

# The Poor State of Health Care Quality in the U.S.: Is Malpractice Liability Part of the Problem or Part of the Solution

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# THE POOR STATE OF HEALTH CARE QUALITY IN THE U.S.: IS MALPRACTICE LIABILITY PART OF THE PROBLEM OR PART OF THE SOLUTION?

David A. Hyman† & Charles Silver††

*The conventional wisdom among patient safety advocates and legal scholars is that medical malpractice lawsuits impede efforts to improve health care quality by encouraging providers to hide mistakes. This belief provides the normative basis for ongoing state and federal efforts to curtail medical malpractice exposure. Groups pressing for tort reform, including the American Medical Association, contend that when doctors and other providers are insulated from liability, patients will be better protected from harm.*

*This Article canvasses the evidence bearing on the connections between malpractice exposure, error reporting, and health care quality, and concludes that the conventional wisdom is wrong. Some evidence, such as the Harvard Medical Practice Study and the history of anesthesia safety, shows that the quality of health care improves as the risk of being sued rises. No evidence shows that malpractice lawsuits cause the quality of health care to decline. Nor does any rigorous evidence show that fear of malpractice lawsuits discourages error reporting—to the contrary, the historical record suggests that liability risk has encouraged providers to discuss treatment risks with patients. Generally, the frequencies with which providers report errors after they occur and discuss errors with patients correlate poorly with liability risk. Thus, there is no foundation for the widely held belief that fear of malpractice liability impedes efforts to improve the reliability of health care delivery systems.*

*Health care error rates are higher than they should be not because providers fear malpractice liability, but because providers have defective incentives and norms. Since providers often lose money when quality improves, there is no “business case for quality.” Moreover, providers’ norms and attitudes, which are often highly punitive, impede efforts to improve quality by discouraging the creation of work environments in which error-reporting and*

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*other predicates for quality improvement can flourish. The tort system's major deficiency lies in its failure to subject providers to sufficient economic pressure to overcome these defective incentives and norms. The main cause of this shortcoming is the rarity with which injured patients assert their claims. Limiting malpractice liability will not protect patients from harm, and may well have the opposite effect. In fact, contrary to the conventional wisdom, malpractice liability itself has the potential to kick-start quality improvement.*

*This Article concludes with a series of recommendations for improving the tort system's potential to encourage quality improvement. The recommendations include new arrangements for error reporting, rewards for making error reports, immunity for providers that follow treatment guidelines, and allowing insurance premiums to rise. In combination, these recommendations create both carrots and sticks encouraging providers to protect patients from harm.*

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## INTRODUCTION

Modern medicine has defeated polio, smallpox, measles, and managed care, and is working on vanquishing medical malpractice lawsuits. President George W. Bush has geared up a massive tort reform campaign that enjoys strong support from physicians, insurers, and other interest groups.<sup>1</sup> The tort reform campaign has proceeded on numerous fronts. Health care providers and politicians have accused patients and their lawyers of filing frivolous suits to extort settlements.<sup>2</sup> They have blamed junk science, phony experts, and knowing jurors for multi-million dollar verdicts. For years, health care providers even denied the existence of substandard care. Until recently, “the profession’s longstanding argument against tort liability had been that medical errors are few, with litigation resulting mainly

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<sup>1</sup> Warren Vieth, *Bush Hammers Medical Malpractice Suits*, L.A. TIMES, Jan. 6, 2005, at A17.

<sup>2</sup> *Id.* (“What’s happening all across this country is that lawyers are filing baseless suits against hospitals and doctors . . . . They know the medical liability system is tilted in their favor.” (quoting President George W. Bush)). In fact, no academic study has ever found a significant volume of frivolous malpractice suits. Empirical researchers broadly agree that plaintiffs’ attorneys screen malpractice cases carefully and bring mainly suits involving serious injuries and evidence of inadequate care. See, e.g., Tom Baker, *Making Sense With Numbers: The Uses and Abuses of Empirical Research On the Validity of Medical Malpractice Claims*, J.L., MED. & ETHICS (forthcoming 2005) (reviewing empirical studies and stating that all but one “find that the medical malpractice claim handling and litigation ‘system’ is appropriately filtering out most non-meritorious cases”).

from rabble-rousing by unscrupulous lawyers and expert witnesses.”<sup>3</sup> In 1996, the American Medical Association (AMA) finally conceded “that medical mistakes happen—are even common,” after numerous empirical studies demonstrated that such errors injure hundreds of thousands and kill tens of thousands every year.<sup>4</sup>

This “concession” was largely cosmetic, since it was coupled with a new anti-litigation claim: health care providers and their supporters now contend that lawsuits harm patients by driving error reports underground. The most influential statement of this claim appears in the Institute of Medicine’s (IOM’s) 1999 report, *To Err Is Human*: “Patient safety is . . . hindered through the liability system and the threat of malpractice, which discourages the disclosure of errors. The discoverability of data under legal proceedings encourages silence about errors committed or observed.”<sup>5</sup> Among public health researchers, doctors, organized medicine, tort reform advocates, and even pharmacists, this claim has become the conventional wisdom.<sup>6</sup> Malpractice reform is vital, these groups assert, because litigation (and not low-quality health care) endangers patients. The tort system is always part of the problem, never part of the solution.

The charge that liability impedes quality improvement is interesting for several reasons. First, the claim implicitly admits that health care providers behave in a self-interested fashion. Punishments discourage providers from reporting errors because providers do not want to be penalized for making them. This concession is important because health care professionals typically deny that self-interest influences their treatment-related decisions. Providers style themselves as patients’ advocates and invariably claim to do what is best for patients—regardless of the economic consequences. Once medical professionals admit that self-interest colors their judgments—particularly judgments involving quality, a core matter of professional competence—the case for external oversight is strengthened dramatically. The traditional justification for professional self-regulation is the shared belief that physicians and other providers can be trusted to act for the benefit of others. If that belief is inaccurate, and the current attack on malpractice liability by physicians is premised on its falsity, the conclusion that outsiders should more aggressively regulate medical practitioners becomes irresistible.

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<sup>3</sup> William M. Sage, *Understanding the First Malpractice Crisis of the 21st Century*, in HEALTH LAW HANDBOOK 1, 4–5 (Alice G. Gosfield ed., 2003).

<sup>4</sup> Linda O. Prager, *Safety-Centered Care*, AM. MED. NEWS, May 13, 1996, at 1.

<sup>5</sup> INST. OF MEDICINE, *TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM* 43 (Linda T. Kohn et al. eds., 2000) [hereinafter IOM].

<sup>6</sup> See *infra* notes 71–90 and accompanying text.

Second, the assertion that liability impedes efforts to make health care safer calls into question the broader policy justification of tort law. Tort scholars believe that liability encourages producers of goods and services to exercise due care by forcing them to internalize the costs of their negligence.<sup>7</sup> If liability actually discourages vendors from exercising due care by driving errors underground, this analysis must be reconsidered. Perhaps the standard tort model accurately describes the influence of tort law in some areas of productive activity but not others. Perhaps it is wrong across the board. Doctors and nurses are hardly the only tortfeasors who can hide problems.<sup>8</sup> If punishments are bad because they discourage people from admitting, reporting, and correcting deficiencies, a comprehensive rollback of tort liability might be in order. Alternatively, if this argument is insufficient to justify wholesale reconsideration of tort law in all contexts, the obvious question is why it should be credited in the health care context.

Third, as shown below, the best available empirical evidence indicates that liability for negligence sometimes improves the quality of health care by motivating providers to do a better job. Consequently, the charge that liability discourages providers from reporting errors (or has other undesirable consequences) identifies a need for a balanced policy judgment, but fails to show how that judgment should be made. The mix and availability of services with liability may be better or worse than the mix and availability of services without liability, and the mix and availability of services may vary depending on the details and accuracy of liability determinations. If liability has both good and bad effects, only a sophisticated policy assessment that weighs both liability's costs and benefits can determine whether we are better off with or without malpractice lawsuits.

Fourth, the charge that liability slows progress by squelching error reporting is persuasive only if liability, on its own, significantly impedes error reporting. If other forces also drive errors underground, a policy decision to eliminate liability might make matters worse by extinguishing the positive effects of liability without causing more information about errors to surface. Most calls for reform ignore this problem, even though it is well known that failures to report errors have multiple causes. These causes include a culture of perfectionism within the medical profession that shames, blames, and even humili-

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<sup>7</sup> See, e.g., Patricia M. Danzon, *Liability For Medical Malpractice*, in 1B HANDBOOK OF HEALTH ECONOMICS 1339, 1343–50 (Anthony J. Culyer & Joseph P. Newhouse eds., 2000) (discussing standard economic analysis of tort law as applied to medical malpractice).

<sup>8</sup> For example, product manufacturers and drug companies can cover up reports of defects and dangerous side effects, drivers can lie about their sobriety and their speed, and cigarette companies can misrepresent their knowledge of the dangerousness and addictiveness of their products.

ates doctors and nurses who make mistakes;<sup>9</sup> fragmented delivery systems requiring the coordination of multiple independent providers;<sup>10</sup> the prevalence of third-party payment systems and administered prices;<sup>11</sup> overwork, stress, and burnout;<sup>12</sup> information overload;<sup>13</sup> doctors' status as independent contractors and their desire for professional independence;<sup>14</sup> the Health Insurance Portability and Accountability Act (HIPAA);<sup>15</sup> a shortage of nurses;<sup>16</sup> and underinvestment in technology that can reduce errors.<sup>17</sup> Both individually and collectively, these factors have discouraged providers from implementing proven safety measures and from developing more reliable delivery systems. Given the significance of these factors, it is naïve to

<sup>9</sup> See David Hilfiker, *Facing Our Mistakes, in* MARGIN OF ERROR: THE ETHICS OF MISTAKES IN THE PRACTICE OF MEDICINE 87, 92 (Susan B. Rubin & Laurie Zoloth eds., 2000) ("[W]hen a physician does make an important mistake, it is first whispered about in the halls, as if it were sin. . . . The medical profession simply seems to have no place for its mistakes."); Marshall B. Kapp, *Medical Error Versus Malpractice*, 1 DEPAUL J. HEALTH CARE L. 751, 755-757 (1997); Bryan A Liang, *The Adverse Event of Unaddressed Medical Error: Identifying and Filling the Holes in the Health-Care and Legal Systems*, 29 J.L., MED. & ETHICS 346, 348 (2001) [hereinafter Liang, *Adverse Event*]; Bryan A. Liang, *Promoting Patient Safety Through Reducing Medical Error: A Paradigm of Cooperation Between Patient, Physician, and Attorney*, 24 S. ILL. U. L.J. 541, 545 (2000) [hereinafter Liang, *Promoting Patient Safety*].

<sup>10</sup> See IOM, *supra* note 5, at 3.

<sup>11</sup> See *id.*; see also Joseph P. Newhouse, *Why Is There a Quality Chasm?*, HEALTH AFF., July/Aug. 2002, at 13, 20-21 (describing problems caused by administered prices); FED. TRADE COMM'N & DEP'T OF JUSTICE, IMPROVING HEALTH CARE: A DOSE OF COMPETITION 5-6 (2004) [hereinafter FTC & DOJ] (discussing the distorting effect on incentives to improve quality arising out of current third-party payment systems), available at <http://www.ftc.gov/reports/healthcare/040723healthcarerpt.pdf> (last visited Feb. 15, 2005).

<sup>12</sup> See Robert J. Blendon et al., *Views of Practicing Physicians and the Public on Medical Errors*, 347 NEW ENGL. J. MED. 1933, 1935, 1937 tbl.3 (2002) (finding that fifty percent of doctors surveyed identified overwork, stress, and fatigue as "very important cause[s]" of errors); Darrell A. Campbell Jr. & Patricia L. Cornett, *How Stress and Burnout Produce Medical Mistakes, in* MEDICAL ERROR: WHAT DO WE KNOW? WHAT DO WE DO? 37, 38 (Marilynn M. Rosenthal & Kathleen M. Sutcliffe eds., 2002) [hereinafter MEDICAL ERROR] (arguing that "high levels of stress and burnout experienced by surgeons . . . negatively affect their clinical performance and social interactions . . . [and] create an environment conducive to medical mistakes").

<sup>13</sup> See Newhouse, *supra* note 11, at 18-20 (describing the rapid increase in medical knowledge and in the number of available medical devices, drugs, and procedures, and explaining that physicians have difficulty keeping up with this new information).

<sup>14</sup> See Liang, *Adverse Event, supra* note 9, at 350-51.

<sup>15</sup> See *id.* at 353-57 (describing the privacy regulations promulgated under HIPAA as an additional "administrative barrier [ ] to error analysis and reduction").

<sup>16</sup> See Blendon et al., *supra* note 12, at 1935, 1937 tbl.3 (finding that 53% of doctors surveyed identified understaffing of nurses in hospitals as a "very important cause" of errors); Ann E. Rogers et al., *The Working Hours of Hospital Staff Nurses and Patient Safety*, HEALTH AFF., July/Aug. 2004, at 202, 207-10 (finding that the use of extended shifts and overtime to address the nursing shortage "may have adverse effects on patient care; . . . both errors and near errors are more likely to occur when hospital staff nurses work twelve or more hours").

<sup>17</sup> David M. Studdert et al., *What Have We Learned Since the Harvard Medical Practice Study?*, in MEDICAL ERROR, *supra* note 12, at 3, 21 ("U.S. hospitals are almost certainly underpending in their efforts to prevent adverse events.").

think that error reporting and health care quality would improve automatically by removing the threat of liability.

Finally, most of the tort “reforms” suggested by providers, professional associations, and lobbying groups would not increase the frequency of error reporting or improve health care quality. The most popular proposals—damages caps, credits for payments from collateral sources, heightened requirements for expert witnesses, and limits on contingency fees—have more to do with provider and insurer self-interest than with health care quality. Their purpose is to reduce insurance costs in the short run, not to improve delivery systems in ways that address low-quality care or decrease the frequency of harmful errors.

If fear of liability has little power to explain the quality problems that pervade the health care sector, what does? In our view, the absence of a “business case” for quality and the perverse incentives that currently accompany the delivery of health care are the most important causes of poor quality.<sup>18</sup> The health care marketplace fails to reward providers for making patients safe, and sometimes it actually punishes them for doing so.<sup>19</sup> The result is that many providers fail to exercise due care in their treatment of patients—to the point of ignoring proven patient safety measures.<sup>20</sup> Because removing the threat of malpractice liability will not fix these problems, tort reform is more likely to reduce health care quality than to improve it.

We do not contend that the civil justice system creates optimal incentives for providers to protect patients from avoidable errors. It does not, and in all likelihood, it never will. Our point is that unless

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<sup>18</sup> See Robert S. Galvin et al., *Has the Leapfrog Group Had An Impact on the Health Care Market?*, HEALTH AFF., Jan./Feb. 2005, at 228, 231–232 (outlining how the absence of a “business case” has impeded quality improvement efforts); Sheila Leatherman et al., *The Business Case for Quality: Case Studies and an Analysis*, HEALTH AFF., Mar./Apr. 2003, at 17, 17–18 (“Without a business case for quality, we think it unlikely that the private sector will move quickly and reliably to widely adopt proven quality improvements.”).

<sup>19</sup> Even providers recognize the perverse incentives created by current health care payment systems. See, e.g., Gina Kolata, *Health Plan That Cuts Costs Raises Doctors’ Ire*, N.Y. TIMES, Aug. 11, 2004, at A1 (explaining that an innovative program using electronic medical records both improved care for patients with diabetes and congestive heart failure and reduced overall costs of care, but lost the support of many physicians because it also substantially reduced physician revenues).

<sup>20</sup> See IOM, *supra* note 5, at 14 (

RECOMMENDATION 8.2 Health care organizations *should* implement proven safety practices.

A number of practices have been shown to reduce errors in the medication process. Several professional and collaborative organizations interested in patient safety have developed and published recommendations for safe medication practices, especially for hospitals. Although some of these recommendations have been implemented, none have been universally adopted and some are not yet implemented in a majority of hospitals.

(emphasis added)).



and until changes in compensation arrangements create a business case for quality, providers will continue to provide low-quality care to many patients and the health care sector will underperform the rest of the economy. We also contend that, in the absence of direct economic incentives for providers to exercise due care, removing liability rights is likely to make matters worse—not better—by freeing providers to serve their own economic interests instead of their patients' interests.

Rather than abolish or weaken liability to protect the economic self-interest of providers, a sensible policy strategy would ask when and how liability has encouraged providers to develop more reliable delivery systems, and propose reforms designed to strengthen this effect. This Article offers some examples showing how this strategy, which melds the strengths of the liability- and systems-based approaches to patient safety, might work.

This Article proceeds as follows. Part I documents the need to improve delivery systems by summarizing what is known about health care quality and medical error. Part II describes the conventional wisdom that medical malpractice liability impedes the improvement of health care by discouraging health care providers from reporting mistakes and addressing their causes. Part III examines the available evidence bearing on the connection between tort law and health care quality, and argues that malpractice exposure more likely *improves* the quality of health care than *detracts* from it. In other words, Part III shows that the conventional wisdom is at best unsupported and at worst wrong. Part IV argues that the quality problems identified in Part I are more likely attributable to economic incentives and professional norms than to malpractice liability. Part V outlines the obstacles that currently impede the quality-improving force of the tort system, and suggests some solutions to these problems.

## I

### A PRIMER ON HEALTH CARE QUALITY AND MEDICAL ERROR

The medical profession has strong norms regarding the importance of delivering high-quality, error-free care. Dr. Atul Gawande—a surgeon, patient safety researcher, and popular writer—aptly captures the basic ethos:

Western medicine is dominated by a single imperative—the quest for machinelike perfection in the delivery of care. From the first day of medical training, it is clear that errors are unacceptable. . . . [E]very X ray must be tracked down and every drug dose must be exactly right. No allergy or previous medical problems can be

forgotten, no diagnosis missed. In the operating room, no movement, no time, no drop of blood can be wasted.<sup>21</sup>

Unfortunately, the actual experience of patients diverges dramatically from the stated goal of “machinelike perfection in the delivery of care.”<sup>22</sup> The literature on health care quality is replete with statements that look like tabloid headlines, but that are, in fact, descriptions of horrendously high error rates: “[o]ne fourth of hospital deaths may be preventable”;<sup>23</sup> “180,000 people may die” every year partly as a result of injuries sustained when receiving health care;<sup>24</sup> “one-third of some hospital procedures may expose patients to risk without improving their health”;<sup>25</sup> “[a]dverse drug events (ADEs) result in more than 770,000 injuries and deaths each year and cost up to \$5.6 million per hospital, depending on size”;<sup>26</sup> unnecessary surgeries kill 12,000 people each year;<sup>27</sup> medical error is either the eighth-leading, sixth-leading, or third-leading cause of death in the United States, depending on the source;<sup>28</sup> and “[t]he United States loses more American lives to patient safety incidents every six months than it did in the entire Vietnam War.”<sup>29</sup> Simply stated, the American health care system allows errors to occur at unacceptably high rates.

Consider inpatient deaths stemming from medical errors. In 1999, the IOM concluded that these errors kill between 44,000 and 98,000 Americans annually.<sup>30</sup> Preventable nosocomial infections are

<sup>21</sup> ATUL GAWANDE, *COMPLICATIONS: A SURGEON'S NOTES ON AN IMPERFECT SCIENCE* 37–38 (2002). For an excellent review of this book, see Steven Lubet, Review Essay, *Like a Surgeon*, 88 CORNELL L. REV. 1178 (2003). For other perspectives on the norms inculcated during residency training, see CHARLES L. BOSK, *FORGIVE AND REMEMBER: MANAGING MEDICAL FAILURE* (1979).

<sup>22</sup> GAWANDE, *supra* note 21, at 37.

<sup>23</sup> Robert H. Brook et al., *Health System Reform and Quality*, 276 JAMA 476, 477 (1996).

<sup>24</sup> Stephen M. Shortell et al., *Assessing the Impact of Continuous Quality Improvement on Clinical Practice: What It Will Take to Accelerate Progress*, 76 MILBANK Q. 593, 593 (1998).

<sup>25</sup> *Id.*

<sup>26</sup> Agency for Healthcare Research and Quality, *Research in Action: Reducing and Preventing Adverse Drug Events to Decrease Hospital Costs*, at <http://www.ahrq.gov/qual/aderia/aderia.htm> (last updated Mar. 2001) (citing studies).

<sup>27</sup> Barbara Starfield, *Is US Health Really the Best in the World?*, 284 JAMA 483, 483 (2000) (citing studies).

<sup>28</sup> IOM, *supra* note 5, at 1 (ranking medical errors eighth); HEALTHGRADES, *PATIENT SAFETY IN AMERICAN HOSPITALS 1* (2004) (ranking medical errors sixth), available at [http://www.healthgrades.com/media/english/pdf/HG\\_Patient\\_Safety\\_Study\\_Final.pdf](http://www.healthgrades.com/media/english/pdf/HG_Patient_Safety_Study_Final.pdf) (last visited Feb. 15, 2005); Starfield, *supra* note 27, at 484 (ranking medical errors third).

<sup>29</sup> HEALTHGRADES, *supra* note 28, at 1 (noting that the number of patient safety deaths every six months is equivalent to “three fully loaded jumbo jets crashing every other day for the last five years”).

<sup>30</sup> See IOM, *supra* note 5, at 1. The IOM based its assessment on existing studies, not its own research. *Id.* Even so, its figures generated some controversy. Researchers have argued that many of the patients would have died anyway, or that reviewer assessments are unreliable. See Rodney A. Hayward & Timothy P. Hofer, *Estimating Hospital Deaths Due to Medical Errors: Preventability Is in the Eye of the Reviewer*, 286 JAMA 415, 417–18 (2001); Clem-

common as well: the Centers for Disease Control estimate that two million hospitalized patients get an infection while in the hospital and that 90,000 will die of their infection.<sup>31</sup> In 2003, the Leapfrog Group, a consortium of large employers devoted to improving health care quality, contended that urban hospitals could avoid “over 54,000 deaths” every year by staffing intensive care units (ICUs) with ICU intensivists.<sup>32</sup> In 2004, a consulting firm estimated that almost 195,000 deaths annually among hospitalized Medicare patients from 2000 to 2002 “were potentially attributable to the patient safety incident(s).”<sup>33</sup> The death toll attributable to medical errors and quality problems does vary depending on the methodology employed to determine the number of deaths, but no one doubts that errors occurring in hospitals take the lives of far too many patients. Stated bluntly, there is an “epidemic of potentially preventable iatrogenic deaths.”<sup>34</sup>

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ent J. McDonald et al., *Deaths Due to Medical Errors Are Exaggerated in Institute of Medicine Report*, 284 JAMA 93, 93–94 (2000).

Those involved in the preparation of the IOM report have defended these figures. See Lucian L. Leape, *Institute of Medicine Medical Error Figures Are Not Exaggerated*, 284 JAMA 95, 95–97 (2000). But see Troyen A. Brennan, *The Institute of Medicine Report on Medical Errors—Could It Do Harm?*, 342 NEW ENG. J. MED. 1123, 1123–25 (2000) (questioning various aspects of the IOM study and expressing reservations regarding its impact: “If the only legislative result of the IOM report is federally mandated reporting, we will have failed . . .”).

<sup>31</sup> Centers for Disease Control (CDC), Press Release, Hand Hygiene in Healthcare Settings, Oct. 25, 2002, available at [www.cdc.gov/handhygiene/pressrelease.htm](http://www.cdc.gov/handhygiene/pressrelease.htm). A company that makes hand hygiene products has claimed that 20,000 of these deaths would have been prevented by handwashing. Healthy Hands USA, Facts About Germs (“More than two million Americans contract an infection during hospital stays. Of that group, an estimated 90,000 die every year from these infections. Up to 20,000 of these deaths could be prevented by practicing simple hand hygiene procedures, such as those outlined in the new CDC hand hygiene guideline.”), at <http://www.healthyhandsusa.com/cdc> (last visited Feb. 15, 2005); see also Atul Gawande, *On Washing Hands*, 350 NEW ENG. J. MED. 1283, 1283 (2004) (writing that infection-control units find “their greatest difficulty is getting clinicians like me to do the one thing that consistently halts the spread of most infections: wash our hands”); Michael J. Berens, *Infection Epidemic Curves Deadly Path, Poor Hygiene, Overworked Workers Contribute to Thousands of Deaths*, CHI. TRIB., July 21, 2002, at 1 (“Strict adherence to clean-hand policies alone could prevent the deaths of up to 20,000 patients each year, according to the CDC and the U.S. Department of Health and Human Services.”); Susan Feyder, *3M Tackles Hospital Infection*, MINNEAPOLIS STAR TRIB., May 10, 2004, at D8 (“The Centers for Disease Control and Prevention has estimated that nearly \$5 billion is added to U.S. health costs every year as a result of infections that patients get while they are hospitalized.”).

<sup>32</sup> See THE LEAPFROG GROUP, FACT SHEET: ICU PHYSICIAN STAFFING 1 (2004), available at [http://www.leapfroggroup.org/media/filc/Leapfrog-ICU\\_Physician\\_Staffing\\_Fact\\_Sheet.pdf](http://www.leapfroggroup.org/media/filc/Leapfrog-ICU_Physician_Staffing_Fact_Sheet.pdf) (last revised Apr. 7, 2004).

<sup>33</sup> HEALTHGRADES, *supra* note 28, at 3.

<sup>34</sup> Studdert et al., *supra* note 17, at 13; see also Blendon et al., *supra* note 12, at 1934 (finding that “[t]hirty-five percent of physicians and 42 percent of the public reported that they had experienced an error in their own care or that of a family member,” with 18% and 24%, respectively, “report[ing] an error that had serious health consequences, including death”); Chunliu Zhan & Marlene R. Miller, *Excess Length of Stay, Charges, and Mortality Attributable to Medical Injuries During Hospitalization*, 290 JAMA 1868, 1872 (2003) (estimating that 32,591 patients perish annually in hospitals from medical injury).

Mortal injuries constitute only the tip of the iceberg: “[O]ver a million people are injured by medical treatments annually in the U.S.”<sup>35</sup> The direct and indirect costs of errors, many of which are borne by victims and their families, are staggering. Estimates of the direct cost of mortality and morbidity from drug-related errors alone run as high as \$177 billion.<sup>36</sup>

Errors like these occur everywhere health care is delivered.<sup>37</sup> One study concluded that medical errors and quality problems in outpatient care resulted in “116 million extra physician visits, 77 million extra prescriptions, 17 million emergency department visits, 8 million hospitalizations, 3 million long-term admissions, 199,000 additional deaths, and \$77 billion in extra costs (equivalent to the aggregate cost of care of patients with diabetes).”<sup>38</sup> After studying 4,500 prescriptions dispensed at 50 pharmacies around the country, researchers at Auburn University estimated that approximately 51 million prescriptions filled nationwide contained some type of error, including 3 million mistakes that were potentially harmful.<sup>39</sup>

Fortunately, many errors are minor and do not injure patients. Of the 10 million women who receive unnecessary Pap smears each year, few suffer adverse health consequences.<sup>40</sup> Nevertheless, these errors have their costs: with Pap tests running \$20 to \$40 each, the prac-

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<sup>35</sup> Lucian L. Leape, *Preventing Medical Accidents: Is “Systems Analysis” The Answer?*, 27 AM. J.L. & MED. 145, 146 (2001).

<sup>36</sup> Notice of Public Meeting, 21 C.F.R. Pts. 201, 211 & 601, June 18, 2002, available at [http://www.fda.gov/OHRMS/DOCKETS/98fr/02n-0204\\_nm00001.pdf](http://www.fda.gov/OHRMS/DOCKETS/98fr/02n-0204_nm00001.pdf) (reporting 1995 and 2001 estimates of direct cost of preventable drug related mortality and morbidity, with hospitalization and long term care accounting for most of the costs).

<sup>37</sup> Errors in outpatient settings have not been studied as thoroughly as inpatient errors. See Tejal K. Gandhi et al., *Adverse Drug Events in Ambulatory Care*, 348 NEW ENG. J. MED. 1556, 1557 (2003) (noting the lack of research regarding adverse drug events and errors in the outpatient setting); Elizabeth M. Lapetina & Elizabeth M. Armstrong, *Preventing Errors in the Outpatient Setting: A Tale of Three States*, 21 HEALTH AFF., July/Aug. 2002, at 26, 26 (“[L]ittle if any research has focused on errors or adverse events occurring outside of hospital settings . . . .” (quoting IOM, *supra* note 5)). The available evidence, however, suggests that outpatient care is subject to many of the same quality problems afflicting inpatient care. See Eve A. Kerr et al., *Profiling the Quality of Care in Twelve Communities: Results from the CQI Study*, 23 HEALTH AFF., May/June 2004, at 247, 250–54; Elizabeth A. McGlynn et al., *The Quality of Health Care Delivered to Adults in the United States*, 348 N. ENG. J. MED. 2635, 2641–42 (2003) (studying treatments for twenty-five conditions, including treatments delivered in ambulatory settings, and finding significant quality problems). On the frequency of adverse drug events, see David W. Bates et al., *Incidence of Adverse Drug Events and Potential Adverse Drug Events: Implications for Prevention*, 274 JAMA 29, 29–33 (1995); David C. Classen et al., *Adverse Drug Events in Hospitalized Patients: Excess Length of Stay, Extra Costs, and Attributable Mortality*, 277 JAMA 301, 301 (1997). See generally Henri R. Manasse et al., *Increase in U.S. Medication-Error Deaths*, 351 LANCET 1655 (1998) (debating the frequency of deaths resulting from medication errors).

<sup>38</sup> Starfield, *supra* note 27, at 484 (citing study).

<sup>39</sup> Michael Higgins, *Rooting Out Bad Medicine*, CHI. TRIB., Aug. 11, 2004, at A1.

<sup>40</sup> Gina Kolata, *10 Million Women Who Lack a Cervix Still Get Pap Tests*, N.Y. TIMES, June 23, 2004, at A1.

tice of needlessly performing them on women who had hysterectomies entails direct costs of \$200 to \$400 million each year, and the indirect costs (e.g., lost work time and unnecessary fears) likely add tens of millions more.<sup>41</sup>

Serious quality problems afflict every aspect of the American health care system. As just illustrated, providers not only perform unnecessary and inefficacious treatments, but they also routinely omit indicated procedures of known value and employ widely varying practice patterns without reason. As a 1998 literature review summarized matters:

The dominant finding of our review is that there are large gaps between the care people should receive and the care they do receive. This is true for all three types of care—preventive, acute, and chronic—whether one goes for a check-up, a sore throat, or diabetic care. It is true whether one looks at overuse or underuse. It is true in different types of health care facilities and for different types of health insurance. It is true for all age groups, from children to the elderly. And it is true whether one is looking at the whole country or a single city.

...

A simple average of the findings of the preventive care studies shows that about 50 percent of people received recommended care. . . . An average of 70 percent . . . received recommended acute care, and 30 percent received contraindicated acute care. For chronic conditions, 60 percent received recommended care and 20 percent received contraindicated care.<sup>42</sup>

Bluntly stated, “quality problems . . . abound in American medicine. The majority of these problems are not rare, unpredictable, or inevitable concomitants of the delivery of complex, modern health care. Rather, they are frighteningly common, often predictable, and frequently preventable.”<sup>43</sup> Nor do matters seem to be improving. Although the IOM’s 1999 report created an enormous shockwave of media coverage, “there is little evidence that patient safety has improved in the last five years.”<sup>44</sup>

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<sup>41</sup> See *id.*; see also Associated Press, *False Alarms in Screening for Cancer Prove Costly*, N.Y. TIMES, Dec. 26, 2004, at 33 (reporting that false positives returned after free cancer screenings cause patients to spend an extra \$1,000 in the following year to address unfounded suspicions of disease).

<sup>42</sup> Mark A. Schuster et al., *How Good Is the Quality of Health Care in the United States?*, 76 MILBANK Q. 517, 520–21 (1998).

<sup>43</sup> Mark R. Chassin, *Is Health Care Ready for Six Sigma Quality?* 76 MILBANK Q. 565, 566–67 (1998) (citations omitted).

<sup>44</sup> HEALTHGRADES, *supra* note 28, at 1; see also Drew E. Altman et al., *Improving Patient Safety—Five Years after the IOM Report*, 351 NEW ENG. J. MED. 2041, 2042 (2004) (“In the past five years, many promising efforts have been launched, but the task is far from complete.”).

Treatments vary enormously as well, with patients in some areas receiving higher and more expensive levels of care than others of similar age and physical condition who live elsewhere.<sup>45</sup> The result is that “geography is destiny” as far as the medical treatment one receives is concerned. One group of commentators estimated that Medicare could buy every Florida beneficiary who agreed to receive Minnesota-style health care a fully loaded Lexus and still come out ahead.<sup>46</sup> The same commentators conducted a series of studies demonstrating that patients in high-care, high-cost areas often fare worse than those receiving less care and consuming fewer resources.<sup>47</sup>

Typically, these problems do not occur because of isolated “bad doctors” or because the necessary information is hard to obtain.<sup>48</sup> Instead, as one commentator cuttingly noted:

From ulcers to urinary tract infections, tonsils to organ transplants, back pain to breast cancer, asthma to arteriosclerosis, the evidence is irrefutable. Tens of thousands of patients have died or been injured year after year because readily available information was not used—and is not being used today—to guide their care.<sup>49</sup>

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<sup>45</sup> See John E. Wennberg et al., *Geography and the Debate Over Medicare Reform*, HEALTH AFF., Feb. 13, 2002, (web exclusive), at <http://content.healthaffairs.org/cgi/content/full/hlthaff.w2.96v1/DC1> (demonstrating substantial regional variation in Medicare expenditures and treatment patterns, without discernable positive effect on outcome or health status).

<sup>46</sup> See *id.* (“The difference in lifetime Medicare spending between a typical sixty-five-year-old in Miami and one in Minneapolis is more than \$50,000, equivalent to a new Lexus GS 400 with all the trimmings.” (citation omitted)).

<sup>47</sup> See Katherine Baicker & Amitabh Chandra, *Medicare Spending, The Physician Workforce, and Beneficiaries’ Quality of Care*, HEALTH AFF., Apr. 7, 2004, (web exclusive) (finding negative correlation between level of Medicare spending per beneficiary and quality of health care delivered at <http://content.healthaffairs.org/cgi/reprint/hlthaff.w4.184v1.pdf>; Elliott Fisher et al., *The Implications of Regional Variations in Medicare Spending. Part 1: The Content, Quality, and Accessibility of Care*, 138 ANNALS INTERNAL MED. 273, 273 (2003); Elliott Fisher et al., *The Implications of Regional Variations in Medicare Spending. Part 2: Health Outcomes and Satisfaction with Care*, 138 ANNALS INTERNAL MED. 288, 288 (2003); see also JONATHAN SKINNER & JOHN E. WENNBURG, HOW MUCH IS ENOUGH? EFFICIENCY AND MEDICARE SPENDING IN THE LAST SIX MONTHS OF LIFE 4 (Nat’l Bureau of Econ. Research, Working Paper No. 6513, 1998) (finding “no evidence of any improved outcome (as measured by survival) associated with increased levels of spending” on elderly Medicare patients in Miami compared to lower levels of spending in Minneapolis), available at <http://www.nber.org/papers/w6513>.

<sup>48</sup> See GAWANDE, *supra* note 21, at 56–57 (“The important question isn’t how to keep bad physicians from harming patients; it’s how to keep good physicians from harming patients.”). Obviously, this generalization has important exceptions: bad doctors do exist, and information about best practices is sometimes hard to obtain.

<sup>49</sup> MICHAEL L. MILLENSON, DEMANDING MEDICAL EXCELLENCE: DOCTORS AND ACCOUNTABILITY IN THE INFORMATION AGE 353 (1997) [hereinafter MILLENSON, DEMANDING MEDICAL EXCELLENCE].

As previously mentioned, the costs of these errors are enormous.<sup>50</sup> Although no one knows how large the bill really is, no one doubts that tens (if not hundreds) of billions of dollars are spent annually on medical services of questionable or nonexistent value alone. One group of scholars estimated that Medicare spending would be almost thirty percent lower, without adversely affecting quality, if treatment patterns were changed to those that prevailed in the lowest cost region of the country.<sup>51</sup> Medicare spending in 2005 is projected at \$345.2 billion—meaning that spending could conceivably be cut by almost \$100 billion. In the health care sector as a whole, poor quality care may cost more than \$400 billion.<sup>52</sup>

Even these massive numbers probably understate the true magnitude of the problem because they fail to capture the degree to which necessary services are performed inefficiently. Consider hernia repair. This surgical procedure is one of the “bread and butter” procedures of a general surgery practice, and is performed hundreds of thousands of times every year in the United States.<sup>53</sup> Most general surgeons perform several hundred of these procedures during the course of their careers. The procedure takes approximately ninety minutes, costs several thousand dollars, and fails about 10-15% of the time.<sup>54</sup> Yet, at a small medical center outside of Toronto—the Shouldice Hospital—the same procedure takes less than half the time, costs half as much, and has a recurrence rate of only 1%.<sup>55</sup> The reason for this extraordinary performance is simple: surgeons at this facility “do hernia operations and nothing else. Each surgeon repairs between six hundred and eight hundred hernias a year—more than

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<sup>50</sup> See Hilfiker, *supra* note 9, at 90 (“[P]erhaps the most frequent result of physician misjudgment is the wasting of money, often in large amounts. . . . An unneeded examination, the needless admission of a patient to the hospital, even the unnecessary advice to stay home from work can waste large amounts of money . . .”).

<sup>51</sup> Wennberg et al., *supra* note 45.

<sup>52</sup> Milt Freudenheim, *Study Finds Inefficiency in Health Care: Employers Are Said to Pay \$390 Billion a Year in Unneeded Costs*, N.Y. TIMES, June 11, 2002, at A1 (reporting that the Juran Institute estimates that “\$390 billion a year [of private spending] is being wasted on outmoded and inefficient medical procedures”); Midwest Business Group on Health, *Reducing the Costs of Poor-Quality Health Care Through Responsible Purchasing Leadership* i (2d printing, Apr. 2003) (updated version of Juran Institute report) (contending that “\$420 billion [is] spent each year” on poor quality health care), at <http://www.mbg.org/pdf/Cost%20of%20Poor%20Quality%20Report.pdf>.

<sup>53</sup> Research supported by the Agency for Healthcare Research and Quality indicates that approximately 700,000 hernia repairs are performed in the U.S. each year. James Gibbs et al., *Inguinal Hernia Management: Watchful Waiting vs. Operation*, at <http://www.chs.northwestern.edu/hernia.htm> (last updated Feb. 13, 2005).

<sup>54</sup> See GAWANDE, *supra* note 21, at 38.

<sup>55</sup> *Id.* For one account of the Shouldice Hospital, see REGINA E. HERZLINGER, *MARKET-DRIVEN HEALTH CARE: WHO WINS, WHO LOSES IN THE TRANSFORMATION OF AMERICA'S LARGEST SERVICE INDUSTRY* 157-63 (1997).

most general surgeons do in a lifetime."<sup>56</sup> Specialized and experienced surgeons operate according to a standardized protocol.<sup>57</sup> The result is that these surgeons out-perform all other providers of hernia repair in North America, even though several have not completed a general surgery residency and the surgeon-in-chief is an obstetrician.<sup>58</sup> This extraordinary performance demonstrates the potential benefits of an undeviating focus on excellence in providing a discrete service or treatment (i.e., a "focused factory").<sup>59</sup> This result also points to a phenomenon observed in numerous areas of the economy, including health care—the positive relationship between the volume of services provided and the quality of those services, or the volume-quality relationship.<sup>60</sup>

Volume-quality relationships have been documented for a wide range of medical procedures.<sup>61</sup> Consider coronary artery bypass grafting (CABG), a surgical treatment that approximately 600,000 Americans receive every year. Researchers have long known that high-volume surgeons and hospitals produce significantly better results for CABG patients than low-volume providers—from hospital to hospital, the risk of in-hospital mortality can vary by a factor of four.<sup>62</sup> Nevertheless, low-volume providers continue performing large numbers of CABG procedures, exposing many patients to excessive risks and killing an appreciable number of them.<sup>63</sup> The problem is not limited to

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<sup>56</sup> GAWANDE, *supra* note 21, at 38.

<sup>57</sup> See HERZLINGER, *supra* note 55, at 159, 161.

<sup>58</sup> See GAWANDE, *supra* note 21, at 38–42.

<sup>59</sup> See HERZLINGER, *supra* note 55, at 157–64.

<sup>60</sup> See *id.* at 176–79.

<sup>61</sup> See HAROLD S. LUFT ET AL., HOSPITAL VOLUME, PHYSICIAN VOLUME AND PATIENT OUTCOMES: ASSESSING THE EVIDENCE 103 fig.5.1 (1990); Edward L. Hannan et al., *A Longitudinal Analysis of the Relationship Between In-Hospital Mortality in New York State and the Volume of Abdominal Aortic Aneurysm Surgeries Performed*, 27 HEALTH SERVS. RES. 517, 535–40 (1992); Samuel O. Thier & Annetine C. Gelijns, *Improving Health: The Reason Performance Measurement Matters*, 17 HEALTH AFF., July/Aug. 1998, at 26, 26–27; see also Herbert R. Karp et al., *Carotid Endarterectomy Among Medicare Beneficiaries: A Statewide Evaluation of Appropriateness and Outcome*, 29 STROKE 46, 48 (1998) (finding that the mortality and stroke rates following carotid endarterectomies at hospitals with a history of ten or fewer surgeries per year was 2.6-fold higher than that at hospitals performing fifty or more).

<sup>62</sup> See MILLENSON, DEMANDING MEDICAL EXCELLENCE, *supra* note 49, at 192 (noting that mortality risk quadruples for patients at hospitals performing a low volume of heart surgeries); see also Kevin Grumbach et al., *Regionalization of Cardiac Surgery in the United States and Canada: Geographic Access, Choice, and Outcomes*, 274 JAMA 1282, 1285 tbl.2 (1995) (reporting that death rates following cardiac bypass surgery were nearly twice as high at California hospitals performing fewer than one hundred procedures per year than at hospitals performing five hundred or more); Edward L. Hannan, *The Relation Between Volume and Outcome in Health Care*, 340 NEW ENG. J. MED. 1677, 1678 (1999) (noting that, in one study of 1989 data, "the risk-adjusted mortality rate for patients of surgeons who performed fewer than 50 [bypass operations] (7.94 percent) was more than twice the mortality rate for patients of surgeons who performed 150 or more procedures (3.57 percent)").

<sup>63</sup> See MILLENSON, DEMANDING MEDICAL EXCELLENCE, *supra* note 49, at 197–98; Kelly J. Devers & Gigi Liu, *Leapfrog Patient-Safety Standards Are a Stretch for Most Hospitals*, CENTER



CABG. A study of patients treated in California in 1997 estimated that more than 600 deaths occurred because patients received care at low-volume hospitals (instead of choosing high-volume hospitals) for procedures with volume-quality relationships.<sup>64</sup>

A final problem affecting healthcare quality is the lack of information regarding the absolute efficacy (let alone cost-effectiveness) of many diagnostic tests and medical treatments.<sup>65</sup> Manufacturers must provide evidence of effectiveness to gain regulatory approval for new pharmaceuticals, but no such requirement applies to medical procedures. Consequently, doctors can administer unproven treatments, and those treatments can rapidly become the standard of care.<sup>66</sup> For example, about 300,000 Americans receive arthroscopic knee surgery for osteoarthritis annually, at an estimated cost of \$1.5 billion per year. Yet, a study published in the *New England Journal of Medicine* in 2002 found that patients who received the surgery handled tasks like walking and climbing stairs less ably than patients who did not.<sup>67</sup> Other common procedures, such as coronary artery bypass surgery and spinal fusion surgery, also fail to help many patients.<sup>68</sup> In one recent high-profile example (bone marrow transplant for advanced

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FOR STUDYING HEALTH SYSTEM CHANGE, Feb. 2004, at 4 (reporting that “only 35.7 percent of hospitals [surveyed] met the Leapfrog [volume] threshold for coronary artery bypass graft surgery”), available at <http://www.hschange.org/CONTENT/647/647.pdf> (last visited Feb. 15, 2005).

<sup>64</sup> R. Adams Dudley et al., *Selective Referral to High-Volume Hospitals: Estimating Potentially Avoidable Deaths*, 283 JAMA 1159, 1163 (2000).

<sup>65</sup> See Robert J. Marder, *Relationship of Clinical Indicators and Practice Guidelines*, 16 QUALITY REV. BULL. 60, 60 (1990) (discussing the lack of evidence showing effectiveness of many treatments and opining that “[m]uch of the inappropriate use of technology results from medical uncertainty rather than insensitivity to cost”).

<sup>66</sup> See Niels F. Jensen & John H. Tinker, *Quality in Medical Care: Lessons from Industry and a Proposal for Valid Measurement and Improvement*, 1 CLINICAL PERF. QUALITY HEALTHCARE 138 (1993) (“The truth is that many currently ‘standard’ diagnostic and therapeutic practices, involving huge numbers of patients, high risks, and tremendous costs, rest upon very uncertain foundations with respect to efficacy.”), available at <http://www.boardprep.com/pdfs/quality.pdf>; see also Gina Kolata, *It Was Medical Gospel, But It Wasn't True*, N.Y. TIMES, May 30, 2004, at 7 (reporting that widespread adherence to a particular blood test level of a prostate-specific antigen as a cancer signal led to overuse of biopsies in men with non-cancerous prostates).

<sup>67</sup> See J. Bruce Moseley et al., *A Controlled Trial of Arthroscopic Surgery for Osteoarthritis of the Knee*, 347 NEW ENG. J. MED. 81, 84 (2002).

<sup>68</sup> Richard A. Deyo et al., *Spinal-Fusion Surgery—The Case for Restraint*, 350 NEW ENGL. J. MED. 722, 724 (2004); Jensen & Tinker, *supra* note 66; Abigail Zuger, *New Way of Doctoring: By the Book*, N.Y. TIMES, Dec. 16, 1997, at F1 (discussing a study finding that, although elderly heart attack patients in the U.S. received coronary angioplasty and bypass surgery almost eight times as often as Canadian patients, survival rates one year after the heart attack were about the same for both groups).

breast cancer), the treatment provided no benefits and killed an appreciable number of the women who received it.<sup>69</sup>

In sum, although hospitals and physicians sincerely profess a commitment to providing high quality care, reality lags far behind their rhetoric. The reasons why quality varies include the decentralized and fragmented nature of the health care delivery system; the dominance of third-party payers who have historically cared more about costs than quality; the tradition of deference to the medical profession to handle quality issues; the lack of visibility of quality defects to consumers, regulators, and legislators; the process through which providers are trained and socialized; the presence of multiple agency relationships; and the lack of competitive alternatives to existing coverage and delivery arrangements. The immediate question, given these market imperfections, is whether tort liability for medical malpractice makes matters worse by impeding desirable reforms or improves matters by exerting pressure on providers to improve.

## II

### THE CONVENTIONAL WISDOM: LIABILITY EXPOSURE IMPEDES QUALITY IMPROVEMENT BY DISCOURAGING ERROR REPORTING

A recent Kaiser Permanente Institute for Health publication asks rhetorically, "Why is our tort system such a roadblock to patient safety?" The answer (that the tort system discourages doctors and other providers from discussing mistakes) is presented as a matter of self-evident truth:

The atmosphere of care delivery is overshadowed by the threat of litigation, as fears of making a mistake and of being sued loom in the minds of providers.

. . .

Keeping quiet can seem an effective "defense" to claims, as most medical injuries are not obvious to patients.

. . .

[L]iability law . . . threaten[s] to sanction [providers who disclose errors, thereby discouraging patient safety's emphasis on learning, feedback, and improvement].<sup>70</sup>

This is the conventional wisdom in the health care sector: malpractice liability impedes efforts to improve patient safety and health

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<sup>69</sup> See Michelle M. Mello & Troyen A. Brennan, *The Controversy Over High-Dose Chemotherapy With Autologous Bone Marrow Transplant for Breast Cancer*, 20 HEALTH AFF., Sept./Oct. 2001, at 101, 101-02, 111.

<sup>70</sup> Randall R. Bovbjerg & Brian Raymond, *Issue Brief: Patient Safety, Just Compensation, and Medical Liability Reform*, KAISER PERMANENTE INSTITUTE FOR HEALTH, Summer 2003, at 1, available at [http://www.kpiph.org/publications/briefs/safety\\_brief.pdf](http://www.kpiph.org/publications/briefs/safety_brief.pdf) (last visited Feb. 15, 2005).

care quality by restricting the free flow of information about mistakes.<sup>71</sup> This criticism of malpractice liability is an article of faith among health policy experts and those who view trial lawyers and the tort system with skepticism or disdain.<sup>72</sup>

The conventional wisdom achieved its greatest political saliency in 1999 when the IOM flatly asserted that “[l]iability concerns discourage the surfacing of errors and communication about how to correct them,” and that “[p]atient safety is . . . hindered through the liability system and the threat of malpractice, which discourages the disclosure of errors.”<sup>73</sup> The IOM repeated the charge in 2001, suggesting that “[a]lternative approaches to liability, such as enterprise liability or no-fault compensation, could produce a legal environment more conducive to uncovering and resolving quality problems.”<sup>74</sup>

Provider organizations have used these conclusions to advance their political agenda of curtailing medical malpractice liability. The AMA claims that it opposes medical malpractice liability because it wants to “creat[e] a climate where reporting of errors will occur so that the information can be used to improve the [health care] system and avoid repeating [errors] in the future.”<sup>75</sup> The AMA also asserts that “[h]ealth care errors would be prevented by transforming the existing culture of blame, which suppresses information about errors,” and that “[w]hen physicians can report errors in a voluntary and con-

<sup>71</sup> See e.g., William B. Runciman et al., *Error, Blame, and the Law in Health Care—An Antipodean Perspective*, 138 ANNALS INTERNAL MED. 974, 978 tbl.2 (2003) (“Blaming and punishing for the inevitable errors that will be made by well-intentioned people working in health care drives the problem of iatrogenic harm underground and alienates those who are best placed to prevent such problems from recurring.”); Higgins, *supra* note 39 (reporting opposition to mandatory error reporting on the ground that it will generate lawsuits that will, in turn, generate pressure to hide mistakes).

<sup>72</sup> See, e.g., NEWT GINGRICH, *SAVING LIVES & SAVING MONEY: TRANSFORMING HEALTH AND HEALTHCARE* 125 (2003) (stating that “patient safety is often weakened by [the] possible litigious implications” of information sharing, and quoting IOM, *supra* note 5); HUMPHREY TAYLOR ET AL., *COMMON GOOD FEAR OF LITIGATION STUDY: THE IMPACT ON MEDICINE* 8–10 (Common Good, Study No. 15780, 2002) (reporting survey results indicating that “[n]early half (43%) of all nurses also feel prohibited or discouraged from doing what they think is right for the patient [in the way of disclosing and discussing errors] because of rules or protocols set up for liability protection,” and that although doctors recognize that frank discussions of adverse events with colleagues can help them improve the quality of the services they deliver, fear of liability discourages them from talking about errors and thinking of ways to reduce them (emphasis omitted)), available at <http://cgood.org/assets/attachments/68.pdf>; AM. MED. ASSOC., *MEDICAL LIABILITY REFORM—Now!* 59 (2004) (“The AMA supports . . . efforts . . . that would establish the statutory framework to create a ‘culture of safety’ whereby information on health care errors could be reported in a confidential and legally protected manner.”), available at <http://www.ama-assn.org/ama/pub/upload/mm/450/mlrmowdec032004.pdf> (last updated Dec. 3, 2004).

<sup>73</sup> IOM, *supra* note 5, at 22, 43.

<sup>74</sup> See INST. OF MED., *CROSSING THE QUALITY CHASM: A NEW HEALTH SYSTEM FOR THE 21ST CENTURY* 219 (2001).

<sup>75</sup> AMA, *Medical Liability Reform: Top 12 Facts and Myths*, [http://www.ama-assn.org/ama/pub/upload/mm/45/leg\\_tortreform.pdf](http://www.ama-assn.org/ama/pub/upload/mm/45/leg_tortreform.pdf) (last visited Feb. 15, 2005).

fidential manner, everyone benefits.”<sup>76</sup> The AMA’s official position is that liability has no proper role in the regulation of health care professionals.

Front-line health care providers advance the conventional wisdom with great conviction. Beverly Jones, Vice President and Chief Nursing Officer at the Henry Ford Health System and a former Associate Dean at the University of Michigan School of Nursing, bluntly stated:

The threat of medical malpractice litigation is one of the most obvious barriers to the improvement of patient safety. . . . [D]isclosing one’s own error or a colleague’s error poses the risk of financial ruin and loss of professional credibility. These risks also serve as disincentives to participate in improvement strategies to reduce the risk of error.<sup>77</sup>

Similarly, Dr. Atul Gawande asserted that “[t]he deeper problem with medical malpractice suits is that by demonizing errors they prevent doctors from acknowledging and discussing them publicly.”<sup>78</sup>

These comments reflect the views of most medical professionals. As Professor William Sage observed:

The medical profession by and large heard a single message from the IOM[’s report, *To Err Is Human*]: that exposed, “punitive” approaches to error detection and correction are inferior to confidential, cooperative efforts from within an expert community. Because physicians regard malpractice litigation as the epitome of punitive, they viewed the 1999 IOM report as further evidence that liability should be curtailed. Reasoning that physicians’ fear of lawsuits prevented them from owning up to mistakes and working to improve quality, they ignored the historical irony that the profession’s long-standing argument against tort liability had been that medical errors are few, with litigation resulting mainly from rabble-rousing by unscrupulous lawyers and expert witnesses. Even [when] confronted with irrefutable evidence that errors are widespread, physicians remain convinced that malpractice liability has no legitimate role to play in quality improvement.<sup>79</sup>

Nearly all academic commentators agree that incident reporting and quality of care will increase only when malpractice liability is cur-

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<sup>76</sup> AMA, *Senate Passage of Patient Safety Bill Victory for America’s Patients and Physicians* (attributing statement to Donald J. Palmisano, M.D., J.D., Immediate Past-President of the AMA), available at <http://www.ama-assn.org/ama/pub/category/13913.html> (last updated Jan. 21, 2005).

<sup>77</sup> Beverly Jones, *Nurses and the “Code of Silence,”* in MEDICAL ERROR, *supra* note 12, at 84, 91–92.

<sup>78</sup> GAWANDE, *supra* note 21, at 57.

<sup>79</sup> Sage, *supra* note 3, at 4–5 (citations omitted).

tailed.<sup>80</sup> Professor Bryan Liang argues that “current tort law . . . provides strong disincentives to engage in medical error reduction and patient safety” because doctors who report errors may suffer financially.<sup>81</sup> Professor Larry Gostin agrees, and argues that only a public health approach to malpractice can solve these problems.<sup>82</sup> Professor Max Mehlman contends that “to deter poor quality care you have to identify it when it occurs, but the threat of punishment prevents doctors from admitting mistakes, and prevents patients from finding out they have been victims of malpractice, which prevents the system from figuring out how to do things better.”<sup>83</sup>

Professor Troyen Brennan and his various co-authors (who are responsible for the most comprehensive studies of medical malpractice) are enthusiastic proponents of the conventional wisdom as well. They assert that malpractice liability “may well stifle efforts to reduce error” because practitioners are wary “of reporting events that may leave them open to accusations of negligence.”<sup>84</sup> That is, “the specter of litigation” currently stands as “the principal barrier to the free flow of information about medical errors,” and “removing it would “align[ ] the foci of the compensation and quality improvement systems and center[ ] attention on precisely those injuries that are eradi-

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<sup>80</sup> See, e.g., Jason M. Healy et al., *Confidentiality of Health Care Provider Quality of Care Information*, 40 BRANDEIS L.J. 595, 596 (2002) (arguing that malpractice litigation, among other things, adversely affects patient care); David H. Johnson & David W. Shapiro, *The Institute of Medicine Report on Reducing Medical Error and Its Implications for Healthcare Providers and Attorneys*, HEALTH LAWYER, June 2000, at 1, 6–11 (noting that discoverability of error reports “creates a strong disincentive to report,” and results in underreporting). Although these points are usually stated definitively, as the statements quoted in the text indicate, some commentators have offered more qualified claims. See, e.g., James F. Blumstein, *The Legal Liability Regime: How Well Is It Doing In Assuring Quality, Accounting for Costs, and Coping with an Evolving Reality in the Health Care Marketplace?*, 11 ANNALS HEALTH L. 125, 141 (2002) (observing that “[c]urrent [malpractice] doctrine may well stand in the way of (instead of advancing) improvements in quality of care, precisely the opposite of the objective of the traditional tort system”).

<sup>81</sup> Liang, *Adverse Event*, *supra* note 9, at 351; see also Bryan A. Liang, *Error in Medicine: Legal Impediments to U.S. Reform*, 24 J. HEALTH POL., POL'Y & L. 27, 39 (1999) (“[P]hysicians with tort liability concerns may be hesitant to report adverse events and medical errors for fear that plaintiffs’ attorneys will have access to this information, thus exposing physicians to liability.”).

<sup>82</sup> Lawrence Gostin, *A Public Health Approach to Reducing Error: Medical Malpractice as a Barrier*, 283 JAMA 1742, 1742–43 (2000) (calling for “mandatory and voluntary reporting of medical errors[,]” but noting “that legal impediments to reporting, surveillance, and prevention [need to be] recognized and resolved before a truly safe health care system can become a reality”).

<sup>83</sup> See Press Release, Case Western Reserve University, Case Law Professor Says Medical Malpractice Crisis is the Result of an Unfair System (Aug. 18, 2003) (quoting Professor Max Mehlman), at <http://www.cwru.edu/pubaff/univcomm/2003/8-03/mehlman.htm> (last visited Feb. 15, 2005).

<sup>84</sup> David M. Studdert & Troyen A. Brennan, *Toward a Workable Model of “No-Fault” Compensation for Medical Injury in the United States*, 27 AM. J.L. & MED. 225, 227–28 (2001).

cable.”<sup>85</sup> Brennan and his co-authors similarly argue that “the moral blame and resulting secrecy of the tort system are the antitheses of modern quality improvement,” and that “[m]oving to a system that does not penalize clinicians for reporting adverse events would result in increased reporting and thus increased institutional learning about how to avoid errors in the future.”<sup>86</sup> In short, addressing errors requires that “we . . . reform the system of malpractice litigation.”<sup>87</sup>

The best evidence of acceptance of the conventional wisdom may be the dearth of commentary disputing it. Even the authors of this Article once observed that “because malpractice liability and regulatory sanctions rely on ‘shame and blame’ strategies, they can be counter-productive in that they drive underground those with the information required to enhance quality.”<sup>88</sup> Professors Timothy Jost and William Sage stand virtually alone in their consistent skepticism. Jost writes that “advocates [of the conventional wisdom] do not convincingly explain why health care institutions and professionals will undertake the hard work of looking for and fixing quality of care problems if they no longer have to worry about blame or shame.”<sup>89</sup> Sage similarly observes that “tort reform is not an intuitive solution to rampant medical error” and that it is unclear why “the medical profession, which historically criticized lawyers for inventing medical errors where none existed, [should] receive even greater protection from lawyers now that we know errors to be widespread.”<sup>90</sup>

Having shown that the conventional wisdom enjoys widespread, if not unanimous, support, the time has come to assess its merits. Part III analyzes the connection between tort liability and health care qual-

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<sup>85</sup> David M. Studdert et al., *Beyond Dead Reckoning: Measures of Medical Injury Burden, Malpractice Litigation, and Alternative Compensation Models from Utah and Colorado*, 33 IND. L. REV. 1643, 1678 (2000); see also Studdert & Brennan, *supra* note 84, at 228 (“Both anecdotal and empirical evidence suggest that providers are less willing to disclose information about errors they make or see when a punitive atmosphere prevails.”).

<sup>86</sup> Michelle M. Mello & Troyen A. Brennan, *Deterrence of Medical Errors: Theory and Evidence for Malpractice Reform*, 80 TEX. L. REV. 1595, 1629 (2002).

<sup>87</sup> Brennan, *supra* note 30, at 1125; see also Studdert et al., *supra* note 17, at 7 (“Commentators and researchers involved in the study of error—many of them clinicians—typically view the law’s role with disdain . . .”).

<sup>88</sup> David A. Hyman & Charles Silver, *You Get What You Pay For: Result-Based Compensation for Health Care*, 58 WASH. & LEE L. REV. 1427, 1446 n.80 (2001).

<sup>89</sup> Timothy S. Jost, *Legal Issues in Quality of Care Oversight in the United States: Recent Developments*, 10 EUR. J. HEALTH L. 11, 19 (2003).

<sup>90</sup> William M. Sage, *Medical Liability and Patient Safety*, 22 HEALTH AFF., July/Aug. 2003, at 26, 30 (2003); see also William M. Sage, *Principles, Pragmatism, and Medical Injury*, 286 JAMA 226, 226 (2001) (noting the irony of liability reform advocates saying that healthcare quality can only improve “if sheltered from outside scrutiny”). Steven Lubet has also derided the tendency of health care providers to blame malpractice lawyers for quality problems. See Lubet, *supra* note 21, at 1189–97 (maintaining that although malpractice litigation offers an imperfect mechanism for systemic improvement, “lawsuits definitely have their place when it comes to addressing, and redressing, medical errors”).

ity to assess how closely the conventional wisdom matches up with what is actually known about the performance of the health care marketplace.

### III

#### WHAT DO WE KNOW ABOUT MEDICAL LIABILITY AND PATIENT SAFETY?

##### A. The Conventional Wisdom Has Never Been Proven

Although commentators routinely invoke the conventional wisdom, they never offer any rigorous evidence or empirical research supporting their position. For example, in *To Err Is Human*, the IOM offered no evidence or studies supporting its assertions that litigation hinders efforts to improve patient safety and that “[l]iability concerns discourage the surfacing of errors and communication about how to correct them.”<sup>91</sup> In context, the omission is glaring. The IOM offered hundreds of references to empirical studies supporting the assertions it made in the rest of the report.<sup>92</sup> Apparently, the truth of the conventional wisdom was too self-evident to require support. Other writings share this deficiency, asserting that liability impedes the improvement of health care safety without citing any studies finding that it has a statistically significant effect.<sup>93</sup>

This lack of citations in support of the conventional wisdom is readily explained. No statistical study shows an inverse correlation between malpractice exposure and the frequency of error reporting, or indicates that malpractice liability discourages providers from reporting mistakes. As Dr. Lucien Leape, a strong proponent of error reporting and a leading advocate for patient safety, recently observed in the *New England Journal of Medicine*, “[F]ear of litigation may . . . be overblown. No link between [error] reporting and litigation has ever been demonstrated.”<sup>94</sup> Thus, no empirical study supports the charge that malpractice liability discourages providers from reporting mistakes. Lacking a rigorous empirical foundation, the primary basis for the conventional wisdom is its plausibility.

Plausibility is one thing, but basing public policy on untested theories is entirely another. Suppose the conventional wisdom was applied to traffic safety. Providers say the fear of liability harms the quality of health care because it motivates them to hide their mistakes and not to discuss their errors. Providers also complain that their

<sup>91</sup> IOM, *supra* note 5, at 22, 43.

<sup>92</sup> For example, when asserting that “[h]ealth care is not as safe as it should be,” the IOM report cites and summarizes “[a] substantial body of evidence point[ing] to medical errors as a leading cause of death and injury.” IOM, *supra* note 5, at 26–48.

<sup>93</sup> See *supra* notes 77–87 and sources cited therein.

<sup>94</sup> Lucian L. Leape, *Reporting of Adverse Events*, 347 N. ENG. J. MED. 1633, 1635 (2002).

judgments are second-guessed by people who are not familiar with all the facts and circumstances, and lack the necessary specialized knowledge. In the context of driving, a parallel set of arguments would be that without tort liability, drivers would have fewer qualms about admitting and discussing their careless behavior. Drivers would also not have to worry that their decisions (often made in a split-second under conditions of uncertainty) would be second-guessed by those who were not on the scene. Thus, parallel reasoning would suggest that traffic safety is likely to improve if tort law is relaxed. The accuracy of this prediction is far from self-evident. Without tort penalties, many drivers might behave more dangerously by driving faster, driving after having an extra glass of wine with dinner, and so on. Safety could improve or decline. Whether tort liability actually makes our highways safer or more dangerous is an empirical matter that cannot be resolved by speculation.<sup>95</sup>

The same caution applies to the connection, or lack thereof, between tort liability and health care quality. Providers may not give tort law the credit it deserves. By penalizing unwanted conduct and mistakes, liability rules may reduce their frequency.<sup>96</sup> Indeed, the view that punishments discourage targeted behaviors is at least as plausible as the opposite view. Providers may also blame the legal system for undesirable behaviors (e.g., failures to report errors and address shortcomings) that occur for other reasons, and that would continue if tort sanctions were removed. Finally, there is a plausible middle ground as well. Liability rules may encourage providers to take greater care *and* discourage them from reporting mistakes. The question then becomes whether the net effect on patient safety is positive or negative.

Ultimately, the critical empirical question is, Does liability for negligence have sufficient deterrent effect to justify the associated transaction costs and dislocations, including but not limited to those that are part of the conventional wisdom? The Harvard Medical Practice Study<sup>97</sup> (HMPS) considered this issue extensively.<sup>98</sup> The HMPS's

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<sup>95</sup> The demand for actual evidence on this point explains the extensive empirical research done on the impact of no-fault automobile insurance.

<sup>96</sup> Michelle White found that tort liability exerts significant financial pressure on providers to use reasonable care, and concluded that rates of negligent injuries and deaths would increase if liability were removed. See Michelle J. White, *The Value of Liability in Malpractice*, HEALTH AFF., Fall 1994, at 75.

<sup>97</sup> See generally PAUL C. WEILER ET AL., A MEASURE OF MALPRACTICE: MEDICAL INJURY, MALPRACTICE LITIGATION, AND PATIENT COMPENSATION (1993) (reporting results of an extensive study of malpractice in New York hospitals).

<sup>98</sup> Interestingly, the Harvard team dismissed the corrective justice goals of the tort system in their original work, although the subject has reappeared in the team's recent scholarship. See David A. Hyman, *Medical Malpractice: What Do We Know and What (If Anything) Should We Do About It?*, 80 TEX. L. REV. 1639, 1644 n.16 (2002).



results are decidedly mixed, but they offer no support for those who argue that malpractice impedes efforts to protect patients.

In fact, the HMPS found an *inverse* relationship between the magnitude of the malpractice risk and the rate of negligent injuries, meaning that as the size of the malpractice risk increased, both the frequency of mistakes and the frequency of negligence declined.<sup>99</sup> Although the finding was not statistically significant,<sup>100</sup> the HMPS investigators nevertheless concluded that

the litigation system seems to protect many patients from being injured in the first place. And since prevention before the fact is generally preferable to compensation after the fact, the apparent injury prevention effect must be an important factor in the debate about the future of the malpractice litigation system.<sup>101</sup>

The HMPS also demonstrated that patients who are least likely to sue, the aged and the poor, were the most likely to be negligently injured—precisely the result a standard model of deterrence predicts.<sup>102</sup> Finally, the HMPS found that the experience of being sued “made [doctors] twice as likely to take more time in explaining the risks of treatment to their patients,” which is the opposite of the effect that patient safety advocates, who argue that malpractice liability discourages candor, predicted.<sup>103</sup> Not surprisingly, the HMPS report recommends that policymakers accept and act on the “indication . . . that malpractice litigation does have an injury prevention effect.”<sup>104</sup>

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<sup>99</sup> See Mello & Brennan, *supra* note 86, at 1610; see also PAUL C. WEILER, MEDICAL MALPRACTICE ON TRIAL 90 (1991) (noting that the HMPS found “a fairly modest, though statistically significant, preventive effect of malpractice litigation is discernible in [the] data”); WEILER ET AL., *supra* note 97, at 131 (finding that tort liability cut the frequency of negligence-related injuries by 29% and cut the overall rate of medical injuries by 11%).

<sup>100</sup> See Mello & Brennan, *supra* note 86, at 1610 (noting that

The HMPS investigators struggled with how to interpret [the fact that their results were not statistically significant,] and ultimately settled on this conclusion: ‘Although we did observe the hypothesized relationship in our sample—the more tort claims, the fewer negligent injuries—we cannot exclude the possibility that this relationship was coincidental rather than causal.’

(quoting WEILER ET AL., *supra* note 97, at 129)).

<sup>101</sup> WEILER ET AL., *supra* note 97, at 133.

<sup>102</sup> *Id.* at 132.

<sup>103</sup> *Id.* at 127.

<sup>104</sup> *Id.* at 132. In the face of daunting methodological challenges, the HMPS team made several subsequent attempts to model the deterrent effects of medical liability, using four different measures of malpractice risk, two different outcome measures, and two estimation strategies. Mello & Brennan, *supra* note 86, at 1611. The team, however, was unable to agree on the optimal specification of the model and on how to interpret the results, so they never submitted their findings for publication. *Id.*

The problems included (1) multiple possible measures of service quality, none of which is clearly superior, that produce different results in regression equations; (2) the ambiguity of the intensity of service measure that showed a strong correlation between tort

As the HMPS team readily admits, the evidence of deterrence it uncovered, although the best available, is both “limited” and “subject to methodological criticism.”<sup>105</sup> In particular, the team notes that the “injury prevention effect” may be *stronger* than it found it to be because “constraints on the data set combined to reduce rather than enhance the likelihood that such a causal connection would manifest itself.”<sup>106</sup> Yet, all things considered, the evidence of deterrence is surprisingly tenuous given the salience of malpractice exposure to physicians and other health care providers who, if survey responses are to be believed, “alter[ ] their behavior in rendering clinical care” because of it.<sup>107</sup> Often-heard complaints about “defensive medicine” only make sense if providers actually are deterred (in fact, only if they are over-deterred) by the risk of liability.

For current purposes, the more significant point is that *none* of the empirical evidence generated by the HMPS supports the conventional wisdom that malpractice liability undermines health care quality. No study has shown that exposure to liability has a statistically significant negative effect on the frequency of error reports. No study has shown that liability exposure causes health care quality to decline overall. Instead, the best available evidence shows that liability makes a modest positive contribution to patient safety despite the definitive and unqualified claims to the contrary made by patient safety advocates and other critics of the tort system.

#### B. Tort Liability and Anesthesia Safety: A Positive Relationship

Patient safety advocates often use the history of anesthesia to demonstrate that health care providers can greatly reduce the frequency of iatrogenic injuries by making delivery systems more impervious to human errors and mechanical problems.<sup>108</sup> As it happens, this example also shows that tort liability can motivate providers to identify and correct shortcomings in health care delivery systems. Anesthesia—the area in which the systems-based approach to error reduction has been applied with the greatest success—actually

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risk and service quality in the HMPS; (3) multiple possible measures of malpractice risk that yield different results in regression equations; (4) confounding variables, such as the hospital-specific case-mix, for which HMPS was unable to control; (5) the enormous burden of extracting data on adverse events and negligence from hospital files; and (6) the endogeneity of claim rates and error rates, each of which may influence the other. *Id.* at 1611–15.

<sup>105</sup> Mello & Brennan, *supra* note 86, at 1615.

<sup>106</sup> WELER ET AL., *supra* note 97, at 132.

<sup>107</sup> Liang, *supra* note 81, at 79 (citing authorities); *see also* TAYLOR ET AL., *supra* note 72, at 11 (“In summary, it is clear that the practice of medicine and the delivery of medical care are significantly influenced and shaped by fear of malpractice claims . . .”).

<sup>108</sup> *See, e.g.*, Leape, *supra* note 94, at 1633; GAWANDE, *supra* note 21, at 64–68.

undercuts the conventional wisdom, as it was malpractice liability that motivated anesthesiologists to find and address the causes of mistakes.

Surgical anesthesia once exposed patients to serious risks of injury and death. Studies put the mortality rate between 1 in 852 and 1 in 6,048 administrations in the 1950s and 1960s, and between 1 in 2,000 and 1 in 10,000 in the 1970s and 1980s.<sup>109</sup> About half of these anesthesia-related deaths were preventable.<sup>110</sup> Anesthesia mishaps also exposed physicians to serious malpractice risks.<sup>111</sup> Injuries were often exceptionally severe, and patients lacked pre-existing relationships with anesthesiologists that might have tempered their willingness to sue.

Today, by contrast, anesthesia is exceptionally safe. In approximately a decade, mortality rates fell from 1 in 10,000–20,000 administrations to 1 in 200,000—a ten- to twenty-fold improvement!<sup>112</sup> As anesthesia became safer, lawsuits against anesthesiologists became less frequent and liability premiums for anesthesiologists declined significantly.<sup>113</sup> In Massachusetts, for example, expensive claims for hypoxic injury disappeared in 1988 when virtually all anesthesiologists started

<sup>109</sup> Alexander Goldstein, Jr. & Arthur S. Keats, *The Risk of Anesthesia*, 33 ANESTHESIOLOGY 130, 133 tbl.1 (1970).

<sup>110</sup> Ellison C. Pierce, Jr., *The Patient's Safety in Anesthesia*, RESIDENT & STAFF PHYSICIAN, Feb. 1989, at 51, 51.

<sup>111</sup> See Edward A. Brunner, *The National Association of Insurance Commissioner's Closed Claim Study*, in ANALYSIS OF ANESTHETIC MISHAPS 17, 25, 28 (Ellison C. Pierce, Jr., & Jeffrey B. Cooper eds., 1984) (reporting that “anesthesia injuries accounted for 3% of all paid claims, but for a disproportionately large 11% of all dollars indemnified” and that “claims arising from anesthesia procedures are more costly than those arising from any other procedure group”).

<sup>112</sup> Lucian L. Leape, *Error in Medicine*, in MARGIN OF ERROR: THE ETHICS OF MISTAKES IN THE PRACTICE OF MEDICINE 95, 107 (Susan B. Rubin & Laurie Zoloth eds., 2000); Ellison C. Pierce, Jr., *Anesthesia: Standards of Care and Liability*, 262 JAMA 773, 773 (1989). *But see* Robert S. Lagasse, *Anesthesia Safety: Model or Myth*, 70 ANESTHESIOLOGY 1609, 1617 (2002) (suggesting anesthesia safety has not improved as much as advertised, and finding a stable anesthesia-related mortality rate of 1 per 13,000 administrations). One commentator suggests that safety has improved markedly, and that current mortality rates reflect the willingness of anesthesiologists to handle much frailer patients than before. *See* James E. Cottrell, *Uncle Sam, Anesthesia-Related Mortality and New Directions: Uncle Sam Wants You!*, 67 AM. SOC'Y ANESTHESIOLOGISTS NEWSL., Jan. 2003, at 8, 8.

<sup>113</sup> Ellison C. Pierce, Jr., *ASA Monitoring Guidelines: Their Origin and Development*, 66 AM. SOC'Y ANESTHESIOLOGISTS NEWSL., Sept. 2002, at 22, 23, available at [www.asahq.org/Newsletters/2002/9\\_02/feature7.htm](http://www.asahq.org/Newsletters/2002/9_02/feature7.htm); *see also* Karen B. Domino, *Increasing Costs of Professional Liability Insurance*, 67 AM. SOC'Y ANESTHESIOLOGISTS NEWSL., June 2003, at 6, 6 (reporting that, although premiums have risen, “loss of insurance and rate increases have not been as dramatic in anesthesiology as in obstetrics and some other surgical specialties”); Paul R. McGinn, *Practice Standards Leading to Premium Reductions*, AM. MED. NEWS, Dec. 2, 1988, at 1, 28 (reporting a 20% drop in malpractice premiums for 320 Massachusetts anesthesiologists who followed the patient monitoring standards set by the ASA, and a 15% discount for Oregon anesthesiologists who adhered to similar standards); *Medical Malpractice Rates Drop for Anesthesiologists*, LAS VEGAS SUN, May 14, 2003, at B2 (reporting that premiums were falling 34% for anesthesiologists covered by the Medical Liability Association of Nevada).

using pulse oximetry and capnography.<sup>114</sup> Deaths and permanent brain injuries from anesthesia-related errors constituted a diminishing fraction of claims,<sup>115</sup> and far fewer of these claims resulted in insurance payouts.<sup>116</sup> The fraction of total medical malpractice insurance costs attributable to anesthesia-related claims fell from 11% to 3.6% over fifteen years.<sup>117</sup> The Controlled Risk Insurance Company reduced premiums for anesthesiologists at Harvard hospitals from \$17,690 to \$11,750 in one year.<sup>118</sup> For anesthesiologists in general, “[t]he 2002 average premium was \$18,000—about the same as in 1985 and much lower than for most specialties.”<sup>119</sup>

Anesthesia’s high level of reliability distinguishes it as the only medical practice area that approaches industrial standards of quality.<sup>120</sup> For this reason, patient safety advocates routinely use anesthesia to show that gains can be made by improving health care delivery systems.<sup>121</sup> Much of the credit for improving anesthesia safety belongs to the American Society of Anesthesiologists (ASA),<sup>122</sup> which launched a patient safety campaign in 1983 that included a study of closed malpractice insurance claims.<sup>123</sup> By studying such claims and other medical records, anesthesiologists discovered that human errors caused an extremely large fraction of anesthesia-related injuries.<sup>124</sup>

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<sup>114</sup> Pierce, *supra* note 112, at 773.

<sup>115</sup> Fred W. Cheney, *Anesthesia Patient Safety and Professional Liability Continue to Improve*, 61 AM. SOC’Y ANESTHESIOLOGISTS NEWSL., June 1997, at 18 & fig.1 (“In the 1970s, 56 percent of all claims were for death or permanent brain damage as compared to 45 percent in the 1980s and 31 percent in the 1990s [Figure 1].”).

<sup>116</sup> *Id.* at 20 & fig.6 (“[T]he proportion of claims for death and brain damage that resulted in payment to the plaintiff has declined from 74 percent in the late 1970s to only 40 percent in the early 1990s . . . [Figure 6].”).

<sup>117</sup> Pierce, *supra* note 112, at 773.

<sup>118</sup> *Id.*

<sup>119</sup> See Stephen C. Schoenbaum & Randall R. Bovbjerg, *Malpractice Reform Must Include Steps to Prevent Medical Injury*, 140 ANNALS INTERNAL MED., Jan. 2003, at 51 (citations omitted).

<sup>120</sup> See Chassin, *supra* note 43, at 569; Salim D. Islam & Andrew D. Auerbach, *The Impact of Intraoperative Monitoring on Patient Safety*, in AHQR, Evidence Report/Technology Assessment, No. 43, at 265.

<sup>121</sup> See *supra* note 108 and accompanying text.

<sup>122</sup> See Ellison C. Pierce, Jr., *The 34th Rovenstine Lecture: The Establishment of the APSF and the ASA Closed Claims Study*, THE ANESTHESIA PATIENT SAFETY FOUNDATION, at <http://www.gasnet.org/societies/apsf/history/rovenstine34-4.php> (last visited Oct. 10, 2004); see also David C. Classen & Peter M. Kilbridge, *The Roles and Responsibility of Physicians to Improve Patient Safety within Health Care Delivery Systems*, 77 ACAD. MED. 963, 967 (2002) (discussing the ASA’s campaign and observing that “few major patient safety initiatives have been launched by other physician professional societies”).

<sup>123</sup> See Pierce, *supra* note 122. The ASA’s campaign also included the creation of a Committee on Patient Safety and Risk Management, and sponsorship of an international symposium on anesthesia-related morbidity and mortality. *Id.*

<sup>124</sup> See Brunner, *supra* note 111, at 29 (“Personal error on the part of the physician is a prime factor involved in medicolegal risk.”); see also David A. Davis, *An Analysis of Anesthetic Mishaps from Medical Liability Claims*, in ANALYSIS OF ANESTHETIC MISHAPS 31, 39 (Ellison C.

The ASA then developed a set of mandatory anesthesia patient monitoring standards, and redesigned their procedures and tools so that fewer errors would occur and so that errors that did occur would be less likely to harm patients.<sup>125</sup> They shortened residents' hours, promulgated practice guidelines, mandated the use of safety precautions, standardized the operation of machines, and outfitted machines with safety devices.<sup>126</sup> Today, adverse events and emergencies are so rare that anesthesiologists use simulators to practice responding to adverse, anesthesia-related events.<sup>127</sup>

Why did the ASA act when it did? According to Ellison C. Pierce, Jr., the leader of the patient safety campaign, two major factors forced the ASA's hand: malpractice claims and negative publicity.<sup>128</sup> "Anesthesiology [malpractice] premiums were . . . among the very highest—in many areas, two to three times the average cost for all physicians. By the early 1980s, anesthesiologists recognized that something drastic had to be done if they were going to be able to continue to be insured."<sup>129</sup> Matters became especially dire after

April 22, 1982, when ABC [television] broadcast . . . "The Deep Sleep, 6,000 Will Die or Suffer Brain Damage." The program described a number of anesthesia mishaps that appeared to have been preventable. The reaction of the public was strong; for months after the broadcast, patients appearing in the operating room for anesthesia had questions about its safety.<sup>130</sup>

Thus, decisive pressure to protect patients came from *outside* the medical profession, not from within it. Practicing anesthesiologists tended to minimize the frequency and severity of errors and to oppose reforms.<sup>131</sup> Dr. Pierce is candid about this fact, reporting that he and other physicians had long known that many or even most anesthesia-related deaths and injuries were preventable, but that the profession had done little to stem the tide.<sup>132</sup> He also identifies professional resistance to practice guidelines as a serious impediment to patient safety:

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Pierce & Jeffrey B. Cooper eds., 1984) (reporting that "at least 80% of [hypoxia] claims . . . [were] caused by human rather than mechanical failure").

<sup>125</sup> See GAWANDE, *supra* note 21, at 64–68.

<sup>126</sup> See *id.* at 67.

<sup>127</sup> See Robert L. Helmreich, *Managing Human Error in Aviation*, *Sci. Am.*, May 1997, at 62, 67 (describing a program in Basel, Switzerland that uses a computerized dummy to simulate operations); David M. Caba et al., *Simulation-based Training in Anesthesia Crisis Resource Management (ACRM): A Decade of Experience*, 32 *SIMULATION & GAMING* 175, 186 (2001).

<sup>128</sup> See Pierce, *supra* note 113, at 22.

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> See *id.*

<sup>132</sup> See *id.*

What were the challenges? Clearly, it was obvious that many, if not most, physicians resented being told what to do. This, of course, was true in all of medicine, from the early guidelines in cardiology concerning emergency treatment of a myocardial infarction to the listing of indications for carotid artery surgery. It was assumed by many practitioners that any guidelines or standards would be fodder for the plaintiff's attorneys. This, of course, has not been the case.<sup>133</sup>

As the last two lines suggest, practicing anesthesiologists also blamed their woes on lawyers who represented malpractice plaintiffs.<sup>134</sup> Such behavior is well-documented and not restricted to anesthesiologists.<sup>135</sup>

Until the 1980s, anesthesiologists had made important but insufficient efforts to study the frequency of anesthesia mishaps, to identify their causes, and to establish treatment guidelines and take other prophylactic steps.<sup>136</sup> The ASA succeeded in dragging a reluctant profession into the future of patient safety only because two insurance "crises" and a hostile television program made the cost of ignoring quality problems unacceptably high.<sup>137</sup> By leading its members instead of following them, the ASA protected millions of patients from harm and thousands of anesthesiologists from malpractice claims.

The ASA's actions cast serious doubt on the conventional wisdom that malpractice lawsuits impede error reduction. Anesthesiologists worked hard to protect patients *because* of malpractice exposure, not in spite of it.<sup>138</sup> Once they succeeded, lawsuits tailed off and insurance costs declined because fewer patients had reason to sue.<sup>139</sup>

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<sup>133</sup> *Id.* at 23.

<sup>134</sup> *See id.*

<sup>135</sup> *See, e.g.,* Davis, *supra* note 124, at 31, 40 (reporting that anesthesiologists responded to malpractice suits by heaping scorn upon plaintiffs' lawyers, insurance companies, and a small number of "bad apples" in their profession).

<sup>136</sup> The history of the ASA's efforts is described in Ellison C. Pierce, Jr., *The Development of Anesthesia Guidelines and Standards*, 16 QUALITY REV. BULL. 61 (1990), and in Pierce, *supra* note 122.

<sup>137</sup> *See* Pierce, *supra* note 113, at 22; *see also* James F. Holzer, *Current Concepts in Risk Management, in ANALYSIS OF ANESTHETIC MISHAPS, supra* note 124, at 91, 91. Holzer largely attributes the rise of risk management as a specialty within hospitals to increases in liability insurance costs. *See id.* at 96–98.

<sup>138</sup> *See supra* notes 128–30 and accompanying text; *see also* David M. Caba, *Anaesthesiology as a Model for Patient Safety in Health Care*, 320 BRIT. MED. J. 785, 785 (2000) ("The malpractice crisis galvanised the [anaesthesiology] profession at all levels, including grass roots clinicians, to address seriously issues of patient safety. . . . [P]erhaps most crucially, strong leaders emerged who were willing to admit that patient safety was imperfect and . . . could be studied and interventions planned to achieve better outcomes."); Michael L. Mil-lenson, *The Silence*, 22 HEALTH AFF., Mar./Apr. 2003, at 103, 108 (noting that anesthesiologists acted to improve patient safety only when pushed by adverse publicity about anesthesia accidents and rising malpractice premiums).

<sup>139</sup> *See supra* notes 111–17 and accompanying text.

Case studies also show direct connections between liability and improved delivery systems for anesthesia.<sup>140</sup> In one reported incident, a patient died because an anesthesiology resident accidentally turned off the oxygen supply instead of the nitrous oxide supply.<sup>141</sup> The hospital's risk managers immediately revealed the error, settled the claim, and assembled a team to investigate the cause of the mistake.<sup>142</sup> The team found that the machine involved was a British model that "differed significantly from other anesthesia machines in use at the hospital" and had no "built-in fail-safe or alarm systems."<sup>143</sup> Hospital administrators then removed the machine from service, reviewed the hospital's policy on the use of oxygen analyzers, replaced older machines with newer models, and ensured that all machines had alarms that sounded when the mixture of oxygen and nitrous oxide was unsafe.<sup>144</sup> All this activity occurred after the malpractice settlement, not before it.<sup>145</sup>

The history of anesthesia safety reveals a simple feedback loop running between litigation and health care quality. Serious errors trigger lawsuits, which saddle providers with increased costs in the form of judgments, settlements, legal fees, and—most significantly—higher insurance premiums. Providers tolerate these costs until it becomes cheaper to improve quality than to pay claims.<sup>146</sup> Providers then determine what is wrong with their delivery systems and improve them. As quality rises and errors diminish, lawsuits disappear and insurance premiums and other liability costs fall. Dr. Fred Cheney, former Chair of the ASA Committee on Professional Liability, understood the feedback loop perfectly: "The relationship of patient safety to malpractice insurance premiums was easy to predict. If patients were not injured, they would not sue, and if the payout for anesthesia-related patient injury could be reduced, then insurance rates should follow."<sup>147</sup>

Recent developments raise the concern that some doctors have forgotten Dr. Cheney's wisdom. Many elective surgeries that once took place in hospitals under the supervision of trained anesthetists now occur in physicians' offices, where solo practitioners perform

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<sup>140</sup> See, e.g., Holzer, *supra* note 137, at 108–10.

<sup>141</sup> See *id.* at 109.

<sup>142</sup> See *id.*

<sup>143</sup> *Id.*

<sup>144</sup> See *id.* at 109–10.

<sup>145</sup> See *id.*

<sup>146</sup> This is true unless it is cheaper to "buy" tort reform legislation from elected officials, in which event providers will do that.

<sup>147</sup> F.W. Cheney, *ASA Closed Claims Project—Where Have We Been and Where Are We Going?*, 57 AM. SOC'Y OF ANESTHESIOLOGISTS NEWSL. 8 (1993).

them without an anesthesiologist.<sup>148</sup> Some contend this practice exposes patients to excessive risks. The Florida Society of Anesthesiologists—an interested group, admittedly—asserts that “the death rate for in-office surgery was ten times higher than the death rate at ambulatory surgical centers.”<sup>149</sup> If office-based anesthesia is, in fact, this much more dangerous, lawsuits may be necessary to motivate solo practitioners to improve their performance.

### C. Trends in Ex Communication: *Ex Ante* and *Ex Post*

Malpractice lawsuits were almost unheard of before the 1840s.<sup>150</sup> They were a common species of litigation by that century’s end, however, and their frequency rose dramatically throughout the 1900s.<sup>151</sup> These trends provide a setting in which to test the conventional wisdom—if liability discourages communication, providers should have become more reluctant to identify and reveal errors over time. They would have investigated mistakes and talked about them freely when malpractice lawsuits were rare, and would have become increasingly tight-lipped as litigation became common. In the “golden age of medicine” prior to the malpractice era, open communication should have been the norm.

Did a “golden age” of open communication about errors ever exist? When answering this question, it is helpful to distinguish three types of speech: *ex ante* communications to patients about treatment risks, *ex post* communications to patients about errors, and *ex post* communications to other providers about errors and possible ways of protecting patients.<sup>152</sup>

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<sup>148</sup> See Lapetina & Armstrong, *supra* note 37, at 27 (predicting that 41,000 office-based surgical facilities would perform up to 20% of all elective surgeries in 2002, and noting that in 2000, 37% of cosmetic procedures and 28% of reconstructive plastic surgery procedures were performed in office settings; “[b]etween 1992 and 1999 office-based liposuction increased 389 percent; breast augmentation, 413 percent; and eyelid surgery, 139 percent”).

<sup>149</sup> See Myrle Croasdale, *Florida Opens Loophole in Office Surgery Rule*, AMEDNEWS.COM, Aug. 12, 2002 (stating in-office death rate was 1 in 10,000, compared to rate of 1 in 100,000 at ambulatory surgical centers), at <http://www.ama-assn.org/amednews/2002/08/12/prsd0812.htm>. For discussions, see SPECIAL ISSUE: OBA SAFETY, ANESTHESIA PATIENT SAFETY FOUND. NEWSL. (APSF, Indianapolis, Ind.), Spring 2000, available at [http://www.apsf.org/resource\\_center/newsletter/2000/spring](http://www.apsf.org/resource_center/newsletter/2000/spring) (last visited Feb. 5, 2005).

<sup>150</sup> See JAMES C. MOHR, DOCTORS AND THE LAW: MEDICAL JURISPRUDENCE IN NINETEENTH-CENTURY AMERICA 109–12 (1993); see also James C. Mohr, *American Medical Malpractice Litigation in Historical Perspective*, 283 JAMA 1731 (2000).

<sup>151</sup> See Danzon, *supra* note 7, at 1355.

<sup>152</sup> We are indebted to Kenworthy Bilz for suggesting this typology. It is useful to consider these three types of communication separately, because norms of behavior might have differed for different kinds of communications, and some types of communication might be more important than others for error-reduction. Malpractice liability might also impede some forms of communication more severely than others.



### 1. *Ex Ante Communication to Patients*

Many commentators have noted that in the golden age of medicine (i.e., the period that preceded the rise of malpractice litigation), physicians' *ex ante* communication with patients about treatment risks was poor. In *The Silent World of Doctor and Patient*, Dr. Jay Katz argues that physicians never voluntarily disclosed risks to patients.<sup>153</sup> Dr. Katz contends that physicians expected patients to trust them blindly and used silence about all technical aspects of care—including the associated risks—to don a “mask of infallibility.”<sup>154</sup> Medical historians have made a similar point: in the Nineteenth Century, physicians frequently failed to explain the limits of their knowledge and available technologies.<sup>155</sup> The AMA's 1847 Code of Medical Ethics actually required doctors to *withhold* information that might undermine patients' confidence, such as uncertainty about the right course of action or the existence of divergent opinions.<sup>156</sup> An 1877 treatise on medical malpractice, however, exhorted surgeons to “be honest with their patients, apprising them of the difficulties of the case, and the uncertainty of perfect results . . . . They should be candid in regard to their deficiencies, claiming no more than they can perform, no more knowledge than they possess.”<sup>157</sup>

Such advice was necessary because many members of the medical profession failed to communicate adequate information to their patients. Indeed, as Professor Lubet correctly observed, “If anything, the days before the malpractice explosion were characterized by less communication from doctors, who then routinely refused to acknowledge even the possibility of uncertainty.”<sup>158</sup>

The doctrine of informed consent, which is enforced through the liability system, has encouraged better *ex ante* communication to patients about risks and benefits.<sup>159</sup> The *Principles of Medical Ethics*, adopted by the AMA in 1980 and supplemented thereafter, now explicitly recognizes the importance of obtaining informed consent, and (revealingly) specifies that the requirement to do so “is based on ‘social policy’ generated by forces outside the medical profession.”<sup>160</sup> Thus, the rise of malpractice litigation not only *preceded* the develop-

<sup>153</sup> See JAY KATZ, *THE SILENT WORLD OF DOCTOR AND PATIENT* 1–2 (1984).

<sup>154</sup> See *id.* at 198–99.

<sup>155</sup> See KENNETH ALLEN DE VILLE, *MEDICAL MALPRACTICE IN NINETEENTH CENTURY AMERICA: ORIGINS AND LEGACY* 202–03 (1990); MOHR, *supra* note 150.

<sup>156</sup> See KATZ, *supra* note 153, at 20–22.

<sup>157</sup> MILO MCCLELLAND, *CIVIL MALPRACTICE* 528 (1877).

<sup>158</sup> Lubet, *supra* note 21, at 1195 (emphasis omitted).

<sup>159</sup> Informed consent, of course, is not operating all that well, which is not surprising given that it was forced upon providers by a legal system they both distrust and despise. See Clarence H. Braddock et al., *Informed Decision Making in Outpatient Practice: Time to Get Back to Basics*, 282 JAMA 2313, 2318–20 (1999).

<sup>160</sup> KATZ, *supra* note 153, at 23.

ment of disclosure requirements, but also accounts for their promulgation.

From the physician's perspective, better *ex ante* communication actually lowers liability risk by giving patients more realistic expectations about the probabilities of success, and the risks they assume by going forward. Thus, the higher the liability risk, the more likely it is that there will be extensive *ex ante* communication with patients. From the perspective of both physician and patient, better *ex ante* communication has an additional benefit—it channels patients to physicians whose skill level best matches the level of required treatment, thereby lowering systemic liability risk for all involved.<sup>161</sup>

Thus, *ex ante* communication with patients is unambiguously increased—not decreased—by liability risk. The conventional wisdom has it exactly backwards, at least with regard to *ex ante* communication.

## 2. Ex Post Communication to Patients

*Ex post* communication with patients refers to disclosure that occurs after a negligent error has occurred. *Ex post* communication is likely to increase liability risks by informing patients about medical errors. For this reason, it seems more likely that *ex post* communication will be chilled as liability risk increases, implying that more *ex post* conversations should have taken place when liability risks were lower.<sup>162</sup> There is, however, no evidence supporting this view. Instead, as Professor Lubet observed, it appears

that doctors, being human, are simply reluctant to admit mistakes to their patients, and instead seize upon any available rationalization. Today, the excuse is malpractice liability. In the old days, it was the patients' own welfare—they would not heal as rapidly, it was said, if they lost confidence in their physicians.<sup>163</sup>

If malpractice litigation did cause the demise of a norm of complete disclosure of mistakes *ex post*, one would expect to find mention of this in historical writings on the medical profession. Exhaustive chronicles of malpractice litigation's impact on physicians never once assert that physicians freely and candidly disclosed errors to patients once upon a time, but stopped doing so when fear of malpractice liability increased.<sup>164</sup> Instead, the historical evidence indicates that there was never much *ex post* communication with patients, even when

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<sup>161</sup> To be sure, *ex ante* communication is not the only way of accomplishing this goal. Payment-for-performance arrangements are the supply-side complement to the demand-side strategy of *ex ante* communication. See Hyman & Silver, *supra* note 88, at 1428–29.

<sup>162</sup> In fact, empirical research indicates that the failure to communicate effectively *ex post* is more likely to cause a malpractice suit than candidly explaining that an error has occurred. See *infra* notes 279–90 and accompanying text.

<sup>163</sup> See, e.g., Lubet, *supra* note 21, at 1195.

<sup>164</sup> See, e.g., *supra* note 155 and accompanying text.

liability risk was low.<sup>165</sup> Thus, factors other than liability risk must account for the failure of physicians to communicate *ex post* with patients about medical errors and negligence—which explains why ethical guidelines for physicians, nurses, and hospitals now require them to disclose such information.<sup>166</sup>

Finally, of the three types of communications identified above, *ex post* conversations with patients probably have the least bearing on health care quality. Providers can identify mistakes internally and take steps to improve their delivery systems whether or not they inform particular patients that errors caused their injuries.

### 3. Ex Post Communication to Other Providers

Liability would seem to have mixed effects on the frequency and usefulness of *ex post* communications to other providers. On the one hand, these communications could “leak,” precipitating lawsuits and providing powerful ammunition for plaintiffs at trial. This possibility weighs against disclosure. On the other hand, the risk of leakage has been largely ameliorated by the statutory peer review protections most states have implemented.<sup>167</sup> Also, discussions with other providers can lower long-term liability risks by preventing future incidents or, at least, lowering their frequency and severity. Accordingly, the effect of increased liability on *ex post* communication to other providers is unclear—liability risk might lower disclosure if physicians either do not believe that peer review protections are adequate or expect nothing good to come of the disclosure, but it might also increase disclosure if the opposite is true.

Whatever the truth may be, we know of no evidence that providers discuss mistakes among themselves *ex post* less freely today than they did a century or more ago. Many such discussions are thought to occur at morbidity and mortality (M & M) conferences that are run in

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<sup>165</sup> See *id.* Indeed, it would be remarkable if a practice of full and candid disclosure of errors *ex post* coexisted with one of near silence on all matters relating to risk *ex ante*. See *supra* notes 153–58 and accompanying text.

<sup>166</sup> See AMA, CODE OF MEDICAL ETHICS: CURRENT OPINIONS WITH ANNOTATIONS 174 (2000) (“Situations occasionally occur in which a patient suffers significant medical complications that may have resulted from the physician’s mistake or judgment. In these situations, the physician is ethically required to inform the patient of all the facts necessary to ensure understanding of what has occurred.”); AMERICAN NURSES ASSOCIATION, § 1.4 CODE OF ETHICS FOR NURSES WITH INTERPRETIVE STATEMENTS 8 (2001), available at [www.nursingworld.org/ethics/code/ethicscode150.htm](http://www.nursingworld.org/ethics/code/ethicscode150.htm); JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS, §§ RI.1.2–RI.1.2.4 COMPREHENSIVE ACCREDITATION MANUAL FOR HOSPITALS: THE OFFICIAL HANDBOOK RI–4 (2002).

<sup>167</sup> See IOM, *supra* note 5, at 119–21. For a less positive view of peer review privilege, see generally Susan O. Scheutzwow, *State Medical Peer Review: High Cost But No Benefit—Is It Time for a Change?*, 25 AM. J.L. & MED. 7 (1999).

connection with residency training programs.<sup>168</sup> Devised in the nineteenth century, these programs spread to teaching hospitals nationwide in the twentieth century. The rise of M & M conferences and the rise of malpractice litigation therefore coincided, suggesting that liability was not an impediment to *ex post* communications to other providers. Moreover, until quite recently, no one had studied M & M conferences for the purpose of learning how often errors were discussed.<sup>169</sup> It is therefore impossible to know whether doctors are having more or less *ex post* communications about mistakes in M & M conferences than before.

#### 4. Summary

Although fear of malpractice liability may affect the frequency and comprehensiveness of error-related communications, it is likely to have different effects on different types of communication—i.e., encouraging *ex ante* communication to patients, discouraging *ex post* communication to patients, and having mixed effects on *ex post* communication with other providers. *Ex post* communications with patients are, however, the type of communication least likely to result in quality improvement. Stated affirmatively, dismantling liability risk is likely to reduce *ex ante* communication with patients, may increase *ex post* communication with injured patients, and has no clear effect on *ex post* communication with colleagues. In the end, none of these effects are likely to result in quality improvements, and some are actually likely to decrease quality of care.

It is also worth noting the response of the medical profession to the rise of malpractice liability. In the nineteenth and twentieth centuries, physicians asked patients for liability waivers and bonds, avoided patients thought likely to sue (mainly the working class and the poor), pressured other physicians to refrain from testifying as expert witnesses, and lobbied state legislators for reforms.<sup>170</sup> The medical profession followed a consistent strategy: deny errors, demonize malpractice plaintiffs and their lawyers, make it hard for plaintiffs to find expert witnesses, and when all else fails, extract legislative reform by threatening to leave patients in the lurch by abandoning one's practice.

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<sup>168</sup> It does not follow that M & M conferences are sufficient, by themselves, to address these problems. One study indicates morbidity and mortality review at an academic medical center failed to detect sixty-three percent of contributing courses to adverse events. John A. Morris et al., *Surgical Adverse Events, Risk Management, and Malpractice Outcome: Morbidity and Morality Review is not Enough*, 237 AM. SURG. 844, 844 (2003).

<sup>169</sup> See Edgar Pierluissi et al., *Discussion of Medical Errors in Morbidity and Mortality Conferences*, 290 JAMA 2838, 2838 (2003).

<sup>170</sup> See, e.g., DE VILLE, *supra* note 155, at 177–78, 197–204; cf. *supra* note 102 and accompanying text (describing increased errors among patients least able to sue).

The medical profession has consistently opposed attempts to impose accountability, whether for bad outcomes or for inadequate disclosure of risks. As such, it is hard to credit the claim that physicians were once enthusiastically communicating *ex ante* and *ex post* with their patients and *ex post* with their colleagues. It is equally hard to believe physicians would begin doing all three if liability risks were lifted.

#### D. Comparative Law Perspectives

One can also assess the merits of the conventional wisdom through a comparative-law lens. If the conventional wisdom is correct, countries where malpractice suits are relatively rare should have fewer medical errors and higher levels of communication about errors than the United States. The United Kingdom is one such country. The United Kingdom has dramatically lower rates of malpractice litigation<sup>171</sup> and offers physicians dramatically lower malpractice premiums than the United States.<sup>172</sup> Those who espouse the conventional wisdom would therefore predict fewer errors and better handling of errors in the United Kingdom than in the United States.

Comparative data on error rates in these two countries are scarce, partly because the study of health care quality in the United Kingdom is in its infancy.<sup>173</sup> This fact alone raises questions about the conventional wisdom. Given the rarity of malpractice litigation in the United Kingdom, why aren't health care providers there gathering error-related data routinely, or at least as often as providers in the United States? Although official publications acknowledge that error rates in the United Kingdom have not been studied with care, they also state that underreporting of errors is widespread.<sup>174</sup> Given the relative infrequency of malpractice lawsuits in the United Kingdom, other forces must account for these shortcomings.

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<sup>171</sup> See Danzon, *supra* note 7, at 1357 (reporting that in 1987 physicians in the United States were "at least 5 times more likely to be sued than physicians in Canada or the UK"); see also TIMOTHY S. JOST, ASSURING THE QUALITY OF MEDICAL PRACTICE: AN INTERNATIONAL COMPARATIVE STUDY 51 (1990) (reporting that malpractice litigation is much less frequent in the United Kingdom than the United States, and that recoveries in England were much smaller than those in the United States).

<sup>172</sup> See, e.g., Ronald A. Green & Thomas H. Taylor, *An Analysis of Anesthesia Medical Liability Claims in the United Kingdom, 1977-1982*, in ANALYSIS OF ANESTHETIC MISHAPS 73 (Ellison C. Pierce, Jr. & Jeffrey B. Cooper eds., 1984) (reporting malpractice premiums of £195 for doctors and £75 for dentists with at least five years of experience, with no price differentiation by practice area).

<sup>173</sup> Paul Barach & Stephen D. Small, *How the NHS Can Improve Safety and Learning*, 320 BRIT. MED. J. 1683, 1684 (2000) (noting that "little comprehensive research on adverse events in health care has been carried out in the United Kingdom").

<sup>174</sup> See CHIEF PHARMACEUTICAL OFFICER, DEP'T OF HEALTH, BUILDING A SAFER NHS FOR PATIENTS: IMPROVING MEDICATION SAFETY 22 (2004) ("Because of low reporting rates the incidence of medication errors within the NHS is not known."), available at <http://www.dh.gov.UK/assetRoot/04/08/49/61/04084961.pdf>.

The available evidence indicates that the United States and the United Kingdom have comparable problems with medical error. For example, rates of inappropriate coronary angiography,<sup>175</sup> coronary bypass grafts,<sup>176</sup> and anesthesia mortality<sup>177</sup> in the United Kingdom approximate those in the United States. Like the United States, the United Kingdom also has a serious problem with nosocomial infections, as “[o]ne in 10 patients contracts a staph infection while staying in England’s hospitals.”<sup>178</sup>

Moreover, in 2000, the Chief Medical Officer of the United Kingdom’s National Health Service (NHS) estimated that 850,000 serious adverse health care events occur in NHS hospitals each year, half of which are likely preventable.<sup>179</sup> The United States does not fare much better.<sup>180</sup> Medication errors are thought to “account [ ] for around a quarter of the incidents which threaten patient safety in each country.”<sup>181</sup> In a tragic illustration of the dangers such medical errors can pose, a prominent patient safety advocate in the United Kingdom recently died from a large overdose of iron because the physician failed to read both columns of print on the label.<sup>182</sup> When even patient safety experts are unable to protect themselves from medical errors, ordinary patients are (quite understandably) likely to lose confidence

<sup>175</sup> See Newhouse, *supra* note 11, at 15.

<sup>176</sup> See *id.*

<sup>177</sup> Compare Green & Taylor, *supra* note 172, at 74 (observing that “[a]nesthesia was the sole cause of death in 1 in 10,000 patients [in the U.K.], but may have contributed to death in 1 in 1,700”) and Ross Holland, *Anesthesia-Related Mortality in Australia*, in ANALYSIS OF ANESTHETIC MISHAPS 61, 66 (Ellison C. Pierce, Jr. & Jeffrey B. Cooper eds., 1984) (reporting a mortality rate for anesthesia of “1 in 10,000 administrations”), with *supra* notes 107–10 and accompanying text. Green & Taylor further note that mortality cases represent the “tip of the iceberg in respect to anesthetic mishaps in the U.K.,” and that “many patients . . . are ‘resuscitated’ and exhibit a considerable degree of damage as a result.” Green & Taylor, *supra* note 172, at 75.

<sup>178</sup> Lizette Alvarez, *British Hospitals Struggle to Limit ‘Superbug’ Infections*, N.Y. TIMES, Aug. 14, 2004, at A5. But see *supra* notes 30–32 and accompanying text.

<sup>179</sup> DEP’T OF HEALTH, AN ORGANISATION WITH A MEMORY: REPORT OF AN EXPERT GROUP ON LEARNING FROM ADVERSE EVENTS IN THE NHS 11 tbl.2.3 (2000) [hereinafter AN ORGANISATION WITH A MEMORY], available at <http://www.dh.gov.uk/assetRoot/04/06/50/86/04065086.pdf>; see also DEP’T OF HEALTH, BUILDING A SAFER NHS FOR PATIENTS: IMPLEMENTING AN ORGANISATION WITH A MEMORY 10, 45 (2001) (describing the prevalence of errors, and recommending four areas of medicine as targets for efforts to reduce the risks of medical errors) [hereinafter IMPLEMENTING AN ORGANISATION WITH A MEMORY], available at <http://www.dh.gov.uk/assetRoot/04/05/80/94/04058094.pdf>; Charles Vincent et al., *Adverse Events in British Hospitals: Preliminary Retrospective Record Review*, 322 BRIT. MED. J. 517, 518 (2001) (“We estimate that around 5% of the 8.5 million patients admitted to hospitals in England and Wales each year experience preventable adverse events, leading to an additional three million bed days.”).

<sup>180</sup> See *supra* Part I (describing the rate of error in the United States).

<sup>181</sup> IMPLEMENTING AN ORGANISATION WITH A MEMORY, *supra* note 179, at 11.

<sup>182</sup> See Daniel Foggo, *Patient’s Liver ‘Saturated’ with Iron After Hospital Confusion Over Dosage*, NEWS TELEGRAPH, Sept. 26, 2004, at <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2004/09/26/ndose26.xml>.

in the performance of health care providers, whether they are in the United States or the United Kingdom.

Physicians in the United Kingdom are also reluctant to disclose medical errors to patients.<sup>183</sup> At two hospitals that formally mandated error reporting, between one-third and one-half of all patients affected by errors were not informed that errors had occurred.<sup>184</sup> Physicians in the United Kingdom also resemble physicians in the United States in creating a "culture of blame" and avoiding "the tough questions of how safety is to become more central to their thinking and behaviour."<sup>185</sup> None of this evidence suggests that malpractice litigation, as such, stifles the reporting of medical errors.<sup>186</sup>

#### E. Disclosure and Error Reporting by Specialty, Location, and Type of Error

The consequences of medical errors range from no harm to minor short-term inconvenience to major injuries to death. If the conventional wisdom were correct, one might expect considerable variation in the willingness of health care providers to disclose and report errors, depending on the risks of litigation and the associated stakes. One might, for example, expect providers to report and disclose errors more often when injuries are minor or when patients are elderly, poor, or otherwise unlikely to receive large damage awards. The risks of malpractice liability also vary systematically based on a provider's specialty and geographic location. Accordingly, one might similarly expect the frequency of disclosure and error reporting to vary inversely with these risks.<sup>187</sup> We have found no evidence that the patterns predicted by the conventional wisdom prevail.<sup>188</sup>

Researchers have generally identified three types of medical errors: adverse events, no-harm events, and near misses.<sup>189</sup> An adverse

<sup>183</sup> See Lubet, *supra* note 21, at 1195 (citing Charles Vincent et al., *Why Do People Sue Doctors? A Study of Patients and Relatives Taking Legal Action*, 343 LANCET 1609, 1611 (1994)).

<sup>184</sup> L.M. Ross et al., *Medication Errors in a Pediatric Teaching Hospital in the U.K.: Five Years Operational Experience*, 83 ARCH. DIS. CHILD 492, 494 (2000); S.M. Selbst et al., *Medication Errors in a Pediatric Emergency Department*, 15 PEDIATRIC EMERGENCY CARE 1, 2 (1999). These studies counted near-misses as a medical error, and it is unclear whether the hospital required reporting of such cases. However, many reports that should have occurred did not.

<sup>185</sup> Barach & Small, *supra* note 173, at 1684.

<sup>186</sup> Although Runciman and his co-authors blame the tort system for impeding quality improvements, they note that even in countries that use "no-fault" compensation systems, "few initiatives to improve safety eventuate." Runciman et al., *supra* note 71, at 974.

<sup>187</sup> Surveys of physicians document significant variation in perceived risk of malpractice claim. See WEILER ET AL., *supra* note 97, at 124-25.

<sup>188</sup> Malpractice premiums are not risk-adjusted within specialties, which further dampens the financial consequences associated with malpractice risk. See Hyman, *supra* note 98, at 1645.

<sup>189</sup> See Heidi Wald & Kaveh G. Shojania, *Incident Reporting*, in AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, MAKING HEALTH CARE SAFER: A CRITICAL ANALYSIS OF PATIENT

event is one in which an error harms a patient—a patient with a known allergy, for example, may be given a drug that triggers an allergic response, thereby injuring the patient.<sup>190</sup> A no-harm event occurs when a mistake is made but the patient avoids injury as a matter of luck or chance.<sup>191</sup> Thus, although a contraindicated treatment is provided, the patient does not suffer the expected adverse consequences. A near miss occurs when a mistake is made but is caught before treatment occurs.<sup>192</sup> Here, for example, a doctor might prescribe a drug that should be withheld from a patient, but the hospital's pharmacist catches the error and refuses to dispense the drug.

Because no-harm events and near misses occur much more frequently than adverse events, they are important sources of information about the reliability of health care delivery systems.<sup>193</sup> For this reason, researchers emphasize the importance of learning about them, studying them, and correcting them.<sup>194</sup> No-harm events and near misses are also less likely to provoke feelings of guilt or shame, and evaluations of these errors are less susceptible to hindsight bias.<sup>195</sup>

If the conventional wisdom is correct, providers should focus on no-harm events and near misses aggressively since they face no liability for these errors. Yet, providers appear to give near misses and no-harm events even less attention than adverse events.<sup>196</sup> Consider the case of Dr. Michael Leonard, an anesthesiologist and chief of surgery for Kaiser Permanente in Denver, who accidentally gave a patient a paralyzing agent instead of the reversal agent he meant to administer.<sup>197</sup> The drugs were kept side by side in the same drawer and had similar packaging—Dr. Leonard simply reached into the drawer and grabbed the wrong one.<sup>198</sup> Fortunately, the paralyzing agent did not harm the patient.<sup>199</sup> When Dr. Leonard discussed the blunder with his partners, he learned that four of five had previously made the

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SAFETY PRACTICES 42 (2001), available at <http://www.ahrq.gov/clinic/psafety/pdf/chap4.pdf>.

<sup>190</sup> See *id.*

<sup>191</sup> See *id.*

<sup>192</sup> See *id.*

<sup>193</sup> See Sheryl Gay Stolberg, *Do No Harm: Breaking Down Medicine's Culture of Silence*, N.Y. TIMES, Dec. 5, 1999, at D1.

<sup>194</sup> Barach & Small, *supra* note 173, at 1684; Jeffrey B. Cooper, *Toward Prevention of Anesthetic Mishaps*, in ANALYSIS OF ANESTHETIC MISHAPS, *supra* note 124, at 167, 181 (emphasizing importance of studying "even minor errors and failures").

<sup>195</sup> Hindsight bias may cause negligence to be found more often when patients are known to have suffered injury. See Wald & Shojania, *supra* note 189, at 42.

<sup>196</sup> See IOM, *supra* note 5, at 34 (studying error reporting at 5 institutions, and finding that only 3 of 54 inpatient adverse drug events were reported).

<sup>197</sup> See Stolberg, *supra* note 193, at D1.

<sup>198</sup> See *id.*

<sup>199</sup> See *id.*



same mistake, but that none of the other physicians thought to volunteer this information or to devise a systemic solution despite the absence of liability.<sup>200</sup> Only when Dr. Leonard took the initiative did a hospital pharmacist change the label on the paralyzing agent and put it in a separate drawer.<sup>201</sup>

Systematic research confirms this pattern: noninjurious errors are rarely reported. A survey by the Institute for Safe Medication Practices (ISMP) found that staff were "more likely" to report errors that actually reach the patient and cause harm than to report other mistakes.<sup>202</sup> The number of respondents who thought it "very likely" that practitioners would report harmless errors ranged from a high of thirty percent for errors that reach the patient but cause no harm to a low of eight percent for potentially hazardous situations that could lead to an error.<sup>203</sup> Simply stated, "[m]ost errors and safety issues go undetected and unreported, both externally and within health care organizations."<sup>204</sup>

A similar dynamic operates with regard to "old" errors. Providers could learn a great deal about the origins of errors by studying patients' charts.<sup>205</sup> If liability in fact impeded this approach, providers could focus on records revealing errors for which the statute of limitations had run. The literature on medical malpractice and patient safety provides no indication that hospitals or other providers have systematically studied "closed" charts.<sup>206</sup>

Admittedly, there are a variety of reasons why providers might conclude that review of closed charts is not cost-effective. For example, charts may lack the information needed to identify mistakes,<sup>207</sup> the state of medical science can change before the statute of limita-

<sup>200</sup> See *id.*

<sup>201</sup> See *id.*

<sup>202</sup> *ISMP Survey Shows Weaknesses Persist in Hospital Systems for Error Detection, Reporting and Analysis*, ISMP MEDICATION SAFETY ALERT!, Nov. 15, 2000 [hereinafter *ISMP Survey*], available at <http://www.ismp.org/MSAarticles/ReportingSurvey.html>.

<sup>203</sup> *Id.* (emphasis removed).

<sup>204</sup> IOM, *supra* note 5, at 43.

<sup>205</sup> Many investigators, including the team that produced the HMPS, have used old files to estimate the frequency of patient injuries and medical negligence. See, e.g., WEILER ET AL., *supra* note 97, at 12.

<sup>206</sup> Indeed, there is evidence that many hospitals are reluctant to review such charts when they are asked by payers to document the quality of care they are providing. Hospitals complain that such review is costly, and they are not being paid to do it.

<sup>207</sup> In fact, in one study, almost 80% of observed adverse events or errors were omitted from the medical records. See Thomas J. Krizek, *Surgical Errors: Ethical Issues of Adverse Events*, 135 ARCHIVES OF SURGERY 1359, 1361 (2000); see also Lori B. Andrews et al., *An Alternative Strategy for Studying Adverse Events in Medical Care*, 349 LANCET 309, 309 (1997) (utilizing ethnographers to review medical records and procedures in a study of adverse events).

tions runs, and providers may believe that their concurrent review practices adequately handle errors.

More importantly, the risk of liability, once again, turns out to be a relatively unimportant factor in the decisionmaking of individual providers. As such, one should not expect the elimination or restriction of liability to have much of an effect on the patient safety efforts of individual providers. In short, when it comes to preventing providers from addressing medical error, tort liability has neither bark nor bite.<sup>208</sup>

#### F. Disclosure and Error Reporting by Providers that are Exempt from Tort Liability

If the conventional wisdom were accurate, one might expect to find cultures of safety, good communication, and superior commitments to quality in practice areas where doctors, nurses, and other individuals do not face malpractice suits. One such place is the Veterans Health Administration (VHA), which provides services to millions of veterans in 173 medical centers, almost 400 ambulatory care facilities and clinics, and more than a hundred nursing homes.<sup>209</sup> The Federal Tort Claims Act (FTCA)<sup>210</sup> precludes veterans injured during medical treatment from suing VHA doctors and nurses.<sup>211</sup> Veterans can sue the VHA itself, but if their malpractice-related injuries stem from service-related problems, they can obtain free remedial treatments and monthly disability stipends without suing or proving fault.<sup>212</sup>

Because the FTCA curtails individual provider liability and reduces the need to file lawsuits, the conventional wisdom would pre-

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<sup>208</sup> See 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, 1287 (1992) (“Perhaps the tort system achieves what deterrence it does by the unpleasantness of its operation—at least as that is experienced or imagined by defendants. The tort system is a mouse with an otherworldly roar.”).

<sup>209</sup> U.S. DEP’T OF VETERANS AFFAIRS, HIGHLIGHTS OF PRODUCTS AND SERVICES, at [http://www.hl7.org/about/profiles\\_recordView.cfm?recordID=007657](http://www.hl7.org/about/profiles_recordView.cfm?recordID=007657) (last visited Jan. 8, 2005).

<sup>210</sup> See 28 U.S.C. §§ 2672, 2679(b)(1) (2000).

<sup>211</sup> See Steve S. Kraman & Ginny Hamm, *Risk Management: Extreme Honesty May Be the Best Policy*, 131 ANNALS INTERNAL MED. 963, 966 (1999) (reporting that doctors employed at VA hospitals do not pay malpractice premiums, but are subject to error reporting and other forms of professional discipline); Thomas K. Kruppstadt, *Determining Whether a Physician is a United States Employee or an Independent Contractor in a Medical Malpractice Action Under the Federal Tort Claims Act*, 47 BAYLOR L. REV. 223, 226 (1995) (observing that “[a]s a U.S. employee, a physician is immune from individual malpractice liability,” but noting that the method for determining whether a physician is an employee or an independent contractor needs “clearer resolution”); Albert W. Wu, *Handling Hospital Errors: Is Disclosure the Best Defense?*, 131 ANNALS INTERNAL MED. 970, 971 (1999) (“[G]overnmental physicians are protected from personal liability [by the FTCA] and are not named in malpractice lawsuits, although they are subject to reporting in cases of negligence.”).

<sup>212</sup> See Kraman & Hamni, *supra* note 211, at 966.

dict high levels of error reporting and a continuous strong commitment to patient safety among health care workers in VHA facilities. The reality is quite different. Until recently, VHA hospitals had "long [been] notorious for serious lapses in medical safety."<sup>213</sup> During the 1970s and 1980s, official reports consistently described significant quality problems in VHA facilities. A 1985 General Accounting Office (GAO) report found numerous, serious deficiencies in VHA performance and monitoring of quality assurance activities.<sup>214</sup> Congress issued its own report criticizing the VHA the same year.<sup>215</sup> Dissatisfied with the VHA efforts to improve care, Congress enacted legislation in 1986 requiring the compilation and analysis of "mortality and morbidity data for surgical programs, and selected VAMC data for specific surgical procedures."<sup>216</sup> In 1987, the GAO issued a report finding that VHA facilities "were significantly under-reporting patient safety incidents."<sup>217</sup>

Throughout the late 1980s and 1990s, these developments led to increased external oversight of the VHA, a series of reports by the VHA affirming its commitment to quality, and several reorganizations of VHA offices responsible for quality assurance.<sup>218</sup> The VHA also instituted a comprehensive risk management program requiring disclosure of medical errors to patients.<sup>219</sup>

These recent efforts seem to be paying off. Reports on adverse drug reactions and other medical errors have increased dramati-

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<sup>213</sup> Cathy Tokarski, Agency for Healthcare Research and Quality, *Medical Error-prevention Strategies Face Barriers to Acceptance* (May 2000) available at <http://www.ahrq.gov/news/medscap2.htm>.

<sup>214</sup> OFFICE OF INSPECTOR GEN., QUALITY MANAGEMENT IN THE DEPARTMENT OF VETERANS AFFAIRS VETERANS HEALTH ADMINISTRATION, REP. NO. 8HI-A28-072, at 3 (Feb. 17, 1998) [hereinafter OIG] (reporting that GAO's 1983 review of OMI [Office of Medical Inspector] found "that VAMCs [Veterans Affairs Medical Centers] had not implemented the required Quality Assurance programs, and that the OMI was not adequately evaluating the effectiveness of VAMCs' QA programs").

<sup>215</sup> See COMM. ON GOV'T OPERATIONS, PATIENTS AT RISK: A STUDY OF DEFICIENCIES IN THE VETERANS ADMINISTRATION MEDICAL QUALITY ASSURANCE PROGRAM, H.R. REP. NO. 100-74 (1985).

<sup>216</sup> See OIG, *supra* note 214, at 3.

<sup>217</sup> *Id.* at 3.

<sup>218</sup> See *id.* at 1-7.

<sup>219</sup> The program directs personnel to improve delivery systems, to report adverse events, to study adverse events in order to improve delivery systems, to disseminate information about improvements throughout the VHA, and to inform patients and their families about injuries resulting from adverse events and their available options for recourse. See DEP'T OF VETERANS AFFAIRS, VHA MANUAL I051/I (1998) (stating that when an accident or negligence injures a patient, "the medical center will inform the patient and/or the family, as appropriate, of the event, assure them that medical measures have been implemented, and that additional steps are being taken to minimize disability, death, inconvenience, or financial loss to the patient or family").

cally.<sup>220</sup> VHA facilities, which scored below other hospitals in Joint Commission on Accreditation of Healthcare Organization (JCAHO) ratings through 1990, obtained higher scores than other hospitals during 1991–93 and approximately equal scores thereafter.<sup>221</sup> VHA's re-engineered systems improved its performance so greatly that, in 2000, VHA outperformed hospitals serving Medicare fee-for-service patients on twelve of thirteen quality indicators.<sup>222</sup> A more recent study indicates that “[p]atients from the VHA received higher-quality care according to a broad measure,” and that “[d]ifferences were greatest in areas where the VHA has established performance measures and actively monitors performance.”<sup>223</sup> VHA facilities continue to experience problems,<sup>224</sup> but in some respects now lead in quality assurance.<sup>225</sup>

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<sup>220</sup> *Id.* at 33 (“Following increased emphasis on adverse drug event reporting, VHA managers stated that between 1988 and 1992 adverse drug reaction reports increased from 22 a year to about 4,000 a year.”); Robert Pear, *Report Outlines Medical Errors in V.A. Hospitals*, N.Y. TIMES, Dec. 19, 1999, at 1 (reporting that between June 1997 and December 1998, “the first 19 months of a new policy that requires employees to report medical errors and ‘adverse events,’” VHA undertook a comprehensive self-examination that documented 3,000 mistakes resulting in more than 700 deaths, a mortality rate of 24%).

<sup>221</sup> See OIG, *supra* note 214, at 74. JCAHO ratings reflect the efforts of VHA hospitals to improve. See *id.* at 22. “In FY 1996, VHA facilities’ average JCAHO Hospital Accreditation Program scores were 94 out of a possible 100 percent, the highest ever,” and “[n]ine VAMCs received ‘accreditation with commendation,’” an award reserved for organizations “demonstrat[ing] exemplary performance in complying with Joint Commission standards.” *Id.* at 22–23.

<sup>222</sup> See Ashish K. Jha et al., *Effect of the Transformation of the Veterans Affairs Health Care System on the Quality of Care*, 348 NEW ENG. J. MED. 2218, 2218, 2224 tbl.3 (2003).

<sup>223</sup> See Steven M. Asch et al., *Comparison of Quality of Care for Patients in the Veterans Health Administration and Patients in a National Sample*, 141 ANNALS INTERNAL MED. 938, 938 (2004).

<sup>224</sup> See, e.g., Laura A. Petersen et al., *Regionalization and the Underuse of Angiography in the Veterans Affairs Health Care System as Compared with a Fee-for-Service System*, 348 NEW ENG. J. MED. 2209, 2209 (2003) (finding that underutilization of angiography is significantly greater in VHA facilities than in fee-for-service Medicare hospitals).

<sup>225</sup> See *VA Patient Safety: Initiatives Promising but Continued Progress Requires Culture Change: Hearing Before the Subcomm. on Oversight and Investigations of the House Comm. on Veterans’ Affairs*, 106th Cong. 2 (2000) (statement of Cynthia A. Bascetta, Assoc. Dir. Veteran’s Affairs and Military Health Care Issues, Health, Educ., and Human Servs. Div.) [hereinafter GAO Testimony], available at <http://www.gao.gov/archive/2000/he00167t.pdf> (last visited Jan. 8, 2005). In 1999, the VA had tested and deployed a bar code medication administration (BCMA) system to reduce medication errors and police drug interactions. *Id.* at 5. Progress with implementing this program was slower than expected, however. See *id.* The “VA reported that during a BCMA pilot test . . . medication errors were reduced by about 70 percent. Systemwide implementation of BCMA was scheduled for June 30, 2000,” but by that date, “only 79 of 137 facilities ha[d] fully implemented BCMA” and “9 facilities ha[d] not implemented BCMA in any area.” *Id.* VHA has also advanced the practice of using “predictive models . . . [of] risk-adjusted surgical outcomes as a means for assessing quality of surgical care . . . . This [sic] data enables VHA clinicians to more accurately determine when both poor and exceptional outcomes are the direct result of a surgical team’s skill and competence.” See OIG, *supra* note 214, at 20–21.

Although VHA facilities have improved remarkably, the important point is that until recently their patient safety performance was no better than other institutions, and the recent improvements resulted from external pressure.<sup>226</sup> Health care professionals did not spontaneously reform VHA hospitals from within, even though VHA personnel bore no exposure to liability suits. To the contrary—despite the complete absence of malpractice risk for individual providers—they created a punitive and fear-inspiring “shame and blame” culture that continues to permeate the VHA and impede progress.<sup>227</sup> The fact that these problems were addressed in response to external oversight makes clear that external monitoring and feedback are important and necessary tools for improving quality.<sup>228</sup>

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<sup>226</sup> As the OIG noted,

VHA top managers need to recognize and appreciate the fact that the several QM [Quality Management] processes and methodologies, and the strong centralized QM oversight and control that VHA adopted in the period from 1985 to 1995, were developed in response to Congressional and public perceptions that VA did not practice sound and effective patient care. These perceptions were based on the reality of a few very seriously flawed cases that prevailing VHA QM processes failed to recognize or address.

OIG, *supra* note 214, at 49. In 1997, OIG observed that consistent implementation of VHA QM policies by clinicians “has always been, and continues to be, a problem. Inconsistent and ineffective policy adherence, plus the failure to use the latest available information to improve systems, render policies ineffective and create the impression that QM efforts are wasted.” *Id.* at 8. In testimony delivered to Congress in 2000, the GAO reported, “VA will face significant challenges to ensure the success of its patient safety effort. In particular, establishing a culture of safety . . . will require sustained commitment to effect permanent change.” GAO Testimony, *supra* note 225, at 6. A follow-up letter identified the problem more precisely:

VA needs to overcome obstacles that impede the move from a ‘blame and shame’ way of handling adverse events to a culture of safety that looks openly at how and why adverse events occur and how systems can be improved to prevent them in the future. . . . VA must convey the message to all its employees that patient safety is everyone’s responsibility. . . .

Letter from Cynthia A. Bascetta, Dir. Health Care—Veterans’ Health and Benefits Issues, U.S. Gen. Accounting Office, to Terry Everett, Chairman, House Subcomm. on Oversight and Investigations, Comm. on Veterans’ Affairs, H.R. 3 (Oct. 13, 2000) [hereinafter GAO Letter], available at <http://www.gao.gov/new.items/d01123r.pdf> (last visited Feb. 5, 2005). The GAO closed its letter by noting that the VA would soon survey its employees to learn whether they felt “safe enough to report adverse events.” See *id.* at 7; see also Kraman & Hamm, *supra* note 211, at 965 (noting that prior to reforms, when injuries happened VHA hospitals made “no organized effort . . . to standardize or track the notification of affected patients”); Pear, *supra* note 220, at 50.

<sup>227</sup> See GAO Letter, *supra* note 226, at 3; see also GAO Testimony, *supra* note 225, at 7 (suggesting that if VHA leaders committed to a strong pro-safety message, a cultural transformation could occur in merely 5 to 7 years).

<sup>228</sup> The VHA resembles private health care providers in that external forces were necessary to drive quality improvements. See Kelly J. Devers et al., *What Is Driving Hospitals’ Patient-Safety Efforts?*, 23 HEALTH AFF., Mar./Apr. 2004, at 103, 105–06, 109 (noting the importance of the JCAHO in driving hospital quality improvement); Jensen & Tiuker, *supra* note 66 (observing that few of the efforts made by hospitals and physicians to meet quality guidelines in the 1980s were “generated spontaneously from within these health

Thus, although VHA personnel have no malpractice exposure, they have historically experienced the same “shame and blame” culture and dysfunctional systems prevailing among providers subject to full-blown tort liability.<sup>229</sup> The absence of liability did not spontaneously result in a culture that encouraged reporting of medical errors, let alone prevention of future medical errors. Instead, like other health care providers, the VHA culture discouraged transparency, error reporting, and disclosure by humiliating people for being imperfect.<sup>230</sup> The existence and persistence of this culture *in the absence of* personal liability for mistakes is inconsistent with the conventional wisdom’s assertion that malpractice liability poisons a well that would otherwise be pure.

### G. Defensive Medicine and Liability

Proponents of the conventional wisdom often cite “defensive medicine” as an example of tort liability’s tendency to degrade health care quality. Defensive medicine occurs when a provider orders a test or procedure that has little or no utility for a patient solely to reduce the risk of a lawsuit.<sup>231</sup> Doctors, medical societies, insurers, and tort reform advocates argue that defensive medicine is widespread.<sup>232</sup> Philip Howard—a member of Common Good, an organization that opposes the use of courts to regulate physicians—contends that defensive medicine costs more than \$100 billion per year.<sup>233</sup>

The empirical evidence supporting claims of defensive medicine is far from conclusive, and it appears that Howard’s claims are grossly exaggerated.<sup>234</sup> As Professors Mello and Brennan observe, “Most defensive-medicine studies have failed to demonstrate any real impacts on medical practice arising from higher malpractice premiums.”<sup>235</sup> In 2003, the Congressional Budget Office studied Medicare patients

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care provider groups; most w[ere] in reluctant response to external pressure” from regulators, accrediting organizations, and professional associations).

<sup>229</sup> See *supra* note 226–27 and accompanying text.

<sup>230</sup> See *id.*

<sup>231</sup> See, e.g., *Shortcomings Found in Mammogram Readings*, WALL ST. J., Oct. 22, 2003, at D2 (reporting on a study finding that “American doctors do twice as many tests to find the same number of breast-cancer cases as physicians in Britain,” and citing “greater fear of malpractice suits in this country” as a cause).

<sup>232</sup> See, e.g., AM. MED. ASSOC., *supra* note 72, at 8 (describing the defensive medicine “crisis” and asserting that “[t]he costs of defensive medicine are estimated to be between \$70–\$126 billion per year”).

<sup>233</sup> See Philip K. Howard, *Legal Malpractice*, WALL ST. J., Jan. 27, 2003, at A16.

<sup>234</sup> See Danzon, *supra* note 7, at 1368–71. For an extended critique of Common Good’s use of the \$100 billion figure, see David A. Hyman & Charles Silver, *Believing Six Improbable Things: Medical Malpractice and “Legal Fear”*, HARV. J.L. & PUB. POL’Y 107 (Fall 2004).

<sup>235</sup> Mello & Brennan, *supra* note 86, at 1606.

treated for a broad range of conditions, but “failed to find any impact of state tort laws on medical spending.”<sup>236</sup>

The difficulty in proving the causal link between malpractice exposure and higher levels of defensive medicine arises from the multitude of motives providers may have for performing “unnecessary” tests and procedures, including greater risk-aversion, a difference of opinion as to comparative utility, and the desire to generate income.<sup>237</sup> Consequently, blaming the liability system as the sole cause of spending on unnecessary procedures and tests is problematic.

An alternative formulation of the defensive-medicine argument asserts that malpractice liability and high insurance premiums cause providers to abandon high-risk specialties, and flee states with pro-patient tort regimes. The AMA, for example, contends that access crises exist in twenty states.<sup>238</sup> The evidence supporting this position, however, is shaky. A 2003 GAO report found isolated examples of access problems in some rural areas, but generally found that reports of access crises were overblown and that Medicare patients continued to receive high-risk procedures at stable or rising rates in so-called “crisis” states.<sup>239</sup>

Further, even if evidence of significant access problems existed, one might still wonder about the implications of this finding. A reduction in service availability could mean that good doctors are refusing to see patients, or that bad ones are. The reduction in service

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<sup>236</sup> U.S. GEN. ACCOUNTABILITY OFFICE, MEDICAL MALPRACTICE ACCOUNTABILITY: IMPLICATIONS OF RISING PREMIUMS ON ACCESS TO HEALTH CARE, REP. NO. GAO-03-836, at 29 (2003), (citing U.S. CONGRESS, CONGRESSIONAL BUDGET OFFICE (CBO), COST ESTIMATE: H.R. 5—HELP EFFICIENT, ACCESSIBLE, LOW-COST, TIMELY HEALTHCARE (HEALTH) ACT OF 2003 (2003)) [hereinafter GAO Report], available at [www.goa.gov/new.items/d03836.pdf](http://www.goa.gov/new.items/d03836.pdf) (last visited Feb 3, 2005).

<sup>237</sup> Physicians who invest in a facility that provides ancillary services, for example, have an incentive to refer patients to that facility. As a result, these arrangements are regulated to control the risk of self-dealing. See David A. Hyman, *Health Care Fraud and Abuse: Market Change, Social Norms, and the Trust “Reposed in the Workmen”*, 30 J. LEGAL STUD. 531, 534–35 (2001); see also Penelope Patsuris, *Scan-dalous*, FORBES, July 27, 2004 (estimating that “unnecessary diagnostic imaging costs the health care system \$16 billion annually,” a “direct result of the fact that so many non-radiologists now own their own scanners”), available at [http://www.forbes.com/healthcare/2004/07/27/cx\\_pp\\_0727medimaging\\_ii.html](http://www.forbes.com/healthcare/2004/07/27/cx_pp_0727medimaging_ii.html).

<sup>238</sup> Press Release, Am. Med. Assoc., Massachusetts Becomes 20th State in a Medical Liability Crisis (June 14, 2004), at <http://www.ama-assn.org/ama/pub/category/13964.html>; AM. MED. ASSOC., *supra* note 72, at 4–5 (expressing concern regarding access, and asserting that “[f]orty-five percent of hospitals reported that the professional liability crisis has resulted in the loss of physicians and/or reduced coverage in emergency departments”).

<sup>239</sup> See GAO Report, *supra* note 236, at 5. The five “crisis” states were Florida, Mississippi, Nevada, Pennsylvania, and West Virginia. *Id.* at 3 n.9. Though the GAO “did not attempt to generalize [its] findings beyond these five states,” it did state that “the experiences of these five states provide important insight into the overall problem” because they are the most often-cited examples of crisis states. *Id.* at 7.

could also be completely unrelated to malpractice liability.<sup>240</sup> The assertion that access reductions are always distressing rests on an unarticulated (and indefensible) assumption that providers have an absolute and unrestricted right to determine the scope and location of their practices, regardless of the quality of service they deliver.

Consider an example. With 550 inpatient beds, Erie County Medical Center (ECMC) in Buffalo, New York is one of the leading health care providers in the region.<sup>241</sup> Many of its physicians are members of the teaching faculty at the State University of New York at Buffalo, making ECMC a leader in education and research.<sup>242</sup> Yet, in 1990, ECMC stopped admitting patients to its cardiac surgery unit for cardiac artery bypass graft (CABG) procedures.<sup>243</sup> Eventually, twenty-seven of the doctors who formerly performed CABG surgeries at ECMC stopped doing so entirely, and the pool of experienced specialists shrank.<sup>244</sup>

One might think these events were disastrous for Buffalo patients, who had to travel long distances to other facilities or lost access to needed surgical services entirely. One would be wrong. The closing of ECMC's cardiac surgery unit didn't harm patients; it helped them. ECMC voluntarily suspended CABG operations because its patients were dying at exceptionally high rates<sup>245</sup>—its risk-adjusted mortality rate of 17.6% was almost four times the state-wide average.<sup>246</sup> The New York State Cardiac Surgery Reporting System found that, for the first six months of 1989, ECMC's cardiac unit was the worst in the state.<sup>247</sup> Closing the unit saved patients' lives by diverting them to better facilities.

The story doesn't end there. After a temporary shutdown, ECMC revamped the cardiac surgery unit by establishing a quality assurance

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<sup>240</sup> See, e.g., Jason Felch, *Valley's Oldest Hospital to Close*, L.A. TIMES, Aug. 20, 2004, at B1 (reporting that six hospital emergency rooms closed during the preceding 14 months because of "substantial financial losses" stemming from "the decline in reimbursement that hospitals receive for uninsured patients," "a new set of state minimum standards for the number of nurses on a shift," and "a statewide deadline for meeting new earthquake retrofit rules"). When investigating the AMA claims of access shortages, the GAO often discovered that identified providers ceased operations for reasons unrelated to liability risk. See GAO Report, *supra* note 236, at 16–19 (discovering that some closures resulted from decreased demand, and that departing physicians often left for reasons unrelated to malpractice concerns).

<sup>241</sup> ECMC Corp., "About Us," About the Erie County Medical Center Corporation (ECMCC), at <http://www.ecmc.edu/about.html> (last visited Feb. 5, 2005).

<sup>242</sup> *Id.*

<sup>243</sup> See Mark R. Chassin, *Achieving and Sustaining Improved Quality: Lessons from New York State and Cardiac Surgery*, 21 HEALTH AFF., July/Aug. 2002, at 40, 42–43 (2002).

<sup>244</sup> See *id.* at 43.

<sup>245</sup> *Id.* at 42.

<sup>246</sup> *Id.* at 40, 42.

<sup>247</sup> *Id.* at 42.



program, recruiting a permanent full-time service chief, hiring operating room nurses and other staff, removing surgeons with low-volume practices, and instituting weekly teaching conferences.<sup>248</sup> The improvement was spectacular. For 1993–95, ECMC’s risk-adjusted mortality rate was 2.51%, a notch *below* the state average of 2.57%.<sup>249</sup> In 1996–98, its rate was 1.77% when the rest of the state averaged 2.27%.<sup>250</sup> When the 1990s began, ECMC’s cardiac surgery unit was the worst in New York State<sup>251</sup>—when the decade ended, it was one of the best.<sup>252</sup>

ECMC’s story is not unique. When New York started issuing report cards on cardiac surgery units in 1989, many hospitals were shocked by their low scores.<sup>253</sup> The hospitals had no idea their units were underperforming, because they had failed to benchmark their results.<sup>254</sup> Many reacted as ECMC did, by restricting or eliminating surgeons’ privileges.<sup>255</sup> Between 1989 and 1992, twenty-seven cardiac surgeons stopped performing CABG surgery in New York, either by leaving the state or switching to other specialties.<sup>256</sup> Again, patients benefited from the “loss.” “As a group, . . . these twenty-seven surgeons experienced a risk-adjusted mortality rate of 11.9 percent, nearly four times the state average of 3.1 percent” for CABG procedures.<sup>257</sup> The exodus of surgeons saved New Yorkers’ lives, as did other improvements in low-scoring providers’ service quality.<sup>258</sup>

The history of cardiac surgery in New York holds many lessons. One is that, absent good information, no one really knows which doctors, hospitals, or clinics are “the best.”<sup>259</sup> Providers rarely collect data on patient outcomes, and they almost never compare their performance to their competitors. Because no one keeps score, the health

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248 *Id.* at 42–43.

249 *Id.* at 43.

250 *Id.*

251 *See id.* at 42.

252 *See id.* at 43.

253 *See id.* at 42–45.

254 *See id.*

255 *See id.*

256 *Id.* at 43.

257 *Id.*

258 *See id.* at 45–46. For a dissenting view, see David Dranove et al., *Is More Information Better? The Effects of “Report Cards” on Health Care Providers*, 111 J. POL. ECON. 555, 556 (2003) (contending that “at least in the short run, . . . report cards decreased patient and social welfare”).

259 A recent study found that Medicare patients treated at hospitals identified as “centers of excellence” by the National Cancer Institute had five-year survival rates that were no better than the survival rates of patients treated at other high-volume hospitals. Nancy J.O. Birkmeyer, *Do Cancer Centers Designated by the National Cancer Institute Have Better Surgical Outcomes?*, 103 CANCER 435, 435 (2005).

care sector can pretend to be an enormous “Lake Wobegon,” in which all providers are above average.<sup>260</sup>

A second lesson of the New York experience is that some health care providers *should* curtail services or close because they are serving patients worse than others. This lesson prompted the Leapfrog Group to prioritize getting low-volume hospitals out of certain lines of work so that patients can obtain better care elsewhere.<sup>261</sup> Leapfrog Group’s evidence-based hospital referral initiative diverts patients away from low-volume providers and toward high-volume hospitals that produce better results.<sup>262</sup>

In other businesses and industries, the public expects the market to force inferior producers to close their doors. The resulting loss of capacity is only a temporary setback, because superior producers will expand to better serve consumers. Oldsmobile, for example, manufactured its last car in 2004.<sup>263</sup> Although aficionados may lament the brand’s demise (after all, it was a fixture of the automotive marketplace for 106 years<sup>264</sup>), consumers can still buy all the cars they want. Honda, Chevrolet, and other manufacturers will happily serve their needs.

The same dynamic operates in health care. When tort costs encourage some providers to leave certain practice areas, superior providers can replace them. For this reason, the importance of departures of particular doctors and hospitals should not be assessed in isolation. When the GAO investigated alleged access problems in so-called “crisis states,” it often found that other providers picked up the slack left by those that departed.<sup>265</sup>

<sup>260</sup> See Hyman & Silver, *supra* note 88, at 1439 (“[P]roviders all believed they were above average performers. This ‘Lake Wobegon’ effect was not dispelled until statistics showing enormous quality disparities became available.”). Lake Wobegon, of course, is the fictional town created by Garrison Keillor, where “all the women are strong, all the men are good-looking, and all the children are above average.” Dirk Johnson, *With Singing, Satire and Sentiment, Lake Wobegon Fades*, N.Y. TIMES, June 14, 1987, at 26. Conversely, once information becomes available, it turns out that everyone with bad results claims they have patients that are sicker than average—creating the first-ever reverse-Lake Wobegon effect. See Hyman & Silver, *supra* note 88, at 1440 n.63.

<sup>261</sup> See THE LEAPFROG GROUP FOR PATIENT SAFETY, FACT SHEET: EVIDENCE-BASED HOSPITAL REFERRAL 1 (2004), (“Lower surgical mortality at high-volume hospitals does not simply reflect more skillful surgeons and fewer technical errors . . . . More likely, it reflects more proficiency with all aspects of care . . . .”), available at [http://www.leapfroggroup.org/media/file/LeapFrog-Evidence-Based\\_Hospital\\_Referral\\_Faci\\_Sheet.pdf](http://www.leapfroggroup.org/media/file/LeapFrog-Evidence-Based_Hospital_Referral_Faci_Sheet.pdf) (last modified Apr. 7, 2004).

<sup>262</sup> See *id.* at 1–2.

<sup>263</sup> Peter Valdes-Dapena, *Dead at 106: Oldsmobile: The Last Car from America’s Oldest Car Company Rolls Off the Line Thursday in Lansing, Mich.*, CNN/MONEY, Apr. 29, 2004, at [http://money.cnn.com/2004/04/28/pf/autos/olds\\_dead/?cnn=yes](http://money.cnn.com/2004/04/28/pf/autos/olds_dead/?cnn=yes) (last visited Feb. 5, 2005).

<sup>264</sup> See *id.*

<sup>265</sup> GAO Report, *supra* note 236, at 17–26.

Even assuming that defensive medicine and physician flight are genuine problems, the conventional wisdom seems less persuasive, not more. The conventional wisdom denies that tort punishments deter providers from making mistakes.<sup>266</sup> Yet, complaints about defensive medicine and physician flight make sense only if providers respond to punishments rationally—that is, by avoiding them. If providers are rational, they can also respond to malpractice liability by improving the quality of their services, i.e., by reducing the frequency and severity of their errors. The defensive-medicine critique of tort liability implausibly assumes that rational providers respond to liability risks only by taking steps that harm patients.<sup>267</sup>

If tort reformers were genuinely worried about defensive medicine and desired to prevent it, they would offer vastly different proposals from the ones they now endorse. Concern about unnecessary tests and procedures, for example, might lead them to call for evidence-based treatment guidelines specifying when and if certain tests need to be performed. Concern over impaired access might lead reformers to propose higher Medicaid payments for obstetricians and other providers in high-risk fields—to be paid only if they adopt error-reducing technology.<sup>268</sup>

If the problem is truly defensive medicine and provider flight, caps on noneconomic damages and contingent fees are a thoroughly perverse way of addressing those problems. This mismatch between diagnosis and treatment is compounded by the fact that tort reformers are seeking a federal solution, when only some states are reportedly experiencing access problems.

#### H. Actual Practices of Discovering and Disclosing Errors

According to the conventional wisdom, liability encourages providers to ignore errors and hide mistakes, thus impeding patients' ability to establish causation. Stated differently, the conventional wisdom treats ignorance and secrecy as dominant strategies to avoid liability.<sup>269</sup>

Ignorance and secrecy are possible responses to liability risks, but they are not the only choices available. Investigation and disclosure

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<sup>266</sup> See *supra* Part II.

<sup>267</sup> See JOST, *supra* note 171, at 51 (discussing the salience of malpractice penalties to physicians as a source of quality improvements in diverse areas).

<sup>268</sup> Cf. Schoenbaum & Bovbjerg, *supra* note 119, at 52 (suggesting that payers could subsidize the malpractice premiums of physicians who make patient safety enhancements).

<sup>269</sup> A dominant strategy yields an expected payoff higher than any other strategy, no matter what strategy one's opponent chooses. DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW* 306 (1994).

are options as well, and both can be used to varying degrees.<sup>270</sup> Consider disclosure. A provider can reveal an error to a colleague, a patient, or both. A provider can be candid and disclose all the available information, or a provider can be coy and disclose incompletely. A provider can admit error and apologize, admit error without apologizing, or apologize without admitting error. Finally, a provider can choose whether to offer compensation, and can determine how generous such an offer might be.

In practice, providers vary tremendously in their strategy choices. In a survey of risk managers at a random sample of hospitals, “[v]irtually all . . . reported disclosing harms to patients at least some of the time, and 80 percent had disclosure policies in place or under development.”<sup>271</sup> Fifty-four percent of risk managers said their hospitals routinely told patients or their families when patients were harmed by care.<sup>272</sup> Only two percent of risk managers said their hospitals never disclosed mistakes.<sup>273</sup> Hospitals also vary tremendously in what they disclose. The same study found that

[t]he most common elements of disclosures [to patients] were an explanation, an undertaking to investigate the incident, an apology, and an acknowledgement of harm. Relatively few respondents reported that a typical disclosure included a declaration of responsibility for the harm or a promise to share investigation results with the patients or their families.<sup>274</sup>

Seventeen percent of respondents, however, indicated that disclosures at their hospitals routinely included both a declaration of responsibility and a promise to share investigative results.<sup>275</sup> A majority of hospitals waived treatment costs associated with errors, but few offered compensation or referrals to support groups, regulatory agencies, or lawyers.<sup>276</sup>

Disclosure to coworkers is also frequent. A study of physicians-in-training found that “[m]istakes were discussed in attending rounds in 57% of cases and at the morning report or morbidity and mortality

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<sup>270</sup> Holzer, for example, describes a case study in which risk managers at a large teaching hospital fully disclosed an act of negligence that caused a patient’s death, and settled the claim “equitably . . . within weeks of the mishap.” Holzer, *supra* note 137, at 108–09. Afterwards, the hospital identified the cause of the mishap and took remedial steps to prevent future recurrences. *Id.* at 109–10.

<sup>271</sup> Rae M. Lamb et al., *Hospital Disclosure Practices: Results of a National Survey*, 22 HEALTH AFF., Mar./Apr. 2003, at 73, 78–79.

<sup>272</sup> *Id.* at 75.

<sup>273</sup> *Id.*, at 77 tbl.2.

<sup>274</sup> *Id.* at 75.

<sup>275</sup> *Id.*

<sup>276</sup> *Id.*

conference in 31% of cases.”<sup>277</sup> Residency training necessarily focuses on the detection and categorization of errors.<sup>278</sup> The frequency of these disclosures belies the assertion that secrecy is a dominant strategy.

To be sure, the diversity of existing practices shows that deciding how to respond to errors and liability risks is not a simple matter. Risk managers have widely varying ideas about the optimal approach.<sup>279</sup> The statement, “Liability causes providers to respond to errors by doing X,” where X includes communicate everything, communicate nothing, and a range of options in between, is not very informative.

A growing body of evidence also suggests that hiding mistakes does not minimize costs. When providers discuss mistakes openly and forthrightly, patients are less likely to sue than when providers engage in stonewalling.<sup>280</sup> As Professor Haavi Morreim has noted, “Often, the strongest predictor of whether a physician will be sued is the extent to which patients feel they are being treated with honesty, respect, and personal interest.”<sup>281</sup>

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<sup>277</sup> Albert W. Wu et al., *Do House Officers Learn from Their Mistakes?*, 265 JAMA 2089, 2093 (1991). Although some disclosures to co-workers are immune from discovery, the protections are far from complete. See IOM, *supra* note 5, at 119–21.

<sup>278</sup> See generally BOSK, *supra* note 21 (examining how surgeons detect, categorize, and sanction errors in hospitals).

<sup>279</sup> Ethical disclosure requirements that are applicable to doctors, nurses, and hospitals may drive some observed behavior. See *supra* Part III.C.

<sup>280</sup> See Ellen Wright Clayton et al., *Doctor-Patient Relationships*, in *SUING FOR MEDICAL MALPRACTICE* 50, 69 (Frank A. Sloan et al. eds., 1993) (finding that “problems with communication between doctors and patients were often crucial factors in precipitating individuals to file suit”); William M. Sage, *Medical Liability & Patient Safety*, 22 HEALTH AFF., July/Aug. 2003, at 26, 31 (“Malpractice suits are often prompted by the desire to obtain explanations for unexpected tragedies or to overcome failures of empathy and communication by physicians.”); see also Wendy Levinson et al., *Physician-Patient Communication: The Relationship with Malpractice Claims Among Primary Care Physicians and Surgeons*, 277 JAMA 553, 553 (1997) (studying communication styles of primary care physicians and surgeons, and “identif[y]ing specific and teachable communication behaviors associated with fewer malpractice claims for primary care physicians”).

<sup>281</sup> E. HAAVI MORREIM, *HOLDING HEALTHCARE ACCOUNTABLE: LAW AND THE NEW MEDICAL MARKETPLACE* 21 (2001); see also Blendon, *supra* note 12, at 1938 (finding that members of the public believed error reporting provided “a very effective” avenue for error reduction and believed such reports should be made public, in distinct contrast to physicians, who “would prefer that reports be kept confidential”); Gerald B. Hickson et al., *Factors that Prompted Families to File Medical Malpractice Claims Following Perinatal Injuries*, 267 JAMA 1359, 1361–62 (1992) (finding that 24% of families that filed malpractice claims relating to perinatal care said that “they filed when they realized that physicians had failed to be completely honest with them about what happened, allowed them to believe things that were not true, or intentionally misled them”); Kapp, *supra* note 9, at 759–65, and references cited therein (arguing that “significantly more legal claims are likely to result because a physician conceals an error” and recounting similar sentiments echoed by other professionals); Kathleen M. Mazon, et al., *Communicating with Patients About Medical Errors: A Review of the Literature*, 164 ARCHIVES OF INTERNAL MED. 1690, 1694 (2004) (finding that patients predicted that “they would be . . . less likely to file a lawsuit if the physician informed them of the error”).

Consider the experience of the Veterans Affairs Medical Center in Lexington, Kentucky. After suffering several sizeable malpractice judgments in 1987, risk managers adopted a new policy of identifying and investigating accidents and incidents of malpractice.<sup>282</sup> The policy included a practice of disclosing substandard conduct even when patients and their caregivers neither knew about nor would likely have discovered the conduct on their own.<sup>283</sup> Hospital employees even tracked down discharged patients, gave them the facts, and “persuade[d] the occasional reluctant victim to accept financial compensation.”<sup>284</sup>

This disclosure practice constituted a complete reversal of the Lexington facility’s prior method of responding to medical errors, which was “an adversarial combination of little disclosure and much opposition.”<sup>285</sup> The policy is also noteworthy because it was unique among VHA facilities when adopted, but did not precipitate a liability crisis at the Lexington facility. To the contrary, although the number of claims increased—an obvious consequence of revealing mishaps patients otherwise would have missed—the policy saved money overall by enabling the Lexington facility to resolve claims at a much lower cost than other VHA facilities.<sup>286</sup> Other hospitals subsequently adopted similarly expansive disclosure strategies, and achieved similar results.<sup>287</sup>

Businesses outside the health care industry have had analogous experiences. In 1991, the Toro Company, a manufacturer of lawn care products, switched from a strategy of aggressively defending all

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<sup>282</sup> Jonathan R. Cohen, *Apology and Organizations: Exploring an Example from Medical Practice*, 27 *FORDHAM URB. L.J.* 1447, 1447–50 (2000) (quoting Andrea Gerlin, *Accepting Responsibility, by Policy*, *PHILA. INQUIRER*, Sept. 14, 1999, at A18).

<sup>283</sup> *Id.* at 1448–49.

<sup>284</sup> *Id.* at 1448.

<sup>285</sup> *Id.* at 1451.

<sup>286</sup> *Id.* at 1449; Wu, *supra* note 211, at 971 (“Compared with 35 other Veterans Affairs medical centers in the eastern United States, the Lexington center has an average workload and is in the top quartile for number of claims filed and the bottom quartile for payments.”).

<sup>287</sup> See Lamb, *supra* note 271, at 80 (reporting anecdotal evidence of such results at Boston’s Dana Farber Cancer Institute, and empirical evidence of such results at Massachusetts’ Sturdy Memorial); Lindsey Tanner, *Doctors Advised: An Apology a Day Keeps the Lawyer Away* (Nov. 12, 2004) (reporting that “the hospitals in the University of Michigan health system have been encouraging doctors since 2002 to apologize for mistakes,” and that “[t]he system’s annual attorney fees have since dropped from \$3 million to \$1 million, and malpractice lawsuits and notices of intent to sue have fallen from 262 filed in 2001 to about 130 per year”), at <http://www.law.com/jsp/article.jsp?id=1100137001367>. See also Kraman & Hamm, *supra* note 211, at 966 (“[A]n honest and forthright risk management policy that puts the patient’s interest first may be relatively inexpensive because it allows avoidance of lawsuit preparation, litigation, court judgments, and settlements at trial.”). This type of policy may also generate goodwill and increase employee morale. See Cohen, *supra* note 282, at 1473–76.

claims to a less confrontational approach.<sup>288</sup> From 1992 to 1996, the average lifespan of its cases dropped from twenty-four months to four months, average payouts fell from \$68,368 to \$18,594, average costs and fees went from \$47,252 to \$12,023, and the average total cost per claim declined from \$115,620 to \$30,617.<sup>289</sup> Toro's liability carrier reduced its premiums by \$1.8 million over three years.<sup>290</sup> Overall, a more conciliatory approach saved Toro an estimated \$75 million between 1992 and 1999.<sup>291</sup>

Although a practice of dealing with errors honestly and forthrightly may be less expensive than a policy of hiding them, Professor Bryan Liang contends this option is not available to insured providers.<sup>292</sup> He bases this conclusion on the fact that medical malpractice policies typically require policyholders to refrain from making statements and taking other actions that would undermine carriers' ability to defend claims.<sup>293</sup> Liang argues that this requirement means that providers who deal with errors openly and forthrightly are jeopardizing their coverage.<sup>294</sup>

If Liang is right, the desire to maintain insurance coverage creates a strong disincentive for disclosure. Although Liang's analysis sounds plausible, he cites no cases in which insurers disclaimed coverage for the reason he identifies. Because many hospitals disclose errors routinely—and others disclose them extensively—one would expect to find at least one such case if any existed. Similarly, one would expect to find evidence of such behavior, including reservation-of-rights letters, in continuing education materials aimed at medical malpractice and insurance lawyers. We were unable to locate any such evidence, which suggests that the "problem" is more theoretical than real.

Liang's argument also omits an important step. It is unclear whether courts would allow insurance carriers to disclaim coverage when providers disclose mistakes. JCAHO accreditation standards, ethics rules governing medical professionals, and some state laws require such disclosures.<sup>295</sup> These requirements, which insurance companies know about when extending coverage, embody important

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<sup>288</sup> Cohen, *supra* note 282, at 1460.

<sup>289</sup> *Id.* at 1460–61.

<sup>290</sup> *Id.* at 1461.

<sup>291</sup> *Id.*

<sup>292</sup> See Liang, *Adverse Event*, *supra* note 9, at 353; Liang, *Promoting Patient Safety*, *supra* note 9, at 559–60.

<sup>293</sup> See Liang, *Adverse Event*, *supra* note 9, at 353; Liang, *Promoting Patient Safety*, *supra* note 9, at 550–60.

<sup>294</sup> See Liang, *Adverse Event*, *supra* note 9, at 353; Liang, *Promoting Patient Safety*, *supra* note 9, at 560.

<sup>295</sup> See *supra* note 166 and accompanying text; IOM, *supra* note 5, at 119–20; Kapp, *supra* note 9, at 759–63; Lubet, *supra* note 21, at 1195–96.

public policies. Courts could easily conclude that public policy considerations prohibit carriers from withdrawing coverage when providers inform patients of mistakes.

In sum, the conventional wisdom dramatically oversimplifies and overstates the relationship between liability and secrecy. Neither liability itself nor related insurance concerns invariably drive providers to hide errors. Many providers hide or ignore mistakes, but many others disclose them to varying degrees. Secrecy may be a strategy some providers choose, but others opt for honesty and openness. This diversity of disclosure strategies suggests, once again, that secrecy is not a dominant strategy. The decision to communicate or keep quiet is a strategy choice that the existence of tort liability, standing alone, has little power to explain.

### I. Summary of the Evidence

The conventional wisdom—that medical malpractice liability impedes the improvement of health care quality by discouraging providers from reporting mistakes—has no basis other than its plausibility.<sup>296</sup> No empirical study has demonstrated a negative correlation between the intensity of malpractice risk and the frequency of error reporting, or has shown that liability correlates inversely with health care quality.<sup>297</sup> In fact, the authors of the Harvard Medical Practice Study reached the opposite conclusion, finding that liability helps deter errors and protect patients.<sup>298</sup>

Other evidence also undermines the conventional wisdom. Anecdotal reports show that lawsuits sometimes motivate providers to address long-standing problems, and that high malpractice premiums prompted dramatic improvements in anesthesia safety.<sup>299</sup> Lawsuits actually increased *ex ante* communication between physicians and patients about treatment risks.<sup>300</sup> Lawsuits also appear to have encouraged communication about errors by causing professional and industry associations to promulgate guidelines requiring disclosures.<sup>301</sup> Error reporting is no more frequent in the United Kingdom than the United States, even though malpractice suits are far more common in the latter.<sup>302</sup> If anything, systems for gathering information about errors and health care quality are more developed in the

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<sup>296</sup> See *supra* Part III.A.

<sup>297</sup> See *id.*; see also Frank A. Sloan, *Policy Implications, in* SUING FOR MEDICAL MALPRACTICE 211, 219 (Frank A. Sloan et al. eds., 1993) ("There is virtually no conclusive empirical evidence on the deterrent effect of tort law in any field.")

<sup>298</sup> See *supra* notes 97–104 and accompanying text.

<sup>299</sup> See *supra* notes 128–30.

<sup>300</sup> See *supra* note 159 and accompanying text.

<sup>301</sup> See *supra* notes 160, 166 and accompanying text.

<sup>302</sup> See *supra* Part III.D.



United States, suggesting that liability and provider interest in errors are positively correlated.<sup>303</sup> Reports of near misses and no-harm events are rare even though these errors cannot result in liability.<sup>304</sup> Underreporting and a punitive practice culture were serious problems at VHA hospitals, even though the FTCA protected doctors and nurses who work there from malpractice suits.<sup>305</sup> Finally, the diversity of disclosure practices prevailing at hospitals across the United States shows that secrecy is not the only plausible response to liability.<sup>306</sup> Providers may even fare better by disclosing errors than by hiding them.<sup>307</sup>

To summarize, the view that liability exposure hinders quality improvement by driving errors underground has been accepted uncritically. The best available evidence suggests that the liability system helps protect patients by deterring mistakes. If the liability system is not responsible for the continuing failure of providers to improve health care quality, what is? And, why is the positive impact of tort law on health care quality so weak?

#### IV

#### PROFESSIONAL NORMS AND ECONOMIC INCENTIVES AS CAUSES OF QUALITY PROBLEMS

The existence of high error rates in health care should surprise no one. Human beings routinely make mistakes, even when they exercise due care. High error rates should be expected when human beings provide services via complex delivery systems—and health care systems are exceptionally complicated.<sup>308</sup> The many frailties that afflict human behavior—including sensory limitations, flawed decision heuristics and empirical theories, information overload, emotions and other distractions, fatigue and other physical problems, defective motivations, training limitations, and forces beyond human control—have ample room to operate in health care. Thus, mistakes are inevitable in the delivery of health care services.<sup>309</sup>

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<sup>303</sup> See *id.*

<sup>304</sup> See *supra* notes 202–04 and accompanying text.

<sup>305</sup> See *supra* Part III.F.

<sup>306</sup> See *supra* Part III.H.

<sup>307</sup> See *supra* notes 285–87 and accompanying text.

<sup>308</sup> Researchers, for example, have identified eleven points at which errors can occur in the system of drug administration in a modern hospital. See David W. Bates et al., *Relationship Between Medication Errors and Adverse Drug Events*, 10 J. GEN. INTERNAL MED. 199–201 (1995).

<sup>309</sup> See GAWANDE, *supra* note 21, at 25–34, 55–56 (describing training methods for new residents that create manifold opportunities for errors, and observing that “all doctors make terrible mistakes. . . . [V]irtually everyone who cares for hospital patients will make serious mistakes, and even commit acts of negligence, every year”); Wu et al., *supra* note 277, at 2089 (“Mistakes are inevitable in the practice of medicine because of the complex-

The surprising thing, in the health care sector and elsewhere, is that consistent high-quality performance ever occurs. Errors are inevitable, but error detection, correction, and prevention are not. All three activities require continuous commitment, money, and hard work. Yet, many industries outside the health care sector have brought error rates under control by designing delivery systems that achieve “six sigma” levels of quality, where defects occur fewer than four times in every million opportunities.<sup>310</sup>

Transporting the error rates that are common in the health care sector to other commercial settings dramatizes the strides other industries have made:

*If the performance of certain high-reliability industries, whose standards of excellence we take for granted, suddenly deteriorated to the level of most health care services, some astounding results would occur. At a defect rate of 20 percent, which occurs in the use of antibiotics for colds, the credit card industry would make daily mistakes on nine million transactions; banks would deposit 36 million checks in the wrong accounts every day; and deaths from airplane crashes would increase one thousand-fold.*<sup>311</sup>

An error rate of 20% would be intolerable in the business settings identified, but error rates as high as 79% have been observed in health care.<sup>312</sup>

High error rates should be intolerable in health care as well. With hundreds of millions of opportunities to deliver health care services every year, a 1% error rate means millions of mistakes, many of which have significant potential to harm patients. The history of anesthesia safety shows that health care providers can do better.<sup>313</sup> Significant variation in error rates across providers shows that providers can do better as well. It is therefore natural to ask why health care quality is lagging. The question has several answers, two of which we concentrate on here: professional norms and economic self-interest.

#### A. Professional Norms of Medicine

To correct errors, one must first identify them. Unfortunately, errors are often hidden from view. They can be especially hard to

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ity of medical knowledge, the uncertainty of clinical predictions, time pressures, and the need to make decisions despite limited or uncertain knowledge.”).

<sup>310</sup> Chassin, *supra* note 43, at 566–69. For the mathematically challenged, sigma represents the standard deviation of a normal curve. One sigma represents a “defect rate” of 69%, two sigma has a “defect rate” of 31%, three sigma has a “defect rate” of 6.7%, four sigma has a “defect rate” of .62%, and five sigma has a “defect rate” of .02%.

<sup>311</sup> *Id.* at 569–70.

<sup>312</sup> *See id.* at 568 tbl.1 (noting that “79% of eligible heart attack survivors fail to receive beta blockers”).

<sup>313</sup> *See supra* Part III.B.

spot in health care because superior performance can generate bad results, and inferior performance can generate good results. Many patients die even when given the best of care, and some patients survive despite providers' mistakes. Because neither death nor survival is a perfect marker for service quality, effort is needed to identify inferior procedures and mistakes.<sup>314</sup>

To identify superior procedures and providers, one may have to conduct statistical studies aggregating large numbers of patients and adjusting for pre-existing health risks. Until researchers conducted such studies of surgeons and cardiac care units performing CABGs, abnormally high mortality rates escaped attention.<sup>315</sup> CABG providers ignored negative outcomes or attributed them to bad luck. These studies forced providers to focus on themselves, their institutional arrangements, and their surgical procedures.<sup>316</sup>

Health care providers also miss mistakes, since they are rarely trained or equipped to identify iatrogenic injury.<sup>317</sup> Human frailties exacerbate this tendency. Even when it is clear that iatrogenic injury occurred and that treatment decisions were erroneous, health care providers are extraordinarily reluctant to identify problems.<sup>318</sup> They appear to have a "reverse-hindsight bias" that causes them to regard preventable injuries as inevitable. Whatever the cause, the tendency of providers to underestimate the frequency of iatrogenic injury is well known.<sup>319</sup>

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<sup>314</sup> Technology has the potential to improve error detection. See IOM, *supra* note 5, at 34 (

Some errors are also difficult to detect in the absence of computerized surveillance systems. In a study of 36,653 hospitalized patients, Classen et al. identified 731 ADEs [adverse drug events] in 648 patients, but only 92 of these were reported by physicians, pharmacists, and nurses. The remaining 631 were detected from automated signals, the most common of which were diphenhydramine hydrochloride and naloxone hydrochloride use, high serum drug levels, leukopenia, and the use of phytonadione and antidiarrheals.

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<sup>315</sup> See Chassin, *supra* note 243, at 41–42.

<sup>316</sup> See *id.* at 46.

<sup>317</sup> See, e.g., Troyen A. Brennan et al., *Identification of Adverse Events Occurring During Hospitalization*, 112 ANNALS INTERNAL MED. 221, 223 (1990) (testing the efficacy of record review for error detection and discovering that most omissions were due to lack of oversight); Jon S. Thompson & Mary A. Prior, *Quality Assurance and Morbidity and Mortality Conference*, 52 J. SURGICAL RES. 97 (1992) (testing the efficacy of a Quality Assurance (QA) program that utilized morbidity and mortality (M & M) conferences to review identified complications, and finding that physicians were "often not present when their complications [were] discussed").

<sup>318</sup> WEILER ET AL., *supra* note 97, at 125 (finding physician reluctance to classifying certain errors as iatrogenic, and finding "an even more pronounced reluctance to label as negligent those treatment decisions that . . . were clearly erroneous").

<sup>319</sup> See, e.g., Leslie D. Goode et al., *When Is "Good Enough"? The Role and Responsibility of Physicians to Improve Patient Safety*, 77 ACAD. MED. 947, 949 (2002) (noting that physicians tend to "believe that it is only the high quality of their skills that keep [sic] more patients

Training in error detection alone will not necessarily lead to error correction. People must also be motivated to report and address errors. Many workers are naturally inclined to ignore or hide errors because they “bring up feelings of shame, and we would rather not confront the bad feelings associated with our failures as individuals.”<sup>320</sup> In many organizations, including hospitals, workers also face pressures unrelated to liability to hide errors and other problems that come to their attention, and to avoid accepting responsibility or blame.<sup>321</sup>

The human tendency to focus on successes rather than failures also causes error correction to receive less emphasis than it should.<sup>322</sup> A 99% success rate and a 1% failure rate are numerically equivalent, but the psychological implications of focusing on one or the other can be profound. Focusing on success rates leads to complacency and self-satisfaction; focusing on failure rates does not.<sup>323</sup> This is why businesses that cannot afford even 1% defect rates, like commercial aviation, banking, information technology, and manufacturing, are obsessive about errors.<sup>324</sup>

The tendency to focus on successes (of which there are many) blinds providers (and often the public) to the magnitude of the quality problem.<sup>325</sup> In the United States, one can obtain the best available

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from being harmed by fault-ridden health care systems” and to “believe that the quality of the care they provide is generally good”).

<sup>320</sup> Craig Lambert, *Obtuse Organizations: Secret Errors Kill*, 103 HARV. MAG., Mar./Apr. 2001, at 11 (quoting Amy C. Edmondson); see also Holzer, *supra* note 137, at 101 (describing the strong emotional impact accusations of error have on anesthesiologists).

<sup>321</sup> See Karen Hopper Wruck & Michael C. Jensen, *Science, Specific Knowledge, and Total Quality Management*, 18 J. ACCT. & ECON. 247, 254 (1994) (“[P]olitics, power, [and] fear [have been viewed as] major impediments to performance improvement . . . . [I]ndividuals routinely inhibit learning by making the theories underlying organizational practices undiscussible. This undiscussibility arises from a fear that disclosure of inefficient or irrational practices will impose pain and embarrassment on all involved.”); see also Jay D. Orlander et al., *The Morbidity and Mortality Conference: The Delicate Nature of Learning from Error*, 77 ACAD. MED. 1001, 1003–04 (2002) (surveying problems with M & M conferences, including failure to discuss many cases in which errors occur and failure of surgeons to attend conferences where their cases are discussed).

<sup>322</sup> See Wruck & Jensen, *supra* note 321, at 271–72. In contrast, the philosophy underlying total quality management (TQM) is to identify and measure weaknesses, rather than strengths. *Id.* at 271. This approach helps provide an organizational antidote to the universal human tendency to avoid feedback on personal errors and failures. See *id.* at 271–72.

<sup>323</sup> *Id.* at 271–72.

<sup>324</sup> See Chassin, *supra* note 43, at 566–70.

<sup>325</sup> For example, a recent report on medication errors stated that “[f]ortunately, less than 3% of these [voluntarily reported] events . . . caused any harm to the patient.” *Medication Safety: Putting Errors Behind Bars*, PHYSICIAN’S WKLY., Jan. 13, 2003, available at <http://physweekly.com/article.asp?issueid=51&articleid=434&printable=1> (last visited Mar. 26, 2005). Three percent may be “fortunately” small by comparison with a larger number, but the commercial aviation industry would be stunned if an equal number of its customers were harmed. If the author of the article had focused on failures instead of successes, he would have written, “Sadly, almost 3% of the reported errors harmed patients.”

care for most maladies, and yet health care errors are a leading cause of death. The IOM triggered a firestorm of controversy, and the creation of several government commissions, by framing the problem of medical error in terms of failure instead of relative success.

Medical schools and other training programs for health care professionals do not teach modern quality assessment and improvement techniques.<sup>326</sup> Instead, they teach students to make independent judgments and treasure clinical autonomy. This training may often benefit patients by supplying them with confident agents. But professional independence can have a significant downside for patients as well. A great deal of uncertainty exists about the “best” treatment for particular clinical conditions, and about the “best” way to perform those treatments. The efficacy of most medical treatments has never been proven, and many treatments have some upside potential. Many treatments can also be administered in a variety of ways. Given these uncertainties, independent medical agents have significant discretion to recommend procedures that are sub-par and to implement procedures in sub-optimal ways.

This state of uncertainty gives medical professionals, especially physicians, considerable freedom and power.<sup>327</sup> Physicians have freedom because they can form a wide range of judgments. They have power because patients will rely on their judgments, enabling them to control enormous resource flows. Efficacy studies, clinical practice guidelines, and other quality improvement devices are likely to constrain medical professionals’ judgment and reduce their importance by excluding options and making the delivery of services more routine.

To put the point another way, although medical schools encourage doctors to exercise good judgment, they have not focused their efforts on total quality management (TQM) or evidence-based medicine (EBM).<sup>328</sup> Instead, they have historically emphasized self-reliance and inculcated a belief in hierarchical systems of authority.<sup>329</sup>

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<sup>326</sup> On medical school efforts to expand training in continuous quality improvement, see Bruce E. Gould et al., *Improving Patient Care Outcomes by Teaching Quality Improvement to Medical Students in Community-based Practices*, 77 *ACAD. MED.* 1011 (2002).

<sup>327</sup> This fact likely explains why the AMA has dedicated its “political energies . . . to protecting doctors’ decision-making autonomy.” Michael Millenson, *Evidence-based Medicine: Why the Time is Now*, 2 *INT’L J. MED. MARKETING* 50, 51 (2001).

<sup>328</sup> For a brief introduction to recent efforts to introduce the principles of TQM to the health care sector, see Timothy Stoltzfus Jost, *Oversight of the Quality of Medical Care: Regulation, Management, or the Market?*, 37 *ARIZ. L. REV.* 825, 835–41 (1995). On the need for and implementation of quality assurance in cardiac surgery, see Vincent A. Gaudiani, *Comprehensive Quality Assurance for Cardiac Surgery*, at <http://www.ctsnet.org/doc/9784> (last visited Jan. 10, 2005).

<sup>329</sup> See Classen & Kilbridge, *supra* note 122, at 964–65 (2002) (describing medical training in which doctors who make mistakes are castigated, and discussing doctors’ reluctance to participate in team-oriented care, even though it has been shown to improve quality).

A person taught to act independently will naturally regard many quality improvement innovations as threats, especially innovations like evidence-based treatment guidelines and computerized diagnostic and risk-assessment tools that have demonstrated their superiority to clinician's subjective judgments.<sup>330</sup> Physicians often deride such approaches to quality improvement as "cookbook" medicine.<sup>331</sup>

Cookbook approaches have the singular virtue of squeezing out inefficient and potentially dangerous individual variation.<sup>332</sup> The cookbook approach has proven itself in potentially hazardous settings, such as aviation; no airplane pilot committed to passenger safety (or self-preservation) would complain about having to practice "cookbook flying" by following a checklist before taking off.<sup>333</sup> Preflight checklists, routine maintenance guidelines, practice with flight simulators, crew resource management training programs, and other mechanisms that make flying routine save lives.<sup>334</sup> By using these strategies, commercial airline companies have reduced accident rates enormously. The accident rate for the United States and Canada exceeded twenty-five per million departures in 1959.<sup>335</sup> By 1980 it was less than one per million departures, and has remained low ever since.<sup>336</sup> Now "more than 10 million takeoffs and landings [occur] each year [in the U.S.] with an average of fewer than four crashes a year."<sup>337</sup> There

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<sup>330</sup> See, e.g., Abigail Zuger, *New Way of Doctoring: By the Book*, N. Y. TIMES, Dec. 16, 1997, at F1 (

[S]tudies suggest that only a very small fraction of the decisions doctors make are actually based on firm evidence that a given test or drug is the best possible approach for patients. Rather, doctors usually rely on a combination of habit and casual intuition, using tests and treatment they are familiar with, have heard good things about, or seem to work in test tubes or laboratory animals.

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<sup>331</sup> Carter L. Williams, *Evidence-Based Medicine in the Law Beyond Clinical Practice Guidelines: What Effect Will EBM Have on the Standard of Care?*, 61 WASH. & LEE L. REV. 479, 490 (noting that some physicians view guidelines as an "affront to the professional autonomy or a transition to 'cookbook' medicine").

<sup>332</sup> *Id.* at 489 ("[Clinical practice guidelines] fight the problems of variation and lack of consensus by expressing a consensus on best practices.").

<sup>333</sup> As someone wryly observed, "[T]he pilot is always the first at the scene of an airplane accident." IOM, *supra* note 5, at 53.

<sup>334</sup> See Leape, *supra* note 112, at 105 (noting that aviation procedures have been standardized as much as possible and that pilots function well in this "rigorously controlled system").

<sup>335</sup> BOEING COMMERCIAL AIRLINES, STATISTICAL SUMMARY OF COMMERCIAL JET AIRPLANE ACCIDENTS: WORLDWIDE OPERATIONS 1959-2003 12 (2004), available at <http://www.boeing.com/news/techissues/pdf/statsum.pdf> (last visited Feb. 5, 2005).

<sup>336</sup> *Id.*

<sup>337</sup> Leape, *supra* note 112, at 104.

have even been years in which no passengers on United States commercial airlines perished due to in-flight accidents.<sup>338</sup>

Not all pilots supported cookbook flying initially. Many resisted efforts to control their judgment and discretion. Many also interacted with other members of flight crews in counterproductive ways. "The airline industry was shocked to realize that well-trained and technically proficient crews could crash airworthy craft because of failures of human interaction and communication—areas in which neither training nor formal evaluation was required by the Federal Aviation Administration (FAA) or any other country's regulatory agency."<sup>339</sup> The need for training in human interaction became clear when studies showed that human errors played a role in 70% of airline accidents and "that most of these errors stemmed from failures in communication, teamwork and decision making rather than from technical shortcomings."<sup>340</sup> Commercial air transportation is exceptionally safe today partly because pilots learned to follow rules and to cooperate with subordinates.

Many health care professionals also need to learn how to work for safety.<sup>341</sup> "A number of observers have noted large-scale obstacles to promotion of [a] safety culture within healthcare[, including] a pervasive *culture of blame* that impedes acknowledgment of error, and *professional 'silos'* that offer unique challenges to changing any universal aspect of healthcare, including culture."<sup>342</sup> As Dr. Ellison Pierce, Jr. succinctly observed when discussing doctors' disdain for guidelines, "[M]any, if not most, physicians resented being told what to do."<sup>343</sup>

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<sup>338</sup> See NAT'L TRANSP. SAFETY BD., AVIATION ACCIDENT STATISTICS, tbl.6 (reporting zero fatalities aboard commercial aircraft in 1993, 1998, and 2002), available at <http://www.ntsb.gov/aviation/Table6.htm> (last visited Feb. 5, 2005).

<sup>339</sup> Helmreich, *supra* note 127, at 62.

<sup>340</sup> *Id.*

<sup>341</sup> See William M. Sage, *Putting the Patient in Patient Safety: Linking Patient Complaints and Malpractice Risk*, 287 JAMA 3003, 3003 (2002) ("The quintessential service business can be identified by a sign mounted prominently behind the counter proclaiming that 'The Customer Is Always Right.' . . . [I]t is hard to imagine a similar placard in a hospital or doctor's office reading 'The Patient Is Always Right.'").

<sup>342</sup> Laura T. Pizzi et al., *Promoting a Culture of Safety*, in AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, AHRQ PUB. NO. 01-E058, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices* 447, 451 (July 2001), available at <http://www.ahrq.gov/clinic/pt-safety/chap40.htm>.

<sup>343</sup> Pierce, *supra* note 113, at 23. In an exchange with Pierce, Jack Moyers—an anesthesiologist at the University of Iowa Hospitals—railed against efforts to supplant informed professional judgment with routine use of mechanical monitors, and professed difficulty "believ[ing] that society will ultimately benefit from anesthesia administered by people who revere alarm systems that have created a working environment more like a discotheque than a proper operating room." See Jack Moyers, *Monitoring Instruments Are No Substitute for Careful Clinical Observation*, 4 J. CLINICAL MONITORING 107, 111 (1988).

Medical professionals often resist efforts to standardize treatments even when it is made clear that standardization yields better results.<sup>344</sup>

The experience of The Leapfrog Group (Leapfrog) highlights the resistance of physicians to standardized treatments. Leapfrog is an initiative created by the Business Round Table that comprises approximately 170 large health care payers.<sup>345</sup> Leapfrog champions three hospital-based, patient-safety practices: computerized physician order entry (CPOE), evidence-based hospital referral (EHR), and ICU physician staffing (IPS).<sup>346</sup> When a recent survey found that hospitals had made little progress in implementing these practices, Leapfrog learned that

[h]ospitals' efforts to meet the three Leapfrog standards often are seen by physicians as restricting their autonomy and reducing their productivity and income. . . . One hospital respondent captured the general sentiment well, noting that one of the "fastest ways to the CEO graveyard is to push physicians too hard and fast on patient safety and quality improvement."<sup>347</sup>

Resistance to guidelines has also slowed the progress of the movement for EBM, a philosophy that grounds treatments in the best available studies of effectiveness.<sup>348</sup> It is easier for providers to use familiar practices than to keep up with the rapidly expanding literature on health care.<sup>349</sup> As a result, providers frequently employ treatments and procedures known to be inefficacious, obsolete, or dangerous.<sup>350</sup> Similarly, it is easier for providers to do what others in their communities do, rather than base their decisions on science. Consequently, treatment practices often vary from place to place for no good reason.<sup>351</sup>

Providers also resist efforts to evaluate the quality of the care they provide.<sup>352</sup> In New York, cardiac surgeons tried to stop the Department of Health from publishing risk-adjusted mortality rates for CABG providers.<sup>353</sup> When they failed, some attempted to "game" the system by reporting that their patients were sicker (and thus at greater

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<sup>344</sup> See, e.g., Greg Basky, *Doctors Resist Adopting Clinical Guidelines*, 318 BRIT. MED. J. 1370, 1370 (May 22, 1999) (discussing a Canadian study finding that education programs had little impact on doctors' rates of compliance with guidelines for using x-rays).

<sup>345</sup> See The Leapfrog Group for Patient Safety, at <http://www.leapfroggroup.org>.

<sup>346</sup> Devers & Liu, *supra* note 63, at 1-4.

<sup>347</sup> *Id.* at 4.

<sup>348</sup> Williams, *supra* note 331, at 487 (defining EBM as "the integration of best research evidence with clinical expertise and patient values").

<sup>349</sup> See *id.* at 494-95 & n.91.

<sup>350</sup> See Zuger, *supra* note 330, at F1.

<sup>351</sup> See *supra* notes 43-44 and accompanying text.

<sup>352</sup> See, e.g., Troyen A. Brennan, *Physicians' Professional Responsibility to Improve the Quality of Care*, 77 ACAD. MED. 973, 980 (2002) (urging physicians to "eschew fear of measurement").

<sup>353</sup> Hyman & Silver, *supra* note 88, at 1440.



risk of dying) than they actually were.<sup>354</sup> In Kentucky, providers used their state hospital association to lobby against an effort by Anthem Blue Cross & Blue Shield to benchmark the quality of cardiac surgery units.<sup>355</sup> Anthem had previously studied cardiac surgery units in Ohio and found a six-fold variation in risk-adjusted mortality rates.<sup>356</sup> The problem is not unique to these three states; public health researchers report that “health plans and hospitals that have low quality of care scores often stop participating in voluntary public reporting efforts.”<sup>357</sup> Evidently, many hospital administrators prefer hiding problems to addressing them.

Punitive practice environments and blaming individuals rather than systems also help hide errors. Nevertheless, many health care workers seem to prefer a punitive practice environment. A nonscientific survey conducted by the ISMP found significant percentages of persons employed in medical facilities who believed that nonpunitive environments increase error rates by tolerating mistakes.<sup>358</sup> Such attitudes discourage quality improvement. To achieve six sigma levels of consistency, one must stop blaming errors on “bad people” and start treating errors as natural, predictable and preventable occurrences. There is no doubt that improving systems takes time, effort, and money. Data must be gathered and studied, systems must be mapped and sources of errors identified, and improvements must be designed and implemented. These activities require training and continuing education, expert consultation, and new equipment. These activities also require people to confront the awkward, embarrassing, impolitic, and shameful reality that a mistake has occurred on their watch.<sup>359</sup> Given these costs, many providers have found it easier to ignore problems, focus on their successes, and hope for the best.

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<sup>354</sup> See *supra* note 260 (describing this behavior as the “reverse-Lake Wobegon effect”); Hyman & Silver, *supra* note 88, at 1440 n.63; see also Chassin, *supra* note 243, at 46 (“The CSRS [Cardiac Surgery Reporting System] has been criticized for encouraging hospitals and physicians to exaggerate the presence of serious risk factors . . .”).

<sup>355</sup> See Thomas Burton, *HMO Rates Hospitals; Many Don't Like It but They Get Better*, WALL ST. J., Apr. 22, 1999, at A1.

<sup>356</sup> See *id.*

<sup>357</sup> Devers & Liu, *supra* note 63, at 5; see also Danny McCormick et al., *Relationship Between Low Quality-of-Care Scores and HMO's Subsequent Public Disclosure of Quality-of-Care Scores*, 288 JAMA 1484, 1487–88 (2002) (finding that “[h]ealth maintenance organizations in the lowest tertile of overall quality . . . were more likely to withdraw from public disclosure,” and that “poor quality rather than profit status . . . was the primary determinant of withdrawal from public disclosure”).

<sup>358</sup> *ISMP Survey on Perceptions of a Nonpunitive Culture Produces Some Surprising Results*, ISMP MEDICATION SAFETY ALERT!, Aug. 22, 2001, at <http://www.ismp.org/MSAarticles/nonpunitive.html>.

<sup>359</sup> For an excellent account of the efforts needed to create a culture of safety at one hospital, see Eric B. Larson, *Measuring, Monitoring, and Reducing Medical Harm from a Systems Perspective: A Medical Director's Personal Reflections*, 77 ACAD. MED. 993 (2002).

Modern quality consultants emphasize that errors constitute opportunities to improve. They also know that environments in which errors are identified and analyzed do not arise spontaneously.<sup>360</sup> Good attitudes must be nurtured. However, most “physicians lack training in the principles of quality improvement.”<sup>361</sup> Good attitudes must also be recognized and rewarded. Yet, hospitals and physicians often lose money by improving quality, as further shown below. Given the training providers do receive, which inculcates them into a culture of shaming and blaming people for mistakes, and their incentives, which make errors profitable, it is surprising that attitudes conducive to patient safety exist at all.



## B. Economics

From an economic perspective, the key to error reduction is a “business case for quality.”<sup>362</sup> A business case for quality exists when a provider can earn a profitable financial return on a quality-enhancing investment.<sup>363</sup> The investment may bring in new patients, reduce costs, or benefit a provider in other ways. Absent a business case, there is no financial motive for a private provider to bear the cost of improving quality.<sup>364</sup>

Unfortunately, in the health care sector, the business case for quality is often weak or nonexistent, even when quality improvements are cost-justified and otherwise desirable overall.<sup>365</sup> Researchers supported by the Commonwealth Fund found that “in all cases where the investing organization [was] a provider . . . , the business case [for implementing quality-enhancing programs known to be cost-efficient was] unfavorable.”<sup>366</sup> This finding applied to a diverse range of pro-

<sup>360</sup> See, e.g., Chip Caldwell et al., *ER Six Sigma Effort Results in 50% Satisfaction Improvement and \$4 Million Cost Recovery, Part 3*, HEALTHLEADERS, Feb. 21, 2003 (reporting that Morton Plant Medical Center achieved major quality improvements in its emergency room by “chang[ing] the staff belief system from ‘good enough’ to a worldclass performance mindset,” and that “[o]f all the activities, the Belief System Transformation effort has been the most time consuming, yet vital.”), at <http://www.healthleaders.com/news/feature1.php?contentid=42528>.

<sup>361</sup> Classen & Kilbridge, *supra* note 122, at 966.

<sup>362</sup> Leatherman et al., *supra* note 18, at 18–19.

<sup>363</sup> See *id.* at 18. Thus, private benefits must exceed private costs within a reasonable amount of time.

<sup>364</sup> *Id.* at 17–18. Of course, the provider may have other motives to bear the cost of improving quality, such as pride in the quality of services provided or concern for reputation.

<sup>365</sup> See *id.* at 23–24.

<sup>366</sup> *Id.* at 24. The Commonwealth Fund sponsored an excellent series of studies of the business case for quality improvements. The reports can be found at [www.cmf.org](http://www.cmf.org). The studies repeatedly find that quality improvements either generate no financial rewards for providers, or perversely, make providers worse off. Such circumstances are unlikely to lead to quality improvements. See FTC & DOJ, *supra* note 11, at 5.

grams, including those designed to help diabetics, smokers, patients with elevated lipid levels and heart disease, and asthmatic children.<sup>367</sup>

Leapfrog experienced similar difficulties.<sup>368</sup> Leapfrog identified three patient safety practices—CPOE, IPS, and EHR—that were thought to generate social benefits that exceeded their social costs.<sup>369</sup> Yet, hospitals made little progress implementing these practices because their private incentives were weak or nonexistent.<sup>370</sup> Hospitals found CPOE too “costly and risky.”<sup>371</sup> They found that IPS reduced their revenues because patients were hospitalized for fewer days and ICU intensivists ordered fewer tests.<sup>372</sup> They found that EHRs cost them opportunities to perform profitable cardiovascular procedures.<sup>373</sup> Low-volume hospitals did not want to lose patients from whom they stood to make money, even though high-volume hospitals provided better care.<sup>374</sup>

The absence of a business case for quality is very old news. As Michael Millenson—a journalist who has written at length about medical error—observed, Dr. Ernest Amory Codman—a Boston physician who pressed for outcomes measurement in the early twentieth century—identified the absence of a business case as the cause of many quality problems.<sup>375</sup>

Many reasons account for the mismatch between social welfare and private incentives. A particularly important cause is the prevalence of third-party payment arrangements. As Professor Regina E. Herzlinger of the Harvard Business School explained in *Market-Driven Health Care*, third-party purchasing conveys less information about

<sup>367</sup> See Leatherman et al., *supra* note 18, at 20–22; ARTEMIS MARCH, THE BUSINESS CASE FOR CLINICAL PATHWAYS AND OUTCOMES MANAGEMENT: A CASE STUDY OF THE CHILDREN'S HOSPITAL AND HEALTH CENTER OF SAN DIEGO 13 (2003), at [http://www.cmwf.org/usr\\_doc/march\\_bcs\\_physicianorderentry\\_609.pdf](http://www.cmwf.org/usr_doc/march_bcs_physicianorderentry_609.pdf).

<sup>368</sup> See Devers & Liu, *supra* note 63, at 3.

<sup>369</sup> *Id.* at 1–2.

<sup>370</sup> See *id.* at 3.

<sup>371</sup> *Id.* at 5. For examples of CPOE costs, see, e.g., Andrea Tortora, *Laptops To Take Guesswork Out of Docs' Handwriting: Christ, University Among Local Hospitals to Use CPOEs*, CINCINNATI BUS. COURIER, Aug. 16, 2004 (reporting that that Health Alliance, which operates hospitals, “is investing millions of dollars into a computer physician order entry (CPOE) system,” that “[t]he costs of implementing CPOE are huge,” and that “Boston's Brigham and Women's Hospital spent \$1.9 million to develop and install its [CPOE] system” and “spends \$500,000 on annual maintenance” (emphasis added)), available at [http://www.bizjournals.com/industries/health\\_care/hospitals/2004/08/16/cincinnati\\_story4.html](http://www.bizjournals.com/industries/health_care/hospitals/2004/08/16/cincinnati_story4.html).

<sup>372</sup> See Devers & Liu, *supra* note 63, at 5.

<sup>373</sup> *Id.*

<sup>374</sup> *Id.* Referral fees, such as those allowed in the legal sector, might ameliorate this problem, but health care providers are generally forbidden from using them. See Hyman, *supra* note 237, at 548–50.

<sup>375</sup> Millenson, *supra* note 327, at 51 (noting that Codman observed in 1914 that it was in no provider's interest to evaluate and improve the quality of hospital care).

consumers' (here, patients') wishes and needs than first-party payment.<sup>376</sup> It also focuses sellers' (here, health care providers') attention on payers rather than consumers because payers are economically more important.<sup>377</sup> Consequently, markets dominated by third-party payment arrangements function relatively poorly.

The disparity becomes obvious when one compares segments of the health care market in which first- and third-party payment arrangements are employed. As Herzlinger reports, first-party arrangements drive the market for corrective lenses and other vision treatments, meaning that patients pick up most or all of the tab.<sup>378</sup> In this sector, wait times are short, service is good, quality is high, prices are competitive, and one-stop shopping is the rule.<sup>379</sup> In contrast, third-party arrangements dominate the market for services supplied by physicians and hospitals. In this sector, wait times are long, service is often provider-friendly rather than patient-friendly, quality varies enormously, patients have little or no idea what services cost, and one-stop shopping exists for only the simplest maladies.<sup>380</sup> The last problem—the need to visit different providers at different locations or at different times—is especially deplorable.<sup>381</sup> Inconvenience discourages many patients from seeking needed care, and “hand offs” (or referrals) are a well-known source of communication problems and mistakes.<sup>382</sup>

Third-party payment contributes to the mismatch between public welfare and private incentives because payers and patients have divergent interests. Payers bear most of the costs of health care; patients enjoy most of the gains. Payers therefore care about cost more than quality. Patients, on the other hand, want ever-higher levels of service. When a patient's share of the marginal cost of care is zero, the patient will rationally want any service that has the potential to yield even a minute gain.<sup>383</sup> Ultimately, both payers' and patients' incentives are defective, and both contribute to the quality problems that plague the United States.

376 See HERZLINGER, *supra* note 55, at 20, 250.

377 *See id.* at 20, 28.

378 *See id.* at 29–33, 249.

379 *See id.*

380 *See id.* at 19–20, 250–51.

381 *Id.* at 18–23.

382 *See id.* at 4.

383 *See id.* at 251. Judge Richard Posner framed one side of the dynamic in typically blunt fashion:

From a short-term financial standpoint—which we do not suggest is the only standpoint that an HMO is likely to have—the HMO's incentive is to keep you healthy if it can but if you get very sick, and are unlikely to recover to a healthy state involving few medical expenses, to let you die as quickly and cheaply as possible.

Blue Cross & Blue Shield United v. Marshfield Clinic, 65 F.3d 1406, 1410 (7th Cir. 1995).

Because payers are more interested in costs than benefits, they have not historically pressured providers to improve.<sup>384</sup> Payers' focus on costs undoubtedly contributes to the fact that providers' compensation is quality-invariant. As outlined previously, superior providers and inferior providers generally receive similar payments. In a world where payers care more about expense than quality, this approach makes sense. Level compensation also meshes well with providers' historical preference for fee-for-service compensation over all other arrangements (and especially over arrangements that condition the right to payment on the production of measurable results).

Even when payers care about quality (because what is good for their employees/subscribers is good for them), incentive problems remain. Subscriber pools often change when patients change employers or health plans. This turnover creates problems because high-quality health care programs often deliver returns long after services are delivered. Disease prevention programs directed at employees in their thirties and forties may greatly reduce health care costs in employees' retirement years, but if few younger employees stay with a company long enough to retire, the savings to the employer may not justify the cost. When costs are internalized, but benefits are externalized, investments in quality are unlikely to be made.

Those who still doubt that provider self-interest offers a robust explanation for the current state of affairs should consider the com-

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<sup>384</sup> This dynamic has changed somewhat in recent years, partly because employers lost their battle to control costs directly. When providers and patients crippled employers' efforts to use MCOs to control costs, employers looked for alternatives. See Clark C. Havighurst, *How the Health Care Revolution Fell Short*, 65 L. & CONTEMP. PROBS., Autumn 2002, at 55, 60, 69–71 (2002); David A. Hyman, *Regulating Managed Care: What's Wrong With a Patient Bill of Rights*, 73 S. CAL. L. REV. 221, 246 (2000). Some latched onto the TQM's mantra: quality improvements save money. See, e.g., Liz Kowalczyk, *Online Rankings Rankle Hospitals: Insurers Offering Data to Consumers*, BOSTON GLOBE, Mar. 8, 2004, at A1 (stating that employers are demanding quality rankings of providers because "[they believe] that high-quality care leads to fewer medical errors, repeat procedures, and lower costs"). A movement to measure the quality of care and to track improvements emerged.

However, the movement has enjoyed only partial success, and the fundamental focus on cost-reduction remains. See Devers et al., *supra* note 228, at 110 (

The first barrier identified by respondents was the absence of strong local market incentives for hospitals to improve patient safety. . . . [E]mployers and insurance brokers who work with them reported relatively little interest in hospital patient safety. Employers were most concerned about premium increases, and although reduction in medical error might reduce costs, few employers connected these two issues.

). Worse, recent changes in market conditions are thought to have jeopardized the efforts of the relatively uncommon employers that do want to improve quality. See Cara S. Lesser et al., *The End of an Era: What Became of the "Managed Care Revolution" in 2001*, 38 HEALTH SERVS. RES. 337, 349 (2003) (stating that "increased consolidation among providers has strengthened their ability to withstand pressure to demonstrate quality"). It remains to be seen how consumer-driven health care, the latest attempt to address these problems, will fare.

parative availability of computerized, user-friendly billing and clinical treatment programs. Software that avoids billing errors is readily available, and most providers have it. By contrast, software for clinical treatment programs has lagged. This outcome is quite predictable from an economic perspective:

The development of medical applications of information technology has largely been commercially funded, and reimbursement has rewarded excellent billing rather than outstanding clinical care. As a result, the focus has been more on products to improve the “back-office” functions related to clinical practice than on those that might improve clinical practice itself.<sup>385</sup>

In sum, health care providers have not worried enough about quality because they have not been paid to do so.<sup>386</sup> Altruism, education, lofty ethical standards, demanding norms of patient service, good character, licensure, reputational concerns, desire for referrals, report cards, and a highly punitive culture have undoubtedly motivated providers to make many improvements, but they have failed to bring health care anywhere near industrial standards of quality.<sup>387</sup> Anesthesiologists knew that patient monitors detected misintubations, but did not use them because they were expensive.<sup>388</sup> Hospitals know that bar codes and computerized physician order entry systems greatly reduce the frequency of medication mistakes, but do not use them because they are expensive.<sup>389</sup> Doctors know that electronic medical

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<sup>385</sup> David W. Bates & Atul A. Gawande, *Improving Safety with Information Technology*, 348 *New Eng. J. Med.* 2526, 2532 (2003); see also Davis, *supra* note 124, at 41–42 (reporting that manufacturers of machines for delivering anesthesia had the technology needed to prevent errors, but did not incorporate it into their products because “there [was] no great demand from the anesthesia providers”); Stephanie M. Duberman & Henrik H. Bendixen, *Concepts of Fail-Safe in Anesthetic Practice*, in *ANALYSIS OF ANESTHETIC MISHAPS* 149, 162–64 (Ellison C. Pierce, Jr. & Jeffrey B. Cooper eds., 1984) (showing that cost-effective means of preventing anesthesia mishaps were available and arguing that “improvements in outcome [could] be achieved inexpensively and simply”).

<sup>386</sup> See Leatherman et al., *supra* note 18, at 17–18 (

[H]ealth care organizations may be reluctant to implement improvements if better quality is not accompanied by better payment or improved margins, or at least equal compensation. Without a business case for quality, we think it unlikely that the private sector will move quickly and reliably to widely adopt proven quality improvements.

); see also Bill Lewis, *New Stents Good for Health, Bad for Finances, Hospitals Say*, *TENNESSEAN.COM*, Aug. 1, 2003 (reporting that hospitals lose approximately \$400 per use of an improved stent because Medicare reimburses less than the actual cost of the product).

<sup>387</sup> See *supra* note 258 and accompanying text.

<sup>388</sup> GAWANDE, *supra* note 21, at 67.

<sup>389</sup> See David F. Doolan & David W. Bates, *Computerized Physician Order Entry Systems in Hospitals: Mandates and Incentives*, 21 *HEALTH AFF.*, July/Aug. 2002, at 180, 183–84 (identifying the “[l]ack of financial incentives” as a significant barrier to the implementation of CPOE and other computerized technologies, and observing that CPOE may actually disadvantage providers in an FFS environment by reducing hospital lengths-of-stay and numbers of tests performed); Chris Rauber, *Sutter Belies Up to Bar Codes*, *S.F. BUS. TIMES*, Dec. 13,

records improve the quality of care, but do not use them because most independent practices are too small to afford the technology.<sup>390</sup> Few emergency rooms have patient-protecting software because of limited resource pooling and economies of scale.<sup>391</sup> Over and over again, one finds that providers fail to implement proven patient safety measures because they lack the incentive to bear the cost.<sup>392</sup>

The absence of a business case for quality explains the infrequency of error reporting as well. Outside of the health care sector, many businesses have created nonpunitive internal working environments that encourage workers to report problems.<sup>393</sup> They have taken this step, despite facing external liability threats, because the benefits of extremely low defect levels exceed the costs. Health care providers can create nonpunitive environments too, and the few hospitals that have done so have experienced “striking” increases in the frequency of error reports.<sup>394</sup> The number of such providers is small,

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2004 (reporting that Sutter Health used a bar code system to reduce medication errors by 28,000 incidents over a year-and-a-half, but that few other hospital chains use the system because “there isn’t a business case for doing this” (quoting Molly Coye, founder and CEO of San Francisco’s Health Technology Center)), available at <http://sanfrancisco.bizjournals.com/sanfrancisco/stories/2004/12/13/story6.html> (posted Dec. 13, 2004); see also *Patient Safety Survey Results Summary* (2001) (reporting that only 3.3% of 241 responding hospitals had CPOE systems), available at <http://www.ismp.org/pages/leap-froggroupresults.htm> (last visited Jan. 10, 2005); Greg Groeller, *New Technologies Tackle Drug Errors*, ORLANDO SENTINEL, Aug. 31, 2003, at H1 (indicating that high cost required hospitals to stagger implementation of technologies designed to reduce medication errors).

<sup>390</sup> See Associated Press, *Study: Computer Records Bring Better Care*, N.Y. TIMES, Dec. 20, 2004, at A1; Richard L. Reece, *Improving Care in Independent Practice*, HEALTHLEADERS NEWS, Aug. 25, 2003, at <http://www.healthleaders.com/news/feature47637.html>.

<sup>391</sup> See Allison Connolly, *Brigham Study: Emergency Rooms Slow to Embrace IT*, BOSTON BUS. J., Aug. 15, 2003, available at <http://boston.bizjournals.com/boston/stories/2003/08/18/newscolumn1.html> (posted Aug. 18, 2003).

<sup>392</sup> See *Patient Safety Survey Results Summary*, *supra* note 389 (reporting that only a minority of 241 reporting hospitals met clinical guidelines for intensive care unit physician staffing, or evidence-based hospital referral standards for high-risk surgeries and neonatal conditions); see also Millenson, *supra* note 138, at 107 (discussing examples in which “a Manhattan teaching hospital” told doctors to improve their handwriting instead of purchasing a computerized order entry system, senior administrators at an “affluent suburban Chicago hospital” “remain[ed] silent while physicians scoff[ed] openly at buying error-reduction technology that [was] unreimbursed,” and a physician claimed to have “pried an error-reduction budget out of her hospital by fibbing that they would lose Medicaid funding unless they acted”).

<sup>393</sup> See, e.g., Helmreich, *supra* note 127, at 62 (stating that an airline that instituted a non-punitive reporting policy “received more than 5,000 reports from its pilots in 21 months”).

<sup>394</sup> Leape, *supra* note 94, at 1633 (reporting that “striking increases in internal reporting have been achieved recently in a few hospitals that implemented nonpunitive and responsive reporting systems”); Leape, *supra* note 35, at 146 (stating that by 1999 “leaders in a number of health care institutions across the country had begun to implement non-punitive reporting” and experienced “fair, if modest success”). The IOM appears to be committed to the position that health care organizations can create non-punitive environments internally while facing punitive pressures from without. In *To Err Is Human*, the

however, reflecting the fact that most providers have little to gain.<sup>395</sup> Attempts to blame under-reporting on fear of litigation sounds plausible, but the real problem is that the market forces operating in the health care sector create insufficient pressure for quality to improve.

In theory, patients could exert pressure for quality by voting with their feet. In fact, they have not done so. Outside the health care sector, businesses that produce sub-par goods and services can expect to suffer near-death experiences that chasten their managers. Inside the health care sector, it is the patients who suffer both near-death experiences and actual death—not the providers. This may be because patients cannot easily differentiate between high-quality care (and high-quality providers) and low-quality care (and low-quality providers). If patients cannot tell the difference, they can neither reward high-quality providers by patronizing them, nor punish low-quality providers by shunning them. The lack of pressure for greater quality may also be because patients have too little “skin in the game.” Even providers who recognize they have a problem and want to invest in quality enhancement can reasonably anticipate that it will be “all pain and no gain,” because patients are unlikely to change their purchasing habits.

### C. The Rarity of Result-Based Compensation

As Sherwin Nuland, a leading writer on the history of the medical profession, observed, “When patients put their trust into a surgeon or other doctor, they are entrusting their health to a whole array of systems.”<sup>396</sup> An economist would say that the patient relies on the provider to address a host of principal-agent problems.<sup>397</sup> Doctors, nurses, and other hospital personnel must work together well and use their knowledge well if patients are to be treated correctly. Unfortu-

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IOM both endorsed non-punitive arrangements and recommended the creation of mandatory error reporting systems that hold providers accountable “by providing disincentives, such as citations, penalties, or sanctions, for continuing to engage in unsafe practices.” Leape, *supra* note 94, at 1633–34. Evidently, external threats need not poison the atmosphere within.

<sup>395</sup> Indeed, many hospital administrators believe they have much to lose from error reporting. A study of 203 hospital CEOs and COOs found that almost eighty percent believed a mandatory nonconfidential system of error reporting would encourage lawsuits. Joel S. Weissman et al., *Error Reporting and Disclosure Systems: Views From Hospital Leaders*, 293 JAMA 1359, 1359 (2005).

<sup>396</sup> Sherwin B. Nuland, *Mistakes in the Operating Room—Error and Responsibility*, 351 NEW ENG. J. MED. 1281, 1282 (2004).

<sup>397</sup> The literature on agency problems in health care markets is surveyed in MARTIN GAYNOR, ISSUES IN THE INDUSTRIAL ORGANIZATION OF THE MARKET FOR PHYSICIAN SERVICES (Nat'l Bureau of Econ. Research, Working Paper, No. 4695, 1994), available at <http://www.nber.org/papers/w4695> (last visited Feb. 5, 2005); see also MARK V. PAULY, DOCTORS AND THEIR WORKSHOPS: ECONOMIC MODELS OF PHYSICIAN BEHAVIOR 5–15 (1980) (modeling physician behavior in economic agency terms).



nately, they often work together poorly. Nuland provides a compelling example. When he was a 22-year-old, third-year medical student in his first week of surgical rounds, an experienced surgeon in a hurry to make another appointment left him in charge of "closing up" a patient. Nuland botched the job because he did not know to clean a pool of blood from the wound before stitching it shut. A week after being discharged, the patient "was readmitted . . . with a high fever and a large wound abscess caused by infection of the retained blood. It was another four days before he had recovered sufficiently to go home."<sup>398</sup>

Nuland's example is one in which an agent (the physician) served a principal (the patient) poorly. In most markets, principals rely heavily on bonding to motivate agents to serve them well.<sup>399</sup> Bonding involves tying the agent's fate to the principal's, so that self-interest will motivate the agent to serve the principal well.

Agents operating in the health care sector go to great lengths to bond with patients. Doctors and nurses receive extensive training, certifications, and continuing education. They commit themselves to codes of ethics, perfectionist standards, and peer review. Hospitals operate on a nonprofit basis, reducing the incentive to "cheat on quality."<sup>400</sup> Providers also place great weight on their reputations. In other industrial sectors, producers behave similarly. They demonstrate commitments to quality by developing brand names, obtaining certifications from independent entities, agreeing to meet production deadlines or quotas, and setting explicit quality standards and performance targets.

Outside the health care sector, however, agents also take one crucial further step: they tie their financial success to their customers' satisfaction by offering warranties, money-back guarantees, inexpensive service contracts, and other emoluments. In other words, they use compensation arrangements that reward them for meeting quality specifications and producing good results. Producers do this for a

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<sup>398</sup> Nuland, *supra* note 396, at 1282. Medical errors are more common when residents are overworked. See generally Christopher P. Landrigan et al., *Effect of Reducing Interns' Work Hours on Serious Medical Errors in Intensive Care Units*, 351 NEW ENG. J. MED. 18 (2004) (studying effects of sleep deprivation on intern performance and finding that interns who worked the traditional schedule, involving significant sleep deprivation, made 35.9% more serious medical errors, 56.6% more nonintercepted serious errors, and 5.6 times as many serious diagnostic errors as interns who did not work extended shifts).

<sup>399</sup> Principals can also rely on monitoring. For obvious reasons, however, monitoring is more difficult in health care than in many other markets.

<sup>400</sup> David A. Hyman, *The Conundrum of Charitability: Reassessing Tax Exemption for Hospitals*, 16 AM. J.L. & MED. 327, 370 (1990) ("In a world where patients are relatively ignorant about their medical conditions, a for-profit provider has a clear incentive to cheat on quality and quantity. Because there are no equity shareholders, nonprofit hospitals may be safer for the relatively helpless patient.").

simple reason: they gain by keeping their customers happy and allaying their customers' fears. A world in which disappointed or worried customers can take their business elsewhere is a world in which competition is a potent force for quality improvement.

Many service agents also bond with their customers by using payment-for-performances (P4Ps). Lawyers, salespersons, real estate agents, financial advisers, auctioneers, and company managers frequently condition their right to compensation in whole or in part on outcomes, e.g., dollars recovered for clients, sales volume, prices, investment returns, revenues, or stock values.<sup>401</sup> The linkage between payment and performance brings the economic interests of principals and agents into closer alignment, to their mutual benefit.

Although P4Ps prevail throughout the economy, they are virtually unknown in the health care sector.<sup>402</sup> Doctors have even used the AMA's Code of Medical Ethics to cast doubt on the ethical propriety of fee arrangements that link compensation to results.<sup>403</sup> None of the four most prevalent compensation arrangements—fee-for-service (FFS), flat rate, capitation, and salary—ties the right to payment to service quality or patient health. All four arrangements are quality-invariant and outcome-independent. Providers receive the same compensation, whether or not they deliver high-quality care.<sup>404</sup>

<sup>401</sup> Hyman & Silver, *supra* note 88, at 1429 (

Many lawyers of diverse types work on contingency, as do many accountants who represent taxpayers before the Internal Revenue Service and local taxing authorities. Investment bankers, stockbrokers, real estate agents, auctioneers, department store clerks, insurance agents, advertising agencies, political consultants, and telemarketers work on commission, as do corporate officers, directors, and executives who receive stock options, partners who share in a firm's profits, employees who receive bonuses, and service personnel who receive tips. [Even] [s]alaried employees participate in [P4Ps] when their pension plans hold their employers' stock.

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<sup>402</sup> See R. Adams Dudley et al., *The Impact of Financial Incentives on Quality of Health Care*, 76 MILBANK Q. 649, 654 (1998) ("Linking salaries and bonuses to performance on quality measures is common in other industries. In the health care industry, however, this practice has been rare until recently and has not been well studied."). The VHA now uses cash awards to encourage employees to report mistakes. See Pear, *supra* note 220, at 50.

<sup>403</sup> See Hyman & Silver, *supra* note 88, at 1459–60 (observing that "[m]any providers oppose [P4Ps] on ethical grounds," and that the AMA's Code of Medical Ethics "*prohibits* doctors from conditioning the right to payment on the success of a treatment procedure"); David A. Hyman & Charles Silver, *Just What the Patient Ordered: The Case for Result-Based Compensation Arrangements*, 29 J.L., MED. & ETHICS 170, 170–73 (2001) (arguing against the AMA's prohibition of result-based compensation).

<sup>404</sup> Consider, for example, the consequences of an FFS compensation arrangement in which a provider's fee is the same whether a service helps a patient, harms a patient, or has no effect. Under such an arrangement, providers' financial interests strongly conflict with patients' health care interests in myriad contexts. Providers, for example, can maximize their profits by delivering unnecessary services (including services that expose patients to risks), sacrificing quality to minimize costs, failing to invest in updated or efficient proce-

Generally, health care's existing compensation arrangements pay providers for what they do, not for what they accomplish.<sup>405</sup> As Dr. Stephen Asch, a health care researcher at RAND, observed, "Medical care is one of those very strange parts of the economy where you get paid no matter what the quality of the service you provide. . . . It is like you went to a car dealership and your Mercedes is going to cost you the same as your Yugo."<sup>406</sup> This failure to tie compensation to variables that correlate strongly with patients' needs and desires has striking consequences: providers not only lack direct economic incentives to deliver high quality medical care, they often profit by cutting quality at patients' expense.<sup>407</sup> As former Speaker of the House Newt Gingrich cuttingly noted, "Healthcare is the only industry in America that can give you a disease and then charge you to cure the disease it gave you."<sup>408</sup>

Payers share responsibility for this state of affairs. Payers have historically cared more about price than quality, so they have negotiated terms that largely delegate responsibility for quality to providers. Although payers have recently become more interested in performance-based compensation arrangements, daunting institutional and political barriers have frustrated their efforts.<sup>409</sup>

Despite these obstacles, P4Ps may create the business case for quality so often missing in the health care sector. By forcing providers to internalize the costs of low-quality care and enabling them to cap-

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dures, and even harming patients and subsequently charging for services needed to undo the damage.

<sup>405</sup> See DAVID A. KINDIG, PURCHASING POPULATION HEALTH: PAYING FOR RESULTS 1 (1997) (noting that providers "'get paid for what [they] do, not what [they] accomplish'" (quoting former Assistant Secretary of Health and Human Services Dr. Philip Lee)).

<sup>406</sup> *Program Coaxes Hospital to See Treatment Under Their Noses*, NEW JERSEY HEALTH CARE QUALITY INST., Dec. 25, 2004, available at <http://www.njhcqi.org/sedrish122504.html>.

<sup>407</sup> See Danzon, *supra* note 7, at 1348. FFS compensation "increase[es] the likelihood of [provider] errors" because providers have an incentive to profit by generating a "high volume of reimbursable encounters and procedures." *Id.* An encounter-based compensation system creates similar incentives and consequences because providers are paid based on the amount of time spent with a patient, the number of patients treated, the number and type of procedures performed, the number of weeks employed, or the number of patients in a practice. Capitation—which pays providers a certain amount per patient—creates slightly different incentives, but with similar consequences. "[S]ince the capitated physician faces a positive marginal cost but receives zero marginal revenue per unit of additional service or effort, capitation may create incentives for suboptimal quantity and quality of care if patients have imperfect information about quality or face costs of switching physicians." *Id.* Refusing to improve delivery systems is a particularly telling example of how providers can cut quality and still profit under existing compensation schemes. Improving such systems can cost millions, or even billions, of dollars. Thus, providers benefit from rejecting improvements though patients' benefits would far outweigh this cost.

<sup>408</sup> GINGRICH, *supra* note 72, at 18. Gingrich also cites a report showing that "hospital-acquired infections, which are not considered medical errors, are responsible for over 88,000 deaths every year and cost over \$4.5 billion." *Id.* at 18–19.

<sup>409</sup> See Hyman & Silver, *supra* note 88, at 1459–72.

ture the benefits of high-quality care, P4Ps can spur improvements in the quality of goods and services.<sup>410</sup> The Shouldice Hospital, which specializes in hernia repairs and outperforms other providers in both quality and price, offers a relevant example. As mentioned previously, hernias recur after surgery in less than one percent of Shouldice's patients.<sup>411</sup> Shouldice links compensation to quality by re-treating these patients without charge and requiring the original treating physician to perform the second surgery without compensation.<sup>412</sup>

It is comparatively easy to monitor the outcome and quality of hernia repair, because both providers and patients can easily determine whether the hernia recurred or not. In many health care contexts, however, quality defects are not so obvious. In these instances, P4Ps have an important information-forcing aspect, both from an internal and external perspective: they can provide the health care system with incentives to discover and remedy "hidden" quality defects, and they help educate patients on quality issues. As noted previously, many organizations have hostile internal cultures that discourage health care workers from reporting and dealing with mistakes. P4Ps can encourage these organizations to transform themselves by making such dysfunctional cultures costly. As soon as employers bestow honors, recognition, and other rewards on employees who find weaknesses and cure them, good attitudes will take hold and flourish.<sup>413</sup>

The dearth of P4Ps may also explain why consumer ignorance is a persistent problem in the health care sector. As stated, principals use two methods to obtain reliable performance from agents: bonding and monitoring. Unfortunately, monitoring appears to have little impact on health care quality, mainly because patients have difficulty assessing the quality of care they receive.<sup>414</sup> The information asymmetry

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<sup>410</sup> See *id.* at 1446–50.

<sup>411</sup> GAWANDE, *supra* note 21, at 38.

<sup>412</sup> HERZLINGER, *supra* note 55, at 161. Similar incentive arrangements exist outside the health care sector. Wruck and Jensen discuss the case of Lincoln Electric, which encouraged high-quality production by issuing lifetime warranties and by requiring employees [to] repair the defects in their output on their own time. . . .

Defects also affect [employees' annual] bonus[es] directly. 'Forgivable' errors result in the employee losing 1% of his or her total annual bonus for each such defect. 'Unforgivable' errors result in a loss of 10% of the annual bonus. Although annual total compensation [at Lincoln Electric] is double the industry average, Lincoln's productivity per worker is five to six times its competitors'. . . . Its monetary pay-for-performance system encourages employees to improve both productivity and quality and has led it to dominate the industry.

Wruck & Jensen, *supra* note 321, at 277–78.

<sup>413</sup> See Wruck & Jensen, *supra* note 321, at 273, 277–78.

<sup>414</sup> See Newhouse, *supra* note 11, at 16–17 (explaining that because consumers cannot tell whether a "bad medical outcome is attributable to poor-quality care or to the underlying disease," they "continue to use providers or delivery systems that give inferior results . . ."); GAYNOR, *supra* note 397, at 13–14 (describing the information asymmetry

between providers and patients is too great for patients to overcome by themselves. In this regard, P4Ps have the potential to help eliminate the persistent problem of consumer ignorance.

Health care is not the only industry in which producers know more about the quality of goods and services than consumers do. Indeed, it is difficult to identify any economic sector in which this is not true. Car companies know more about the reliability of automobiles than buyers. Growers, grocers, and restaurateurs know more about the purity of foods than consumers. Commercial airlines know more about safety records, on-time arrival frequencies, and lost luggage problems than passengers. Significant informational asymmetries between sellers and buyers are common.

Outside the health care sector, however, markets provide incentives to overcome these asymmetries. Price and nonprice competition creates pressures for sellers to ensure that buyers know where to find high-quality goods and services. Consider televisions. If television sets vary in quality, manufacturers of better sets can profit by charging higher prices or selling more units. For this strategy to work, consumers must be able to tell good television sets from bad ones. High-quality sellers thus have an incentive to invest in the reputation of their brand name and to educate their customers. Consumers will quickly learn to avoid sellers that withhold information, or will recognize that they are trading off price against quality in dealing with such sellers.

Compared to other vendors, health care providers say little about the quality of the goods and services they provide. They rarely convey information about mortality rates, infection rates, inoculation rates, wait times, or other matters of interest to patients. They do not benchmark themselves against other providers, or advertise their results.<sup>415</sup> They resist efforts by others to rank them.<sup>416</sup> They do not

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between patient and physician, and stating that “[q]uality of care (or physician effort in producing care) can be observed far less precisely by the patient than by the physician, providing the physician with an opportunity to skimp on quality”).

<sup>415</sup> *But cf.* Wruck & Jensen, *supra* note 321, at 271 (“Many TQM organizations also benchmark, comparing their performance to data available on the performance of peer or competitor firms.”).

<sup>416</sup> *See* Marc Santora, *Cardiologists Say Rankings Affect Surgical Decisions*, N.Y. TIMES, Jan. 11, 2005, at B3 (noting “the hostility among many doctors to publicly releasing data of any kind”). Despite opposition from providers, Medicare, other health care payers, and regulators have recently begun rating the quality of care and posting the results on the internet. *See, e.g.*, Gina Kolata, *Program Coaxes Hospitals to See Treatments Under Their Noses*, N.Y. TIMES, Dec. 25, 2004, at A1 (discussing rankings by Medicare and the Department of Veterans Affairs); *see also* Quality Check, [www.qualitycheck.org](http://www.qualitycheck.org) (website created by the Joint Commission on Accreditation of Health Care Organizations that enables users to compare hospitals on a variety of medical services) (last visited Feb. 5, 2005); MyHumana—Compare Hospitals, <http://www.humana.com/misc/tour/takethetourmember/Member9.htm> (website enabling Humana members to “compare number of procedures conducted, complication and mortality rates, length of stay and cost information”) (last visited Feb. 5, 2005);

even provide complete information about prices in advance. Their silence reflects the fact that educating patients has little upside for them.<sup>417</sup> P4Ps can invert this dynamic, and create incentives for providers to collect and disclose information in order to attract patients and garner the associated economic rewards.

Use of P4P in the health care sector has been increasing. Medicare has begun offering hospitals bonuses for hitting quality improvement targets and for submitting data needed to measure quality.<sup>418</sup> Private payers have also launched P4P initiatives. Although these developments merit applause, P4Ps are unlikely to carry the entire burden of error reduction due to limitations in measuring results. Thus, alternatives or supplements to P4Ps must also be considered.

#### D. Alternatives to P4Ps

The “reforms” offered by proponents of the conventional wisdom also demonstrate the need for P4Ps and other incentives to improve the quality of care. Without exception, critics of liability call for extensive government financing and regulation of health care providers.<sup>419</sup>

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Josh Goldstein, *Patients in N.J. Get a Gauge for Care Quality*, PHILLY.COM, July 2, 2004 (discussing a New Jersey Department of Health and Senior Services report rating hospitals by their compliance with treatment standards). Predictably, providers have questioned the value of the rankings and their accuracy. See Kowalczyk, *supra* note 384.

<sup>417</sup> See Stuart M. Butler, *A New Policy Framework For Health Care Markets*, 23 HEALTH AFF., Mar./Apr. 2004, at 22, 23–24 (arguing that if forced to compete, health care plans would offer subscribers more information); Alain C. Enthoven, *Market Forces and Efficient Health Care Systems*, 23 HEALTH AFF., Mar./Apr. 2004, at 25, 25 (contending that health care purchasers are poorly informed partly because providers “resist[ ] . . . the collection and publication of quality-related information”). Professor Jost emphasizes the severity of the information problems afflicting health care consumers, and the impediments to such disclosure. See Jost, *supra* note 328, at 850–55.

We agree that educating patients is a demanding and difficult project, and we harbor no illusions that most patients will select services intelligently once providers disclose service information. But widespread intelligent selection may not be needed. In most markets, a good deal of free-riding occurs as unsophisticated shoppers benefit from producers’ efforts to satisfy the demands of informed shoppers seeking out the best goods and services at the best prices. Free-riding could also occur in the health care sector if the population of sophisticated patients was larger. Our point is simply that this population will become larger if providers are incentivized to convey more information.

<sup>418</sup> See, e.g., Bruce Japsen, *Doctors Put on a Pay-for-Performance Alert*, CHI. TRIB., Dec. 9, 2004, at B3.

<sup>419</sup> See, e.g., Bates & Gawande, *supra* note 385, at 2532–33 (arguing for government funding of government-promulgated standards and of information technology); Doolau & Bates, *supra* note 389, at 185 (recommending state and federal grants for technology implementation); Kathleen Covert Kimmel & Joyce Sensmeier, *A Technological Approach to Enhancing Patient Safety*, HEALTHCARE INFO. MGMT. SYS. SOC’Y REP. 1–2 (2002) (

Given the expense of an electronic medical record system, which includes physician order entry, medication administration records, and decision support systems, funding from the hospital supplemented by the federal government is needed. . . . [T]he government needs to create a national health information infrastructure as a medical communication highway to protect its citizens.

Consider Professor Liang's self-described "very modest proposal."<sup>420</sup> He would "create a patient safety center within the National Institutes of Health for coordination and study of medical error," "mandate systems-based patient safety and error reduction efforts . . . as a condition of accreditation and licensure of institutional providers," "mandate systems-based, patient safety and error reduction, [and] continuing medication education for individual providers," "mandate [error] reporting with the stick of licensure suspension or revocation for nonreporting," "eliminate . . . termination without cause clauses in physician [employment] contracts," separate financial officers from clinicians, "mandate third party, independent review when physicians and health care plans conflict in recommendations for patients," and, apparently, forcibly educate patients.<sup>421</sup> That Liang describes this string of regulations as "a very modest proposal" shows all too plainly that no one imagines health care providers will achieve appropriate safety levels on their own.<sup>422</sup>

Commentators' reflexive reliance on governmental initiatives is easy to understand. In health care, regulations more often drive patient safety initiatives than market forces. In one multicomunity study of the factors driving the adoption of patient safety initiatives, hospital administrators and other interviewees cited the desire to meet JCAHO accreditation requirements more than any other cause.<sup>423</sup> They even gave JCAHO credit for improvements that were

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); Lapetina & Armstrong, *supra* note 37, at 26, 35–37 (recommending that governments require ambulatory and office-based surgical centers to require accreditations and to mandate the use of licensed anesthesiologists in certain procedures: "[T]he U.S. Department of Health and Human Services (HHS) should mandate that all states create standards of care for office-based surgery and procedures involving anesthesia within a designated number of years. The standards should address areas including patient monitoring during procedures, technology implementation, and equipment purchase and maintenance").

<sup>420</sup> Liang, *Promoting Patient Safety*, *supra* note 9, at 561.

<sup>421</sup> *Id.* at 561–66. Professor Liang also identifies the need for "internal and industry-wide reporting and analysis systems that continuously monitor errors and error reduction effectiveness." *Id.* at 563. It is not clear whether Professor Liang would mandate these programs as well.

<sup>422</sup> Faith in the government's ability to police health care quality, however, is unwarranted. Experience with state-run incident reporting systems and medical boards provides no basis for optimism on this score. See, e.g., Troyen A. Brennan, *Hospital Peer Review and Clinical Privileges Actions: To Report or Not Report*, 282 JAMA 381, 382 (1999); Leape, *supra* note 94, at 1636 (asserting that a "[l]ack of resources limits the ability of state [reporting] systems to provide better oversight and more useful feedback to hospitals"); U. S. GOV'T ACCOUNTABILITY OFFICE, MEDICARE: CMS NEEDS ADDITIONAL AUTHORITY TO ADEQUATELY OVERSEE PATIENT SAFETY IN HOSPITALS, REP. NO. GAO-04-850, at 11 (2004) (finding that JCAHO failed to find 167 of 241 serious deficiencies in 500 hospital surveys conducted between 2000 and 2002); Richard Perez-Pena, *Law to Rein in Hospital Errors Is Widely Abused, Audit Finds*, N.Y. TIMES, Sept. 29, 2004, at A1 (finding that hospitals often delay weeks or months in reporting errors, sometimes not reporting them at all, and that the New York State Health Department rarely sanctions them for such behavior).

<sup>423</sup> See Devers et al., *supra* note 228, at 105–06.

not tied to express JCAHO requirements, such as investments in electronic medical records and other forms of information technology, characterizing these investments as indirect means to meet express JCAHO requirements.<sup>424</sup>

The consensus that government must lead the way is an unmistakable sign that providers' incentives are inadequate. No one expects taxpayers to underwrite quality improvements in computers sold by Dell or cars sold by General Motors.<sup>425</sup> The public expects companies (and the private sector more generally) to invest in quality because doing so is profitable. It is time to subject health care providers to the same logic. Once we do, we should expect immediate and extensive improvements in the quality of health care and a restructuring of the health care system along functional lines.

## V

### HARMONIZING THE LIABILITY AND PATIENT-SAFETY APPROACHES

Patient safety advocates argue that faulty systems cause medical errors, not bad people.<sup>426</sup> But tort liability blames individuals (and sometimes entities) for mistakes and holds them accountable for patient losses. This is one reason many patient safety advocates believe tort liability is detrimental. Because liability shames and blames individuals, patient safety advocates argue that liability is applying pressure at the wrong point.

Yet, tort liability and patient safety are not incompatible. One can find many reports in which malpractice lawsuits caused providers to address systemic problems they neglected when left to their own devices.<sup>427</sup> The history recounted in Part III.B shows that anesthesiologists revamped their systems and improved their performance because of tort liability, not in spite of it. Additionally, the HMPS found that professional negligence and patient harm were less likely to occur when injured patients were *more* likely to sue.<sup>428</sup> Thus, tort liability

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<sup>424</sup> See *id.* at 107.

<sup>425</sup> To be sure, technology transfer of government-funded research is another matter entirely. In general, the United States relies on a mix of public and private funding to conduct basic scientific research. Applied research is more heavily funded by private parties, who reasonably anticipate garnering an economic return from their investments.

<sup>426</sup> See, e.g., Liang, *Promoting Patient Safety*, *supra* note 9, at 543–44 (noting that “one individual is not responsible for the outcomes of the entire system,” and that “[i]t’s the system that is the necessary and appropriate focus when we consider how good or bad [an] outcome is”).

<sup>427</sup> See, e.g., Michael J. Berens, *Infection Epidemic Carves Deadly Path: Poor Hygiene, Overwhelmed Workers Contribute to Thousands of Deaths*, *CHI. TRIB.*, July 21, 2002, at 1 (discussing efforts that Bridgeport Hospital in Connecticut made to bring down rates of post-surgical nosocomial infections after a malpractice lawsuit brought the Hospital’s indifference in the face of a known peril to light); see *supra* Parts III.B, III.G.

<sup>428</sup> See *supra* note 99 and accompanying text.



actually motivates some providers to improve their performance and delivery systems, but does so inconsistently and less effectively than is optimal.

In this Part, we outline several ways to strengthen the tendency of tort liability to motivate providers to improve their delivery systems. We begin by setting out a simple theory of how tort liability is supposed to create incentives for quality improvement. The theory forces one to rethink the criticism that the tort system fails because it targets individuals instead of systems. The criticism may be right, but not for the reason its authors contend. We then examine the causes of the tort system's failure to generate quality improvements. Finally, we consider ways to strengthen the incentive for providers to deliver high-quality care.

#### A. Creating Incentives for Safety: A Simple Theory of Cost Internalization

Organizations like hospitals and managed care organizations (MCOs) have the power to improve delivery systems, but tort law often holds individuals like doctors and nurses responsible for mistakes. When individual providers "called the shots," the decision to impose liability on them was arguably defensible. Now that organizations are in charge, holding individuals responsible for systems they do not control seems nonsensical.<sup>429</sup>

The problem of individual accountability, moreover, is compounded by the efforts of MCOs to influence the practice of medicine. Physicians complain that MCOs prevent them from delivering medical care of the highest quality and punish them for advocating on behalf of patients. It seems perverse to hold physicians liable for mishaps resulting from constraints MCOs impose on them. Freeing MCOs from malpractice liability also weakens their incentive to improve quality.<sup>430</sup> Enthusiasts of the conventional wisdom aggres-

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<sup>429</sup> Runciman et al., *supra* note 71, at 976 (arguing against the application of sanctions to individuals and contending that "more attention should be given to demanding organizational compliance with appropriate standards"); Liang, *supra* note 81 at 43-44 (

[L]iability rules on the organizational level may also impede error reduction activities . . . . [These] rules often shield organizations from liability . . . , even though the organization has designed the incentive structure . . . . This is a direct result of a physician's independent contractor status; since the physician is not considered to be under the control of the organization and has significant discretion over the performance of his or her responsibilities, the organization, which "merely" pays for services, is generally not liable for the actions of the independent contract physician . . . .

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<sup>430</sup> In *Aetna Health, Inc. v. Davila*, 542 U.S. 1175, 124 S. Ct. 2488 (2004), the U.S. Supreme Court held that ERISA preempts HMOs from liability under state law for decisions relating to coverage for medical procedures recommended by physicians. See also Jennifer

sively assert that these institutional realities support their criticisms of the tort system.

Although these points are true in a superficial sense, liability critics fail to grapple with the Coasean point that contracts can cure inefficient assignments of liability.<sup>431</sup> Suppose that MCOs, health maintenance organizations (HMOs), hospitals, and other entities can improve delivery systems at the lowest cost, and suppose also that the law imposes responsibility for mishaps on physicians. If physicians can use contracts to shift liability to organizations, progress will occur regardless of which entity the liability system targets.

Suppose that a doctor employed by an MCO can efficiently spend \$1,000 reducing errors directly, that the doctor faces a remaining expected liability exposure of \$25,000 per year after this investment is made, and that a liability insurance carrier would charge an actuarially fair premium of \$25,000 to cover the remaining exposure.<sup>432</sup> After preventing errors directly and buying insurance, the doctor's total cost of dealing with errors is \$26,000.

Now suppose the MCO could cut the doctor's residual liability exposure from \$25,000 to \$5,000 by improving its health care delivery systems at a cost of \$10,000. Plainly, the doctor could save money by paying the MCO \$10,000 to make the improvements and by paying a fair premium of \$5,000 to insure the residual risk that would remain. Paying the MCO to improve would reduce the doctor's total cost of dealing with errors to \$16,000 (\$1,000 + \$10,000 + \$5,000).

The doctor's professional liability carrier could accomplish the same result. Suppose the doctor is content to pay the \$25,000 premium. Instead of accepting the payment and shouldering the risk, the doctor's liability carrier would find it advantageous to pay the MCO to improve its systems. A \$10,000 payment to the MCO would save the carrier an expected \$20,000 in liability costs, allowing it to pocket a \$10,000 profit.<sup>433</sup>

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Arlen & W. Bentley MacLeod, *Malpractice Liability for Physicians and Managed Care Organizations*, 78 N.Y.U. L. REV. 1929, 1932 (2003) (observing that absence of liability encourages MCOs to underinvest in preventing injury and to use less care in making coverage determinations); Liang, *supra* note 81, at 43-44 ("[B]ecause managed care organizations do not generally shoulder liability associated with patient injury, they have no incentive to engage in or fund the significant administrative and clinical costs associated with error reduction research and implementation.").

<sup>431</sup> See generally Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

<sup>432</sup> For simplicity, the example assumes that defense costs and claim adjustment expenses are zero and that liability insurance premiums are tailored to the risks individual physicians present. Each of these assumptions is inaccurate to varying degrees, but they do not affect the implications of our model.

<sup>433</sup> Liability insurers have in fact worked to reduce the frequency of malpractice claims. See, e.g., U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, DEFENSIVE MEDICINE AND MEDICAL MALPRACTICE, OTA-H-602, at 33 (1994) (reporting that some malpractice insurers have developed "mandatory clinical protocols that physicians must follow to main-

Because a liability carrier can pool physicians who practice in the same hospital or facility, it may also find it advantageous to pay for improvements that individual physicians would not purchase on their own. Suppose a \$50,000 improvement in a hospital's operating room would reduce the liability exposure of 100 doctors by \$1,000 each.<sup>434</sup> It would be irrational for any doctor to pay \$50,000 for a \$1,000 gain, but it would be advantageous for a carrier covering all 100 doctors to pay \$50,000 to save \$100,000. The liability insurer could thus achieve economies of scale that individual doctors would have difficulty obtaining on their own.

Completing the triangle, the MCO could step between the doctor and the liability insurer. By agreeing to indemnify the doctor for malpractice claims, the MCO could absorb the doctor's \$25,000 expected liability loss in return for a payment of \$25,000, spend \$10,000 improving its systems, pay \$5,000 for an insurance policy covering the doctor's residual exposure, and pocket \$10,000 in cash.<sup>435</sup> An MCO could also perform an aggregating function by implementing practice standards and other safety enhancements and taxing their costs to all doctors under contract.<sup>436</sup> Examples of such enterprise liability by contract exist in some areas of the health care marketplace, although there are clearly transactional and institutional barriers to its universal adoption.<sup>437</sup>

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tain coverage"); Liang, *Promoting Patient Safety*, *supra* note 9, at 546 (reporting that malpractice carriers require doctors and hospitals to engage in risk management activities as a condition for obtaining coverage); Jack Moyers, *Does Monitoring Have an Effect on Patient Safety?*, 4 J. CLINICAL MONITORING 107, 110 (1988) ("We now find certain monitors being used [in connection with anesthesia] because insurance companies, either directly or indirectly, have issued a sort of ultimatum.").

<sup>434</sup> Many safety devices that could be adopted at hospitals and other locations where doctors practice are likely to fit this description. A computerized drug order entry system, for example, would benefit all clinicians who prescribe medications in a hospital as well as the hospital's nurses and pharmacists.

<sup>435</sup> See Danzon, *supra* note 7, at 1378 ("If enterprise liability is potentially efficient, it could already be adopted by voluntary contract between hospitals and their medical staff."); see also Hyman, *supra* note 98, at 1651-55 (cataloging reasons why enterprise liability has not been adopted through voluntary contracts, and observing that Yogi Berra identified the basic problem with voluntary adoption of enterprise liability: "If people don't want to come to the ballpark, nobody's going to stop them").

<sup>436</sup> See Bryan A. Liang, *Patient Injury Incentives in Law*, 17 YALE L. & POL'Y REV. 1, 57 (stating that a physician who contracts with an MCO "subjects himself or herself . . . to practice and other MCO requirements, including the use of specific clinical practice guidelines, limitations on care decisions by management, standards of utilization review," and other terms).

<sup>437</sup> See Danzon, *supra* note 7, at 1378 ("[C]ontractual enterprise liability is already the norm in at least one staff model HMO, in most teaching hospitals and in other contexts where physicians are salaried hospital employees."); Mello & Brennan, *supra* note 86, at 1624-36; William M. Sage & James M. Jorling, *A World That Won't Stand Still: Enterprise Liability by Private Contract*, 43 DEPAUL L. REV. 1007, 1032 (1994). On the barriers to more extensive adoption of such arrangements, see Hyman, *supra* note 98, at 1651-55.

To summarize, if health care organizations could efficiently reduce error rates by improving delivery systems, the assignment of tort liability to individual providers should not impede progress. Rather, individual provider liability should create a bargaining environment in which physicians pay organizations directly or indirectly to make cost-justified improvements.<sup>438</sup> The decision to saddle individuals with financial responsibility for mishaps should not be fatal to improving quality, even if organizations have greater ability to improve health care delivery systems than individuals do.

Critics of tort liability nevertheless believe that the decision to target individuals is an important mistake.<sup>439</sup> If they are right, it can only be because contractual exchanges are not re-assigning liability efficiently. The difficulty of contracting cannot account for this. Doctors, hospitals, MCOs, and health care payers already use contracts to regulate many aspects of health care delivery, and they have considerable freedom to re-allocate malpractice risks.<sup>440</sup> Recent premium spikes appear to have encouraged risk-shifting, with "physicians in many states . . . seeking coverage from the hospitals with which they are affiliated."<sup>441</sup>

To explain why the decision to target individuals makes a difference (assuming it does), one must posit defective incentives. That is, one must show that inefficient assignments of liability "stick" because the incentives to shift responsibilities to organizations are missing, even though organizations can bear them more efficiently.

## B. Defective Incentives Impede Liability Trades

It should be plain by now that many providers invest fewer resources in patient safety than they should. The most important explanation for this is the failure of the health care market to reward quality improvements. Another is the tort system's failure to pick up the slack. The tort system emits a weak and inconsistent signal for quality improvement.<sup>442</sup>

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<sup>438</sup> Cf. GUIDO CALABRESI, *THE COSTS OF ACCIDENTS* 312 (1970) (noting the importance of placing liability on the cheapest cost avoider, regardless of whether they are parties to the contract).

<sup>439</sup> See *supra* Part II.

<sup>440</sup> See *supra* notes 431-38 and accompanying text.

<sup>441</sup> Sage, *Medical Liability and Patient Safety*, *supra* note 90, at 33.

<sup>442</sup> The discussion in this section focuses on the tort system's impact on errors that injure patients. Other defects in health care delivery abound, but are not generally subjects of tort litigation. Consider waste. Many medical tests and procedures, such as arthroscopic knee surgery for patients with osteoarthritis and spinal fusion surgery for patients with back pain, are of doubtful effectiveness. See Jensen & Tinker, *supra* note 66, at 15-16 ("The truth is that many currently 'standard' diagnostic and therapeutic practices, involving huge numbers of patients, high risks, and tremendous costs, rest upon very uncertain foundations with respect to efficacy."). Ineffective procedures do not trigger

The basic reason for the failure of the tort system is that injured patients rarely sue.<sup>443</sup> Focusing on hospitalized patients in New York, the HMPS found a 7.5 to 1 ratio between negligence-induced adverse events<sup>444</sup> and the total number of medical malpractice claims.<sup>445</sup> Approximately 2% of patients whose injuries stemmed from negligence filed claims, although claiming was more common when injuries were more severe.<sup>446</sup> "Even when the injury sample [was] narrowed to a subset of more monetarily valuable tort claims—those involving serious injury to patients less than seventy years old—a negligence-to-claims ratio of 5 to 2 persist[ed]."<sup>447</sup> Other studies also find low claim rates.<sup>448</sup> The oft-heard charge that patients sue whenever bad outcomes occur is simply wrong.

The universe of filed lawsuits also contains a substantial number of claims in which no negligence occurred. Over-claiming—the assertion of invalid malpractice claims—is, however, dwarfed by under-claiming—the failure to assert valid claims. "[F]or every doctor or hospital against whom an invalid claim is filed, there are seven valid claims that go un-filed."<sup>449</sup>

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malpractice lawsuits unless they are delivered improperly and patients are harmed. Consequently, malpractice lawsuits do not discourage waste. On the effectiveness of knee surgery and spinal fusion surgery, see *supra* notes 67–68 and accompanying text.

<sup>443</sup> Excellent discussions of the literature on under-claiming in the malpractice context, and in the tort context generally, can be found in STEPHEN DANIELS & JOANNE MARTIN, *CIVIL JURIES AND THE POLITICS OF REFORM* (1995).

<sup>444</sup> An "adverse event" is an injury caused by medical management (rather than the underlying disease process) that resulted in either a prolonged hospital stay or disability at discharge. The judgment that an adverse event had occurred was based on a two-stage process using implicit standards to conduct a professional review of the medical records. The studies of New York (1984 hospitalizations) resulted in an adverse event rate of 3.7%. Studdert et al., *supra* note 17, at 6. Subsequent studies of Utah and Colorado (1992 hospitalizations) resulted in an adverse event rate of 2.9% in those states. *Id.* at 11.

<sup>445</sup> Studdert et al., *supra* note 17, at 7 ("In total, approximately 3,600 malpractice claims relating to injury year 1984 were made in New York. A comparison to the 27,000 negligent adverse events arising in that year produces a negligence-to-claims ratio of 7.5 to 1." (citations omitted)).

<sup>446</sup> *Id.* at 16.

<sup>447</sup> *Id.* at 7; see also Danzon, *supra* note 7, at 1354 (explaining that malpractice lawsuits rarely occur when patients suffer small injuries); WEILER ET AL., *supra* note 97, at 113 (noting that "nearly 80 percent (10,026 out of 12,859) of the patients who suffered a negligent injury but did not sue were either fully recovered from the injury within six months or were more than 70 years old when the injury occurred").

<sup>448</sup> See Danzon, *supra* note 7, at 1354–57 (reviewing studies showing that patients injured by medical negligence rarely sue); Andrews et al., *supra* note 207, at 312; Frank A. Sloan & Chee Rvey Hsieh, *Injury, Liability, and the Decision to File a Medical Malpractice Claim*, 29 *LAW & SOC'Y REV.* 413 (1995) (finding that of 220 women whose babies suffered serious injuries or died, only 23 sought legal advice and none sued).

<sup>449</sup> Michael J. Saks, *Medical Malpractice: Facing Real Problems and Finding Real Solutions*, 35 *WM. & MARY L. REV.* 693, 703 (1994).

Because under-claiming is so widespread, the tort system predictably fails to send a strong quality-improvement signal.<sup>450</sup> To create optimal incentives, the system would have to transfer 100% of the costs of negligence from patients to providers. In reality, patients and their first-party health insurers bear the vast majority of the costs of medical injuries.<sup>451</sup> The fraction of the cost borne by providers is far too small to motivate them to invest as heavily as they should in quality improvements.<sup>452</sup>

Even if the tort process had no other defects, under-claiming would limit private incentives to make socially efficient improvements. Suppose, for example, that an MCO could cut the expected costs of negligently-inflicted iatrogenic injuries to patients from \$25,000 to \$5,000 by investing \$7,500 in better health care delivery systems. From an efficiency perspective, the investment, which saves \$12,500 in net expected injury-related costs, ought to be made. If tort law holds physicians instead of MCOs responsible for negligence, then the MCO will have no incentive to spend the \$7,500 barring the Coasean transactions previously outlined.<sup>453</sup> Without those transactions, the MCO would bear the cost of the improvement, but others—patients and doctors—would reap the gains.

Nor, in a world of widespread under-claiming, would physicians find it economically advantageous to pay the MCO to make the improvement. Suppose that patients bearing only 13% of the injuries sue—the percentage indicated by a 7.5 to 1 ratio of adverse events to claims. It would cost physicians \$3,250 to compensate these plaintiffs in full, far less than the \$7,500 the improvement would require. From the physicians' perspective, under-claiming makes it cheaper to tolerate mistakes than to prevent them.

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<sup>450</sup> See Mello & Brennan, *supra* note 86, at 1608; see also WEILER ET AL., *supra* note 97, at 113 (“To the extent that injured victims systematically underutilize their tort rights, there is a corresponding reduction in actors’ incentives to adopt socially optimal precautions against such injuries.”).

<sup>451</sup> See Randall R. Bovbjerg & Frank A. Sloan, *No-Fault for Medical Injury: Theory and Evidence*, 67 U. CIN. L. REV. 53, 60–61 (1998) (noting that “the vast majority of medical injuries are reimbursed by the first-party coverages, just as are the underlying conditions that caused patients to seek medical care initially” (citing DEBORAH R. HENSLER ET AL., *COMPENSATION FOR ACCIDENTAL INJURIES IN THE UNITED STATES* (1991)) (footnotes omitted)).

<sup>452</sup> Poor quality health care of all forms was said to account for roughly \$420 billion in direct medical spending in 2003 and for another \$105 to \$210 billion in indirect costs, like reduced business productivity due to employee absenteeism. The total economic burden imposed by poor quality health care is thus in the neighborhood of \$500 to \$700 billion. MIDWEST BUS. GROUP ON HEALTH, *REDUCING THE COSTS OF POOR-QUALITY HEALTH CARE THROUGH RESPONSIBLE PURCHASING LEADERSHIP* i–ii (2003). By comparison, medical malpractice costs totaled almost \$27 billion in 2003. Ins. Info. Inst., *Medical Malpractice* (Jan. 2005), <http://www.iii.org/media/hottopics/insurance/medicalmal/>. For a dissenting view, see White, *supra* note 96.

<sup>453</sup> See *supra* text accompanying notes 431–37.

One could ameliorate the impact of under-claiming by up-weighting settlements and trial verdicts. For example, one could supplement patients' compensatory recoveries with sizeable awards of noneconomic damages and punitive damages, so that victorious plaintiffs recovered more than 100% of their costs. If only 10 of 100 identical patients injured by negligence files a lawsuit, but each suing patient wins 10 times his or her losses, then the total payout comes to 100% and the incentive to make cost-justified improvements is preserved. Americans constantly hear about a "lawsuit lottery," in which plaintiffs with trivial injuries recover staggering sums. Does the lottery offset under-claiming?

Again, the truth falls far short of the rhetoric. Plaintiffs with serious injuries (whether stemming from medical malpractice or other causes) tend to be under-compensated, not overpaid. "This pattern of . . . undercompensation at the higher end is so well replicated that it qualifies as one of the major empirical phenomena of tort litigation ready for theoretical attention."<sup>454</sup> In Florida cases involving emergency room treatment or prenatal care, economist Frank Sloan and his co-authors compared plaintiffs' economic losses—mainly, their past and future medical costs and their lost wages or expected income—to the amounts they received.<sup>455</sup> They found that "claimants tended to be undercompensated, and [that] the fraction of loss recovered tended to be less for the most severe injuries and for deaths, in particular for infants."<sup>456</sup> On average, plaintiffs recovered about half their losses. The small number of patients who took their cases to trial and won did better, beating their estimated economic losses by 22%.<sup>457</sup> When one considers that plaintiffs have to pay their attorneys, defray expert fees and other litigation costs, and reimburse Medicare, Medicaid and other payers from these sums, even these trial recoveries seem inadequate.

Overpayments thus do not offset under-claiming. It would be more accurate to say that under-compensation compounds under-claiming. The combination of the two enables health care providers to avoid most of the costs malpractice entails.<sup>458</sup> For this reason, prov-

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<sup>454</sup> Saks, *supra* note 208, at 1218. For studies of particular litigation contexts, see JAMES S. KAKALIK ET AL., *COSTS AND COMPENSATION PAID IN AVIATION ACCIDENT LITIGATION* (1988); ELIZABETH M. KING & JAMES P. SMITH, *COMPUTING ECONOMIC LOSS IN CASES OF WRONGFUL DEATH* (1988); ELIZABETH M. KING & JAMES P. SMITH, *ECONOMIC LOSS AND COMPENSATION IN AVIATION ACCIDENTS* (1988).

<sup>455</sup> Frank A. Sloan & Stephen S. van Wert, *Cost of Injuries, in SUING FOR MEDICAL MALPRACTICE* 123, 124–25 (Frank A. Sloan et al. eds., 1993).

<sup>456</sup> Sloan, *supra* note 297, at 220.

<sup>457</sup> *See id.*

<sup>458</sup> Hyman, *supra* note 98, at 1644–45. Of course, the observation in the text is based on whether the economic and non-economic costs to negligently injured patients are fully shifted to those responsible. Two complications are obvious. First, physicians routinely

iders lack incentives to re-allocate malpractice risks even when it would be socially efficient for them to do so. Inefficient assignments of liability “stick” because injured patients rarely sue, and because those who do sue rarely recover their economic losses in full.<sup>459</sup> The combination makes it cheaper for providers to bear whatever liability they face, rather than transfer it to others who could bear it more cheaply by improving delivery systems.

Many commentators agree that under-claiming weakens providers’ incentives to invest in patient safety.<sup>460</sup> Many of these same individuals also subscribe to the conventional wisdom that malpractice liability impedes progress on the patient safety front by driving errors underground. This combination of views is odd. Logically, those who espouse the conventional wisdom should argue that the rarity of malpractice suits *improves* health care quality by reducing the frequency and severity of punishments. If all malpractice victims were to file lawsuits and obtain compensation, the conventional wisdom would predict a marked *decline* in health care quality, as proliferating lawsuits scared providers out of their wits and fostered unprecedented efforts to hide mistakes. One cannot have it both ways; either tort deters (in which case more is better) or it does not (in which case less is better). Regardless, there is, once again, little empirical evidence to support the conventional wisdom.

Other problems further dilute the tort system’s deterrent signal. After patients file malpractice cases, the system does a reasonably good job of sorting the wheat from the chaff—a much better job than many proponents of tort reform suggest. Many studies report high frequencies of settlement and payment in cases where experts agree that defendants violated the standard of care and low frequencies

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complain that the tort system imposes a range of non-economic costs on them, including damage to reputation, fear, and the like. Professor Saks has suggested that these costs help “up-weight” the deterrent value of the amounts actually awarded by the tort system. See Saks, *supra* note 208, at 1286–87. Unfortunately, there are substantial demoralization costs associated with this strategy, and it encourages anti-tort coalitions that would not otherwise form.

Second, from an economic perspective, injured patients will not bring a lawsuit unless the benefits from doing so exceed the costs. For those who are negligently injured with minor damages, costs are certain to exceed benefits. Thus, the efficient level of malpractice claiming from the plaintiff’s perspective will, by definition, be less than the full number of injured patients, as long as the costs of claiming are non-zero. From the defendant’s perspective, this means that injuries are cost-free as long as resulting damages fall below the threshold of plaintiff’s costs in bringing a lawsuit.

<sup>459</sup> *But see* Arlen & MacLeod, *supra* note 430, at 2005–06 (arguing that optimal liability rules would impose liability on both MCOs and physicians).

<sup>460</sup> See, e.g., Liang, *Promoting Patient Safety*, *supra* note 9, at 567 (arguing that because “fewer than one out of sixteen patients who are ‘negligently’ injured ever collect a penny from the tort system, . . . we’re not getting the appropriate effect in terms of maximization of safety and minimization of error and . . . injury”).



when experts agree otherwise.<sup>461</sup> Still, a good job is not a perfect one. Civil justice processes appear to produce wrong decisions with some frequency, awarding damages to undeserving claimants and withholding damages when negligent injury occurred.<sup>462</sup> Many of these mistakes are unavoidable. Malpractice cases are so complex and subjective that even experts disagree over the correct outcomes an appreciable part of the time.<sup>463</sup> Standards of care are often uncertain as well because evidence of the efficacy of treatments is lacking. Payments are therefore often made or withheld in many tort cases where educated people could reasonably criticize either result. As Sloan and his co-authors observe, "To the extent that there is highly incomplete knowledge about the effect of particular interventions by health care providers on outcomes, it is unrealistic to expect courts to be omniscient in this regard."<sup>464</sup>

These problems add a good deal of "noise" to the signal the tort system emits.<sup>465</sup> The noisier the signal, the less effective it is in com-

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<sup>461</sup> For an excellent survey of the literature, see Baker, *supra* note 2. Baker also critiques the HMPS's finding that patients with invalid claims frequently receive compensation. See CATHERINE T. HARRIS ET AL., PLACING "STANDARD OF CARE" IN CONTEXT: THE IMPACT OF WITNESS POTENTIAL AND ATTORNEY REPUTATION IN MEDICAL MALPRACTICE LITIGATION 4 (Wake Forest University School of Law Public Law and Legal Theory Research Paper Series, Research Paper 02-14, 2002) (

Over the past fifteen years, there have been a number of empirical studies of the medical malpractice claims process. Virtually every one . . . has concluded that compensation paid to the plaintiff is closely related to a determination of 'negligence,' typically defined in terms of a failure by the defendant physician to meet the relevant standard of care.

), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=333560](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=333560); Frank A. Sloan et al., *The Dispute Resolution Process*, in *SUING FOR MEDICAL MALPRACTICE* 153, 166 tbl.8.2 (Frank A. Sloan et al. eds., 1993) (observing higher rates of settlement in cases where the physician panel assessed the defendant as "liable" than in cases where the panel believed the defendant was "not liable"); Ralph Peeples et al., *The Process of Managing Medical Malpractice Cases: The Role of Standard of Care*, 37 WAKE FOREST L. REV. 877, 885-86 (2002) (reporting that "[i]n 100% . . . of the cases in which the outside reviewers evaluated the defendant-physician as probably liable, the insurer concluded that the standard of care had been breached," and that "money was paid to the plaintiff in 93.1% of the cases" in which the insurer determined that the standard of care was breached); Arlen & MacLeod, *supra* note 430, at 1939 n.35 (2003) (citing references).

<sup>462</sup> See, e.g., Karen L. Posner et al., *Trends in Anesthesia Malpractice Lawsuit Payments*, 101 ANESTHESIOLOGY A-1405 (2004) (reporting that in the late 1990s, 40% of claims in which anesthesia met professional standards resulted in payments). Physicians who are sued when they are not negligent may incur significant financial and reputational costs.

<sup>463</sup> See, e.g., Peeples, *supra* note 461, at 884 (reporting that in 34.3% of the cases in which a malpractice carrier solicited external reviews, the reviewers disagreed); Karen L. Posner et al., *Variation in Expert Opinion in Medical Malpractice Review*, 85 ANESTHESIOLOGY 1049, 1051 (1996) (noting that anesthesiologists disagreed on whether care was negligent 38% of the time, because they used implicit standards of review instead of explicit criteria). Indeed, in the subset of tried cases, the experts disagreed by definition, since both sides had to provide an expert who supported their position.

<sup>464</sup> Sloan, *supra* note 297, at 219.

<sup>465</sup> A team of Harvard researchers described the system as "sending as confusing a signal as would our traffic laws if the police regularly gave out more tickets to drivers who

municating a message to health care providers. If providers perceive they will likely be held liable even for non-negligent care, they are unlikely to take seriously the “outputs” of the tort system as indicative of anything.

A further difficulty is that the transaction costs of the tort system are high compared to first-party insurance coverage. For every dollar that reaches an injured patient as a result of a tort claim, another dollar or so is reportedly spent getting it there. The magnitude of the latter expense is not surprising. Malpractice lawsuits involve complex issues, expert witnesses, large damages, and often multiple defendants.<sup>466</sup> Compared to other tort suits, they also last a long time.<sup>467</sup> Malpractice lawsuits also tend to be hard-fought, even when liability is fairly clear, because they affect health care providers’ reputations and endanger their licenses.<sup>468</sup> All these factors tend to increase litigation costs and weaken the deterrent signal of tort liability.

Finally, one must consider the impact malpractice insurance has on providers’ incentives. Malpractice insurance for health care professionals is rarely risk-rated.<sup>469</sup> Premiums vary by specialty, geography, and a few other variables, but they do not reflect individual providers’ loss experiences. The failure to risk-rate insurance may well be rational, but it further limits the ability of the tort system to send a deterrent signal to physicians about the consequences of their

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go through green lights than to those who go through red lights.” WEILER ET AL., *supra* note 97, at 75. To be sure, there is a substantial “base rate” problem with this metaphor. Because the vast majority of drivers do not go through red lights, even a small error rate in writing tickets will result in precisely this outcome. See Saks, *supra* note 449, at 714.

<sup>466</sup> See Bernard Black, Charles Silver, David A. Hyman & William M. Safe, *Stability, Not Crisis: Medical Malpractice Claim Outcomes in Texas, 1988–2002*, J. EMPIRICAL LEGAL STUD. (forthcoming 2005) (finding that over 30% of malpractice claims involve three or more defendants).

<sup>467</sup> See Charles Silver, *Does Civil Justice Cost Too Much?*, 80 TEX. L. REV. 2073, 2110 (2002) (noting that malpractice cases are more complex and more difficult to resolve than other tort cases).

<sup>468</sup> See also CATHERINE T. HARRIS ET AL., WHO ARE THOSE GUYS? AN EMPIRICAL EXAMINATION OF MEDICAL MALPRACTICE PLAINTIFF’S ATTORNEYS (Wake Forest University School of Law Public Law and Legal Theory Research Paper Series, Research Paper 03-09, 2002) (finding that insurers routinely made plaintiffs demonstrate the merit of their cases even when insurers thought that liability was clear), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=399640](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=399640).

<sup>469</sup> Previous attempts to impose experience rating have been unsuccessful, as physicians have simply switched to insurers offering non-experience rated coverage. See Frank A. Sloan, *Experience Rating: Does it Make Sense for Medical Malpractice Insurance?*, 80 AM. ECON. REV., May 1990, at 128. On experience rating for medical malpractice coverage more generally, see Gary M. Fournier & Melanie Morgan McInnes, *The Case For Experience Rating in Medical Malpractice Insurance: An Empirical Evaluation*, 68 J. RISK & INS., June 2001, at 255.

actions—let alone the implications of their failure to adequately invest in patient safety measures.<sup>470</sup>

The problems discussed to this point—under-claiming, erroneous denials of compensation, under-compensation of patients with severe injuries, high transaction costs, and distortions attributable to malpractice insurance—would limit the effectiveness of tort law even if civil justice processes made full compensation available to all negligently injured patients. In fact, civil justice processes are not so generous. Waves of tort reform have made it harder for patients with valid claims to obtain compensation and have limited the amounts they can recover.

Tort reform has taken a variety of forms. The most prevalent type is a cap on non-economic damages (pain and suffering), which is usually not indexed for inflation. Other proposals include screening panels, mandatory ADR, caps on contingent fees, collateral source offsets, requirements relating to expert reports and expert witnesses, and the like. In general, these reforms make malpractice cases more expensive, riskier, and less rewarding for claimants and their lawyers. They also make malpractice claims less expensive for defendants by reducing their frequency, weakening plaintiffs' bargaining positions, decreasing the willingness of plaintiffs' attorneys to bear costs, or giving defendants credit for payments claimants receive from other sources.

For deterrence purposes, the impacts of tort reform on both sides matter. On the claimant's side, it is well known that economic incentives influence the behavior of plaintiffs' lawyers. Because these lawyers work for contingent fees and have to bear large expenses, they prefer cases involving serious injuries, large damages, and clear liability.<sup>471</sup> Patients have trouble finding representation when their injuries are small or their damages are small, which, in the case of the elderly and the poor, may be true even when their injuries are severe. Patients also find it hard to hire lawyers when it is unclear whether their treatment violated the standard of care. Indeed, empirical studies have found that plaintiffs' attorneys who handle malpractice cases are highly selective.<sup>472</sup>

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<sup>470</sup> *But see* Hyman, *supra* note 98, at 1645 n.18 (noting the rise of risk-rated malpractice insurance in Texas).

<sup>471</sup> *See* Hickson et al., *supra* note 281, at 1359 ("Unless claims are large enough, plaintiffs' lawyers, paid by contingency fees, will not think them worth the effort.")

<sup>472</sup> *See, e.g.,* Herbert M. Kritzer, *Contingency Fee Lawyers As Gatekeepers in the Civil Justice System*, 81 JUDICATURE 22, 24-27 (1997); Herbert M. Kritzer, *Holding Back the Floodtide: The Role of Contingent Fee Lawyers*, WIS. LAW., Mar. 1997, at 10, 63; *see also* Henry S. Faber & Michelle J. White, *Medical Malpractice: An Empirical Examination of the Litigation Process*, 22 RAND J. ECON. 199, 200 (1991) (arguing that "the contingency fee system gives plaintiffs' lawyers a strong incentive to screen prospective plaintiffs and to accept only cases having sufficiently high expected value").

By making medical malpractice cases riskier and less rewarding, tort reforms discourage contingent fee lawyers from taking them. For this reason, tort reforms worsen the under-claiming problem, thus reducing the incentive for providers to invest in measures that protect patients from harm and exercise due care in their treatments. Tort reforms that make malpractice cheaper for defendants by reducing the frequency of lawsuits or the amounts defendants must pay to resolve them have the same economic effect.<sup>473</sup>

### C. Making the Tort System Work Better

Medical providers want to abolish the tort system. Trial lawyers want to keep it. Neither side is likely to win a complete victory. Policy debate should therefore focus on accommodations that further the legitimate interests of both and that, above all, encourage improvements that protect patients from preventable harms. We discuss certain possibilities here.

All of these proposals are necessarily quite preliminary, and they are likely to require modification in light of market developments and difficulties with implementation. Yet all have the singular virtue of creating incentives for providers to “do the right thing,” by encouraging error reporting and the use of those reports to actually address the problem of low-quality care.

#### 1. *Make the Market Work Better*

As explained above, strong economic forces provide the overriding impetus for quality improvement in most industrial sectors. The simple fact that producers profit by meeting customers’ needs creates enormous pressure to treat customers well. When markets work well, civil justice systems can safely play a minor role in quality improvement. Their main purpose can be to ensure a degree of civility and respect in economic relationships by taking the roughest edges off disagreements that buyers and sellers cannot work out on their own.<sup>474</sup>

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<sup>473</sup> See DANIELS & MARTIN, *supra* note 443, at 106 (summarizing studies of the impact of various tort reforms on claim frequency and payment size). As for quality, a recent study finds that certain tort reforms appear to increase infant mortality in certain circumstances. Jonathan Klick & Thomas Stratmann, *Does Medical Malpractice Reform Help States Retain Physicians and Does It Matter?*, Oct. 2, 2003, at <http://ssrn.com/abstract453481>. The evidence on the impact of tort reform on quality is, however, too limited and preliminary to support a firm judgment at this time.

<sup>474</sup> A distinguishing feature of highly developed capitalist economies is an ethic of honesty and fair dealing between buyers and sellers. There is reason to think courts contribute to the development and persistence of this ethic. Comparative studies show a positive correlation between economic growth and easy access by businesses to honest courts. See Frank Cross, *Law and Economic Growth*, 80 TEX. L. REV. 1737 (2002).

In the health care sector, market forces subject providers to little economic pressure to improve. Consequently, quality problems abound and courts are asked to exert greater pressure for quality than they normally do. Even in theory, it is difficult for courts to play so large a role. Markets cause quality to improve automatically by encouraging producers to generate new knowledge and to change their processes as their knowledge grows. Courts decide malpractice cases on the basis of old knowledge (that may or may not be reliable) that has been incorporated into a standard of care (that may or may not be efficient). Courts are therefore inherently limited in what they can do.

The first prescription for improving health care quality must therefore be to increase the strength of market forces. The highest priority should be given to arrangements that enhance providers' incentive to deliver high-quality care by tying their compensation to measurable improvements in outcomes, and providing patients with the information required to distinguish between superior and inferior providers.<sup>475</sup> To restore the *ex post* tort system to its proper role, we should place more emphasis on *ex ante* contracts between payers, patients, and providers.

## 2. Allow Premiums for Malpractice Insurance to Rise

The history of anesthesia safety suggests that providers react in economically rational ways to malpractice insurance premium changes. Anesthesiologists studied their delivery systems and improved them because it saved them money overall. At the time, anesthesiologists' insurance premiums were considerably higher than those paid by many other physicians. By reducing morbidity and mortality rates, anesthesiologists protected millions of patients from avoidable harms, cut the number of malpractice claims, and saved money on insurance.

Anesthesiology is the only medical practice area to achieve reliability rates that rival those of high-quality producers in other industries, and those most responsible for its improvement openly admit that lowering malpractice premiums was an important objective. The lesson for policymakers is that rising insurance rates can encourage health care providers to make desirable improvements. The lesson is also that litigation rates and premiums will fall on their own when providers improve the quality of care.<sup>476</sup>

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<sup>475</sup> See Hyman & Silver, *supra* note 88, at 1446–48.

<sup>476</sup> Providers occasionally acknowledge this fact. See, e.g., Joel B. Finkelstein, *Senate Passes Patient Safety Bill with New Error Reporting System*, AMEDNEWS, Aug. 9, 2004, available at <http://www.ama-assn.org/amednews/2004/08/09/gvl10809.htm> (attributing to Dr. Don-

Policymakers should therefore resist the urge to rescue providers from premium increases by capping damages or otherwise impeding the tort system's ability to shift costs. By doing nothing, policymakers may achieve significant results in a short time.<sup>477</sup> Anesthesia safety improved dramatically and quickly after the ASA promulgated guidelines for patient monitoring.<sup>478</sup> Insurers reduced premiums for anesthesiologists soon thereafter, as their performance improved. If policymakers had intervened by capping malpractice premiums for anesthesiologists or limiting their liability to patients, the incentive to address the underlying quality problems would have been substantially diminished—if not eliminated altogether.

The improvements anesthesiologists implemented in the 1980s have had staying power. Unlike rates for other medical professionals, anesthesiologists' insurance premiums have remained relatively flat, reflecting the fact that anesthesia delivery continues to be safe. A plausible hypothesis is that the proquality attitudes and institutions anesthesiologists created took hold, fostering a culture of safety with a life of its own. If policymakers allow insurance rates to rise for other providers, they will feel pressure to develop similar attitudes and institutions, and the culture of medicine may change for the better.

### 3. *Use Caps on Non-Economic Damages to Reward Error Reporting and Error Reduction*

To encourage voluntary error reporting, an obvious strategy is to reward providers for making reports and punish them for hiding mistakes. We propose that a cap on non-economic damages be used for this purpose. Although many states have imposed such caps already, they have not used them as we propose because their object has thus far been to limit insurance costs, not to improve health care quality. States with caps have missed an opportunity to encourage providers to make improvements that will protect patients and cause insurance costs to decline naturally.<sup>479</sup>

When a provider reports an error within a specified time of its occurrence, we propose that the provider receive the protection of a limit on non-economic damages. The limit could take many forms, including a flat cap, a sliding scale tied to the amount of economic

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ald J. Palmisano, the Immediate Past-President of the American Medical Association, the view that "fewer errors . . . will reduce the number of lawsuits against physicians").

<sup>477</sup> Cf. David A. Hyman, *Medicine in the New Millennium: A Self-Help Guide for The Perplexed*, 26 AM. J. L. & MED. 143, 149 (2000) ("Don't Just Do Something; Sit There.").

<sup>478</sup> Melissa Chiang, Note, *Promoting Patient Safety: Creating a Workable Reporting System*, 18 YALE J. ON REG. 383, 388 n.18 (2001) (noting that "[a]nesthesiology is now widely acknowledged as the leading medical specialty in terms of addressing patient safety").

<sup>479</sup> In Florida, a group of hospitals has proposed legislation based on this strategy. See John Dorschner, *Limiting Liability*, MIAMI HERALD, Apr. 1, 2005, at 1C.

damages awarded, or a percentage reduction against an eventual trial award. When a provider fails to report an error in a timely manner, we propose that non-economic damages be enhanced. Once again, many arrangements are possible, including a floor on allowable damages or a multiplier applied to total damages.

Using a combination of carrots and sticks should increase error reporting greatly. At present, health care workers who know about errors have insufficient incentives to report them because error reduction benefits neither their employers nor them. The possibility of reducing damage awards to injured patients would pressure providers to reward workers for conveying useful information. Because providers with functioning error-reporting systems would also face less liability, insurance companies could also offer them lower premiums. Insurers might even make the existence of error-reporting practices a condition for extending coverage.

The rewards and punishments we propose could have collateral benefits as well. First, by reporting errors and gaining the benefit of the cap, providers would reduce the variance associated with malpractice claims. This should make malpractice cases easier to settle and to insure. A floor on non-economic damages should likewise reduce claim variance. Second, because the fact of having made a report would have to be public (at least to the extent of being revealed to the trial court), information about providers' error reporting practices would be produced. Employers, consumer groups, and others could use this information when rating providers or deciding whether to include them in networks.

The possibility of rewarding providers for reporting errors raises two important questions: what should they report, and to whom? There are many options. Choices among them should be made on the basis of their tendency to promote quality improvement.

An option that seems especially attractive would be to require providers to participate in quality surveys like those run by Leapfrog. As noted previously, providers of lesser quality are more likely to withdraw from these surveys in disproportionate numbers. Yet, if malpractice claims track the frequency of errors, these providers also stand to gain the most from caps on damages. Consequently, the incentive for them to participate in quality surveys would increase dramatically if our proposal is adopted.

Tying the damages cap to participation in third-party surveys would also create the option of rewarding providers for improving their quality survey "scores" over time. This could be accomplished by creating a second (and lower) cap on non-economic damages that becomes available when measurable improvements in quality targets are achieved.

Rewarding providers for improving their quality survey scores would also address a second problem. Error reporting is a necessary condition for improvement, but not a sufficient one. Providers have known all along about some of the problems outlined in this Article, but many have not put their knowledge to use because they find it cheaper and easier to allow errors to occur than to prevent them. To harmonize medical liability and patient safety, it is as critical to create incentives to use knowledge appropriately as it is to reward providers for accumulating information.

#### 4. *Reward Health Care Workers for Reporting Problems*

Under-claiming, which weakens the deterrent signal sent by the tort system, is inherently difficult to fix. Although one often hears that Americans are excessively litigious, most Americans are exceedingly reluctant to sue.<sup>480</sup> Most of us also cannot easily tell whether we received proper care. Finally, many injuries stemming from medical errors are too small to justify the high cost of malpractice litigation. The tendency of first-party health care payers to share these costs further dilutes patients' incentives. The prospects for increasing the claim rate are dim.

Given this difficulty, one must consider the possibility of relying on persons other than patients to activate the legal system and to generate economic pressure to improve. Health care workers are the obvious candidates. They are more likely than patients to know about errors and faulty delivery systems. They may also know when health care providers are ignoring shortcomings instead of correcting them. Finally, they are professionally motivated to protect patients.

The Patient Safety and Quality Improvement Act of 2004 (Patient Safety Act), draft legislation introduced in the House,<sup>481</sup> responds to this reality by authorizing the creation of private and public patient safety organizations.<sup>482</sup> Health care workers, including doctors, can report quality defects on a confidential basis without fear that the information they provide will be discovered and used against them in litigation.<sup>483</sup> The organizations will then study the information they receive to prepare reports intended to help hospitals and other providers improve their delivery systems.<sup>484</sup>

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<sup>480</sup> International comparisons reveal that on a per capita basis Americans are less likely to sue than Germans, Swedes, Israelis, and Austrians, and about as likely to sue as Britons and Danes. See Herbert M. Kritzer, *Lawyer Fees and Lawyer Behavior in Litigation: What Does the Empirical Literature Really Say?*, 80 *TEX. L. REV.* 1943, 1982 (2002).

<sup>481</sup> H.R. 663, 108th Cong. (2004).

<sup>482</sup> See *id.* § 924.

<sup>483</sup> See *id.* § 922.

<sup>484</sup> See *id.* § 921(4).



Proponents of the Patient Safety Act describe it as “a monumental accomplishment [that] opens the door to rapid advancement in patient safety akin to the successful model of the aviation reporting system.”<sup>485</sup> This is obvious puffery, but the degree of exaggeration is enormous. First, the Aviation Safety Reporting System costs about \$70 per error report to run.<sup>486</sup> Taking this figure as a guide, it would cost \$350 million a year to study the 5 million adverse events that occur annually in the health care system.<sup>487</sup> The legislative history of the Patient Safety Act indicates that Congress expects to appropriate a tiny fraction of this amount.<sup>488</sup> The bulk of the dollars needed to process reports will therefore have to come from the private sector—but there is no obvious reason to expect the private sector to make the investment. Second, pilots have strong natural incentives to report errors and fix problems.<sup>489</sup> Health care workers have few natural incentives to report mistakes, and the Patient Safety Act creates none. Its supporters observe that “physicians and hospitals would have little to lose from submitting reports,” but little to lose is not something to gain.<sup>490</sup> Even when a confidential reporting system is up and running, the business case for quality will still be missing.

The Patient Safety Act is built on the false premise that goodwill alone is sufficient to motivate health care providers to study their mistakes and improve their systems. Health care workers can complain to regulators already, and sometimes they do.<sup>491</sup> Generally speaking, however, it is more profitable for them to participate in the “conspiracy of silence” that allows errors to continue than to report them. It is also more profitable for providers to ignore the error reports they receive than to spend the millions or billions of dollars that are needed to upgrade the quality of health care.

A *qui tam* approach, loosely based on that found in the False Claims Act (FCA),<sup>492</sup> could create substantial incentives for employees

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<sup>485</sup> Joel B. Finkelstein, *Senate Passes Patient Safety Bill with New Error Reporting System*, AMEDNEWS, Aug. 9, 2004, available at <http://www.ama-assn.org/amednews/2004/08/09/gvl10809.htm> (quoting Donald J. Palmisano, MD, Immediate Past-President of the American Medical Association).

<sup>486</sup> Leape, *supra* note 94, at 1636–37.

<sup>487</sup> *Id.*

<sup>488</sup> The Congressional Budget Office estimated that implementation of the Act would require appropriations of \$51 million over 4 years. S. REP. 108-196, at 14 (2003).

<sup>489</sup> See *supra* note 333.

<sup>490</sup> See Finkelstein, *supra* note 485.

<sup>491</sup> For a recent example of an investigation triggered by a whistle-blowing employee's report, see Walter F. Roche Jr., *Patients May have Gotten Wrong HIV Results*, BALT. SUN, Mar. 11, 2004, at 1A (reporting that, because of a complaint filed by a former employee, state health officials discovered that a hospital's laboratory personnel overrode controls in testing equipment and mailed possibly erroneous test results to hundreds of patients).

<sup>492</sup> 31 U.S.C. § 3729 (2000). The FCA allows private parties to sue on behalf of the United States government, and share in the eventual recovery. See *id.*

to come forward. The approach we envision would reward workers for reporting problems to administrative agencies or third-party quality monitors by paying them liquidated bonuses. The reports would be confidential, to ameliorate employees' fear of reprisal.<sup>493</sup> Providers that, upon investigation, are found to have sub-par systems in place would be penalized. These penalties would fund the reporting employees' rewards. Because the penalties would be fines rather than civil damages, they would not be covered by insurance.

Small bonuses would probably generate significant information about seriously-deficient health care providers without giving employees incentives to abuse the process, e.g., by lodging complaints after being discharged. If proponents of the conventional wisdom are right, many health care workers are looking for safe ways to reveal errors and pressure their employers to improve. These employees may fear reprisal on the job as much as or more than they fear litigation. The approach we envision would give employees with valuable information regarding quality defects an opportunity to reveal it without putting their jobs on the line.

Again, the questions of what to report and to whom must be addressed. It probably makes more sense to rely on independent quality monitors than on public agencies, like state medical boards. The latter have proven to be incapable of policing quality effectively.<sup>494</sup> The entities that are leading the campaign for quality are the ones most likely to resist being captured by providers and to give complaints the attention they deserve.<sup>495</sup>

An alternative (but complementary) approach that would also use a *qui tam* strategy would allow employees to bring malpractice cases on behalf of patients. The statute of limitations on such cases should only start running after the individual plaintiff has had a reasonable amount of time to bring a case on his own behalf. When injuries are too small to justify contingent fee lawsuits, employees would be allowed to file *qui tam* cases immediately and for liquidated damage amounts. All of these strategies have the potential to address the under-claiming that makes malpractice cheaper for providers than it should be.

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<sup>493</sup> See Steve Twedt, *House Panel Ok's Whistleblower Bill*, PITTSBURGH POST-GAZETTE, June 9, 2004, at A13 (discussing the proposal in the Pennsylvania legislature to establish a confidential hotline, which providers could use to report problems of health care quality without fear of reprisals).

<sup>494</sup> See, e.g., Sidney Wolfe, *Bad Doctors Get a Free Ride*, N.Y. TIMES, Mar. 4, 2003, at A1 (discussing the failure of state medical boards to discipline doctors with multiple malpractice payments).

<sup>495</sup> See Devers et al., *supra* note 228, at 105 (finding that "hospitals' major patient-safety initiatives are primarily intended to meet JCAHO requirements").

5. *Recognize Evidence-Based Medicine as an Absolute Defense*

Physicians complain bitterly that their conduct is subject to second-guessing by know-nothing juries and judges. To the extent that physicians render care meeting consensus standards of quality, there is no reason to subject them to liability or to devote legal resources to such cases. Although there are obvious difficulties associated with the development of consensus standards, physicians who adhere to those standards should be immune from suit.<sup>496</sup> As noted previously, physicians express fear and loathing about the prospect of being sued. If physicians fear malpractice as much as they say they do, the prospect of immunity should be an immediate incentive for the implementation of these standards.

6. *Require Repeat Defendants to Undergo Quality Audits and Publicize the Results*

A relatively small fraction of all physicians are reported to account for a disproportionate share of malpractice claims, settlements, and judgments.<sup>497</sup> Targeting reform efforts against those most responsible for the problem is an efficient use of limited resources. Rather than waiting for malpractice claims to be brought, state licensing boards and the hospitals at which repeat defendants have privileges should be required to conduct prospective quality audits, and to publicize the results of those audits. Even if the audits do not result in any disciplinary action or limitation of privileges, the act of publicizing the quality audits should create considerable incentives for repeat-defendant physicians to correct their deficiencies or find another line of work.

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<sup>496</sup> On the risks and benefits of developing and using such standards, see Michelle Mello, *Of Swords and Shields: The Use of Clinical Practice Guidelines in Medical Malpractice Litigation*, 149 U. PA. L. REV. 645 (2000). For a range of perspectives on a case where EBM standards were in issue, see Daniel Merenstein, *Winners and Losers*, 291 JAMA 15 (2004) and *Evidence-Based Medicine on Trial*, 291 JAMA 1697 (2004).

<sup>497</sup> Studying closed insurance claims, the Massachusetts Board of Registration in Medicine found that 4.2% of the 2,307 physicians on whose behalf malpractice claims were paid were responsible for 13.5% of all paid claims and for 12.9% of all dollars paid. COMMONWEALTH OF MASS. BD. OF REGISTRATION IN MED., *MEDICAL MALPRACTICE ANALYSIS* (2004), available at [http://www.massmedboard.org/public/pdf/announcements/Med\\_Mal\\_2004.pdf](http://www.massmedboard.org/public/pdf/announcements/Med_Mal_2004.pdf). Using Florida data, another study found much higher concentrations. Frank A. Sloan et al., *Medical Malpractice Experience of Physicians: Predictable or Haphazard?*, 262 JAMA 23:3291 (Dec. 15, 1989) (reporting that 3% of physicians in the medical specialty group accounted for 85% of malpractice payments, that 6% of physicians in the obstetrics-anesthesiology group account for more than 85% of payments, and that 7.8% of physicians in the surgical specialty group account for almost 75% of the payments).

## CONCLUSION

Patient safety advocates have made strong and unqualified claims regarding the deleterious impact of medical liability on the performance of the health care system. Although their claims are plausible, the available evidence does not support them. Liability apparently makes a modest positive contribution to patient safety overall, accounts for significant improvements in anesthesia safety, encourages providers to solve specific problems at specific health care institutions, and causes physicians to be more forthcoming in conversations with patients.<sup>498</sup>

Many providers have failed to adopt patient safety measures of proven effectiveness, and they have similarly failed to use information already in their possession to protect patients from harm.<sup>499</sup> Given that providers subject to liability for negligence behave in this fashion, it is absurd to think they would voluntarily spend hundreds of millions or billions of dollars implementing patient safety initiatives if the threat of liability were removed. Optimism about providers' likely responses to hortatory appeals to "do the right thing" should be distinguished from pie-in-the-sky Pollyannaism.

The conventional wisdom simply assumes this problem away.<sup>500</sup> It is naïve to think that progress on the patient safety front would oc-

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<sup>498</sup> Millenson, *supra* note 138, at 108; see also Danzon, *supra* note 7, at 1362 ("[C]asual evidence indicates that hospital and other peer review procedures have been strengthened in direct response to liability."); Michael L. Millenson, *The Patient's View of Medical Errors*, in MEDICAL ERROR, *supra* note 12, at 101, 107 (reporting that in response to malpractice liability, "hospitals and medical staffs have arguably paid more attention to impaired practitioners, where the legal risk is obvious, than to fixing systems errors that lack an easy villain").

<sup>499</sup> One cannot blame hospitals' failure to reduce post-surgical infections on litigation's tendency to drive error reports underground. Hospitals are aware of the problem and its potential cures, but sometimes fail to act until sued. For example, Professor Lubet summarizes the failure of the Bridgeport Hospital in Connecticut to address obvious deficiencies in sanitary procedures, even as infection rates soared. Lubet, *supra* note 21, at 1194. Litigation brought the hospital's problems to light, and post-litigation, the infection rate fell to "near zero." *Id.*

Nor can litigation explain why providers often fail to use error reports that are generated internally to improve delivery systems. See *ISMP Survey*, *supra* note 202 ("Although access to valuable error-related data may be easy to obtain, it may not actually [be] used to improve medication safety. For example, more than a quarter of respondents (29%) said they had not collected and used information about pharmacy interventions to correct prescribing errors.").

<sup>500</sup> Barry R. Furrow, *The Problem of Medical Misadventures: A Review of E. Haavi Morreim's Holding Health Care Accountable*, 29 J.L., MED. & ETHICS 381, 381 (2001) (

[M]uch of the current discussion among providers is self-protective, as it assumes that the threat of malpractice litigation is the problem, blocking discussion and disclosure of errors and thus preventing system improvements to decrease future errors. Don't spook physicians, say the critics, for they are easily spooked. Protecting them from liability will open the floodgates of candid error disclosures, allowing for the necessary system improvements.

cur automatically if the threat of liability were removed.<sup>501</sup> Providers are (all else being equal) more likely to attend to problems that are sources of liability than to problems for which the costs are externalized.<sup>502</sup> Indeed, as Professor Sage has noted, “[I]nnovation that improves safety often happens in the shadow of liability.”<sup>503</sup>

These observations do not mean that the arguments raised by patient safety advocates should be ignored. Medical liability is an extraordinarily inefficient mechanism for encouraging the delivery of high-quality care and for transferring resources from negligent providers to injured patients. A strategy that uses the economic self-interest of providers to address the problems raised by patient safety advocates has more chance of succeeding than one that either relies on the legal system exclusively or eliminates tort regulation and puts nothing in its place.

Useful approaches would harness all available forces—including market-based incentives, legal liability, and health care workers’ professionalism—to address these problems. Firms in other industrial sectors have created nonpunitive environments in which workers can report problems without fear of recrimination or reprisal, despite firm-level exposure to external liability threats (or even because of these threats).<sup>504</sup> For these firms, the benefits of providing higher quality goods and services exceeds the associated costs, and nonpunitive internal reporting systems provide the information needed to drive that outcome. Health care organizations can create such environments if they are truly committed to providing high-quality care.<sup>505</sup>

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<sup>501</sup> See *id.* at 381 (“If, however, the tort system were to vanish overnight, the forces of provider ego, practice inertia, and leadership shortcomings . . . would still conspire to conceal errors.”).

<sup>502</sup> David A. Hyman, *Professional Responsibility, Legal Malpractice, and the Eternal Triangle: Will Lawyers or Insurers Call the Shots?*, 4 *CONN. INS. L.J.* 353, 353–403 (1997–1998).

<sup>503</sup> Sage, *supra* note 3, at 19.

<sup>504</sup> See, e.g., Helmreich, *supra* note 127, at 62 (stating that an airline that instituted a non-punitive reporting policy “received more than 5,000 reports from its pilots in 21 months”).

<sup>505</sup> See Leape, *supra* note 94, at 1633 (reporting that “striking increases in internal reporting have been achieved recently in a few hospitals that implemented nonpunitive and responsive reporting systems”); Leape, *supra* note 35, at 146 (stating that by 1999 “leaders in a number of health care institutions across the country had begun to implement non-punitive reporting”).

The IOM appears to be committed to the position that health care organizations can create non-punitive environments internally while facing punitive pressures from without. In *To Err Is Human*, it both endorsed non-punitive arrangements and recommended the creation of mandatory error reporting systems that hold providers accountable “by providing disincentives, such as citations, penalties, or sanctions, for continuing to engage in unsafe practices.” Leape, *supra* note 94, at 1634. Thus, even the IOM agrees that there is no fundamental inconsistency between internal non-punitive and external punitive cultures.

Patient safety advocates are also right in arguing that the health care sector needs a cultural transformation. One commentator cuttingly framed the problem as follows:

Suppose that an airline's managers and pilots repeatedly resisted installing collision-avoidance systems despite solid evidence of their worth. Suppose, too, that they complained that the radar was not reimbursed adequately, required inconvenient retraining, provided no competitive advantage in attracting passengers at a time when airline profits were low, and (*sotto voce*) was an insult to pilot judgment. No one would blithely blame "airline culture" for an ensuing disaster, and no one would absolve individual pilots and managers of responsibility for that disaster simply because they never intended for passengers to be harmed.<sup>506</sup>

Health care providers make arguments like these all the time, and they expect them to be taken seriously. Better evidence of attitudes antithetical to patient safety would be hard to find.

Bad attitudes persist because providers have bad incentives. A world in which health care providers profit by making mistakes is a world in which they will find reasons for allowing high error rates to persist. No rational system of compensation rewards an agent for behavior that makes a principal worse off.<sup>507</sup> Unless and until these incentive problems are corrected, patients will continue to receive low-quality care, and medical errors will continue to beset our system of health care delivery.

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<sup>506</sup> Millenson, *supra* note 138, at 110.

<sup>507</sup> See Hyman & Silver, *supra* note 88, at 1480; FTC & DOJ, *supra* note 11, at 26.

