LIMITING LIABILITY FOR AUTOMOBILE ACCIDENTS: ARE NO-FAULT TORT THRESHOLDS EFFECTIVE?

James K. Hammitt, John E. Rolph

October 1985

N-2418-ICJ

The Institute for Civil Justice
This research is supported by The Institute for Civil Justice.

This Note contains an offprint of Rand research originally published in a journal or book. The text is reproduced here, with permission of the original publisher.

The Rand Publications Series: The Report is the principal publication documenting and transmitting the Institute's major research findings and final research results. The Note reports other outputs of Institute research for general distribution. Publications of The Rand Corporation do not necessarily reflect the opinions or policies of Rand's and the Institute's research sponsors.

Published by The Rand Corporation
LIMITING LIABILITY FOR AUTOMOBILE ACCIDENTS: ARE NO-FAULT TORT THRESHOLDS EFFECTIVE?

James K. Hammitt, John E. Rolph

October 1985

N-2418-ICJ

Prepared for

The Institute for Civil Justice
Board of Overseers

JACK G. CLARKE, Director and Senior Vice President, Exxon Corporation; Chairman of the Board of Overseers

STEPHEN J. BROECK, Executive Director, Consumer Federation of America

EDWARD H. BUDD, Chairman and CEO, The Travelers Companies

DONALD F. CRAIB, JR., Chairman and CEO, Allstate Insurance Companies

LAURENCE S. GOLDS, General Counsel, AFL-CIO

JAMES A. GREER, Partner, LeBoeuf, Lamb, McFadden & Arseneault

MORRIS HARRELL, Attorney, Rain Harrell Emery Young & Doke; former President, American Bar Association

GEOFFREY C. HAZARD, JR., Nathan Baker Professor of Law, Yale University School of Law

AILEEN C. HERNANDEZ, President, Aileen C. Hernandez Associates

EDWIN E. HUDLESON, JR., Partner, Cooley, Godward, Castro, Huddleston & Tatum

SHIRLEY M. HUPSTEDLER, Attorney, Hufstedler, Miller, Carlson & Beardsley; former U.S. Circuit Judge; former Secretary, U.S. Department of Education

LAURENCE E. LYNN, JR., Dean, The School of Social Service Administration, The University of Chicago

C. BRUCE MAINES, President, Safeco Corporation

RICHARD L. MATHIAS, President, Property-Casualty Insurance Council

JOSEPH W. MURRIS, Member, Gable & Gotwals; former Vice President and General Counsel, Shell Oil Companies; former U.S. District Court Chief Judge

DONALD E. NICKELSON, President, Consumer Marketing Group, Paine Webber Incorporated

FRANKLIN W. NUTTER, President, Alliance of American Insurers

BARBARA SCOTT PREISKEL, Attorney-at-Law

HOLDRA RAPP, Frank Plumptre Ramsey Professor of Managerial Economics, Harvard University

PAUL D. RHEINGOLD, Attorney

DAVID S. SHRAGER, Shrager, McDaid & Loftus; former President, The Association of Trial Lawyers of America

GUSTAVE H. SHUBERT, Senior Vice President, The Rand Corporation; Director, The Institute for Civil Justice

MARGARET BUSH WILSON, Senior Partner, Wilson, Smith and Seymour; former Chairman, NAACP National Board of Directors

LEONARD WOODCOCK, Adjunct Professor of Political Science, University of Michigan; President Emeritus, United Auto Workers; former U.S. Ambassador to the People's Republic of China

KATHRYN D. WRIGHT, Corporate Director

Honorary Members

KENNETH J. ARROW, The Joan steekin Professor of Economics and Professor of Operations Research, Stanford University

WILLIAM O. BAILEY, President, Atina Life and Casualty Company

IRVING A. BLUESTONE, Professor of Labor Studies, Wayne State University; former Vice President, United Auto Workers

ARCHIE R. BOE, President, Sears Roebuck & Company; retired

GUIDO CARABRESI, Sterling Professor of Law, Yale Law School

RICHARD P. COOLEY, Chairman of the Board, Sea fret Corporation

THOMAS R. DONAHUE, Secretary-Treasurer, AFL-CIO

W. RICHARD GOODWIN, Chairman and President, CMC, Inc.

EDWARD H. LEVI, Glen A. Lloyd Distinguished Service Professor, School of Law, University of Chicago; former U.S. Attorney General

JOHN A. LOVE, Chairman and CEO, Ideal Basic Industries; former Governor of Colorado

ROBERT H. MALOTT, Chairman and CEO, FMC Corporation

CHAUNCEY J. MEDBERRY, III, Chairman, retired, Bank of America

EDWARD J. NOHA, Chairman and CEO, CNA Insurance Companies

SAMUEL R. PIERCE, JR., Secretary, U.S. Department of HUD

DONALD H. RUMSFELD, President and CEO, G. D. Searle & Company

WILLIAM B. SCHWARTZ, Vannevar Bush University Professor and Professor of Medicine, Tufts University

ELEANOR B. SHELDON, former President, Social Science Research Council

POTTER STEWART, Associate Justice, United States Supreme Court, deceased

WARD WAGNER, JR., Partner, Cone, Owen, Wagner, Nugent, Johnson, Hazouri & Roth; former President, The Association of Trial Lawyers of America

JUSTIN A. STANLEY, Partner, Mayer, Brown & Platt; former President, ABA

ROBERT B. WILCOX, President, Property-Casualty Insurance Corporation, retired

SANDRA L. WILLET, former Executive Vice President, National Consumers League

PAUL S. WISE, Chairman, Alliance of American Insurers

CHARLES J. ZWICK, Chairman and CEO, Southeast Banking N.A.; former Director of the U.S. Bureau of the Budget

The Institute for Civil Justice

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.

Rand is a private, nonprofit institution, incorporated in 1948, which engages in nonpartisan research and analysis on problems of national security and the public welfare.

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.

The Institute disseminates the results of its work widely to state and federal officials, legislators, and judges, to the business, consumer affairs, labor, legal, and research communities, and to the general public.
PREFACE

This Note is a reprint of an article that appeared in Law & Policy, Volume 7:4, 1985. Using insurance claims data, the authors analyze the effectiveness of no-fault tort thresholds in limiting the number of automobile accident victims who seek compensation through the tort system.

The analysis contained in this Note is described in greater detail in the first two volumes of a four-volume study on automobile accident compensation, conducted by the authors for The Institute for Civil Justice. These four reports are included in a listing of current ICJ publications at the back of this Note and can be obtained from the Institute.
Limiting Liability for Automobile Accidents: Are No-Fault Tort Thresholds Effective?

JAMES K. HAMMITT and JOHN E. ROLPH*

“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, we estimate the effectiveness of several states’ thresholds. We 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, we find little evidence of claimants “padding” their claims to exceed the dollar thresholds.

No-fault compensation plans for automobile accident victims were developed to replace the traditional tort liability system. Early no-fault advocates criticized the tort system under which the motorist who is legally at fault or his liability insurance company compensates the accident victims as providing “too little, too late, unfairly allocated, at wasteful cost, and through means that promote dishonesty and disrespect for the law.” (Kee- ton and O’Connell, 1965: 3). In contrast, no-fault plans establish mandatory “no-fault” insurance that reimburses the policyholder, his passengers, and any pedestrians he may injure, without regard to who “caused” the accident. No-fault insurance is intended to provide quicker and more certain compensation, at less cost, because there is no need to ascertain legal responsibility for the accident.

No state has yet adopted a no-fault plan that totally replaces the tort system. All no-fault states attempt to prevent certain automobile accident victims—those with less severe injuries—from using the tort law to obtain compensation, but allow more seriously injured victims to pursue tort compensation in addition to collecting no-fault insurance benefits. The two classes of victims are defined by whether their injuries exceed a “tort threshold,” which may be either a “dollar” or “verbal” threshold.1

Under a dollar tort threshold, accident victims are not entitled to tort compensation unless their medical expenses exceed the threshold value.

* The Institute for Civil Justice, The Rand Corporation. We thank Joseph Ferreira, Robert Houchens, Sandra Polin, Timothy Quinn, Donald Segraves and three anonymous reviewers for their contributions to this research.
Thresholds range from $200 (net of hospital and diagnostic expenses) in New Jersey to $4,000 in Minnesota. To breach a verbal threshold, victims must have suffered one of a specified set of injuries. Verbal thresholds are typically quite stringent, requiring permanent and significant disfigurement, disability, or death. In a few states, however, the verbal threshold is satisfied by less serious injuries: a fracture (Massachusetts), or any injury not confined to soft tissue (New Jersey).

All states with dollar thresholds also have verbal thresholds, but three no-fault states (Florida, Michigan and New York) have only verbal thresholds. In these states, regardless of medical expenses incurred, a victim is not entitled to tort compensation unless his injuries exceed the stringent verbal threshold.

Whether an accident victim is entitled to tort compensation or must be satisfied with no-fault insurance benefits can have a substantial effect on the amount of compensation he or she receives. No-fault insurance pays only for a victim's economic losses (called "special damages"), primarily medical expenses and lost wages. In contrast, under tort law the victim can potentially collect compensation for "pain and suffering" and other nonpecuniary losses (called "general damages") as well as for special damages. Although payments for general damages differ widely between accident victims, they often exceed the victim's special damages. For automobile accident victims with $500 in medical expenses the median payment for general damages in our data (described below) is about $1,000. For those with $5,000 in medical expenses the median payment for general damages is about $6,500. (Hammitt, 1985, see figure 1.) Thus the lure of compensation for general damages provides a substantial incentive for a victim to seek tort compensation if another motorist is arguably liable for his injuries.

Because payments for general damages can be so large relative to the compensation a victim can obtain from no-fault insurance, one would expect accident victims to file lawsuits or claims against another driver's liability insurance in all but minor cases. Indeed, one might expect that some victims would attempt to circumvent the tort threshold either by fraudulently claiming medical expenses in excess of the dollar threshold, or by incurring additional, unnecessary, medical treatment in order to surmount the threshold. In some cases accident victims do receive liability insurance payments, including compensation for general damages, even though their injuries may not have exceeded the tort threshold. These payments are made because almost all automobile liability claims are settled without recourse to trial. In cases where it is not clear whether a claimant could prove that his injuries exceed the tort threshold the liability insurer may offer some payment to settle the claim and avoid further expense.

Because the possible gain in seeking compensation from a liability insurer is so large, there is some debate about how effectively tort thresholds, especially low-to-moderate dollar thresholds, reduce the
number of victims who file liability claims. In this article we present an analysis of insurance claims data designed to address this issue. In the states studied, we find that even relatively weak thresholds appear to prevent a large proportion of accident victims from obtaining tort compensation. For example, we estimate that the $500 tort threshold in Massachusetts reduces the number of victims who are paid under automobile liability insurance there by more than half. Stricter tort thresholds, such as the verbal one in Michigan, appear to prevent about 90 percent of auto accident victims from obtaining tort compensation. We surmise that the much smaller chance of recovering compensation if one's injuries do not exceed the tort threshold discourage large numbers of victims from filing liability claims and lawsuits. Interestingly, we find no evidence to suggest that victims systematically exaggerate their expenses, or incur additional medical expenses, to surmount dollar tort thresholds.

We turn now to describing the closed automobile insurance claims data that we analyze. We then describe our two methods for estimating the proportion of automobile accident victims excluded from tort claims by the tort threshold. Finally we present our analysis of claims to determine whether they have been padded or exaggerated in an effort to surmount the tort threshold.

DATA

The data we analyze consists of claims paid by automobile insurers under the Bodily Injury (BI) and Personal Injury Protection (PIP) coverages. BI insurance is liability insurance; it pays damages to a third party (the accident victim) for which the policyholder is liable. PIP insurance is no-fault insurance; it pays benefits to the policyholder, his passengers, and pedestrians without regard to legal fault.

The data were collected by the All-Industry Research Advisory Council (AIRAC), an insurance-industry association, and include all claims that were closed with some payment to the claimant by the participating insurers during a two-week period in autumn, 1977; claims that were denied payment are not included. At the time of the survey, the twenty-nine participating insurers had a 62 percent share of the national market for private passenger automobile insurance. For each closed claim, insurance company claims adjusters and supervisors provided detailed information on the claimant's personal characteristics, medical and other economic losses, type and severity of injury, and the payment made by the insurer. The data are described more fully in AIRAC (1979).

As part of a study of compensation under tort and no-fault rules (Hammit, 1985; see also Rolph et al., 1985), we selected four no-fault states for analysis—Massachusetts, New Jersey, Pennsylvania and Michigan. Generalization of results from one state to another is always problematic; however, based on the frequency with which claimants retain attorneys and file
lawsuits, these four states appear to be more litigious or claims-conscious than most other states. Consequently the proportions of accident victims that the thresholds prevent from recovering tort compensation in these states is likely to be smaller than the proportion that similar thresholds would bar in other, less claims-conscious, states. There may be other states however, that are even more claims-conscious than the four we analyze. For example, knowledgeable insurance industry followers assert that the original $1000 tort threshold in Florida had almost no effect on the number of BI claims paid there; it was not until Florida established an entirely verbal threshold, and an anti-fraud bureau, that the number of victims receiving tort compensation declined (Personal communication; see also O'Connell, 1977: 159-60, and U.S. Dept. of Transportation, 1977). Thus there may be some states where our conclusions do not hold. However, we believe our analysis is based on assumptions that apply in all but exceptional circumstances.

Table 1 presents an overview of claims payments under both PIP and BI insurance, for three representative states. The majority of claims are quite modest; as shown in the first panel of the table, more than half the PIP claimants are paid less than $300, while about four-fifths receive less than $1,000. BI payments are somewhat larger, because they usually include payments for general damages in addition to economic loss. Even so, half of the California BI payments are less than $1,000. The Massachusetts BI payments are much higher than the California payments, because the Massachusetts tort threshold excludes claimants with relatively mild injuries.
As a result, only 28 percent of Massachusetts BI payments are less than $1,000.

The second panel of the table reveals that the distribution of dollars paid by insurers is dominated by the larger claims. While most claims payments are modest, these account for only a small share of total payments. As shown in the second panel, both the two percent of Michigan PIP claimants and of California BI claimants who were paid more than $15,000 each received about one-third of the total dollars paid.

METHODS

Our strategy for estimating the effect of tort thresholds in each of the four states studied is to generate independent estimates for each state. When we compare these states to states without tort thresholds using the "BI-file method" (described below), we also generate independent estimates for each comparison pair of states. This disaggregated estimation approach is appropriate here in view of the diversity of the states we are comparing. The alternative of simultaneously estimating the effects of tort thresholds for all states with a statistical model (like regression) that shares information about relationships across states is not feasible without comprehensive and comparable data for litigation affecting factors in each state. Such data are needed to statistically adjust for differences between states that might affect how tort thresholds operate. We have not been able to locate such sufficiently comprehensive data.

We estimate the fraction of accident victims who are denied tort compensation because of tort thresholds using two different methods and compare the results. First, we use the "PIP-file method" to compare the number of PIP claimants who are eligible to obtain BI compensation (as reported by the survey respondents) to the number who would have been eligible prior to the adoption of the tort threshold in their state. Since PIP pays all victims without regard to fault or injury severity the PIP claims file includes most types of accident victims (the main exception is uninsured motorists and their passengers). The fraction of PIP claimants who would have been eligible for BI payments prior to the threshold, but who are no longer eligible, is our PIP-file method estimate of the effect of the tort threshold in reducing the number of successful BI claimants in that state. Note that this method estimates only the number of potential claimants that are no longer entitled to tort compensation, but does not account for their likelihood of actually filing BI claims.

Our second method, the "BI-file estimate," is based on a comparison of the populations of claimants who are paid by BI insurance in the no-fault state and in a reference state that has no tort threshold. The validity of this estimate depends on the extent to which the distributions of accident victims in the no-fault and the reference state are similar, with respect to economic loss, type of injury, legal fault, propensity to file insurance claims
and to retain an attorney, and other factors that might affect the number of successful BI claimants. We attribute the difference between the numbers of successful BI claimants to the tort threshold. Unlike the PIP-file method, the BI-file method does account for victims' likelihood of filing BI claims. However, it does not allow for the estimation of any separate effect (in addition to the tort threshold) that the existence of no-fault insurance has on the number of liability insurance claims filed. (Since victims can almost always collect under PIP, they may be less likely to also file a BI claim.) However, since the results of both of our estimation methods are in general agreement, we conclude that tort thresholds are the primary cause of fewer liability insurance claims in no-fault states.\textsuperscript{6}

To determine the accuracy of the BI-file method we generate independent estimates of the tort-threshold effect using several different reference states. If the potential-claimant populations are distributed identically in all states, the estimates would be the same for all reference states up to statistical fluctuations. The extent to which the choice of reference state affects the estimate is an indication of the degree to which the populations differ, and thus is a measure of the precision of the method.\textsuperscript{7}

Some commentators have suggested that the adoption of a no-fault system will increase the number of automobile accidents, since drivers may be less careful when the deterrent of tort liability is removed.\textsuperscript{8} Others doubt such an adoption will have a significant effect, since the tort deterrent is largely diluted by liability insurance, and other factors are probably more important influences on driving behavior. Our estimates do not take account of this effect, should it exist. We estimate the change in the proportion of accident victims who are paid by BI insurance; if the adoption of a no-fault plan increases the number of accident victims our estimates will overstate the reduction in BI claims paid. We describe both our methods and results in more detail below.

**ANALYSIS AND RESULTS**

A large proportion of accident victims in the four no-fault states we studied did not seek or were denied payment under BI insurance because of a tort threshold. Our estimates of the fraction affected by the threshold vary, depending on the method used and the reference state chosen. But, as shown below, the order of the estimates is consistent with the order defined by the apparent stringency of the thresholds.

Table 2 gives our estimates of the proportion of BI claimants excluded by the thresholds using both the PIP-file method and the BI-file method with our four reference states. The New Jersey threshold ($200 medical loss, net of hospital and diagnostic expenses) was the weakest of the four.\textsuperscript{9} We estimate that roughly half of the potential claimants were excluded by this threshold. Stated another way, the number of accident victims obtaining compensation from another motorist’s liability insurance company
Table 2. Estimated Percentage of Potential BI Claimants Excluded by Tort Thresholds

<table>
<thead>
<tr>
<th>No-fault State (threshold)</th>
<th>PIP-file Method</th>
<th>Reference State</th>
<th>BI-file Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>California</td>
<td>Washington</td>
</tr>
<tr>
<td>New Jersey ($2000)</td>
<td>48%</td>
<td>39%</td>
<td>51%</td>
</tr>
<tr>
<td>Massachusetts ($500)</td>
<td>60%</td>
<td>50%</td>
<td>64%</td>
</tr>
<tr>
<td>Pennsylvania ($750)</td>
<td>72%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Michigan (verbal)</td>
<td>89%</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: We did not calculate BI-file estimates for Pennsylvania and Michigan because too few BI claimants were paid in those states to generate reliable estimates.

would have been about twice as large if there were no threshold. We estimate that Massachusetts’ $500 threshold excluded roughly 60 percent of potential claimants, Pennsylvania’s $750 threshold excluded about 70 percent, and Michigan’s verbal threshold excluded almost 90 percent of all victims who would otherwise have been paid under BI.\(^\text{10}\) (We did not calculate BI-file method estimates for Michigan and Pennsylvania because the number of BI claimants in our sample is too small to give reliable estimates.)\(^\text{11}\)

While there is substantial variability among the estimates for each state, the relative ordering of the no-fault states is the same for each set of estimates. The exact percentages differ with the method, but all of our estimates suggest that even modest tort thresholds have a large (if not precisely known) effect on the number of BI claims paid.

Large decreases in the number of BI claims paid do not, however, translate to equally large effects on total BI payments. Because the claimants who are prevented from making claims are those with the smallest economic losses and least serious injuries, they account for a relatively small share of all BI payments. By comparing the total BI payments to reference-state claimants, classified by whether or not they exceeded the no-fault states’ thresholds, we estimate that total BI payments are about 7 to 16 percent lower in New Jersey (compared to 39 to 66 percent of claimants excluded) and 15 to 31 percent lower in Massachusetts (compared to 50 to 76 percent of claimants excluded), than they would be in the absence of a threshold.\(^\text{12}\) Moreover, because of inflation in the costs of medical care, the fixed-dollar thresholds in New Jersey, Massachusetts and Pennsylvania are undoubtedly less effective in reducing both the number of BI claims and claims costs today than they were in 1977, the year to which our estimates apply. We turn now to a discussion of the details of each of the analyses.
The PIP-file method for estimating the number of potential claimants who were denied BI compensation because of a state’s tort threshold is based on data for victims who filed claims under a no-fault (PIP) policy. For each PIP claimant, claims adjusters reported 1) whether the claimant qualifies for a BI or tort payment under his state’s current no-fault law, and 2) whether the claimant would have qualified prior to the imposition of the law. Although the instructions that accompanied the survey forms do not define “qualification,” respondents seem to have interpreted the question as asking whether the claimant would be likely to obtain some payment if he filed a BI claim.13

The PIP-file estimate of the proportion of potential BI claims that were either denied or not filed because of the tort threshold is the number of PIP claimants no longer qualifying for BI recovery divided by the number who would have qualified before the threshold was imposed. That is:

\[
\frac{\text{Number of PIP claimants eligible for BI with threshold}}{\text{Number of PIP claimants eligible for BI without threshold}}
\]

Although a claimant who qualified for BI recovery would not necessarily have filed a BI claim, the direction in which this factor would bias our estimate is unclear. Our PIP-file estimate is based only on victims who filed PIP claims. The incentives to file BI claims are in some respects stronger than the incentives to file PIP claims, and in other respects weaker.14 On balance, we believe that the PIP-file estimates are more reliable than the BI-file estimates since they rely solely on data for the particular no-fault state in question. As a comparison of the two sets of estimates shows, however, the two methods produce roughly consistent results.

BI-FILE ESTIMATES

To estimate the proportion of potential claimants denied payment because of a tort threshold using the BI-file method we categorize potential BI claimants in no-fault states into three groups, as illustrated in Figure 1. Claimants in Group 1 have injuries greater than the tort threshold and are paid by BI insurance. Claimants in Group 2 have injuries that are not serious enough to breach the threshold, but nevertheless these claimants also obtain BI payments, presumably because the BI insurer would rather make some payment to settle the claim than continue to defend it. Claimants in Group 3 have injuries that do not exceed the threshold and are unable to obtain BI payments. As a result, Group 3 claimants are not included in our sample; it is their number that we estimate.15

The successful BI claimants in a reference (tort or add-on) state include all three groups, though we cannot, of course, distinguish between Group 2
and 3 claimants in these states. If the populations of potential claimants are distributed similarly in the no-fault and reference states, the ratio of the number of successful no-fault-state claimants whose injuries exceed the threshold (Group 1) to the total number of potential no-fault-state claimants (all three groups) is equal to the corresponding ratio in the reference state. We use this relationship to derive our estimate of the size of Group 3, the claimants excluded by the threshold.

Table 2 above presents our estimates of the proportion of all potential no-fault state claimants (Groups 1, 2 and 3) that are excluded by the tort threshold (Group 3). We calculate these estimates as follows. Let $r$ be the proportion of paid reference-state claimants whose injuries exceed the no-fault state’s tort threshold $r$ is equal to the ratio of the number of Group 1 claimants to the total number in Groups 1, 2 and 3 in the reference state). Similarly, let $p$ be the proportion of no-fault-state claimants in our data whose injuries exceed the tort threshold $p$ is equal to the number of Group 1 claimants divided by the number of Group 1 and Group 2 claimants in the no-fault state). Let $x$ be the unknown ratio of the number of Group 3 claimants to the number of paid (Groups 1 and 2) no-fault state claimants. We wish to estimate $\beta$, the proportion of all potential claimants excluded by the threshold (the ratio of the number of Group 3 claimants to the total number in all three groups), where

$$\beta = \frac{x}{1 + x}$$  \hspace{1cm} (1)$$

We assume that the distribution of injuries in the no-fault and reference states is the same, or, more specifically, that the proportion of potential
claimants in each state whose injuries exceed the no-fault state’s threshold is the same,

\[ r = \frac{p}{1 + x}. \]  

(2)

Combining equations (1) and (2), we obtain our estimate

\[ \beta = \frac{x}{1 + x} = 1 - \frac{r}{p}. \]

As shown in Table 2, the estimates using different reference states differ by as much as 27 percent, reflecting differences between the potential-claimant populations in the different states. These differences arise for various reasons, including differences between states in the mix of accident types, victim characteristics, and the cost of medical care. In addition, potential BI claimants may be less likely to file BI claims in a state such as Maryland where PIP insurance is required if they can more easily obtain compensation from their PIP coverage. If this effect were large, it could affect the estimates of tort-threshold effects that use Maryland as the reference state. As Hammit (1985) reports, however, comparisons between BI-claimant populations do not provide any evidence that the availability of PIP benefits in Maryland reduces the number of BI claimants in that state, and the tort-threshold estimates that use Maryland as the reference state are comparable to those derived using other reference states.

In addition to differences between accident-victim populations in different states, our BI-file estimates are affected by the difficulty of determining which reference-state claimants would have satisfied a particular tort threshold, that is, distinguishing Group 1 claimants from the others. For the no-fault-state claimants, the survey forms record whether the tort threshold was exceeded, allowing us to distinguish between Group 1 and Group 2 claimants. But for the tort-state claimants we had to estimate, using reported medical expenses and injury severity, whether the claimant’s injuries would have exceeded the no-fault state’s tort threshold. In order to make the comparison between tort and no-fault states consistent, we considered claimants in both states to have exceeded the threshold (Group 1) only if their recorded injuries exceeded the threshold.

We could not determine unambiguously whether a claimant exceeded the tort threshold from the recorded injury descriptions. For example, the Massachusetts threshold is exceeded if the claimant suffers permanent and serious disfigurement, but the questionnaire we used does not ask about the severity of a permanent disfigurement. Somewhat arbitrarily, we define all claimants with permanent disfigurement to have exceeded the threshold.16

We check the accuracy of this classification procedure by comparing the proportions of no-fault-state claimants recorded as having exceeded the threshold to the proportions estimated by our method of classifying claimants using their reported injuries; this is presented in Table 3. Our classification procedure labels more claimants as being over the threshold in both
Table 3. Percentage of All Paid BI Claims that Exceed the Tort Threshold

<table>
<thead>
<tr>
<th></th>
<th>NJ</th>
<th>MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recorded over threshold</td>
<td>88%</td>
<td>76%</td>
</tr>
<tr>
<td>Classified over threshold</td>
<td>89%</td>
<td>80%</td>
</tr>
<tr>
<td>Either recorded or classified over threshold</td>
<td>97%</td>
<td>88%</td>
</tr>
</tbody>
</table>

New Jersey and Massachusetts. However, the differences between proportions are small—at most 4 percent. The discrepancies probably result from two factors. First, our classification procedure counts too many claimants over the threshold because of the ambiguity in the injury descriptions (some of the permanently disfigured claimants were not sufficiently disfigured to exceed the threshold). Second, the proportion recorded in the questionnaire as having exceeded the threshold is probably too small. The multiple-choice question from which this proportion is derived asks how the claimant exceeded the threshold but does not ask whether he did so. We assume that all claimants for whom no answer was given (and whose medical expenses did not exceed the dollar threshold) did not exceed the tort threshold, but there are surely some claimants who exceeded the threshold but for whom, for whatever reason, the question was not answered.

Although our classification procedure is not perfect, the effect of the imperfections on our estimate of the proportion of claimants excluded by the tort thresholds is unclear. Since we use the same classification method for both no-fault and reference states the errors should be offsetting. The similarity of the BI-file and PIP-file estimates suggests that the effect of the classification errors is not large, relative to the other inaccuracies of the procedure.

CIRCUMVENTING THE TORT THRESHOLD

Do claimants in some no-fault states inflate their medical expenses, either by incurring needless treatment or by claiming (perhaps with the assistance of an unscrupulous doctor) to have incurred such treatment? We find no evidence of such padding in our data.

Claimants face a strong incentive to breach the threshold because doing so enhances the possibility of their receiving payments for general damages, which are not covered by PIP insurance. Moreover, by breaching the threshold, claimants may be able to recover for their economic losses twice: once from their PIP insurers, and once under their BI claims. This double recovery may be possible if the PIP insurer does not require reimbursement from the BI payment, or if the insurer fails to enforce the reimbursement provision.

If a significant number of claimants whose injuries do not exceed the threshold manage to obtain BI payment by "padding" their claims, we would expect to find a "hump" in the distribution of medical losses—a dis-
proportionately large number of claimants whose reported medical expenses exceed the tort threshold by only a little. To assess how many Massachusetts and New Jersey claimants overcome the tort thresholds by padding their medical expenses, we compare the proportion of claimants whose injuries exceed the dollar threshold by no more than $100 and $500 to the proportion predicted in each of the four states without thresholds. In total, we make sixteen comparisons (two no-fault states times two medical expense intervals times four reference states). In twelve of the sixteen cases, fewer claimants have recorded medical expenses in the interval just above the threshold than predicted. In the other four cases, using the above method, the estimate of the number of paid claimants who exaggerate their injuries in order to breach the threshold is between 2 and 16 percent of all claimants who appear to exceed the threshold.\textsuperscript{17}

Because twelve of our sixteen comparisons provide no evidence of padding, we conclude that the data give little support to the notion that claims are systematically padded to circumvent tort thresholds. Further, since these states are more litigious than most, as discussed above, we would expect to find more evidence of padding claims here than in most other no-fault states. Alternatively, the effect of any padding that does occur may be offset by other factors such as other claimants' reluctance to file BI claims when they have already been compensated under PIP, or their uncertainty about the definition of the tort threshold and whether they are eligible to make BI claims.

SUMMARY

Contrary to what one might expect, modest tort thresholds appear to have a substantial effect on the number of accident victims who obtain compensation from liability insurance, at least in the states we studied. The availability of first-party insurance benefits probably contributes to this reduction, but our data do not allow us to estimate this effect separately in the four no-fault states.\textsuperscript{18} Stringent tort thresholds, like the Michigan verbal threshold, deny tort compensation and, with it, compensation for pain and suffering to nine out of ten automobile accident victims. Also, contrary to some reports, we find little evidence in the states studied to support the view that many accident victims incur unnecessary medical treatment as a means of circumventing the tort threshold. The thresholds appear to serve their purpose of acting as gates to limit the number of automobile accident victims who enter the tort system and thereby defeat the no-fault reforms.

\textit{James Hammitt, educated at Harvard College and the Kennedy School of Government, is an associate mathematician with The Rand Corporation.}

\textit{John E. Rolph holds a Ph.D. in statistics from the University of California, Berkeley. He is a senior statistician at The Rand Corporation and leads their Statistical Research and Consulting Group.}
NOTES

1. States are classified as tort, add-on, and no-fault. No-fault insurance is not sold in tort states. In add-on states, insurers are required to offer and motorists may be required to buy no-fault coverage. In no-fault states, motorists are required to buy no-fault insurance and accident victims are not entitled to tort compensation unless their injuries exceed the tort threshold.

2. In 1983 New Jersey adopted a law allowing automobile insurance buyers to choose the threshold to which they will be subject if injured. Buyers can elect either the $200 threshold which applied to all motorists from 1973 to 1983, or a new, higher threshold of $1500 in medical expenses, net of hospital, x-ray and other diagnostic expenses, to be adjusted annually in accordance with the Consumer Price Index. The verbal portion of the new threshold is also stricter than the old. Under the old threshold, a victim could sue for tort compensation if his injuries were not confined to "soft tissue," but this language has been omitted from the new threshold.

3. Most no-fault plans further limit compensation for each type of loss. Maximum policy limits on medical benefits range from $2,000 to unlimited, while wage-loss policy limits on benefits are often 75 or 85 percent of lost wages, up to only $100 or $200 per week.

4. An accident victim may file a claim directly with another party's liability insurer, may file a lawsuit against the other party and/or his insurer, or do both. Because of filing fees and other costs, only about one-fifth of those who file liability claims (primarily those with larger claims) also file suit (see Hammitt, 1985).

5. The proportion of claimants denied BI compensation in a claims-conscious state will be a lower bound for the proportion that would be denied in a less claims-conscious state if claims-consciousness disproportionately increases the number of claims filed by victims with relatively mild injuries, that is, if severely injured victims in the less litigious state are as likely to file claims as those in the more litigious state.

6. Using a similar method, we estimate that the availability of no-fault insurance alone has little effect on the number of liability claims filed in Maryland, an add-on state that requires motorists to carry no-fault insurance (see Hammitt, 1985).

7. As reference states, we used the four other states—California, Washington, North Carolina, and Maryland—that we had selected for our larger study (Hammitt, 1985). The first three are tort states, while Maryland is a mandatory add-on state, meaning that motorists are required to carry PIP insurance.

8. Landes (1982) analyzed fatal accident rates across states and years. She asserts that, after controlling for other factors, fatalities are more numerous in states with higher thresholds, and that comparatively strict thresholds may increase the fatal-accident rate by 10 to 15 percent.

9. The New Jersey tort threshold was $200 at the time the claims data were collected, but was changed in 1983. See note 2 supra.

10. The tort thresholds are defined as follows:
    New Jersey: (1) $200 medical expenses net of hospital and diagnostic expenses, (2) death, (3) permanent disability, (4) permanent significant disfigurement, (5) partial or total loss of body member, (6) any injuries not confined to soft tissue.
    Massachusetts: (1) $500 medical expense, (2) death, (3) loss of body member, (4) permanent serious disfigurement, (5) loss of sight or hearing, (6) any fracture.
    Pennsylvania: (1) $750 medical expense net of diagnostic x-ray and rehabilitation costs in excess of $100, (2) death, (3) serious permanent injury, (4)
permanent, irreparable, severe cosmetic disfigurement, (5) total disability exceeding 60 days.
Michigan: (1) death, (2) serious impairment of bodily function, (3) permanent, serious disfigurement.

11. Our estimates are consistent with those available from other sources. According to a study by Thomas Jones, then Michigan Insurance Commissioner, BI claims in that state declined 87 percent after no-fault insurance was adopted. It is not clear whether this figure refers to claims filed or paid (see Widiss et al., 1977: 383). The U.S. Department of Transportation published ratios of paid BI claims to insured cars for fourteen no-fault states covering the years 1969 to 1975. These data were obtained from the State Farm Insurance Companies, which had a 14 percent national market share at the time. By comparing the average paid claim frequencies for all reported years before and after no-fault was adopted, we calculate that BI claims declined 62 percent in New Jersey, 82 percent in Pennsylvania, and 88 percent in Michigan (see U.S. Department of Transportation, 1977: 26–28).

12. The share of total BI payments made to claimants whose injuries do not exceed the New Jersey tort threshold is 7 percent in California, 8 percent in Maryland, 9 percent in Washington, and 16 percent in North Carolina. The share of payments to claimants whose injuries do not exceed the Massachusetts threshold is 15 percent in California, 18 percent in Washington, 25 percent in North Carolina, and 31 percent in Maryland. These estimates assume that none of the claimants whose injuries do not exceed the threshold would be paid, and that they consequently overstate the reduction in claims payments. In contrast, our procedure for estimating the number of claimants that are excluded because of the threshold accounts for the fact that some are paid, even though their injuries do not exceed the threshold (see the “BI-File Estimates” subsection). As shown by Table 3 infra, as many as one-quarter of paid claimants in the no-fault states may have injuries that do not exceed the threshold.

13. See AIRAC (1979) for the actual questionnaire. Although all claimants would “qualify” before the threshold was established, in the sense that they were not barred from filing a claim because of a tort threshold, only those to whom another motorist was likely to be liable were described as qualifying for recovery. Thus drivers in single-car accidents were not included in this definition. Because PIP compensation is available to nearly all accident victims the proportion of PIP claimants who would have qualified for BI compensation prior to the imposition of the tort threshold is an estimate of the proportion of accident victims who are injured in circumstances that allow compensation under tort liability. The proportion is close to two-thirds in each of our four no-fault states: Michigan—56 percent, Pennsylvania—64 percent, Massachusetts—65 percent, New Jersey—69 percent.

14. Filing a BI claim will not affect one’s own insurance rates, as filing a PIP claim might, and the victim may file a BI claim as retribution. On the other hand, a victim may feel that he must retain an attorney to handle a BI claim, he may find it more unpleasant to negotiate with an adversary insurance firm, or he may pity the at-fault driver.

15. There is also a fourth group—accident victims whose injuries exceed the threshold but who do not file BI claims, or whose claims are denied for other reasons. Because we are interested in the number of potential claimants excluded by the threshold, this group does not concern us. We assume that the number of eligible claimants who do not file claims, or whose claims are incorrectly denied, is the same fraction of claims that are properly paid in each state. That is, we assume that no claims are incorrectly denied for not exceeding the threshold when the claimant’s injuries do exceed the threshold.
16. The tort thresholds are reported at note 10 supra. We assume that the claimant exceeded the Massachusetts threshold if his medical expenses exceeded $500, he died, or he suffered permanent disability or a fracture. The New Jersey threshold is deemed to be satisfied if medical expenses net of hospital and x-ray expenses exceeded $200, the claimant suffered permanent disability or a fracture, or he died.

17. More precisely these are estimates of the percentages of “excess” claimants—the data do not indicate the reasons. In Massachusetts, the estimates of the percentage of “excess” claimants between the dollar threshold ($500) and $100 higher ($600) is 13, 2 and 2 percent using California, Washington and Maryland respectively as reference states. In New Jersey the corresponding percentage is 16 percent using a $500 range and California as the reference state.

18. As described at note 6 supra, using our BI-file method we found little evidence that the availability of PIP benefits alone significantly reduces the number of BI claims in Maryland.

REFERENCES


Other ICJ Publications

R-2715-ICJ
The Law and Economics of Workers' Compensation
Policy Issues and Research Needs
L. Darling-Hammond and T. J. Kneser
1980

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

R-2732-ICJ
Court Efforts to Reduce Pretrial Delay
A National Inventory
P. Ebeson, with the assistance of J. Adler, M. Selvin, and M. Yesley
1981

R-2733-ICJ
Judicial Arbitration in California
The First Year
D. Henager, A. Lipson, and E. Rolph
1981

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

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

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

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

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

R-2883-ICJ
Costs of the Civil Justice System
Court Expenditures for Processing Tort Cases
J. Kakalk and A. Robyn
1982

R-2904-ICJ
Educational Policymaking Through the Civil Justice System
P. T. Hill and D. L. Madsen
1982

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

R-2922-ICJ
The Pace of Litigation
Conference Proceedings
J. W. Adler, W. F. Felstein, D. H. Henager, and M. A. Peterson
1982

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

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

R-3002-ICJ
Managerial Judges
J. Resnik
1982

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

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

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

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

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

R-3042-ICJ
Costs of Asbestos Litigation
J. S. Kakalk, P. A. Ebner, W. L. F. Felstein, M. G. Shanley
1983

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

R-3051-ICJ
Automobile Accident Compensation
Volume II: Payments by Auto Insurers
J. K. Hammitt
1985

R-3052-ICJ
Automobile Accident Compensation
Volume III: Payments from All Sources
R. L. Houchens
1985

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

R-3071-ICJ
Simple Justice
How Litigants Fare in the Pittsburgh Court Arbitration Program
1983
R-3084-ICJ
Regulating the Content and Volume of Litigation
An Economic Analysis
G. L. Fries
1983

R-3122-ICJ
Variation in Asbestos Litigation Compensation and Expenses
J. S. Kakalik, P. A. Ebener,
W. L. F. Felstiner, G. W. Hagstrom,
M. G. Shanley
1984

R-3168-ICJ
Managing the Unmanageable
A History of Civil Delay in the Los Angeles Superior Court
M. Selvin and P. A. Ebener
1984

R-3167-ICJ
Introducing Court-Annexed Arbitration
A Policymaker’s Guide
E. Ralph
1984

R-3248-ICJ
Deep Pockets, Empty Pockets
Who Wins in Cook County
Jury Trials
A. Chin, M. A. Peterson
1985

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

N-1965-ICJ
Court-Administered Arbitration: An Alternative for Consumer Dispute Resolution
D. R. Hensler and J. Adler, with the assistance of G. Rest
1985

N-1994-ICJ
Jury Awards and Prejudgment Interest in Tort Cases
S. J. Carroll
1983

N-2006-ICJ
California Enacts Prejudgment Interest: A Case Study of Legislative Action
A. Lipson
1984

N-2156-ICJ
Court-Ordered Arbitration: The California Experience
E. S. Rolph, D. R. Hensler
1984

N-2257-ICJ
Court-Annexed Arbitration: The National Picture
F. A. Ebener, D. R. Betancourt
1985

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

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

P-2663-ICJ
Court-Annexed Arbitration in the State Trial Court System
D. R. Hensler
1984

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

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

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

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

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