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Tom Baker

University of Pennsylvania Carey Law School

Charles Silver

University of Texas at Austin

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HOW LIABILITY INSURERS PROTECT PATIENTS AND IMPROVE SAFETY

Tom Baker and Charles Silver***

INTRODUCTION

Forty years after the publication of the first systematic study of adverse medical events,¹ the patient safety world has changed. Among other developments, there is greater access to information about adverse medical events and increasingly widespread acceptance of the view that patient safety requires more than vigilance by well-intentioned medical professionals. In this Article, we describe some of the ways that medical liability insurance organizations contributed to this transformation, and we catalog the roles that those organizations play in promoting patient safety today.

While we will not explore in any detail the tort liability regime that provides the *raison d'être* for medical liability insurance, it is important to emphasize that medical liability insurers exist, and therefore do everything that they do, only because injured patients have the right to legal recourse. Moreover, we know what we know about the landscape of adverse medical events largely because of medical malpractice claims. This is obviously the case for the many important studies that use insurance company closed claim files as the data source. However, people often forget that the most important, large-scale, hospital-based studies of adverse medical events had their origins in efforts by the medical profession to prove there was a better way to address patient injuries than tort litigation.² While the studies failed to

* William Maul Measey Professor of Law and Health Sciences, University of Pennsylvania Law School, <http://ssrn.com/author=172195>. Harold Bressler and Allison Hoffman provided valuable comments on a draft of this article at the 24th Annual Clifford Symposium on Tort Law and Social Policy. Thank you to Kayla Katz and Joseph Noel for research assistance.

** Roy W. and Eugenia C. McDonald Endowed Chair in Civil Procedure, The University of Texas at Austin School of Law, <http://ssrn.com/author=164490>.

1. See generally Don Harper Mills, *Medical Insurance Feasibility Study: A Technical Summary*, 128 W. J. MED. 360 (1978) [hereinafter Mills, *Medical Insurance Feasibility Study*] (summarizing how adverse medical events affect patients).

2. See generally TOM BAKER, THE MEDICAL MALPRACTICE MYTH 94 (2005) [hereinafter BAKER, THE MEDICAL MALPRACTICE MYTH]; CAL. MED. ASS'N & CAL. HOSP. ASS'N, REPORT ON THE MEDICAL INSURANCE FEASIBILITY STUDY (Don Harper Mills ed., 1977); PATRICIA M. DANZON, MEDICAL MALPRACTICE: THEORY, EVIDENCE, AND PUBLIC POLICY (1985) (relying in

achieve that goal, they did achieve something important: documenting that serious adverse medical events are a major public health problem.³

Of course, medical liability insurers know that most patients who bring medical malpractice claims have suffered significant injuries and that many of those claims meet the legal standard for tort liability.⁴ They also know that many of those injuries are preventable and that hospitals and other places where patients receive care still have room for improvement.⁵ Thus, it is hardly surprising that medical liability insurance organizations have been and remain at the forefront of efforts to promote patient safety. Insurers undoubtedly undertake these efforts primarily to improve their internal operations and profitability, but these efforts also support the patient safety movement in health care, as we describe and document in this Article.

Consistent with medical liability insurers' focus on patient claiming, we begin by discussing how insurers protect patients by providing compensation that helps insurers deal with the consequences of medical mistakes. We then place insurers' efforts to improve patient safety more directly within the broader context of insurance as a form of

large part on Mills, *Medical Insurance Feasibility Study*, *supra* note 1); Troyen A. Brennan et al., *Incidence of Adverse Events and Negligence in Hospitalized Patients: Results of The Harvard Medical Practice Study I*, 324 *NEW ENG. J. MED.* 370 (1991) [hereinafter Brennan et al., *Harvard Medical Practice Study*]. For a summary of closed claim studies as of 2005, see BAKER, *THE MEDICAL MALPRACTICE MYTH*, *supra*, at 77–83. For more recent closed claim studies, see, for example, Allen Kachalia et al., *Missed and Delayed Diagnoses in The Emergency Department: A Study of Closed Malpractice Claims From 4 Liability Insurers*, 49 *ANNALS EMERGENCY MED.* 196 (2007); Aaron S. Kesselheim et al., *Using Malpractice Claims to Identify Risk Factors for Neurological Impairments Among Infants Following Non-Reassuring Fetal Heart Rate Patterns During Labour*, 16 *J. EVALUATION CLINICAL PRAC.* 476 (2010); Eric G. Poon et al., *Cognitive Errors and Logistical Breakdowns Contributing to Missed and Delayed Diagnoses of Breast and Colorectal Cancers: A Process Analysis of Closed Malpractice Claims*, 27 *J. GEN. INTERNAL MED.* 1416 (2012); Scott E. Regenbogen et al., *Patterns of Technical Error Among Surgical Malpractice Claims: An Analysis of Strategies to Prevent Injury to Surgical Patients*, 246 *ANNALS SURGERY* 705 (2007); Hardeep Singh et al., *Medical Errors Involving Trainees: A Study of Closed Malpractice Claims From 5 Insurers*, 167 *ARCHIVES INTERNAL MED.* 2030 (2007).

3. See generally *INST. OF MED., TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM* (Linda T. Kohn et al. eds., 2000) (relying in large part on Brennan et al., *Harvard Medical Practice Study*, *supra* note 2, and the closed claim studies). On the unsuccessful efforts of some of the *Harvard Medical Practice Study* researchers to suggest that medical malpractice litigation was a similarly serious problem, see generally Tom Baker, *Reconsidering the Harvard Medical Practice Study Conclusions About the Validity of Medical Malpractice Claims*, 33 *J. LAW, MED. & ETHICS* 501 (2005).

4. See, e.g., BAKER, *THE MEDICAL MALPRACTICE MYTH*, *supra* note 2, at 77–83; Kachalia et al., *supra* note 2; Kesselheim et al., *supra* note 2; Poon et al., *supra* note 2; Regenbogen et al., *supra* note 2; Singh et al., *supra* note 2.

5. See BAKER, *THE MEDICAL MALPRACTICE MYTH*, *supra* note 2, at 31–33 (explaining that an Australian health care study found that “half of the medical management injuries were preventable”).

private governance. By doing so, we link this Article to prior work growing out of two scholarly traditions: the law and economics scholarship that took hold in U.S. law schools in the early 1980s and a contemporaneous sociological tradition that entered into legal scholarship through the Law and Society Association. We cannot provide the full genealogy of this “insurance as governance” research in this Article. Our goal here is to strengthen our qualitative account of the role of medical liability insurers in promoting patient safety by providing a theoretical grounding and links to research documenting similar governance activities by insurers in other fields.

As we discuss, medical malpractice insurers promote patient safety in at least six ways: (1) Insurers identify subpar providers in ways that provide the opportunity for other institutions to act. (2) Insurers provide incentives for providers by charging premiums that are based on risk and by refusing to insure providers who are too high-risk. (3) Insurers accumulate data for root cause analysis. (4) Insurers conduct loss prevention inspections of medical facilities. (5) Insurers educate providers about legal oversight and steps that they can take to manage their risks. (6) Finally, insurers provide financial and human capital support to patient safety organizations.

I. LIABILITY INSURERS COMPENSATE VICTIMS FOR INJURIES ATTRIBUTABLE TO MALPRACTICE

Liability insurers protect patients from the consequences of adverse events by compensating them for the losses they sustain. Broadly speaking, these losses come in two forms: (1) financial costs, which may be attributable to need for additional medical treatments, lost income, or other expenses; and (2) debilitation, which may include ongoing pain, physical disfigurement, and psychological impairment.

Researchers have studied the medical malpractice liability system many times, and many aspects of the system are well understood. For example, it is known that, with occasional exceptions, patients must sue to obtain recoveries, and to sue successfully they must hire attorneys. Because malpractice cases are expensive to prepare and are defended zealously by insurers, plaintiffs’ attorneys choose cases with care. Typically, they only accept clients with meritorious claims whose injuries are sufficiently severe to generate sizeable recoveries. The ratio of rejections to acceptances is high.

Even so, plaintiffs’ attorneys often drop malpractice cases after accepting them because evidence acquired during discovery frequently

reveals hidden weaknesses.⁶ This pattern of high drop rates despite careful initial assessments likely reflects the underlying distribution of potential cases, in which weak cases (i.e., those in which adverse outcomes occur as a result of natural causes) greatly outnumber strong ones (i.e., those in which medical negligence is the cause). For example, suppose the following: Among patients who experience bad outcomes, the ratio of weak cases to strong ones is 9–1; a lawyer evaluates 100 cases selected at random; and the lawyer sorts the cases accurately 90% of the time. The group of potential cases will then include 90 weak cases and 10 strong cases. The lawyer will correctly reject 81 of the 90 weak cases, and the lawyer will incorrectly reject 1 of the 10 strong cases. The group of accepted cases will then include 9 strong cases and 9 weak ones—a 50-to-50 distribution. Despite the lawyer’s highly accurate evaluation process, the skew in the underlying distribution makes it seem as though the lawyer is as willing to accept weak cases as strong ones.⁷

As the accepted cases proceed through discovery, many are dropped while others are dismissed on motions or settled.⁸ Cases with weak merits are more likely to be dismissed, to be dismissed quickly, and to be dismissed with less expense than others.⁹ The time from filing to disposition appears to be influenced by insurers’ subjective assessments of claim strength. Insurers dispute claims until they are convinced of their merit, at which point they settle.¹⁰

Settlements occur before trials, after trials, and often during the appeal process. Regardless of the stage of resolution, empirical studies have shown that the payments patients receive, when they do receive them, conform to certain patterns. First, when the providers are independently-employed physicians, insurers provide all but a minute fraction of the dollars that are paid.¹¹ Second, payments rarely exceed primary carriers’ policy limits, even when jury verdicts establish that

6. See generally Paul Fenn & Neil Rickman, *Information and the Disposition of Medical Malpractice Claims: A Competing Risks Analysis*, 30 J.L., ECON., & ORG. 244 (2014).

7. This analysis is drawn from Michael J. Saks, *Do We Really Know Anything About The Behavior of The Tort Litigation System—and Why Not?*, 140 U. PA. L. REV. 1147 (1992).

8. See Fenn & Rickman, *supra* note 6.

9. See generally David M. Studdert et al., *Claims, Errors, and Compensation Payments in Medical Malpractice Litigation*, 354 NEW ENG. J. MED. 2024 (2006) [hereinafter Studdert et al., *Claims, Errors, and Compensation*].

10. On the connection between information about claim quality, claim managers’ assessments, and settlement, see Fenn & Rickman, *supra* note 6.

11. See Kathryn Zeiler et al., *Physicians’ Insurance Limits and Malpractice Payments: Evidence from Texas Closed Claims, 1990–2003*, 36 J. LEGAL STUD. (Vol. Supp.) S9, S11 (2007) (“[T]his study finds that physicians rarely used personal assets to resolve malpractice claims.”).

the legal value of plaintiffs' claims is far higher.¹² Third, trial verdicts and settlement payments grow in size as injuries become more severe and the strength of the evidence of malpractice increases.¹³ Fourth, a "death discount" exists, meaning that payments tend to be larger when patients sustain grave, permanent injuries than when they die.¹⁴ Fifth, the most serious and persistent defect in the tort system more broadly—other than litigation costs—is the tendency to under-compensate victims with meritorious claims.¹⁵ Juries often send deserving plaintiffs home empty-handed, and severely injured plaintiffs frequently receive smaller payments than they deserve. The more grievous the injury, the more likely and more serious the problem of under-compensation tends to be.

Liability insurance matters from beginning to end, that is, from case selection to the conclusion of litigation. Even when injuries are large and the facts strongly indicate that negligence occurred, plaintiffs' attorneys often decline requests for representation when providers carry little or no malpractice coverage. In the main, plaintiffs' attorneys are in the business of collecting from insurers; only in exceptional cases do they go after doctors' personal assets. An empirical study of Texas found that patients suffered compensation shortfalls because the providers who treated them carried less insurance than needed to compensate them in full.¹⁶ Because Texas has strong debtor-protection laws, settlements above the policy limits that involve payments from physicians are uncommon.¹⁷ For the same reason, Texas settlements may be smaller than those in other states, where the law gives tort claimants better access to providers' personal assets.¹⁸

As a rough generalization, it is usually true that patients' recoveries in medical malpractice top out at the limits of doctors' professional

12. See generally Tom Baker et al., *Everything's Bigger in Texas: Except the Medmal Settlements*, 22 CONN. INS. L.J. 1 (2016) [hereinafter Baker et al., *Everything's Bigger in Texas*]; David A. Hyman et al., *Do Defendants Pay What Juries Award? Post-Verdict Haircuts in Texas Medical Malpractice Cases, 1988–2003*, 4 J. EMPIRICAL LEGAL STUD. 3 (2007); Charles Silver et al., *Policy Limits, Payouts, and Blood Money: Medical Malpractice Settlements in the Shadow of Insurance*, 5 U.C. IRVINE L. REV. 559 (2015).

13. For a discussion on trial verdicts, see THOMAS H. COHEN, U.S. DEP'T OF JUSTICE, BUREAU OF JUSTICE STATISTICS, NCJ 203098, MEDICAL MALPRACTICE TRIALS AND VERDICTS IN LARGE COUNTIES, 2001, at 2 (2004) ("Median award amounts for medical malpractice trials arising from death claims . . . and permanent injuries . . . were higher than the median awards for medical malpractice trials that stemmed from temporary injuries . . ."). See Studdert et al., *Claims, Errors, and Compensation*, *supra* note 9, for a discussion of settlement payments.

14. See Saks, *supra* note 7, at 1216–17.

15. See generally *id.*

16. See Hyman et al., *supra* note 12, at 53.

17. See Zeiler et al., *supra* note 11, at S39.

18. See Baker et al., *Everything's Bigger in Texas*, *supra* note 12, at 2–4.

liability coverage.¹⁹ But it would be a mistake to view policy limits only as caps on injured patients' recoveries because the existence of insurance coverage is what enables patients to obtain compensation. Insurers are the bankers for the tort system. Without them, the liability system as we know it could not function.

II. MEDICAL MALPRACTICE INSURANCE AS GOVERNANCE

Medical malpractice insurance not only compensates injured patients *ex post*, it also promotes patient safety *ex ante*. In that regard, it can be useful to think of medical malpractice insurance as serving a regulatory function. We will discuss some of the ways that insurers "regulate" medical practice, but first we would like to place this discussion into the larger context of the "insurance as governance" scholarship that has grown out of two social scientific research traditions. The first is the law and economics tradition that has been so influential in U.S. legal scholarship generally. The second is a sociological tradition that is less familiar to most U.S. legal scholars.

For present purposes, the seminal law and economics theoretical work is that of Steven Shavell. Shavell used a deceptively simple model to describe how the moral hazard of liability insurance could undermine the deterrent effect of tort liability.²⁰ As Shavell surely appreciated, this was an old idea, present at the birth of liability insurance in the late 19th Century.²¹ Shavell's insight, and his impact on law and economics scholarship, came from what he did next: He extended the model to account for risk-based pricing and other moral hazard mitigation activities.²² This showed that even if these activities could not entirely restore the deterrent effect of tort liability, the overall social effect of tort liability with liability insurance was welfare-enhancing because of the combination of loss prevention and loss distribution benefits. Shavell's work firmly linked liability and liability insurance together in the law and economics literature, and it taught legal economists to think about liability insurance in ways that made

19. Patients' prospects may be better when they sue surgery centers, hospitals, or other institutions with sizeable assets that are not exempt from creditors.

20. See Steven Shavell, *On Liability and Insurance*, 13 BELL J. ECON. 120, 122–23 (1982). See generally Tom Baker & Peter Siegelman, *The Law and Economics of Liability Insurance: A Theoretical and Empirical Review*, in RESEARCH HANDBOOK ON THE ECONOMICS OF TORTS 169 (Jennifer Arlen ed., 2013), reprinted in 1 LAW AND ECONOMICS OF INSURANCE (Daniel Schwarcz ed., 2015).

21. See generally KENNETH S. ABRAHAM, *THE LIABILITY CENTURY: INSURANCE AND TORT LAW FROM THE PROGRESSIVE ERA TO 9/11* (2008).

22. See generally Shavell, *supra* note 20.

them more receptive than they might otherwise have been to the qualitative empirical legal scholarship that drew on sociological tradition.²³

From sociology, there are two seminal sources for the concept of “insurance as governance.” The first is a series of lectures that Michel Foucault gave in Paris and Berkeley in the late 1970s and early 1980s. Together with work by his French and American students, these lectures introduced a concept of insurance as governance that was more critical and less mechanical than the model-based concept from law and economics.²⁴ Much less easily reduced to simple relationships than the economics of insurance (and less influential in legal academic work as a result), this research relies on qualitative methods and detailed description. This methodology documents how insurance simultaneously “underwrites the ability to play with danger” and “articulates standards of risk management that foster safety and security,” while serving in this and other dimensions as the paradigmatic institution of “governance beyond the state.”²⁵ The second source is Carol Heimer’s research on how insurance companies manage moral hazard in insurance contracts.²⁶ Her research revealed some of the diverse and sometimes unpredictable ways that insurance organizations and institutions accomplish the abstract, moral hazard mitigation assumed in Shavell’s models.²⁷

The legal scholarship most strongly influenced by this sociological research includes studies of fraternity risk management, corporate governance, employment practices, police misconduct, and lawyers’

23. See, e.g., Baker & Siegelman, *supra* note 20; Omri Ben-Shahar & Kyle D. Logue, *Outsourcing Regulation: How Insurance Reduces Moral Hazard*, 111 MICH. L. REV. 197, 200 (2012); Victor P. Goldberg, *The Devil Made Me Do It: The Corporate Purchase of Insurance*, 5 REV. L. & ECON. 541, 542 (2009).

24. For the best summary of Foucault’s thinking on governmentality and an excellent selection of work by his students in this tradition, see generally MICHEL FOUCAULT, *THE FOUCAULT EFFECT: STUDIES IN GOVERNMENTALITY* (Graham Burchell et al. eds., 1991). See also Jonathan Simon, *The Ideology of Actuarial Practices*, 22 L. & SOC’Y REV. 771, 772–73 (1988).

25. RICHARD V. ERICSON ET AL., *INSURANCE AS GOVERNANCE* 8 (2003); see also RICHARD V. ERICSON & AARON DOYLE, *UNCERTAIN BUSINESS: RISK, INSURANCE, AND THE LIMITS OF KNOWLEDGE* 47–48 (2004); INE VAN HOYWEGHEN, *RISKS IN THE MAKING: TRAVELS IN LIFE INSURANCE AND GENETICS* 21 (2007).

26. See generally CAROL A. HEIMER, *REACTIVE RISK AND RATIONAL ACTION: MANAGING MORAL HAZARD IN INSURANCE CONTRACTS* (1985). For her contribution to the insurance as regulation literature, see Carol A. Heimer, *Insuring More, Ensuring Less: The Costs and Benefits of Private Regulation Through Insurance*, in *EMBRACING RISK: THE CHANGING CULTURE OF INSURANCE AND RESPONSIBILITY* 116 (Tom Baker & Jonathon Simon eds., 2002).

27. Carol Heimer was most interested in using insurance examples to demonstrate that markets need hierarchies and organizations, and she was less interested in developing a sociology of insurance.

professional liability.²⁸ In each case, researchers have found insurers engaging in loss prevention efforts, with the conspicuous exception of directors and officers liability insurance sold to large, publicly traded companies.²⁹ While many fields remain to be explored in detail, there is now a large body of research documenting what Ben-Shahar and Logue describe as the “insurance-as-regulation paradigm” that provides indirect support for our claim that medical liability insurance organizations promote patient safety *ex ante*.³⁰

A. Liability Insurers Help Identify Negligent Providers

Although providers and their advocates often say otherwise,³¹ empirical research suggests that malpractice settlements are both good indicators of past negligence and good predictors of future claims. They are good indicators because both the likelihood and the size of payments correlate with the strength of the evidence of medical malpractice.³² They are good predictors because the number of past settlements correlates with the likelihood that more payments will be made.³³ Settlements can serve as good proxies in these ways because, generally, liability insurers are willing to pay claimants, and physicians are willing to consent to settlements only when good evidence of malpractice exists.

28. See generally TOM BAKER & SEAN J. GRIFFITH, ENSURING CORPORATE MISCONDUCT: HOW LIABILITY INSURANCE UNDERMINES SHAREHOLDER LITIGATION (2010); Tom Baker & Rick Swedloff, *Mutually Assured Protection Among Large U.S. Law Firms*, 24 CONN. INS. L.J. 1 (2017); John Rappaport, *How Private Insurers Regulate Public Police*, 130 HARV. L. REV. 1539 (2017); Jonathan Simon, *In the Place of the Parent: Risk Management and the Government of Campus Life*, 3 SOC. & LEGAL STUD. 15 (1994); Shauhin A. Talesh, *Data Breach, Privacy, and Cyber Insurance*, 43 L. & SOC. INQUIRY 417 (2017); Shauhin Talesh, *Legal Intermediaries: How Insurance Companies Construct the Meaning of Compliance with Anti-Discrimination Laws*, 37 L. & POL'Y 209 (2015).

29. See BAKER & GRIFFITH, *supra* note 28, at 3 (“D&O insurance significantly erodes the deterrent effect of shareholder litigation, thereby undermining its effectiveness as a form of regulation.”). For a comparison of D&O insurance to other kinds of insurance in this regard, see generally Tom Baker & Rick Swedloff, *Regulation by Liability Insurance: From Auto to Lawyers Professional Liability*, 60 UCLA L. REV. 1412 (2013).

30. See Ben-Shahar & Logue, *supra* note 23, at 247.

31. See Lawrence E. Smart, *A Comparative Assessment of the PIAA Data Sharing Project and the National Practitioner Data Bank: Policy, Purpose, and Application*, 60 LAW & CONTEMP. PROBS. 59, 68 (1997) (“Monetary settlements to patients are often not indicative of negligent treatment by a physician.”).

32. See generally Studdert et al., *Claims, Errors, and Compensation*, *supra* note 9.

33. See David M. Studdert et al., *Prevalence and Characteristics of Physicians Prone to Malpractice Claims*, 374 NEW ENG. J. MED. 354, 358 (2016); Anna Almendrala, *Many Doctors Who Face Malpractice Suits Are Serial Offenders*, HUFFINGTON POST (Jan. 29, 2016, 11:56 AM), https://www.huffingtonpost.com/entry/doctors-malpractice-research_us_56a94bece4b05e4e37033d00 (explaining that doctors who have already paid multiple malpractice settlements are more likely to be involved in another settlement).

Given the diagnostic and predictive value of settlements, it should not be surprising to learn that the health care system uses them to identify providers who may pose dangers to patients. For example, in 1986, Congress created the National Practitioner Data Bank (NPDB) as a repository for information about malpractice payments, state disciplinary actions, and clinical practice restrictions. The NPDB includes reports on physicians, nurses, dentists, and other professionals filed by hospitals, liability insurers, state medical boards, and other entities.³⁴

In theory, the NPDB can help state medical licensing boards identify dangerous physicians. When doctors seek to renew their licenses or apply for licenses in new states, the boards can query the database and learn about problems in applicants' pasts. In practice, however, boards consult the NPDB infrequently. "In 2017, 30 state medical boards in the U.S. backgrounded a physician using the database fewer than 100 times, according to numbers from the Health Resources and Service Administration. Thirteen boards didn't even check it once."³⁵ As a result, many physicians with checkered histories slip through the cracks. From 2011 to 2016, "more than 500 physicians" did so.³⁶ These doctors had troubled pasts, including prescription drug problems, unsafe or unnecessary surgeries, and improper sexual relations with patients. Despite having been "chastised by one state medical board," they were "able to hang their shingles at a new address with a 'clean' license" because the NPDB was not queried.³⁷

Hospitals are required to consult the NPDB whenever new practitioners apply for privileges and every two years thereafter. The consequence of failing to query the database when required is that a hospital "is presumed to have knowledge of any information reported to the NPDB concerning the practitioner."³⁸ This information may be "use[d] in litigation against the hospital" by an attorney representing an injured patient.³⁹ In fact, hospitals take the duty to consult the NPDB seriously, and the information it contains often affects their

34. See generally NAT'L PRACTITIONER DATA BANK, U.S. DEP'T OF HEALTH & HUMAN SERVS., NPDB-00921.04.00, FACT SHEET ON THE NATIONAL PRACTITIONER DATA BANK (2008), <https://www.ire.org/media/uploads/files/datalibrary/npdb/factsheet.pdf> [hereinafter PRACTITIONER DATA BANK FACT SHEET].

35. Matt Wynn & John Fauber, *NPDB Records Often Ignored in Docs' Licensing*, MEDPAGE TODAY (Mar. 7, 2018), <https://www.medpagetoday.com/special-reports/states-of-disgrace/71600>.

36. *Id.*

37. John Fauber, Matt Wynn, & Kristina Fiore, *States of Disgrace: A Flawed System Fails to Inform the Public*, MEDPAGE TODAY (Feb. 28, 2018), <https://www.medpagetoday.com/special-reports/statesofdisgrace/71418>.

38. PRACTITIONER DATA BANK FACT SHEET, *supra* note 34, at 2.

39. *Id.*

credentialing decisions.⁴⁰ “[I]n its first 13.3 years of operation . . . the NPDB processed more than 32 million queries.”⁴¹ Hospitals made 34% of them.⁴²

Hospitals appear to be less serious about reporting to the NPDB, however. One study found that more than two-thirds of the hospitals examined reported no adverse events to the NPDB over a five-year span.⁴³ Another estimated that 75% of “potentially reportable actions” and 60% of “unquestionably reportable actions” went unreported.⁴⁴ These omissions reduce the NPDB’s value.

Providers’ use of the so-called corporate shield impairs the NPDB’s completeness too. The shield is employed when “the medical corporation for which the doctor works is named in the suit, and the doctor is either not originally named or is released specifically for the purpose of avoiding a report to the NPDB.”⁴⁵ Although the extent to which this tactic reduces the number of payments that are reportable to the NPDB is not known, some authors believe that one-half of otherwise reportable adverse events are deflected by this means.⁴⁶

Given Congress’ decision to create the NPDB, it seems natural to regard the use of the “corporate shield” as a vice that denies the NPDB’s users of valuable information. But some advocates of early dispute resolution and quality improvement regard it as a virtue and discuss their use of the shield openly.

The University of Michigan Health System avowedly uses the corporate shield, and its settlements are generally in the institution’s name. UMHS is a staff-model institution in which physicians are employees rather than independent contractors, hence under this approach “reporting of individual caregivers in medical malpractice claims in the National Practitioner Data Bank is rare. However, full claims histories are maintained and reported for each involved caregiver, as required.” In other words, UMHS emphasizes thorough internal peer review as part of its overall quality process. Even though it rarely reports medical malpractice payments, it still ac-

40. See generally Teresa M. Waters et al., *The Role of the National Practitioner Data Bank in the Credentialing Process*, 21 AM. J. MED. QUALITY 30, 31–32 (2006).

41. *Id.* at 32.

42. *Id.*

43. See Laure-Mae Baldwin et al., *Hospital Peer Review and the National Practitioner Data Bank: Clinical Privileges Action Reports*, 282 JAMA 349, 351 (1999).

44. Waters et al., *supra* note 40, at 37.

45. Smarr, *supra* note 31, at 67.

46. See Haavi Morreim, *Malpractice, Mediation, and Moral Hazard: The Virtues of Dodging the Data Bank*, 27 OHIO ST. J. ON DISP. RESOL. 109, 138 (2012) (“By the mid-1990s, somewhere around 50% of otherwise-required NPDB reports were thought to be diverted via the corporate shield.”).

tively reports adverse actions on a provider's privileges or credentials to the NPDB.⁴⁷

Whether the benefits of the "corporate shield" exceed its costs is unknown, but the several authors who recommend eliminating the requirement to report malpractice payments to the NPDB presumably think the benefits do exceed the costs.⁴⁸

Because malpractice settlements send reliable, if noisy, signals of provider quality, state medical boards often use them to trigger investigations of physicians. For example, the Texas Medical Board is required to review "the medical competency of a licensee if three or more separate lawsuits and/or settlements are reported to the board based on health care liability claims within a five-year period."⁴⁹ Physicians licensed in California are required to report "civil judgments, settlements, and arbitration awards" to that state's medical board too.⁵⁰ In effect, these governmental bodies rely on private litigation. In particular, the governmental bodies rely on liability insurers' willingness to make payments to identify negligent providers instead of expending the resources that would be needed to do so themselves. By enacting tort reform laws that make settlements less common, many states have prevented this arrangement from working as it previously did.⁵¹

B. Liability Insurers Provide Incentives for Patient Safety by Charging Risk-Adjusted Premiums and Denying Coverage to High-Risk Providers

The conventional wisdom has long been that medical malpractice insurers do not charge risk-based premiums. Thus, medical liability insurance premiums do not provide the usual loss prevention incentives of other kinds of liability insurance, except to the extent that the leaders of a medical specialty society decide to take on a goal of re-

47. *Id.* at 140 (quoting Allen Kachalia et al., *Liability Claims and Costs Before and After Implementation of a Medical Error Disclosure Program*, 153 ANNALS INTERNAL MED. 213, 214 (2010)).

48. *Id.*; see also William M. Sage et al., *Bridging the Relational-Regulatory Gap: A Pragmatic Information Policy for Patient Safety and Medical Malpractice*, 59 VAND. L. REV. 1263, 1264 (2006).

49. 22 TEX. ADMIN. CODE § 176.8 (2017).

50. JULIANNE D'ANGELO FELLMETH & THOMAS A. PAPAGEORGE, FINAL REPORT: MEDICAL BOARD OF CALIFORNIA ENFORCEMENT PROGRAM MONITOR 5 (2005).

51. On the impact tort reform laws have had on disciplinary actions by state medical boards, see generally Paul Jesilow & Julianne Ohlander, *The Impact of Tort Reforms on the Sanctioning of Physicians by State Licensing Boards*, 7 J. EMPIRICAL LEGAL STUD. 117 (2010).

ducing the liability exposure of their specialty.⁵² Although this conventional wisdom may have been true for physicians, liability insurance for hospitals and other health care enterprises has traditionally been underwritten on an individualized, risk-adjusted basis.⁵³

Three trends are increasing the degree to which health care enterprises' medical liability insurance arrangements are risk-based. First, like large organizations in the United States generally,⁵⁴ health care organizations are retaining more risk⁵⁵ through self-insured retentions, captive insurance,⁵⁶ and mutual insurance arrangements involv-

52. For documentation of this conventional understanding, see Shirley Svorny, *Could Mandatory Caps On Medical Malpractice Damages Harm Consumers?*, 685 CATO POLICY ANALYSIS 4 (2011), <https://object.cato.org/sites/cato.org/files/pubs/pdf/pa685.pdf>. The most famous example of a medical society taking on the goal of reducing liability exposure is anesthesiology. See, e.g., BAKER, *THE MEDICAL MALPRACTICE MYTH*, *supra* note 2, at 108–10.

53. See generally MICHELLE M. MELLO, *UNDERSTANDING MEDICAL MALPRACTICE INSURANCE: A PRIMER* (2006) (reporting that experience rating is not used for physicians, but that 25% of hospitals' total insurance premiums are based on experience).

54. For a discussion of the trend that corporations in general are retaining more risk, see SCOTT E. HARRINGTON & GREGORY R. NIEHAUS, *RISK MANAGEMENT AND INSURANCE* 527 (2d ed. 2004) (reporting that “medium to large business insurance policies often include relatively large deductibles or self-insured retentions”); Tom Baker, *The Shifting Terrain of Risk and Uncertainty on the Liability Insurance Field*, 60 DEPAUL L. REV. 521, 535 (2011) (“There is one major cross-cutting development in the commercial lines marketplace that is worth singling out: businesses of all kinds are retaining greater levels of risk, as represented by the rising deductibles and self-insured retentions.”).

55. For an account of the general phenomenon that health care organizations are also retaining more risk, see Randall R. Bovbjerg, *Beyond Tort Reform: Fixing Real Problems*, 3 IND. HEALTH L. REV. 3, 7 (2006) (“More medical providers have also turned to unconventional, alternative risk mechanisms such as risk-retention groups, or, for hospitals, self insurance. Like claims made policies, these arrangements offer somewhat less protection than major carrier coverage: They have less capital for emergencies, and they are not backstopped by state guaranty funds that protect insureds in the case of conventional insurers' insolvency.”).

56. For more information regarding self-insured retentions and captive insurance, see *RISK MANAGEMENT HANDBOOK FOR HEALTH CARE ORGANIZATIONS* 19 (Roberta L. Carroll ed., 2009) [hereinafter *RISK MANAGEMENT HANDBOOK*] (“One strategy for managing an identified risk is risk retention. This treatment strategy involves assuming the potential losses associated with a given risk and making plans to cover the financial consequences of such losses. The retention options open to health care organizations include current expensing of losses, using an unfunded loss reserve (an accounting entry denoting a potential liability to pay for a loss), using a funded loss reserve (a reserve backed by set-aside funds within the organization), borrowing funds to pay for losses, and providing insurance through an affiliated captive insurer.”); Margo Schlanger, *Operationalizing Deterrence: Claims Management (in Hospitals, a Large Retailer, and Jails and Prisons)*, 2 J. TORT L. 1, 49 (2008) (citing Michelle M. Mello et al., *Hospitals' Behavior in a Tort Crisis: Observations from Pennsylvania*, 22 HEALTH AFF. 225, 229 (2003)) (“[L]arge teaching hospitals very often use a form of self-insurance known as captive insurers, in which the hospital owns the primary insurer and therefore retains all but catastrophic risk.”). For an introduction to captive insurance companies, see, for example, INT'L ASS'N OF INS. SUPERVISORS, *ISSUES PAPER ON THE REGULATION AND SUPERVISION OF CAPTIVE INSURANCE COMPANIES* (Oct. 2006), <https://www.iaisweb.org/page/supervisory-material/issues-papers/file/34279/issues-paper-on-regulation-and-supervision-of-captive-insurance-companies-october-2006>.

ing multiple organizations.⁵⁷ Second, the consolidation of health care organizations means that an increasingly large share of health care is provided in hospitals and other organizations with the scale needed to take advantage of these alternative risk mechanisms.⁵⁸ Third, the de-

57. For information regarding mutual insurance arrangements involving multiple organizations, see DONNA K. HAMMAKER & THOMAS M. KNADIG, *HEALTH CARE MANAGEMENT AND THE LAW* 60 (2d ed. 2018) (“The University of Pennsylvania (along with 17 other colleges and universities) were investors and early backers of Collegiate Health Care Corp. (CHCC), the nation’s first interuniversity managed care organization. CHCC attempted to develop a mutual health insurance plan for college students. More than 100 schools participated in the nationwide effort before the concept was abandoned, primarily because of its complexity.”); Agnus Smith, *Co-Op Health Insurance – Cooperative Healthcare Plans*, FIRST QUOTE HEALTH (June 14, 2018), <https://www.firstquotehealth.com/health-insurance-news/co-op-health-insurance> (“Health insurance co-ops are a type of mutual insurance plan. A mutual insurance plan is a plan that is owned and operated by the members of the group that owns the plan. All of the money that is earned by the group directly benefits its members by reducing costs (e.g. premiums), being distributed to the members, or being held within the group to benefit the entire group, which is why co-op health insurance plans are so affordable.”).

58. For documentation regarding the consolidation of health care organizations, see Robert I. Field, *Government as the Crucible for Free Market Health Care: Regulation, Reimbursement, and Reform*, 159 U. PA. L. REV. 1669, 1719–20 (2011) (“During the 1990s, as large, national managed care companies swallowed smaller local ones, their bargaining clout drove down fees paid to hospitals and physicians in many markets. This, in turn, led many providers to consolidate into health systems, hospital chains, and large physician-group practices to try to gain a better negotiating position. By the end of the 1990s, much of American health care had become a more centralized enterprise. In effect, the rise of managed care revised the organizational structure of health care provision overall . . .”). On the movement of physicians into salaried staff positions with hospitals, see Bonnie Darves, *Understanding the Physician Employment “Movement”*, NEJM CAREERCENTER (July 23, 2014), <http://www.nejmcareercenter.org/article/understanding-the-physician-employment-movement/>. On consolidation in the hospital sector, see Matthew Kandrach, *Hospital Consolidation Is Driving Up Consumer Costs*, REALCLEARHEALTH (Feb. 1, 2018), https://www.realclearhealth.com/articles/2018/02/01/hospital_consolidation_is_driving_up_consumer_costs_110764.html. For a discussion of the relationship between scale and alternative risk mechanisms, see JOHN KOSTER ET AL., *N=1: HOW THE UNIQUENESS OF EACH INDIVIDUAL IS TRANSFORMING HEALTHCARE* 101, 106 (2015) (“Scale matters in delivering coordinated care. To deliver care across the continuum and to effectively manage the health of populations, scale is necessary. . . . Collaboration in information and data management is rapidly growing. The scale necessary to fully utilize big data and predictive analytics is beyond any single organization. Cloud computing is, by definition, scalable.”); RISK MANAGEMENT HANDBOOK, *supra* note 56, at 202 (“Health care organizations with collaborative ties have the benefit of identifying and analyzing adverse events and occurrences on a larger scale than is possible with data generated only internally.”); Mu-Sheng Chang, *Alternative Risk Transfer: Evidence of Self-Insurance Among Hospitals in Pennsylvania for Workers’ Compensation Liability*, 27 J. INS. REG., Winter 2008, at 59, 69–70 (“Even small or medium firms can self-insure under a consolidated self-insurance program. Therefore, in self-insurance, it is crucial whether a hospital, especially of small or medium size, is a member of a health care system. The system—an alliance of numerous health care providers—may experience the benefit of scale and/or scope economies by providing a complete spectrum of medical services and exercising purchasing power in obtaining supplies. Affiliated hospitals in a health care system are more likely to make similar decisions in assuming their WC liability. Due to economies of scale, the presence of a health care system offers an incentive for a hospital in the choice of self-insurance.”); Martin Gaynor & Deborah Haas-Wilson, *Change, Consolidation, and Competition in Health Care Markets*, 13 J. ECON. PERSPECTIVES 141, 147

cline of self-employed physicians means that an increasingly large share of physicians work in an “enterprise insurance” environment.⁵⁹

Providing the liability insurance for the physicians and other providers who practice in enterprise facilities gives the enterprise obvious incentives to manage the liability exposure of those providers. Perhaps less obviously, enterprise liability insurance gives the administrative leaders of the hospital or medical school a lever to control physicians that is more fine-tuned than the “shape up or ship out” control that can be hard to exercise when a physician has tenure or a large practice. For example, in an informal interview we conducted with a former university official we learned of an instance in which a university was able to use its control over liability insurance for faculty members to stop a tenured medical school clinical faculty member from continuing to engage in a high-risk procedure.⁶⁰

Moreover, Shirley Svorny’s qualitative research on the medical liability insurance market suggests that the conventional wisdom no longer holds true even for physicians who purchase their own medical malpractice insurance.⁶¹ Individual medical malpractice insurers generally charge premiums based on the location and medical specialty of the physician, not the physician’s individual experience or characteristics.⁶² But not all insurers are willing to insure all physicians. As Svorny explained, “[t]hrough some experience rating takes place among physicians insured by a specific carrier, most experience rating takes place across carriers.”⁶³ She reported three categories of insurers: (1) insurers that “pick physicians with spotless records,” (2) insurers that “underwrite physicians with somewhat higher risk,” and (3) surplus lines carriers that are willing to insure physicians who cannot get other coverage, for premiums that vary from “150 to 500 percent

(1999) (“The trend toward horizontal consolidation is in part a response to changing factors in the health care market, like declining demand for inpatient hospital services, economies of scale, the shifting of risk from private and public insurers to providers, greater price and quality sensitivity on the part of buyers, and selective contracting by managed care organizations.”).

59. See generally Tom Baker, *Medical Malpractice Insurance Reform: “Enterprise Insurance” and Some Alternatives*, in *MEDICAL MALPRACTICE AND THE U.S. HEALTH CARE SYSTEM* 267 (William M. Sage & Rogan Kersh eds., 2006). As of 2016, less than half of all physicians in the U.S. were owners of the organization in which they worked, and about one-third of all physicians worked in hospital-owned practices or directly for a hospital. See generally Carol K. Kane, *Policy Research Perspectives: Updated Data on Physician Practice Arrangements: Physician Ownership Drops Below 50 Percent*, AMA (May 2017), <https://www.ama-assn.org/sites/default/files/media-browser/public/health-policy/PRP-2016-physician-benchmark-survey.pdf>.

60. See Interview with former university official (Dec. 21, 2017) (notes on file with authors).

61. See Svorny, *supra* note 52, at 4–5.

62. *Id.* at 6.

63. *Id.* at 6.

of those in standard markets.”⁶⁴ Svorny quoted a medical liability insurance underwriter as follows:

I’m surprised that people have difficulty believing physicians’ malpractice premiums are impacted by the practitioner’s loss experience. Virtually every professional liability line has a premium modification formula for prior losses. Virtually every insurance coverage line discerns, on the basis of price risks with and without claims. Large risks—with credible experience—are specifically loss rated by actuaries. Small risks or risks without enough credibility on a stand-alone basis are pooled with other like/kind risks and within that pool, risks with prior losses will pay more.⁶⁵

In sum, medical liability insurance premiums are risk-based to a significant extent and thus, do provide the kind of loss prevention incentives that are assumed in Shavell’s economic models. How medical provider organizations respond to those incentives is, of course, an empirical question. Put simply, our point here is that risk-based pricing is one way that medical liability insurance promotes patient safety.

C. *Liability Insurers Accumulate Data for Root Cause Analysis*

Insurers’ claim files often contain a wealth of information that can help identify the root causes of medical errors, and they can also be used to reduce both the likelihood of mistakes and the severity of the injuries they cause. The first association of medical professionals to have examined insurers’ claim files for these purposes appears to be the American Society of Anesthesiologists (ASA), whose Closed Claim Project began in 1985.⁶⁶ The ASA’s database includes thousands of anesthesia-related malpractice claims provided by more than thirty-five participating liability carriers.⁶⁷ Over decades, hundreds of anesthesiologists have examined these files, which typically contain “hospital records, anesthetic records, narrative statements of involved personnel, expert and peer reviews, deposition summaries, outcome reports, and settlement or award details,” and which provide “recorded findings using a standard data collection form.”⁶⁸ The ASA has published dozens of studies based on their findings.

64. *Id.* at 7; see also Brandon Stahl, *High-risk Health Providers Stay in Business Thanks to State Insurance*, STAR TRIBUNE (May 6, 2013, 6:16 PM) (describing how the Minnesota Joint Underwriting Association, a state-created insurer of last resort, provides coverage for doctors who cannot obtain conventional insurance).

65. Svorny, *supra* note 52, at 8.

66. Meghan G. MacRae, *Close Claims Studies in Anesthesia: A Literature Review and Implications for Practice*, 75 AM. ASS’N NURSE ANESTHETISTS J. 267, 267 (2007).

67. *Id.*

68. *Id.*

By shedding light on the types of injuries that occur and their frequency, the ASA's closed claim studies generated professional support for changes in anesthesia procedures that protected millions of patients from harm. Following the completion of a study published in 1990, the ASA's Committee on Standards promulgated new treatment guidelines that required pulse oximetry and end-tidal carbon dioxide verification of endotracheal intubation, and that governed the management of difficult airways. By reducing the frequency and severity of injuries, these guidelines also protected anesthesiologists from malpractice claims and made their liability coverage cheaper. In *To Err Is Human*, the Institute of Medicine's landmark report on medical errors, the ASA's Closed Claim Project was touted as a model of patient safety.⁶⁹

Even so, other professional societies were slow to follow the ASA's lead. Instead of devoting resources to the study of root causes, they sought to reduce their members' exposure to liability claims by lobbying for damages caps and other restrictions on lawsuits. These efforts benefited their members, but likely harmed patients by reducing the pressure the liability system exerted on providers to improve patient safety.

Eventually, however, a few other professional associations saw the value of closed claims studies and followed suit. The American Association of Nurse Anesthetists, a group whose research interests parallel those of the ASA, published its first study of closed claims involving Certified Registered Nurse Anesthetists in 2001.⁷⁰ In 2012, an examination of "[t]he websites of all recognized medical specialties in the United States" found that obstetricians had also stepped up to the plate.⁷¹ One study of closed claims involving brain-injured children "led to the formulation and implementation of a comprehensive redesign of the patient safety process," which was employed:

[A]t the Hospital Corporation of America, the nation's largest private healthcare delivery system [with approximately 220,000 deliveries performed annually]. Working with a clinical advisory board and work group consisting of physicians and nurses, uniform processes, procedures, and checklists were developed. Every member of the obstetric team was empowered and required to intervene and halt any process deemed to be dangerous, and effective peer-review policies were instituted. Improved perinatal outcomes were

69. INST. OF MED., *TO ERR IS HUMAN*, *supra* note 3, at 144–45.

70. See generally Lorraine M. Jordan et al., *Data-driven Practice Improvement: The AANA Foundation Closed Malpractice Claims Study*, 69 AM. ASS'N NURSE ANESTHETISTS J. 301 (2001).

71. Steven E. Pegalis & B. Sonny Bal, *Closed Medical Negligence Claims Can Drive Patient Safety and Reduce Litigation*, 470 CLINICAL ORTHOPAEDICS & RELATED RES. 1398, 1399 (2012).

realized with a lower maternity and fetal injury rate, lower primary cesarean delivery rate, and reduced rates of litigation.⁷²

A second study by obstetricians used payouts and sentinel events in claims involving brain-injured newborns delivered at a major hospital in New York “to compare the delivery of care before and after the implementation of safety initiatives. The authors reported that the average compensation payment decreased dramatically from more than \$27 million per year to approximately \$2.5 million per year and that sentinel events decreased from five per year to none.”⁷³ Claim-based studies of obstetrics patient safety programs introduced at other hospitals have since yielded similar results.⁷⁴

As they did for anesthesiologists, closed claims studies also motivated obstetricians to support treatment guidelines as a means of reducing exposure to liability claims. Often, opposition to guidelines runs strong among providers, who deride them as “cookbook medicine.”⁷⁵ This was as true for obstetricians as for other physicians.

[I]n the two decades that followed implementation of the ASA safety guidelines, the posture of the obstetric community had been one of inaction. However, once the benefit of safety measures in the obstetric field were clear, one author that investigated this subject remarked that “Malpractice loss is best avoided by reduction in adverse outcomes and the development of unambiguous practice

72. *Id.* at 1401 (citing Steven L. Clark et al., *Improved Outcomes, Fewer Caesarean Deliveries, and Reduced Litigation: Results of a New Paradigm in Patient Safety*, 199 AM. J. OBSTETRICS & GYNECOLOGY 105.e1 (2008)).

73. *Id.* (citing Amos Grunebaum et al., *Effect of a Comprehensive Obstetric Patient Safety Program on Compensation Payments and Sentinel Events*, 204 AM. J. OBSTETRICS & GYNECOLOGY 97, 97 (2011)).

74. See Christian M. Pettker et al., *A Comprehensive Obstetric Patient Safety Program Reduces Liability Claims and Payments*, 211 AM. J. OBSTETRICS & GYNECOLOGY 319, 319 (2014) (explaining that Yale-New Haven Hospital’s obstetric program decreased the number of claims and payments significantly); William Riley et al., *Decreasing Malpractice Claims by Reducing Preventable Perinatal Harm*, 51 HEALTH SERVS. RES. 2453, 2453 (2016) (“There is a significant reduction in the number of perinatal malpractice claims paid, losses paid, and indemnity payments . . . following interventions to improve perinatal patient safety and reduce perinatal harm.”).

75. See Patricia C. Crowley, *No Pain, No Gain? The Agency for Health Care Policy & Research’s Attempt to Change Inefficient Health Care Practice of Withholding Medication From Patients in Pain*, 10 J. CONTEMP. HEALTH L. & POL’Y 383, 400 (1994) (“[T]he medical community has long been suspicious of developing guidelines for medical care ‘because of fears that they could lead to standardized ‘cookbook medicine’ that dictate specific treatments and interfere with the doctor-patient relationship.”); William R. Trail & Brad A. Allen, *Government Created Medical Practice Guidelines: The Opening of Pandora’s Box*, 10 J.L. & HEALTH 231, 239–40 (1995) (“The American Medical Association (AMA) first dismissed practice guidelines as ‘cookbook medicine.’”); Shelly Reese, *Will You Be Pressured to Perform ‘Cookbook’ Medicine?*, MEDSCAPE (July 30, 2013), <https://www.medscape.com/viewarticle/808258> (explaining that physicians see clinical practice guidelines as “potentially valuable tools that, if mishandled, can become a hefty, skull-crushing medical cookbook”).

guidelines, rather than by attempting to make unusual care more 'defensible' through the use of nonspecific guidelines."⁷⁶

When shown that they can help patients while also protecting themselves from malpractice suits, physicians' attitudes toward guidelines can change.

Although anesthesiologists and obstetricians appear to be the only medical professionals to have developed treatment guidelines after studying closed malpractice claims, other providers are also using closed claims to enhance their understanding of medical errors. Recent years have seen the publication of closed claim studies by nurse practitioners,⁷⁷ cardiologists,⁷⁸ radiologists,⁷⁹ and ophthalmologists,⁸⁰ for example. But it remains true that professional societies could mine this resource much more deeply than they have.

Liability insurers and their industry groups have facilitated and supplemented the work of physicians and their professional societies by sharing closed claim data, providing analyses, and developing treatment guidelines of their own. The Doctors Company has produced closed claim studies of malpractice cases in which the defendant providers were nurse practitioners, general practitioners, obstetricians, cardiologists, plastic surgeons, hospitalists, and other physicians.⁸¹ It has also produced clinical practice guidelines for several specialties and for specific treatments, such as removal of pigmented skin lesions⁸² and handling hospitalized patients who are obese.⁸³ Working with the National Patient Safety Foundation, The Doctors Company Foundation sponsored *RCA²: Improving Root Cause Analyses and Actions to Prevent Harm*, a volume whose purpose "is to ensure that efforts undertaken in performing RCA² [Root Cause Analysis and Action] will

76. Pegalis & Bal, *supra* note 71, at 1401 (quoting Clark et al., *supra* note 72, at 105.e2).

77. See, e.g., June Leigh & Jennifer Flynn, *Enhance Patient Safety by Identifying and Minimizing Risk Exposures Affecting Nurse Practitioner Practice*, 33 J. HEALTHCARE RISK MGMT. 27 (2013).

78. See, e.g., William J. Oetgen, *Characteristics of Medical Professional Liability Claims in Patients with Cardiovascular Diseases*, 105 AM. J. CARDIOLOGY 745 (2010).

79. See, e.g., Micheál A. Breen et al., *Pediatric Radiology Malpractice Claim—Characteristics and Comparison to Adult Radiology Claims*, 47 PEDIATRIC RADIOLOGY 808 (2017); H. Benjamin Harvey et al., *Radiology Malpractice Claims in the United States From 2008 to 2012: Characteristics and Implications*, 13 J. AM. C. RADIOLOGY 124 (2016).

80. See, e.g., Tamara R. Fountain, *Ophthalmic Malpractice and Physician Gender: A Claims Data Analysis (An American Ophthalmological Society Thesis)*, 112 TRANSACTIONS AM. OPHTHALMOLOGICAL SOC'Y 38 (2014).

81. See *Closed Claim Studies*, DOCTORS CO., <https://www.thedoctors.com/articles/closed-claims-studies/> (last visited June 6, 2018) (collecting closed claim studies).

82. See David Charles, *Removing a Pigmented Skin Lesion*, DOCTORS CO., <https://www.thedoctors.com/articles/removing-a-pigmented-skin-lesion/> (last updated May 2000).

83. See Paul Nagle, *Caring for the Hospitalized Obese Patient*, DOCTORS CO., <https://www.thedoctors.com/articles/caring-for-the-hospitalized-obese-patient/> (last updated Feb. 2017).

result in the identification and implementation of sustainable systems-based improvements that make patient care safer in settings across the continuum of care.”⁸⁴

The Controlled Risk Insurance Company (CRICO), created by the Harvard Medical organizations in the mid-1970s to provide liability insurance for those organizations, used closed claim data to improve the quality of care received by breast cancer patients.

[I]n the 1990s when many physicians were being sued for failure to diagnose breast cancer, CRICO found their insured physicians had no uniform approach to monitoring breast lumps. The insurance firm developed a standard treatment algorithm, offered insured physicians who used it an insurance premium discount, and dramatically reduced litigation.⁸⁵

Today, CRICO has an ongoing project known as Strategies for Patient Safety, which “explores the myriad ways 30-plus years of analyzing medical malpractice data can guide physicians and nurses practicing amidst today’s patient safety risks.”⁸⁶ CRICO calls its medical malpractice database the Comparative Benchmarking System (CBS), and boasts that CBS contains “approximately 30 percent of all US malpractice cases.”⁸⁷ With nearly 400,000 cases involving 175,000 physicians and 400 hospitals, CBS is a remarkably rich source of information for many aspects of patient safety.⁸⁸

CRICO has mined CBS extensively. Its website lists an array of evidence-based guidelines, offers extensive decision support tools and treatment algorithms, provides detailed checklists for physicians to follow, and enables physicians to evaluate themselves by completing testing modules. Other insurance companies draw upon CBS too, including The Doctors Company and MMIC, whose biannual publication *Brink* puts the latest findings from closed claim studies into insured physicians’ hands.⁸⁹

84. NAT’L PATIENT SAFETY FOUND., *RCA2: IMPROVING ROOT CAUSE ANALYSES AND ACTIONS TO PREVENT HARM*, at vii (2015).

85. Mary Chaffee, *Extracting Medical Injury Information from the Legal System to Improve Patient Safety in the Health System: A Social Utility Approach*, 11 U. MASS. L. REV. 372, 391 (2016).

86. CRICO, *Strategies for Patient Safety (SPS)*, HARVARD (Apr. 4, 2018) <https://www.rm.f.harvard.edu/Clinician-Resources/Newsletter-and-Publication/2011/CRICO-SPS-Past-Issues>.

87. CRICO, *How Does Your Organization Compare? Comparative Benchmarking System (CBS)*, HARVARD, <https://www.rm.f.harvard.edu/Products-and-Services/CRICO-Strategies-Products-and-Services/CBS> (last visited Mar. 12, 2018).

88. See *id.*; see also Jock Hoffman, *Where Things Go Wrong*, CRICO (Oct. 31, 2017), <https://www.rm.f.harvard.edu/Clinician-Resources/Newsletter-and-Publication/2017/SPS-Where-Things-Go-Wrong>.

89. See *Brink Magazine*, MMIC, <https://www.mmicgroup.com/resources/stay-current/brink-magazine> (last visited Mar. 12, 2018). MMIC was formerly known as the Midwest Medical Insur-

The Medical Profession Liability Association (formerly known as the Physician Insurers Association of America) has long maintained a Data Sharing Project (DSP) that produces reports for its members. The DSP is designed:

[T]o provide evidence of the medical conditions, procedures, and practices that give rise to medical malpractice claims. It relies on a complex code system incorporating the International Classification of Diseases, 9th. Clinical Modification (ICD-9), to identify medical conditions and treatments, and on other systems of specialized codes to account for medico-legal issues.⁹⁰

In doing so, the DSP “provides key information for . . . insurance companies and stakeholders with an interest in patient safety . . . [and includes] . . . the necessary statistical information needed to enhance risk management in medicine.”⁹¹

Academic researchers have also used closed claim databases to generate a host of insights concerning patient safety. With funding from CRICO and the Agency for Healthcare Research and Quality, a team of researchers led by David M. Studdert studied a dataset that covered approximately 33,000 physicians, 61 acute care hospitals, and 428 outpatient facilities, using claim files provided by malpractice insurance companies across the United States. Dubbed the Malpractice Insurers’ Medical Error Surveillance and Prevention Study (MIMESPS), the research effort produced eight studies of health care quality and patient safety,⁹² plus three articles on the operation of the malpractice liability system.⁹³ On the former topic, the problems addressed included instruments and sponges left inside surgery patients,

ance Company. *History*, MMIC, <https://www.mmigroup.com/about/who-we-are/history> (select “1988” from the “Select Year” drop-down menu) (last visited Nov. 19, 2018).

90. Smarr, *supra* note 31, at 59.

91. *MPL Association Data Sharing Project: Learning from Medical and Professional Liability Claims and Trends*, MED. PROF. LIABILITY ASS’N, https://www.mplassociation.org/wcm/Data_Sharing_Project/wcm/_Data_Sharing_Project/What_is_the_DSP.aspx (last visited May 29, 2018).

92. See generally Tejal K. Gandhi et al., *Missed and Delayed Diagnoses in the Ambulatory Setting: A Study of Closed Malpractice Claims*, 145 *ANNALS INTERNAL MED.* 488 (2006); Atul A. Gawande et al., *Risk Factors for Retained Instruments and Sponges After Surgery*, 348 *NEW ENG. J. MED.* 229 (2003); Caprice C. Greenberg et al., *Patterns of Communication Breakdowns Resulting in Injury to Surgical Patients*, 204 *J. AM. C. SURGEONS* 533 (2007); Kachalia et al., *supra* note 2; Mary R. Kwaan et al., *Incidence, Patterns, and Prevention of Wrong-Site Surgery*, 141 *ARCHIVES SURGERY* 353 (2006); Regenbogen et al., *supra* note 2; Selwyn O. Rogers et al., *Analysis of Surgical Errors in Closed Malpractice Claims at 4 Liability Insurers*, 140 *SURGERY* 25 (2006); Singh et al., *supra* note 2.

93. See generally Michelle M. Mello & David M. Studdert, *Deconstructing Negligence: The Role of Individual and System Factors in Causing Medical Injuries*, 96 *GEO. L.J.* 600 (2008); Studdert et al., *Claims, Errors, and Compensation*, *supra* note 9; David M. Studdert & Michelle M. Mello, *When Tort Resolutions Are “Wrong”: Predictors of Discordant Outcomes in Medical Malpractice Litigation*, 36 *J. LEGAL STUD.* 47 (2007).

wrong-site surgery, mistaken and delayed diagnoses, and communication breakdowns, among others. MIMESPS used physician-reviewers to determine whether errors occurred and to establish causes, insofar as possible.

MIMESPS has had important collateral effects. For example, in hope of taking the MIMESPS approach a large step further, the Stanford University Medical Center built an Enterprise Risk Management system that combines closed claim data analysis with other sources of information with the goal of identifying both risks to patients and opportunities to improve.⁹⁴ Seeing the value that MIMESPS extracted from closed claim data, commentators have also called for greater access to medical malpractice settlements, the terms of which are often confidential.⁹⁵

In view of the secular decline in the volume of medical malpractice cases, closed claims may be a less valuable resource in the future than they were in the past.⁹⁶ Whether they continue to have significant value depends on several factors. First, to an unknown degree, the reported decline may reflect more widespread use of the “corporate shield,” discussed above, rather than a real reduction in claim frequency. If that is so, then hospitals and insurers will continue to have access to valuable information, and researchers with whom they share data will as well. To the extent that the decline in claim frequency reflects the progressive exclusion of small claims from the liability system, information will be lost, but larger claims, which tend to involve

94. See generally Jeffrey Driver & Renée Bernard, *Enterprise Risk Management*, in THE SAGES MANUAL OF QUALITY, OUTCOMES AND PATIENT SAFETY 529 (David S. Tichansky, John Morton, & Daniel B. Jones eds., 2012).

95. See generally Chaffee, *supra* note 85. On confidentiality provisions in settlements, see William M. Sage et al., *Use of Nondisclosure Agreements in Medical Malpractice Settlements by a Large Academic Health Care System*, 175 JAMA INTERNAL MED. 1130, 1131–33 (2015). In addition to utilizing closed claim data put together by malpractice insurers, hospitals and other medical providers often benefit from and analyze their own claim management data. Margo Schlanger suggests that “claim management practices . . . [in hospitals] produce an important secondary effect of enabling and encouraging a variety of harm-prevention or accident-avoidance measures.” See Schlanger, *supra* note 56, at 8 (suggesting that in hospitals, large retailers, and prisons, claim management strategies and personnel contribute to harm prevention). Like insurers, hospitals collect information about possible claims, through various reporting systems. “[E]very hospital has in place a policy for the reporting, investigation (‘root cause analysis’), and systemic response (‘action plan’) to every ‘sentinel event.’” Schlanger, *supra* note 56, at 28. Hospitals then analyze claim files and incident reports, allowing them to “assess safety and quality of care problems . . . [and] design useful interventions.” Schlanger, *supra* note 56, at 31.

96. See Myungho Paik, Bernard Black, & David A. Hyman, *The Receding Tide of Medical Malpractice Litigation: Part I—National Trends*, 10 J. EMPIRICAL LEGAL STUD. 612, 624–25 (2013); Myungho Paik, Bernard Black, & David A. Hyman, *The Receding Tide of Medical Malpractice Litigation: Part 2—Effect of Damage Caps*, 10 J. EMPIRICAL LEGAL STUD. 639, 645–47 (2013).

severe injuries and solid evidence of negligence, will remain. Arguably, the latter cases identify defects in delivery systems that are most worth fixing.

D. Liability Insurers Conduct Loss Prevention Inspections of Medical Facilities

Medical malpractice insurers routinely conduct loss prevention inspections of medical facilities in two contexts: (1) as part of the underwriting process when providing liability insurance for the facility and (2) as a service offered outside of the underwriting process, typically without a fee to the facilities that they insure. Documenting the full extent of underwriting inspections would require extensive qualitative research, but the conventional wisdom within the industry is that such inspections are a routine occurrence.⁹⁷ Medical liability insurers advertise the fact that they provide loss prevention services outside of the underwriting process,⁹⁸ and we have personal knowledge of major hospital systems that have paid for such services from medical liability insurers.

Examples of how medical liability insurers advertise loss prevention inspection services to their members include:

- Medical Liability Mutual Insurance Company (MLMIC) provides policyholders with “on-site risk management surveys/audits.”⁹⁹
- ProAssurance provides “a confidential on-site risk assessment to help identify opportunities for improvement.”¹⁰⁰
- Illinois State Medical Inter-Insurance Exchange (ISMIE) provides “every policyholder the opportunity to undergo an on-site assessment of their medical professional liability risks” with “personalized feedback and recommendations to help address any potential issues.”¹⁰¹
- CHART Risk Retention Group offers members “onsite and on-line assessment surveys.”¹⁰²

97. See Interview with senior medical liability insurance industry professional who has filled multiple roles (Dec. 21, 2017) (notes on file with authors).

98. *MLMIC Risk Protect*, MLMIC, <https://www.mlmic.com/physicians/mlmic-risk-protect/> (last visited Nov. 7, 2018).

99. *Id.*

100. *Medical Practice Site Survey*, PROASSURANCE, <https://www.proassurance.com/managing-risk/physicians-and-physician-groups/medical-practice-site-survey1/> (last visited June 11, 2018).

101. ISMIE, *RISK MANAGEMENT SERVICES: FOR PHYSICIANS AND OTHER HEALTH CARE PROFESSIONALS 6* (2018–2019), https://www.ismie.com/Risk-Management/Risk_Management_Services_2018-2019/.

102. *Services: Risk Management*, CHART RISK RETENTION GROUP, <https://www.chartrg.com/insurance/#tab-1-2> (last visited Feb. 13, 2019).

- The Doctors Company offers members the ability to “request a comprehensive on-site survey by [one of its] patient safety/risk management experts.”¹⁰³
- Medical Mutual Group encourages members to request an “on-site risk assessment,” which is followed by “[s]pecific recommendations . . . outlined in a report.”¹⁰⁴
- MMIC provides policyholders with “customized on-site assessments [to] help identify areas of risk, and create actionable plans.”¹⁰⁵
- Norcal Group offers policyholders “onsite risk management services.”¹⁰⁶

E. Liability Insurers Educate Medical Providers About Legal Oversight and Risk Management

Many medical malpractice insurers provide educational services to medical practitioners, one of the most common services being free courses on topics related to medical liability that meet state Continuing Medical Education (CME) requirements. Forty-six states have CME requirements, and we have gathered that free, insurer-provided courses are available in all of them.¹⁰⁷ As well, many insurers offer premium discounts as an incentive for participation in loss prevention programs.¹⁰⁸ Medical malpractice insurers also provide educational materials for physicians through their websites, such as resource docu-

103. *Interactive Guides/Site Surveys: Evaluate Your Practice and Systems*, DOCTORS CO., <https://www.thedoctors.com/patient-safety/Interactive-Guides-Site-Surveys-Evaluate-Your-Practice-and-Systems/> (last visited May 31, 2018).

104. *On-Site Risk Assessment*, MED. MUTUAL, <https://www.medicalmutualgroup.com/cra> (last visited May 31, 2018).

105. *Assessments*, MMIC, <https://www.mmicgroup.com/insurance/minimize-risk/assessments> (last visited May 31, 2018).

106. *Risk Management Solutions*, NORCAL GROUP, <https://www.norcal-group.com/risk> (last visited May 29, 2018).

107. See *State CME Requirements*, MEDSCAPE, <https://www.medscape.org/public/staterequirements> (last updated Apr. 2016). The four states that, according to this source, do not have CME requirements are Colorado, Indiana, Montana, and New York. *Id.* For examples of insurer-offered CME courses, see W. Stancil Starnes, *Providing Resources and Support for Physicians*, 110 WIS. MED. J. 254, 254 (2011); CRICO, *CME: By Harvard Physicians. For Harvard Physicians.*, HARVARD, <https://www.rmhf.harvard.edu/CME-Home> (last visited June 11, 2018); *Continuing Medical Education (CME)*, TEX. MED. LIABILITY TR., <http://www.tmlt.org/cme> (last visited June 11, 2018); *Education and CME*, DOCTORS CO., <https://www.thedoctors.com/patient-safety/education-and-cme/> (last visited June 11, 2018).

108. See, e.g., Starnes, *supra* note 107, at 255 (encouraging “physicians who are insured by ProAssurance . . . to earn up to 2.5% premium credit by taking advantage of [its] online loss prevention seminar program”).

ments, checklists, sample forms, and podcasts.¹⁰⁹ Some offer a help-line that policyholders may call to receive specialized advice and consultation.¹¹⁰

As well as courses, seminars, and online materials, some medical malpractice insurers now offer simulation-based training and teamwork training to policyholders.¹¹¹ CRICO seems to be at the forefront of this new risk management strategy,¹¹² demonstrating that “there should be an active partnership between the malpractice carrier and the health care organization.”¹¹³ CRICO “has developed premium incentive plans that have incorporated simulation-based training and/or teamwork training” in three specialty areas: anesthesiology, obstetrics, and laparoscopic surgery.¹¹⁴ CRICO has also been involved in developing a “standardized multi-institutional operating room team training program using simulation” designed to practice teamwork, communication skills, assertiveness, and the use of the World Health Organization Surgical Safety Checklist.¹¹⁵ In order to incentivize participation in its simulation training, CRICO offered premium discounts, CME credits, and compensation for lost wages.¹¹⁶ Overall, the pilot test of this training system showed that this form of training is not only feasible, but can have a positive impact on its participants.¹¹⁷

Medical malpractice insurers are specially situated to develop and provide these forms of safety training. Insurers and providers have a shared mission to improve patient safety and avoid preventable injuries, even if insurers are motivated by the less than altruistic goal of avoiding financial exposure.¹¹⁸ However, because providers often

109. See, e.g., *Keeping You Informed*, MIEC, <http://www.miec.com/RESOURCES/PUBLICATIONS.aspx> (last visited June 11, 2018); *MedPro Solutions Risk Consulting Services*, MEDPRO, <https://www.medpro.com/risk-management-consulting-services> (last visited June 11, 2018); see also Starnes, *supra* note 107, at 255; *Risk Management Solutions*, *supra* note 106; *Welcome to the Learning Center*, MAGMUTUAL, <https://www.magmutual.com/learning-center> (last visited May 29, 2018).

110. See, e.g., Starnes, *supra* note 107, at 255; *Risk Management Solutions*, *supra* note 107.

111. See *Member Benefits*, CHART RISK RETENTION GROUP, <https://www.chartrg.com/insurance/> (last visited Nov. 7, 2018).

112. Other medical malpractice insurers have also begun developing simulation trainings. See e.g., *id.* (offering members “[o]n-request access to maternal, pediatric, infant, and central line simulators”).

113. Robert Hanscom, *Medical Simulation from an Insurer’s Perspective*, 15 ACAD. EMERGENCY MED. 984, 986 (2008).

114. *Id.*

115. Alexander F. Arriaga et al., *Pilot Testing of a Model for Insurer-Driven, Large-Scale Multicenter Simulation Training for Operating Room Teams*, 259 ANNALS SURGERY 403, 404, 408 (2014).

116. *Id.* at 403.

117. *Id.* at 405.

118. Hanscom, *supra* note 113, at 985.

have competing priorities and lack the requisite resources to create harm prevention programs, medical malpractice insurers are in a better position to fill in the gaps and develop patient safety programs.¹¹⁹ “Because malpractice cases can be directly linked to dollars . . . [malpractice entities] can draw attention to cases—and causative factors—that result in the ‘worst of the worst’ patient care disasters.”¹²⁰ CRICO also produces short films and podcasts that depict, for example, the impact medical errors have on patients and the psychological consequences that physicians and nurses suffer after mistreating them.¹²¹

Although the most common way that insurers try to lessen providers’ liability is through educational resources about improving safety and lessening risk, many insurers also try to help providers reduce the cost of adverse medical events by encouraging disclosure. One of the key groups behind the disclosure movement, The Sorry Works! Coalition (Sorry Works!), “is dedicated to promoting full disclosure and apologies for medical errors as a ‘middle-ground solution’ in the medical liability crisis.”¹²² Some of the key members of Sorry Works! are insurers.¹²³ For example, Robert Kellogg, who is currently the President and CEO of Mesa Medical Insurance and who formerly served as both the COO of New Mexico Mutual and President/CEO of State Mutual Insurance Company in Michigan, is on the board of directors for Sorry Works!¹²⁴ The full-disclosure movement promulgated by groups like Sorry Works! aims to improve doctor-patient relationships, repair the reputation of providers, reduce litigation, and lessen costs.¹²⁵ “Qualitative research studies have identified . . . [that] patients who feel ignored, deserted, or who suspect that there is a ‘cover up’ by the medical profession, may be more inclined to sue.”¹²⁶

This full-disclosure program has been utilized by the University of Michigan Health System, which “halved the number of pending law-

119. *Id.* at 985–86.

120. *Id.* at 986.

121. See, e.g., *CRICO Podcasts Home*, HARVARD, <https://www.rm.f.harvard.edu/Clinician-Resources/Podcast/2011/CRICO-Podcasts-Home-Page> (last visited Feb. 13, 2019) (providing a list of podcast episodes on medical malpractice case studies and patient safety updates).

122. Doug Wojcieszak, John Banja, & Carole Houk, *The Sorry Works! Coalition: Making the Case for Full Disclosure*, 32 JOINT COMM’N J. ON QUALITY & PATIENT SAFETY 344, 344 (2006).

123. *Id.*

124. *Board of Directors*, SORRY WORKS!, <https://sorryworks.net/board-of-directors/> (last visited May 29, 2018).

125. See Wojcieszak, Banja, & Houk, *supra* note 122, at 345–46.

126. Frank V. Lefevre, Teresa M. Waters, & Peter P. Budetti, *A Survey of Physician Training Programs in Risk Management and Communication Skills for Malpractice Prevention*, 28 J.L., MED. & ETHICS 258, 265 (2000).

suits and reduced litigation costs per case from \$65,000 to \$35,000, resulting in annual savings of approximately \$2 million in defense litigation bills.”¹²⁷ COPIC Insurance Company has also had success with this program and has “reduced the number of lawsuits by half and reduced settlement expenses by 25%.”¹²⁸ The Veterans Affairs Medical Center in Lexington, Kentucky has benefited from full-disclosure too.¹²⁹ By “honestly notif[y]ing patients of substandard care and offer[ing] timely, comprehensive help in filing claims . . . [the facility] diminishes the anger and desire for revenge that often motivates patients’ litigation,” leaving patients more willing to settle a claim “on the basis of calculable monetary losses rather than on the potential for large judgments that contain a punitive element.”¹³⁰

We cannot assess the impact these educational programs and risk management strategies have on physicians’ behavior. However, these programs and strategies provide one more way for medical liability insurers to reinforce both (1) legal oversight of physician behavior, especially when a serious injury occurs, and (2) steps that physicians and other providers can take to avoid, or at least reduce, liability.

F. Liability Insurers Support Patient Safety Organizations

Finally, medical liability insurers provide human capital and financial support to patient safety organizations. In 2005, as a response to the Institute of Medicine report, *To Err is Human*, Congress enacted the Patient Safety and Quality Improvement Act, which set the groundwork for the development of government-certified Patient Safety Organizations (PSOs).¹³¹ Providers that work with a federally-listed PSO are entitled to privilege and confidentiality protections under the Act.¹³² “By conferring [these] privilege[s] . . . the Act was intended to promote shared learning to enhance quality and safety nationally.”¹³³ In order to be considered a federally-listed PSO, an organization must be listed with the Agency for Healthcare Research

127. Wojcieszak, Banja, & Houk, *supra* note 122, at 346.

128. *Id.*

129. See Steve S. Kraman & Ginny Hamm, *Risk Management: Extreme Honesty May Be the Best Policy*, 131 ANNALS INTERNAL MED. 963, 963–67 (1999).

130. *Id.* at 966.

131. See *About the PSO Program*, AGENCY FOR HEALTHCARE RESEARCH & QUALITY, <https://www.pso.ahrq.gov/about> (last visited June 1, 2018).

132. *Id.*

133. *Id.*

and Quality (AHRQ), a division of the Department of Health and Human Services (HHS).¹³⁴

Current medical malpractice insurance personnel are often on the boards of federally-listed Patient Safety Organizations, including the Kentucky Institute for Patient Safety and Quality and the Ohio Patient Safety Institute.¹³⁵ Some former staff members for medical malpractice insurance companies end up working at federally-listed PSOs too, such as Clarity PSO.¹³⁶ One organization, the CHART Institute, has even combined a PSO and a medical malpractice insurance company into one.¹³⁷ “CHART combines an AHRQ-certified Patient Safety Organization with a 100% member-owned medical malpractice insurance company.”¹³⁸ Also, although currently delisted due to voluntary relinquishment of its federal PSO status, MagMutual Insurance had its own PSO, the MagMutual Patient Safety Institute, between 2014 and 2017.¹³⁹

Many current and former medical malpractice insurance personnel are also on the boards of leading non-federally-listed patient safety groups, including the American Society for Healthcare Risk Management, the Schwartz Center for Compassionate Healthcare, the Alliance for Quality Improvement and Patient Safety, the National Patient Safety Foundation, the Anesthesia Patient Safety Foundation, Californians Allied for Patient Safety Protection, and the Leapfrog Group.¹⁴⁰

134. See Patient Safety and Quality Improvement, 73 Fed. Reg. 70,732, 70,732 (Nov. 21, 2008) (to be codified at 42 C.F.R. pt. 3).

135. The Senior Vice President and COO of KHA Solutions Group, Brian Brezovsky, is on the board of KIPSO. See *Board Members*, KY. INST. FOR PATIENT SAFETY & QUALITY, <http://www.kipsq.org/AboutKIPSO/KIPSOBoard.aspx> (last visited June 1, 2018); KY. HOSP. ASS’N, <https://www.kyha.com/kha-staff> (last visited June 1, 2018). Jade Thompson, a Clinical Risk Consultant at Coverys, is on the board of OPSI. See *Board of Trustees*, OHIO HOSP. ASS’N, <https://www.ohiohospitals.org/Patient-Safety-Quality/Ohio-Patient-Safety-Institute-OPSI/Board-of-Trustees.aspx> (last visited June 1, 2018).

136. Anne Marie Hajek, the President and CEO of Clarity Group, formerly served as both the President of the Healthcare Risk Services Group and the Executive Vice President of MMI Companies. See *Who We Are*, CLARITY PSO, <http://www.claritygrp.com/patient-safety-organization/who-we-are> (last visited June 1, 2018).

137. *About*, CHART RISK RETENTION GROUP, <https://www.chartrrg.com/about/> (last visited June 1, 2018).

138. *Id.*

139. See *Delisted PSOs*, AGENCY FOR HEALTHCARE RESEARCH & QUALITY, <https://www.pso.ahrq.gov/listed/delisted> (last visited June 1, 2018).

140. The American Society for Healthcare Risk Management (an affiliated society of the American Hospital Association) has a number of people who work in medical liability insurance on its board. See *Board*, AM. SOC’Y HEALTH CARE RISK MGMT., <http://www.ashrm.org/about/Board/bios.dhtml> (last visited June 11, 2018). As well, the Risk Authority Stanford CEO, Jeff Driver, is a Distinguished Fellow of the American Society for Healthcare Risk Management and was also a past president. See *Jeff Driver, JD, ARM, DFASHRM, MBA*, RISK AUTHORITY, <http://>

We understand that medical malpractice insurers and individuals employed by medical malpractice insurers also make financial contributions to these organizations.¹⁴¹ In addition, some medical malpractice insurers have grant programs that provide funding for patient safety initiatives.¹⁴²

/theriskauthority.com/organizer/jeff-driver-jd-arm-dfashrm-mba/ (last visited Feb. 13, 2019). The President of CRICO, Mark Reynolds, is on the board of The Schwartz Center for Compassionate Healthcare. See *Leadership*, SCHWARTZ CTR. COMPASSIONATE HEALTHCARE, <http://www.theschwartzcenter.org/about-us/leadership/> (last visited June 11, 2018). The CRICO Chief Medical Officer, Luke Sato, is on the board of the Alliance for Quality Improvement and Patient Safety. See *Board of Directors*, ALLIANCE QUALITY IMPROVEMENT & PATIENT SAFETY, <https://www.aqips.org/board-members> (last visited Feb. 13, 2019); CRICO, *Executive Leadership*, HARVARD, <https://www.rm.f.harvard.edu/About-CRICO/Our-Team/Departments/Executive-Leadership> (last visited June 11, 2018). The Doctors Company CEO, Richard E. Anderson, is on the Board of Governors of the National Patient Safety Foundation and the Board of Directors of Californians Allied for Patient Protection. See *Company Overview of The Doctors Company*, BLOOMBERG, <https://www.bloomberg.com/research/stocks/private/person.asp?personId=7405504&privcapId=4222976&previousCapId=46274739&previousTitle=National%20Patient%20Safety%20Foundation> (last visited June 11, 2018). Many other medical malpractice insurance executives are on the Board of Directors of Californians Allied for Patient Health, including The Norcal Group CEO, Scott Diener; one of the Assistant Vice Presidents at The Doctors Company, Elizabeth Healy; and CEO of the Physicians Reimbursement Fund, Stephen Scheifele. See *Californians Allied for Patient Prot., Board Members*, MICRA, <http://micra.org/about-capp/board-members/> (last visited June 11, 2018). Preferred Physicians Medical Risk Retention Group is on the corporate advisory council of the Anesthesia Patient Safety Foundation. See *2019 Corporate Advisory Council*, ANESTHESIA PATIENT SAFETY FOUND., <https://www.apsf.org/donors-corporate.php> (last visited Feb. 13, 2019). Dolores Mitchell, the former Executive Director of the Massachusetts Group Insurance Commission is on the Board of Directors of the Leapfrog Group. See *Board of Directors*, LEAPFROG GROUP, <http://www.leapfroggroup.org/about/board-directors> (last visited June 11, 2018).

141. Coverys donates to the IHI Patient Safety & Quality Coalition. See *IHI Patient Safety & Quality Coalition: Coalition Member Roster*, INST. FOR HEALTHCARE IMPROVEMENT, <https://npsf.site-ym.com/?page=coalitionmembers> (last visited June 11, 2018); *IHI Patient Safety & Quality Coalition*, INST. FOR HEALTHCARE IMPROVEMENT, <http://www.npsf.org/?page=safetycoalition> (last visited June 11, 2018). Preferred Physicians Medical Risk Retention Group donated \$30,000 last year to the Anesthesia Patient Safety Foundation. See *Corporate and Community Donors*, ANESTHESIA PATIENT SAFETY FOUND., <https://www.apsf.org/donors.php> (last visited June 11, 2018). The Doctors Company Foundation is a major supporter of the Institute for Healthcare Improvement. See *IHI Open School: Supporters*, INST. FOR HEALTHCARE IMPROVEMENT, <http://www.ihf.org/education/IHIOpenSchool/overview/Pages/Supporters.aspx> (last visited June 11, 2018).

142. Coverys donated to eighteen patient safety initiatives in 2016. See Press Release, Coverys, Eighteen Patient Safety Hospital Programs Receive Funding in 2016 (Mar. 6, 2017), <https://www.coverys.com/About-Us/Media-Room/Press-Release/2017/March/Eighteen-Patient-Safety-Hospital-Programs-Receive>. CRICO has a grant program to fund patient safety initiatives at member institutions. See CRICO, *Grant RFD Details*, HARVARD, <https://www.rm.f.harvard.edu/Products-and-Services/Patient-Safety-Initiatives/CRICO-Grants/Grants-RFA-Details> (last visited June 11, 2018). NORCAL Group recently created the NORCAL Group Foundation which provides grants for patient care, patient safety, and physician wellness. See *NORCAL Group Foundation Established to Support Healthcare Programs in Local Communities*, GLOBENEWSWIRE (Sept. 22, 2017, 9:30 AM), <https://globenewswire.com/news-release/2017/09/22/1131545/0/en/NORCAL-Group-Foundation-Established-to-Support-Healthcare-Programs-in>

CONCLUSION

When discussing the history of liability insurance in the United States, Gary Schwartz noted the existence of a controversy concerning the extent to which insurance coverage would discourage potential tortfeasors from taking appropriate safety-enhancing steps.¹⁴³ He wrote that “many scholars share in the view that tort law’s deterrence objective is ‘severely, perhaps fatally undermined’ by the prevalence of insurance” because insurance breaks the connection between liability and financial responsibility.¹⁴⁴

We now know that the matter is not that simple. Because they bear financial responsibility for losses, liability carriers use a variety of techniques to encourage health care providers to exercise reasonable care. They tie premiums to providers’ loss histories, accumulate data that can be used to identify the root causes of medical mistakes, conduct loss prevention assessments of providers’ facilities, develop practice guidelines, teach providers how to deliver quality care more consistently, and support patient safety research and initiatives. Liability insurers also help identify subpar providers by refusing to insure them and by settling malpractice claims only when there is solid evidence of negligence. Because carriers aggregate losses incurred by populations of physicians, their loss-prevention incentives are larger than individual providers’ incentives, as are their economies of scale in research and deployment. The combination of incentives and scale economies may lead insurers to develop better safety-enhancing measures than individual providers would on their own.

In practical effect, the incentives that insurers create and the monitoring services they deploy may preserve the deterrent effect of tort law by replacing (or more than replacing) the loss of provider-level financial responsibility for individual mistakes. Whether liability insurance discourages providers from improving safety—as many scholars once feared—or encourages them to protect patients from avoidable harms—as may also be true—is an empirical question that a survey paper like this one cannot resolve. But we have shown that insurers make serious efforts to reduce their losses by encouraging and helping providers to do better.

Local-Communities.html. The Risk Authority/SUMIT Stanford also has a grant program. See *SUMIT Insurance Company, Ltd.*, RISK AUTHORITY, <http://theriskauthority.com/sumit/> (last visited June 11, 2018).

143. See Gary T. Schwartz, *The Ethics and the Economics of Tort Liability Insurance*, 75 CORNELL L. REV. 313, 313 (1990).

144. *Id.* at 313 (quoting John G. Fleming, *The Role of Negligence in Modern Tort Law*, 53 VA. L. REV. 815, 823 (1967)).

