulgation of practice standards, the relationship of outcome and quality is still unclear nor has it been firmly established in many aspects of clinical care. While standard appears to be the wave of the future, any approach which relies on overly-specific protocols to be followed may lead to expensive and unnecessary care.

It may not be possible at this time to assure quality in medicine in the same way that quality is assured in a manufacturing process. It is extremely important to encourage both physicians and consumers to upgrade the integrity of the doctor/patient relationship. In so doing, physicians should be very involved in the process and assist in developing better guidelines for providing high quality care. Patients should become more informed and pragmatic relative to their expectations of what outcomes are possible and probable. Health care may be a right and a privilege, but it has to be a partnership as well.

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X

ATTACHMENTS

- ATTACHMENT A: Physician Survey Instrument
- ATTACHMENT B: Physician Survey Analysis
- ATTACHMENT C: Attorney Survey Instrument
- ATTACHMENT D: Attorney Survey Analysis

ATTACHMENT A

MEDICAL MALPRACTICE LIABILITY STUDY
OBSTETRICS AND MALPRACTICE IN MAINE - 1989
PHYSICIAN SURVEY

ID#: (1-3)

1. Please indicate your primary practice specialty:

- (4) ☐ a. Family physician
☐ b. General practitioner
☐ c. Obstetrician/gynecologist
☐ d. Other (please specify) _____

2. Approximately what percent of your practice is in:

- (5-6) ☐ % Obstetrics
(7-8) ☐ % Gynecology
(9-10) ☐ % Other (please specify) _____
(11-12) ☐ % Other (please specify) _____

3. Please estimate how many deliveries you personally attended in:

(13-21) 1987 _____ 1988 _____ Estimated total for 1989 _____

4. If you have changed your obstetrics practice since January 1987, indicate how? (Check all that apply.)

- (22) ☐ Stopped or reduced providing care to UNINSURED patients
(23) ☐ Stopped or reduced providing care to MEDICALLY HIGH-RISK patients
(24) ☐ Stopped or reduced providing care to MEDICAID patients
(25) ☐ Changed practice location
(26) ☐ Put a limit on the number of patients accepted.
(27-28) If yes, number per year: _____
(29) ☐ Other (please specify) _____

5. If you have reduced/stopped (circle one) your obstetrics practice since January 1987, rank the three most important reasons why. (Please respond with 1 for most important, 2 for second most important, and 3 for third most important)

- (30) ☐ Limited back-up and consulting available for patients with high risk of a poor birth outcome
(31) ☐ Fee limit on Medicaid reimbursement
(32) ☐ Concern over obstetric malpractice suit
(33) ☐ Cost of malpractice insurance premiums in obstetrics
(34) ☐ Unavailability of occurrence type insurance coverage
(35) ☐ Inconvenience of practicing obstetrics (on-call responsibilities, sleep deprivation, etc.)
(36) ☐ Other (please specify) _____

IF YOU ARE NOT CURRENTLY PRACTICING OBSTETRICS PLEASE SKIP TO QUESTION 10.

6. Medicaid patients made up what percentage of your obstetrics practice during: (Please exclude those you were called on for delivery only.)

(37-42) 1987 _____ 1988 _____ Estimated for 1989 _____

7. What is your policy regarding providing total obstetrical care to Medicaid obstetric patients? (Please check one.)

- (43) ☐ a. DO NOT limit care for Medicaid obstetrical patients
☐ b. DO NOT provide care for Medicaid obstetrical patients
☐ c. Provide care for a LIMITED NUMBER of Medicaid obstetrical patients

(44-45) If yes, how do you choose which patients you will accept? _____

8. If you do not provide total obstetrical care to Medicaid patients, or provide care to only a limited number, please rank the 3 most important reasons why. (Please respond with 1 for most important, 2 for second most important, and 3 for third most important.)

- (46) ☐ Reimbursement is inadequate
 (47) ☐ Dissatisfaction with OHS policies.
 (48) ☐ Pregnancies are high medical risk
 (49) ☐ Fear of malpractice suit
 (50) ☐ Too much paperwork
 (51) ☐ Patients are noncompliant
 (52) ☐ Patients sue more
 (53) ☐ Other (specify) _____

9. If you plan to drop obstetrics, indicate the year this will occur:

- (54) a. 1989 _____ d. Not sure _____
 b. 1990 _____ e. No plans to drop _____
 c. 1991 _____

10. What is the current annual malpractice insurance premium for you personally (cost of liability premium per physician)?

(55-57) \$ _____/yr.

11. Please indicate who is currently paying your malpractice insurance premium.

- (59-60) ☐ a. I personally pay the premiums ☐ b. My employer (other than practice)
☐ c. My practice pays the premiums ☐ d. My hospital
☐ e. Other (specify) _____

12. What are your current malpractice insurance coverage limits? (case limit/total limit)

- (61) ☐ a. \$100,000/300,000 ☐ b. \$200,000/600,000
☐ c. \$1 mil/3 mil ☐ d. Other(\$_____/_____) _____

13. Have you ever been named in an obstetrics personal injury or malpractice suit?

- (62) ☐ 1 Yes ☐ 2 No

If Yes, how many culminated in each of the following outcomes? (Provide actual number.)

- (63-64) ☐ Filed and dropped ☐ Court settlement in your favor
 (65-66) ☐ Settled out of court ☐ Court settlement for plaintiff
 (67) ☐ Still pending
 (68) ☐ Other (please specify) _____

(69-70) How many of these suits were filed by Medicaid recipients? _____

14. If a judgment was awarded for your most recent suit, please indicate the amount. \$ _____

(71-74)

Were you satisfied with this outcome?

- (75) ☐ 1 Yes ☐ 2 No

(76) a. If not, why? _____

15. In 1988, what was the total gross income to your practice per physician before deductions and taxes? \$ _____

(77-80)

In 1988, what was your net income from your practice per physician before deductions and taxes? \$ _____

(81-84)

If you were on salary in 1988, what was the total gross income before deductions and taxes? \$ _____

(85-88)

(89)

Please return in the enclosed envelope to: Ronald Deprez, Ph.D., Public Health Resource Group, Inc., P.O. Box 5068, Portland, ME 04101

THANK YOU FOR YOUR PARTICIPATION
 ATT. 2

Attachment B

Survey Methods and Response/Non-response Comparison

Physicians to be included in the sample were identified through the "Cooperative Health ManPower Resource Inventory", a data bank containing demographic information on all practicing Maine physicians. Physicians were included in the sample if their primary specialty was Family Practice or Obstetrics/ Gynecology, they were Osteopathic doctors, or their second or third specialty was listed as Obstetrics. Six hundred and twenty-one physicians were identified and sent surveys using this criteria. Of this number thirty surveys were returned undelivered because of the physicians death or lack of a forwarding address.

Fifty percent (300) of those surveyed returned questionnaires. There were only slight variations in percentage results between respondents and non-respondents. In addition, both the non-respondents and respondents were similar to the original pool, again only showing slight variation in some areas.

There was a slight over representation by urban physician in the respondents. Thirty eight percent of the physicians who returned questionnaires worked in urban areas, in comparison to thirty-four percent of the original sample. The opposite was found for non-respondents, with urban physicians slightly under represented with thirty percent and rural physicians slightly over represented with seventy percent.

Physician Location

Location	Respondents	Non Respondents	Original Sample
Urban	38%	30%	34%
Rural	62%	70%	66%

By age categories, the percentage of respondents and non-respondents under forty was similar to the original sample. From forty to fifty-nine there was a slight over representation by respondents when compared to the original sample. For physicians sixty and over, the original sample contained twenty-four percent. Twenty-six percent of non-respondents fell into this category while only twenty-one percent of the respondents were sixty or over, showing a slight under representation by respondents.

	<u>Age</u>		
	Respondents	Non Respondents	Original Sample
Under 40	33%	31%	32%
40 - 59	46%	43%	44%
Over 60	21%	26%	24%

Seven percent of the original sample were residents. Six percent of the respondents classified themselves as residents and eight percent of nonrespondents were classified as residents.

A slightly higher percentage of respondents were male than found in the original sample and the nonrespondents sample. The opposite was found with female physicians respondents. Only twelve percent of the respondents were female while fourteen percent of the original sample and fifteen percent of non-respondents were female.

	<u>Sex</u>		
	Respondents	Non Respondents	Original Sample
Male	88%	85%	86%
Female	12%	15%	14%

A greater percentage of physicians who responded to the survey treated medicaid patients than non-respondents or than in the original sample. In addition, the percentage of blank responses found in the respondent sample was slightly lower than found in the non-respondents or original sample.

	<u>Treat Medicaid Patients</u>		
	Respondents	Non Respondents	Original Sample
Yes	89%	81%	84%
No	5%	8%	7%
Blank	6%	11%	9%

Of the four categories of physicians found in the sample, the percentage of Family Practice physicians were higher in respondents than in the original sample or the nonrespondents. Similar percentages were found for respondents, non-respondents, and the original sample for Obstetrics/Gynecology. The category Other MD's, which included all physicians whose second or third specialty was listed as Obstetrics, was slightly under represented in the respondents. The same results were found for the Doctors of Osteopathic Medicine.

Physician Categories

	Respondents	Non Respondents	Original Sample
Family Practice	55%	42%	48%
Obstetric/ Gynecology	16%	15%	15%
Other MD	12%	21%	17%
Osteopaths	17%	22%	20%

Respondent physicians were slightly under represented for 36-110 deliveries per year compared to the original sample while slightly over represented for 16-35 to deliveries and 111-550 deliveries per year. The percentages of respondents, non-respondents, and original sample were similar for 0 Deliveries per year and 2-15 deliveries per year.

Number of Deliveries

Per Year	Respondents	Non Respondents	Original Sample
0	3%	2%	2%
2-15	2%	3%	3%
16-35	8%	5%	6%
36-110	79%	85%	82%
111-550	9%	5%	7%

ATTACHMENT C

MEDICAL MALPRACTICE LIABILITY STUDY
ATTORNEY SURVEY

ATTORNEY NAME: _____ DATE ____/____/____

FACE-TO-FACE OR TELEPHONE INTERVIEW (Circle one)

PLAINTIFF OR DEFENDANT ATTORNEY (Circle One)

PRACTICE QUESTIONS:

What Proportion of your practice/caseload are liability cases?

What types of liability cases are they? (product, medical, etc.)

How many Medical Malpractice cases have you had in the last five years?

How many Medical Malpractice cases do you have pending now?

What are they about? (type of medical
procedures/diagnoses/???)

What is the trend in your malpractice cases compared to other personal injury cases in your practice? Are they increasing or decreasing? Are awards getting larger?

(P) What motivates malpractice case clients to seek legal assistance? (Emotional issues/cost of medical care/ ??)

(P) On average, how many reports of alleged malpractice incidents (different clients) do you consider before taking on a case?

(P) What goes into the decision to take on a malpractice case?

(D) Have you ever felt pressured by your clients (insurance co. and/or physician) to settle a case when you felt it did not have merit?

MEDICAL MALPRACTICE LIABILITY STUDY

SCREENING PANEL QUESTIONS:

How many of your cases have gone before the screening panels?

What was the result?

How many ruled in your favor?

How many reached settlement?

How many went on to a lawsuit?

How many resulted in an indemnity payment to the plaintiff?

Have you ever not adhered to the panel decision to settle and proceeded to a lawsuit? Why?

What was the outcome of the case?

How do you decide whether to use the panel for a case?
(size of potential award? merits of the case?/???)

How do you decide when to settle a case? (what do you look for in the case that suggests a settlement is the best course of action?)

Have the availability and use of screening panels had an effect on this? How?

How much leeway do you have in the decision to settle or adjudicate a case?

How have the use of panels affected this?

Has your time involved in a case increased or decreased with the use of panels?

On average how have panels effected litigation expenses?

Have you filed more or less notice of claims since the panels have been active?

Have you ever by-passed the panels altogether? Why?

Other impressions of the panels???

ATTACHMENT D

ATTORNEY SURVEY SAMPLE--PRETRIAL SCREENING PANELS

INTRODUCTION:

An assessment of the tort law changes passed in 1986 by the Maine State Legislature was conducted as part of this study. Of the six reforms passed, two have been in effect for a sufficient time to evaluate, the prelitigation screening panels and the increased disciplinary power of the Board of Registration of Medicine. This report addresses the screening panel reform and the second reform has been addressed in Section VI

SCREENING PANEL PROCESS:

In Maine, the prescreening panel system is set in motion when the Clerk of the Superior Court receives a notice of claim in a medical malpractice case. The Chief Justice of the Superior Court is informed and he then appoints a retired judge to serve as panel chairman. Two or three additional panel members are then selected by the panel chair from a list of doctors, health care providers, and attorneys. (If the defendant is a health care provider, then one of the panel members would be chosen from the defendant's subspecialty if such exists.)

Discovery is the legal term used to describe all of the various pretrial procedures that are used by one party to obtain facts and information about the case from the other party in order to assist in trial preparation. In most cases, there is considerable time and expense involved at the pretrial phase. Relative to the screening panel process, there is the question of how much discovery will be allowed. This was a very important issue with all those interviewed. The law provides that if a party applies to the chairman, he/she may permit "reasonable discovery." The words reasonable discovery are vague, however, and the lawyers and Justice McCarthy are not certain how much discovery preparation for the screening panel hearing is allowed, will be allowed, and should be allowed. Since all respondents considered this such an important issue, it will be more fully discussed in the summary section of this report.

Shortly after the notice of claim, the panel chairman sets up a meeting with the attorneys and they decide upon a date when discovery must be completed and on a hearing date. The parties must agree on a timetable within twenty days of the filing of a notice of claim. The hearing date must be set within 120 days of the notice of claim.

Under Maine law, the parties may bypass the panels if they mutually agree on resolution by trial alone. The panel can only decide the legal defense of comparative negligence; it may not hear any other defense the outcome of which might ultimately decide the case. The Rules of Evidence do not apply at panel hearings, and the parties are permitted to cross examine the

witnesses against them. Further, a unanimous panel decision against either the plaintiff or the defendant as to negligence and/or causation is admissible at trial.

SCREENING PANEL DATA:

Superior Court Administrator, Robert Miller, has been compiling limited data as to the number of notices filed, panel hearings, and complaints filed in medical malpractice cases since the enactment of the screening panels. That data has been updated to reflect the medical malpractice caseload as of April 13, 1989. No one is responsible for keeping track of the number of panel decisions and whether the decisions are for the plaintiffs or defendants. Nor was data available prior to the screening panel system as to the number of medical malpractice complaints filed. Nevertheless, an attempt has been made to briefly summarize the data available.

For the period beginning January 1, 1987 through April 13, 1989, 232 notices of medical malpractice were filed. Of those notices, 118 were disposed of by April 13, 1989. There were 71 complaints filed, and 32 panel hearings were held during that same time period. These data are set forth in TABLE 1 which follows:

TABLE 1
SCREENING PANEL DATA
(through 4/13/89)

COUNTY	NOTICES FILED	NOTICES PENDING	NOTICES DISPOSED	PANEL HEARINGS	COMPLAINTS FILED
Androscoggin	15	7	8	1	5
Aroostook	20	11	9	3	4
Cumberland	57	27	30	7	19
Franklin	0	0	0	0	0
Hancock	10	4	6	1	2
Kennebec	26	11	15	8	8
Knox	6	4	2	2	2
Lincoln	0	0	0	0	0
Oxford	12	6	6	3	5
Penobscot	36	19	17	6	13
Piscataquis	2	2	0	0	1
Sagadahoc	3	0	3	0	1
Somerset	8	5	3	0	3
Walco	4	0	4	1	1
Washington	3	2	1	0	0
York	30	20	11	1	7

ATTORNEY SURVEY:

A. Purpose:

The purpose of this survey was to obtain information from practicing attorneys relative to the effect, if any, of tort reforms passed in Maine in 1986. Specific information was gathered relative to the pretrial screening panel system which has been implemented. This is the only reform that has been in place long enough to permit some analysis. In addition, general information was elicited from the respondents relative to such things as caseload, type of cases being pursued, and suit motivation. These findings reflect only the opinions of those interviewed in this select sample, and are by no means meant to be predictive of all attorneys in Maine.

B. Method:

Structured interviews were conducted with eight individuals involved with the medical malpractice screening panels. The survey instrument is appended. Survey respondents included three attorneys who do primarily plaintiffs' work, one attorney who does 60% defense and 40% plaintiff work (hereafter, defense/plaintiff attorney), two attorneys who do only defense work, the panel chairman who has been involved in 119 cases and presided over 20 panel hearings, and a claim manager for St. Paul Fire and Marine Insurance Company. Those interviewed were from Rumford, Augusta, Bangor, Lewiston and Portland. Of the attorney interviewed, over 50% of their practice consists of medical malpractice. The attorneys could not specify a typical type of medical malpractice that they handle. All considered medical malpractice cases to be different and could not generalize about a particular type of case. The number of cases the attorneys have had go to the panels ranges from 4 to 12. The claim manager has had 30 cases go to the panels and the panel chairman has received 119 notices of claims and presided over 20 panel hearings.

Findings: Case Trends:

When asked about trends in the medical malpractice caseload compared to other personal injury cases, there was agreement among all four defense attorneys that the trend in their caseload suggests that the number of medical malpractice claims is decreasing while the severity of these claims is increasing. The experience of the claim manager was in agreement with the defense attorneys that the number of medical malpractice cases is decreasing, following the national trend, while the cases are becoming more complex and the damages more significant. The experience of the plaintiff attorneys, however, was that there was no particular trend in the number of claims and severity of these claims over the last five years.

Suit Motivation:

The plaintiff attorneys had differing views as to what motivate clients they represent to sue physicians and other health care providers. For one attorney, it was purely compensation for injury, simply to pay the hospital and medical bill. For another, compensation is a motivation in a low percentage of his cases. In his experience, medical expenses are usually covered by Medicaid or some other means. The motivation in most cases was "quality of care." He explained that the mother of a child who is completely incapable of caring for him/herself as a result of malpractice is a slave to that child for the rest of the child's life. In that type of case the mother is suing for more than just reimbursement for expenses. The third plaintiff attorney interviewed considered the motivation to sue a combination of compensation for extreme injury and a response to either a doctor's poor bedside manner or to a subsequent doctor's declaration that the former doctor caused them serious injury and pain. He felt that there are a number of motivations in many cases and added that many people want to help prevent what happened to them or their families from happening to others.

Plaintiff attorney generally spend an average of six months reviewing a medical malpractice case to determine its viability. Hospital records must be obtained, and at least one expert witness from out of state must be hired to review the case. Before a notice of claim may be filed, two determinations must be made. First, did the defendant breach an accepted standard of care and did this breach cause injury? Second, given the considerable time and expense involved in the process of litigation, are the expected damages from a case going to be high enough to justify the cost of a suit?

Case Disposition:

As a result of case review, many cases are dismissed as non-meritorious or cost inefficient. One attorney conducted an informal survey within his law firm and concluded that out of 20 possible medical malpractice cases, only three cases are accepted for review based on an initial interview with potential clients, and only one case out of those three results in the filing of a notice of claim. Another attorney, who has a rural practice in Rumford, turns down 90% of clients who come to him to sue for medical malpractice injury. He confirms what the other plaintiff attorneys have experienced-- that given the costs of litigation, the damages must be very high for the case to be pursued in this manner.

Impact of Pretrial Litigation Panels:

The plaintiff attorneys agreed that the pretrial screening panels have had an effect on their decisions to accept certain types of medical malpractice cases. The time and expense of a medical malpractice case has doubled because the attorneys must now prepare and try the case twice, once before the panel,

and once before the jury. A result is that damages must be even higher in order for a case to be economically viable and some cases that were economically viable before the screening panels were instituted are no longer.

One attorney who does 40% plaintiff work claims that he does not take the screening panels seriously and considers an adverse decision by the panel irrelevant. He does not hire an expert witness nor engage in complete discovery and preparation for the panel hearings. He feels that if he has a good case showing clear negligence and significant damages he will win at trial despite an adverse panel decision. The other plaintiff attorneys are concerned about the effect of a 3-0 panel decision against a plaintiff and thus, they fully prepare for the panel hearing. Justice McCarthy noted that most of the attorneys take the attitude that they must do whatever they can to win before the panel. He agreed, however, that if the plaintiff has a good case, a 3-0 panel decision could be explained to a jury and would not affect the trial. To date, there has not been an adverse 3-0 panel decision that has gone to trial so it is unknown what effect this type of decision will really have when admitted into evidence.

The defense attorneys believe that the screening panels have reduced the time and expense that they must put into their cases by reducing the overall number of claims, weeding out the non-meritorious claims, and encouraging early settlement. The result, they maintain, are lower fees.

The plaintiff attorneys vehemently disagreed that the screening panels have reduced the time and expense of their cases. They feel they do their own weeding out of non-meritorious cases and thus, they consider the panels to be superfluous. They point out that Rule 11 of the Maine Rules of Civil procedure, as well as the Rules of Professional Responsibility, prohibit the filing of a claim that is frivolous. The plaintiff attorneys bypass the screening panels in every case if possible because it saves them time and money. (If both parties agree they may bypass the panels). In addition, all the attorneys remarked that most of the panel decisions were in favor of the defense (3-0 or 2-1). They explained that the doctors who are on the panels are usually from the same geographical area as the defendant doctor and are almost always reluctant to rule against a fellow doctor.

There was agreement among all the attorneys interviewed that the screening panels generally help to encourage settlement. It is easier to convince a plaintiff to settle a case if the screening panel decision is adverse. Some noted, however, the reverse is sometimes true-- that when there is a 3-0 decision, the winning side becomes adamant against settling because they are convinced they have a good case.

All the attorneys interviewed are concerned about the extent of discovery being conducted to prepare for the screening panel hearings. The plaintiff attorneys believe that the defense

bar generally tries to "spend the plaintiff dry" and that unlimited discovery before the screening panel is excessive, time consuming, expensive, and must be duplicated at the trial stage. In their view, many attorneys turn the panel hearing into a minor trial which can take three to four days to complete.

Panel Chairman Justice McCarthy has developed a system to counter excessive discovery. Plaintiff and defense parties decide in advance what method of discovery they will follow. They may agree to limited discovery according to Rule 26(b)4 or the Maine Rules of Civil Procedure or they can conduct full discovery. However, if they choose to conduct full discovery they must agree that it will be used at trial so that the discovery will not be duplicated.

The excessive duration of the screening panel sessions is another issue Justice McCarthy faces. He is concerned that it is going to become increasingly difficult to attract lawyers, doctors and other health care deliverers to sit on the panels if the hearings last three to four days. He advocates the use of prepared reports as opposed to live testimony.

Summary:

The plaintiff attorneys felt there was little to gain from the screening panels. They will always waive the screening panel trial if the defense agrees. All of the others interviewed except one defense attorney were reserving judgment on the panels until more time has gone by. Nevertheless, they did think that the panels were weeding out some frivolous claims and encouraging early settlement in certain cases. Judge McCarthy agreed that not enough time has passed and at least eight months should be allowed before the panels can be evaluated in a meaningful way. He considers a value of the panels to be their ability to have a case dismissed against at least some of the defendants. He explains that in most medical malpractice cases the plaintiff sues four to five people or organizations. He believes the screening panels help to acquit two to three people from the lawsuit before it goes to trial. He also believes the panels help to narrow the issues for a subsequent trial.