LAW AND THE HEALTHCARE CRISIS: THE IMPACT OF MEDICAL MALPRACTICE AND PAYMENT SYSTEMS ON PHYSICIAN COMPENSATION AND WORKLOAD AS ANTECEDENTS OF PHYSICIAN SHORTAGES – ANALYSIS, IMPLICATIONS, AND REFORM SOLUTIONS

John W. Hill†
Angela N. Aneiros††
Paul Rayford Hogan†††

ABSTRACT

The U.S. faces a healthcare crisis of monumental proportions with myriad facets including issues of access, quality, and affordability. Medical malpractice liability is often alleged to play a role in this crisis through its impact on physician compensation and shortages. This study goes beyond the rhetorical arguments in exposing the root causes of the crisis to be the structure of healthcare delivery and physician compensation systems, in part using pooled data we develop. These systems greatly increase the cost of healthcare, lead to far too many medical errors, and skew the distribution of physicians across specialties, in part because the current compensation

† John W. Hill, PhD, JD, is Professor, Arthur M. Weimer Chair in Business, and Life Sciences Research Fellow at the Kelley School of Business, Indiana University. He has published over 50 books and articles in journals such as the Academy of Management Journal, Accounting Review, Behavioral Ethics Quarterly, Boston University Annual Review of Banking Law, Indiana Law Journal Supplement, Journal of Accounting & Public Policy, Journal of Business Research, University of Illinois Journal of Law, Technology & Policy, and University of Pennsylvania Journal of Business Law and has received several research awards including the Deloitte Wildman Medal and Lybrand Silver and Bronze Medals. Please send correspondence to the first author at hillj@indiana.edu. The first author can be contacted at 812-855-2610 (direct) or 812-302-3062 (cell).

†† Angela N. Aneiros is a recent graduate of the Maurer School of Law, Indiana University where she served on the editorial board of the Indiana Journal of Global Legal Studies. She is currently employed by a Chicago law firm. She also served as a graduate assistant in the Business Law Department of the Kelley School of Business, Indiana University and a legal intern for Indiana University Student Legal Services.

††† Paul Rayford Hogan is a recent magna cum laude graduate of the Maurer School of Law, Indiana University, where he served on the editorial staff of the Indiana Journal of Global Legal Studies. He is currently an Associate at Ice Miller LLP in Indianapolis, Indiana. His co-authored article on expert testimony in business valuation cases appeared in the University of Pennsylvania Journal of Business Law.
structure provides inappropriate treatment incentives. Rather than simplistic tort reform solutions such as direct caps on damages, we argue that the real answer to the healthcare crisis resides in new and evolving models of healthcare delivery and reimbursement that hold promise of improving the quality of care and decreasing the number of medical malpractice cases. At the same time, these new systems present new challenges for an already deficient regime for resolving malpractice claims which needs to be reformed to complement the new delivery and reimbursement systems. We propose pragmatic changes to the current malpractice regime predicated on five pillars: (1) mandated price and quality disclosure of healthcare services, (2) a focus on enterprise liability in which the medical entity responsible for care is the defendant as opposed to individual physicians, (3) mandated disclosure of medical errors to patients, (4) mandated, non-binding mediation the function of which is to avoid costly, protracted trials and long delays in patient compensation whenever possible, and (5) mandated disclosure of medical errors in settled cases. We argue that this approach will provide appropriate incentives to allow for needed systemic change that discourages under treatment and better serves the needs of tort victims.

I. INTRODUCTION

The United States faces a healthcare crisis of monumental proportions with myriad facets including issues of access, quality, and affordability—the subject of much political rhetoric. Amidst the many facets of the crisis and the rancor that attends it are the problems of physician shortages in certain critical areas of practice—such as primary care—and the growing refusal of physicians to accept Medicare patients. Both problems are allegedly related to physician compensation, which, in turn, is linked to controversy involving the cost of medical malpractice insurance that supposedly causes physicians to shy away from certain medical specialties (a subject that has been heavily debated in recent years). In addition, physician shortages are also potentially related to Medicare fee-for-service (FFS) rules that are having a profound effect on physicians’ reimbursement for services and their career choices with respect to area of practice.

---

3. Id. at 265.
5. Id.
6. Id. at 62–63.
There is little question that the United States is currently experiencing a healthcare crisis. Among the most important of the many facets of the crisis are (a) a grossly inefficient, antediluvian care delivery system; (b) an unacceptable rate of medical errors; and (c) an increasingly unaffordable cost of healthcare at the macro level that is exacerbated by a complex, convoluted payment system. Now that healthcare is the largest industry in the nation, approaching 18% of gross domestic product and expected to reach 20% by 2016, a solution to this crisis is imperative. A poorly organized healthcare delivery system continues to degrade the quality of care, cause unnecessary deaths, and waste billions of dollars. There is an “unconscionable error rate” that results in as many as 98,000 patient deaths per year, and research indicates large disparities in the quality of healthcare across different systems in the United States. Healthcare providers face pressures to improve healthcare delivery from multiple sources including the legal system and an aging population. One source describes the efforts to improve the system as “unhurried,” “sluggish,” and “snail-paced.”

Appended to this crisis is a debate over medical malpractice costs that waxes and wanes periodically with physicians asserting various adverse effects on their practices resulting from malpractice costs. Among these assertions is that, because malpractice costs are so adversely affecting the profitability of physician practices, physicians are being driven from practicing in some jurisdictions, thereby contributing to a problem of physician shortages in the future.

18. See Hill et al., supra note 1, at 160–61 (discussing factors contributing to medical malpractice costs).
some locales and specialties. The medical malpractice system has stimulated such national debate and discussion of both conventional and conceptual reforms that it has led some jurisdictions to enact tort reform measures such as caps on malpractice awards designed to limit physicians’ legal liability, eliminate joint-and-several liability, and limit access to courts. However, the issue of the real impact of malpractice liability on physician compensation as an antecedent of physician shortages remains an open one.

Also joined to the healthcare crisis is a debate over the role of Medicare, including its present and future cost to the government and therefore to taxpayers, and—of particular interest in this study—its role in physician reimbursement, some physicians’ refusal to treat Medicare patients, and emerging physicians’ choice of specialty. The U.S. Comptroller General has estimated that Medicare, Medicaid, and Social Security costs will grow from less than 10% of Gross Domestic Product currently to approximately 20% by the middle of the 21st century. Under the present fiscal regime, Medicare cash flow is projected to turn negative before 2010 and become increasingly so as figures are extrapolated into the future. Over the years, as pressure has mounted to control Medicare spending, Centers for Medicare & Medicaid Services (CMS) has moved to limit increases with some success. Despite this modest success, the Medicare trust fund is expected to be bankrupt by 2019 with some arguing the blame rests with the government subsidizing the supply of healthcare by paying providers directly and also with providers who have become adept at exploiting the system thus setting up a seemingly inevitable collision between physician shortages on one hand and fiscal constraints on the other.

http://online.wsj.com/article_print/0,,SB111758299333547628,00.html.


23. Id. at 288–89.

24. See Hill et al., supra note 1, at 186–87 (noting that despite malpractice reforms, malpractice litigation and malpractice insurance premiums remain high).


27. MASS. MED. SOC’Y, supra note 20, at 2.


29. Id. at 24.


This study examines evidence regarding the respective influences of malpractice liability costs and Medicare reimbursement rules on physician compensation, workload, and shortages in critical specialties. Specifically, it explores, both logically and empirically, the association between malpractice insurance costs, physician compensation, and the quantity of care provided over time and by specialty to draw conclusions about the evidentiary versus emotive impact of malpractice on physicians’ compensation. Section II describes the current third-party healthcare payment systems and how these systems operate. Section III analyzes evidence from various sources to include archival data on physicians’ compensation, malpractice insurance cost, and workload, then draws conclusions about their effects on physician compensation, shortages of physicians, and quality of care. It also explores the issue of whether federal healthcare laws and regulation are skewing the distribution of physician specialties and draws conclusions about the flawed setting of Medicare reimbursement rates. We augment extant evidence, much of which is anecdotal, with our own dataset consisting of pooled data drawn from three sources to help separate rhetoric from reality with respect to the impact of the legal system on physicians’ compensation and shortages. Section IV discusses the smorgasbord of ongoing and proposed healthcare reforms and discusses the potential efficacy of each. In Section V, we discuss the need for new healthcare delivery and payment systems, and what forms these systems will likely take. Drawing inferences from these evolving healthcare delivery and reimbursement systems, Section V discusses medical malpractice reform, the ideal characteristics of a modified medical malpractice regime, and concludes with a pragmatic solution for how to create such a regime in response to these evolving systems. Section VI summarizes our arguments and conclusions.

II. THIRD-PARTY-PAYER REIMBURSEMENT OF PHYSICIANS

Inasmuch as physicians’ revenue comes largely from third-party payers, there is little question that private insurance and Medicare/Medicaid reimbursement have a profound effect on physician compensation and, ultimately, on shortages of physicians in the less-well-compensated specialties. During the period 1995-2003, physician’s average net income from medical practice declined about 7% in real dollars in contrast to an approximately equal increase for other types of professionals. In primary care the decrease was 10.2%. Physician shortages are asserted to be particularly acute in primary care because private and public reimbursement

34. T& GINSBURG, supra note 33, at 1.
35. Id.
does not compensate primary care physicians (PCPs) for many activities their jobs require. Medicare’s alleged contribution to this problem results from the combination of bias in the reimbursement system that favors procedural medicine over cognitive medicine. Additionally, laws governing Medicare fee increases and volume growth are such that the system generates fee cuts for individual services once spending targets are exceeded absent Congressional intervention. While physician Medicare compensation per service has decreased overall, the amount of time physicians spend treating patients and the volume of services provided have supposedly increased as a result of restructuring of practices in ways that reduce the amount of time physicians spend on matters other than patient care, and growth in the number of tests and procedures available. Consequently, the volume of patients treated does not appear to be the culprit in diminished physician compensation. Rather, declining reimbursement rates in real dollar terms relative to practice costs appear to be to blame. When it comes to reimbursement, physicians are said to be currently dealing with too many healthcare plans, which are unnecessarily complicated and have little consistency. Physicians have difficulty being familiar with the myriad protocols and regulations of each plan, and reimbursement formularies are cumbersome and change frequently. The following subsections discuss the primary sources of physician reimbursement as a foundation for exploring their effects on physician compensation and shortages in the subsequent section.

A. Private Insurance Reimbursement

The problems associated with private health insurance would seem to present yet another of the conundrums associated with U.S. healthcare in that private insurance is essentially a risk-spreading arrangement to protect against the risk of low-probability, high-cost events such as a house catching fire. To
operate effectively as for-profit entities, private insurance companies obviously must control the risks associated with coverage, which creates incentives to exclude the high-risk prospective insured or charge them very high premiums. In the case of health insurance, however, assuming reasonable longevity, it stands to reason that a relatively large number of the privately insured will likely experience some high-cost medical event providing disincentives for private insurance to cover the aged and giving rise to the need for public insurance. Moreover, many privately insured patients are insured under group policies that require little or no prescreening. This creates incentives for healthcare insurance companies to insure and then deny coverage when costly medical events do arise; and, indeed, this practice has not been all that infrequent as evidenced by recent lawsuit settlements involving large-scale coverage denials. Physicians and insurance companies are often at odds over definitions of what constitutes a medical necessity under private insurance and at least one state, Connecticut, has fostered legislation to shift the burden of proving a lack of medical necessity to the insurer as opposed to physicians and patients.

The multi-payer healthcare market that is unique to the United States

“adverse selection” by screening out potential high-cost customers). These high-cost occurrences raise the overall cost of health insurance, to the detriment of the rest of the population. Id. at 3.

44. See id. at 3–4 (noting that even the screening itself is expensive).

45. See id. at 9 (explaining the benefits of public insurance, including lower administrative costs and bargaining power).

46. See Michael Chernew, Private Ins. System, available at www.med.umich.edu/csp/Course%20materials/Fall%202005Chernew_Private%20Insurance%20System.ppt (noting how the majority of persons insured by private insurers are covered under employer-based policies and that the employers’ share of the cost, called “co-payments,” has been increasing over time).

47. See, e.g., Aetna Sets External Review of Rescinded Policies, REUTERS (Sept. 23, 2008), available at http://www.reuters.com/article/idINBNG35520920080923 (noting the external review board of physicians adopted by Aetna in order to review policy rescissions); Los Angeles Sues Anthem for Individual Policy Cancellations, FIERCE HEALTHCARE (Apr. 17, 2008), http://www.fiercehealthcare.com/node/24541/print (noting how the city of Los Angeles is suing insurance companies for issues related to the denial of large insurance claims); U.S. Health Plans Propose to Boost Individual Coverage, FIERCE HEALTHCARE, (Dec. 20, 2007) http://www.fiercehealthcare.com/node/13698/print (explaining some proposals to help health insurers meet California regulations, for example, by making it harder to deny coverage and making these decisions subject to third-party reviews); Vanessa Fuhrman, UnitedHealth Takes Longest to Pay Claims, WALL ST. J., May 3, 2007, available at http://online.wsj.com/article/SB1178155840862937071.html?mod=health__home_stories (explaining how physicians’ concerns over reimbursement difficulties have also spawned ratings surveys in which insurance companies are evaluated based upon claims payments); Jeffrey Gold, Doctors Settle Class Action Against N.J.’s Largest HMO, INS. J., Oct. 17, 2006, http://www.insurancejournal.com/news/east/2006/10/17/73372.htm (noting how private insurance companies and physicians have litigated over matters beyond denial of coverage, such as issues regarding companies’ reimbursement policies and insurers illegally coercing physicians to do business with them); Richard Perez-Pena, Doctors’ Group Sues Two Insurers, Charging Unfair Correlation, N.Y. TIMES, Sept. 21, 2006, at B3 (noting a lawsuit filed by the Medical Society against an insurance company, alleging that they illegally coerced physicians to do business with them by threatening the loss of patient customers); Press Release, Washington State Office of the Attorney General (Sept. 24, 2003), Yakima Physicians Barred from Jointly Negotiating Reimbursement Rates, available at http://www.atg.wa.gov/pressrelease.aspx?id=5122 (noting how physicians have also been denied the right to negotiate collectively with insurance companies over reimbursement rates by the Federal Trade Commission).


49. See KRUGMAN & WELLS, supra note 8, at 1 (noting the failure in the United States to instill some
permits larger healthcare providers (HCPs) to practice price discrimination wherein different prices are charged by private insurance companies depending upon the relative bargaining power of the HCPs and/or payers. Private insurance companies are said to have higher administrative costs than government insurance, and because of lower bargaining power relative to the federal government, private insurers typically reimburse physicians at higher rates for most medical services than Medicare. In contrast, Medicare is said kind of universal health care, in favor of private health insurance options).

50. Wirtz, supra note 32. For their part, insurance companies have enjoyed some immunity from federal antitrust laws through the McCarran-Ferguson Act of 1945 which expressly exempted the "business of insurance" from such laws to the extent that insurance was regulated by state law and did not involve "acts of boycott, coercion, or intimidation." KENNETH R. WING, LAW AND THE PUBLIC'S HEALTH 242 (6th ed. 2003). The Supreme Court has interpreted the term "business of insurance" narrowly, however, to include only activities involving agreements between the insurance company and policyholder and directly involving the underwriting of risks. See id. at 242–43 (citing Group Life & Health Insurance Co. v. Royal Drug Co., 440 U.S. 205, 211 (1979)) (stating that the elements of true "business insurance" involves the "spreading and underwriting of a policyholder's risk"). See also Union Life Insurance Co. v. Pireno, 458 U.S. 119, 120 (1982) (noting that "business insurance" activity must include the "transferring or spreading a policyholder's risk").

51. JEFF LEMIEUX, PERSPECTIVE: ADMINISTRATIVE COSTS OF PRIVATE HEALTH INSURANCE PLANS, CENTER FOR POLICY AND RESEARCH, AMERICA'S HEALTH INSURANCE PLANS (2005), available at http://www.ahipresearch.org/pdfs/Administrative_Costs_030705.pdf (noting CMS estimates of private insurance administrative costs averaging about 12% of premiums over the past 40 years whereas Medicare’s percentage was about 3% in 2003). However, despite single-payer health reform advocates touting of Medicare’s low administrative cost rate, it is difficult to make comparisons with private health plans because Medicare does not include a cost of capital in its estimates of spending. Adding the costs of Medicare’s share of the federal debt service cost would cause Medicare’s administrative cost part to grow to just under 10%, still below that of private insurers but not dramatically so. Id. See Premiums and Profits, CONSUMERREPORTS.ORG, Sept. 2007, available at http://web.archive.org/web/20080528060820/http://www.consumerreports.org/cro/health-fitness/health-care/health-insurance/9-07/premiums-and-profits/0709_health_profit_1.htm (explaining that insurers typically retain 15–25% of the premiums they collect for administrative costs, marketing expenses, and profits); RESEARCH AND POLICY COMMITTEE OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, QUALITY, AFFORDABLE HEALTH CARE FOR ALL: MOVING BEYOND THE EMPLOYER-BASED HEALTH-INS. SYS. 36 (2007), http://www.ced.org/images/library/reports/health_care/report_healthcare07.pdf [hereinafter RESEARCH AND POLICY COMMITTEE] (estimating private insurance company overhead between 15% and 20% of revenue).

52. See, e.g., Wirtz, supra note 32 (noting the medical “arms race” private insurance companies face when dealing with competition, such as the federal government).

53. See BCBS OF MI Promoting Coverage Pool for Individuals, FIERCEHEALTHCARE, Feb. 29, 2008, http://www.fiercehealthcare.com/node/19715 (showing some evidence that insurance companies are beginning to explore ways to make the private, individual health insurance more affordable). In anticipation of as many as 25% of the state’s residents needing individual health insurance within the next decade, Blue Cross Blue Shield of Michigan is intending to create a health insurance coverage fund for people who have been denied coverage elsewhere with state authorization. Id. See Kevin Hayes & Christopher Hogan, Medicare Physician Payment Rates Compared to Rates Paid by the Average Private Insurer, 1999–2001 (Aug. 2003), available at http://www.medpac.gov/publications/contractor_reports/Aug03_PhysPayRates%28cont%29Rpt.pdf (noting that Medicare payments fees were in the 60–70% during the period 1989–1997 but averaged closer to 80% during the period 1999–2001); National Coalition on Health Care, Health Insurance Costs (2008), http://www.nchc.org/facts/cost.html (noting that employment-based health insurance premiums increased by 100% from 2000–2007, compared to a 21% cumulative wage growth over the same period, and health insurance is the fastest growing cost component for employers); Diane Levick, Law Would Require Insurers to Offer Policies to More Consumers, COURANT.COM (Aug. 19, 2008), available at http://www.courant.com/business/hc-individual/8819.artaug19,0,7042438.story (describing the several states’ mandated guarantee issue rules which require individual policies to be sold regardless of the insured’s health, but the premiums are very expensive exceeding $16,000 per annum in some cases); Janet B. Mitchell, et al., Premium Subsidy Programs: Who Enrolls, and How Do They Fare? 24 HEALTH AFFAIRS 1344, 1344–45 (2005) (showing how premiums have increased so much in recent years that some states have instituted premium subsidy plans through which low-income residents who would otherwise presumably be uninsured are able to purchase individual, private health insurance); Joseph Paduda, How Does Physician Income Drop while Costs Increase?, MANAGED CARE
to reimburse physicians at rates so low as to create low and sometimes negative margins for HCPs.\textsuperscript{54}

An examination of the cumulative growth per enrollee payments for physician and clinical services indicates that the rate for private insurers has paralleled that of Medicare over most of the period 1970-1990 except for a period during the late 1980s when the rates diverged somewhat with private payments growing at a faster rate.\textsuperscript{55} There is, however, evidence of a diminishing gap between Medicare and private insurer rates during the latter 1990s.\textsuperscript{56} The gap between Medicare rates and private rates of reimbursement further declined from 143\% of Medicare’s rate in 1997 to 123\% in 2003.\textsuperscript{57}

Private insurance companies thus impact physician compensation in a manner somewhat analogous to Medicare because they generally tend to increasingly follow the lead of Medicare in setting reimbursement rates over the long term.\textsuperscript{58} Further, not only does the government drive private insurance reimbursement to a significant extent, it also subsidizes it. Because private health insurance is largely employer-based and employers receive a tax deduction for their employee healthcare expenses, the government is in effect paying a significant portion of private-healthcare-insurance expense through reduced tax revenues.\textsuperscript{59}

Reimbursement plans in the employer-based insurance market can be divided into four types: (1) fee-for-service (FFS), (2) health-management organizations (HMOs), (3) preferred provider organizations (PPOs), and (4) point of service plans (POS).\textsuperscript{60} Under traditional FFS plans, providers pay a fee for each service provided. Insurance companies have no influence over choices of physician and treatment and do not bargain strongly on the basis of price—a system that has led to overuse and high prices. HMOs came about as a means of reducing costs through the integration of the provider and insurer functions and placed more power in the hands of insurers with respect to treatment authorization. The numbers of insured through HMO plans grew rapidly from the middle 1980s, peaking in 2000 at slightly over 80 million, but dropping subsequently by approximately 10 million indicating a decline in

\textsuperscript{54} Medicare Reimbursement to Physicians, American Academy of Family Physicians (Feb. 10, 2005), available at \url{http://www.aafp.org/online/en/home/policy/federal/congressional-testimony/medicarereimb.html} (explaining how higher reimbursement rates have been funded by rapidly rising premiums for family coverage which are doubling every ten years); \textit{Research and Policy Committee, supra} note 51, at 2, 12 (noting how employer-based health insurance is said to be pricing itself out of reach). Private health insurance premiums are increasing at a faster rate than insured’s incomes. Employers have coped with rising employee-healthcare costs by imposing more restrictions on eligibility and increasing employee contributions. \textit{Id}. \textit{See Research and Policy Committee, supra} note 51, at 12 (noting how private health insurance premiums are rising faster than incomes).

\textsuperscript{55} Christina Boccuti & Marilyn Moon, \textit{Comparing Medicare and Private Insurers: Growth Rates in Spending over Three Decades}, 22 \textit{Health Affairs} 230, 235 (2003) (noting that the cumulative growth rate per enrollee account for differences in payers’ spending relative to previous spending trends thereby allowing for a more comprehensive perspective over time).

\textsuperscript{56} Hayes & Hogan, \textit{supra} note 53.

\textsuperscript{57} Paduda, \textit{supra} note 53.

\textsuperscript{58} Hogan, \textit{supra} note 38.

\textsuperscript{59} Chernew, \textit{supra} note 46.

\textsuperscript{60} \textit{Id}. 
popularity. Under such plans, PCPs have received approximately 12% of
premium dollars while specialists received approximately 32% and hospitals
received approximately 36%. PPOs are essentially a discounted price for
service arrangement among HCPs, patients and insurers governed by less
restrictive rules than HMOs. With PPOs, the provider organization assembles
a provider list, controls and monitors quality of service, and receives a profit.
HCPs benefit by maintaining market share and receiving faster payments in
return for discounted fees. Under POS plans, insurers choose PCPs who
control referrals, but such plans otherwise work similarly to PPO plans in that
those insured can obtain out-of-network coverage if they are willing to pay a
higher out-of-pocket price. Over the past decade, PPO plans have come to
dominate all other types as the most popular with over 50% of the employer-
based insured population. Partly accounting for this popularity is the fact that
PPO plans have experienced the smallest cost increase on any plan type. 61

The plan type becomes highly important when considering the influence
on physician incentives. FFS plans are characterized by supplier-induced
demand in that the more care physicians provide, the more they earn.
Conversely, plans that focus on capitation—an annual fee paid to a physician
for each insured in the plan 62—are characterized by demand dissuasion in that
the less care provided for any one patient, the more patients who can be treated
by a given physician and the more that physician can earn. 63 The same
physician can be reimbursed by both FFS and capitation for different patients
depending upon contractual arrangements. 64

Irrespective of differences in the types of private insurance and the
complicated mechanics of physician reimbursement, physicians’ relationships
with insurance companies have proven increasingly problematic. Insurance
companies are alleged to have systematically and consistently underpaid
physicians over the past decade, a practice that has resulted in a substantial
number of lawsuits, 65 many of which have been won by physicians. 66 In

61. Id.
Feb. 26, 2010).
63. Chernew, supra note 46.
64. See Kathy Robertson, Insurers Warn Brokers, SACRAMENTO BUS. J., Aug. 22, 2008, available at
health insurance plans can also be categorized as high-deductible, self-insurance, and wrap-around plans).
High-deductible plans cover most medical expenses after employees have paid a set amount for medical care
and are priced lower than other plans predicated on the expectation that such deductibles will encourage
insured to be more judicious in their use of healthcare. Self-insurance plans are custom plans set up to pool
risk for employers, which assume some or all of the financial risk for employee healthcare. Wrap-around
plans involve combining high-deductible and self-insurance plans such that employers pay for some or all of
the deductible. Such plans have been heavily opposed by insurers which maintain that such plans destroy the
incentive for employees to use healthcare judiciously and, in effect, undermine the intent behind high-
deductible plans resulting than higher than anticipated cost to the insurer. Daily Health Policy Report, Kaiser
average deductibles for PPO plans is now said to exceed $1,000 annually. Michael Steinberg, Time to Rethink
article/93881-time-to-rethink-our-view-of-private-health-insurers (some insurance companies are adapting to
employer self-insurance by becoming administrators for such plans).
65. Dawn Lipthroft, Insurance Companies Settle Lawsuits on Physician Reimbursement, ETHICAL
HEALTH PARTNERSHIPS (2005), http://www.ethicalhealthpartnerships.org/insurancelawsuits.html. See, e.g.,
addition to litigation involving reimbursement policies, insurance companies and physicians have litigated over insurers illegally coercing physicians to do business with them. Exacerbating these difficulties, physicians have also been denied the right to negotiate collectively with insurance companies over reimbursement rates by the Federal Trade Commission, a restriction that increasingly places physicians at a disadvantage as mergers of insurance companies increase their bargaining power relative to that of individual physicians. Physicians’ concerns over reimbursement difficulties have also spawned ratings surveys in which insurance companies are evaluated based upon claims payments. Moreover, insurance companies have been accused of inflating estimates of the amounts of claims paid in reports to state regulators. These difficulties imply a growing tension between physicians and private insurers regarding reimbursement for healthcare services—one that calls into question the effectiveness of regulation in limiting questionable insurance practices and suggests an increasing propensity of physicians resorting to the judicial system for remedies to such practices.

B. Medicare Reimbursement

Instead of universal healthcare, the United States has what has been termed a “patchwork” of public and private health programs of which Medicare is the foremost public program followed closely by its slightly smaller, but fast growing, sibling, Medicaid. Medicare, administered by the


70. Fuhrmans, supra note 47.


73. RESEARCH AND POLICY COMMITTEE, supra note 51, at 1, 2. See, e.g., WING, supra note 50, at 139 (noting that in 1990 Congress passed minimum standards for private “Medi-Gap insurance policies that are supposed to help cover patients’ liability for services not covered under Medicare). In 2005, approximately 567,000 physicians billed Medicare. MEDPAC, PHYSICIAN SERVICES PAYMENT SYSTEM (2007), available at
U.S. Department of Health and Human Services (HHS) through CMS, is totally federally funded and divided into components, two of which are hospital insurance (HI) and supplementary medical insurance (SMI). HI, also known as Medicare part A, which is funded by payroll taxes, helps pay for hospital, home health, skilled nursing, and hospice care, while SMI, also known as Medicare part B, pays for physician, hospital outpatient, and some other services, and is funded by a combination of general fund, insurance and co-payments.

Inasmuch as participation in Medicare is legally voluntary, courts have been liberal in allowing almost unlimited discretion to limit payments and require compliance with preconditions for reimbursement. HHS can impose maximum ceilings on the reimbursement for certain costs, audit the reported costs for services provided, and use the audited costs to determine future reimbursement rates irrespective of fairness to physicians. Medicare spending for physician services is basically a function of three variables: payment rates for individual services, volume of services, and the mix of services. In 1983, Congress created a system in which CMS manages physician reimbursements based upon 745 Medicare severity diagnosis-related-groups (MS-DRGs) predicated on the severity of illness. The MS-DRG system is supposed to be prospective in that the amounts paid are fixed in advanced. In reality, however, payments have never been completely prospective since events subsequent to the onset of treatment (e.g. changes in diagnosis) exert significant influence over payments.

In 1989 in an effort to control healthcare spending by reducing incentives to over treat patients, Congress also instituted a resource-based-relative-value scale (RBRVS) within the MS-DRG system with the goals of providing a


74. John B. Shoven, The Impact of Major Improvements in Life Expectancy on the Financing of Social Security, Medicare, and Medicaid, in COPING WITH METHUSelah: THE IMPACT OF MOLECULAR BIOLOGY ON MEDICINE AND SOCIETY 166, 175–76 (Heney J. Aaron & William B. Schwartz eds., 2004). HI is funded primarily by a 2.9% payroll tax with its only other sources of revenue being trust fund interest and a share of recycled tax payments on Social Security benefits and that SMI receives approximately 75% of its funding from general revenues and 25% from participants. Id.

75. Id. Medicare Part C relates to Medicare Advantage, an effort to blend private and public reimbursement that is discussed subsequently. Part D relates to prescription drug coverage.


77. Wing, supra note 50 at 130, 194 (noting that since 1982 HHS has had the authority to contract with “peer review organizations” “to review the quality, necessity, and appropriateness of services paid for by Medicare”).


81. Id.
rational basis for physician reimbursement, removing excess profits from some services, and assuring adequate payment for evaluation and management services. Under the RBRVS, CMS sets rates for each service provided by physicians using approximately 9,000 current procedural terminology (CPT) codes with a code associated with each medical procedure. Physician reimbursement under the RBRVS is determined by three fundamental factors: (1) work relative value units (wRVUs), which are a measure of work performed by the physician and which assign values to each individual CPT code, (2) geographic practice cost indices, and (3) a monetary conversion factor. As a cost control measure, however, the RBRVS has had only partial success in controlling costs at best. Physicians tend to increase the quantity of services provided as Medicare rates move downward despite an amendment to the RBRVS legislation that is supposed to lower the Part B reimbursement rates for a service in response to increases in utilization of that service.

The basic assumption underlying Medicare reimbursement is that the price of a given health service should reflect the cost of providing that service leading to a cost-based physician reimbursement system. Given that

---

82. **Research and Policy Committee, supra note 51, at 2, 12.**
84. Barbara Peck, *Future of Medicare Reimbursement Uncertain*, Position Paper, available at [http://www.docstoc.com/docs/25969491/Future-of-Medicare-Medicare-Reimbursement-Uncertain-By-Barbara-Peck](http://www.docstoc.com/docs/25969491/Future-of-Medicare-Medicare-Reimbursement-Uncertain-By-Barbara-Peck). The actual reimbursement calculation is computed as follows: [work relative value units(budget neutrality work adjuster)(work geographic practice cost index)] + [(practice expense relative value units)(practice expense geographic practice cost index)] + [(malpractice professional liability insurance relative value units)(professional liability insurance geographic practice cost index)] = (total relative units reimbursement)(Medicare dollar conversion factor for that year) = Medicare payment to physician. The three relative value units (RVUs) in the formula represent the values assigned by CMS to the resources needed to provide a given physician service reflecting the time, skill, effort, intensity and risk required by that service and depending upon specialty. The geographical practice cost indices (GPCI) are intended to adjust for differences in cost across different locales. The budget neutrality work adjustor is intended to adjust physician payments to comply with the budget neutrality cap to total Medicare payments mandated by Congress. The Medicare conversion factor is a dollar amount necessary to translate total RVUs into a reimbursement amount.
85. Barbara Peck, *Future of Medicare Reimbursement Uncertain*, Position Paper, available at [http://www.docstoc.com/docs/25969491/Future-of-Medicare-Medicare-Reimbursement-Uncertain-By-Barbara-Peck](http://www.docstoc.com/docs/25969491/Future-of-Medicare-Medicare-Reimbursement-Uncertain-By-Barbara-Peck). The actual reimbursement calculation is computed as follows: [work relative value units(budget neutrality work adjuster)(work geographic practice cost index)] + [(practice expense relative value units)(practice expense geographic practice cost index)] + [(malpractice professional liability insurance relative value units)(professional liability insurance geographic practice cost index)] = (total relative units reimbursement)(Medicare dollar conversion factor for that year) = Medicare payment to physician. The three relative value units (RVUs) in the formula represent the values assigned by CMS to the resources needed to provide a given physician service reflecting the time, skill, effort, intensity and risk required by that service and depending upon specialty. The geographical practice cost indices (GPCI) are intended to adjust for differences in cost across different locales. The budget neutrality work adjustor is intended to adjust physician payments to comply with the budget neutrality cap to total Medicare payments mandated by Congress. The Medicare conversion factor is a dollar amount necessary to translate total RVUs into a reimbursement amount.
86. *Id.*
87. *Id.* supra note 50, at 137. The following internet posting by Medpac provides amplifying details regarding RBRVS-based reimbursement: Medicare pays for physician services based on a list of services and their payment rates, called the physician fee schedule. In determining payment rates for each service on the fee schedule, the Centers of Medicare & Medicaid Services (CMS) considers the amount of work required to provide a service, expenses related to maintaining a practice, and liability insurance costs. The values given to those three types of resources are adjusted by variations in the input prices in different markets, and then a total is multiplied by a standard dollar amount, called the fee schedule’s conversion factor, to arrive at the payment amount. Medicare’s payment rates may be adjusted based on provider characteristics, additional geographic designations, and other factors. Medicare pays the provider the final amount, less any applicable beneficiary co-insurance.
88. Tenreiro, *supra note 73, at 1.*
89. *S. Tenreiro, supra note 84. See also Graham, supra note 25 (providing the following example of Medicare’s alchemy for setting physician reimbursement: “Medicare’s economists concluded that a hysterectomy takes twice as much time as a psychotherapy session, 3.8 times as much mental effort, 4.47 times
Medicare expenses already constitute a large part of federal spending, controlling Medicare costs has become a focus of a great deal of attention, especially in light of an aging population that threatens to exacerbate what is already a major problem for the U.S. economy. As a result, Congress has capped Medicare reimbursement to physicians using a sustainable growth rate (SGR) in determining the annual updates to the monetary conversion factors in the RBRVS formula—in effect changing Medicare reimbursement into a zero-sum game in which there are winners and losers among physician specialties. The SGR mechanism is supposed to use “information about physician spending in relation to cost increases, changes in the number of beneficiaries, and growth in the overall economy to impose fiscal discipline on Medicare” spending. This SGR cap has proven untenable, however, for two reasons. First, even if reimbursement rates go unchanged and no new CPT codes are added, growth in the number of beneficiaries—together with fraud, waste and abuse—adds to spending necessitating continuous Congressional overrides of the cap by waiving the SGR formula for one year. Second, the cumulative nature of its calculation makes future spending a function of past spending caps that have been temporarily suspended by Congressional intervention, thereby resulting in projections of unrelenting decreases in reimbursement for many years. The series of one-year Congressional fixes achieved by waiving the SGR formula has been characterized as merely kicking the problem down the road. Indeed, Medicare spending appears out of control with such problems as $198 million spent on unapproved pharmaceuticals during the period 2004–2007 alone.

In an effort to reform Medicare reimbursement through privatization, claims are now processed through a patchwork system of fiscal intermediary carriers such as insurance companies. Physicians who accept Medicare patients can accept or reject assignment of Medicare reimbursement. Physicians who accept assignment bill Medicare for its responsible portion through a carrier and bill the patient for the balance: the patient’s co-payment. Any physician accepting assignment agrees to accept Medicare’s “reasonable charge” which is often less than the physician’s normal charge. If a physician as much technical skill and physical effort, and 4.24 times as much risk. Add it all up, and a hysterectomy is 4.99 times as much work as a psychotherapy session—at least according to the government. Just about every possible procedure, treatment and appointment was calculated similarly. That’s how the government determined the prices it would pay under Medicare.

90. Medicare Payments to Physicians, supra note 7, at 9.
92. GAO, MEDICARE PHYSICIAN PAYMENTS, supra note 78, at 11.
93. Medicare Reimbursement to Physicians, supra note 7, at 14.
94. Id.
does not accept assignment, the claim must still be sent to the carrier, but the patient is responsible for any amount above Medicare’s reasonable charge. Under this arrangement, the patient typically pays the bill including any amount above what Medicare allows and then submits a claim to Medicare for its portion of payment. 98 This carrier system of processing Medicare claims has created difficulties for physicians inasmuch as the carriers are chosen essentially through a low-bidder process. 99 Because of the cost pressures resulting from low bids, carriers are often unable to provide good service resulting in slow claims processing and cash flow problems for physicians. 100

Another problematic issue for physicians arising from the complexity of Medicare reimbursement is that of possible regulatory and legal action for false claims resulting from overbilling for Medicare-covered services, the consequences of which can be quite significant from both financial and legal standpoints. 101 The federal government has developed data-mining methodologies to assess healthcare claims and assist in its enforcement against infractions under the False Claims Act. 102 Medicare billing violations can also surface from “whistleblower lawsuits or qui tam actions.” 103 Such violations can involve severe financial penalties and criminal prosecution. 104 For example, in United States v. Rogan, a hospital administrator was required to make financial restitution for false claims after several of his coconspirators received prison sentences. 105 Consequently, physicians are well advised to exercise caution and avoid a pattern of mistakes in billing Medicare for patient services.

Recent attempts by CMS to force HCPs to tighten quality controls, though laudable in many respects, also adversely impact physician compensation. 106 In the past, HCPs were able to externalize a majority of the costs of medical errors, which provided a disincentive for investment in quality improvement. 107 CMS now disallows incremental payments associated with...

---


100. Id.


102. Wagonhurst & Habte, supra note 101, at 12.

103. Id.

104. Id.

105. U.S. v. Rogan, 459 F. Supp. 2d 692, 721–25 (N.D. Ill. 2006). Medicare’s tentacles reach even into purchases of one physician’s practice by another where a buying physician’s failure to exercise due diligence with respect to the billing practices of the seller’s could subject the buyer to legal and financial risk. See generally Greg Brock et al., What Every Compliance Officer Should Know About M&A Due Diligence, COMPLIANCE TODAY, Dec. 2008, 30, at 31 (“failure to properly identify HCP-related compliance issues during the due diligence phase [in a merger and acquisition] may result in severe financial and regulatory consequences . . . .”).

106. Rosenthal, supra note 80, at 1574.

eight secondary conditions that it considers preventable complications resulting from the provision of medical care. These include such errors as objects left in the patient during surgery, air embolisms, blood incompatibility, pressure ulcers, and catheter-associated urinary tract infections. To make matters worse for physicians, some private insurers have been quick to jump on this bandwagon.

C. Medicaid Reimbursement

Title XIX of the Social Security Act established Medicaid as a joint federal/state program for the purpose of providing healthcare funding primarily for low-income and disabled persons. Medicaid is an open-ended entitlement program under which the federal government pays a share (50-83%) of expenditures with the remainder covered by states. Unlike Medicare, within broad federal requirements each state administers its individualized Medicaid program according to its own plan and reimburses providers for care provided. Medicaid provides a growing safety net for a broad cross section of the population, covers 60% of the poor, and differs philosophically from Medicare in its orientation toward the underclass rather than the aged. Medicaid reimbursements for health services are typically low compared to private insurance and even Medicare reimbursement such that acceptance of Medicaid patients has been described as a “community service.”

Generally, federal Medicaid law does not set precise requirements for setting reimbursement rates for physician services, but instead requires only the following: “[A]ssure that payments are consistent with efficiency, economy, and quality of care and are sufficient to enlist enough providers so that care and plan services are available under the plan at least to the extent that such care and services are available to the general population in the geographic area.” The import is that rates for a given service can vary

108. Rosenthal, supra note 80, at 1574.
109. Id.
111. See 42 U.S.C. § 1396a (2006) (creating a statutory Medicare program to provide for the disabled and low-income individuals).
113. Id.
114. RICHMOND & FEIN, supra note 8, at 236.
115. Wirtz, supra note 32 (quoting a hospital official in Minnesota).
widely from state to state.\textsuperscript{118} Even though Medicaid fees for primary care increased significantly during the period 1998-2003, Medicaid replaced higher-paying private insurance for many patients during that period resulting in a net loss in physician compensation and a reluctance to treat Medicaid patients.\textsuperscript{119}

A principle reason for Medicaid’s increasingly low reimbursement for patient services is found in its cost growth. Medicaid cost growth has exceeded even that of Medicare in recent years,\textsuperscript{120} in part because of the erosion of private health insurance and growth in the uninsured population,\textsuperscript{121} and in part because of rampant fraud and abuse in which even some states have been willing participants.\textsuperscript{122} Total Medicaid costs more than doubled during the period 1988–1993,\textsuperscript{123} and by 2006 combined federal and state Medicaid was expecting to reach a level of $300 billion annually, compared to Medicare’s $384 billion.\textsuperscript{124} Cost pressures have also resulted in cutbacks in various Medicaid-funded services.\textsuperscript{125} During 2006, all fifty states and the District of Columbia implemented some sort of Medicaid cost control measures to include reduced benefits, restricted eligibility, and increased co-payments.\textsuperscript{126}

In summary, all three basic types of third-party payers are problematic for physicians and have been the subject of severe criticism from the standpoint of their cost to their clients or taxpayers and the manner in which they reimburse physicians for healthcare services. Governments, particularly the federal government, play an increasing role in both funding healthcare and determining physicians’ payment for services. More than 60% of national healthcare expenditures are now funded through federal and state budgets when income tax expense deductions for employer-sponsored plans are

\begin{itemize}
\item \textsuperscript{118} See Milligan, supra note 116, at 5 (noting, for example, rates for CPT Code No. 99245 paid amounts of $113, $215, $49, $151, $164, and $178 across six states and the District of Columbia compared to Medicare’s rate of $232).
\item \textsuperscript{119} Id. at 6–8.
\item \textsuperscript{121} Mark Rosenberg & Frederick Cohen, Medicaid and Physician Reimbursement, 118 PEDIATRICS 808, 808–09, (2006), available at http://www.pediatrics.org/cgi/content/full/118/2/808.
\item \textsuperscript{126} Rosenberg & Cohen, supra note 121, at 808.
\end{itemize}
III. PAYMENT SYSTEMS, MALPRACTICE INSURANCE COST, PHYSICIAN COMPENSATION AND SHORTAGES, AND QUALITY OF CARE

Despite the fact that physicians in the United States are said to receive particularly generous remuneration in contrast to their counterparts in other first-world countries, reimbursement practices can have a profound impact upon the quality and quantity of care. As two leading healthcare commentators have put it, “[t]he risks in any payment system are apparent. The way dollars flow changes incentives and therefore behavior.” A recent study conducted by the Medical Group Management Association (MGMA) cited the following as four of the five primary current concerns of medical groups: (1) maintaining physician compensation in an environment of declining reimbursement; (2) operating cost rising more rapidly than revenue; (3) managing finances in light of uncertainty over Medicare reimbursement rates; and (4) recruiting sufficient numbers and types of physicians. In the following subsections we examine the nexuses among third-party reimbursement, professional liability insurance cost, physician compensation, shortages, and quality and availability of care.

There are several difficulties in attempting to determine the effects of medical malpractice cost and reimbursement systems on physician compensation and shortages. First, there is no universal, agreed-upon measure of physician shortages. Second, most evidence is anecdotal, but what empirical evidence exists is not always in agreement, often lacks causal inference, and is subject to mixed interpretation. Third, much of the research that has been conducted has used surveys of physicians raising concerns about self-selection bias with respect to how representative the respondents are of the physician population as a whole and about physicians’ obvious financial incentives to exaggerate the consequences of malpractice liability cost with respect to their patient populations. Finally, some

127. RESEARCH AND POLICY COMMITTEE, supra note 51, at 10.
128. AARON ET AL., supra note 8, at 7.
129. RICHMOND & FEIN, supra note 8, at 84.
132. Id. (noting an Agency for Health Research and Quality study found a correlation between tort exposure and physician supply in that states with malpractice liability caps have 12% more physicians per capita, but Pennsylvania, which has no cap, ranked 13th among all states in physicians per capita).
133. See, e.g., id. (discussing survey techniques used by researchers); WIS, HOSP. ASS’N & WIS. MED. SOC’Y, WHO WILL CARE FOR OUR PATIENTS? WISCONSIN TAKES ACTION TO FIGHT A GROWING PHYSICIAN SHORTAGE 7 (2004), available at http://doctor.rms.med.wisc.edu/document_11_66781.pdf (discussing the physician shortage problem in Wisconsin); Baretta R. Casey, et al., Rural Kentucky’s Physician Shortages: Strategies for Producing, Recruiting and Retaining Primary Care Providers within a Medically Underserved
demographic areas, particularly rural and inner-city areas, have long experienced shortages of certain types of physicians, quite possibly more due to quality of life and practice issues than malpractice liability concerns.  

Consequently, to aid in our examination of reimbursement systems and malpractice insurance cost on physician compensation and shortages, we develop a database (hereinafter, “pooled dataset”) using data drawn from the following four sources and taken from the period 1999-2007: (1) MGMA annual Physician Compensation and Production Survey containing data on compensation and RVU production; (2) MGMA Cost Survey: Multispecialty Practices Report containing data on physician practice costs to include professional liability insurance; (3) CMS Medicare Utilization for Part B report containing data on submitted Medicare charges and numbers of Medicare patients served, and numbers of services provided per Medicare patient; and (4) the AMA’s Physician Characteristics and Distribution in the U.S. containing numbers of practicing physicians by specialty. The pooling of data from these sources would enable empirical insights to be drawn with respect to changes over time and by specialty in physicians’ compensation, production, patients served, professional liability insurance cost, and general practice costs as well as changes in numbers of physicians. Although we do not possess data on changes in private insurance reimbursement broken down by specialty and Medicaid reimbursement (the latter varying state-by-state), changes in Medicare reimbursement rates may serve as a reasonable proxy for changes in private insurance, privately administered Medicare, and Medicaid reimbursement rates, especially when viewed over a longer period and not simply year-to-year.

---

134 See, e.g., Guadagnino supra note 131; Who Will Care for Our Patients? supra note 133; Casey supra note 133; outlining the relationship between geographic location and the ability to attract physicians.


137 See, e.g., Centers for Medicare and Medicaid Services, Medicare Utilization for Part B, available at http://www.cms.hhs.gov/MedicareFeesforSvcPartsAB/04_MedicareUtilizationforPartB.asp (providing links to data on a wide variety of characteristics, including services, payments and procedures).


139 The vast majority of third-party payers use the RBRVS to determine physician reimbursement. The approximate percentages of RBRVS usage for various third-party payers are as follows: Blue Cross/Blue Shield companies = 78%, privately administered Medicare programs = 95%, Medicaid = 64%, and other private insurers = 75%. See Joel F. Bradley, CPT Coding and Reimbursement Update 2006, Presentation to the National Vaccine Advisory Committee 38 (June 6, 2006), www.hhs.gov/nvpo/nvac/documents/BradleyJun06.ppt. Because private insurance companies differ among each other and even within a given company with respect to their particular plans, it seems there is no simple method for determining their reimbursement rates. Studies using claims data from various sources indicate a growing convergence with Medicare rates, however. See, e.g., Hayes & Hogan, supra note 53, at 9 (reporting higher reimbursement rates funded by rapidly rising premiums for family coverage).

140 See Boccuti & Moon, supra note 55 (noting that short-term comparisons of private versus public reimbursement rates sometimes present an unreliable picture because of short-lived regulatory changes and management techniques). One reason that Medicare and private insurance spending are interrelated is because
A. Effects of Third-Party Reimbursement on Physician Compensation and Shortages

The total supply of physicians has been reasonably adequate over the past century. The issue of shortages is largely one of maldistribution by specialty and location. An area of primary concern is that of PCPs—including the specialties of family practice, internists, obstetrics/gynecology, and pediatrics—for which reimbursement policies are creating difficulties. For example, over the past five years the percentage of medical students entering family practice has dropped from 14% to 8%, and only 2% of currently graduating medical students plan to become PCPs. One fifth of PCPs earned less than $120,000 in 2007, and PCPs struggle “... to get decent reimbursement from health plans.” The cost of private and public medical schools increased 50% and 133%, respectively, over the past two decades in real dollars. Physicians graduate medical school owing $139,517 in debt on average, with 75% having debt of at least $100,000 and 87.5% having outstanding loans. With slow growth in compensation, young physicians face increasing difficulty repaying this debt, a problem that has directly contributed to a shortage of PCPs. As one commentator has stated, “[t]he number of U.S. medical students choosing careers in primary care or family practice has drastically fallen in recent years, threatening the stability of the overall healthcare system...” a problem attributed to medical specialists earning almost twice as much as PCPs for serving the same number of patients. Some nurses are said to be better compensated than PCPs. PCPs

employers put pressure on private plans to reduce premiums as Medicare reimbursement declines. Jeff Lemieux, Medicare vs. FEHB Spending: A Rare, Reasonable Analysis, CENTERISTS.ORG (June 23, 2003), available at http://www.centerists.org/pages/2003/06/23_lemieux_health.html. See, e.g. supra note 7, at 70–74.

141. Richmond & Fein, supra note 8, at 204.

142. Id.


144. Medicare Payments to Physicians, supra note 7, at 70–74.

145. Klepper, supra note 143.


147. Ken Terry, 2008 Exclusive Survey-Earnings: Good News for Primary Care Income, MED. ECON. (Aug. 1, 2008), http://license.icopyright.net/user/viewFreeUse.act?fuid=MTQxNDgwOA%3D%3D (noting that, although “... family physicians’ total compensation advanced 5 percent [in 2007], the median incomes of GPs [general practitioners], internists, and ob/gyns [obstetrician/gynecologists] dipped slightly compared to prior year statistics.”).


151. Chris Rauber, UCSF Study: Lower Pay for Primary-Care Doctors Threatens System, S.F. BUS.
are reportedly feeling overworked, and nearly half plan to either cut back on their practices or quit medicine entirely. The result is an apparent shortage of PCPs despite an adequate supply of most other types of physicians in most locales. This problem contributes to what has been termed the “relentless rise in health-care costs” by encouraging even more costly acute care versus less costly preventive medicine.

A major reason for shortages of PCPs is the bias in the application of Medicare’s RBRVS which favors procedural medicine over cognitive medicine. PCPs spend more time listening and interacting with patients than do specialists in surgery, gastroenterology, and anesthesia who are more procedurally focused. CPT codes for new services were the major drivers of growth in the volume of physicians’ work per Medicare beneficiary during the period 1992–2002, with the greatest increases coming in procedure-heavy specialties such as cardiology and gastroenterology. This bias favoring procedural medicine has been perpetuated by an AMA committee created in 1991 known as the RVS Update Committee (RUC) that advises CMS on setting physician reimbursement rates for services. The RUC is overwhelmingly dominated by procedural sub-specialists with the result that medical students, given their aforementioned debt load upon graduation, are driven into higher-paying procedural specialties for financial reasons. The RUC consists of 29 members, 23 of whom are nominated by major national medical specialty societies and appointed by the AMA board of directors. Despite its advisory role as an advocacy group, the RUC appears to be the sole source of external input received regularly by CMS about physician reimbursement rates, and has been described as secretive, unrepresentative, and unaccountable since neither its membership nor its proceedings are made public. The RUC’s recommendations take on even more importance when taken with the federally legislated requirement that CMS must maintain budget

154. Id.
156. See id. (discussing Medicare’s fee-shifting mechanism and how it has created a disparity between certain practices causing shortages of PCPs).
158. Maxwell et al., supra note 91, at 1853.
159. See Physician Reimbursement Under Medicare, supra note 83 (providing a definition of the RUC and discussing the procedures the RUC uses to make recommendations to the CMA).
160. Id. (discussing the composition of the RUC).
161. Bradley, supra note 139.
162. Poses, supra note 157.
163. Id.
Federal law requires that the budgetary impact of increases in existing CPT codes or the establishment of new codes be offset by decreases for other codes, thereby creating conflict among various specialties. In light of the previously acknowledged bias of the RUC toward procedural medicine, this zero-sum arrangement virtually guarantees winners and losers with PCPs generally being the losers.

Further, it should also be noted that Medicare law affects physician compensation indirectly through the anti-kickback and anti-self-referral statutes associated with Medicare/Medicaid-related law that place restrictions on physician mal-distribution, insurance reimbursement also has indirect effects on physician compensation. For example, several studies have found that, as physicians increase the volume of care to offset the loss of revenue due to Medicare fee cuts, they increase the volume of care per patient, not the number of patients. Further, to the extent that more-care-per-patient means longer hours for physicians, this only exacerbates the PCP shortage because more and more physicians prefer medical specialties that offer more control over their professional work schedules. The adverse interaction between lower compensation and uncontrollable lifestyle for PCP’s is said to represent “two strikes” according to one study.

Further, it is realized only 1.1% in increased compensation due to declining reimbursement. Robert Lowes, Realizing More, More Patients, No Raise? RAND J. ECONOMIST, May 5, 2008, http://healthcare-economist.com/2008/05/05/realizing-more-more-patients-no-raise/ (finding that some doctors are increasing the amount of care per patient given the need to make up for Medicare fee cuts, which cause a loss in revenue). See generally A.M. Epstein, et al., The Use of Ambulatory testing in prepaid and fee-for-service Group Practices: Relation to Perceived Profitability, 314 (17) NEW ENG. J. MED. 1089, 1089–94 (1986) (finding individual coinsurance rates had a large impact on the number of physician visits during hospitalization); Judith K. Hellerstein, The Importance of the Physician in the Generic versus Trade-Name Prescription Decision, 29(1) RAND J. ECON. 108, 108–36 (1998) (finding a connection between physicians ordering high-cost tests and insurance reimbursement); J. P. Newhouse & M.S. Marquis, The Norms Hypothesis and the Demand for Medical Care, 13 J. HUM. RESOURCES 159, 159–82 (1978) (finding a relationship between insurance status and patients being more likely to receive a prescription from a physician).
on what the income physicians can earn though ownership of ancillary medical entities and through their affiliations with hospitals. Although such restrictions are a complex topic easily deserving of a separate study, they are not a focus of this study and might best be summed up succinctly with the following statement: “It is quite clear that OIG [Office of the Inspector General, HHS] and CMS expect assessments of need in health care arrangements to be made without regard to referrals or the generation of business between the parties.”

170. The federal anti-self-referral statute known as the Stark Law, 42 U.S.C. § 1395nn (2006), provides that a physician generally cannot refer patients to a healthcare entity with which the referring physician has a financial relationship, if payment for the relevant healthcare services is to be made through the Medicare and Medicaid programs. § 1395nn(a)(1)(A). Entities that have furnished healthcare services pursuant to an unlawful referral are prohibited from seeking and obtaining Medicare and Medicaid payment for those services. § 1395nn(g). In the event of submission of a bill requesting Medicare or Medicaid payment for a service resulting from a prohibited referral, any party submitting such a bill or causing it to be submitted may be assessed a civil monetary penalty of up to $15,000 per service, assuming the party knew or should have known that the performance of the service resulted from a prohibited referral. Id. Civil penalties as high as $100,000 may be assessed on any participant in an ongoing scheme such as a cross-referral arrangement, if the participant knew or should have known that prohibited self-referrals led to the furnishing of the relevant healthcare services. Id. In addition, healthcare providers can be barred from the Medicare and Medicaid programs for knowing violations of the Stark Law. 42 C.F.R. pt. 1003. There are several exceptions, however, to the Stark Law’s ban on physicians’ referrals to entities with which they have a financial relationship. Among the various exceptions are ones allowing self-referrals when the physician is employed by the entity to which he makes a referral, 42 U.S.C. § 1395nn(c)(2); when certain other types of personal services arrangements exist between the referring physician and the referred-to entity, § 1395nn(c)(3); when the referred-to entity is the same medical group with which the physician practices, § 1395nn(b)(1), (2); and when certain arrangements involving rental of space or equipment exist between the referring physician and the referred-to entity, § 1395nn(o)(1). Unless an exception applies, any referral otherwise prohibited constitutes a violation of the Stark Law, § 1395nn(a)(1)(A). For useful overviews of the Stark Law, its considerable breadth and ambiguities, the exceptions to its application, and the controversy it has generated, see A.B.A. HEALTH LAW SECTION, E-HEALTH BUSINESS & TRANSACTIONAL LAW 120-123 (Barbara Bennett ed., 2002) (hereinafter E-HEALTH BUSINESS), and STUART SHOWALTER, THE LAW OF HEALTHCARE ADMINISTRATION 242-46 (4th ed. 2004). The federal anti-kickback statute, 42 U.S.C. § 1320a-7b(b) (2006), prohibits the knowing and willful solicitation, receipt, offer, or payment of remuneration of any sort in an effort to induce a healthcare services referral for which payment is made under a federally funded healthcare program. § 1320a-7b(b)(1), (2). See E-HEALTH BUSINESS, at 114–15 (discussing how this statute and the Stark Law, rest on the apparent rationale that consumers of healthcare services are at a significant disadvantage compared to providers because of a material and unfavorable information asymmetry, and that there must be checks against providers whose financial motivations might induce them to make referrals for self-interested reasons rather than on the basis of what is best for the patient). Because it may be violated by any person or entity, the anti-kickback statute sweeps even more broadly than the Stark Law, which addresses self-referral by physicians. Compare 42 U.S.C. § 1320a-7b(b)(1), (2) (anti-kickback statute’s applicability to “[w]hoever knowingly and willfully solicits or receives . . .” and “[w]hoever knowingly and willfully offers or pays . . .”) with 42 U.S.C. § 1395nn(a)(1)(A) (citing Stark Law’s ban on self-referral by a “physician”). A violation of the anti-kickback law can lead to a felony criminal prosecution in which fines of up to $25,000 and imprisonment for a maximum of five years can be imposed. 42 U.S.C. § 1320a-7b(b)(1), (2). The statute and regulations promulgated by the HHS allow for numerous exceptions and safe harbors that classify particular arrangements and relationships as permissible and a non-violation of the anti-kickback law. § 1320a-7b(b)(3); 42 C.F.R. pt. 1001 (2006). Among these exceptions and safe harbors are ones providing protection for remuneration furnished pursuant to an employment relationship, 42 U.S.C. § 1320a-7b(b)(3)(B), an independent contractor relationship that meets certain conditions, 42 C.F.R. § 1001.952(d), and certain qualifying space and equipment rental contacts, id., § 1001.952(e). See E-HEALTH BUSINESS, supra note 170, at 114–20, 126–27 (describing an overview of the anti-kickback statute, its exceptions and safe harbors, and other federal laws dealing with fraud and abuse in regard to federally funded healthcare programs). See WING, supra note 50, at 206–14 (describing the history of the development of Medicare and Medicaid-related anti-kickback law).

In addition to the foregoing evidence, we examine the associations among physician reimbursement, compensation, and shortages in more detail using the aforementioned pooled dataset. This dataset permits comparison of percentage changes in Medicare reimbursement over the period 2000–2006 with those of physician compensation and numbers across fifteen different specialties for which complete data could be obtained for all years.\footnote{172} Appendix A displays annual values for certain key variables such as median compensation, the number of work RVUs performed, and number of Medicare services performed broken down into four categories: all specialties, primary care specialties, non-primary-care specialties, and high-risk specialties.\footnote{173} Appendix B shows year-to-year and total percentage changes in selected variables across all years.

For all specialties, during the seven-year period Medicare reimbursement per service increased 15.14% while median average physician compensation increased 27.52%. Together with the aforementioned evidence that private insurance reimbursement rates are converging with Medicare rates,\footnote{174} the remaining reason for physician compensation increasing more than Medicare rates is that physicians increased the volume of Medicare services provided. In addition to having the lowest reimbursement rate per wRVU, PCP’s also had the lowest percentage change in median compensation consistent with the notion that PCPs’ incomes are not keeping pace with those of other specialties. Median compensation as a percentage of total medical revenue rose 27.52% for all specialties in the database, but only 17.07% for PCP’s. Medicare reimbursement per service provided rose 20.56% for primary care, 10.21% for the other specialties, and 7.28% for high-risk specialties, but the change in 2006 more than accounted for these increases and probably reflected an effort by the federal government to correct a previous bias that worked against PCP’s. The amount of wRVUs per physician increased by 6.56% during this period consistent with the previously noted assertions that physicians are increasing the amount of treatment they provide. The number of total physicians increased 10.87%, PCP’s by 12.53%, other specialties by 8.01%, and high-risk specialties by only 5.54%.\footnote{175}

In general, our data tends to provide some support for the argument that Medicare reimbursement has an adverse effect on physicians’ compensation and physicians have increased the amount of treatment provided to offset changes in Medicare reimbursement rates that have lagged behind private insurance at times, and have been erratic. However, since the numbers of

\footnote{172} These 15 specialties included anesthesiology, cardiology, family practice, gastroenterology, general surgery, hematology/oncology, internal medicine, neurology, OB/GYN, ophthalmology, orthopedic surgery, otolaryngology, pediatrics, radiology, and urology.

\footnote{173} Primary-care specialties include family practice, internal medicine, OB/GYN, and pediatrics. High-risk specialties include cardiology, general surgery, orthopedic surgery, and OB/GYN.

\footnote{174} See supra text accompanying notes 55–57.

\footnote{175} These figures are not adjusted for changes in the demand for physicians and specialties for which literature uncovered no reliable source of national data. The figures also do not reflect very recent career decisions by medical students because of the two-year lag in the available data, and the fact that physicians emerging from residencies in 2006 would have made career specialty decisions some years prior while still in medical school.
physicians in all categories increased, and without knowing changes in national demand by specialty, it is difficult to know whether the data is indicative of shortages or not. It appears that the number of PCP’s did grow during the data period despite primary care severely lagging behind other specialties in median compensation. Consequently, assuming the afore-referenced reports of PCP shortages are accurate, such shortages are either more recent than our data can detect, more pronounced in certain locales, and/or a result of a rapidly growing demand.

B. Effects of Professional Liability Insurance Cost on Physician Compensation and Shortages

Despite evidence that only a small percentage of patients who are harmed by medical errors pursue litigation, even fewer actually receive any compensation for their injuries, and those who do wait an average of five years to receive it. Assertions that medical malpractice liability is adversely affecting physician compensation to such an extent that it contributes significantly to physician shortages continue to be widespread and are of particular concern in primary care. For example, based upon survey responses by physicians, the Massachusetts Medical Society 2007 Workforce Study found that professional liability in medical practice was largely influenced by shortages in primary care. In that study, physicians in four specialties (emergency medicine, neurosurgery, OB/GYN, and orthopedics) reported that their practices have been significantly impacted by fear of lawsuits, and five specialties (OB/GYN, neurology, urology, general surgery and orthopedics) reported that high professional liability insurance rates were pressuring them to make career changes. For many physicians, then, the practical concern is not the cost of being sued per se, but the cost of purchasing professional liability insurance.

Abstracting trends from medical malpractice insurance costs is difficult for several reasons. Under Medicare accounting, professional liability insurance reimbursement is normally 1% to 3% of the total relative value units under RBRVS, and although originally charge-based, it has been resource-based since 2000, varying because of specialty specific premium data, levels of

179. Id. at 80.
180. See WING, supra note 50, at 316.
Given the complexities and secrecy associated with setting Medicare rates, however, it is difficult to draw conclusions regarding trends in malpractice cost from Medicare data. Another difficulty in interpreting trends in medical malpractice insurance cost is that premiums are not individual-experience-based as is automobile liability insurance. As such, many physicians in a given subspecialty are affected by errors committed by a few of its members. Other difficulties are that the malpractice costs are dramatically affected by insurance companies’ investment returns, and premium actualization usually lags insurance companies’ actual loss experience, which can result in sudden and dramatic premium hikes. Consequently, in the following paragraphs we attempt to shed some empirical light on this issue through the use of our pooled dataset.

Appendices A and B suggest a substantial increase in professional liability insurance as a percentage of medical revenue over the 2000–2006 period of 20.33% for PCPs, 49.89% for physicians other than PCPs, and 57.89% for high-risk specialties. These are large percentage changes compared to percentage changes in median compensation as a percentage of medical revenue and are only partially explained by the aforementioned increases in wRVUs. This suggests there is validity to the physicians’ arguments about rising malpractice liability costs—at least during the period of 2000–2006. The lower increases in primary care liability insurance cost relative to other specialties do not suggest professional liability insurance cost is a factor in driving emerging physicians away from primary care and into other specialties (except in the case of OB/GYNs, the sole primary care specialty that falls into our high-risk category).

The costs of professional liability should obviously be higher in certain specialties which carry higher risks, such as obstetrics and orthopedic surgery, and general specialties that deal with trauma cases. For example, surgical cases accounted for 26.1% of payments and obstetrics for 9.5% in 2004. The early part of the current decade saw a decrease in OB/GYN residency applications in some states, but it is unclear that liability costs are continuing to grow worse because professional liability expenses actually declined for some high-risk specialties such as OB/GYN and orthopedic surgery in 2007. Nonetheless, a growth rate in professional liability insurance cost as percentage of medical revenue, which is twice that of the comparable growth rate in

181. Bradley, supra note 139.
182. See John D. Banja, Medical Errors and Medical Narcissism 3 (Jones and Bartlett Publishers, Inc. 2005) (noting that the great majority of practitioner self-reporting of medical error is institutionally discouraged and often concealed).
183. Id. at 131.
184. See Physician Workforce Study, supra note 178, at 83 tbl.23.
median compensation, is cause for concern and may explain why the growth rate in the number of physicians in high-risk specialties is the lowest of any of the groups in our dataset. Again, absent demand data it is difficult to draw firm conclusions, however.

The appendices indicate that the cost of professional liability insurance as a percent of medical revenue is relatively small, generally falling in the 2–3.5% range even for the high-risk specialties. The erratic nature of increases in professional liability insurance, however, is noteworthy. For example, there were changes of approximately 12%, 13%, and 20% in three of the years across all specialties. Clearly, such dramatic increases in a single year would likely panic many physicians—especially when compared to small and stable changes in total practice operating costs as a percentage of medical revenue—and may partly explain why medical malpractice liability is such an emotional topic for physicians. High variance in cost makes financial planning and budgeting more difficult. This is suggestive of sticker shock resulting from surprisingly large premium increases in some years possibly having a more significant influence on physicians’ attitudes toward the costs of malpractice insurance than the absolute impact on their incomes. It is also consistent with the aforementioned issue of lagged and erratic actuarialization of loss experience.

C. Effects of Physician Compensation and Shortages on Quality and Availability of Care

The notion that patients will always be protected by physicians’ patient advocacy is said to have been eroded by increasing financial pressures. Current reimbursement systems reward physicians for ordering more tests, performing more procedures, and moving the maximum number of patients through practice, while spending as little time as possible with each patient. Various studies have examined the nexus between physician reimbursement and the quality of healthcare with the general finding that third-party reimbursement has an effect on health services. For example, artery bypass graft surgeries increased when Medicare reimbursement for such surgeries was reduced. Similarly, a study released in 2002 by Rand Health found that lower levels of insurance reimbursement explained why only a small percentage of the estimated 460,000 to 740,000 people with serious hearing

188. But see id. (noting that in 2007 operating costs for many physician practices rose faster than revenues).
189. Id., Medicare Reimbursement to Physicians, supra note 7.
Medicare reimbursement cuts have been found to affect physicians’ decisions regarding treatment of prostate cancer patients. CMS’s efforts to reform reimbursement for certain drugs have apparently led to increased temptations for physicians to overuse injectable drugs. At a more macro level, a study of physicians treating FFS Medicare beneficiaries found that financial incentives to increase services influenced the intensity of services provided each patient but not the volume of patients.

Similar issues arise with Medicaid reimbursement where allegedly low reimbursement rates have resulted in some HCPs refusing to treat Medicaid patients, and insurance companies refusing to enroll sick people in Medicaid programs they administer and withdrawing them from Medicaid-sponsored programs. Because of low reimbursement, a significant number of physicians have historically limited the portion of patient treatment funded by Medicaid. In a class action lawsuit against the State of Illinois, plaintiffs representing the Medicaid-enrolled children in Cook County presented a study showing “that less than half the children on Medicaid received even a single screening examination” in the first year after birth, and other statistics

--


Since the advent of Medicare in the 1960s, the federal government has been struggling with the myriad inefficiencies, misallocations, and other economic dysfunctions associated with the fee-for-service (FFS) private health insurance system on which Medicare was modeled. . . . That FFS reimbursement would encourage providers to deliver more care than might be clinically appropriate was an idea that emerged, with supporting data, back in the 1970s, codified as Roemer’s Law. . . . A flood tide of research in the decades since has elevated Roemer’s Law to health care’s equivalent of a Newtonian principle. . . . Since the advent of diagnosis-related groups (DRGs) in the 1980s, Medicare has attempted to cope with the economic and clinical consequences of these perverse incentives through the use of prospective payment strategies. . . . This payment system has inspired a multitude of well-documented inefficiencies and occasional outright abuses.

Kleinke, supra note 196.

198. Rubenstein, supra note 120.


201. Rosenberg & Cohen, supra note 121, at 809.
consistent with inadequate reimbursement causing limiting care. Emergency physicians also testified during the litigation that their attempts to make discharge referrals to PCPs met great difficulty in finding physicians willing to accept Medicaid patients. The federal judge in this case ruled that children in Cook County, Illinois were unable to secure Medicaid covered care, in part because of low reimbursement rates.

A former CMS administrator has stated that a fundamental problem with Medicare is price fixing—in that HCPs are paid the same whether they provide quality care or not—and former HHS Secretary Mike Leavitt admitted that the SGR formula used to determine physician compensation is seriously flawed. This leads to a paradoxical situation where educators emphasize the importance of taking a complete patient history and understanding the patient and the social context of the patient’s health problems to medical students, all of which require time—physicians’ scarce resource—while the reimbursement system emphasizes the number of procedures performed. Moreover, consistent with demand inducement theory, evidence suggests that increases in the volume and intensity of patient care results in overtreatment.

Turning to the results reported in Appendices A and B, we have already noted that physicians are working harder than previously in terms of wRVUs generated per annum. Median compensation appears to be rising faster than compensation per wRVU, suggesting that volume of services provided played a significant role in increases in compensation. Although it can be hazardous to draw inferences from only a few data points in a time series, after some substantial increase in the early part of the study period, total wRVUs seem to have stabilized in the latter part, possibly suggesting that physicians may have reached their practical volume capacity in terms of numbers of

204. Id. at *57.
207. Richmond & Fein, supra note 8, at 97.
208. See Yip, supra note 193, at 695–97, which notes both that there is a spillover effect from Medicare service volume and intensity to the private insurance sector as well and that, taken generally, this evidence raises concerns about the reliability of price regulation in the form of the Medicare Fee Schedule in controlling healthcare costs. Therefore, the combination of shortages of PCPs and the fact that most of the volume increases stem from the provision of additional services (rather than from simply accepting more patients, as the supply and demand imbalance might indicate) suggests that most PCDs have already reached volume capacity.
209. Id. at 695.
210. See infra app. A (showing that there has been an overall increase in wRVUs between 2000–2006).
211. Id. (showing a greater percentage of increase in median compensation compared to increase in wRVUs between 2000–2006).
212. Id. (showing that the wRVUs have remained stable between 2002–2006).
patients. If that supposition is accurate, then any increases in services provided to offset insurance payment-rate cuts in the future will, by necessity, result from changes in the volume and/or mix of services per patient, rather than simply from more patients being treated. Although there is some fluctuation year to year in Medicare payment per service provided, these rates are reasonably stable.\(^{213}\) One seemingly plausible reason is that physicians may alter their service mix in an effort to stabilize incomes. Of particular interest is primary care, given the alleged looming shortage of PCPs. Examination of the change in compensation as a percentage of medical revenue reveals that PCPs have essentially seen no increase in this percentage value (0.16%) compared with other specialties, which have enjoyed a 28.45% increase over the study period—providing yet another perspective on the PCP compensation issue.\(^{214}\)

Not only can the quality of care be affected by reimbursement, but the availability of certain types of care can also be affected because some services (e.g., heart-bypass surgery) are reimbursed at much higher rates than others.\(^{215}\) This creates a physician demand on hospitals to make capital expenditures that will enable the provision of such services, even if that means redundant capabilities in some locales.\(^{216}\) Medicare and Medicaid cutbacks and managed-care fee reductions by private insurers are creating uncertainty about the ability of physicians to invest in health information technology that has the potential to improve care.\(^{217}\) Given that medical information technology is said to hold great promise for reducing medical errors and concomitantly reducing healthcare costs,\(^{218}\) this outcome seems highly undesirable.

An inherent side effect of prospective payment systems such as Medicare and other third-party payers is that “in the absence of perfect risk adjustment . . . [and] to the extent that certain observable patient characteristics are associated with higher costs [to the physician] and are not accounted for in the payment formula,” HCPs have incentives to avoid patients with those risk factors.\(^{219}\) Perhaps one of the biggest impacts of physician reimbursement on the quality and availability of care has been a recent trend of more and more physicians refusing to treat Medicare patients due to allegedly low reimbursement rates.\(^{220}\) Despite participation in Medicare being voluntary, most physicians have accepted Medicare patients in the past,\(^{221}\) and, to a large

\(^{213}\) Id. (showing that, besides 2005 and 2006, payments per service hardly changed).

\(^{214}\) Id. (showing that PCPs have even seen a decrease in compensation in some years).

\(^{215}\) Wirtz, supra note 32.

\(^{216}\) Id.


\(^{218}\) See generally Hill et al., supra note 1, at 235–37 (arguing that developing more efficient medical information technology would likely decrease instances of medical malpractice, which in turn would likely lower medical costs).

\(^{219}\) Rosenthal, supra note 80, at 1575.

\(^{220}\) See Milligan, supra note 116, at 9 (noting that many physicians are not treating Medicaid patients, even though Medicaid fees have increased).

extent, many physicians may have little choice but to participate, given the extent to which their practices rely upon Medicare and/or Medicaid patients. However, there is some evidence, and ample rhetoric, suggesting that, where demand for physician services by non-Medicare/Medicaid patients is sufficient, more physicians are refusing to accept new Medicare and Medicaid patients. Rural physicians often rely heavily on Medicare patients, and some have allegedly been forced to change the structure of their practices as a result of inadequate Medicare and Medicaid reimbursement. The magnitude of this problem is exacerbated by the existence of private insurance companies which fractionate the pool of potential insured and exclude those persons with preexisting health conditions who arguably need coverage the most and must therefore resort to Medicare and Medicaid.

Also worsening the Medicare/Medicaid reimbursement picture for physicians is the recent cost-saving decision by CMS to no longer pay for so-called “never events” occurring due to certain types of preventable medical errors, which some say penalize HCPs for some unavoidable errors as well. Not only does this rule adversely impact physicians’ compensation directly through reduced reimbursement, it may also raise malpractice costs by providing an advantage for plaintiff’s attorneys who could potentially argue that Medicare refused to pay for procedures because CMS deemed a mistake had occurred. Some fear that this possibility may, in turn, result in HCPs’ attempting to protect themselves from lawsuits by avoiding treating patients if they are more at risk of developing the types of problems for which CMS refuses to pay.

To summarize, it would appear that third-party reimbursement and physician shortages are having an adverse impact on healthcare services, with perhaps the greatest difficulties being in primary care. With medical associations already predicting that the demand for PCPs will outpace demand for other types of physicians, the potential effects of physician shortages on primary care become even more significant in light of the movement toward Medical Homes and other new healthcare delivery models, which holds great potential to reduce healthcare costs. There is also the possibility that healthcare reform might insure many previously uninsured, thereby releasing a

223. See id. (stating that physicians who can afford to drop Medicare cannot afford to be cut entirely out of insurance market).
225. Medicare Reimbursement, supra note 222.
226. RICHMOND & FEIN, supra note 8, at 239.
228. Id.
229. Id.
230. Cross, supra note 36.
231. See infra text accompanying notes 296–308 (presenting the arguments that support such a movement).
pent-up demand for primary care that would swamp existing capacity in locales where there are waiting lists of patients to be seen.\textsuperscript{232} Consequently, absent some radical change in two interrelated principal factors that drive physicians’ career choices—compensation and quality of life—physician shortages in some specialties appear to represent a growing threat to the U.S. healthcare system.\textsuperscript{233}

IV. A SMORGASBORD OF ONGOING AND PROPOSED HEALTHCARE REFORMS

The foregoing sections strongly suggest that the U.S. healthcare system is broken from the standpoints of cost, quality, and accessibility,\textsuperscript{234} and that its organization is so badly flawed\textsuperscript{235} that reasonable people might maintain that we have a non-system when it comes to delivery and financing.\textsuperscript{236} Various ongoing or proposed initiatives are aimed at improving the quality and affordability of healthcare. These include pay-for-performance incentives, a consumerist movement aimed at increasing price and quality transparency, Medicare Advantage, and a shift toward various new models of preventive care. This section discusses the nature of these reforms and assesses the potential efficacy of each.

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{232} Demands on Providers in Mass. Illustrate Potential Challenges of Covering Uninsured, 18(9) HEALTH PLAN WK., June 9, 2008, at 1, 6.
\item \textsuperscript{233} MASS. MED. SOC’Y, supra note 178, at 38. With the cost of U.S. healthcare so high, more and more patients are resorting to traveling abroad to obtain less expensive medical care, and some insurance companies are beginning to accommodate this practice in an effort to save themselves money. See, e.g., Indiana Insurers See "Medical Tourism” as Growing Trend, INSIDE IND. BUS., Nov. 11, 2008, http://www.insideindianabusiness.com/newsitem.asp?id=32524 (noting that “WellPoint, Inc. (NYSE:WLP), the nation’s largest health benefits company in terms of medical membership, today announced a new international medical tourism pilot product that will allow members to access benefits for certain common elective procedures at designated facilities in India.”). Some argue that medical tourism represents a growing competitive threat to U.S. healthcare because the number of patients going abroad for treatment exceeds that for patients coming into the U.S. The Joint Commission, Health Care at the Crossroads: Guiding Principles for the Development of the Hospital of the Future 13 (2008), available at http://www.jointcommission.org/NR/drdonyles/1C9A7079-7A29-4658-BB0D-ATDF47713098B0/ Hospital_Future.pdf. Although medical tourism may eventually reduce the demand for some subspecialties and encourage more emerging physicians to select primary care as a career, it holds little promise for reducing the PCP shortage in the immediate future inasmuch as Medical Homes obviously require continuous local access to medical attention, and logically travel costs and possibly greater risks associated with medical procedures performed abroad should impose natural limits on medical tourism. See, e.g., Sarah Freeland, The Risks of Medical Tourism – Is It Safe?, EZINE ARTICLES, Nov. 29, 2006, http://ezinearticles.com/?The-Risks-of-Medical-Tourism–Is-It-Safe?&id=372503 (noting that the main medical risks involve travel complications and aftercare with long flights increasing the likelihood of pulmonary embolisms and blood clots). Additionally, the absence of legal systems that permit adequate redress of medical errors in some foreign countries may also discourage medical tourism once the risks become better known. Natalia Casas, Medical Tourism Overview, NEWIMAGE.COM, July 5, 2007, http://www.newimage.com/resource-center/medical-tourism.html (noting that, despite competitive rates, state-of-the-art facilities, and internationally trained medical specialists, “... because U.S. law is rarely enforceable overseas, medical tourism clients often have little or no legal recourse in the event of negligence or malpractice by the physician or institution.”).
\end{itemize}
\end{footnotesize}
A. Pay-for-Performance

Pay-for-performance (P4P) programs have been instituted by both Medicare and private insurers in an effort to tailor reimbursement to physician performance. Medicare spending has heightened Congressional concerns over physician payments, and some experts believe that the current healthcare finance system is contributing to this rapid spending growth by not encouraging physicians to make efficient use of resources. Consequently, Congress authorized experimentation with monetary incentives for physicians to reduce healthcare costs through better care. Such experimentation was stimulated, in part, by the rapid growth in the use of P4P programs by private insurance companies. These companies initiated P4P programs for the purpose of providing incentives for physicians to follow the care of chronically ill patients more closely and help promote patient compliance with treatment regimes.

P4P is a hybrid methodology that combines Medicare FFS payments with a bonus payment that physicians can earn by demonstrating savings in rendering patient care and meeting certain quality-of-care performance targets. The underlying purpose behind P4P is to reduce the tendency for physicians to eliminate or forget certain desirable processes as part of a service by providing positive (and more rarely negative) financial incentives for quality care. Congress recently re-entered this arena with a draft bill that would more closely link Medicare reimbursement to quality of care rather than the current FFS system.

237. Medicare Payments to Physicians, supra note 7.
240. Medicare Payments to Physicians, supra note 7.
241. See, e.g., Daniel Lee, Program in Indiana Ties Doctor Bonuses to Quality Care, INDIANAPOLIS STAR, Oct. 16, 2008, at C1, available at http://pqasb.pqarchiver.com/indystar/access/1695217901.html?FMT=ABS&date=Oct+16%2C+2008 (noting that Anthem Blue Cross and Blue Shield of Indiana are planning to increase reimbursement to doctors by as much as ten percent next year if their patients receive recommended care).
242. U.S. Gov’t Accountability Office, GAO-08-65, supra note 238, at 2, 9–12. For example, one P4P methodology uses a three-step process as follows. In step 1, CMS determines whether a participating physician group is eligible for a bonus based upon whether the group achieved an annual savings greater than 2% of the target expenditure amount. In step 2, a determination is made of the size of the bonus pool whereby 80% of the savings in step 1 is available as a bonus pool and 20% reverts to Medicare. In step 3, a determination of the actual bonus payment is made whereby 70% of the 80% from step 2 is awarded as a cost-savings bonus and up to 30% of that amount is awarded to those who meet certain quality of care outcome targets. Id. at 9–12.
Despite the hope and hype that have accompanied P4P initiatives,\textsuperscript{245} and some modest successes notwithstanding,\textsuperscript{246} P4P has many shortcomings and seems far from a panacea for the healthcare system’s ills—having been dismissed by some as a band-aid on a broken system.\textsuperscript{248} At least one study has found that P4P does not improve the quality of healthcare.\textsuperscript{249} A possible reason is that the amounts of performance bonuses and penalties in most P4P systems are too small to offset volume incentives.\textsuperscript{250} In one P4P program designed to improve diabetes care, only two of the ten participating physician groups were able to meet the criteria for earning a bonus payment through cost savings despite CMS’s efforts to level the playing field, such as the use of comparison groups to adjust for differences in health status of patients, and despite the fact that the physician groups were larger than normal providing them certain size-related advantages.\textsuperscript{251} Another criticism is that P4P tends to favor physicians who care for healthier and wealthier patients.\textsuperscript{252} Perhaps even more compelling arguments against P4P are that in the demonstration study CMS was unable to provide timely performance feedback to the physicians due to the complexities of the data.\textsuperscript{253} Also, smaller physician groups which are the norm lack the costly human and IT resources to handle the reporting/tracking requirements.\textsuperscript{254} In other words, it appears that even if P4P is able to achieve both quality and cost improvement in demonstrations designed under more or less optimal conditions, extrapolating P4P to smaller physician groups seems highly problematic at best and possibly counterproductive if its administrative burden distracts physicians from patient


\textsuperscript{247} See, U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-65, supra note 238, at 37–38 (summarizing and highlighting concerns with the CMS program).

\textsuperscript{248} Miller, supra note 243, at 7.


\textsuperscript{250} Miller, supra note 243, at 7.

\textsuperscript{251} U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-65, supra note 238, at 5–6.

\textsuperscript{252} Lee, supra note 241.

\textsuperscript{253} U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-65, supra note 238, at 37–38.

\textsuperscript{254} See id., at 34 (implying that larger practice groups are better equipped to implement these types of programs). P4P program complexities are evinced by the fact that four different statutory authorities were used to authorize five demonstration P4P programs with somewhat different criteria obviously creating difficulties for already busy physicians to know what is being rewarded and how as well as exacerbating the measurement and monitoring difficulties for CMS. Id. at 17. P4P was introduced in 2004 in the U.K., with somewhat rocky beginnings with only a small number of practices having achieved high scores. Mark Moran, Pay for Performance Gets Off to Rocky Start in the United Kingdom, PSYCHIATRIC NEWS, Dec. 15, 2006, at 7, available at http://pn.psychiatryonline.org/cgi/content/full/41/24/7-a. Early research into the effects of P4P in the U.K. indicated positives such as improvements in certain measures of care, increased computerization, and more healthcare being provided by nurses, but found unintended risks and consequences such as poor care for un-incentivized conditions, more fragmented and less holistic care, and misrepresentation of data to achieve targets. Anton J. Kuzel, Vanessa Diaz & Kelly J. Devers, The UK National Health Service and Pay-for-Performance: Lessons for the United States, 4 ANNALS FAM. MED., 275–76 (2006), available at http://www.annfammed.org/cgi/reprint/4/3/275-a.
care.

B. Consumerism and Pricing Transparency

There is substantial evidence that, at least among some segments of the U.S. population, a shift is occurring in the way in which health care consumers view their own and their physicians’ roles in their healthcare.\textsuperscript{255} This shift involves consumers moving from a passive, inactive role in which they are dependent upon physicians to make decisions about their health, to an activist role in which they collaborate about healthcare decisions with physicians acting as coaches rather than decision-makers.\textsuperscript{256} Those who favor free, efficient markets as a solution to the ills of healthcare in general and reimbursement in particular are quick to embrace this movement and argue for market transparency in quality and pricing.\textsuperscript{257} A number of states such as California, Colorado, Minnesota, New York, and North Carolina have seen initiatives involving healthcare quality ratings.\textsuperscript{258}

With respect to pricing, it is impossible for markets to function efficiently without information about costs and quality, but such information has been absent in the healthcare market.\textsuperscript{259} Unlike other marketplaces, consumers of healthcare have virtually no control over the prices they pay. Seniors are not even allowed to fund their own tax-free health savings account, thereby avoiding the “Medicare morass.”\textsuperscript{260} The healthcare market is more asymmetric than most because buyers possess much less knowledge than sellers, and consequently the market is not fully competitive.\textsuperscript{261} Finally, the buyer is often not the patient receiving care but rather the patient’s employer, which obviously reduces the patient’s incentives to make informed cost/benefit decisions.

---


\textsuperscript{256} Id. at 20.


\textsuperscript{260} Graham, supra note 25.

\textsuperscript{261} Richmond & Fein, supra note 8, at 229.
decisions about care.\textsuperscript{262}

There have been some limited successes resulting from increased consumer transparency in healthcare. For example, providing risk-adjusted data on cardiac-bypass surgery had the salutary effect of spotlighting the worst-performing physicians with the result that some ceased to practice in New York.\textsuperscript{263} It would be premature and “unduly optimistic,” however, to believe that most healthcare consumers will suddenly become skilled purchasers of healthcare\textsuperscript{264} and that consumerism and price transparency alone will reform healthcare delivery for several reasons. First, accurate determinations of physician quality represent a challenge because there is intense debate over the accuracy of physician ratings and strong resistance by physicians (and some regulators) to having physicians’ records and medical malpractice payments made public.\textsuperscript{265} Second, physician rankings have been more concerned with cost savings for insurers and employers than physician quality,\textsuperscript{266} and obtaining accurate quality data from patients is difficult because of reluctance to speak about their experiences with physicians.\textsuperscript{267} Third, there

\textsuperscript{262} See id. (explaining that the consumer is absent from influence over the market; if the physician was the actual buyer and managed care entity was the actual seller, many powerful purchasers would be required to exact any kind of real change in the demand for the product).

\textsuperscript{263} DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, supra note 259, at 41.

\textsuperscript{264} See id. (citing characteristics in the current healthcare industry, such as inflexibility in terms of caregivers and deductibles, which influence consumers’ interest in healthcare).


\textsuperscript{266} Kalogredis, supra note 265 at 1.

is some doubt that merely posting prices will be of substantial benefit to many consumers because of disparities in the accuracy of reported prices and the fact that such prices are rarely representative of the total cost of the bundle of services necessary for treatment. Fourth, despite “moderately strong” interest among consumers in using price information to make healthcare decisions, given the complexities of healthcare choice and billing, there is a question of how many consumers will be savvy enough to appropriately use information about healthcare quality and cost, inasmuch as they usually seek this information from providers who themselves often lack this information. “Only 17% of consumers view their health [insurers] plans as trustworthy sources of information about the best treatments . . .” Less than two thirds of patients trust their physicians in this regard, raising the question of just how consumers will gain an understanding of the excessively complex existing delivery and reimbursement system.

Sixth, “[i]ncreased patient activism is not an unalloyed good” in that patients who shop for healthcare may demand inappropriate prescription drugs and treatments. Consequently, although there seems to be a strong role for consumerism and pricing transparency in new models of care delivery and reimbursement, their efficacy seems highly doubtful as a silver bullet for healthcare reform. In the long run, reform needs to go beyond the disclosure of quality and price information and include other reforms and incentives.

C. Grafting Medicare to Private Insurance

Private enterprise aficionados who favor market solutions to the healthcare crisis have been the principal proponents of Medicare Advantage (MA), the latest in a continuing series of programs that graft private plans to Medicare. MA replaced the Medicare+Choice program authorized under the


See DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, supra note 259, at 40 (explaining how even doctors have limited medical cost and quality data, some coming from the federal government); NRHI HEALTHCARE PAYMENT REFORM SUMMIT, FROM VOLUME TO VALUE: TRANSFORMING HEALTH CARE PAYMENT AND DELIVERY SYSTEMS TO IMPROVE QUALITY AND REDUCE COSTS 24, 26 (2008), http://www.rwjf.org/files/research/nrhiseries1rpt.pdf [hereinafter FROM VOLUME TO VALUE] (noting that “evidence-based clinical practice guidelines” provide weak evidence and do not allow patients and physicians to adequately ensure that the data is reliable).

Deloitte Center for Health Solutions, supra note 255, at 20. 201 See id. at 20 (stating that 63% of health care consumers “view[] doctors as trustworthy sources”).

See DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, supra note 259, at 39 (expressing concern over patient persistence for healthcare in that it may pressure the industry into a low-quality research and medication formulation process).

See, e.g., FROM VOLUME TO VALUE, supra note 269, at 22 (describing the benefit of informed patients).

See id. at 41 (listing some of the key recommendations of the summit).

Balanced Budget Act of 1997, and over the past few years Congress has increased payments to MA plans to induce more insurers to enter this market. MA plans now serve one fourth of all Medicare beneficiaries and are widely available nationwide. Approximately 22% of the 44 million people enrolled in Medicare receive their health benefits via private insurers.

There is strong indication, however, that MA plans have added cost for little gain in the improvement of care. The higher payments to MA plans mean that such plans have greater flexibility to expand basic Medicare benefits at a cost subsidized by Medicare. Instead of cost savings, such plans are said to offer an average of over $1,100 in additional annual benefits to enrollees above that of traditional Medicare. This has spawned demands that MA reimbursement be brought into line with that of traditional Medicare, and President Obama has declared that “excessive subsidies” to MA insurance companies need to be eliminated.

For every dollar private insurance companies receive under MA plans, they pay only eighty-seven cents out in medical care as opposed to ninety-seven cents for traditional Medicare; and much of the recent debate over the most recent Medicare bill enacted on July 15, 2008, concerned payments to private insurance companies offering MA plans.

Moreover, pharmacy benefit managers are also said to be overcharging consumers for drugs under Part D of Medicare, and as a result CMS is pressing for more information about MA plans.

Despite these seemingly high subsidies, insurance companies—which unlike the federal government, have marketing costs and have to return cost of capital to their shareholders—are placing a dicey, long-term bet that the federal government will be a good business partner over time by offering rates that are sufficiently high and stable. In the past, the Bush Administration opposed cuts to MA, but fueled in part by some senior citizen lobbies, pressure is

---

276. Id. at 1302.
278. Id.
280. Id. See also 2009 Will Be “Big Ugly Year” for Medicare, Former CMS Head Warns, HEALTH PLAN WEEK, Sept. 29, 2008, at 4 (“MA insurers haven’t yet demonstrated that they can improve the health of enrollees . . . .” (quoting former Health Care Financing Administration administrator, Gail Wilensky)).
281. Gold, supra note 275, at 1304.
283. Pear, supra note 277.
289. Gold, supra note 275, at 1309.
building in Congress to reduce MA subsidies. Some argue that the glory
days of MA are over and insurers can expect lower payment increases, new
operational requirements and more accountability. To make matters worse,
MA policy sales were forecast to slow in 2009 due to recent CMS attempts to
reduce allegedly excessive commissions, and a former CMS administrator
has predicted that 2009 would be a “big ugly year” for MA plans. The
unlikelihood that MA will save money in the short run, the United States
having the highest healthcare administrative cost percentage in the world,
and uncertainty about long-term payoffs all call into question the future of MA
plans as a serious healthcare-cost-reducing mechanism.

D. New Delivery Models Focused on Preventive Care and Chronic Care
Management

Some medical policy experts hold that healthcare costs might be greatly
reduced by placing more emphasis on preventive care and proactive treatment
of chronic disease, as opposed to reactive treatment of acute illnesses. One
of the more promising recent developments in healthcare reform has been the
proposed Medical Home, Chronic Care, and Ideal Medical Practice Models
that emphasize preventive care and chronic disease containment. The basic
concept behind the Medical Home Model is that each patient would enjoy an
ongoing relationship with a team of healthcare professionals that would
collectively assume responsibility for providing, arranging, and coordinating
all healthcare needs across all elements of the healthcare system to enhance
quality, safety, and access. The fundamental benefits motivating Medical
Homes are that (a) it is both more efficient and cost effective to prevent
debilitating diseases than to treat them once they manifest, and (b) the best way
to do this is proactive health management provided by PCPs aided by “mid-
level” physician’s assistants and nurse practitioners who become the focal

290. Letter from Mike Leavitt Sec’y of the Dept. of Health and Human Serv. to the Senate Finance
cat=3&show=yes&dr_DateTime=05-30-08.
291. Judy Packer-Tursman, Medicare Advantage Plans Must Expect Greater CMS Oversight and Should
Focus on Revenue Management, AIH HEALTH BUS. DAILY (Sept. 11, 2008), http://www.aishealth.com/
ManagedCare/Medicare/MAN_CMS_MA_Requirements.html.
292. Judy Packer-Tursman, 2009 Medicare Advantage Selling Season Is Off to a Slow Start as Health
Plans Eye Regulations, Modify Commissions, AIH HEALTH BUS. DAILY, Oct. 31, 2008,
http://www.retiredamericans.org/ht/a:GetDocumentAction/i/10468. See also, Anne Zieger, CMS to Review
Medicare Advantage Sales Commissions, FIERCEHEALTHCARE, Oct. 27, 2008,
(noting that critics are criticizing whether the size of MA sales commissions are leading to excessively
aggressive selling tactics and a wide range of industry stakeholders calling on CMS to cap commissions to
which it is agreeable).
293. Did Wall St. Kill Health Reform? Bailouts, Economy May Trump Plans to Fix System, 18 HEALTH
PLAN WEEK 1, 3 (2008) (quoting former CMS Administrator Tom Scully).
294. Medicare Reimbursement Rates 2008 Update 1, supra note 95.
298. Id. at 25.
Inasmuch as evidence suggests that a great deal of the cost associated with chronic illness might be prevented through proactive versus reactive care, Medical Homes have great appeal conceptually from both cost and quality perspectives. Further, there is evidence that patients give the highest grades to healthcare systems in which there is one physician in charge of their care.

The Chronic Care Model is somewhat similar to the Medical Home Model but focuses on patients who have chronic diseases and has six key components: (1) mobilization of community resources to meet patient needs, (2) the creation of a culture, organizational structure and processes that deliver high-quality care, (3) educating and empowering patients to assist in their healthcare management, (4) efficient and effective delivery system design, (5) use of evidence-based medicine, and (6) use of information systems and technology to promote efficiency and effectiveness of care. The Medical Home Model, as opposed to traditional models, has a strong emphasis on self-management of chronic diseases and linkages to community resources outside a physician’s practice. There is substantial evidence gathered from more than thirty-nine studies that the Chronic Care Model produces both quality and cost-effectiveness.

The Ideal Medical Practice Model has goals somewhat similar to the Medical Home and Chronic Care Models but places even more emphasis on collaborative interaction between patient and physician. It has the following key elements: (1) focus on patient interactions; (2) design of office operations for patient convenience, efficiency, and physician continuity; (3) minimization of factors that inhibit patient interaction; (4) measurement of patient outcome; and (5) real-time patient self-reporting.

Although many healthcare professionals argue that the only way to reduce the demand for acute care is to emphasize preventative medicine, chronic care management, and healthy lifestyles, not all agree that this emphasis alone will fix the healthcare cost problem, because it will likely lead to more screening and tests resulting in more false positives and more patient encounters. There are also questions about the current quality of primary care in non-
institutional settings as evinced by a recent study that found some parents resorting to emergency departments for child treatment out of concerns about the care and attention received at PCPs’ offices. Further, the problem of the concept’s dependency on PCPs when they are already in short supply in some locales is obvious and discussed in more detail in the next section. Despite these concerns, it seems apparent that quality problems and extreme budget pressures will necessitate bold changes in healthcare delivery and reimbursement to counter perverse incentives that encourage accelerating patient throughput at the expense of quality in order for physicians to maintain their compensation levels. The federal government is already moving to encourage new delivery systems along the lines of increased emphasis on preventive care.  

308. Casual examination of the medical home concept reveals some similarities to the recent movement toward in-house clinics offered by some employers for their employees. We see little necessary differences assuming the in-house clinics function with the aforementioned characteristics of medical homes. See RESEARCH AND POLICY COMMITTEE, supra note 51, at 29. There has also been a recent trend toward retail health clinics offered by pharmacy and retail chains. See Regina E. Herzlinger, Who Killed U.S. Medicine? WASH. POST, July 25, 2007, http://www.washingtonpost.com/wp-dyn/content/article/2007/07/24/AR2007072401850.html (describing the benefits of retail medical clinics such as CVS and Wal-Mart). Although it would appear that these clinics may offer greater convenience and lower-cost care and therefore be particularly attractive to lower-income, uninsured or under-insured patients with who frequent hospital emergency departments—therefore taking some pressure off overcrowded emergency departments as well as some PCPs—the clinics are set up to treat only minor illnesses and will likely to fall short in most cases of being a medical home as envisioned in this subsection. Id. “These clinics are not performing brain surgeries but rather are attending to routine care, such as for a child’s earache, and prevention.” Id. See also, Health Plans Continue to Eye Retail Clinics to Build Market Share, Reduce Care Costs, AIS’S HEALTH PLAN WEEK, Sept. 1, 2008 at 1, 1. (describing the benefits). Most retail clinic patients do not have a PCP. Jacob Goldstein, Which Patients Are Going to Retail Clinics? WALL ST. J., Sept. 11, 2008, http://blogs.wsj.com/health/2008/09/11/which-patients-are-going-to-retail-clinics. Consequently, despite the potential for retail clinics to deliver some appreciable reduction in healthcare costs and improve some aspects of care for an under-served segment of the population, we do not regard the movement to have the potential for wholesale reform of healthcare delivery. See, e.g., Bruce Jaspen, Retail Clinic Users Lack Personal Doctors, CHIC. TRIB., Sept. 25, 2008, http://www.chicagotribune.com/business/chic-trib-notebook-0925-sep25,0,2566351.story (stating how retail health clinics lack the doctor-patient relationship).  
309. See, e.g., JOINTE COMMITTEE, supra note 176, at 10–12 (describing strategies to enhance patient safety and promote open communication channels between doctor and patient). One proposed major change to healthcare that is sometimes labeled a reform is the movement toward the use of various information systems technologies such as electronic medical records and computerized decision support systems up to and including a national health information network (NHIN) to connect all providers. Although we have written that a NHIN has the potential to greatly improve healthcare quality and reduce its costs, see generally, Hill et al., supra note 1, we concur with the Research and Policy Committee of the CED that better health information systems “would not solve the fundamental, systemic weakness in health-care delivery” and that “merely superimposing a veneer of IT on top of the current mal-constructed health-care system will not solve the underlying problems.” RESEARCH AND POLICY COMMITTEE, supra note 51, at 3, 29. Therefore, we believe that a NHIN is not a distinct healthcare delivery reform but rather an important complement to reform despite the need for medicine to treat information technology as a core competence that links HCPs rather than an intra-office tool. Id. at 38.  
V. Future Directions for Healthcare Delivery, Reimbursement and Malpractice Reform

In order to reduce healthcare costs and improve care and accessibility, there is compelling evidence that healthcare reimbursement must be redesigned to align itself with the changes in delivery discussed in the previous section leading toward a greater emphasis on preventive care. In this section we argue for a bundled, case-rate reimbursement system to complement the changing delivery system and also for changes in medical malpractice law to complement reimbursement change.

A. The Need for a New Reimbursement System that Emphasizes Value, Not Volume

The shift toward preventive care necessitates a complementary new reimbursement system. As noted by the American Association of Family Practitioners, “[t]he urgency to transform the design, delivery, and financing of primary care converges well with interest in more broadly implementing a model of chronic care that demonstrated improved quality and cost-effectiveness.” A major cause of quality and cost problems in U.S. healthcare is that of reimbursement systems which encourage volume over value-driven healthcare.

Irrespective of differing ideological positions regarding private versus public health, the evidence strongly suggests that the federal government is de facto increasingly driving physician reimbursement in dysfunctional ways as previously noted. The healthcare reimbursement system, influenced increasingly by Medicare, has placed physicians in a difficult position whereby reductions in physician reimbursement due to the current zero-sum approach can only be restored by increasing the volume of services provided to the physician’s extant patient base. Unsurprisingly, many physicians have learned to game the reimbursement system to the extent possible. As far back as 1996, critics of the current reimbursement system argued that Medicare was not just sick, its condition was fatal and “radical surgery” was required. In 2008, Medicare began paying out more than it takes in and, to a

---

311. See, e.g., Richmond & Fein, supra note 8, at 230 (noting the tendency to deal with healthcare reform issues in a piecemeal manner instead of holistically).
313. Id. at S19.
314. Medicare Reimbursement to Physicians, supra note 54.
315. From Volume to Value, supra note 269, at 6.
318. National Center for Policy Analysis, Brief Analysis No. 208 The Medicare Program: The Need for Radical Surgery (July 3, 1996), available at http://www.ncpa.org/ba/ba208.html. “Conflicts of interest—the quintessential misalignment of the interests of patients and providers—are widespread in treatment and procurement decisions in medicine.” Research and Policy Committee, supra note 51, at 35. U.S medicine is a “fragmented non-system” with care settings resembling “separate ‘silos’” in which physicians are mostly “free agents” with interests that conflict with each other and hospitals, and an important
significant extent, is in deep financial trouble because of its payment model. Just as concerning as cost is the problem that existing reimbursement systems frequently penalize physicians for providing higher quality services because they lose revenues when the keep patients healthy and avoid unnecessary care.

Medicare reimbursement to physicians—and also that of private insurers that largely follow Medicare’s lead—is based upon cost-plus pricing. As one commentator has stated, “[f]or policy makers seeking to realign the price signals sent to physicians to ensure that the nation’s medical needs are met, the primary policy lever is Medicare and Medicaid payments rates.” Research indicates that providing more services per patient in an attempt to restore income following cuts in Medicare payment rates does not improve outcomes and, in fact, often results in poorer outcomes. This observation points to a need for changing Medicare regulations for developing reimbursement rates to better reflect current costs of providing care and to adjust the numbers of physicians in specific specialties to better meet the nation’s needs. In particular, PCPs cannot make the changes in primary care delivery contemplated in the shift to the New Model discussed in the previous subsection without improved payment systems to support this model.

In an explicit acknowledgment of the need for reimbursement change, the RUC recently voted to increase the value of cognitive services relative to that of procedures, and in March 2006, the Medicare Payment Advisory Commission recommended that HHS establish a panel of experts to study the relative values of medical services. However, given the magnitude of the problems with the healthcare system and highly political process by which reimbursement rates are set, it seems doubtful that these initiatives represent an effective, permanent solution to the PCP shortage. Merely tweaking the

---

320. Miller, supra note 243, at 1.
321. Tenreiro, supra note 84.
322. Tu & Ginsburg, supra note 33, at 4.
323. From VOLUME TO VALUE, supra note 269, at 1. To better understand the causes of healthcare inflation, it is instructive to examine the following equation that expresses the variables contributing to the cost of care per patient:

\[
\text{Cost/patient} = (\#\text{conditions per patient}) \times (\#\text{episodes of care per condition}) \times (\#\text{of a given type of service per episodes of care}) \times (\#\text{processes per service}) \times \text{(cost per process)}.
\]

The situation described by this equation has been analogized to a balloon whereby, for example, squeezing the balloon to control costs of individual processes or services alone causes the costs to “pop out” elsewhere such as in the number of services provided. If an attempt is made to control the number of services within a particular episode of care, the result may be more episodes of care. Under the FFS system, physicians are paid a fixed fee for each service provided with few, if any, limits on the numbers of services. Under such a system, the physician is at reimbursement risk for the number and cost of processes covered by a separate fee but little else. Such a system rewards volume, does not penalize poor quality, and focuses on short-term as opposed to long-term outcomes. See Miller, supra note 243, at 6 (explaining the most common way of paying for health care services).

324. From VOLUME TO VALUE, supra note 269, at 1.
325. Id. at 2.
326. Id. at 1.
327. See supra text accompanying notes 156–65 (discussing medical specialists’ dominance throughout the process of recommending reimbursement rates).
existing volume-driven physician reimbursement system through pay-for-performance programs and/or making Medicare semi-private through programs such as Medicare Advantage seems unlikely to rectify these dysfunctions. Rather, an entirely new approach is needed.\textsuperscript{328}

Perhaps the most promising blueprint for reimbursement reform emanated from the Network for Regional Healthcare Improvement’s 2008 Healthcare Payment Summit,\textsuperscript{329} which recommended a complete revolution of healthcare reimbursement from the current FFS to a “case rate” system. Under this system, a health problem prevention entity such as Medical Homes would be paid a diagnosis-based, prospectively defined, condition-specific capitation (single) price for all services needed by a patient for both acute illnesses\textsuperscript{330} and outpatient care.\textsuperscript{331} Such a system would involve “bundling” all treatment services into one package and paying one entity for this bundle of services with the entity distributing payment in some rational fashion among the participants.\textsuperscript{332} The proposed reforms also contemplate the following facets: (1) warranties by HCPs in the form of commitments to address preventable errors of complication without additional charges, (2) severity-risk adjustment mechanisms to compensate for difficulties in a specific patient’s condition, and (3) “outlier payments” to cover cases that result in extreme and unpredictable costs.\textsuperscript{333}

Paying for episodes of acute care may help control cost associated with each episode, but it does little to control the number of episodes a patient may have.\textsuperscript{334} Consequently, the reform proposal also contains a provision for periodic payments to some healthcare entity such as proposed in the New Model to cover care management, preventive care, and minor acute services associated with chronic illnesses because such illnesses do not always end in some fixed period of time.\textsuperscript{335} Preventing chronic disease from becoming acute disease would be the goal.\textsuperscript{336} Ultimately, the current FFS system would be entirely replaced and PCPs would receive a single periodic payment for providing preventive care for a patient. Healthcare consumers would receive incentives in the form of reduced co-payments for utilizing a Medical Home under the New Model.\textsuperscript{337}

Under the present reimbursement system, physicians make more money when they are slow to diagnose and treat a problem, and there is little or no

\textsuperscript{328} Graham, \textit{supra} note 25.
\textsuperscript{329} FROM \textit{VOLUME TO VALUE}, \textit{supra} note 269, at 7.
\textsuperscript{330} \textit{Id.} at 2.
\textsuperscript{331} \textit{Id.} at 12, 41–43 (“Condition-specific capitation means that while there is a single payment for a patient, the amount of that payment varies depending upon the specific condition that the patient has, unlike traditional capitation systems that pay the same amount for each patient regardless of how many or what types of conditions they have.”).
\textsuperscript{332} \textit{Id.} at 1–2, 15, 25.
\textsuperscript{333} \textit{Id.} at 3, 25.
\textsuperscript{334} \textit{Id.} at 43.
\textsuperscript{335} \textit{FROM \textit{VOLUME TO VALUE}, \textit{supra} note 269, at 42–43.
\textsuperscript{336} Lucian L. Leape, Progress in Patient Safety, Presentation at the Harvard Medical School Seminar: The Patient Safety Imperative (Nov. 3-4, 2008) [hereinafter \textit{Leape presentation}] (notes on file with authors).
\textsuperscript{337} \textit{Id.} at 12.
incentive to use cost-saving technological advantages such as information technologies. Under the proposed reimbursement system, physicians would no longer be restricted by a complicated set of codes that govern treatment and would no longer have incentives to over-treat patients. Instead, physicians would have incentives to maintain or improve patients’ health, prevent hospital admissions, and work collaboratively to coordinate patient care. Physicians would also have incentives to improve their practices such that they are considered high-value providers. There would be funding flexibility to utilize the best combination of providers to maximize value, and patients would have incentives to select physicians who provide the best value.

Principal tenets of a plan developed by the Payment Reform Summit are that preventive care would reduce the incidence of advanced chronic illnesses and reduce healthcare spending per capita through practicing preventive medicine and focusing on value, rather than volume, of care. Consumers often reap the benefits of both reductions in cost and improvement in quality in industries other than healthcare, so despite perceived conflicts between these goals, there seems no reason that healthcare costs cannot decrease while quality increases.

In effect, the proposed reimbursement system can be thought of as another link in the healthcare value chain—one that provides value to physicians for the care they provide and value to healthcare consumers by creating incentives for HCPs to provide quality and timely care. As previously discussed, however, bundled, case-rate reimbursement systems of the type proposed still have the drawback of creating incentives to under-treat. As explored in the following subsections, this creates a role for the legal system in helping to counterbalance this incentive and providing redress if HCPs engage in under-treatment that leads to patient harm.

B. Important Legal Inferences Emanating from Examination of the Healthcare Crisis

The evidence presented earlier regarding physicians’ compensation and malpractice costs and the likely changes in healthcare delivery and reimbursement gives rise to several important legal inferences. One inference is that physicians’ difficulties with professional liability insurance include not just the magnitude of its cost but also the variance in the year-to-year increases in its cost. Our examination of the evidence does not suggest a massive, pervasive professional insurance cost problem at the national level, but rather a somewhat more complicated problem than its attendant rhetoric might suggest. Although physicians, particularly in high-risk specialties, appear to have

---

339. From Volume to Value, supra note 269, at 43–44.
340. Id. at 12.
341. Id. at 19–23.
342. Miller, supra note 243, at 3.
343. Id.
344. From Volume to Value, supra note 269, at 24.
legitimate complaints about the increases in professional liability insurance costs relative to the increases in their compensation, the absolute dollar cost of professional liability insurance still remains a fairly small portion of medical revenues, at least at the national level. Furthermore, recent evidence suggests that these cost increases may have temporarily plateaued. As previously discussed, what seems particularly problematic is that high variability in premium increases on a year-to-year basis, especially in high-risk specialties, creates a potential sticker shock that complicates budgeting and evokes a visceral reaction from physicians. This phenomenon has received little, if any, attention in the tort reform debate.

A second, related inference is that the cost of medical malpractice is not independent of the healthcare reimbursement system. Physicians’ attempts to hold medical revenues constant as reimbursement rates decline, by increasing the volume of services provided per patient, logically suggests that professional liability risk should increase as more services are provided, particularly in light of previously presented evidence that providing more services per patient does not improve healthcare and may actually degrade it. This relation should eventually cause an increase in liability insurance premiums, as loss experiences increase due to service volume. Although we cannot determine how much of the increase in insurance cost is due to increases in volume of service per patient, the volume of patients, in general, causes declines in insurance companies’ rates of return on their investment portfolios, court outcomes, and/or increase in the frequency of medical errors. This nexus between service volume and insurance cost is an important point that has largely gone unrecognized in the tort reform arguments.

A third inference—one that, like the first two, has gone largely unrecognized—is that, given the lack of independence between reimbursement and medical errors, tort reform, absent reimbursement reform, is ill advised. There is widespread acceptance that the current reimbursement system is badly flawed and creates incentives for physicians to emphasize volume of patients over quality in the provision of care, leading to inferior outcomes. Given the evidence that the extant system of physician reimbursement is contributing to the problem of medical errors, which, in turn, increase malpractice costs, an important implication is that tort reform is best not addressed in a vacuum that ignores this interrelationship. Indeed, two notable healthcare commentators state the following:

Few things in medicine and its infrastructure are quite as simple as might first appear. That is certainly the case with the “malpractice crisis”.... In bringing reform to a malpractice arena that is overlaid with emotion, it is especially necessary that changes be made on the basis of information and careful analysis rather than on the basis of

345. Schmitt, supra note 185, at 2.
346. See, e.g., Richmond & Fein, supra note 8, at 238 (outlining problems within the current American healthcare framework); see also Medicare Reimbursement to Physicians, supra note 7, at 71 (explaining the reduced income that physicians receive as a result of Medicare’s reimbursement scheme).
347. From Volume to Value, supra note 269, at 1.
348. Id. at 6.
anecdotes and horror stories. The existing adversarial approach to change assumes that every gain for patients and their attorneys represents a loss to physicians and insurers, and that every change that would benefit physicians would necessarily harm patients. That need not be the case.\textsuperscript{349}

Consequently, despite potential cost reductions in some healthcare niches,\textsuperscript{350} higher-than-necessary professional liability insurance costs are, in part, a result of quality problems stemming from perversities in the reimbursement system, not simply flaws in the tort system.\textsuperscript{351} Moreover, even if tort reforms, such as a federal cap on non-economic damages, slow increases in liability insurance premiums, they “will not alter the fundamental unfairness to patients and physicians and the deleterious impact on patient safety that are inherent in the existing tort system.”\textsuperscript{352} Thus, we maintain that ad hoc tort reform initiatives, absent healthcare delivery and payment reform, seem contraindicated until the major problems with delivery and reimbursement are substantially resolved. Furthermore, some commentators argue that, given the evidence from empirical research on the malpractice claims system’s relatively poor performance in helping to identify negligent providers and compensate injured patients, the system for enforcing patient rights needs to be strengthened, not weakened.\textsuperscript{353}

C. New Challenges for the Courts Post Delivery and Reimbursement Reform

If the answer to improving healthcare quality and reducing costs rests with a new, preventative focus in medical service delivery and a concomitant shift toward case-rate reimbursement, then the legal system needs to broaden

\textsuperscript{349} RICHMOND & FEIN, supra note 8, at 209–74.
\textsuperscript{350} See, e.g., RESEARCH AND POLICY COMMITTEE, supra note 51, at 31 (noting that research suggests that in the case of fresh heart attacks tort reform could save 5–10% of costs, but that this might prove to be a one-time reduction in costs with no reduction in their growth rate over the long term).
\textsuperscript{351} There is some evidence that frivolous lawsuits may be becoming less of an issue to hospital administrators in relation to the myriad other challenges healthcare faces. In annual surveys malpractice insurance was listed as a top issue confronting hospitals by 24% by hospital administrators in 2003. That figure had dropped to only 3% by 2006. Jim Conway, Patient Safety Imperative Update, Harvard Medical School Seminar: The Patient Safety Imperative, (Nov. 3–4, 2008) [hereinafter Conway Presentation] (notes on file with authors). Evidence from claims data involving 1496 claims showed that 97% involved an injury, 61% of that 97% involved a medical error, and only 73% of that 61% resulted in a payout. This suggests that 27% of the patients (236 cases) who arguably deserved compensation did not receive it. On the other hand, there were payments in 28% (145 cases) of injury cases that did not involve medical errors. See Allen B. Kachalia, Current Controversies in Liability and Medical Error, Presentation at Harvard Seminar (Nov. 2008) (notes on file with authors). The data reported by Kachalia can be interpreted in different ways, but it would appear that injustices imposed by the legal system upon physicians by non-meritorious lawsuits are fewer than injustices imposed on patients with meritorious suits. One study found that physicians’ perceived risk of being sued for malpractice is three times greater than the actual risk. HARVARD MEDICAL PRACTICE STUDY, PATIENTS, DOCTORS, AND LAWYERS: MEDICAL INJURY, MALPRACTICE LITIGATION, AND PATIENT COMPENSATION IN NEW YORK 9–10 (1990) (noting, as well, that significant costs are incurred outside of those stemming directly from tort liability).
\textsuperscript{352} JOINT COMMISSION, supra note 176, at 40.
\textsuperscript{353} DEAN M. HARRIS, CONTEMPORARY ISSUES IN HEALTHCARE LAW AND ETHICS 253 (2d ed. 2003).
its focus from primarily that of medical errors and resulting reactive care to also include ensuring adequate preventative care. Similar to the changes in health service delivery and payment; however, this will likely not come without challenges.

First, under the reimbursement reforms proposed by the Payment Reform Summit, the need for legal enforcement of patient rights should increase in some respects despite the prospects for improved quality of healthcare and a possible attendant drop in some types of medical errors. The reason rests with the inherent moral hazard problem associated with case-rate or capitation-type payments, which carry incentives to under-treat patients or refuse care to patients who appear likely to develop poor outcomes.354 Even P4P incentives layered on top of the case-rate reimbursement system for physicians are unlikely to rectify this problem, inasmuch as prior research has evinced that such incentives fail to fully address this moral hazard issue.355 Thus, in the world of the reformed reimbursement system envisioned by the Payment Reform Summit, a strong tort system is needed as much, if not more, than ever to counterbalance incentives to under-treat.

Second, we foresee medical malpractice defendants becoming composed less of individual physicians and more of teams of healthcare professionals. Since, under the New Model, the medical entity will likely be a principal focus of the new reimbursement system, which must somehow allocate payment to its various members,356 then those members should collectively bear the risk of harm resulting from under-treatment. In jurisdictions embracing comparative fault regimes, apportioning damages may be more problematic.357 Given that more states have begun to shift to comparative fault regimes this potential difficulty takes on even greater significance.358 Further, to an appreciable extent, state law drives the choice of defendant (i.e., a medical entity or an individual physician).359 Complicating this landscape will be situations in which patients who are harmed have been involved with more than one medical entity and/or previously changed Medical Homes due to relocation, thus giving rise to jurisdictional and venue issues that may be problematic if multiple preventive care entities in multiple jurisdictions are involved.360

354. FROM VOLUME TO VALUE, supra note 269, at 24.
355. Id.
356. See supra text accompanying note 332 (explaining that the entity would be paid for a bundle of services and then would be responsible for distributing payments to the various care providers involved).
357. FROM VOLUME TO VALUE, supra note 269, at 2.
359. Interview with Jeffrey L. Peek, Esq., Partner, Cardaro & Peek, LLC, Baltimore, MD and Washington, DC (Dec. 11, 2008) [hereinafter Peek Interview] (notes on file with authors). Mr. Peek has 17 years experience as a medical malpractice attorney. He is a member of the Board of Governors of the Maryland Trial lawyers Association and listed among Who’s Who in American Law. Prior to becoming a plaintiff’s attorney, Mr. Peek worked for a large, prominent law firm defending hospitals and physicians. As a plaintiff’s attorney, Mr. Peek has successfully represented clients in malpractice claims involving almost every major hospital and health system in Maryland and the District of Columbia, winning a number of seven-figure verdicts or settlements. In 2007, a client he represented was awarded the highest verdict in a medical malpractice case in the history of Baltimore.
360. See Miller, supra note 243, at 61 (noting that there are situations where it is impractical to expect that a single provider will be able to coordinate the services needed to care for the patient).
Therefore, a second challenge for the legal system will be making an enterprise liability concept workable.

Third, it seems likely that a preventative care focus will involve a much longer time frame and possibly more healthcare professional participants than the current system which places more emphasis on shorter-term, episodic events. Developing the scientific evidence necessary to establish causality is one of the most problematic requirements for successful malpractice cases, and such evidence is usually more lacking with respect to preventive care. Some medical malpractice plaintiffs’ attorneys tend to avoid preventative care cases because of difficulties in proving causality. One of the difficulties in cases involving preventive medicine is that of contributive fault where two factors are perhaps most concerning: (1) the longevity of the treatment process during which many intervening patient-specific variables such as obesity as a condition of choice may affect care and (2) patient compliance with a treatment regime. Further, development of such evidence will take a considerable amount of time given the necessity of dealing only with closed claims as opposed to claims in progress, a cumbersome system given that it may take years for claims to close. Therefore, a third challenge for the judicial system is to find improved ways of developing evidence related to extended preventive care.

Fourth, if medical systems are left uncorrected, the systemic nature of medical errors stemming from the highly complex nature of medicine creates an environment where catastrophic results are almost inevitable at some point. Many extant clinical systems are open-loop (nonfeedback-controlled) systems that do not formally observe the outcomes of the processes they are controlling, but rather, make decisions on preprogrammed criteria, and success in using such evidence to reduce medical errors requires a willingness to make process improvements. Such cybernetic loops would permit communication feedback from downstream outcomes that reliably “pulls” physicians back to patients and facilitates continuous redesign of clinical methodologies. Continuous redesign of healthcare delivery that results in fewer and fewer medical errors will ultimately reduce physicians’ malpractice liability risks and costs, and the medical profession need only look to its own ranks for first-hand evidence of the veracity of this claim. One of the greatest success stories in medical process improvement rests with anesthesiology, a specialty that has cut its mortality rate from one in 10,000 to one in 200,000 through examination of scientific evidence and changes in processes.

361. Peek Interview, supra note 359.
362. Id.
364. See Bania, supra note 182, at 8–9.
365. Gordon D. Schiff, Minimizing Diagnostic Error: The Importance of Follow-up and Feedback, 121 Am. J. Med. S38, S38 (2008). See also Kachalia, supra note 349 (noting the collision between reluctance of physicians to disclose mistakes due, in part, to fear of legal liability and mandated reporting of adverse events now, the legal protection for which varies state by state thereby raising issues of accessibility and discoverability).
366. Schiff, supra note 365, at S40–41.
Despite its potential for improving patient safety, development of scientific evidence regarding medical malpractice and efforts to correct deficiencies is impeded by “gag clauses” that require permanent, confidential sequestering of all information relating to settled cases. Consequently, yet another challenge for the judicial system will be finding ways to get information from settled cases into the feedback loops that reduce medical errors.

Fifth, the legal system should play a role in helping to create a “just culture” in medicine that fosters learning to reduce medical errors while improving systemic accountability for errors. In considering this challenge, the question arises as to why other medical specialties have not been able to achieve results similar to those obtained in anesthesia. As two commentators note, “[m]any 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.”

Physician participation is essential for such a cybernetic loop to be effective since physicians hold the trump card in most medical treatment decisions. One commentator states, however, that there is virtually no evidence that physicians who are sued subsequently change their practices ex post noting that physicians have difficulty admitting mistakes and normalize errors by rationalizing that “these things happen.” Obtaining physician participation in creating a just culture in medicine means developing an ethos in which patient welfare trumps physician ego and emotion.

Another motivation for the legal system helping to address the need for a just culture in medicine is that the New Model embodies patient-centricity as one of its tenets. In the past, physicians were regarded with great deference because of the knowledge asymmetry that existed between them and their patients. Today, however, many healthcare consumers want to play a

---

368. Id. at 19, 37. Although a detailed examination of the legal implications of healthcare delivery and payment reform other than those related to medical malpractice is beyond the scope of this study, these concerns strongly suggest that modifications in federal law may be needed to accommodate the new healthcare environment as reforms get underway. These regulations may need revisiting anyway as a result of a recent rise in the numbers of conflict-of-interest situations arising from physicians’ financial interests in treatment alternatives which have been demonstrated to affect their objectivity. See DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, supra note 259, at 43 (discussing caregiver conflicts). See also FROM VOLUME TO VALUE, supra note 269, at 18 (discussing the general problems with the American healthcare systems and several solutions).

369. See JOINT COMMISSION, supra note 176, at 40 (advocating alternatives to the medical liability system).


371. BANJA, supra note 182, at 29, 31–32, 125–26 (noting that physicians are “. . . trained in a culture where disclosure to peers is a sign of weakness. Instead, skill in ‘roundsmanship’ is valued, that is, creative and contemporaneous responses to cover deficiencies or errors when reporting to more senior physicians” and citing a survey of physicians, nurses, pharmacists and medical quality assurance personnel in which 88% agreed that rationalization excusing medical errors are common in hospitals, 76% agreed that rationalizations are one of the chief reasons why errors are not disclosed, and 89% agreed that healthcare providers are strongly tempted to rationalize their errors).

372. Spann, supra note 312, at S2.

373. DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, supra note 257, at 42.
decision-making role in their care decisions. As patients are empowered by
more and more health information via the internet, and, as the number of
diseases, tests and treatments increases with the inexorable march of medical
research and technology, physicians—particularly generalists such as PCPs—
are less likely to possess all of the information related to patients’ care.
Inasmuch as misdiagnoses represent the cause of almost 60% of malpractice
claims and evidence suggests patients can help detect potential problems such
as medication errors, errors would be reduced if physicians spent more time
listening to patients and encouraging patient involvement in health
decisions.

A final challenge, then, for the legal system is how to best help bring
about positive changes in the culture of medicine such that closed-loop,
cybernetic systems that evoke appropriate improvements to healthcare delivery
can function well and patient feedback is incorporated into these loops. Why
should this be considered as part of the function of a revised regime for
adjudicating medical malpractice cases? Perhaps the best answer is summed
by the following three points: (1) inherently hazardous systems such as
medical treatment should be heavily defended against failure; (2) despite the
failure of medical self-regulation in preventing medical errors, no other
profession dealing with life and death matters enjoys as much freedom from
regulatory controls over their behaviors; and (3) “... no one imagines
healthcare providers will achieve appropriate safety levels on their own.”
Absent physician willingness and strong self-regulatory pressure absent in the
past to change medical culture, some form of external encouragement is
needed; and, given governments’ past unwillingness to impose this discipline,
the judicial system represents the last defender of moral justice to ensure that
this change occurs. In the following subsection we argue for a revised legal
regime so that medical malpractice can become such a change agent.

D. A New Framework for Resolving Medical Malpractice Claims Post
Healthcare Reform

Given that only a small percentage of patients injured by medical
malpractice ever pursue litigation, even fewer receive compensation for those
injuries, and it takes five years on average for a medical liability case to come
to closure, the current tort system appears to fall woefully short in

374. Deloitte Center for Health Solutions, supra note 255, at 20.
375. See Digital Connections Council of the Committee for Economic Development, supra note
259, at 42 (observing that in this new environment, caregivers are also turning to their peers to exchange
information).
376. See Banja, supra note 182, at 156; Digital Connections Council of the Committee for
Economic Development, supra note 259, at 42–43; Saul N. Weingart, The Nature of Error in Health Care,
Presentation at Harvard Seminar (Nov. 2008) (notes on file with authors) [hereinafter Weingart Presentation].
378. Harris, supra note 353, at 253.
379. See id. at 76 (discussing the practice of allowing HCPs to exempt themselves from government
inspections based on self-regulation—a practice that would be inconceivable in other industries in which
human lives are at stake).
380. Hyman & Silver, supra note 370, at 970.
compensating patients harmed by medical errors. Whatever the reasons for and the validity of physicians’ concerns about the tort system, the greatest concern for the public should be the fact that the current tort system is apparently neither deterring medical errors to an acceptable extent nor adequately compensating patients for harm incurred through such errors. Most victims of substandard care never file claims or recover any compensation. Even when patients do receive compensation, malpractice litigation can often drag on for years with multiple appeals before payment. Current medical malpractice tort reform efforts suffer from the problem of treating medical errors as separate from the healthcare system. Focused on reducing HCP costs, most tort reform proposals have centered on ways to make it more difficult for patients to recover damages and hold HCPs liable for negligence. Instead of reforming medical malpractice solely as a means of reducing costs, the system should be reformed to better accomplish the goals of deterrence and compensation in a more equitable and efficient manner.

As the New Model and complementary payment reforms evolve, the task of medical malpractice appears even more formidable. The aforementioned difficulties in (1) countering incentives to under-treat, (2) apportioning damages, (3) establishing causality in preventive care, (4) obtaining feedback on settled cases to improve healthcare, and (5) creating a just culture in medicine further complicate the malpractice landscape and suggest that, absent substantive change in the way medical errors are dealt with by legal systems, victims of medical malpractice may be even less well served going forward. The central question then is: How can medical liability be restructured to encourage patient safety through process improvement and to reduce the incidence of negligent medical errors while at the same time providing swifter and more patient-friendly compensation for the injured?

Over the years there has been much contentious lobbying by the medical profession for tort reform and vigorous academic debates regarding how to reform medical malpractice litigation. Many of these debates have centered on legal theoretical issues such as whether contract law is preferable to tort, or whether a new basis for a standard of care based on a fiduciary concept is preferable to the existing tort system. Despite the lobbying and debates, what little change has taken place has been, for the most part, relegated to the development of stopgap measures such as caps on non-economic damages.

381. JOINT COMMISSION, supra note 176, at 31.
382. Id. at 4 (“Several studies have, with remarkable consistency, revealed the inconsistency of the medical liability system in determining negligence and compensating patients.”).
384. Id. at 669.
385. HARRIS, supra note 353, at 254.
386. See, e.g., Peter D. Jacobson & Michael T. Cahill, Applying Fiduciary Responsibilities in the Managed Care Context, 26 AM. J. L. & MED. 155, 155 (2000). Jacobson and Cahill, however, suggest that reformation of medical malpractice through implementation of fiduciary concepts “is indifferent to how health care is organized.” Id. at 171. As has been shown, however, institutional change is a necessary element of addressing the overall healthcare crisis, malpractice liability being no exception.
387. Todres, supra note 383, at 670.
Although other, more theoretical approaches proposed in the past may have some merit, the barriers to implementation of these approaches have apparently been so formidable that their implementation in the foreseeable future seems unlikely. With the advent of new delivery and reimbursement systems, the time has come to develop an alternative, practical framework for adjudicating medical malpractice claims that, like the New Model of care delivery, provides greater value to patients in both preventing under treatment and redressing preventable medical errors. Professor Todres has argued that a care-based, healing-centered approach to medical malpractice tort reform should achieve the following goals: providing compensation to injured patients, promoting safety, minimizing suffering, fostering exchange of information, and offering restorative dialogue. In our opinion, the most promising approach to creating a practical framework for medical malpractice liability that accomplishes these goals rests upon the following five pragmatic pillars: (1) mandated pricing and quality disclosure of healthcare services to foster a more efficient marketplace for healthcare services; (2) a shift to enterprise liability that complements the nature of the new bundled, case-rate payment concept; (3) mandated disclosure of all material and harmful medical errors to patients and a regulatory authority to ensure that patients are advised when they have been potentially harmed; (4) a first-best attempt at compensating plaintiffs based upon mandated, but non-binding, mediation that preserves the right to jury trial under tort law; and (5) mandated disclosure of the nature of medical errors associated with settled cases to release the useful information errors currently sealed. Although none of these proposed pillars are new conceptually, it is their combination, practicality, and their complementary nature to the evolving healthcare delivery and reimbursement systems that makes their case compelling.

The first pillar, mandated pricing and quality disclosure, is aimed at reducing both the cost of healthcare and the medical error rate (and therefore the frequency of medical malpractice litigation). Despite recent trends toward greater disclosure, healthcare cost and quality remain masked in a confusion of complexities in which patients rarely know either prior to treatment. Such masking frustrates the ability of patients to make informed cost/benefit decisions regarding their care and self-select away from poor quality. As

388. For a more detailed analysis of some, though by no means all, of the problems facing current tort reform efforts, see generally Mathew Shon Manweller, Understanding Tort Reform: Strategic Actors, Public Policy, and Feedback Loops, 5 BUS. & POL. 95 (2003) (discussing problems with effective implementation of tort reform policy).
390. Todres, supra note 383, at 667.
393. See, e.g., E. Haavi Morreim, Redefining Quality by Reassigning Responsibility, 20 Am. J. L. & M ED. 79, 94–95 (1994) (discussing how there should be a better balance between patients and third-party payers as to who determines what level of resources should be devoted to the patient’s care). See also, F.T.C. v. Ind. Fed’n of Dentists, 476 U.S. 446, 462 (1986) (discussing how similar logic has been used to invalidate many
Professor Morreim has noted,

Patients bring considerable vulnerability to the health care setting . . . . Patients and physicians rarely include costs in their discussion of proposed interventions . . . . Many patients often have no idea what an intervention costs until after they receive the bill, and even then the bill may be so confusing that they still have no idea what cost how much . . . . The current system, in which physicians or third party payers make cost-value tradeoffs and simply issue them to patients, is simply unacceptable.394

Mandated disclosure of the cost and quality of healthcare is consistent with the current trends toward quality measures, patient-centric medicine and improving the quality of care through patient participation.395 Allowing patients to make cost and quality decisions based upon clear, understandable disclosures facilitates a more efficient and higher quality healthcare marketplace.396 Given that a large percentage of medical errors are made by a small minority of HCPs,397 allowing free markets to identify and avoid those providers should go a long way toward reducing the incidence of medical errors. Poorer quality providers would be encouraged to improve quality or face declines in business, and quality providers will be encouraged to identify themselves and maintain or improve their own quality standards.398 O’Connell and Neale have suggested that, “[i]deally, civil liability should fully compensate injured patients and adequately deter negligent providers without affecting the behavior of non-negligent providers.”399 We take this concept one step further and suggest that the truly ideal system is one that provides incentives for constant improvement.

An additional benefit of cost and quality transparency is likely to be a reduced incidence of malpractice suits against physicians as patients are allowed to take a greater role in their medical decision making and assume a greater degree of responsibility for the outcomes.400 Studies suggest that

healthcare provider policies of refusing to deliver certain information to patients). Section I of the Sherman Act (antitrust) is violated when HCPs agree *inter alia* to limit the information delivered to their patients. *Id.*

396. *See* Morreim, *supra* note 393, at 100 (discussing how physicians in clinical settings should weigh costs and benefits of care with patients).
397. *See* Leo Boyle, *The Truth About Medical Malpractice*, TRIAL, Apr. 1, 2002, at 9 (discussing how an investigation found that only 40 doctors in West Virginia were responsible for a quarter of the 2,300 medical malpractice reported to the state’s board of medicine).
399. *Id.*
400. The concept that patient autonomy can have benefits of its own is not a new one, though an exhaustive analysis is beyond the scope of this study. *See*, e.g., Edmund D. Pellegrino, *Physician and Patient Autonomy: Conflicting Rights and Obligations in the Patient-Physician Relationship*, 10 J. CONTEMP. HEALTH L. & POL’Y 47, 49–51 (1994) (explaining the potential costs and benefits associated with patient autonomy). But see Roger B. Dworkin, *Getting What We Should from Doctors: Rethinking Patient Autonomy and the Doctor-Patient Relationship*, 13 HEALTH MATRIX 235, 246 (2003) (discussing how greater patient autonomy would lead to quality of care that is bargained for, but in actuality such a development remains impossible as medical malpractice is still based in tort law, using a standard of reasonable care for all cases). Professor Dworkin argues that patient autonomy is a much heralded concept, but one that ultimately fails when put to the
patients involved with their care are more satisfied and demand fewer marginal interventions resulting in fewer lawsuits. If patients cannot be held accountable for things that they cannot control, the corollary is that increased patient control means shared responsibility and increased accountability for outcomes because the freedom to make decisions is an important prerequisite for responsibility.

The second pillar of our proposal is that of enterprise liability to complement the medical entity and bundled payment concepts that are likely to form the thrust of healthcare reform. Enterprise liability appropriately shifts the liability from individual physicians to the healthcare entity providing treatment because most medical errors happen because of failed systems, not failed people, and there are almost always multiple contributing factors to medical errors. Consequently, enterprise liability would offer a more representative defendant than individual physicians. Holding healthcare entities responsible for medical safety would shift the emphasis from one of individuals adhering to safe procedures to one of helping to ensure that treatment is integrated and coordinated across all members of the healthcare-entity team and processes are appropriately controlled. This would have the effect of promoting institutional safety while helping to stabilize liability insurance rates. A complementary effect we envision would be to limit the test. Id. “If patient autonomy were really the dominant value in patient health care law, then doctors and patients would be free to bargain about the quality of care the doctor would provide to the patient. Malpractice law would be contract law, not torts. . . . Yet malpractice law remains a matter of torts as we attempt to maintain the fiction that all patients are entitled to the same level of care.”

401. See Morreim, supra note 393, at 102 (discussing how patient responsibility for determining costs/benefits of interventions leads to less use of third-party intervention reviews).

402. Id. at 97.

403. See, e.g., BANJA, supra note 182, at 123 (describing enterprise liability as “. . . an amalgam of various forms of liability—notably vicarious liability, agency, and corporate liability—that essentially make an organization responsible for the wrongdoings of its workers.”). See also Morreim, supra note 393, at 80 (noticing how “we have placed these responsibilities [for healthcare quality] almost exclusively on physicians, but that powerful economic changes now require a reallocation of the responsibilities of providers, patients, and payers in defining and delivering quality in health care.”).

404. Morreim, supra note 393, at 80. Arlen and MacLeod demonstrate analytically that it is optimal to not only hold managed care organizations (MCOs) liable for both their own negligence but also for the negligence of their affiliated physicians even in situations where the MCOs do not exercise direct control over physicians. See Jennifer Arlen & W. Bentley MacLeod, Malpractice Liability for Physicians and Managed Care Organizations, 78 N.Y.U. L. REV. 1929, 2005 (2003) (discussing how, on the other hand, Danzon and Sloan argue against vicarious liability preferring a contractual approach). See also Patricia Danzon & Frank Sloan, The Regulation of Managed Care Organizations and the Doctor-Patient Relationship, 30 J. LEGAL STUD. 661, 661 (2001) (offering little empirical or analytical evidence for their position; however, Arlen and MacLeod show analytically that contracts and market forces are insufficient to ensure optimal care absent legal sanctions even in situations where patients correctly anticipate the risks imposed upon them).

405. Leape presentation, supra note 336 (noting the necessity of changing the culture to reorient how physicians think about themselves).


407. BANJA, supra note 182, at 125.

408. See Joint Commission, supra note 176, at 31–32 (noting the incentive for healthcare institutions to create protocols and systems that value and maximize patient safety when liability is integrated).

409. Id.
psychological impact of litigation, an impact that one commentator has suggested “. . . pervades all aspects of medical practice . . . [resulting in a] lasting emotional angst.”

This fear, in turn, perversely incentivizes overtreatment, leading inexorably to more chances for medical error.

Because healthcare safety is about working in teams, and evidence that the majority of medical errors are system failures as opposed to individual failures, an enterprise liability approach that places the burden of responsibility on a medical entity as opposed to individual physicians would be a logically symmetric companion to the movement toward the new preventive care model for delivery reimbursed through bundled, case-rate payments. Enterprise liability also seeks to ensure greater coverage for patients harmed by medical errors and has the benefit under our proposed framework of reliance upon the same liability requirements as the extant negligence-based tort system.

An enterprise approach to liability, however, begs for movement from the current top-down, “captain of the ship” culture in which physicians dictate stop or go on medical decisions to an “aircraft carrier” approach in which anyone on deck can stop a launch due to a safety problem. All team members such as nurses should feel free to report hazards and expect to be treated with respect for doing so.

Although this change in extant healthcare culture is a


411. Id. (noting that fear of medical malpractice forces many physicians to engage in so-called ‘defensive medicine’, making clinical decisions motivated at least in part by a desire to minimize exposure to liability. This overtreatment, then, necessarily interjects new opportunities for medical error in procedure or prescription).

412. Leape presentation, supra note 336 (noting the necessity of changing the culture to reorient how physicians think about themselves). A floor comment by one physician during a medical seminar regarding the absence of teamwork is telling: “As someone working in the hospital, I don’t know what is going on. So much of the time no one knows what is going on.” Weingart Presentation, supra note 376 (floor comment).

413. Banja, supra note 182, at 125.

414. See Todres, supra note 383, at 701–02 (noting that a major criticism of enterprise liability is that it does nothing to address patients’ emotional healing and may or may not result in more efficient resolution of claims. The criticisms are addressed, however, by other facets of our proposed framework that are compatible with enterprise liability).

415. Banja, supra note 182, at 127 (The top-down nature of medical practice is evidenced by the tension that often exists between physicians and nurses, a relationship that has been described as problematic). See, e.g., Mark Todd, Doctors Don’t Have Germs, Nurse Told, SYDNEY MORNING HERALD, June 21, 2005, at 3, available at http://www.smh.com.au/news/national/doctors-dont-have-germs-nurse-told/2005/06/20/1119250928025.html (relating a story about harm caused by a physician’s plain error despite nurse’s warnings); S. Robert Hernandez, The Perfect Storm: Nursing in Twenty-First Century America, 24 HEALTH AFFAIRS 1372, 1372 (2005) (reviewing SUZANNE GORDON, NURSING AGAINST THE ODDS: HOW HEALTH CARE COST CUTTING, MEDIA STEREOTYPES, AND MEDICAL HURRIS UNDERMINE NURSES AND PATIENT CARE (Cornell University Press 2005)). This tension among healthcare workers who should be part of a team but are not manifests itself errors as disparate as the wrong chemotherapy and absence of good hand hygiene. Weingart Presentation, supra note 376.

416. Leape presentation, supra note 336 (noting such reports should go to department heads, not just to physicians directly involved with an episode of care). There is substantial evidence of tension between physicians and nurses that contributes to medical errors. For example, in one survey of surgeons and surgical nurses there was little congruence between their perceptions of barriers to communication with nurses reporting intimidation by surgeons, unknown expectations and assumptions, a fear of confronting surgeons, a lack of a sense of teamwork, a lack of leadership, power struggles, cultural differences, and a failure to stop and think before speaking—none of which were noted by the surgeons. Donald W. Moorman, Building More Effective Teams in Surgery, presentation at Harvard Seminar (Nov. 2008) (notes on file with authors).
desirable—and arguably necessary—complement to the evolving delivery and reimbursement systems, such an attitudinal transformation, may prove to be as difficult as any aspect of the overall healthcare transformation envisioned in this study. The reason is that it requires an admission by physicians that attitudinal change is needed and a concerted effort by the medical profession as a whole to press for change. Enterprise liability may play an important role in helping to bring about this cultural change inasmuch as physicians who routinely refuse to engage in appropriate team behaviors for error minimization may find themselves ostracized.

The third pillar of our proposal involves mandated disclosure of any adverse medical event immediately to the patient or the patient’s legal representative. Three key benefits flow from this pillar: the error and (ideally) its cause would immediately be imputed into the feedback loop of the New Model thereby limiting the likelihood of repetition; increased transparency in quality of care would allow for increased consumer choice; and compensation of harmed patients would be expedited. An ancillary benefit of disclosure is that it affords a first opportunity for apologies which both facilitates patient healing and reduces the likelihood of lawsuits. Mandatory disclosure is already part of a physician’s ethical obligations according to the AMA. However, this ethical obligation, absent the force of law, appears not to create the desirable level of disclosure. One study found that as many as 76% of physicians had not disclosed serious medical error to a patient. Twenty-six states currently have some form of legal disclosure obligation for hospitals, although this disclosure typically only requires disclosure of adverse events to state agencies and not to patients. Further, a federal study found that disparate state disclosure requirements made the data thus collected unsuitable for general use. Federal imposition of a mandatory, consistent disclosure error requirement for all states would address this problem.

The fourth pillar of our proposal is mandatory, nonbinding mediation once a claim has been filed. Mediation involves negotiation between concerned parties facilitated by a neutral third party under three basic

417. See Leape presentation, supra note 336 (noting the necessity of changing the culture to reorient how physicians think about themselves).
418. One commentator states, “... the most persuasive explanation for endorsing a patient-centered model of disclosure to think of the health professional-patient relationship as a contract.” Banja, supra note 182, at 23.
419. See Michael Waite, To Tell the Truth: The Ethical and Legal Implications of Disclosure of Medical Error, 13 HEALTH L.J. 1, 22 (2005) (arguing that non-disclosure is self-perpetuating. That is, non-disclosure leads to more medical errors because errors cannot be studied and prevented without knowledge that they exist, which leads to more non-disclosure).
420. Todres, supra note 383, at 686.
422. Waite, supra note 419, at 7 (citing Albert W. Wu et al, Do House Officers Learn from Their Mistakes, 265:16 J. AM. MED. ASS’N 2089 (1991)).
424. Id. at iii. Currently, of those states having any such requirement, New Jersey has the most comprehensive disclosure requirement, while Indiana and Ohio tie for the least comprehensive. Id. at 26.
principles: party autonomy, informed decision making, and confidentiality with no requirement to reach agreement in mediation, only to participate in the process. Proponents of mediation maintain that it represents the best solution to the manner in which malpractice claims are currently handled because it reduces the resources expended in jury trials and results in fewer outlier verdicts. Mediation also offers a “forum in which patients can receive information and apologies to help foster emotional healing.”

Under our proposal, apologies volunteered by HCPs in mediation could not be used as evidence in a subsequent trial, mediation would not preclude pre-screening of cases bound for trial by special boards where permitted by state law, and both the plaintiff patient and defendant medical entity’s rights to a jury trial under tort and contract law would be preserved. Although the plaintiff’s right to sue individual defendants comprising the medical entity jointly and severally under tort would also be preserved, under the enterprise concept the medical entity would be the only defendant in mediation providing a strong incentive for individual members to accept the outcome of the mediation.

Other proponents of mandatory mediation of medical malpractice claims note that the nature of mediation (an impartial forum of dispute resolution that does not declare a winner or loser) is particularly well suited for medical malpractice claims. Mediation provides for potentially expedited resolution of differences in a less costly and emotionally fraught environment. Limiting the emotional impact of the dispute resolution is essential to maintaining the physician-patient relationship, which, given the manner of current and proposed healthcare delivery, is a goal in itself. Forged mediation could also facilitate provision of compensation to patients whose legitimate claims are too small to secure legal representation because attorneys fear they will not be able to recover their costs due to requirements for expensive expert testimony.

---

425. Todres, supra note 383, at 698.
426. Id. at 698–99. The article distinguishes the benefits of mediation from those of arbitration, the latter of which relies on the same tort law standards as jury trials and provides no opportunity for a plaintiff to appeal an arbitrator’s ruling. As a result, arbitration does not reduce HCPs’ incentives to engage in risk management by admitting no wrongdoing as opposed to focus on emotional healing for the patient and reduction of future potential errors. Id.
427. Id. at 699.
428. Rule 408 of the Federal Rules of Evidence already precludes evidence acquired or apparent admissions made during the process of a settlement negotiation. A specific carve-out may be desirable in that Rule and analogous state evidence laws to ensure that all such mandated mediations fall under the ambit of the Rule. See Fed. R. Evid. 408(a)(2) (stating permitted and prohibited uses of evidence acquired during settlement negotiations).
430. Id. at 25.
431. Id. at 26. Johnson notes “[t]hat would not normally be an important consideration in determining whether [to] mediate because the . . . relationship . . . is usually severed at the time of the negligence. But maintaining the physician-patient relationship is becoming important to hospitals as they are increasingly incorporating individual physicians into the institution as employees. The same is true for HMOs that administer ERISA health plans.”
432. See Todres, supra note 383, at 696 (noting that the solution to the problem of attorneys retaining too much of the claimant’s recovery is contingency fees, which does not solve the problem but rather leaves patients with no remedy at all because lawyers will not “risk taking cases in which damages awarded may not cover their costs.”), Peek Interview, supra note 359.
The fifth pillar of our proposal involves mandated disclosure of the nature of medical errors associated with settled cases. Many medical malpractice cases are settled, and currently many settled cases are subsequently sealed thereby depriving the medical community of the information contained in these cases about the nature of medical errors.\textsuperscript{433} The policy justifications for this pillar largely echo those for the mandatory disclosure to the affected patient.\textsuperscript{434} The likely benefit is two-fold: adverse events are captured in feedback loops, and transparency is increased for patients.\textsuperscript{435}

We envision many benefits from our proposed framework in addition to those already mentioned. There is a likelihood of more reliable, credible, and equitable adjudication of claims.\textsuperscript{436} For example, an oft heard complaint is that juries make large awards for pain and suffering because they sympathize with injured plaintiffs.\textsuperscript{437} Regardless of the validity of this argument, reducing the number of jury trials would blunt this concern. The ability of HCPs to externalize the cost of their negligence by passing it on in their bills to the patient would also be reduced.\textsuperscript{438} The potential exists to compensate a larger number of injured plaintiffs but with less likelihood of large, aberrant jury verdicts.\textsuperscript{439} Smaller, injured patients with legitimate claims that are currently impractical to pursue because of the time and expense of litigation would be compensated in more instances.\textsuperscript{440}

Many in the medical profession argue that tort law forces physicians to practice defensive medicine, ordering unnecessary tests and treatments which incur unnecessary costs.\textsuperscript{441} It has been estimated that defensive medicine costs the federal government between $25.3 billion and 44.3 billion per year.\textsuperscript{442} Under the enterprise concept, there would tend to be greater consensus on what constitutes avoidable events and group incentives to encourage their prevention. Use of mediation in the manner we suggest would also send clearer messages regarding what is needed to deter adverse medical events.\textsuperscript{443} For cases that are settled through mediation, legal costs would also be reduced due to shorter court processing times, with less adjudication and a reduced need for expert testimony—which is both costly and sometimes difficult to
Because fault under tort negligence would attach only at the jury trial stage—and mediation would lead to fewer cases tried at that stage—mediation would likely result in less emotion and greater acceptance of and action towards error feedback than under the current system.\(^{445}\) Findings and settlement information from cases decided by mediation or settlement would, moreover, be immediately available for public access,\(^{446}\) making it easier to develop evidence regarding the effectiveness of preventive care. Additionally, greater disclosure of the nature of medical errors would make non-meritorious cases easier to identify, thereby reducing one of the leading complaints voiced by physicians.\(^{447}\)

The establishment of group incentives under the enterprise liability concept, with predetermined damages apportionment, would also help to promote a “just culture.” For members of a medical entity, the diffusion of responsibility and absence of individual fault in a legal sense under the enterprise liability concept provides a shield of sorts against being stigmatized in the eyes of parties external to the medical entity. At the same time, it does not prevent blame from being assigned internally by other members of that entity, as when members all have some stake in outcomes, they are less likely to tolerate behaviors that threaten the group’s welfare. This can be a healthy phenomenon when harms are caused by incompetence, reckless disregard for due care, and negligent incapacitation.\(^{448}\) Thus, greatly reduced external stigmatization and group incentives for correcting systemic flaws and individual behavioral problems would help foster greater dissemination of information about medical errors and their causes, and help standardize procedures across jurisdictions thereby making it easier to identify best-practice.\(^{449}\) Also, a “just culture” means forthright disclosure of adverse medical events to the patient, a concept endorsed at least in theory by the AMA.\(^{450}\) Serendipitously, such disclosures have been shown to reduce the likelihood of malpractice lawsuits and improve patient satisfaction. At one hospital, over a five-year period every patient to whom a medical error was disclosed remained a patient of the hospital, and total payouts resulting from such disclosures were nominal.\(^{451}\)

In short, evolving healthcare delivery and reimbursement systems present new challenges for the courts and require a complementary medical malpractice liability regime. Our solution rests upon five pragmatic pillars, all of which seem more politically attainable than more radical reform measures and, in combination, meet the aforementioned goals of a care-based, healing-centered, medical malpractice liability regime. The following section

\(^{444}\) See Wing, supra note 50, at 315.

\(^{445}\) See Joint Commission, supra note 176, at 35–36 (describing the features and effects of mediation).

\(^{446}\) See id. at 36 (listing pros of mediation).

\(^{447}\) Id. at 35.

\(^{448}\) See Bania, supra note 182, at 6, 34.

\(^{449}\) Id. at 35.

\(^{450}\) Id. at 24–25. See also AMA Opinion 8.12, supra note 421.

\(^{451}\) Conway Presentation, supra note 351 (floor comment).
summarizes this study and its principal arguments.

VI. SUMMARY

U.S. healthcare is in a crisis, troubled by problems with cost, availability, and quality, with a long history of political wrangling such that it has been termed a $1.3 trillion fiasco, based on per-year figures from 2000.452 Clearly, the nation is getting a poor return on healthcare spending measured by cost versus benefits, and the United States falls short of all dimensions of a high performance health system.453 One commentator has suggested that 47% of healthcare spending in the United States is waste.454 The majority of Americans are dissatisfied with U.S. healthcare, and 82% are desirous of a system overhaul.455 For years, the legal system has been blamed for physicians’ woes with their compensation, and demands for tort reform to reduce the cost of professional liability insurance have been virtually continuous. Our analysis suggests, however, that a principal, largely overlooked culprit is third-party reimbursement where the federal government plays an increasingly large role with respect to both the magnitude and uncertainty of physician compensation. Major changes in healthcare delivery and payment systems are needed to achieve the desired improvements in healthcare quality, affordability, and accessibility.456 New models of healthcare delivery based on preventive care have been proposed which—if complemented by a new reimbursement system that rewards value, not volume, and legal reform—promise to substantially reduce healthcare cost and improve its quality in terms of outcomes.

Largely ignored in all the rhetoric associated with the healthcare crisis and the debate over medical malpractice tort reform are the interdependencies between the current delivery and reimbursement systems that encourage lower quality care, and physicians’ professional liability costs. Congress and the new administration have signaled that they are open to medical malpractice reform and determined to address the issue.457 We argue that further efforts at tort reform make little sense in the absence of consideration of these interdependencies with the likely result of making it more difficult for patients who have suffered medical errors to obtain compensation.458 If the main

452. Todres, supra note 383, at 669 (citing J.D. Kleinke, OXYMORONS: THE MYTH OF A U.S. HEALTH CARE SYSTEM 2 (2001)).
453. Conway Presentation, supra note 351.
454. Leape presentation, supra note 336 (noting the necessity of changing the culture to reorient how physicians think about themselves).
456. From VOLUME TO VALUE, supra note 269, at 5, 40.
458. BANJA, supra note 182, at 122.
culprits adversely affecting healthcare quality—and, concomitantly, physician
compensation—are its delivery and reimbursement systems, the illogic of
attempting to fix an admittedly flawed outcome of inferior health quality,
before first fixing the delivery and reimbursement systems, seems obvious.
This should not be construed, however, to mean that the tort system should not
be changed. The system is currently not delivering good value to healthcare
consumers because too few patients who are harmed are compensated, while
some patients are compensated who should not be (although the incidence of
the former problem appears to be greater). Extreme variability in changes in
premiums creates sticker shock for physicians and complicates their financial
planning. Perhaps most importantly, new delivery and reimbursement systems
would refocus care toward greater emphasis on prevention and would depend
upon case-rate payments that provide incentives to under-treat patients. No
case-rate-reimbursement system, no matter how carefully designed, is likely to
totally prevent under-treatment because there will be times when the economic
benefits of under treatment exceed any incentives not to under-treat. This
means that the legal system is needed as a backstop to help ensure that patients
receive appropriate care.

Our proposed changes in adjudicating claims arising from medical errors
rest upon five pillars: (1) mandated price and quality disclosure of healthcare
services; (2) a focus on enterprise liability in which the defendant is the
medical entity responsible for care as opposed to individual physicians; (3)
manded disclosure of medical errors to patients; (4) mandated, non-binding
mediation, the function of which is to avoid costly, protracted trials and long
delays in patient compensation whenever possible; and (5) mandated
disclosure of medical errors in settled cases. This regime is designed to
provide a check on HCPs’ incentives to under-treat patients in conjunction
with the New Model, increase the speed of compensation to injured plaintiffs,
de-stigmatize medical errors to encourage communication through a tighter
feedback loop that reduces medical errors and improves treatment quality, help
reduce both the costs of healthcare generally and the specific costs associated
with medical malpractice litigation, and facilitate the creation of a just culture
in healthcare.

Such a system has many salutary benefits, some of which include
incentives to improve the processes that led to errors rather than making
emotional denials of fault, lower likelihoods of non-meritorious lawsuits
resulting in payment, faster patient compensation, and lower healthcare and
legal costs. The nation requires such changes because the status quo is simply
unaffordable from the standpoint of ensuring access to high quality healthcare
at an affordable cost.
### APPENDIX A. KEY VARIABLES RELATED TO PHYSICIANS’ WORK ENVIRONMENT ACROSS 16 SPECIALTIES

<table>
<thead>
<tr>
<th>TYPE SPECIALTY</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>00-06 % Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL SPECIALTIES</td>
<td>$208,860</td>
<td>$215,987</td>
<td>$223,747</td>
<td>$237,982</td>
<td>$247,542</td>
<td>$259,604</td>
<td>$266,339</td>
<td>27.52%</td>
</tr>
<tr>
<td>Median compensation</td>
<td>$508,532</td>
<td>$585,475</td>
<td>$576,285</td>
<td>$598,287</td>
<td>$558,673</td>
<td>$534,648</td>
<td>$529,972</td>
<td>4.22%</td>
</tr>
<tr>
<td>Total medical revenue</td>
<td>41.07%</td>
<td>36.89%</td>
<td>38.83%</td>
<td>39.78%</td>
<td>44.31%</td>
<td>48.56%</td>
<td>50.26%</td>
<td>22.36%</td>
</tr>
<tr>
<td>Median comp as % of total medical revenue</td>
<td>$9.782</td>
<td>9.528</td>
<td>10.278</td>
<td>10.343</td>
<td>10.370</td>
<td>10.716</td>
<td>10.423</td>
<td>6.56%</td>
</tr>
<tr>
<td>wRVUs</td>
<td>$51.99</td>
<td>$61.45</td>
<td>$56.07</td>
<td>$57.85</td>
<td>$53.88</td>
<td>$49.89</td>
<td>$50.85</td>
<td>-2.20%</td>
</tr>
<tr>
<td>Medical rev per wRVU</td>
<td>$21.35</td>
<td>$22.67</td>
<td>$21.77</td>
<td>$23.01</td>
<td>$23.87</td>
<td>$24.23</td>
<td>$25.55</td>
<td>19.67%</td>
</tr>
<tr>
<td>Comp per wRVU</td>
<td>$393,311</td>
<td>$367,247</td>
<td>$392,720</td>
<td>$402,161</td>
<td>$438,518</td>
<td>$445,445</td>
<td>$459,696</td>
<td>16.88%</td>
</tr>
<tr>
<td>Total # physicians</td>
<td>$54.25</td>
<td>$48.04</td>
<td>$47.04</td>
<td>$40.89</td>
<td>$40.96</td>
<td>$35.80</td>
<td>$52.14</td>
<td>15.14%</td>
</tr>
<tr>
<td>Medicare pmt per serv</td>
<td>1.71%</td>
<td>1.86%</td>
<td>2.08%</td>
<td>2.52%</td>
<td>2.35%</td>
<td>2.81%</td>
<td>64.13%</td>
<td></td>
</tr>
<tr>
<td>Prof liab ins as % med rev</td>
<td>46.4%</td>
<td>45.42%</td>
<td>46.99%</td>
<td>47.74%</td>
<td>47.22%</td>
<td>47.80%</td>
<td>48.43%</td>
<td>4.96%</td>
</tr>
<tr>
<td>Tot opr cost as % of med rev</td>
<td>$156,715</td>
<td>$160,078</td>
<td>$163,151</td>
<td>$167,475</td>
<td>$172,264</td>
<td>$178,836</td>
<td>$183,468</td>
<td>17.07%</td>
</tr>
<tr>
<td>PRIMARY CARE</td>
<td>$393,311</td>
<td>$367,247</td>
<td>$392,720</td>
<td>$402,161</td>
<td>$438,518</td>
<td>$445,445</td>
<td>$459,696</td>
<td>16.88%</td>
</tr>
<tr>
<td>Median compensation</td>
<td>$393,311</td>
<td>$367,247</td>
<td>$392,720</td>
<td>$402,161</td>
<td>$438,518</td>
<td>$445,445</td>
<td>$459,696</td>
<td>16.88%</td>
</tr>
<tr>
<td>Total medical revenue</td>
<td>41.07%</td>
<td>36.89%</td>
<td>38.83%</td>
<td>39.78%</td>
<td>44.31%</td>
<td>48.56%</td>
<td>50.26%</td>
<td>22.36%</td>
</tr>
<tr>
<td>Median comp as % of total medical revenue</td>
<td>$9.782</td>
<td>9.528</td>
<td>10.278</td>
<td>10.343</td>
<td>10.370</td>
<td>10.716</td>
<td>10.423</td>
<td>6.56%</td>
</tr>
<tr>
<td>wRVUs</td>
<td>$51.99</td>
<td>$61.45</td>
<td>$56.07</td>
<td>$57.85</td>
<td>$53.88</td>
<td>$49.89</td>
<td>$50.85</td>
<td>-2.20%</td>
</tr>
<tr>
<td>Medical rev per wRVU</td>
<td>$21.35</td>
<td>$22.67</td>
<td>$21.77</td>
<td>$23.01</td>
<td>$23.87</td>
<td>$24.23</td>
<td>$25.55</td>
<td>19.67%</td>
</tr>
<tr>
<td>Comp per wRVU</td>
<td>$393,311</td>
<td>$367,247</td>
<td>$392,720</td>
<td>$402,161</td>
<td>$438,518</td>
<td>$445,445</td>
<td>$459,696</td>
<td>16.88%</td>
</tr>
<tr>
<td>Total # physicians</td>
<td>$54.25</td>
<td>$48.04</td>
<td>$47.04</td>
<td>$40.89</td>
<td>$40.96</td>
<td>$35.80</td>
<td>$52.14</td>
<td>15.14%</td>
</tr>
<tr>
<td>Medicare pmt per serv</td>
<td>1.71%</td>
<td>1.86%</td>
<td>2.08%</td>
<td>2.52%</td>
<td>2.35%</td>
<td>2.81%</td>
<td>64.13%</td>
<td></td>
</tr>
<tr>
<td>Prof liab ins as % med rev</td>
<td>46.4%</td>
<td>45.42%</td>
<td>46.99%</td>
<td>47.74%</td>
<td>47.22%</td>
<td>47.80%</td>
<td>48.43%</td>
<td>4.96%</td>
</tr>
<tr>
<td>Tot opr cost as % of med rev</td>
<td>$156,715</td>
<td>$160,078</td>
<td>$163,151</td>
<td>$167,475</td>
<td>$172,264</td>
<td>$178,836</td>
<td>$183,468</td>
<td>17.07%</td>
</tr>
</tbody>
</table>
### APPENDIX A. KEY VARIABLES RELATED TO PHYSICIANS’ WORK ENVIRONMENT ACROSS 16 SPECIALTIES (CONTINUED)

<table>
<thead>
<tr>
<th>TYPE SPECIALTY</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>00-06 % Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIALTIES NOT PRIMARY CARE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median compensation</td>
<td>$282,689</td>
<td>$297,373</td>
<td>$307,623</td>
<td>$333,626</td>
<td>$338,023</td>
<td>$361,875</td>
<td>$367,538</td>
<td>30.02%</td>
</tr>
<tr>
<td>Total medical revenue</td>
<td>$539,194</td>
<td>$671,572</td>
<td>$657,103</td>
<td>$693,015</td>
<td>$628,523</td>
<td>$586,746</td>
<td>$566,012</td>
<td>1.22%</td>
</tr>
<tr>
<td>Median comp as % of total medical revenue</td>
<td>50.55%</td>
<td>44.28%</td>
<td>46.81%</td>
<td>48.14%</td>
<td>53.78%</td>
<td>61.67%</td>
<td>64.93%</td>
<td>28.45%</td>
</tr>
<tr>
<td>wRVUs</td>
<td>12,656</td>
<td>12,118</td>
<td>13,651</td>
<td>13,152</td>
<td>13,431</td>
<td>12,309</td>
<td>12,309</td>
<td>-2.74%</td>
</tr>
<tr>
<td>Medical rev per wRVU</td>
<td>$44.18</td>
<td>$55.42</td>
<td>$48.13</td>
<td>$51.77</td>
<td>$47.79</td>
<td>$43.69</td>
<td>$45.98</td>
<td>4.07%</td>
</tr>
<tr>
<td>Comp per wRVU</td>
<td>$22.34</td>
<td>$24.54</td>
<td>$22.93</td>
<td>$24.92</td>
<td>$25.70</td>
<td>$26.94</td>
<td>$29.86</td>
<td>33.68%</td>
</tr>
<tr>
<td>Total # physicians</td>
<td>186,663</td>
<td>191,811</td>
<td>193,638</td>
<td>196,926</td>
<td>197,250</td>
<td>201,306</td>
<td>201,606</td>
<td>8.01%</td>
</tr>
<tr>
<td>Medicare pmnt. per serv</td>
<td>$58.14</td>
<td>$61.37</td>
<td>$59.78</td>
<td>$47.96</td>
<td>$47.99</td>
<td>$41.77</td>
<td>$64.08</td>
<td>10.21%</td>
</tr>
<tr>
<td>Prof liab ins as % of med rev</td>
<td>1.59%</td>
<td>1.65%</td>
<td>1.83%</td>
<td>2.20%</td>
<td>2.40%</td>
<td>2.37%</td>
<td>2.38%</td>
<td>49.89%</td>
</tr>
<tr>
<td>Tot opr cost as % of med rev</td>
<td>42.96%</td>
<td>41.82%</td>
<td>43.78%</td>
<td>44.41%</td>
<td>43.76%</td>
<td>44.58%</td>
<td>45.36%</td>
<td>5.60%</td>
</tr>
<tr>
<td>HIGH RISK SPECIALTIES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median compensation</td>
<td>$271,797</td>
<td>$285,178</td>
<td>$288,596</td>
<td>$302,775</td>
<td>$314,688</td>
<td>$332,188</td>
<td>$337,847</td>
<td>24.30%</td>
</tr>
<tr>
<td>Total medical revenue</td>
<td>$624,101</td>
<td>$642,427</td>
<td>$648,863</td>
<td>$668,909</td>
<td>$699,795</td>
<td>$697,260</td>
<td>$709,157</td>
<td>13.65%</td>
</tr>
<tr>
<td>Median comp. as % of total medical revenue</td>
<td>43.55%</td>
<td>44.39%</td>
<td>44.88%</td>
<td>45.26%</td>
<td>44.97%</td>
<td>47.64%</td>
<td>47.64%</td>
<td>9.39%</td>
</tr>
<tr>
<td>wRVUs</td>
<td>13,013</td>
<td>11,108</td>
<td>13,575</td>
<td>13,039</td>
<td>13,326</td>
<td>13,828</td>
<td>13,803</td>
<td>6.07%</td>
</tr>
<tr>
<td>Medical rev per wRVU</td>
<td>$47.96</td>
<td>$57.84</td>
<td>$47.80</td>
<td>$51.42</td>
<td>$52.51</td>
<td>$50.42</td>
<td>$51.38</td>
<td>7.13%</td>
</tr>
<tr>
<td>Compens per wRVU</td>
<td>$20.89</td>
<td>$25.67</td>
<td>$21.26</td>
<td>$23.27</td>
<td>$23.61</td>
<td>$24.02</td>
<td>$24.48</td>
<td>17.19%</td>
</tr>
<tr>
<td>Total # physicians</td>
<td>121,739</td>
<td>124,852</td>
<td>125,120</td>
<td>127,221</td>
<td>127,227</td>
<td>128,788</td>
<td>128,488</td>
<td>5.54%</td>
</tr>
<tr>
<td>Medicare pmnt. per serv</td>
<td>$60.15</td>
<td>$62.61</td>
<td>$59.04</td>
<td>$59.15</td>
<td>$60.12</td>
<td>$57.76</td>
<td>$64.53</td>
<td>7.28%</td>
</tr>
<tr>
<td>Prof liab ins as % of med rev</td>
<td>2.15%</td>
<td>2.37%</td>
<td>2.75%</td>
<td>3.13%</td>
<td>3.38%</td>
<td>3.52%</td>
<td>3.39%</td>
<td>57.89%</td>
</tr>
<tr>
<td>Tot opr cost as % of med rev</td>
<td>45.11%</td>
<td>45.01%</td>
<td>46.83%</td>
<td>47.99%</td>
<td>47.34%</td>
<td>47.26%</td>
<td>47.98%</td>
<td>6.35%</td>
</tr>
</tbody>
</table>
APPENDIX B. YEAR-TO-YEAR CHANGES IN KEY VARIABLES RELATED TO PHYSICIANS’ WORK ENVIRONMENT ACROSS SPECIALTY CATEGORY

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Specialties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%Δ in MC reimbursement per service</td>
<td>6.10%</td>
<td>-2.09%</td>
<td>-13.06%</td>
<td>0.16%</td>
<td>-12.61%</td>
<td>45.65%</td>
<td>15.14%</td>
</tr>
<tr>
<td>%Δ in median compensation</td>
<td>3.41%</td>
<td>3.59%</td>
<td>7.36%</td>
<td>4.02%</td>
<td>4.87%</td>
<td>2.59%</td>
<td>27.32%</td>
</tr>
<tr>
<td>%Δ in FTE physicians</td>
<td>3.37%</td>
<td>1.22%</td>
<td>2.48%</td>
<td>0.89%</td>
<td>1.91%</td>
<td>0.58%</td>
<td>10.87%</td>
</tr>
<tr>
<td>%Δ in wRVUs</td>
<td>-2.60%</td>
<td>7.88%</td>
<td>0.63%</td>
<td>0.26%</td>
<td>3.34%</td>
<td>-2.74%</td>
<td>6.56%</td>
</tr>
<tr>
<td>%Δ in liability insurance cost as % med rev</td>
<td>8.59%</td>
<td>11.97%</td>
<td>13.12%</td>
<td>7.00%</td>
<td>-6.66%</td>
<td>19.48%</td>
<td>64.13%</td>
</tr>
<tr>
<td>%Δ in total operating cost</td>
<td>-1.56%</td>
<td>3.46%</td>
<td>1.60%</td>
<td>-1.09%</td>
<td>1.21%</td>
<td>1.32%</td>
<td>4.96%</td>
</tr>
<tr>
<td>Primary Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%Δ in MC reimbursement per service</td>
<td>6.09%</td>
<td>-0.62%</td>
<td>-3.46%</td>
<td>0.16%</td>
<td>-11.81%</td>
<td>34.09%</td>
<td>20.56%</td>
</tr>
<tr>
<td>%Δ in median compensation</td>
<td>2.15%</td>
<td>1.92%</td>
<td>2.65%</td>
<td>2.86%</td>
<td>3.82%</td>
<td>2.59%</td>
<td>17.07%</td>
</tr>
<tr>
<td>%Δ in FTE physicians</td>
<td>3.72%</td>
<td>1.37%</td>
<td>2.92%</td>
<td>1.29%</td>
<td>1.83%</td>
<td>0.82%</td>
<td>12.53%</td>
</tr>
<tr>
<td>%Δ in wRVUs</td>
<td>-2.30%</td>
<td>6.81%</td>
<td>1.81%</td>
<td>-2.74%</td>
<td>3.38%</td>
<td>-3.01%</td>
<td>3.60%</td>
</tr>
<tr>
<td>%Δ in liability insurance cost as % med rev</td>
<td>19.06%</td>
<td>10.92%</td>
<td>-1.17%</td>
<td>-1.09%</td>
<td>-14.37%</td>
<td>8.87%</td>
<td>20.33%</td>
</tr>
<tr>
<td>%Δ in total operating cost</td>
<td>0.96%</td>
<td>0.72%</td>
<td>1.96%</td>
<td>-0.22%</td>
<td>-0.25%</td>
<td>0.28%</td>
<td>3.49%</td>
</tr>
<tr>
<td>Specialties other than primary care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%Δ in MC reimbursement per service</td>
<td>5.55%</td>
<td>-2.59%</td>
<td>-19.77%</td>
<td>0.07%</td>
<td>-12.97%</td>
<td>53.40%</td>
<td>10.21%</td>
</tr>
<tr>
<td>%Δ in median compensation</td>
<td>5.19%</td>
<td>3.45%</td>
<td>8.45%</td>
<td>1.32%</td>
<td>7.06%</td>
<td>1.56%</td>
<td>30.02%</td>
</tr>
<tr>
<td>%Δ in FTE physicians</td>
<td>2.76%</td>
<td>0.95%</td>
<td>1.70%</td>
<td>0.16%</td>
<td>2.06%</td>
<td>0.15%</td>
<td>8.01%</td>
</tr>
<tr>
<td>%Δ in wRVUs</td>
<td>-2.25%</td>
<td>12.65%</td>
<td>1.93%</td>
<td>-1.76%</td>
<td>2.12%</td>
<td>-8.35%</td>
<td>-2.74%</td>
</tr>
<tr>
<td>%Δ in liability insurance cost as % med rev</td>
<td>4.14%</td>
<td>10.51%</td>
<td>20.24%</td>
<td>9.31%</td>
<td>-1.54%</td>
<td>0.65%</td>
<td>49.89%</td>
</tr>
<tr>
<td>%Δ in total operating cost</td>
<td>-2.65%</td>
<td>4.69%</td>
<td>1.45%</td>
<td>-1.47%</td>
<td>1.86%</td>
<td>1.77%</td>
<td>5.60%</td>
</tr>
</tbody>
</table>
## APPENDIX B. YEAR-TO-YEAR CHANGES IN KEY VARIABLES RELATED TO PHYSICIANS’ WORK ENVIRONMENT ACROSS SPECIALTY CATEGORY (CONTINUED)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%Δ in MC reimbursement per service</td>
<td>4.10%</td>
<td>-5.70%</td>
<td>0.18%</td>
<td>1.64%</td>
<td>-3.92%</td>
<td>11.72%</td>
<td>7.28%</td>
</tr>
<tr>
<td>%Δ in median compensation</td>
<td>4.92%</td>
<td>1.20%</td>
<td>4.91%</td>
<td>3.93%</td>
<td>5.56%</td>
<td>1.70%</td>
<td>24.30%</td>
</tr>
<tr>
<td>%Δ in # physicians</td>
<td>2.56%</td>
<td>0.21%</td>
<td>1.68%</td>
<td>0.00%</td>
<td>1.21%</td>
<td>-0.23%</td>
<td>5.54%</td>
</tr>
<tr>
<td>%Δ in wRVUs</td>
<td>-14.64%</td>
<td>22.21%</td>
<td>-4.17%</td>
<td>2.44%</td>
<td>3.77%</td>
<td>-0.19%</td>
<td>6.07%</td>
</tr>
<tr>
<td>%Δ in liability insurance cost as % med rev</td>
<td>10.59%</td>
<td>15.64%</td>
<td>14.00%</td>
<td>7.86%</td>
<td>4.15%</td>
<td>-3.59%</td>
<td>57.89%</td>
</tr>
<tr>
<td>%Δ in total operating cost</td>
<td>-0.22%</td>
<td>4.03%</td>
<td>1.63%</td>
<td>-0.53%</td>
<td>-0.17%</td>
<td>1.51%</td>
<td>6.35%</td>
</tr>
</tbody>
</table>