

This appendix presents more detailed results of the six empirical studies of the impact of State tort reforms on the malpractice cost indicators reviewed in chapter 3. Appendix tables C-1 through C-3 summarize the studies' results for each malpractice cost indicator, respectively: claim frequency, payment per paid claim, and insurance premiums or losses. In each table (i. e., for each indicator), the results for each study that used that indicator (referenced by the first author's last name) are listed for each of the State tort reform measures that the study employed. (Table 3-3 in the text summarizes the contents of these three tables.)

Because the nature of the data used for a given indicator differed greatly among the studies (see the ch. 3 subsection on "Malpractice Cost Indicators"), tables C-1 through C-3 depict only the direction of the studies results, and not their specific quantitative values. A minus sign (–) means that the results were in the expected direction--i. e., presence of that tort reform reduced the malpractice cost indicator.

A plus sign (+) means that results were in the unexpected direction--i. e., presence of that tort reform increased the malpractice cost indicator. A dot (•) means that the study did not examine the impact of that tort reform on that malpractice cost indicator.

To gauge the relative importance of the findings, the tables also indicate the level of statistical significance reported for each result: The greater the number of asterisks shown beside a given plus or minus sign, the higher was the level of statistical significance reported for the result. To indicate overall trends in the direction of the results, plus and minus signs are shown for every reported coefficient, regardless of how large or small they were in absolute magnitude. However, we must emphasize that results that were not statistically significant at all (i. e., with no asterisks beside them) should be interpreted as being essentially zero. Unlike in text table 3-3, no zeros appear in appendix tables C-1 through C-3: Every result has a plus or minus sign, and a dot means "not examined in the study."

Table C-I--Results of Empirical Studies on the Impact of State Tort Reforms on Medical Malpractice Claim Frequency^a

Reform	Study ^b			Zuckerman
	Adams	Danzon		
		OLS	TSLS	
Restrict the statute of limitations:				
a. Use date of event, not discovery	—	•	•	•
b. Shorten basic statute of limitations for medical malpractice	∅ ∅ ∅	∅	∅ ∅	∅ ∅
c. Shorten statute of limitations for minors	•	•	•	—
d. Shorten extension of statute of limitations from date of discovery	•	•	•	+
Establish pretrial screening panels:				
a. Mandatory	•	∅		•
b. Results admissible in trial	•	•	•	•
c. Any type	•	∅		∅
Limit attorney fees	•	∅		∅
Modify the standard of care:				
a. Codify the standard of care	•	•	•	•
b. Do not adopt the “expanded locality rule”		•	•	•
c. Establish qualifications for expert witnesses	•	•	•	•
Require or allow awards to be reduced by amount of collateral payments:				
a. Require	•	∅ ∅ ∅		∅
b. Allow	•	•	•	
c. Either require or allow	•	∅ ∅ ∅	∅	•
Impose caps on damage awards:				
a. Total damages	•	•	•	∅
b. Noneconomic damages only	•	•	•	
c. Punitive damages only	•	•	•	•
d. Noneconomic or punitive damages	•	•	•	•
e. Any type	•	•	•	•
Require or allow periodic payments:				
a. Require	•	•	•	•
b. Allow	•	•	•	•
c. Either require or allow	•	•	•	•

Table C-I--Results of Empirical Studies on the Impact of State Tort Reforms on Medical Malpractice Claim Frequency^a(Continued)

Reform	Study ^b			Zuckerman
	Adams	Danzon		
		OLS	TOLS	
Restrict the joint and several liability doctrine	•	•	•	•
Allow voluntary, binding arbitration:				
a. Codify the option of arbitration for medical malpractice	•	+ **	+ **	•
b. Allow pre-injury agreements to arbitrate	•	•	•	—
Restrict the use of <i>res ipsa loquitur</i>	—	•	•	•
Restrict the use of <i>ad damnum</i> clauses	•	•	•	•
Limit the doctrine of informed consent	— ***	•	•	•
Allow costs awardable in frivolous suits	•	•	•	—

^aKey to symbols:

- Result in the expected direction (reducing malpractice claim frequency)
- + Result in the unexpected direction (increasing malpractice claim frequency)

• Not examined in the studies reviewed here

* Significant at the .10 level

** Significant at the .05 level

*** Significant at the .01 level

^bStudy measures:

Adams: Number of malpractice claims for 1976-1981 reported by physicians in a 1982 survey,

Danzon(OLS): Number of claims filed per insured physician, reported by insurance companies for 1975-1984, claims-made policies only, ordinary least-squares regression.

Danzon(TOLS): Number of claims filed per insured physician, reported by insurance companies for 1975-1984, claims-made policies only, two-stage least-squares regression.

Zuckerman: Number of claims filed per insured physician, reported by insurance companies for 1975-1986, claims-made policies only.

SOURCES: E. K. Adams, and S.Zuckerman, "Variation in the Growth and Incidence of Medical Malpractice Claims," **Journal of Health Politics, Policy and Law** 9(3):475-488, **Fall 1984**; P.M. Danzon, "The Frequency and Severity of Medical Malpractice Claims: New Evidence," Law and Contemporary Problems 49(2):57-84, Spring 1986; S. Zuckerman, R.R. Bovbjerg, and F. Sloan, "Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums," Inquiry 27(2): 167-182, Summer 1990.

Table C-2--Results of Empirical Studies on the Impact of State Tort Reforms on Medical Malpractice Payment Per Paid Claim^a

Reform	Study ^b					
	Danzon		Sloan			Zuckerman
	OLS	TSLs	Prob. of payment	Amount of payment	Amount + LAE	
Restrict the statute of limitations:						
a. Use date of event, not discovery	•	•	•	•	•	•
b. Shorten basic statute of limitations for medical malpractice	•	•		∅	∅	
c. Shorten statute of limitations for minors	•	•	•	•	•	∅
d. Shorten extension of statute of limitations from date of discovery	•	•		-	-	∅
Establish pretrial screening panels:						
a. Mandatory		∅		+**	+*	•
b. Results admissible in trial	•	•	-	-*	-	•
c. Any type		∅		-	-	+*
Limit attorney fees			+	+	+	+***
Modify the standard of care:						
a. Codify the standard of care	•	•	•	•	•	•
b. Do not adopt the "expanded locality rule"	•	•	•	•	•	•
c. Establish qualifications for expert witnesses	•	•	∅	+	∅	•
Require or allow awards to be reduced by amount of collateral payments:						
a. Require	∅	∅	-	-	-*	-*
b. Allow	•	•	+	+		-
c. Either require or allow	∅	∅	•	•	•	•
Impose caps on damage awards:						
a. Total damages	•	•	+	-**	-***	-
b. Noneconomic damages only	•	•	-	-**	-*	-*
c. Punitive damages only	•	•	•	+	-	•
d. Noneconomic or punitive damages	•	•	•	•	•	•
e. Any type	∅	∅	•	•	•	•
Require or allow periodic payments:						
a. Require	•	•	-	-	-	•
b. Allow	•	•	+	∅		•
c. Either require or allow	•	•	•	•	•	•

Table C-2--Results of Empirical Studies on the Impact of State Tort Reforms on Medical Malpractice Payment Per Paid Claim^a(Continued)

Reform	Study ^b					
	Danzon		Sloan			Zuckerman
	OLS	TSLs	Prob. of payment	Amount of payment	Amount + LAE	
Restrict the joint and several liability doctrine	•	•	•	•	•	•
Allow voluntary, binding arbitration:						
a. Codify the option of arbitration for medical malpractice	••	- **	•	•	•	•
b. Allow pre-injury agreements to arbitrate	•	•				
Restrict the use of <i>res ipsa loquitur</i>	•	•			•	•
Restrict the use of <i>ad damnum</i> clauses	•	•	•	•		•
Limit the doctrine of informed consent	•	•	•			•
Allow costs awardable in frivolous suits	•	•	•	••	••	•

^aKey to symbols:

- Result in the expected direction (reducing payment per paid claim)
- + Result in the unexpected direction (increasing payment per paid claim)
- Not examined in the studies reviewed here
- * Significant at the .10 level
- ** Significant at the .05 level
- *** Significant at the .01 level

^bStudy measures:

Danzon(OLS): Average payment amount per paid claim for all claims (i.e., under both claims-made and occurrence policies), 1975-1984, ordinary least-squares regression

Danzon(TSLs): Average payment amount per paid claim for all claims (i.e., under both claims-made and occurrence policies), 1975-1984, two-stage least-squares regression

Sloan: Probability that the claim would result in payment, 1975-1978 and 1984

Amount of indemnity payment for the claim, 1975-1978 and 1984

Amount of indemnity payment plus "loss-associated expense" (mainly defense attorneys' fees) for the claim, 1975-1978 and 1984

Zuckerman: Average payment amount per paid claim for all claims (i. e., under both claims-made and occurrence policies), 1975-1986

SOURCES: P.M. Danzon, "The Frequency and Severity of Medical Malpractice Claims, New Evidence, " Law and Contemporary Problems 49(2):57-84, Spring 1986; F.A. Sloan, P.M. Mergenhagen, and R.R. Bovbjerg, "Effects of Tort Reforms on the Value of Closed Medical Malpractice Claims: A Microanalysis," Journal of Health Politics, Policy and Law 14(4):663-689, Winter 1989; S, Zuckerman, R.R. Bovbjerg, and F. Sloan, "Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums," Inquiry 27(2): 167-182, Summer 1990,

Table C-3--Results of Empirical Studies on the Impact of State Tort Reforms on Medical Malpractice Insurance Premiums or Losses^a

Reform	Study ^b					
	Zuckerman (premiums)			Blackmon	Barker	
	General	General	General	Ob/Gyn	Premiums	Losses
Restrict the statute of limitations:						
a. Use date of event, not discovery	•	•	•	•	•	•
b. Shorten basic statute of limitations for medical malpractice	∅	∅	∅	∅	∅	∅
c. Shorten statute of limitations for minors	∅	∅	+	•	•	•
d. Shorten extension of statute of limitations from date of discovery	∅	∅	∅	•	•	•
Establish pretrial screening panels:						
a. Mandatory	•	•	•	•	•	•
b. Results admissible in trial	•	•	•	•	•	•
c. Any type			∅	•	•	•
Limit attorney fees		-	-	-	-	•
Modify the standard of care:						
a. Codify the standard of care	•	•	•	•	•	•
b. Do not adopt the "expanded locality rule"	•	•	•	•	•	•
c. Establish qualifications for expert witnesses	•	•	•	•	•	•
Require or allow awards to be reduced by amount of collateral payments:						
a. Require	-	+	-	•	•	•
b. Allow	+	+	+	•	•	•
c. Either require or allow	•	•	•	∅		∅
Impose caps on damage awards:						
a. Total damages	-***	-***	-***	•	•	•
b. Noneconomic damages only	+	+	∅	•	•	•
c. Punitive damages only	•	•	•	•	•	•
d. Noneconomic or punitive damages	•	•	•	∅	∅	•
e. Any type	•	•	•	•	•	∅
Require or allow periodic payments:						
a. Require	•	•	•	•	•	•
b. Allow	•	•	•	•	•	•
c. Either require or allow	•	•	•	∅		•

Table C-3--Results of Empirical Studies on the Impact of State Tort Reforms on Medical Malpractice Insurance Premiums or Losses^a(Continued)

Reform	Study ^b					
	Zuckerman (premiums)			Blackmon	Barker	
	General practice	General surgery	Ob/Gyn	Premiums	Losses	Premiums
Restrict the joint and several liability doctrine	•	•	•	—*	—	•
Allow voluntary, binding arbitration:						
a. Codify the option of arbitration for medical malpractice	•	•	•	•	•	•
b. Allow pre-injury agreements to arbitrate	—	—		•	•	•
Restrict the use of <i>res ipsa loquitur</i>	•	•	•	•	•	•
Restrict the use of <i>ad damnum</i> clauses	•	•			•	•
Limit the doctrine of informed consent	•	•	•	•	•	•
Allow costs awardable in frivolous suits	—	+		•	•	•

^aKey to symbols:

- Result in the expected direction (reducing malpractice premiums or losses)
- + Result in the unexpected direction (increasing malpractice premiums or losses)
- . Not examined in the studies reviewed here
- * Significant at the .10 level
- ** Significant at the .05 level
- *** Significant at the .01 level

^bStudy measures:

Zuckerman: Malpractice insurance premiums for general practice, 1975-1986

 Malpractice insurance premiums for general surgery, 1975-1986

 Malpractice insurance premiums for obstetrics/gynecology, 1975-1986

Blackmon: Change in malpractice insurance premiums between 1985 and 1988

 Change in malpractice insurers' losses from 1985 to 1988

Barker Mean loss ratio, malpractice insurance industry total, 1977-1986

SOURCES: D.K. Barker, "The Effects of Tort Reform on Medical Malpractice Insurance Markets: An Empirical Analysis," Journal of Health Politics, Policy and Law, 17(1):143-161, Spring 1992; G.Blackmon, and R Zeckhauser, "State Tort Reform Legislation: Assessing Our Control of Risks," in Tort Law and the Public Interest, Peter H, Schuck (cd.) (New York: W.W. Norton & Co., 1991); F.A. Sloan, P.M. Mergenhausen, and R.R.Bovbjerg, "Effects of Tort Reforms on the Value of Closed Medical Malpractice Claims: A Microanalysis," Journal of Health Politics, Policy and Law 14(4):663-689, Winter 1989; S. Zuckerman, R.R.Bovbjerg, and F. Sloan, "Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums," Inquiry 27(2): 167-182, Summer 1990,