Illinois Tort Reform and the Cost of Medical Liability Claims

THE ILLINOIS SUPREME COURT earlier this year struck down a state law capping noneconomic (i.e., pain and suffering) damage awards in medical professional liability cases. In a 4-2 decision handed down on Feb. 4, the court upheld a 2007 circuit court ruling that the law violated the Illinois Constitution's separation of powers clause by infringing upon "the inherent power of the judiciary" to determine damage award amounts.

In passing the 2005 law, the Illinois legislature had attempted to limit non-economic damage awards to $500,000 in cases involving physicians, and to $1 million for those involving hospital defendants.

The ruling has significant implications, as claim severities in Illinois had been among the highest in the coun-

try. Without a cap, indemnity claim severities for physicians are likely to increase by approximately 23 percent, and the average cost that insurers expend defending claims (i.e., allocated loss adjustment expenses, or ALAE) will increase by 10 percent (relative to what those costs would have been had the cap held). In total, the average increase in claim severity (loss and ALAE combined) will be approximately 18 percent. The impact on rates is not as clear, since many insurers had been skeptical of the staying power of these reforms.

What are the implications for the rest of the country? Some 30 states have laws limiting noneconomic damages, although the amount of the caps, the types of cases to which they are applicable, and the mechanisms for imposing them can vary widely. According to the American Medical Association, courts in 16 states have upheld caps on noneconomic damages, while 12 have rejected them. Some support for tort reform has found its way into the recent federal health care legislation, though Secretary of Health and Human Services Kathleen Sebelius has said that "this is really a state-level situation."

This was the third time the Illinois legislature had attempted to set a cap on noneconomic damages and the third time the Illinois Supreme Court had rejected the proposal. The first cap, passed in 1975, was overturned by the court the next year. Twenty years later, a second tort reform act sought to limit noneconomic damage awards to $500,000 in "all actions involving bodily injury, death or physical damage to property based on negligence or product liability." That law was overturned in its entirety in 1997, with the court finding it violated both the special legislation and separation of powers clauses of the Illinois Constitution.

The most recent law was more narrowly tailored; it sought to limit noneconomic damage awards only for medical professional liability claims. Its repeal leaves Illinois with among the highest claim severities in the country.

Projecting Potential Financial Implications

As actuaries, we have no opinion on the legal merits of the court's decision, nor do we take any policy position on the advisability of imposing caps on damage awards of any kind. Our primary objective following the court's repeal has been to determine if we could devise a statistically defensible method for projecting what the potential financial implications of the court's ruling might be for Illinois insurers and, ultimately, Illinois physicians.

Using publicly available loss data from two states that require the filing of detailed medical professional liability damage award amounts, we created a distributional model for economic and noneconomic damages, as well as ALAE. The model also incorporated the correlated relationship between these costs. We then fit that model to Illinois claim severity, as obtained from rate filings of the ISMIE Mutual Insurance Co., the largest writer of physicians' professional liability coverage in Illinois.

The resulting model was specific to physicians and the $500,000 cap that had been applicable to claims against them. We focused on claim severities only, as any impact on rates is less clear. Rates for Illinois physicians, as for any other market segment, are subject to additional forces beyond the underlying projected loss costs. Any impact on claim frequency would also be hard to project—although the experience of other states indicates that claim frequency tends to increase when tort reform is overturned and that such an increase can be significant.

Overview of the Model

The general approach to building our model first required an understanding of the components influencing Illinois physicians' professional liability claim costs.

TABLE 1

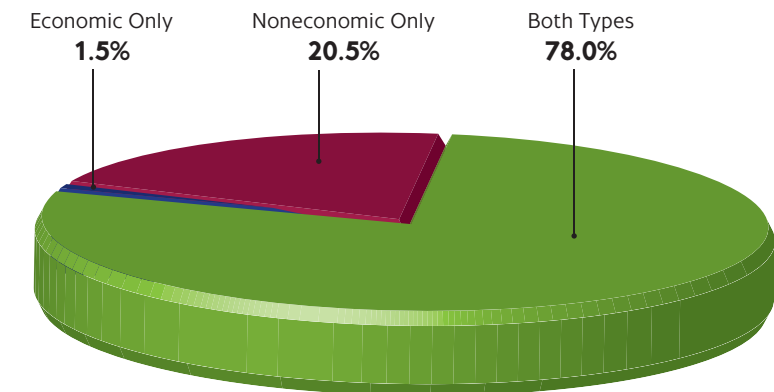| Effect of Tort Reform Overturn on Illinois Physician Claim Severities	
Indemnity	23 percent
ALAE	10 percent
Indemnity & ALAE	18 percent

SOURCE: AUTHORS

In particular, these consisted of indemnity payments (subdivided into economic and noneconomic damages) and ALAE costs. We examined these components, distinguishing between cases that closed with an indemnity payment (CWI) and those that culminated with payment of ALAE only (CWE). We developed correlated distributions around each of these components, then used these distributions to simulate potential loss and ALAE costs in Illinois under two scenarios: one with the cap on damages, and one without.

Illinois does not require the reporting of detailed, individual medical professional liability claims to any public database, so we could not directly develop these relationships for our subject state. To overcome this lack of direct data, we made use of external data from Florida and Texas, two states that have long required insurers to report detailed data on closed claims. Based on the data from the Florida Office of Insurance Regulation Medical Malpractice Closed Claim Database and Texas Liability Insurance Closed Claim Reports, we were able to develop statistical distributions for both economic and noneconomic claim costs. We then calibrated those distributions to be specific to the claim severities in Illinois, using information obtained from ISMIE rate filings. These included:

- Loss severity per CWI claim;
- ALAE severity per CWI claim;
- ALAE severity per CWE claim; and
- The proportion of all claims that were CWI, CWE, or closed with no payment (CNP).

Derivation of Model Assumptions

Chart 1 details our assumptions regarding claim disposition ratios that were built into our simulation model. For CWI

CHART 1 Claim Disposition Ratios

No Payment (CNP)	Indemnity (CWI)	ALAE Only (CWE)
5%	**17%**	**78%**
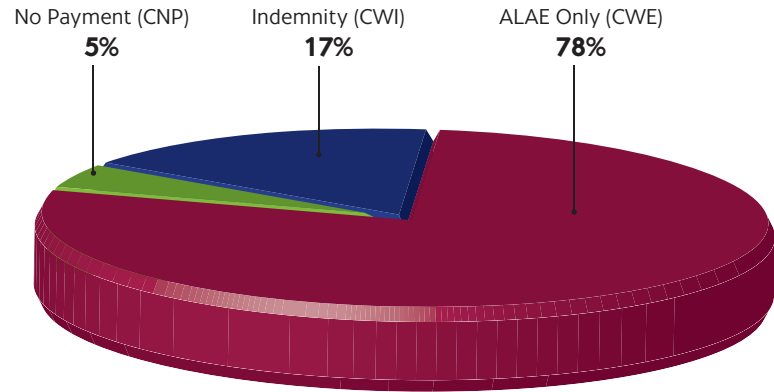
CHART 2 Indemnity Claims by Loss Type

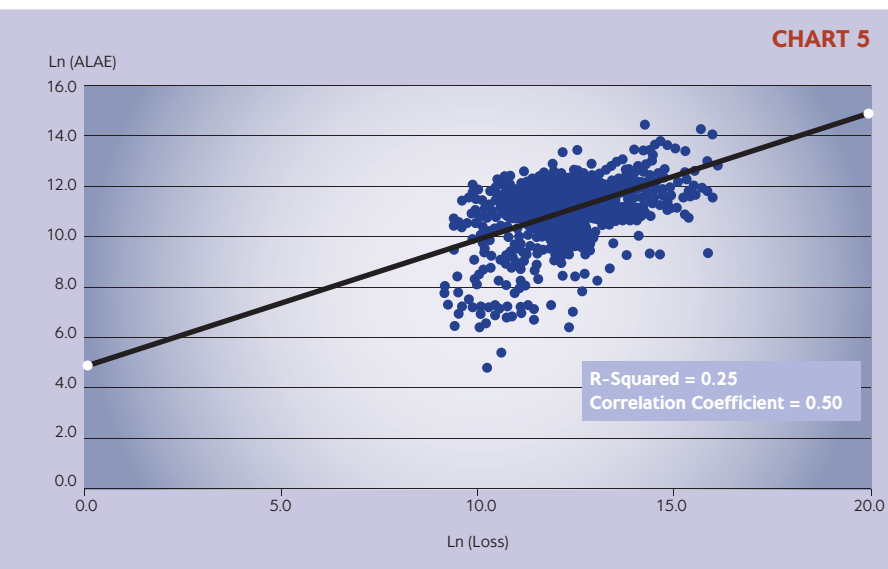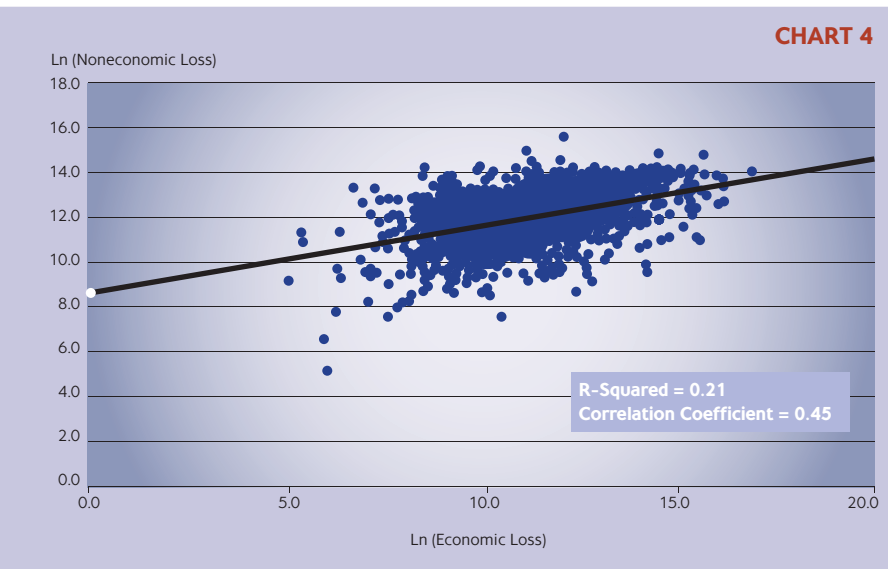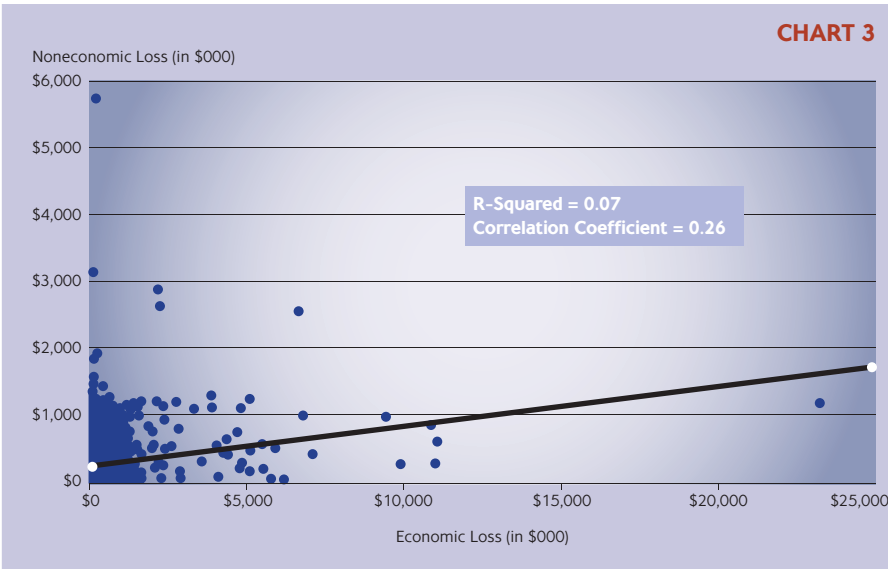| Economic Only	Noneconomic Only	Both Types
1.5%	**20.5%**	**78.0%**

SOURCE: AUTHORS

claims, we further decomposed this category of loss based on the Texas closed claim database and established the portions of CWI claims by loss category, as shown in Chart 2.

We next tested the empirical economic and noneconomic loss data from Florida and Texas against various statistical distributions and found that a lognormal distribution best mimicked the actual distribution of the different loss components.

For economic losses, we established that a lognormal distribution most closely fit the empirical data with a coefficient of variation of 8.0 for Florida and 3.5 for Texas. Fortunately, a lognormal distribution varies only slightly across this range of coefficient of variation values for loss amounts up to $1 million (we limited the sum of economic and noneconomic loss in our analysis to $1 million, consistent with the most common physicians' professional liability policy limit in Illinois). In

addition, regardless of the selected coefficient of variation, the economic loss would not be affected by the cap. This served to minimize the impact of the selected coefficient of variation. These factors together allowed us to select a coefficient of variation for economic damages of 5.75 (the average of the two indications) for use in Illinois, knowing that any election within this range would produce similar results.

Severity of claims for noneconomic damages was also fit to a lognormal distribution. In this case, both the Texas and Florida databases suggested a coefficient of variation of 2.5. The lower coefficient of variation for this loss component is reasonable, as noneconomic damages involve more judgment on the part of juries and consequently tend to be not as dispersed as economic damages. Instead, one observes a tendency for noneconomic awards to cluster around certain round numbers.

CHART 3

Noneconomic Loss (in $000)

R-Squared = 0.07
Correlation Coefficient = 0.26

Economic Loss (in $000)

CHART 4

Ln (Noneconomic Loss)

R-Squared = 0.21
Correlation Coefficient = 0.45

Ln (Economic Loss)

CHART 5

Ln (ALAE)

R-Squared = 0.25
Correlation Coefficient = 0.50

Ln (Loss)

SOURCE: AUTHORS

Relationship Between Economic and Noneconomic Loss

Determining the relationship—if any—between economic and noneconomic loss was also an essential step in building our model. Do claims with high amounts of economic loss have correspondingly high amounts of noneconomic loss, or are they independent of one another?

Chart 3 attempts to discern a relationship between economic and noneconomic loss for all claims within the Florida database containing both of these loss types:

Each point in the scatter plot represents the amount of a noneconomic loss (vertically, on the left) in relation to the corresponding economic loss amount (horizontally, along the bottom). Looking at the raw data does suggest a relationship—if not exactly a compelling one. Most of the data points cluster in the lower left-hand corner. Although there is a rise in the upward values as you move along the horizontal axis, the upward slope is gradual, with a correlation coefficient of 0.26.

To obtain what we thought would give us a better look at the relationship between the two cost components, we took the same data and performed a transformation using a natural logarithm of each of the loss amounts—economic and noneconomic. This demonstrated a significantly stronger relationship, with an r-squared value of 0.21 and a correlation coefficient of 0.45 (see Chart 4).

Transforming the data in this way shows that—yes—noneconomic loss is indeed related to the magnitude of economic loss but less and less as economic loss amounts continue to rise. At small damage amounts, an additional $10,000 of economic loss might incur an additional $7,000 of noneconomic loss. At much larger amounts, however, a $10,000 increase might lead to only a $1,000 or $2,000 rise in noneconomic damages.

This is likely because economic damages are based on quantifiable factors such as lost wages and medical care expenses, whereas noneconomic awards tend to be more judgmental; they lessen as a percentage of the total as the more empirically quantifiable economic damage awards grow larger.

TABLE 2	Relationship Between Economic Loss and Noneconomic Loss				
Database	Assumption	R-Squared	Indicated Correlation Coefficient		Selected Relationship/ Correlation Coefficient
			Pearson's R	Spearman's Rank Order	
Florida	Linear Relationship	0.070	0.265	0.455	Log-Linear 0.500
	Log-Linear Relationship	0.207	0.455	0.455	
Texas	Linear Relationship	0.247	0.497	0.567	
	Log-Linear Relationship	0.351	0.592	0.567	

SOURCE: AUTHORS

We also tested the relationship between economic and noneconomic loss from the Texas data and obtained results consistent with the Florida data presented earlier (see Table 2 for a summary of these indications).

Relationship Between Loss and ALAE

It is intuitive that ALAE costs rise in response to indemnity costs as insurers seek to reduce the likelihood of greater indemnity payments, and the data from Texas empirically support this conclusion (the Florida data did not contain ALAE amounts). Chart 5 shows the correlated relationship between loss and ALAE, once again after lognormal transformation. Consistent with the relationship between loss types discussed above, loss and ALAE demonstrated a stronger correlation after the lognormal transformation than prior to the transformation (the r-squared value increased from 0.18 to 0.25).

In modeling ALAE severities, we differentiated between CWI and CWE claims, and relied on the ISMIE rate filing for the ALAE severity of each claim type. Within our model, we relied on the relationship shown in Chart 5 to estimate the ALAE on each CWI claim. We assumed that ALAE costs on CWE claims would remain unchanged as a result of overturning the cap. This is consistent with the ALAE severities given for CWI and CWE claims within ISMIE's rate filing, in which on average almost twice the amount of ALAE was spent on a CWI claim as was spent on a CWE claim.

Clear Consequences

Assuming policy limits of $1 million, our analysis indicates that the mean indemnity per reported occurrence will increase by approximately 23 percent. Mean ALAE will be 10 percent higher owing to the costs associated with defending these higher severity claims.

These two results together suggest that the combined indemnity and ALAE claim severity in Illinois will rise by approximately 18 percent relative to what it would have been had the cap held, as the effects of the cap's removal become manifest.

The relatively large magnitude of the estimated increase is due primarily to the tort environment in Illinois, which has among the highest claim severities in the nation.

The impact on actual calendar-year claim payments is less clear. The tort reform took effect on an occurrence basis. Given the often significant lag in physicians' professional liability claims from occurrence date to report date, many of the claims currently being settled in Illinois may stem from events prior to the implementation of tort reform. The cap on damages would never have applied to them. In addition, we believe there most likely has been a delay in claim settlement for many of the post-reform claims, as plaintiff attorneys awaited the court's anticipated ruling.

How rates might be affected is even more difficult to judge, but any effect is likely to be less substantial than the projected increases in loss. In light of the prior two reversals by the judiciary in the state, Illinois insurers have demonstrated little confidence over the past few years that the cap could withstand a legal challenge. It is reasonable to expect we may see some rate increases among medical professional liability insurers that had experimented with rate decreases in Illinois, and just as reasonable to assume that rates might have decreased in time, had the cap on noneconomic damage awards remained in place. □

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