

## Introduction: Current Research on Medical Malpractice Liability

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On May 19–20, 2006, the John M. Olin Program in Law and Economics at the University of Chicago Law School hosted a conference entitled “Current Research on Medical Malpractice Liability.” Participants presented papers that covered a range of topics, from insurance coverage and errors in litigation to the effects of liability on physician practice and physician supply. Papers also explored the effects of tort reforms, some existing, some new. Many of the papers from this conference are presented in this issue.

The first paper in this issue, by Kathryn Zeiler, Charles Silver, Bernard Black, David A. Hyman, and William M. Sage, uses closed claims data from Texas to examine (1) the extent to which physicians obtain liability coverage and (2) the extent to which liability policies cover damage payments. The key finding is that insurance policies cover nearly all damage payments; the relationship is so strong that it seems coverage limits may limit total payments. The fact that physicians are fully insured against financial liability from medical malpractice claims has some important implications for liability policy. First, if—as is commonly thought—malpractice insurance premiums are community rated, then damages are unlikely to have significant behavioral effects. That means evidence of deterrence or defensive medicine is driven by the nonfinancial component of liability, such as the reputational or psychic costs of liability. In other words, what causes doctors to provide better care or too much care is not damages per se but the psychic costs of litigation or the impact of damages on the physicians’ reputations. (If, however, mal-

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practice premiums are in fact partly experience rated, then damages may still be responsible for behavioral effects, notwithstanding the authors' findings.)

Second, if payments to patients are implicitly capped by insurance coverage, why do doctors not reduce their coverage? Zeiler and her co-authors do find that nominal coverage is constant over time (so that real coverage declines), but it is unclear why nominal coverage does not also decline. There may be the threat that plaintiffs' attorneys will go after the assets of doctors with insufficient coverage, but the variance in coverage across doctors suggests many are above the insufficient-coverage threshold.

The second paper in the issue, by David Studdert and Michelle Mello, employs a panel of doctors to review roughly 1,400 closed claims files from five medical malpractice insurers in order to identify erroneous payment decisions. They find that roughly 30 percent of cases resulted in payments where there was no negligence (false positives) and roughly 30 percent of cases resulted in zero payments when there was evidence of negligence (false negatives). False positives were more likely in cases involving an infant plaintiff or a hospital codefendant. Cases that went to trial had a lower rate of false positives and a higher rate of false negatives than remaining cases.

There are three immediate implications. Although Studdert and Mello's number for error rates in litigation is lower than the number from, for example, the Harvard Medical Practice Study, it does suggest that litigation is a noisy signal of quality and thus a crude penalty for negligence. These errors reduce the efficiency of malpractice damages as a deterrent to negligence. If, as a result of errors, damages are correlated with certain procedures or diagnostics holding outcomes constant, the paper's results may also explain why liability results in defensive medicine. The second implication concerns joint and several liability. In a recent paper on birth outcomes after tort reform, Janet Currie and Bentley MacLeod (2007) argue that limiting joint and several liability can improve deterrence by raising the share of damages paid by the parties most responsible for treatment errors. This is true even if there are no errors in litigation. Studdert and Mello's findings go further and suggest that joint and several cases are also associated with false-positive errors in litigation. Since false positives are more likely a cause of defensive medicine than deterrence of negligence, joint and several cases are also more likely to be associated with defensive medicine. The third implication concerns trials. It is possible that Studdert and Mello's result is

entirely due to selection of cases for trial. That is, randomly assigning a case to trial rather than settlement does not decrease the probability of false positives or increase the probability of false negatives. More work is required to rule out this possibility. If the authors' result turns out not to be driven by selection, it might recommend reforms to reduce false negatives at trials. Are there fewer such errors in bench trials? Are rules on experts' testimony detrimental to plaintiffs? Because there are so few cases that go to trial, the result suggests a puzzle more than a need for reforms. Why do plaintiffs' attorneys' not go to trial even less often? Or why do defendants and their insurers settle at a higher rate than implied by trial outcomes?

The third paper in the issue, by Beomsoo Kim, examines the effect of liability on medical practice, specifically, the procedures used by obstetricians (OBs). The primary analysis is a state-level regression of procedural outcomes such as cesarean section (c-section) rates and office visits on the number of malpractice claims per 100 births. To address endogeneity—the effect of procedures on claims—Kim instruments for claims against OBs by claims against doctors other than OBs. Kim finds that, other than amniocentesis rates, medical procedures and access are not affected by malpractice claims against OBs. This paper contributes to a large literature on deterrence and defensive medicine. That literature, and Kim's paper, is consistent with two conclusions. First, a higher number of claims or higher premiums do not appear to have a significant effect on OB practice or access. For example, Dubay, Kaestner, and Waidmann (1999) find that premiums have no effect on c-section rates (except for single mothers, who are thought to be more litigious), and Baicker and Chandra (2004) find that neither claims nor premiums affect c-section rates.<sup>1</sup> Second, tort reforms may affect positively medical practice outside the OB context. The most notable example here is Kessler and McClellan (1996), who find that “direct” tort reforms (defined as those affecting the amount paid in the event of liability) decrease Medicare expenditures on patients with acute myocardial infarction but do not adversely affect outcomes. While a subsequent paper by Kessler and McClellan (2000) finds that this effect disappears in states with high health maintenance organization (HMO) penetration rates (the theory being that HMOs eliminate defensive medicine via cost controls), their

1. But see Grant and McInnes (2004), who find that obstetricians increase their cesarean section rates after they are sued. The authors do not examine the effect on doctors who are not sued or doctors before they are sued.

work is still notable because it controls for outcomes. Kim's paper is a solid contribution to this body of knowledge, though its normative implications are ambiguous. Unless we know whether cesarean rates are too high or too low, we cannot be sure whether it is a good thing (deterrence) or a bad thing (defensive medicine) that tort liability does not affect them.

The fourth and fifth papers in the issue, by Jonathan Klick and Thomas Stratmann and by David Matsa, examine whether tort liability adversely affects physician supply, a common criticism from doctors. Like the effect of liability on deterrence and defensive medicine, the effect on physician supply is the subject of a large number of papers. The reason is that it is theoretically unclear whether an increase in liability costs would decrease physician supply. If the market for physicians were competitive and patient demand were inelastic (as it might be if patients were well insured), then the liability costs would be passed on to consumers. Perhaps the most prominent paper to address the physician supply effect is by Kessler, Sage, and Becker (2005), who find that direct tort reforms like damage caps increase physician supply by 3 percent or so, especially in high-risk specialties. The result is consistent with Helland and Showalter (2007), who find that damage caps reduce the number of hours physicians work. Further, work by Mello et al. (2007) suggests that malpractice pressure has a larger effect on the supply of OBs, and work by Encinosa and Hellinger (2005) suggests that the supply effect is larger among rural physicians.

There is, however, some conflicting evidence. For example, Baicker and Chandra (2005) find that high malpractice premiums have no effect on physician supply (though they find that premiums are negatively correlated with rural physician supply). Dranove and Gron (2005) find no reduction in the supply of OB services during a medical malpractice crisis in Florida (though they do find an effect on supply of neurosurgeons' services).

Klick and Stratmann's innovation is an attempt to address the problem of endogeneity. While we believe that liability may reduce physician supply, it is also possible that the supply of physicians affects whether a state adopts tort reforms. If a physician shortage induces reform, then estimates of the effect of reform on supply will be biased downward. If a critical number of physicians is required to pass reforms, then the same estimates will be biased upward. Klick and Stratmann suppose that it is the supply of total physicians and not high-risk physicians that determine whether tort reform is passed. If this is true, and tort reform

has no effect on the supply of low-risk physicians, then netting out the correlation between reform and supply of low-risk physicians will identify the effect of reform on the supply of high-risk physicians. They find that damage caps increase high-risk physician supply by 3.9–6.6 percent.

Matsa's contribution to the literature is a longer panel (1970–2000) of data on physician supply at the county level and a careful methodology. Consistent with Baicker and Chandra (2005), he finds that damage caps have no significant effect on the supply of physicians in the average county but do reduce the supply of specialist physicians in rural counties by 10–12 percent. Matsa addresses endogeneity in physician trends (if not levels) by demonstrating that physician supply did not significantly change until after tort reforms were adopted. Finally, Matsa highlights that the supply effect of damage caps may grow over time as physicians gain confidence that the cap will not be overturned by the courts. While he cannot reject that the effect of caps is constant over time, he is the first to document potential dynamic effects of tort reform.

The sixth paper in this issue, by Ronen Avraham, examines the effect of different tort reforms on the frequency and average amount of settlement payments. This is an important question because tort reforms have an ambiguous effect on both outcomes. Proponents of reforms argue that reforms will reduce payments and thus the amount of litigation by reducing the incentive of plaintiffs and their lawyers to sue doctors. Opponents of reform argue, however, that tort reform, by reducing the penalty for the negligent practice of medicine, may increase the frequency of malpractice and thus malpractice claims and total (not average) damages awarded. Of course the exact effects may vary across reforms, as Currie and MacLeod's (2007) paper on joint and several liability suggests. Consistent with this possibility, Avraham finds that, while caps on pain and suffering awards reduce both the frequency and average amount of settlement payments, limits on joint and several liability reduce only the frequency of payments, and periodic-payment reforms reduce only the average size of payments. (Other reforms had no significant effects.) It would be useful to probe why the different reforms had different effects, though that may become complicated by the interaction between the effects of multiple reforms operating simultaneously. Before concluding this review of Avraham's paper, it should be noted that Avraham contributes to the public good in a second way. He employs a new coding of tort reform laws that is more sensitive to the precise dates laws are adopted and struck down and that he has made available to other researchers. This should reduce the degree to

which measurement error afflicts other studies that use tort reform as proxy for malpractice liability pressure.

The final two papers in this issue are different than the first six because, rather than size up the problems with (or successes of) the current malpractice liability system, they propose or evaluate innovative reforms to that system. In this regard they are forward looking. Joni Hersch, Jeffrey O'Connell, and Kip Viscusi use data on closed claims in Texas and Florida to simulate the effect of O'Connell's "early offer" reform proposal. Under that proposal, if a physician makes prompt and reasonable offer of economic damages and attorney fees and the patient declines the offer, the patient will have to prove the physician was not merely negligent, but grossly negligent, in order to win damages in court. This proposal will encourage physicians to make prompt offers in order to avoid facing noneconomic damages at trial and will encourage patients to settle lest they face a higher standard of proof at trial. Both sides will save litigation costs because early offers will expedite dispute resolution. There will likely be an effect on *ex ante* physician behavior, but the purpose of this paper is to document the size and direction of financial transfers under an early-offer program holding behavior constant. The authors conclude that damage payments will fall by two-thirds (representing the fraction of payments associated with noneconomic damages), or \$130,000–\$160,000, and that claims will be resolved 2 years faster, saving plaintiffs and defendants together about \$100,000–\$200,000.

Kenneth Reinker and David Rosenberg propose an even more radical reform: allowing patients to assign their medical malpractice claims to their health insurer. (Medical malpractice insurers already have the right to control the defense of suits against insured physicians.) Their notion is that replacing individual plaintiffs with health insurers will speed up resolution due to repeat play among large, sophisticated parties. It may also improve deterrence by eliminating nonmeritorious suits (false positives) and excessive costs for health insurers due to negligence (false negatives), thereby improving the correlation between negligence and premiums. (Of course this assumes experience rating of premiums.) At the very least, if patients actually allow subrogation, the authors' proposal will render the debate over the collateral source rule largely irrelevant: because the health insurer is the ultimate bearer of medical costs, juries will not be confused about the harm inflicted by the physician defendant!

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