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### Regulating Health Care Quality in an Information Age

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*Recent technological innovations have promoted widespread access to health-related information, raising important questions about the future of a health care regulatory system premised on the persistence of information failures. This Article analyzes the implications of the health information revolution for each of the three major types of health care regulation: market-displacing regulation (such as professional licensure), market-channeling regulation (such as pay-for-performance initiatives), and market-facilitating regulation (such as quality reporting programs). By reducing the costs of information inputs into the regulatory process, the health information revolution will facilitate expanded regulation. At the same time, it should prompt a shift of focus from market-displacing regulations to market-channeling and market-facilitating regulations that will help consumers take advantage of newly available information about quality. Evidence suggests that this shift has in fact begun, but that*

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regulatory evolution has not yet concluded. The future health care regulatory framework's design ultimately should depend on the nature of regulatory goals and the relative strengths of government and private regulators. After exploring these factors, this Article proposes refinements to the existing health care regulatory framework.

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#### INTRODUCTION

Patients often lack information about the quality of health care services they receive. As a result, they may receive services that they would have avoided, or avoid services they would have sought, had they been more fully informed. Ill-informed decision-making can deprive society of the efficiency benefits of well-functioning markets and may subject individual patients to unacceptably high risks of injury. To shield patients from the negative consequences of imperfect information, we have developed a complex framework for regulating health care quality.

Recent innovations in the production, analysis, and dissemination of information, however, will substantially reduce the magnitude of information imperfections in health care markets. Reductions in computing costs have facilitated not only the spread of evidence-based medicine and the distribution of guidelines based on it, but also the development of measures of provider quality. The Internet allows rapid and broad dissemination of information about medical conditions, medical treatments, and provider quality to both providers and the general public. In short, the information failures that historically have plagued health care markets will become less pronounced.

If information failure is an important justification for regulating health care quality, then what implications will the health information revolution have for the health care regulatory framework? One possible answer is that the health information revolution should prompt us to regulate less. A patient with access to information about individual providers' quality of care, for example, would have less need for state medical boards' assistance in rooting out poor quality providers through medical licensure requirements or competence-based disciplinary actions. A second possible answer is that the health information revolution should prompt us to regulate more. Information imperfections will persist forever, so regulation can at least potentially benefit some patients. Because information about quality is an input into the regulation process, and technological innovation has reduced the cost of such information, we can regulate more cheaply than we once could. We can therefore regulate more with the same resources.

A third and more plausible answer is that the implications of the health information revolution cannot be described in the simplistic language of regulating "less" or regulating "more." Such language

implies that regulation of health care quality takes a single, easily scalable form. In fact, the health care regulatory framework is comprised of many overlapping forms of regulation implemented by many different regulators. It is therefore possible to both regulate less and regulate more; the health information revolution can perhaps be better described as leading to a reorientation of health care quality regulation.

This Article explores how the health care regulatory framework should be reshaped in the aftermath of the health information revolution. Scholars have long been interested in this issue.<sup>1</sup> In a 1995 article, for example, Professor Timothy Jost argued that in part as a result of the information revolution, management techniques had begun to displace professional self-regulation as a means of regulating quality, while the market had begun to displace bureaucracy as a regulator of health care services.<sup>2</sup> Because of the difficulties involved in developing and using quality measures to ensure the quality of medical care, however, Jost concluded that there remained a role for traditional forms of public regulation such as licensure and professional discipline.<sup>3</sup> Others have expressed similar skepticism about information disclosure as a regulatory tool.<sup>4</sup>

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<sup>1</sup> For an example outside of the health care context, see Daniel C. Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115 (2004) (examining how improvements in information technologies may alter environmental regulation). Professor Esty suggests that information technology will improve pollution control and that “the optimal mix of environmental policies and strategies is likely to evolve as more complete information changes the relative costs and benefits of various institutional approaches to solving environmental problems.” *Id.* at 120-21.

<sup>2</sup> Timothy Stoltzfus Jost, *Oversight of the Quality of Medical Care: Regulation, Management, or the Market?*, 37 ARIZ. L. REV. 825, 826 (1995) (describing trends in health care regulation); *id.* at 835 (describing increasing importance of management and market in health care regulation). He attributes these trends in part to the “revolution in information processing” that “has enhanced the ability of the health care industry to collect, process, and analyze data,” and in part to the growing role in the industry of large institutions such as physician groups, hospitals, and managed care organizations. *Id.* at 836.

<sup>3</sup> See *id.* at 850-57 (describing problems that public and lay management face in using health care quality information); *id.* at 859-68 (proposing continued role for traditional forms of regulation).

<sup>4</sup> See, e.g., William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1720-33 (1999) (describing challenges in using information disclosure to improve competitiveness in managed care setting); *id.* at 1736 (“Where individual consumers are concerned, disclosure is unlikely to be a practical substitute for minimum quality standards, private accreditation, and expert intermediaries.”).

In the last few years, however, there has been tremendous growth in the use of information technologies to create and disseminate measures of quality. Numerous organizations have begun to disseminate health care quality report cards through the Internet, including Medicare, state governments, and private organizations.<sup>5</sup> Furthermore, some health care payers have begun to pay health care providers based on formulas that incorporate quality measures.<sup>6</sup> Continued progress in developing health information technologies, quality measurement techniques, and new regulatory approaches suggests a need for reexamination of the health care regulatory framework.

This Article takes on this task. Its analysis begins in Part I, which describes the information-related failures that pervade health care markets, the problematic consequences of these failures, and potential responses to them. It introduces a three-part typology of responses to information failures: market-displacing responses such as licensure, which influence the quality of care by limiting patient choice; market-facilitating responses such as report cards, which influence the quality of care by remedying information failures; and market-channeling responses such as pay-for-performance programs, which influence the quality of care by encouraging providers to alter their behavior.<sup>7</sup>

Part II provides a theoretical analysis of how information technologies affect the costs and benefits of regulatory approaches falling into each of the three categories. It argues that the health information revolution should expand the role of market-channeling and market-facilitating regulations in the health care regulatory framework, while limiting the role of market-displacing regulations. It then assesses the extent to which regulatory change has actually begun to occur, drawing on recent examples of regulatory innovation.

Part III examines the implications of the health information revolution and associated regulatory shifts for both regulatory goals and regulatory roles. Subpart A argues that while all three regulatory

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<sup>5</sup> See *infra* Part II.B.

<sup>6</sup> See *infra* Part II.B.

<sup>7</sup> Previous scholars have recognized the categories of regulations here labeled “market-displacing” and “market-facilitating.” See *infra* Part I.B (describing previous classifications of responses to information failures); *infra* note 24 (documenting previous use of label “market-displacing”); *infra* note 37 (documenting previous use of label “market-facilitating”). The addition of the “market-channeling” category is helpful because it captures forms of health care regulation that share some but not all features of regulations in other categories. As discussed in Part III.A, these differences have important efficiency and equity implications.

approaches can potentially increase average quality levels, the differences in the ways they work may result in different distributions of quality levels across the population. Market-displacing regulations, for example, attempt to eliminate the poorest quality care, but permit quality to be allocated randomly above the threshold they set. By contrast, market-facilitating regulations allocate quality according to patient knowledge and willingness to pay. Market-channeling regulations may sometimes allocate quality according to willingness to pay, but do not ordinarily depend on patient knowledge.

One reason that these regulatory approaches may achieve different results is that the identities of the decision makers they involve differ. Subpart B of Part III argues that by increasing access to a common set of informational tools, the information revolution has expanded the roles of consumers, patients, and the public in defining regulatory goals; at the same time, it has also enabled a broader range of entities to assume regulatory functions. These changes can benefit patients by facilitating access to care that suits their needs, but also creates the potential for increasingly burdensome regulatory overlap. Subpart B analyzes the potential division of duties between public and private regulators and evaluates recent proposals of ways to better coordinate health care regulation.<sup>8</sup>

Part IV draws on the analysis of Parts II and III to offer suggestions about potential future directions for health care regulation.

## I. INFORMATION IMPERFECTIONS IN HEALTH CARE MARKETS

### A. *The Nature of Information Imperfections*

The problem of imperfect information pervades medicine. In some cases, we may not know of any available treatment; in others, we may not know which of several treatments achieves the best outcomes. Our lack of knowledge about medicine may preclude patients from receiving treatment that can improve their health status. Furthermore, even if researchers know that a particular treatment is

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<sup>8</sup> For examples of recent proposals, see INST. OF MED., PERFORMANCE MEASUREMENT: ACCELERATING IMPROVEMENT 1-16 (2006) [hereinafter IOM] (proposing creation of National Quality Coordination Board); Michelle M. Mello et al., *Fostering Rational Regulation of Patient Safety*, 30 J. HEALTH POL. POL'Y & L. 375, 411-18 (2005) (describing ways of "rationalizing . . . the regime of pluralistic regulation that characterizes patient safety," based on institutional capacities of regulators).

effective, providers do not always offer it.<sup>9</sup> While this failure to deliver high quality care may be due to a deficit in skills or experience, a reluctance to expend effort, or poorly organized or underfunded health care delivery systems, it may also be due to individual providers' lack of knowledge. A physician who fails to keep up with the medical literature or to make an effort to ascertain the contents of practice guidelines, for example, may be unaware of approaches to treatment that could obtain better health outcomes for patients.

The imperfect information that is most often cited when discussing health care markets, however, is not the imperfect information of the provider, but instead the imperfect information of the patient or purchaser.<sup>10</sup> In efficient health care markets, patients would purchase services based on both their quality and their price, prompting provider competition along these dimensions. A patient with perfect information can choose to receive services only from providers who consistently deliver high quality care or can contract with a provider to deliver a specified level of quality. Providers who wanted to meet the demand for high quality services would need to acquire the necessary information, develop the necessary skills and experience, and exert the necessary level of effort, as well as find ways to surmount institutional impediments.

But health care markets do not much resemble this portrait of efficiently functioning markets. Patients often cannot assess the quality of care they receive, either before or after it is delivered. In theory, patients can attempt to correct their information deficiencies

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<sup>9</sup> See Elizabeth A. McGlynn et al., *The Quality of Health Care Delivered to Adults in the United States*, 348 NEW ENG. J. MED. 2635, 2641-42 (2003) (concluding based on medical record review that deficits "in adherence to recommended process for basic care pose serious threats to the health of the American public"); E. Haavi Morreim, *A Dose of Our Own Medicine: Alternative Medicine, Conventional Medicine, and the Standards of Science*, 31 J.L. MED. & ETHICS 222, 224-25 (2003) (discussing studies showing that clinical practice often does not reflect current medical knowledge).

<sup>10</sup> A recent exception to this observation is Jennifer Arlen & W. Bentley MacLeod, *Torts, Expertise, & Authority: Liability of Physicians and Managed Care Organizations*, 36 RAND J. ECON. 494 (2005), which analyzes a model in which physicians' treatment recommendations depend on the extent to which physicians acquire appropriate information through an investment in expertise. Investment in expertise reduces the probability of error. *Id.* at 500-01. The authors show that if managed care organizations ("MCOs") exercise authority over physicians through a utilization review process and if authority and expertise are non-contractible, MCOs reduce physicians' incentives to acquire expertise. *Id.* at 515. The article concludes that because MCOs' review of medical decisions affect physician behavior, MCOs should be held liable for physician torts. *Id.*

by acquiring the necessary information. Doing so may be very costly, however. It is costly to collect raw data and to create and disseminate meaningful quality measures. It is also costly to use quality measures: patients must take the time to read through them and assess their relevance to their decision-making. Problems of bounded rationality may prevent patients from using data appropriately. If the perceived costs of obtaining and using data exceed the perceived benefits from doing so, individual patients will likely decline to seek out this information.<sup>11</sup>

Without some form of outside assistance, uninformed patients cannot choose their providers based on quality, pay their providers based on quality, or meaningfully contract based on quality. As a result, providers will have a limited incentive to improve quality to the level that patients desire. Even providers who for personal or professional reasons seek to deliver the highest quality of care possible may face difficulty doing so, because if quality is not observable, they may not be able to raise prices sufficiently to cover the costs of improving quality. Patients' lack of information therefore discourages efforts to increase quality and impedes the functioning of health care markets,<sup>12</sup> likely contributing to the health care quality deficiencies that have been identified in numerous reports and studies.<sup>13</sup>

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<sup>11</sup> Uninformed patients may not realize the extent to which there are differentials in quality; patients who believe that "all providers are the same" will not bother to seek out information about quality, regardless of whether their beliefs are correct. See *infra* Part IV.A (arguing that regulators should increase awareness of quality disparities).

<sup>12</sup> Another reason that health care markets diverge from this theoretical model is the complexity introduced by the varied roles of employers, insurers, and patients in selecting and paying health care providers. Often the patient selects the physician, but pays out-of-pocket only a fixed copayment for services provided. The result is that the patient has no reason to consider price in choosing a provider, just quality and convenience. At the same time, the insurer may limit provider networks and negotiate payment rates without regard to specific patients' interests. While market forces can help to align patient preferences and prices even within this framework — an insurer with poorly assembled networks may lose customers, for example, and insurers may need to pay higher fees to retain popular high quality physicians — this fractured purchasing process can lead to outcomes that would diverge from those in a more conventional market.

<sup>13</sup> See, e.g., INST. OF MED., *CROSSING THE QUALITY CHASM: A NEW HEALTH SYSTEM FOR THE 21ST CENTURY* 23-25 (2001) [hereinafter *CROSSING THE QUALITY CHASM*] (discussing "quality gap"); INST. OF MED., *TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM* 26-48 (2000) [hereinafter *TO ERR IS HUMAN*] (documenting prevalence of medical errors); see also David A. Hyman & Charles Silver, *The Poor State of Health Care Quality in the U.S.: Is Malpractice Liability Part of the Problem or Part of the*



In short, absent regulation, information failures may hinder patients' access to the quality of care they would otherwise demand and receive. The question then is whether regulation can remedy this problem.<sup>14</sup>

*B. Responses to Information Imperfections*

While the term “regulation” generally refers to the use of rules — *Black’s Law Dictionary* defines “regulation” as “the act or process of controlling by rule or restriction” — and often to government entities’ use of rules, it is frequently used more broadly in the health care context.<sup>15</sup> Professor Michelle Mello, Carly Kelly, and Professor Troyen Brennan, for example, have defined regulation “to include any organized and deliberate leveraging of power or authority to effect changes in the behavior of health care providers.”<sup>16</sup> This Article also uses the term “regulation” and its variants broadly to include any measure intended to intervene in the relationship between a health care provider and a consumer-patient by mandating, incentivizing, or facilitating an action by one party that might affect the nature of its relationship with the other. This definition is intended to capture all measures undertaken by third parties, whether public or private, that have the ultimate aim of altering the quality of care that providers deliver to patients.<sup>17</sup>

Health care quality regulations can be grouped according to their mechanisms for influencing quality. Regulatory responses to

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*Solution?*, 90 CORNELL L. REV. 893, 900-09 (2005) (describing studies showing high medical error rates and poor quality care).

<sup>14</sup> Other kinds of market imperfections and market failures may also affect health care markets. Providers with monopoly power (or buyers with monopsony power) may prevent markets from reaching competitive equilibria, for example. Insurance coverage may also interfere with the operations of health care markets. This article focuses primarily on information-related market failures.

<sup>15</sup> BLACK’S LAW DICTIONARY 1311 (8th ed. 2004).

<sup>16</sup> Mello et al., *supra* note 8, at 376.

<sup>17</sup> This definition of “regulation” sweeps within it many measures not conventionally thought of as regulatory, such as financial incentives that reward improved care. Similarly, it attaches the label “regulator” to third parties — parties other than the provider or patient — not conventionally thought of as regulators of health care providers, such as patients’ employers. Using the regulatory label is nevertheless helpful for expositional purposes because it captures all mechanisms intended to influence quality, just as traditional command-and-control regulations are. There are certainly important differences among the various types of regulation, including their degree of reliance on private entities and on markets; these differences and their implications will be explored systematically in Parts I, II, and III of this Article.

imperfect information and bounded rationality are often separated into two broad categories. In their classic analysis of the desirability of market interventions in the presence of imperfect information, for example, Professors Alan Schwartz and Louis Wilde suggest that “[l]egal intervention . . . should be designed to enable each individual consumer to make the optimal choice, or otherwise to protect him from the consequences of making uninformed choices.”<sup>18</sup> Professors Christine Jolls and Cass Sunstein argue that “legal policy may respond best to problems of bounded rationality not by insulating legal outcomes from its effects, but instead by operating directly on the boundedly rational behavior and attempting to help people either to reduce it or eliminate it.”<sup>19</sup> In his examination of managed care patient protection laws, Professor Russell Korobkin refers to the “common dichotomy of legal solutions to market imperfections”: an approach that “requires that government act to mimic efficient market outcomes,” and an approach that “requires government (or private entities) to facilitate efficient private ordering.”<sup>20</sup> This Article labels the two types of regulation identified by these authors “market-displacing” and “market-facilitating.” It also identifies a third type of regulation that shares some characteristics with each of these approaches: “market-channeling” regulation.

### 1. Market-Displacing Regulatory Approaches

Schwartz and Wilde, Jolls and Sunstein, and Korobkin all refer to a category of regulatory approaches that protect people from the harsh consequences of their ill-informed choices, often by precluding them from making these choices in the first place. Schwartz and Wilde offer the example of protecting uninformed consumers through mandated or prohibited contract terms.<sup>21</sup> Jolls and Sunstein speak of insulating outcomes from the effects of bounded rationality, pointing to the heightened standard for product liability and bans on dangerous products, both of which are intended to protect consumers who

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<sup>18</sup> Alan Schwartz & Louis L. Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis*, 127 U. PA. L. REV. 630, 633 (1979).

<sup>19</sup> Christine Jolls & Cass R. Sunstein, *Debiasing Through Law*, 35 J. LEGAL STUD. 199, 200 (2006).

<sup>20</sup> Russell Korobkin, *The Efficiency of Managed Care “Patient Protection” Laws: Incomplete Contracts, Bounded Rationality, and Market Failure*, 85 CORNELL L. REV. 1, 63 (1999).

<sup>21</sup> Schwartz & Wilde, *supra* note 18, at 633-34.

underestimate product risks.<sup>22</sup> Korobkin's market mimicry solution also limits choices by displacing actual markets with regulatory actions that achieve the results of efficient markets; his example is health insurance benefit mandates.<sup>23</sup> The approaches in this category are "market-displacing" approaches, in the sense that they restrict or eliminate individuals' abilities to engage in unfettered market transactions.<sup>24</sup>

Perhaps the most visible and straightforward example of a market-displacing regulatory approach to addressing health care quality issues is medical licensure. State licensure frameworks protect ill-informed patients against poor quality care in two ways. First, state statutes impose minimum licensure qualifications to practice medicine and prohibit the unauthorized practice of medicine.<sup>25</sup> The licensure requirement works prospectively to protect patients against poor quality care: if the prohibition against unauthorized practice is enforced, patients will be unable to contract with providers who do not fulfill licensure requirements. The prohibition prevents uninformed patients from mistakenly selecting unqualified practitioners they would have avoided, had they been more informed. Properly designed licensure requirements will prevent those most

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<sup>22</sup> Jolls & Sunstein, *supra* note 19, at 207.

<sup>23</sup> Korobkin, *supra* note 20, at 63.

<sup>24</sup> Other authors have recognized the importance of market-displacing strategies in health care regulatory regimes. Professor Peter Jacobson observes that regulatory strategies can be ordered along a continuum from "market-facilitating" to "market-displacing." Peter D. Jacobson, *Regulating Health Care: From Self-Regulation to Self-Regulation?*, 26 J. HEALTH POL. POL'Y & L. 1165, 1166 (2001). He explains that market-displacing approaches are designed to substitute for market forces. *Id.* Professors William Sage and Peter Hammer note that unlike market-facilitating remedies for imperfect competition in health care markets, "market-displacing measures work to counteract market failure" through non-market means, "potentially sidestepping competition entirely to achieve greater efficiency." William M. Sage & Peter J. Hammer, *A Copernican View of Health Care Antitrust*, 65 LAW & CONTEMP. PROBS. 241, 290 n.70 (2002). Similar terms have been introduced in discussions of regulation in other industries. In an article focusing on consumer banking regulations, for example, Professors Robert Cooter and Edward Rubin explain, "The responses to market failure can be comprehensively described as market perfecting, market displacing, and market stimulating." In their typology, a market displacing statute is one that "concludes that the operation of the market cannot be restored, and that its failure can only be remedied by replacing it with governmental rules." Robert D. Cooter & Edward L. Rubin, *Orders and Incentives as Regulatory Methods: The Expedited Funds Availability Act of 1987*, 35 UCLA L. REV. 1115, 1174 (1988).

<sup>25</sup> See BARRY R. FURROW ET AL., HEALTH LAW §§ 3-1 to -10 (2d ed. 2000) (describing professional licensure mechanisms).

likely to deliver poor quality care from providing services to patients.

Second, state statutes create professional oversight boards responsible not only for overseeing the licensure process, but also for disciplining licensed professionals for unprofessional conduct and incompetence.<sup>26</sup> This regulatory approach differs from the prohibition on unauthorized practice in the sense that it is retrospective; it responds to poor quality practice that has already occurred, rather than the mere probability of poor quality practice. For the uninformed patient who was the victim of poor quality service, professional discipline offers little remedial benefit. On the other hand, this regulatory approach can still be classified as market-displacing in two respects. To the extent that the board sanctions physicians by suspending, restricting, or revoking medical licensure, professional discipline precludes future market transactions — the delivery of health care services — between the sanctioned physician and patients. In addition, the possibility of future professional discipline serves as an incentive for physicians to conform their behavior to the professional standards recognized by the board. As a result, the board's regulatory actions will tend to prevent patients from purchasing low quality services from physicians.

Hospitals and their medical staff committees and managed care organizations have adopted a similar dual approach in regulating the quality of affiliated providers, thus protecting ill-informed patients against the receipt of services of substandard quality.<sup>27</sup>

Before hospitals grant physicians clinical privileges or managed care organizations admit physicians to their panels, they review the physicians' credentials to assure a minimal level of likely quality. In addition, they may take action to suspend physicians' hospital privileges or remove physicians from managed care panels if they later determine that the physicians fail to satisfy minimum quality requirements.

Another example of a market-displacing regulatory approach is malpractice law.<sup>28</sup> Malpractice law regulates providers by enforcing professionally defined standards of care. Like professional discipline

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<sup>26</sup> See *id.* §§ 3-11 to -23 (describing professional discipline process). Similar statutes apply to nursing and other health-related professions.

<sup>27</sup> See *id.* §§ 4-1 to -8 (describing hospital staff privileges); John D. Blum, *The Evolution of Physician Credentialing into Managed Care Selective Contracting*, 22 AM. J.L. & MED. 173, 187-90 (1996) (examining managed care credentialing issues).

<sup>28</sup> See Mello et al., *supra* note 8, at 386-87 (describing tort law as kind of regulation that serves deterrent function).

processes, malpractice law is retrospective in that it responds to instances in which poor quality care has already been delivered. Also like professional discipline processes, it nonetheless has a prospective effect because it gives providers an incentive to conform to prevailing standards.<sup>29</sup> Courts reinforce the market-displacing aspect of malpractice law by generally refusing to permit parties to contract out of malpractice liability.<sup>30</sup> As a result, poorly informed consumers cannot contract for services of a quality level below the legally recognized standard of care.

State licensure and disciplinary processes, hospital and managed care credentialing and peer review processes, and malpractice law are all market-displacing in the sense that they attempt to remove from the market transactions that might otherwise occur.<sup>31</sup> While the nature of these processes varies, they share an intent to eliminate care deemed to be of unacceptably low quality.<sup>32</sup>

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<sup>29</sup> Malpractice law differs from professional discipline processes, however, in offering a remedy in the form of damages to patients harmed by low quality care.

<sup>30</sup> See, e.g., FURROW ET AL., *supra* note 25, § 6-5 (“Waivers of liability and other attempts at exculpating health care providers from liability are treated with disfavor by the courts.”).

<sup>31</sup> Certificate of need (“CON”) regulation is another example of a regulatory approach that removes transactions from the market. States with CON regulations require entities hoping to open certain health care facilities (such as hospitals or nursing homes) to obtain regulatory approval first. See Christopher J. Conover & Frank A. Sloan, *Does Removing Certificate-of-Need Regulations Lead to a Surge in Health Care Spending?*, 23 J. HEALTH POL. POL’Y & L. 455, 455-56 (1998) (describing CON regulations). While these regulations were initially intended to reduce duplication of services, lowering health care costs, they also could improve health care quality, either through the review process itself or, given the positive association between patient volumes and health care outcomes, by increasing the likelihood that each operating facility treats a high volume of patients. *Id.* at 455-56, 477-78; see also Laretta Higgins Wolfson, *State Regulation of Health Facility Planning: The Economic Theory and Political Realities of Certificates of Need*, 4 DEPAUL J. HEALTH CARE L. 261, 291 (2001) (describing criteria used in reviewing CON applications). The evidence that CON regulations actually increase quality is limited. See Conover & Sloan, *supra*, at 477-78.

<sup>32</sup> These processes could be characterized as “market-facilitating” with respect to patients who prefer the quality of care dictated by these processes. Professors Jennifer Arlen and W. Bentley MacLeod, for example, have pointed out that when the quality of health care and the actions that produce it (such as investment in expertise) are non-contractible, physicians may provide suboptimal care — care below the level of quality that patients would prefer. In such a setting, tort liability may induce optimal care. See Jennifer Arlen & W. Bentley MacLeod, *Malpractice Liability for Physicians and Managed Care*, 78 N.Y.U. L. REV. 1929, 1978-79 (2003). Even if the tort standards reflected the preferences of the majority of patients, however, they would still be

## 2. Market-Facilitating Regulatory Approaches

The second category of regulatory approaches identified by Schwartz and Wilde, Jolls and Sunstein, and Korobkin involves efforts to improve people's decision-making abilities by helping them overcome their rationality or information deficiencies.<sup>33</sup> Schwartz and Wilde analyze legislative efforts "to enable each individual consumer to make the optimal choice" by mandating that firms disclose information to consumers.<sup>34</sup> Jolls and Sunstein suggest that regulators can respond to "over-optimism" by requiring firms to frame product safety information in terms of the potential negative consequences of using their product, rather than the positive consequences of using an alternative; they label this type of regulatory response "debiasing through law."<sup>35</sup> Korobkin notes that one way governments may try to address market failures is by providing or requiring managed care organizations to provide information about the benefits covered by managed care plans.<sup>36</sup> These approaches are "market-facilitating" in the sense that they facilitate the operations of traditional, decentralized markets.<sup>37</sup> In a market characterized by information imperfections, they affect outcomes not by limiting purchaser choices or otherwise restricting market operations, but instead by altering the market participants' decision-making processes through mechanisms that correct information and rationality problems.

The most basic market-facilitating regulatory approach in the health care setting is to increase patients' access to information about quality. Early examples of information-based regulation mostly took the form of state provision of basic data about physician qualifications and disciplinary records. Following a 1994 series of media stories about

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market-displacing because they constrain the choices of other patients.

<sup>33</sup> Other scholars have discussed this category of regulatory approaches in the health care context. See, e.g., John V. Jacobi, *Competition Law's Role in Health Care Quality*, 11 ANNALS HEALTH L. 45, 49 (2002) (distinguishing between command-and-control regulation, such as licensure, and competition-enhancing regulation, such as information-related rules and antitrust law).

<sup>34</sup> Schwartz & Wilde, *supra* note 18, at 633, 635.

<sup>35</sup> Jolls & Sunstein, *supra* note 19, at 226.

<sup>36</sup> Korobkin, *supra* note 20, at 66.

<sup>37</sup> The term "market-facilitating" has often been used to describe health care regulations. See, e.g., Jacobson, *supra* note 24, at 1166; Korobkin, *supra* note 20, at 67; Sage & Hammer, *supra* note 24, at 290 n.70; Sage, *supra* note 4, at 1801. Cooter and Rubin use the term "market-perfecting" to refer to statutes that supply to a failing market "the particular element that the failure has eliminated." Cooter & Rubin, *supra* note 24, at 1174.

quality of care deficiencies among local physicians, the Massachusetts Board of Registration in Medicine developed a plan to disseminate to the public much of the information it had collected about its registered physicians.<sup>38</sup> Today, patients seeking information about their Massachusetts physicians can examine their profiles online to learn about their education, training, disciplinary, and malpractice records, among other information.<sup>39</sup> Pennsylvania is one of the pioneers of a second type of information-based regulatory approach, the health care report card. Pennsylvania requires hospitals to report various data to the Pennsylvania Health Care Cost Containment Council (“PHC4”), which then publishes annual report cards that present individual hospitals’ and physicians’ risk-adjusted mortality and readmission rates for cardiac bypass surgery as well as various quality measures for hip and knee replacement.<sup>40</sup> If the reported

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<sup>38</sup> See Frances H. Miller, *Illuminating Patient Choice: Releasing Physician-Specific Data to the Public*, 8 LOY. CONSUMER L. REP. 125, 127-33 (1996) (describing development of Board of Registration’s disclosure policy).

<sup>39</sup> Mass. Bd. of Registration in Med.: On-Line Physician Profile Site, <http://profiles.massmedboard.org/MA-Physician-Profile-Find-Doctor.asp> (last visited Mar. 28, 2007). The website describes medical education, postgraduate training, board certification, hospital affiliations, honors and awards, professional publications, hospital and board disciplinary actions, criminal convictions, and malpractice claims on which payments have been made, among other things. *Id.* Other states have developed similar websites, although they tend to be less comprehensive. Maryland, for example, discloses information about physician education, postgraduate training, specialty board certification, self-designated practice areas, hospital privileges, disciplinary actions, malpractice judgments, malpractice settlements, and convictions for crimes involving moral turpitude. See Md. Bd. of Physicians, Practitioners Profile System, <https://www.mbp.state.md.us/bpqapp/> (last visited Mar. 28, 2007). California discloses information about physician education, disciplinary actions, and malpractice judgments. Med. Bd. of Cal.: Physician License Lookup, <http://www.medbd.ca.gov/Lookup.htm> (last visited Mar. 28, 2007). Minnesota provides the physician’s address, birth year, and basic license information, confirms the existence of a medical degree, and notes whether any disciplinary action has been taken. Minn. Bd. of Med. Prac.: Health Professional Database, <http://www.docboard.org/mn/df/mndf.htm> (last visited Mar. 28, 2007).

<sup>40</sup> PENN. HEALTH CARE COST CONTAINMENT COUNCIL (PHC4), PENNSYLVANIA’S GUIDE TO CORONARY ARTERY BYPASS GRAFT SURGERY 2004, 2-5 (Feb. 2006), available at <http://www.phc4.org/reports/cabg/04/docs/cabg2004report.pdf>. For cardiac bypass surgery, PHC4 publishes indicators for whether in-hospital mortality, 30-day mortality, 7-day readmission, and 30-day readmission rates are lower, the same, or higher than expected. It also reports the patient’s length of stay. See *id.* at 10-25. For total hip and knee replacement, PHC4 reports on whether joint infection or device problems, lung and leg blood clots, readmissions, and post-operative lengths of stay for both surgeons and hospitals are lower, the same, or higher than expected. PHC4, TOTAL HIP AND KNEE REPLACEMENTS 7-23 (June 2005), available at

information finds its way to consumers, who then use it to select providers, it is market-facilitating in nature. It allows consumers to choose providers offering the level of quality they prefer, while at the same time giving providers in search of patients an incentive to improve their quality.<sup>41</sup>

Other regulations may fall within the market-facilitating category not because they directly communicate information to patients, but because they support efforts to do so. Regulations that help reduce the costs of producing or disseminating information, for example, will ultimately be market-facilitating in nature. So will regulations that reduce the costs of using information, such as by standardizing the presentation of information or otherwise helping patients sort through information. Regulations that prohibit the dissemination of “bad” information, such as prohibitions on false advertising, are also market-facilitating. In short, any intervention that improves the functioning of markets by helping to correct their imperfections can be labeled market-facilitating.

### 3. Market-Channeling Regulatory Approaches

Many of the efforts to address quality concerns in health care fall

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<http://www.phc4.org/reports/hipknee/02/docs/hipkneeFY2002report.pdf>. In addition, it publishes information about wound infection rates for hospitals. *Id.*

<sup>41</sup> Report cards work through non-market facilitating mechanisms as well. Even if patients ignore report cards, a report of poor performance can prompt a reaction from providers who seek to protect their reputations among friends and colleagues, or who simply believe that they should deliver the highest quality of care possible. They may react to a report of poor quality by searching for ways to improve or by curtailing their practices. See, e.g., Mark R. Chassin, *Achieving and Sustaining Improved Quality: Lessons from New York State and Cardiac Surgery*, 21 HEALTH AFF. 40, 42-45 (2002) (describing responses of physicians and hospitals to New York’s reporting of bypass surgery outcomes); Judith H. Hibbard et al., *Does Publicizing Hospital Performance Stimulate Quality Improvement Efforts?*, 22 HEALTH AFF. 84, 84 (2003) (concluding that “[m]aking performance information public appears to stimulate quality improvement activities in areas where performance is reported to be low”); Ashish K. Jha & Arnold M. Epstein, *The Predictive Accuracy of the New York State Coronary Artery Bypass Surgery Report-Card System*, 25 HEALTH AFF. 844, 844 (2006) (“Surgeons with the highest mortality rates were much more likely than other surgeons to retire or leave practice after the release of each report card.”). Well-designed report cards can further boost health care quality by supplying indicators that can be used as benchmarks, thus reducing providers’ marginal costs of engaging in quality improvement initiatives. Note that if the motivation for self-improvement is purely medical professionalism or, more broadly, the desire to benefit patients, then the mechanism is “market-channeling” in that it neither mandates a change in behavior nor operates through its effect on consumer decision making. See *infra* Part I.B.3.



neatly into the market-displacing or market-facilitating categories, but a few do not. Often implemented through nongovernmental entities, regulations that fall into this alternative, intermediate category tend to be market-displacing in the sense that they alter provider behavior without operating through the interface between provider and patient. They differ from classic market-displacing regulations, however, in that they merely influence behavior rather than directly mandate or prohibit it.<sup>42</sup> This intermediate approach can therefore accommodate diverse and evolving patient preferences in ways that traditional market-displacing regulations such as licensure cannot; in this respect, it more closely resembles the market-facilitating approach. The centrality of third-party regulators in implementing this form of regulation, however, means that it may generate different market results than would purely market-facilitating regulations. This regulatory approach is therefore more aptly labeled “market-channeling” than market-displacing or market-facilitating.

One example that belongs in the market-channeling category is the health care institution-led voluntary quality improvement initiative. A hospital, for example, might implement total quality management techniques to improve the care that physicians deliver to patients; a physician group might engage in efforts to encourage group members’ adherence to practice guidelines. While these forms of quality improvement might not involve the formal oversight mechanisms of the credentialing or peer review processes, they nonetheless involve attempts to alter providers’ behavior. Because they involve third-party efforts to elevate quality levels, efforts that do not necessarily directly involve patients, they are market-channeling forms of regulation.<sup>43</sup>

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<sup>42</sup> Sage makes a similar distinction when discussing mandates to disclose health-related performance measures. He explains that this approach to regulation differs from substantive standard setting in that “it avoids the task of establishing an absolute performance standard, contenting itself with narrowing gaps in relative performance, as well as promoting longitudinal efforts to improve quality over time.” Sage, *supra* note 4, at 1781. In the terminology of this Article, it would be market-channeling entities that take advantage of performance-related disclosure to influence care; absolute standards would be set through market-displacing regulation.

<sup>43</sup> Sage has similarly highlighted the role of medical professionals in setting target quality levels and has argued that “informed consumerism is incomplete as a normative model for health care because fiduciary responsibilities of intermediaries such as physicians traditionally have been defined apart from economic considerations or a contractual framework.” Sage, *supra* note 4, at 1711. If physicians make decisions on behalf of patients without regard to their economic interests, then the physicians’ decisions are market-channeling or market-displacing in form, depending on the degree to which they are mandated by professional norms.

Similarly, Quality Improvement Organizations, which work under contract with Medicare to improve the quality of hospital care, perform market-channeling regulatory functions when they provide hospitals technical assistance in implementing mechanisms to enhance quality.<sup>44</sup>

Other examples of market-channeling mechanisms include accreditation and certification. Many previous commentators have described these practices as market-facilitating, and in part, they are.<sup>45</sup> By communicating to patients the fact that hospitals or physicians meet quality standards established by health care professionals, accreditation and certification processes correct information failures and help health care markets function more effectively. The content of these standards, however, are determined not by individual patients' preferences, but instead by the organizations that set them. By defining standards, accreditation and certification organizations exert significant direct influence over providers' behavior, much as market-displacing mandates would. As long as health care providers are permitted to deviate from the standards these organizations set, however, this regulatory approach differs from compulsory systems such as licensure.<sup>46</sup> While institutions seeking accreditation will strive to comply with the relevant standards, there is no legal penalty if they do not; patients can in theory continue to seek care at the institution.

From the patients' perspective, payers' reimbursement mechanisms can also be characterized as market-channeling.<sup>47</sup> Under pay-for-

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<sup>44</sup> See Ctrs. for Medicare & Medicaid Servs. (CMS), U.S. Dep't of Health & Human Servs., Quality Improvement Organizations: Overview, <http://www.cms.hhs.gov/QualityImprovementOrgs/> (last visited Mar. 28, 2007) (describing functions of Quality Improvement Organizations). *But see* Claire Snyder & Gerard Anderson, *Do Quality Improvement Organizations Improve the Quality of Hospital Care for Medicare Beneficiaries?*, 293 JAMA 2900, 2900 (2005) (concluding that participants in Quality Improvement Organization programs do not show greater quality improvement than non-participants).

<sup>45</sup> *E.g.*, Jacobson, *supra* note 24, at 1166; Sage & Hammer, *supra* note 24, at 290.

<sup>46</sup> The more widespread expectations of compliance with accreditation and certification standards become, the more closely these mechanisms resemble market-displacing regulations. If accreditation standards are used to define the standard of care, for example, or if accreditation is a prerequisite for business operations because of payer requirements, then accreditation is effectively a market-displacing regulation with respect to the market interactions between individual patients and providers. Similarly, if board certification becomes a prerequisite for physicians to obtain hospital privileges, it takes the form of a market-displacing regulation.

<sup>47</sup> Professor Michelle Mello and her coauthors have suggested that while regulation is ordinarily contrasted with the market as a means to achieve social goals, regulation can occur through market mechanisms, including value-based purchasing.

performance initiatives, for example, insurers reward health care providers for demonstrating that they provide high quality care.<sup>48</sup> As with other forms of market-channeling regulation, some observers might not consider pay-for-performance programs a regulatory approach. If payers are treated as perfect agents of consumer-patients or as consumers themselves, then pay-for-performance programs are just examples of fully-informed markets working properly.<sup>49</sup> Payers, fully informed about providers' quality, pay them for that quality. But because payers are not the ultimate beneficiaries of the providers' services, they can be considered regulatory entities — they work on the patients' behalf to encourage providers to deliver higher quality care. Under this view, pay-for-performance initiatives are somewhat market-displacing, because once established, they encourage providers to improve quality without regard for the preferences of individual patients. At the same time, they are not fully market-displacing, because they do not pose an obstacle to patients seeking any given level of quality. They are instead market-channeling: they give financial incentives to providers to improve their quality of care, without any direct market pressure from patients to do so.

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Mello et al., *supra* note 8, at 392. Sage has also referred to the pay-for-performance mechanism as a “fairly standard type of regulatory intervention” and has recognized that “[i]t sits somewhere in between a mandatory information disclosure law . . . and a command-and-control standard.” William M. Sage, *Pay for Performance: Will It Work in Theory?*, 3 *IND. HEALTH L. REV.* 303, 323 (2006); see also William M. Sage et al., *Bridging the Relational-Regulatory Gap: A Pragmatic Information Policy for Patient Safety and Medical Malpractice*, 59 *VAND. L. REV.* 1263, 1266 (“Health care quality oversight is conducted by state regulators, private accreditation bodies such as the Joint Commission on Accreditation of Healthcare Organizations (‘JCAHO’), internal institutional self-regulatory processes, and — through payment policy rather than explicit regulation — Medicare, Medicaid, and private health insurers.”).

<sup>48</sup> See generally Arnold M. Epstein et al., *Paying Physicians for High-Quality Care*, 350 *NEW ENG. J. MED.* 406 (2004) (describing structure of pay-for-performance programs).

<sup>49</sup> Employers and insurers will be at best imperfect agents of patients, which means that market-channeling regulatory approaches may not meet patient needs. Of course, imperfect agency is a potential problem for all regulators and all regulatory approaches. See, e.g., John V. Jacobi, *Patients at a Loss: Protecting Health Care Consumers Through Data Driven Quality Assurance*, 45 *KAN. L. REV.* 705, 766, 775-76 (1997) (noting that data-driven quality assurance in managed care context is controlled by employers, providers, and governments, and that these organizations' interests may not align perfectly with consumers' interests).

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## II. REGULATORY SHIFTS IN AN INFORMATION AGE

Market-displacing, market-channeling, and market-facilitating forms of regulation each play an important role in addressing information-related failures in health care markets. While this multifaceted regulatory framework is likely to persist, the relative importance of each approach to the regulatory framework has shifted over time. A significant contributor to this regulatory evolution — and a likely driving force behind future evolution — is innovation in information technology that has reduced information costs.

### A. *Effects of the Information Revolution in Theory*

#### 1. Changes in Regulatory Costs

Forty years ago, Avedis Donabedian described three dimensions along which quality can be assessed: structure, process, and outcomes.<sup>50</sup> Structural measures of quality, such as completion of a medical residency or the number of nurses assigned to each bed, are generally easily observable and straightforward to measure. They are the provider's attributes and tend to be constant over time, so relatively few measures need be taken. While information technologies may provide some assistance in collecting and storing these measures, they probably would not generate significant savings in measurement costs.

By contrast, process and outcome measures of quality may vary with each clinical encounter. Unless someone is assigned the task of personally observing each provider or patient, indicators of process quality, such as the delivery of clinically appropriate drugs in the hospital setting, must ordinarily be abstracted from medical records after the fact. Outcome measures such as mortality, hospital readmission, disability, and self-assessed health status will also vary with each treatment episode and must somehow be tracked. If process and outcome measures are to be transformed into meaningful measures of provider quality, their clinical basis must first be established, and then they must be consistently collected, appropriately aggregated, and carefully analyzed. Outcome measures of quality must be accurately risk-adjusted so that they reflect the

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<sup>50</sup> Avedis Donabedian, *Evaluating the Quality of Medical Care*, 44 MILBANK MEMORIAL FUND Q. 3, 166, 167-69 (1966) (describing content of outcome-, process-, and structure-based quality assessment methods).

quality of medical care provided, rather than patients' underlying characteristics and illnesses. Information technologies can help with many of these tasks. If the only way to compile information about patient characteristics and patient outcomes were to manually abstract data from the patients' medical records and then to analyze it by hand, or by using the computers of the 1950s, systematically producing quality measures would be prohibitively costly.

As Jost recognized, innovations in information technology have reduced the costs of engaging in this kind of analysis.<sup>51</sup> First, information technology has reduced the cost of collecting, aggregating, and storing the data that underlie many measures of quality. Health care providers now collect and transmit in electronic form vast quantities of data to payers such as health plans and Medicare in connection with their efforts to obtain reimbursement. While these records are far from ideal for assessing quality, they contain enough information to perform some quality analyses; the existence of such records greatly reduces the marginal costs of creating quality measures. More detailed data from patient records is much more useful, and this too is increasingly stored in electronic form. Approximately 15% to 20% of U.S. physicians' offices and 20% to 25% of U.S. hospitals are now estimated to have adopted electronic medical record systems.<sup>52</sup> While growth in electronic medical record adoption has been very slow, one of the central goals of the recently created federal Office of the National Coordinator for Health Information Technology is to promote the widespread adoption of health information technologies.<sup>53</sup> The proliferation of electronic medical records will greatly facilitate the extraction and storage of data about patient characteristics, treatments, and outcomes, further decreasing quality measurement costs in the future.

Second, information technology has reduced the cost of analyzing data. Increases in computing power and software sophistication have

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<sup>51</sup> See Jost, *supra* note 2, at 836 ("Developments in information processing technology . . . have dramatically enhanced the ability of the health care industry to collect, process, and analyze data. These advances create the possibility of engaging in analysis of outcomes of health care processes."); see also ROBERT I. FIELD, *HEALTH CARE REGULATION IN AMERICA: COMPLEXITY, CONFRONTATION AND COMPROMISE* 237-38 (2007) (discussing impact of information technology on medical care).

<sup>52</sup> Richard Hillestad et al., *Can Electronic Medical Record Systems Transform Health Care? Potential Health Benefits, Savings, and Costs*, 24 *HEALTH AFF.* 1103, 1104 (2005).

<sup>53</sup> Office of the National Coordinator for Health Information Technology: Statement of Organization, Functions, and Delegations of Authority, 70 *Fed. Reg.* 48,718, 48,718 (Aug. 19, 2005).

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facilitated the statistical analysis of data that has either been collected in or converted into electronic form. Improved computing capabilities have made possible complex analyses that control for factors that might otherwise interfere with assessing quality.

Finally, the lower costs of data collection, storage, and analysis benefit not only the mechanical process of calculating performance on quality measures, but also the initial development of quality measures, particularly process measures of quality. The growth of evidence-based medicine has played an important role in advancing efforts to assess quality. While a number of quality measures and practice guidelines continue to be consensus-based, clinical trials have become an increasingly important source of information about the sorts of practices that are correlated with better outcomes. Like the quality measures they sometimes engender, clinical trials depend on data collection, storage, and analysis. In this respect, too, the health information revolution has decreased the cost of quality measurement.<sup>54</sup>

Measures of clinical quality, whether structure-, process-, or outcome-based, are critical inputs into the health care regulatory production process. Licensure depends on physician-provided information about training; professional discipline, on patient- and physician-initiated complaints about physician performance; pay-for-performance initiatives and report cards, on data about health care structures, processes, and outcomes. Information technologies that reduce the costs of information inputs like these should have two effects on the production of regulation. First, if technically possible, the now less costly information should displace other, relatively more expensive regulatory inputs.<sup>55</sup> Specifically, regulators seeking to regulate efficiently should make relatively more use of information in the regulatory process. For example, if the costs of the vigilance and effort required to identify and report deficiencies to licensure boards through complaints is high, and if information technologies make possible monitoring through a relatively inexpensive automatic reporting system, then we should adopt such a reporting system.

Second, a decrease in input costs will reduce the marginal cost of regulation, which should prompt more aggressive regulation, all else

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<sup>54</sup> See Jost, *supra* note 2, at 836 (explaining importance of advances in information technologies for clinical studies).

<sup>55</sup> Cf. WALTER NICHOLSON, INTERMEDIATE MICROECONOMICS AND ITS APPLICATION 524-25 (5th ed. 1990) (explaining that fall in wages would lead to substitution of labor for capital inputs into production process).

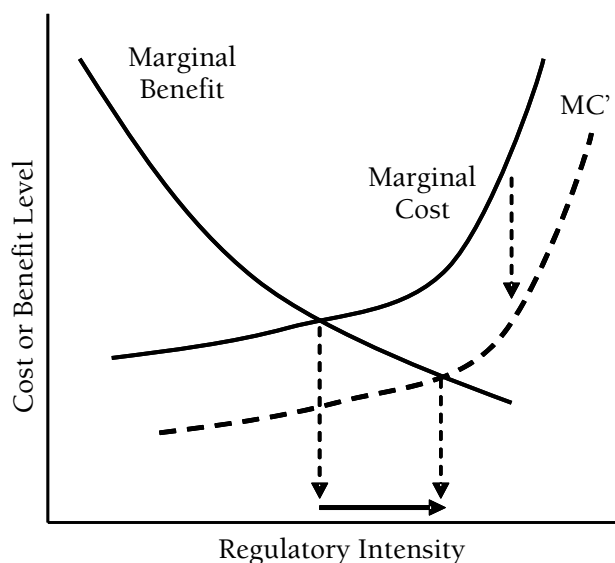
equal.<sup>56</sup> The socially optimal level of regulation, like the socially optimal level of production of any good or service, is reached when its marginal benefit equals its marginal cost. If regulation's marginal benefit exceeds its marginal cost, it is worthwhile to regulate more; if regulation's marginal cost exceeds its marginal benefit, then society will benefit from regulating less. All else equal, as information technology improvements reduce the marginal cost of regulation, there will be more situations in which the benefit of regulation exceeds its cost. More regulation therefore becomes optimal. Figure 1 illustrates the mechanics of the process: as marginal costs decline, the optimal level of regulatory intensity increases. Increased regulatory intensity can take the form of enhanced enforcement or improved quality or increased quantity. Regulations that were once cost-prohibitive — regulations for which costs exceeded benefit at any conceivable level of regulation — suddenly begin to make sense as a result of the health information revolution.<sup>57</sup>

Figure 1.

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<sup>56</sup> Cf. Esty, *supra* note 1, at 175 (“The ability to fill information gaps changes the relative advantages and disadvantages of different regulatory regimes and effects a shift in our environmental protection ‘possibility frontier.’”).

<sup>57</sup> Cf. *id.* at 192 (arguing that environmental controls will be adopted earlier when information costs are lower).



For each type of regulation, the extent of such expansionary effects depends on the magnitude of the information cost decline and the extent of information use, among other factors. As previously explained, these effects are likely to be the most dramatic for regulatory technologies that make use of process and outcome measures of quality, rather than structural measures. At least as currently designed, for example, the licensure process depends on information such as the nature and extent of applicants' medical education, and so would not be much affected by lower information costs. Pay-for-performance programs and report cards, on the other hand, often make use of process and outcome-based measures of quality. All else equal, then, the optimal levels of such regulatory approaches would be higher in the aftermath of the health information revolution. Other regulatory approaches may fall between these two extremes. Like licensure, the board certification process has traditionally relied on structural measures of quality such as education and training. As information technology makes additional measures of quality possible, however, it may become optimal to take advantage of them in the certification process. Because the market-channeling and market-facilitating approaches to regulation tend to be the most



data-intensive, they will be subject to the most expansionary pressure as a result of the health information revolution.

Jost describes how improved information technologies have contributed to the development and expansion of two quality oversight techniques: total quality management and health care report cards.<sup>58</sup> The creation of statistical quality measures allows outsiders who did not actually observe the care delivered, and who may not even know much about medicine, to monitor the quality of care that is delivered. This makes more feasible not only lay management and consumer report cards, as Jost recognizes, but also pay-for-performance and other market-channeling techniques implemented by third parties.<sup>59</sup>

So far, the analysis has focused mainly on technological innovations that have reduced the costs of aggregating and analyzing information. One of the most important contributors to the health information revolution, however, was in its infancy when Jost's article and the earliest critiques of report cards were published: the Internet. To benefit from a report card in the pre-Internet world, a patient had to first discover its existence and then go to the trouble of obtaining a printed version. Today, a patient interested in health care quality might come across report cards through a simple Internet search; patients can then easily obtain the report card information online.<sup>60</sup> Internet use has expanded rapidly: more than 70% of Americans report using the Internet, including about 30% of those sixty-five and older.<sup>61</sup> The Internet has dramatically reduced the costs of transmitting information, particularly in situations where it must be transmitted to large numbers of users. For this reason, the

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<sup>58</sup> See Jost, *supra* note 2, at 850-55 (report cards); *id.* at 855-57 (quality management).

<sup>59</sup> See FIELD, *supra* note 51, at 240 (describing how information technology supports development of both report cards and pay-for-performance programs).

<sup>60</sup> In a 2004 survey, 37% of respondents reported that they would be very likely to search for health care quality information on an Internet website, while only 20% reported being likely to order a printed booklet. HENRY J. KAISER FAMILY FOUND. ET AL., NATIONAL SURVEY ON CONSUMERS' EXPERIENCES WITH PATIENT SAFETY AND QUALITY INFORMATION 5 (2004), available at <http://www.kff.org/kaiserpolls/7209.cfm> (follow "Survey Summary and Chartpack" hyperlink).

<sup>61</sup> Pew Internet & American Life Project, September 2005 Tracking Survey: Demographics of Internet Users, [http://www.pewinternet.org/trends/User\\_Demo\\_12.05.05.htm](http://www.pewinternet.org/trends/User_Demo_12.05.05.htm) (last visited Mar. 28, 2007). This number has grown quickly over time; as of 2000, for example, fewer than 50% of American adults used the Internet. Percent of American Adults Online, 1995-2004, <http://www.pewinternet.org/trends/InternetAdoption.jpg> (last visited Mar. 28, 2007).

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development of the Internet is a particularly important factor in reducing the costs of implementing market-facilitating regulations, which are generally directed at improving decision-making by individual patients. The Internet's development should support an expansion in market-facilitating regulation, increasing its relative weight in health care's regulatory mix.

## 2. Changes in Regulatory Benefits

In some cases, all else will not be equal. Specifically, while the previous paragraphs considered the health information revolution's effects on regulatory costs, they did not consider its impact on regulatory benefits. As Figure 1 suggests, the optimal level of any given type of regulation depends on benefits as well as costs. The health information revolution may decrease the benefits of some forms of regulation while increasing the benefits of others.

For example, decreasing information costs will likely reduce the extent to which the average patient benefits from the most traditional forms of health care regulation. If information is no longer costly, patients who are searching for a particular level of quality can obtain it by using information purchased at a low price from commercial providers, rather than depending on regulation to achieve their desired result. From a patient's perspective, regulation and information may be substitutes for one another. Declines in information costs can therefore reduce the demand for regulation, regardless of whether it is of the market-displacing, market-channeling, or market-facilitating variety. At the same time, regulations can also be substitutes for one another. Higher-quality versions of a particular type of regulation (ones that identify poor quality providers more accurately, for example) may displace lower quality ones, or one type of regulation may displace another.

If the information revolution sufficiently reduces the costs of creating and using report cards, for example, patients (or, more broadly, society as a whole) may prefer to use them as a tool for correcting information imperfections because they accommodate diverse consumer preferences and avoid the potential for bureaucratic error in assessing consumer needs.<sup>62</sup> Patients will then benefit less

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<sup>62</sup> Cf. Jolls & Sunstein, *supra* note 19, at 226 (arguing that debiasing through law preserves choice, acknowledging "both that individuals have diverse preferences and that planners may err"). Jolls and Sunstein also explore the concerns raised by debiasing approaches, *id.* at 227-34, but ultimately conclude that debiasing is

from market-displacing regulatory approaches such as licensing schemes, and the optimal level of this type of regulation will decline.

To see how this might work in practice, imagine a regulation that stipulates that only physicians are permitted to perform a particular kind of procedure. The conventional justification for this sort of market-displacing scope of practice regulation is that physicians' more extensive training increases the likelihood that they will deliver high quality care, relative to other providers such as nurses. Such a rule would protect many patients against unintentionally receiving lower quality care. But if report cards on both physician and nurse performance become available and are accurate and easy to use, many of the patients previously in need of protection against errors due to their inability to assess quality will be able to choose providers based on a reasonably accurate assessment of their likely quality. In such a setting, regulation can be decreased or weakened by permitting both nurses and physicians to deliver the service. After receiving information about quality, many patients will choose to receive services from the most highly rated providers. Others, however, might choose the more poorly rated providers if they offer lower priced services, particularly if the patients are uninsured or bear a high proportion of their own health care costs. In a full-information world, lowering the market-displacing thresholds increases such patients' access to care, without exposing other informed patients to the risk of lower quality providers. Even if a few patients remain uninformed, the benefits from greater access to lower-quality care may exceed the costs of imposing risks on the uninformed few. In short, in an information-rich environment, patients are likely to prefer weaker market-displacing regulations.

While declining information costs may reduce demand for some types of regulation, it may spur demand for others. Some regulations may be complements to information provision, rather than substitutes for it.<sup>63</sup> For example, declining information dissemination costs will

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"sometimes far preferable to the strategy of insulating legal outcomes from the effects of bounded rationality" and "often promises to be both more successful and less invasive than more conventional alternatives." *Id.* at 234.

<sup>63</sup> Regulations may also be complementary to one another. Market-facilitating regulations arising out of the information revolution may increase the benefit of market-displacing regulations such as tort law, for example. The availability of report card information may enhance patients' ability to assess when a provider has engaged in malpractice, thus increasing the accuracy and efficiency, and thus, the benefit, of the litigation system. *Cf.* Kathryn Zeiler, *Turning from Damage Caps to Information Disclosure: An Alternative to Tort Reform*, 5 *YALE J. HEALTH POL'Y L. & ETHICS* 385, 394-

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increase societal demand for regulations that facilitate coordination in the production of quality measures. Demand for regulations that assure the quality and reliability of such measures might similarly increase. In an information-rich world, patients and their agents will greatly benefit from regulations that facilitate sorting through, interpreting, and using information, regardless of who provides it. The benefit of market-facilitating regulations of this type is likely to increase as information begins to proliferate in the marketplace.

### 3. Information-Related Regulatory Shifts

Ultimately, all of the changes outlined, whether they are changes in cost or changes in benefit, will together determine the nature of information revolution-related shifts in the optimal levels of regulation. The confluence of shifts in the marginal cost and marginal benefit of regulation should help define the regulatory focus of the future. The health information revolution will yield little cost savings for traditional, structural quality measure-based forms of market-displacing regulations, and will likely decrease the benefit stemming from such regulation. Together, these two effects suggest that the optimal level of such regulation will be lower than it once was. A likely far more important contributor to the change in the optimal mix of regulation, however, will be the health information revolution's impact on market-channeling and market-displacing forms of regulation. As previously explained, lower information costs reduce the costs of many forms of regulations falling into these categories, such as pay-for-performance programs and report cards. At the same time, they likely increase the benefit of regulations that facilitate the use of information. These effects suggest a much larger role for market-channeling and market-facilitating regulations in the future.

#### *B. Effects of the Information Revolution in Practice*

Given that the health information revolution is already underway, it would not be surprising if some of the regulatory shifts described in theoretical terms in subpart A had already started to occur in practice. The evidence reveals that some changes in regulatory approach are not

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95 (2005) (arguing that disclosure of managed care contract payment terms can help patients update their prior beliefs about whether their physicians were negligent). This increase in benefit of the tort system would offset to some extent the decrease in benefit stemming from the availability of alternative mechanisms for regulating quality.

yet apparent, while others have begun to take hold.

It may be more difficult to alter or dismantle traditional forms of regulation than to introduce new ones, and indeed, the evidence on changes in health care regulatory approaches supports this view. For example, there is little evidence of weakening of market-displacing regulations to accommodate more informed choice.<sup>64</sup> There has been considerable interest among state legislatures in allowing practitioners such as nurses and optometrists to perform more tasks traditionally within physicians' scope of practice, but there is no indication that this expansion is related to improvements in patients' abilities to determine quality — nor should it be, given that quality reporting efforts in particular have so far focused on hospitals and physicians rather than other kinds of providers.<sup>65</sup> Similarly, there is little evidence that an expansion in viable quality oversight techniques has prompted a weakening of medical malpractice standards. While there is evidence that hospitals have begun using patient data to evaluate staff physicians' performance,<sup>66</sup> there does not seem to be a movement among state licensure boards to systematically incorporate statistical quality measures into traditional licensure or disciplinary processes. Quality measures do not seem to have yet revolutionized medical malpractice litigation, either. While it may be possible to make more use of statistical data about general practice patterns in malpractice litigation to establish the standard of care,<sup>67</sup> evidence rules may limit

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<sup>64</sup> *But cf.* Frances H. Miller, *Medical Discipline in the Twenty-First Century: Are Purchasers the Answer?*, 60 *LAW & CONTEMP. PROBS.* 31, 32 (1997) (observing that “the locus of ‘disciplining’ doctors . . . has already begun to gravitate away from traditional government licensure and medical malpractice litigation toward purchasers of medical services”). This observation likely reflects the relatively small role that professional boards have long played in disciplining physicians and the significant increase in the role of purchasers, rather than a reduction in the level of market-displacing regulation.

<sup>65</sup> See Myrle Croasdale, *Physician Task Force Confronts Scope-of-Practice Legislation*, *AM. MED. NEWS*, Feb. 13, 2006, available at <http://www.ama-assn.org/amednews/2006/02/13/prl10213.htm> (describing legislative efforts to expand scope of practice of nonphysician practitioners).

<sup>66</sup> See Barry R. Furrow, *Data Mining and Substandard Medical Practice: The Difference Between Privacy, Secrets and Hidden Defects*, 51 *VILL. L. REV.* 803, 819-21 (2006) (discussing role of statistical data in staff privileging process).

<sup>67</sup> See Mark A. Hall et al., *Measuring Medical Practice Patterns: Sources of Evidence from Health Services Research*, 38 *WAKE FOREST L. REV.* 779 (2002) (describing statistical evidence available to establish physician practice patterns); see also Furrow, *supra* note 66, at 822-23 (suggesting that calculation of statistical distributions “will allow the generation of inferences, akin to those of *res ipsa loquitur*, that a patient injury is more properly attributable to provider negligence than innocent explanations,” but recognizing that “[w]hether a court would be willing to use such

the usefulness of physician-specific quality measures in such litigation.<sup>68</sup>

On the other hand, there is evidence that other regulators have begun making greater use of quality measures. The best examples come from the accreditation and certification processes. The Joint Commission on Accreditation of Healthcare Organizations (“JCAHO”) has now partnered with external developers of quality measurement systems to collect information on institutional quality.<sup>69</sup> JCAHO mandated hospital participation in this quality measurement initiative in 1998, and its quality measurement activities continue to expand.<sup>70</sup> JCAHO reports as an objective over the 2005 to 2010 period “increasing the use of measure data for quality improvement, benchmarking, accountability, decision-making, accreditation and research.”<sup>71</sup> Similarly, a number of specialty organizations have started incorporating the use of performance data into the board certification process.<sup>72</sup> To maintain board certification in internal medicine, physicians must complete a self-evaluation of practice performance; one route for doing so involves physician use of quality performance reports compiled by hospitals, health plans, or other

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data in a negligence case as the basis for a *res ipsa* instruction is another question”). But see generally Michelle Mello, *Using Statistical Evidence to Prove the Malpractice Standard of Care: Bridging Legal, Clinical, and Statistical Thinking*, 38 WAKE FOREST L. REV. 821 (describing challenges of meaningfully incorporating statistical evidence into malpractice litigation).

<sup>68</sup> See Aaron Kesselheim et al., *Will Physician-Level Measures of Clinical Performance Be Used in Medical Malpractice Litigation?*, 295 JAMA 1831, 1834 (2006) (concluding that, at least for current types of performance measures, “[t]he bar for admission of such evidence in malpractice litigation is high and the possibility that [physician clinical performance assessment] data will reach this bar seems remote, at least for the vast majority of injury types that prompt litigation”). Kesselheim and his co-authors also note, however, that limitations on the use of such data may not extend to “proceedings by state licensure boards, hospital review committees, and other adjudicatory bodies with more relaxed rules of evidence.” *Id.*

<sup>69</sup> Joint Comm’n (JCAHO), *Key Historical Milestones, 1986 to 1999 Infrastructure Building 1*, available at <http://www.jcaho.org/NR/rdonlyres/CF91D166-C4C3-453A-8445-F26190F19107/0/KeyHistoricalActivities.pdf> (last visited Mar. 28, 2007).

<sup>70</sup> *Id.* at 2.

<sup>71</sup> JCAHO, *Future Goals and Objectives, 2005 to 2010 Measure Expansion and Data Use 3*, available at <http://www.jcaho.org/NR/rdonlyres/5DD15D2A-09A0-4353-8290-C3C73A1E763F/0/FutureGoals.pdf> (last visited Mar. 28, 2007).

<sup>72</sup> See Christine K. Cassel & Eric S. Holmboe, *Credentialing and Public Accountability: A Central Role for Board Certification*, 295 JAMA 939, 940 (2006) (arguing that hospitals and health plans should consider ways to provide outcomes data that could then be used by physicians and reported to specialty boards, and noting that this model is currently in place for certain specialties).

organizations.<sup>73</sup>

The most dramatic effect of the health information revolution, however, has been the expansion of market-channeling and market-facilitating forms of regulation. While reductions in information costs are not the sole contributor to this expansion — increased awareness of quality problems and renewed payer concern about health care costs may both motivate a search for new quality improvement approaches, for example — this expansion is consistent with the shift in optimal regulation described previously.<sup>74</sup>

One form of market-channeling regulation, the pay-for-performance program, is becoming increasingly common, particularly for physician services. One of the most frequently cited private pay-for-performance programs is Bridges to Excellence, which pays bonuses to physicians who meet certain structural quality standards (such as keeping electronic medical records) as well as those who meet certain outcome standards (with respect to blood pressure, for example).<sup>75</sup> Another is the Integrated Healthcare Association (“IHA”) program, in which participating health plans covering eight million enrollees pay physician groups a bonus based on measures of clinical quality of care, patient satisfaction, and the use of information technology.<sup>76</sup> As of 2005, there were reportedly over 100 pay-for-performance initiatives in place across the country; sponsors included health insurance companies and employers.<sup>77</sup> A recent study of more than 250 Health

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<sup>73</sup> See Am. Bd. of Internal Med., Self-Evaluation of Practice Performance, <http://www.abim.org/moc/sempbpi.shtm#6> (last visited Mar. 29, 2007) (describing components of self-evaluation requirement for board certification). The stated long-term goal of this performance measurement requirement is that “physicians will be competent in improvement science and will have the information systems needed to meet the quality reporting requirements of patients, purchasers and payers.” *Id.* While the Board of Internal Medicine does not currently mandate a minimum level of performance, it is possible that the Board would do so in the future.

<sup>74</sup> Professor Frances Miller attributes the shift in regulatory approaches to advances in information technology and “a shift to a more market-oriented health sector.” Miller, *supra* note 64, at 32.

<sup>75</sup> See Epstein, *supra* note 48, at 407-08 (describing Bridges to Excellence and providing examples of other pay-for-performance programs).

<sup>76</sup> *Id.* Plans in the IHA program paid physician groups \$37.4 million based on 2003 data and an estimated \$54 million based on 2004 data; estimated performance-based compensation in the second year of the program averaged about 1.5% of participating physician groups’ total compensation. INTEGRATED HEALTHCARE ASS’N, ADVANCING QUALITY THROUGH COLLABORATION: THE CALIFORNIA PAY FOR PERFORMANCE PROGRAM 12-13 (Steve McDermott & Tom Williams eds., 2006), available at <http://www.iha.org/wp020606.pdf>.

<sup>77</sup> *Examining Pay-for-Performance Measures and Other Trends in Employer-*

Maintenance Organizations (“HMOs”) across the country showed that more than half used pay-for-performance techniques in their contracts with providers.<sup>78</sup>

Although it has not yet incorporated pay-for-performance principles in its standard reimbursement formulas, the Medicare program recently joined Bridges to Excellence, IHA, and other private health plans in pursuing pay-for-performance programs. Over the last few years, Medicare has launched multiple pay-for-performance demonstration projects.<sup>79</sup> More than 250 hospitals, for example, are currently participating in the Premier Hospital Quality Incentive Demonstration, in which hospitals in the top 10% of performance for a particular diagnosis receive a 2% bonus on top of their Medicare payment, and hospitals in the next 10%, a 1% bonus.<sup>80</sup> Medicare is also beginning to develop performance reporting programs for physicians. The American Medical Association has brought together a consortium of physicians to collaborate in the development of about 140 physician quality of care measures that could be reported voluntarily to Medicare in 2007.<sup>81</sup> The Medicare Payment Advisory Commission has recommended reforming the Medicare payment system to provide financial incentives for higher-quality care to hospitals, physicians, and home health agencies, in addition to other entities, and the collection of quality data may be a preliminary step toward implementing such payment mechanisms.<sup>82</sup>

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*Sponsored Health Care: Hearing Before the Subcomm. on Employer-Employee Relations of the H. Comm. on Education and the Workforce*, 109th Cong. 2 (2005) (statement of Meredith B. Rosenthal, Assistant Professor of Health Economics and Policy, Harvard School of Public Health), available at <http://republicans.edlabor.house.gov/archive/hearings/109th/ee/health051705/rosenthal.pdf>.

<sup>78</sup> The study included 252 HMOs from 41 metropolitan areas. Of the plans that had pay-for-performance programs, nearly 90% used them to compensate physicians and about 38% used them to compensate hospitals. Interestingly, plans were more likely to use these programs when the plans' own payments depended on performance. See Meredith B. Rosenthal et al., *Pay for Performance in Commercial HMOs*, 355 *NEW ENG. J. MED.* 1895, 1895 (2006).

<sup>79</sup> Press Release, CMS, Medicare “Pay for Performance (P4P)” Initiatives (Jan. 31, 2005), available at <http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=1343>.

<sup>80</sup> Fact Sheet, CMS, Premier Hospital Quality Incentive Demonstration: Rewarding Superior Quality Care (Jan. 2007), available at <http://www.cms.hhs.gov/HospitalQualityInits/downloads/HospitalPremierFS200602.pdf>.

<sup>81</sup> David Glendinning, *AMA Leads Project to Develop Quality Measures by Year's End*, *AM. MED. NEWS*, Mar. 13, 2006, available at <http://www.ama-assn.org/amednews/2006/03/13/gvl10313.htm>.

<sup>82</sup> Karen Milgate & Sharon Bee Cheng, *Pay-for-Performance: The MedPAC*



The expansionary trend in third-party efforts to improve quality is perhaps most visible in the explosive growth in the publication of health care report cards. Early accounts of quality reporting often focused on data published by the predecessor to the Centers for Medicare and Medicaid Services (“CMS”) in the mid-1980s to the early 1990s as well as report card efforts in Pennsylvania and New York.<sup>83</sup> Today, however, a much more extensive and diverse group of report cards is available.<sup>84</sup>

Since the late 1980s, when large employers and health plans collaborated in developing a report card on care delivered to health plan members, private organizations have played an important role in publishing report cards.<sup>85</sup> Today, accreditation organizations, some employers, and many health plans disseminate information about quality to patients. Perhaps the most prominent example of this phenomenon is the Leapfrog Group, whose membership includes health plans and large employers responsible for funding health care services for millions of people across the United States.<sup>86</sup> It provides structure-, process-, and outcome-based composite quality measures for participating hospitals based on their adoption of computerized order entry systems, their intensive care unit staffing patterns, their treatment patterns and performance, and their safety practices.<sup>87</sup> There are numerous other examples as well. To give just a few, a coalition of purchasers, health plans, hospitals, and consumers led an effort to develop California hospital report cards for publication.<sup>88</sup> In

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*Perspective*, 25 HEALTH AFF. 413, 413 (2006).

<sup>83</sup> See, e.g., Jost, *supra* note 2, at 837 (describing Health Care Financing Administration’s hospital mortality reports and providing other examples of report cards published before 1995).

<sup>84</sup> For a description of the history and current use of report cards, see IOM, *supra* note 8, at 44-51.

<sup>85</sup> See *id.* at 44 (describing development of Health Plan Employer Data and Information Set, which now underlies health plan report cards released by National Committee for Quality Assurance).

<sup>86</sup> The Leapfrog Group: Who Are Leapfrog Members?, [http://www.leapfroggroup.org/about\\_us/who\\_are\\_members](http://www.leapfroggroup.org/about_us/who_are_members) (last visited Mar. 28, 2007).

<sup>87</sup> See The Leapfrog Group: What Does Leapfrog Ask Hospitals?, [http://www.leapfroggroup.org/for\\_consumers/hospitals\\_asked\\_what](http://www.leapfroggroup.org/for_consumers/hospitals_asked_what) (last visited Mar. 28, 2007).

<sup>88</sup> See Press Release, CalPERS, CalPERS Endorses Project to Develop California Hospital Report Card (May 18, 2005), *available at* <http://www.calpers.ca.gov/index.jsp?bc=/about/press/pr-2005/may/hosp-report-card.xml> (describing report card task force composition and goals); Cal. HealthCare Found., California Hospital

Texas, employer groups joined together to sponsor a website providing comparative quality information in the heart care and childbirth areas.<sup>89</sup> Many health plans are developing websites that provide information about health care quality to their enrollees.<sup>90</sup> In addition, JCAHO now publishes individual hospital quality data on a website.<sup>91</sup>

Public entities continue to publish quality-related information as well.<sup>92</sup> For example, the federal government recently returned to the practice of providing information about hospital quality; the federal Department of Health and Human Services (“HHS”) website now provides links to hospital-specific measures of adherence to recommended practices in the areas of heart attack, heart failure, and pneumonia care, as well as the prevention of surgical infections.<sup>93</sup> In

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Assessment and Reporting Task Force, <http://www.chcf.org/topics/hospitals/index.cfm?itemID=111065> (last visited Mar. 28, 2007) (describing development of hospital report cards); *see also* Cal. HealthCare Found., CalHospitalCompare.org, <http://calhospitalcompare.org/> (California hospital comparison website) (last visited Mar. 28, 2007).

<sup>89</sup> Texas Business Group on Health & Dallas-Fort Worth Business Group on Health, The Texas Hospital Checkup, <http://tbgh.org/checkup/> (last visited Mar. 28, 2007).

<sup>90</sup> *See, e.g.*, Independence Blue Cross, HealthGrades Physician and Hospital Quality Guides, [http://www.ibx.com/members/health\\_resources/healthgrades.html](http://www.ibx.com/members/health_resources/healthgrades.html) (last visited Mar. 28, 2007) (explaining that its member website includes HealthGrades-provided information about physician education, training, licensure, board certification, and medical board disciplinary actions, as well as ratings of hospitals based on survival and complications statistics, LeapFrog Group safe practices ratings, and procedure volumes, among other measures).

<sup>91</sup> JCAHO, Quality Check, <http://www.qualitycheck.org/> (last visited Mar. 28, 2007).

<sup>92</sup> Some reporting initiatives require providers to report errors to regulatory entities, but do not require the entities receiving the reports to publish facility-specific information. *See, e.g.*, 40 PA. CONS. STAT. § 1303.313 (2006) (requiring medical facilities to report serious events to Patient Safety Authority); Patient Safety Authority, Reporting Medical Errors, <http://www.psa.state.pa.us/psa/cwp/view.asp?a=1147&q=440863&psaNav=> (last visited Mar. 28, 2007). While this type of statute implements a market-channeling quality improvement mechanism to the extent that providers use the aggregated data to facilitate quality improvement, it is not a market-facilitating mechanism because it does not make the information broadly available to health care purchasers. For an overview of patient safety-related reporting programs, including some programs that disclose results to the public and others that do not, *see* Sage et al., *supra* note 47, at 1284-91.

<sup>93</sup> *See* U.S. Dep’t of Health & Human Servs., Hospital Compare, <http://www.hospitalcompare.hhs.gov/> (last visited Mar. 28, 2007). Medicare provides hospitals an incentive to report quality information through its reimbursement mechanism. Hospitals that failed to submit the specified quality data received a 0.4

2005, Florida created a website allowing consumers to compare health facility quality measures.<sup>94</sup> In 2006, Colorado passed a statute requiring the publication of hospital report cards.<sup>95</sup> In addition, in response to concerns about medical error and infection rates, numerous states have recently imposed new public reporting mandates. In 2003, Minnesota passed a statute requiring public reporting of adverse events identified as events that should never occur.<sup>96</sup> In 2005 Illinois and Indiana joined Minnesota in mandating public reporting of adverse events.<sup>97</sup> Also in 2005, New York passed legislation requiring public reporting of infection rates at individual hospitals.<sup>98</sup> In 2006 Florida added surgical infection prevention information to its website,<sup>99</sup> and Missouri<sup>100</sup> and Pennsylvania<sup>101</sup> began

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percentage point lower increase in Medicare payment rates in 2005 and 2006 and will receive a two percentage point lower increase in 2007. 42 U.S.C. § 1395ww(b)(3)(B)(vii) (2006). Medicare also supplies quality measures and results of inspection reports for nursing homes. See U.S. Dep't of Health and Human Servs., Medicare, Nursing Home Compare, <http://www.medicare.gov/NHCompare/Home.asp> (last visited Mar. 28, 2007). It has begun a voluntary program to collect information on physician quality, but has not yet announced plans to report physician-specific results. See U.S. Dep't of Health and Human Servs., CMS, Physician Quality Reporting Initiative, [http://www.cms.hhs.gov/PQRI/01\\_Overview.asp#TopOfPage](http://www.cms.hhs.gov/PQRI/01_Overview.asp#TopOfPage) (last visited Mar. 28, 2007). In 2006, Congress enacted legislation mandating that physicians receive a 1.5% bonus for reporting this information. Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, 120 Stat. 2922, 2978.

<sup>94</sup> See State of Florida, Agency for Health Care Admin., Florida Compare Care, <http://www.floridacomparecare.gov> (last visited Mar. 28, 2007).

<sup>95</sup> See Colorado Hospital Report Card Act, COLO. REV. STAT. § 25-3-701 (2006); Press Release, Colo. Governor Bill Owens, Owens Signs Health Care Bills (June 2, 2006), available at <http://www.colorado.gov/governor/press/june06/healthcare.html>.

<sup>96</sup> See MINN. STAT. § 144.7067 (2006); MINN. DEP'T OF HEALTH, ADVERSE HEALTH EVENTS IN MINNESOTA HOSPITALS 2 (2005), available at <http://www.health.state.mn.us/patientsafety/ae/aereport0105.pdf> (describing origins of Minnesota's statute).

<sup>97</sup> See 410 ILL. COMP. STAT. 522/10-1 (2005); Ind. Exec. Order No. 05-10 (Jan. 10, 2005), available at [http://www.in.gov/gov/press/media/eo/EO\\_05-10\\_Medical\\_Error\\_Reporting.pdf](http://www.in.gov/gov/press/media/eo/EO_05-10_Medical_Error_Reporting.pdf).

<sup>98</sup> See N.Y. PUB. HEALTH LAW § 2819 (McKinney 2005).

<sup>99</sup> See Press Release, Fla. Agency for Health Care Admin., Agency for Health Care Administration Announces the Addition of Surgical Infection Prevention (SIP) Measure Data to Florida Compare Care Website (Jan. 4, 2006), available at [http://www.fdhc.state.fl.us/Executive/Communications/Press\\_Releases/archive/2006/1-4-06\\_SIPP\\_Website.pdf](http://www.fdhc.state.fl.us/Executive/Communications/Press_Releases/archive/2006/1-4-06_SIPP_Website.pdf).

<sup>100</sup> See Press Release, Mo. Governor Matt Blunt, Blunt Aims to Protect Patients from Healthcare-Associated Infections (Dec. 28, 2006), available at <http://gov.missouri.gov/press/HealthcareInfectionData122806.htm>; see also State of Missouri, Dep't of Health & Senior Servs., Missouri Healthcare-Associated Infection Reporting, <http://www.dhss.mo.gov/HAI/> (last visited Mar. 28, 2007).

publishing hospital-specific information about hospital-acquired infections.

Reporting on physician quality has not expanded as quickly as reporting on hospital quality, but reporting mechanisms continue to be created. California's Office of the Patient Advocate publishes report cards on medical groups, using a three-star system to rate them along dimensions of "getting the right medical care" (a measure based on immunizations, testing, and screening practices) and "patient rating of care experiences" (based on patient surveys).<sup>102</sup> In 2006, a Massachusetts coalition of providers, purchasers, consumers, and others<sup>103</sup> used health plan data to create a website<sup>104</sup> that allows patients to view clinical data<sup>105</sup> and patient satisfaction data<sup>106</sup> for local medical groups. In addition, CMS and the federal Agency for Healthcare Research and Quality ("AHRQ") recently announced a pilot project under which the Ambulatory Care Quality Alliance, a coalition of organizations representing physicians, patients, employers, and others, will combine public and private information on physician performance for the purpose of public reporting.<sup>107</sup>

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<sup>101</sup> See Press Release, Penn. Health Care Cost Containment Council, Pennsylvania Releases Nation's First Hospital-Specific Report on Hospital-Acquired Infections (Nov. 14, 2006), available at <http://www.phc4.org/reports/hai/05/nr111406.htm>; see also Penn. Health Care Cost Containment Council, Hospital-Acquired Infections in Pennsylvania 2005, available at <http://www.phc4.org/hai/Default.aspx>.

<sup>102</sup> See State of Cal., 2005 HMO Report Card, [http://www.opa.ca.gov/rc2005/med\\_groups/rating\\_summary\\_report.asp](http://www.opa.ca.gov/rc2005/med_groups/rating_summary_report.asp) (last visited Mar. 28, 2007) (medical group comparison website); State of Cal., About the Medical Group Ratings, [http://www.opa.ca.gov/rc2005/med\\_groups/about\\_this\\_data.asp](http://www.opa.ca.gov/rc2005/med_groups/about_this_data.asp) (last visited Mar. 28, 2007) (describing content of quality measures).

<sup>103</sup> See Mass. Health Quality Partners (MHQP), About Us, <http://www.mhqp.org/aboutus/AboutUs.asp?nav=020000> (last visited Mar. 28, 2007) (describing members of Massachusetts Health Quality Partners).

<sup>104</sup> MHQP, About Us, Health Care Information You Can Trust, <http://www.mhqp.org> (last visited Mar. 28, 2007).

<sup>105</sup> See Press Release, MHQP, MHQP Report Gives Consumers and Providers Unprecedented Access to Actionable Data on Medical Group Quality (Feb. 10, 2006), available at [http://www.mhqp.org/mhqp\\_attachments/MHQP\\_CQ\\_release\\_2006-02-03.pdf](http://www.mhqp.org/mhqp_attachments/MHQP_CQ_release_2006-02-03.pdf) (describing clinical quality data).

<sup>106</sup> See Press Release, MHQP, Landmark Report Provides Massachusetts Consumers Comprehensive Information on Quality of Care Based on Patients' Experiences (Mar. 9, 2006), available at [http://www.mhqp.org/mhqp\\_attachments/MHQP\\_PES\\_release\\_2006-03-02.pdf](http://www.mhqp.org/mhqp_attachments/MHQP_PES_release_2006-03-02.pdf) (describing patient satisfaction data).

<sup>107</sup> See Press Release, Agency for Healthcare Research & Quality (AHRQ), U.S. Dep't of Health & Human Servs., Ambulatory Care Quality Alliance Announces Pilot Project (Mar. 1, 2006), available at <http://www.ahrq.gov/news/press/pr2006/ambcarepr.htm>.

If these report cards are to facilitate the functioning of markets through their impact on patient decision-making, they must reach patients, and patients must be willing to use them. Surveys indicate that patients are interested in obtaining information about quality. A 2006 survey, for example, found that about 57% of Americans would be extremely or very likely to use information about physician quality of care and specialty areas, while just over half would be likely to use similar information about hospital quality of care.<sup>108</sup> About half of respondents stated that they would be willing to switch providers based on such ratings.<sup>109</sup>

While Americans' actual use of quality information to select providers falls short of these levels, Americans have begun to seek out and use health-related information in their decision-making. In a 2006 survey, 64% of Internet users reported searching for information on a specific disease or medical problem, while 29% reported searching for information about a particular doctor or hospital.<sup>110</sup> About 20% of respondents to another 2006 survey said they had used quality information in the past year to make health care decisions, a significant increase since 2000.<sup>111</sup> About 24% of respondents saw comparative quality information about hospitals, and about 43% of those who saw it used it in making decisions; about 12% of respondents saw information about doctors, and over half of these respondents used it.<sup>112</sup> In a 2005 survey of insured consumers, between 14% and 16% of respondents reported receiving information about physician and hospital quality from their health plans; more than 40% of these respondents reported using the physician information, while at least 25% reported using the hospital information.<sup>113</sup> While these statistics suggest that consumers who use

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<sup>108</sup> Ruth Helman et al., *2006 Health Confidence Survey: Dissatisfaction with Health Care System Doubles Since 1998*, EBRI NOTES, Nov. 2006, at 2, 9, available at [http://www.ebri.org/pdf/notespdf/EBRI\\_Notes\\_11-20061.pdf](http://www.ebri.org/pdf/notespdf/EBRI_Notes_11-20061.pdf).

<sup>109</sup> *Id.*

<sup>110</sup> SUSANNAH FOX, PEW INTERNET & AMERICAN LIFE PROJECT, *ONLINE HEALTH SEARCH 2006*, at i, available at [http://www.pewinternet.org/pdfs/PIP\\_Online\\_Health\\_2006.pdf](http://www.pewinternet.org/pdfs/PIP_Online_Health_2006.pdf). For comparison, in 2002, approximately 21% of users reported searching for a particular doctor or hospital. *Id.*

<sup>111</sup> HENRY J. KAISER FAMILY FOUND. & AHRQ, *2006 UPDATE ON CONSUMERS' VIEWS OF PATIENT SAFETY AND QUALITY INFORMATION 5* (2006), available at <http://www.kff.org/kaiserpolls/upload/7559.pdf>.

<sup>112</sup> *Id.* at 4. In addition, about 29% of respondents saw information about health plans and about half of these respondents used it. *Id.*

<sup>113</sup> Paul Fronstin & Sara R. Collins, *Early Experience with High Deductible and*

comparative quality information remain in the minority, these surveys predate many of the most recent quality-reporting initiatives. As reporting efforts proliferate and mature, patient awareness and use of such information will likely increase.<sup>114</sup>

In short, the growth of market-channeling and market-facilitating forms of regulation has already begun. While these changes have not

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*Consumer-Driven Health Plans: Findings from the EBRI/Commonwealth Fund Consumerism in Health Care Survey*, EBRI ISSUE BRIEF, Dec. 2005, at 28, available at [http://www.ebri.org/pdf/briefspdf/EBRI\\_IB\\_12-2005.pdf](http://www.ebri.org/pdf/briefspdf/EBRI_IB_12-2005.pdf). Among enrollees of comprehensive health plans, 42% reported using physician quality information provided by health plans, while 25% reported using hospital quality information. Among enrollees of high deductible or consumer-driven health plans, 54% reported using physician information and 45% hospital information. *Id.*

<sup>114</sup> A number of studies have attempted to evaluate empirically the impact of specific report cards on patient decision-making. One early study demonstrated that the mere publication of report cards is not necessarily enough to ensure their use. See Eric C. Schneider & Arnold M. Epstein, *Use of Public Performance Reports*, 279 JAMA 1638, 1638 (1998) (finding that while more than half of surveyed bypass surgery patients at four Pennsylvania hospitals in 1996 reported that they would change surgeons if they learned that their surgeon had higher than expected mortality rates, only about 12% were aware of Pennsylvania's report card ratings before surgery, and only about 20% of those patients said those ratings affected their decision-making). Somewhat more recent studies have found limited impacts of quality reporting on patient choice of providers. See, e.g., David H. Howard & Bruce Kaplan, *Do Report Cards Influence Hospital Choice? The Case of Kidney Transplantation*, 43 INQUIRY 150, 153 (2006) (finding that report cards issued between 1999 and 2002 influenced younger and college-educated patients' choice of kidney transplant centers, but had limited impact overall); Jha & Epstein, *supra* note 41, at 854 (finding that bypass surgery report cards released between 1992 and 1998 reliably predicted above average performance and that physicians' decisions to cease practice were associated with poor reported performance, but that there was no evidence that report card results affected providers' market share). At the time of these and other early studies, patients may have remained unaware of quality ratings, may not have trusted the quality ratings, or may have been more heavily influenced by other factors, such as physician recommendations, geographic preferences, or insurance coverage. A parallel and larger literature examining the influence of health plan report cards has found a more substantial impact of reporting on consumer choice. See, e.g., Dennis P. Scanlon et al., *The Impact of Health Plan Report Cards on Managed Care Enrollment*, 21 J. HEALTH ECON. 19, 37 (2002) (finding that health plan report card issued by General Motors in 1997 led employees to avoid plans with multiple below average ratings, but did not necessarily lead them to choose plans with many superior ratings); Leemore S. Dafny & David Dranove, *Do Report Cards Tell Consumers Anything They Don't Already Know? The Case of Medicare HMOs* 26-27 (Nat'l Bureau of Econ. Research, Working Paper No. 11420, 2005) (finding that Medicare beneficiaries responded to consumer satisfaction scores but not other quality measures provided by Medicare HMO report cards issued in 2000 and 2001). Because all of these studies examined periods before the recent proliferation of health care quality report cards, they are not necessarily predictive of future use of report cards. Additional study will be needed.

yet been accompanied by a reduction in the intensity of market-displacing forms of regulation, their growth has started to alter the composition of the health care regulatory framework. It is likely that further information-related shifts in regulatory approaches will occur. In a dynamic regulatory environment, it is important to evaluate the implications of potential regulatory change in order to determine the need for further regulatory refinements. Part III takes on this task.

### III. REEXAMINING HEALTH CARE REGULATION

#### A. *Reexamining Regulatory Goals*

This Article has so far categorized the basic approaches to regulation of health care quality, offered a theory about how informational innovation should affect the optimal mix of regulatory approaches, and detailed the changes in regulatory approach that are already apparent in practice. It has not, however, attempted to calculate the costs and benefits of each form of regulation. Nor has it assessed the regulatory approaches' relative effectiveness in achieving quality improvements. A comprehensive evaluation of this sort is beyond the scope of this Article. Part II's claim about the shift in the optimal mix of regulation is instead a limited one: assuming that our historical health care regulatory framework was optimal, then all else equal, a decline in information costs associated with informational innovation should prompt a shift in regulatory approach. If we can achieve precisely the same desirable regulatory result at a lower cost using an information-intensive regulatory approach, then surely we should do so. Moreover, if a decline in information costs means that information-intensive approaches suddenly yield quality-related benefits that exceed their costs, then surely we should adopt them. Part II argued that the decline in information costs made it more likely that information-intensive regulations will meet this criterion.

Part II's suggestion that the decline in information costs might cause a change in regulatory benefit is not as circumscribed as the other claims. In particular, the basis for its suggestion that the benefit of market-displacing regulation will decline in the aftermath of the information revolution is the argument that market-channeling and market-facilitating regulations will serve regulatory needs by remedying information failures in the marketplace. Given the reality that information failures are likely to persist, this premise invites further examination.

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This subpart looks more closely at the potential effects of market-displacing, market-facilitating, and market-channeling regulations, focusing in particular on the extent to which regulatory benefits may vary for different groups of people. It argues that because the mechanisms that market-displacing, market-channeling, and market-facilitating regulations use to remedy market failures differ, they may obtain different regulatory results, especially with respect to the distribution of high quality care across the population. A shift in relative emphasis in regulatory approaches may therefore have equity as well as efficiency implications for the delivery of health care services. This conclusion highlights the importance of considering regulatory goals when assessing the desirability of information-related regulatory shifts.

### 1. The Effects of Market-Displacing Regulations

Consider, for example, market-displacing regulations. Regulatory mechanisms such as licensure, professional discipline processes, and malpractice law take advantage of the expertise of medical professionals to remove transactions likely to be of lower quality from the market. Particularly when they set low quality thresholds, market-displacing regulations may not much compress the distribution of quality of care, which has been shown to be quite wide, but they do truncate the distribution of quality that would otherwise exist.<sup>115</sup> Setting aside the question of incidence of the direct costs of implementing regulations, market-displacing approaches benefit those who would refuse to purchase care that falls below the designated threshold. By removing such care from the market, these regulations save uninformed patients the costs of determining whether individual providers meet the threshold.<sup>116</sup> The higher patient information collection and analysis costs, the more likely they are to benefit from this approach to regulation.

At the same time, however, market-displacing regulations deprive

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<sup>115</sup> See, e.g., Stephen F. Jencks et al., *Quality of Medical Care Delivered to Medicare Beneficiaries*, 284 JAMA 1670, 1674 (2000) (reporting substantial geographic variations in quality of care delivered).

<sup>116</sup> See, e.g., U.S. DEP'T OF JUSTICE & U.S. FED. TRADE COMM'N, IMPROVING HEALTH CARE: A DOSE OF COMPETITION, ch. 2, at 27 (2004) [hereinafter A DOSE OF COMPETITION], available at [http://www.usdoj.gov/atr/public/health\\_care/204694.pdf](http://www.usdoj.gov/atr/public/health_care/204694.pdf) ("Several commentators contend that a state-enforced minimum quality standard is an efficient response to the 'limited information patients have about quality and the relatively high costs of obtaining information.'").



patients of access to care that, given their circumstances, they might prefer. If the costs of increasing quality are low, and increases in quality reduce total medical costs by obviating the need for further medical care, then regulations that raise quality levels may benefit all patients. If meeting the standards set by regulators is costly,<sup>117</sup> however, some patients may be harmed by the quality increase.<sup>118</sup> Someone who has very low income and is unable to afford the higher-quality care (or health insurance that funds higher-quality care) will not receive care at all. Those who would prefer to spend their income on other things, either because they have more pressing needs (such as food or shelter) or because they simply do not value health care highly, will be forced to spend more than they otherwise would.<sup>119</sup> All else equal, the higher the patient's income and the more he or she benefits from high quality care, the more likely he or she will benefit from market-displacing regulation.<sup>120</sup>

## 2. The Effects of Market-Facilitating Regulations

Market-facilitating regulations work differently. Rather than increasing average quality by eliminating low quality providers, market-facilitating regulations increase average quality by providing

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<sup>117</sup> See *id.* & n.197 (“Empirical studies have found that licensing regulation increases costs for consumers.”).

<sup>118</sup> This argument has often been discussed in the context of proposals to allow individuals to contract around malpractice standards. See, e.g., Richard A. Epstein, *Contractual Principle Versus Legislative Fixes: Coming to Closure on the Unending Travails of Medical Malpractice*, 54 DEPAUL L. REV. 503, 511 (2005) (discussing benefits of contract in setting care standards and referring to “large silent cadre of individuals who would arguably get better access and better treatment once the threat of liability no longer overhangs the primary market in medical service”). See generally Richard A. Epstein, *Medical Malpractice, Imperfect Information, and the Contractual Foundation for Medical Services*, 49 LAW & CONTEMP. PROBS. 201 (1986) (examining argument that use of medical custom protects uninformed patients and arguing that contractual approach to standard-setting would be beneficial); Clark C. Havighurst, *Private Reform of Tort-Law Dogma: Market Opportunities and Legal Obstacles*, 49 LAW & CONTEMP. PROBS. 172 (1986) (stressing importance of consumer preferences in determining levels of care).

<sup>119</sup> See, e.g., Jennifer Arlen, *Private Contractual Alternatives to Malpractice Liability*, in *MEDICAL MALPRACTICE AND THE U.S. HEALTH CARE SYSTEM* 245, 252 (William M. Sage & Rogan Kersh eds., 2006) (“Tort liability hurts some patients because it applies a common standard of care to all patients, at least in theory. This can hurt patients whose willingness to pay for safety is less than that reflected in the standard of care.”).

<sup>120</sup> See A DOSE OF COMPETITION, *supra* note 116, ch. 2, at 27 (“A third study found that licensure benefits the segment of consumers who place more emphasis on quality.”).

enough information to generate meaningful competition over quality, assuming that purchasers prefer higher quality.<sup>121</sup> This means that they will tend to be more effective in increasing quality levels in environments in which provider competition is robust. If health plans' restrictions on provider choice are pervasive, for example, then report cards might not have much effect (unless they produce competition among health plans). In geographic areas that cannot support multiple providers, or that are subject to regulatory or other impediments to competition, report cards will tend to be less effective. While patients residing in such areas may be able to use the information they obtain to put direct pressure on providers to improve,<sup>122</sup> they may benefit less from market-facilitating mechanisms than patients who can more easily go elsewhere for services. Thus, market-facilitating regulations will tend to disproportionately benefit patients whose potential providers face high levels of competition.

Market-facilitating regulations may also alter the allocation of services of differing levels of quality across the population. Market-facilitating regulations could in theory benefit all patients by enabling them to make informed selections of the level of care they prefer, given the financial and health circumstances in which they find themselves.<sup>123</sup> They would sort themselves among providers according to the providers' established quality levels and their own preferences, including their willingness to pay for services.<sup>124</sup> If

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<sup>121</sup> Report cards also may improve quality through other channels, such as their impact on physicians' reputations among their peers. Because these channels do not involve patient decision-making, however, they are market-channeling rather market-facilitating in nature. See sources cited *supra* note 41.

<sup>122</sup> For example, in order to prevent infections by increasing the frequency of proper handwashing practices, patient safety organizations have encouraged patients to ask medical practitioners whether they have washed their hands. See Amy D. Waterman et al., *Hospitalized Patients' Attitudes About and Participation in Error Prevention*, 21 J. GEN. INTERNAL MED. 367, 367 (2005). If report cards showed that a particular provider had high infection rates, patients might respond by requesting practitioners to wash their hands, even if they could not switch providers.

<sup>123</sup> Esty makes a similar observation in the context of environmental decision-making. He explains that command-and-control regulations collectivize decision-making and substitute general cost-benefit calculations for "individualized evaluation of exposures, impacts, and harm valuation." Esty, *supra* note 1, at 144. Similarly, licensure and other market-displacing regulations substitute the decision-making body's generalized assessment of acceptable quality for an individual patient's assessment.

<sup>124</sup> Professor Jennifer Arlen has shown that permitting patients to contract out of tort liability — in essence, to weaken market-displacing regulation to allow for greater variability in quality — can harm patients. See Arlen, *supra* note 119, at 256-57. She

patients were fully informed and no other market imperfections or failures existed, the market for health care services would be efficient.<sup>125</sup>

This is a big “if,” however. In addition to distortions caused by the presence of health insurance and imperfect competition, distortions due to imperfections in information are likely to remain.<sup>126</sup> It is unlikely that market-facilitating regulatory approaches will ever be so successful as to reduce information costs to zero. Imperfections will likely persist for some groups more than others, potentially exposing them to deficits in quality. Likely members of these groups include those without Internet access, the poorly educated, and the most severely ill.<sup>127</sup>

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argues that the provision of health care services is subject to both inter-patient externalities and intertemporal externalities: a physician who takes the necessary steps to increase quality (such as by investing in expertise) may benefit all of a physician’s patients, both now and in the future. *Id.* at 258-62. Because each patient hopes to free-ride on a higher level of quality induced by contractual obligations imposed by others, each contracts for a lower-than-optimal quality of care, leading to worse outcomes than would result in a tort system. *Id.* In a world characterized by full information and unfettered competition, however, this free rider problem is attenuated. Each provider’s quality level is a characteristic of the provider, publicly evidenced by both structural quality measures and the past treatment of patients. If providers compete for (and patients pay) higher prices based on accurate, comprehensive quality measures, free-riding would not be a major problem.

<sup>125</sup> See, e.g., Sage, *supra* note 4, at 1710 (describing how information can support competition by resolving asymmetric information problems, thus improving allocative efficiency).

<sup>126</sup> Market failures may also result from interdependent preferences. In particular, each patient may benefit from knowing that other patients receive a similar quality of care, or a level of quality above some minimum threshold. By cutting off the tail of the quality distribution or otherwise narrowing the quality distribution, market-displacing regulation is well-suited to assuring minimum quality levels and compressed quality distributions. Fully informed markets, however, would not achieve this result, unless each patient just happened to prefer similar quality levels. If society values uniformity in quality levels, then, market-displacing regulations may be desirable. Note, however, that it is also possible to compress quality distributions in markets by subsidizing low income patients’ purchase of care. For a discussion of equity as a regulatory objective, see discussion *infra* Part IV.C.

<sup>127</sup> In an article examining the implications of report cards for certain vulnerable patient groups, such as “the poor, the less educated, the uninsured, the chronically sick, and members of minority ethnic and language groups,” Huw Davies and his coauthors argue that report cards may underserve vulnerable groups in a variety of ways. Huw T.O. Davies et al., *Health Care Report Cards: Implications for Vulnerable Patient Groups and the Organizations Providing Them Care*, 27 J. HEALTH POL. POL’Y & L. 379, 380 (2002). They argue, for example, that report cards may report measures the groups consider irrelevant, fail to report measures they consider relevant, or report

What these groups have in common are characteristics associated with higher costs of information acquisition and use. Those without Internet access, for example, will face much higher costs in taking advantage of the many web-based resources described in this Article.<sup>128</sup> They might be able to search from library computers or obtain paper copies of quality reports or telephone for information, but each of these approaches is likely to be more costly or less informative than using the web-based tools. Those who are poorly educated or inexperienced will likely have much weaker foundational knowledge of medicine and health care quality. They will therefore require more time to understand the content of websites and the meaning of ratings, and in fact may never fully understand them. The higher information costs may discourage the poorly educated from using such sites, and those who choose to do so anyway may ultimately put themselves at a greater risk of choosing a lower quality provider based on a misinterpretation of the ratings.<sup>129</sup> In general, poor health literacy may undermine the effectiveness of report cards.<sup>130</sup> Similarly, those who are severely ill may find that their diminished cognitive or physical capabilities or their emotional states preclude or greatly increase the costs of using information that has been made available. The elderly,<sup>131</sup> the poor,<sup>132</sup> and the poorly

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measures that fail to account for their experiences. *Id.* at 383-86. This criticism does not imply that report cards are inherently problematic, and it certainly does not imply that they are inferior to other regulatory methods, which may be even less responsive to the needs of vulnerable groups. It does suggest, however, that report cards should be tailored to patient interests, a recommendation that Davies and his coauthors make. *Id.* at 394-95. The authors also argue that improper risk adjustment can hurt vulnerable groups by inducing providers to avoid caring for them. *Id.* at 391.

<sup>128</sup> See, e.g., Sage, *supra* note 4, at 1822 (observing that disclosure-based regulatory regimes relying on information technologies may increase quality and access disparities because of socio-economic differences in technology availability and use).

<sup>129</sup> Davies and his coauthors suggest that “cultural, educational, and linguistic barriers” will exacerbate difficulties that members of vulnerable groups face in interpreting report cards. Davies et al., *supra* note 127, at 390.

<sup>130</sup> See, e.g., Jost, *supra* note 2, at 853-55 (describing limitations on consumers’ ability to use health care report cards); Sage, *supra* note 4, at 1728-31 (describing health literacy and rationality barriers to effective report card use).

<sup>131</sup> A 2006 survey showed that 33% of adult respondents over 65 were Internet users, as compared to 70% in the 50 to 64 age category, and over 80% of those under 50. Pew Internet & American Life Project, Demographics of Internet Users, [http://www.pewinternet.org/trends/User\\_Demo\\_1.11.07.htm](http://www.pewinternet.org/trends/User_Demo_1.11.07.htm) (last visited Mar. 28, 2007). Another survey suggests that the young are more likely to use quality information than the elderly; among the elderly, only 14% said that they would be very likely to go to a website for quality information on physicians, hospitals, or

educated<sup>133</sup> are likely to fall disproportionately into one or more of these categories,<sup>134</sup> face higher costs of information use, and therefore be unable to benefit directly from market-facilitating regulations.<sup>135</sup>

In conventional product markets, the fact that some consumers remain uninformed may have little effect on equilibrium product characteristics or prices.<sup>136</sup> If producers cannot distinguish between informed consumers and uninformed consumers, they must treat all equally; the producers will manufacture a product that meets the needs of the consumers who shop around. In such a setting, as long as the uninformed share the preferences of the informed, the equilibrium will reflect their preferences. A poorly informed, middle income patient of a large teaching hospital, for example, might benefit from a group of well-informed, middle income patients who search for the highest quality hospitals, putting pressure on hospitals to improve their quality to a level that that meets the demands of those patients. A physician treating a patient population dominated by well-informed

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health plans, while 42% of those under 65 would. HENRY J. KAISER FAMILY FOUND. ET AL., *supra* note 60, at 14. In addition, the elderly may be less able to evaluate information they do receive; one study found that older adults had more difficulty using health plan information properly. Judith H. Hibbard & Ellen Peters, *Supporting Informed Consumer Health Care Decisions: Data Presentation Approaches That Facilitate the Use of Information in Choice*, 24 ANN. REV. PUB. HEALTH 413, 428 (2003).

<sup>132</sup> Approximately 49% of those whose household income was less than \$30,000 per year were Internet users, as compared to 93% of those with household incomes over \$75,000 dollars. Pew Internet & American Life Project, *supra* note 131.

<sup>133</sup> For example, 36% of those with less than high school education used the Internet, as compared to 59% of high school educated respondents, 84% of respondents with some college, and 91% with college or higher levels of educational attainment. *Id.*

<sup>134</sup> Surveys of Internet users suggest that other groups would be disproportionately affected by an emphasis on market-facilitating regulation as well. Respondents who were women, black, or lived in rural areas were less likely to be Internet users than their counterparts. *Id.* Of course, these gaps may close over time, particularly if shifts in regulatory approaches and other trends further raise the value of the Internet to everyone.

<sup>135</sup> Of Internet users, women, those under 65, those with a college degree, those with more than six years of online experience, and those with a broadband connection at home were more likely than others to look for health information online. See FOX, *supra* note 110, at 2. For example, 33% of Internet users age 39 to 49 had used the Internet to look up information about a particular doctor or hospital, while only 18% of those over 65 had. *Id.* at 4. Similarly, 40% of Internet-user college graduates had used the Internet to search for information about a particular doctor, while only 21% of high school educated Internet users had done so. *Id.*

<sup>136</sup> See, e.g., Schwartz & Wilde, *supra* note 18, at 638-39 (discussing how “persons who search sometimes protect nonsearchers from overreaching firms”).

patients may feel pressured to change treatment patterns or other aspects of her practice, and may make these changes for all patients simultaneously.

But because physicians generally see a relatively small number of patients, it is possible that their patient populations will be segmented along both socio-demographic and illness lines. As a result, the degree of protection that uninformed individuals receive from informed patient “shoppers” may vary. Physicians practicing in a college community, for example, may treat a highly informed group of patients, while physicians practicing in a community populated by poorly educated patients may treat poorly informed patients. While physicians practicing in the first community will have an incentive to improve, physicians in the second community may face less competitive pressure to improve clinical quality.<sup>137</sup>

Ultimately, in a world with no information about quality, there may be little competitive pressure to increase quality,<sup>138</sup> and the high quality health care that does exist is more likely to be allocated randomly across patients. In a world with full information about quality and competitive markets, there may be pressure to increase quality, and any high quality health care that results will be allocated by market forces, including individuals’ willingness (and ability) to pay for services.<sup>139</sup> In a world with partial information about quality and competitive markets, high quality health care will be allocated according to both willingness to pay and patients’ stock of information. Market-facilitating regulations therefore are likely to

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<sup>137</sup> A recent article presenting a theoretical model of patient-physician interaction suggests that when few patients are well-informed about clinical matters, increasing their level of information has no effect on physician decision-making. The article concludes from the analysis that the best way to improve patient welfare is to increase the number of highly informed patients by providing information. If there is already a large proportion of patients who are well-informed, then the best way to increase welfare is to increase the level of information of the already well-informed; all patients, including lesser-informed patients, will benefit from the impact of this increase of knowledge on physician practices. See Bin Xie et al., *The Physician-Patient Relationship: The Impact of Patient-Obtained Medical Information*, 15 HEALTH ECON. 813, 813, 823 (2006) (describing results and policy implications of model’s analysis).

<sup>138</sup> There may still be personal, professional, or regulatory pressure to improve, however, particularly if performance measures are published.

<sup>139</sup> See, e.g., A DOSE OF COMPETITION, *supra* note 116, ch. 1, at 17 (“Information regarding quality allows consumers to make their own determinations of how best to balance those attributes that are important to them . . . and drive improvements throughout the system. If consumers are poorly informed about quality, providers may offer an inefficiently low level of quality.”).

result in a different allocation of high quality care than market-displacing regulations.

### 3. The Effects of Market-Channeling Regulations

Market-channeling regulations occupy a middle ground between these two approaches, their proximity to either extreme varying in accordance with the particular characteristics of the regulation in question. They improve quality not by eliminating low quality providers, or through self-improvement efforts spurred by direct competition for patients, but instead through behavioral changes inspired, facilitated, or funded by fellow health care providers or third parties. In some cases, market-channeling approaches may resemble market-displacing approaches. A health care manager or accreditation organization focused on the narrow objective of improving quality, for example, may set a uniform quality threshold. Just as for the market-displacing approach, the ideal threshold would reflect societal demand for quality, but it need not do so, and it may not be sufficiently tailored to reflect variation in demand for quality across subpopulations.

In other cases, market-channeling approaches resemble market-facilitating approaches. Pay-for-performance programs, for example, incentivize quality by paying more for higher-quality services; thus, these programs could generate results similar to those of pure market competition. In practice, however, pay-for-performance programs are likely to have different short-term implications from market-facilitating regulations for the patient population as a whole. First, pay-for-performance programs are likely to benefit the insured disproportionately. Put simply, the people most likely to benefit directly from quality improvement mechanisms adopted by informed intermediaries are those who have informed intermediaries.<sup>140</sup> Second, because pay-for-performance programs do not depend on patient use of information to achieve their quality gains, they can potentially benefit even patients who are poorly equipped to make health care decisions. In a report card system, the providers most motivated to improve quality will be those with the most to gain or lose from the

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<sup>140</sup> This is not to say that the uninsured will receive no benefit at all from pay-for-performance programs operated by payers; they may benefit indirectly if providers' patterns of practice change for all patients as a result of the incentives they receive for delivering high quality care to some patients. But those who contract without the assistance of intermediaries are less likely to benefit from reliance on this market-channeling approach.

publication of report cards: those whose marginal patients are wired and well-educated. Physicians with such patients will want to maintain high levels of quality in order to prevent these patients from departing or, if their practice is not full, to attract new patients. By contrast, in properly risk-adjusted pay-for-performance programs, the composition of a physician's patient load is irrelevant. Physicians will work to improve their quality as long as the programs' financial incentives exceed the physicians' effort costs.

The implications of market-channeling regimes will depend both on who receives the high quality care they generate and who pays for it. The impact of an insurer-operated pay-for-performance program, for example, may depend on whether a market-facilitating regulatory regime is also present and on how patient payments are determined. If patients have limited access to information about quality and do not pay more for services falling into higher-quality tiers, then quality may be allocated randomly across insured patients, and patients will pay for the average level of quality provided to all patients, rather than the quality of care they actually receive.<sup>141</sup> Lucky patients will pay less than what they get, and unlucky patients will pay more. If there is imperfect market-facilitating regulation, then informed patients may pay less than what they get, and uninformed patients may pay more.<sup>142</sup> If there is both imperfect market-facilitating regulation and payment adjustment, then informed patients get what they want, and pay for it; uninformed patients would simply get what they pay for.<sup>143</sup>

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<sup>141</sup> Tiered health plans do not necessarily charge more for higher quality services. In fact, plans may charge more for lower quality services that are high cost, as a means of encouraging patients to choose more efficient care. See, e.g., Jeremy Olson, *Blue Cross Revises Ranking System*, ST. PAUL PIONEER PRESS, July 25, 2006, at 1B (describing health plan that tiers physicians according to efficiency); see also *infra* note 143 (discussing criteria used to create tiers).

<sup>142</sup> In other words, if uninformed enrollees, despite having access to high quality care, end up receiving lower quality care (either because of lack of information, as hypothesized by the text, or for geographic or other reasons), then the premiums they pay will actually subsidize other enrollees' receipt of higher quality care. Cf. James C. Robinson, *Hospital Tiers in Health Insurance: Balancing Consumer Choice with Financial Incentives*, HEALTH AFF. WEB EXCLUSIVES W3-135, W3-145 (2003), <http://content.healthaffairs.org/contents-by-date.0.shtml> (follow "Web Exclusives: 2003" hyperlink; scroll down to "19 March 2003") ("In reality, nontiered hospital networks do not subsidize the poor at the expense of the rich. . . . [L]ow-quality hospitals are likely to be located in low-income communities and be used by the citizens who live nearby.").

<sup>143</sup> Some health insurers have in fact begun to adjust payment levels. Tiered health plans place providers into different tiers based on a variety of criteria, including cost, quality, and other characteristics. Different levels of cost-sharing may be associated



#### 4. The Importance of Regulatory Goals

This section's analysis of market-displacing, market-channeling, and market-facilitating regulatory approaches reveals that regulatory mechanisms often have different implications for different populations. Market-displacing regulations can help the ill-informed if regulators set standards appropriately; at the same time, they hurt those who prefer to purchase less expensive care that does not meet the standard. Market-facilitating regulations help ensure that the quality of care delivered reflects purchasers' demands; at the same time, they may not help patients who are ill-equipped to use the information they generate. For this reason, if we want to make absolutely certain that everyone who receives treatment benefits from at least a minimal standard of care — regardless of the financial burden such a decision might create — then even in an information-rich world we will not want to weaken market-displacing forms of regulation.<sup>144</sup> Market-channeling regulations may possess the characteristics of either market-displacing or market-facilitating mechanisms. The imperfections in regulatory mechanisms and our

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with each tier. *See id.* at W3-137. Designed to accommodate desires for broad choice of providers while at the same time controlling costs, *see id.* at W3-135 (describing goals of designers of tiered plans), tiered networks could in theory accommodate different preferences for quality combinations by creating high cost, high quality and low cost, low quality tiers. *See id.* at W3-144 (discussing role of quality in tiered network design). Currently, there are also high quality, low cost providers, as well as low quality, high cost providers. *See* Robert Steinbrook, *The Cost of Admission — Tiered Copayments for Hospital Use*, 350 *NEW ENG. J. MED.* 2539, 2540 (2004) (quoting health plan employee as saying “[t]here are high-cost hospitals that are high quality and low-cost hospitals that are high quality” and that “[t]he reverse is also true”). If markets begin to approach the full-information ideal, however, prices for high quality providers should be bid up and prices for low quality providers bid down, all else equal. Tiered products have encountered considerable resistance from providers, however. *See* Glen Mays et al., *Ctr. for Studying Health Sys. Change, Tiered-Provider Networks: Patients Face Cost-Choice Trade-Offs*, *ISSUE BRIEF*, Nov. 2003, at 3, available at <http://www.hschange.org/CONTENT/627/627.pdf>.

<sup>144</sup> One survey suggests that there is considerable demand for both market-displacing and market-facilitating forms of regulation. *See* KAISER FAMILY FOUND. & AGENCY FOR HEALTH CARE POLICY & RESEARCH, *AMERICANS AS HEALTH CARE CONSUMERS: THE ROLE OF QUALITY INFORMATION, QUESTIONNAIRE & TOPLINES 26* (1996), available at <http://www.ahrq.gov/downloads/pub/kaisqual.pdf> (reporting that 12% of respondents to 1996 survey said that government should “[m]onitor health plans, doctors, and hospitals to make sure they meet minimum standards for quality of care,” 24% said government should “[m]ake sure information about the quality of health care is available so people can judge for themselves,” 52% said government should “[d]o both,” and 10% said government should “[d]o neither”).

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reliance on private health care financing together mean that our choices of regulatory approach will have distributional as well as efficiency consequences, consequences that ought to be taken into consideration in determining which regulatory approaches to pursue.

### B. Reexamining Regulatory Roles

As the information revolution proceeds and the mix of regulatory approaches begins to shift, the mix of regulators will likely shift as well. This subpart explores the evolving nature of regulatory pluralism in health care, analyzes the changing roles of regulators in setting regulatory goals, and outlines the contours of the roles of public regulators in an information age.

#### 1. Regulatory Pluralism in an Information Age

Health care markets have long been characterized by regulatory pluralism: health care organizations are subject to many different types of regulation imposed by many different types of regulator.<sup>145</sup> Regulatory pluralism continues to be a feature of health care markets in the information age. As described in Part II, by assisting those who cannot observe care directly in assessing its quality, the health information revolution has permitted the introduction of new regulatory approaches (report cards, pay-for-performance programs) and has helped expand the roles of employers and insurers as regulators. As described in Part III.A, new market-channeling and market-facilitating approaches can benefit the public by resolving the information failures that undermine quality improvement efforts and by improving the match between diverse patient preferences and quality levels. But these new regulatory approaches also add to the already existing regulatory cacophony.

Numerous authors have commented on the dangers of regulatory pluralism. As regulations multiply, they may begin to conflict or

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<sup>145</sup> See Mello et al., *supra* note 8, at 381 (noting that “[t]he current regulatory environment for patient safety is highly pluralistic in nature”); see also M. Gregg Bloche, *The Invention of Health Law*, 91 CAL. L. REV. 247, 288 (2003) (“Yet the health sphere is virtually unique in its multiplicity of legal and regulatory actors — federal, state, and local; and judicial, administrative, and legislative — each with its own incomplete understandings and parochial aims.”); Peter Hammer, *Competition and Quality as Dynamic Processes in the Balkans of American Health Care*, 1 J. HEALTH POL. POL’Y & L. 473, 473 (2006) (discussing challenges posed by regulatory pluralism in health care).

undermine one another. In discussing health care regulation and the health care system in general, Professor Gregg Bloche refers to “incoherence and inconsistency,” Professor Einer Elhauge to an “incoherent mish-mash of approaches,” Professor Peter Hammer to “America’s health care Balkans,” and Professor William Sage to “conflicts” and the goal of creating a “coherent regulatory strategy.”<sup>146</sup> While some of the incoherence within health care regulation arises from a desire to address multiple goals simultaneously, such as increasing quality, expanding access, and reducing costs, it can persist even in regulations addressing a particular health-related concern, such as patient safety. Like many commentators, for example, Mello and her coauthors note the possibility of conflicts between tort liability, which discourages disclosure of medical errors, and patient safety regulation, which encourages it.<sup>147</sup> Incoherence of a sort is also a feature of the framework for regulating health care quality, in the sense that market-displacing regulations are aimed at achieving uniform minimum levels of quality, while market-facilitating and market-channeling regulations contemplate the possibility of a range of quality levels.<sup>148</sup>

But even where regulations are coherent in a broad sense, regulatory pluralism can be problematic. Regulations can be costly to implement and even costlier to comply with. As regulations multiply, they may become duplicative and unnecessarily burdensome. After describing the many organizations involved in patient safety initiatives, including AHRQ, the Leapfrog Group, JCAHO, and the National Quality Forum, Mello and her coauthors acknowledge that “overlaps are not inherently problematic or irrational,” but also express concern that they can undermine patient safety efforts.<sup>149</sup> In its recent report, the Institute of Medicine (“IOM”) expresses similar concerns about the

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<sup>146</sup> Bloche, *supra* note 145, at 288; Einer R. Elhauge, *Can Health Law Become a Coherent Field of Law?*, 41 WAKE FOREST L. REV. 365, 377 (2006); Hammer, *supra* note 145, at 474; Sage, *supra* note 4, at 1711 (describing conflicts among competition, agency, performance, and democratic rationales for disclosure regulations); *id.* at 1712 (“This Article represents the first attempt to transform mandatory disclosure into a coherent regulatory strategy for the health care system.”).

<sup>147</sup> Mello et al., *supra* note 8, at 389-92.

<sup>148</sup> Of course, these regulations need not conflict; regulatory approaches such as tort law and licensure can define the minimum quality of care, while market-channeling and market-displacing regulations can incentivize increases of quality beyond this threshold and allocate care among patients.

<sup>149</sup> See Mello et al., *supra* note 8, at 403-11 (describing patient safety regulations and outlining advantages and disadvantages of regulatory pluralism).

performance measurement that underlies quality improvement efforts. It observes that “many public- and private-sector initiatives have made substantial progress in developing, implementing, and reporting on measures of provider performance,” but argues that “[t]he absence of a carefully crafted, comprehensive approach to performance measurement and all three approaches to change (public disclosure of performance data, payment policies, and performance improvement processes) results in an excessive burden on providers and weakens the impact of incentives for quality improvement.”<sup>150</sup> A recent survey shows that hospitals participating in multiple quality reporting programs often must devote considerable resources to quality measurement, particularly in light of programs’ varying requirements.<sup>151</sup>

The discussion in Part II of this Article revealed that the health information revolution contains within it potential for both regulatory convergence and regulatory dissonance. The basis for convergence is the fact that the information revolution may potentially provide each regulator the same informational foundation for regulatory decisions. Regulators are increasingly using the same informational tools: performance measures are used not only in information-intensive regulatory approaches such as pay-for-performance programs and report cards, but also in more traditional forms of regulation such as accreditation and certification. This regulatory convergence has the potential to align the efforts of regulators, if they use precisely the same performance measures and seek the same goals. At the same time, however, by increasing the diversity of regulatory approaches and expanding the pool of potential regulators, the information revolution may instead increase regulatory burden and conflict, as each regulator creates (and demands data for) slightly different performance measures or pursues different goals.<sup>152</sup>

Three potential responses to this concern are to define a common core of regulatory goals, to create a standardized set of performance

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<sup>150</sup> IOM, *supra* note 8, at 3, 32.

<sup>151</sup> See Hoangmai H. Pham et al., *The Impact of Quality-Reporting Programs on Hospital Operations*, 25 HEALTH AFF. 1412, 1412, 1416-17, 1421 (2006) (reporting survey results on resources hospitals devote to quality programs and discussing burden imposed by participation in multiple quality programs).

<sup>152</sup> See TROYEN A. BRENNAN & DONALD M. BERWICK, *NEW RULES: REGULATION, MARKETS, AND THE QUALITY OF AMERICAN HEALTH CARE* 374 (1996) (“As a result of this fragmentation and competition among regulators, providers of care . . . are forced into wasteful and needlessly complex efforts of internal measurement, report preparation, and record keeping.”).

measurement tools, and to tailor a role for each regulator based on its strengths. The IOM has considered all three responses. It has defined six broad quality improvement-related goals: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity.<sup>153</sup> It argues for the creation of a National Quality Coordination Board (the “Quality Board”) that would establish short and long-term goals and potentially develop standardized performance measures in support of these goals.<sup>154</sup> It recommends that public and private regulators (including purchasers, accreditation and certification organizations, and government entities) align their activities with the national goals and that the Quality Board build upon their efforts.<sup>155</sup>

By contrast, Mello and her coauthors focus mainly on the last of the three potential responses. They describe the four stages of patient safety regulation (problem identification, research and innovation, mandate-setting, and compliance enforcement) and then evaluate the institutional capacity of regulators such as JCAHO, public and private purchasers, legislatures, licensing boards, and the tort liability system to accomplish each task.<sup>156</sup>

These articles’ core insights are important in designing a health care regulatory framework for an information age: that to develop an effective regulatory framework, it is important to define a consistent set of goals; that institutional competencies matter; that both private and public regulators have important roles to play; and that to reap the full benefits of the information age, it is important that performance measures be widely available and designed properly. The first two insights are relevant to any type of regulation, and the third is generally relevant when regulation requires expertise possessed by private entities. But the health information revolution alters the way we think about each of these issues, as well as supplying the context in which the fourth insight becomes salient. The remainder of this section pulls together these insights by discussing how the information revolution should reshape regulatory roles, and in particular, the roles of public regulators.

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<sup>153</sup> IOM, *supra* note 8, at 1.

<sup>154</sup> *Id.* at 7.

<sup>155</sup> *Id.* at 10, 12.

<sup>156</sup> See Mello et al., *supra* note 8, at 415-18 (analyzing institutional capacity of regulators). The authors suggest, for example, that JCAHO has strong institutional capacity for identifying problems, conducting research, and setting mandates, while state licensing boards have strong capacity for setting mandates and enforcing compliance. *Id.*

## 2. Goal Setting Roles in an Information Age

The information age could potentially reshape the process of goal-setting in a few ways. First, greater availability of information, whether disseminated as a result of efforts by regulators, commercial organizations, or health care providers themselves, can enhance the public's influence over the governmental role in goal-setting. Sage argues that one of the rationales for mandatory disclosure laws is the "democratic rationale," which "posits that information about global costs and benefits . . . can expose the externalities that distinguish public from private decision-making."<sup>157</sup> He argues, for example, that disclosure of information about the nature of public health care spending, health care rationing by managed care companies, and access to health care services can support democratic debate over the health care system.<sup>158</sup> Similarly, Professor Daniel Esty observes that "[p]ersuasive data and easy dissemination inevitably will increase 'transparency' and undermine the governmental monopoly over decisionmaking."<sup>159</sup> Citizens can become aware of alternative regulatory approaches and much more easily voice their views.<sup>160</sup> For example, as more information about variation in the quality of care becomes available, the public may begin to insist on specified minimum levels of quality, thus increasing their role in refining publicly governed market-displacing forms of regulation. The resulting changes may be efficiency enhancing, if greater public involvement increases regulators' knowledge about the quality levels that uninformed individuals would prefer, or equity enhancing, if greater public involvement increases governmental commitment to ensuring equity in access to high quality care.

Second, the greater availability of information can enhance patients' power to define health care goals outside of the democratic system. As Part I explained, information imperfections undermine patients' ability to receive the care they would otherwise demand; as Part II explained, the health information revolution helps to expand patients' capabilities to make meaningful decisions; as Part III.A explained, market-

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<sup>157</sup> Sage, *supra* note 4, at 1806.

<sup>158</sup> *Id.* at 1806-19.

<sup>159</sup> Esty, *supra* note 1, at 167.

<sup>160</sup> *Id.* at 167-70. It is not clear, however, that they will choose to do so. See, e.g., Cary Coglianese, *Citizen Participation in Rulemaking: Past, Present, and Future*, 55 DUKE L.J. 943, 954-59, 964-68 (2006) (arguing that innovation in information technologies has not eradicated barriers to participation in rulemaking and finding that meaningful citizen participation in regulatory policymaking has not increased).

facilitating regulatory approaches allow patients to express their preferences for care of different quality levels. When patients cannot assess or directly influence the quality of care that their physicians provide, they must rely on medical professionalism and outside regulators to define quality targets. As Sage emphasizes, however, health care systems premised on consumer sovereignty operate differently from systems designed to obtain particular performance goals.<sup>161</sup> When patients are given information about quality and the ability to choose providers, it is the intersection of their actions and their providers' actions through the competitive process that sets quality levels. In essence, the health information revolution makes it possible for market participants to define, and market outcomes to reflect, health care goals.

These two trends toward enhanced public influence over health care quality — through the collective voice of the public and through individual patients' purchasing decisions — do not mean that the public is displacing others' roles in defining health care system goals. Democratic processes, of course, are subject to many influences, not just those of individual members of the public. In addition, patients may prefer to defer to the organizations that purchase care on their behalf, both public and private, as well as to the medical experts engaged in market-channeling forms of regulation, to make informed decisions about which goals to pursue.

But even more importantly, an information-rich world is not a perfect-information world. Patients will be able to view and understand only a small subset of information that is potentially relevant to assessing whether health care providers are meeting their needs and demands. If patients do not know enough to know which information is useful, the entities that control the dissemination of information will have significant influence over the knowledge base upon which both patients and members of the public make their decisions. They will therefore influence not only patients' decisions,

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<sup>161</sup> See Sage, *supra* note 4, at 1780-81 (“Performance-related disclosure is openly instrumental, challenging both physician authority and consumer sovereignty as organizing principles for the health care system.”). Note, however, that performance-related disclosure need not conflict with consumer sovereignty as exercised in ideal conditions. Poorly functioning markets can allow quality levels to decline; efforts to increase quality through performance-related disclosures may therefore result in the equilibrium quality levels that would be achieved in a fully functional market. Furthermore, if the market is actually fully functional, it will reward providers for using performance measures as tools to achieve the levels of quality demanded by patients.

but also the decisions of providers who respond to patient demands or the publication of data itself.<sup>162</sup> Sage highlights the dangers of this aspect of information disclosure, suggesting that “the process of informing consumers and patients also carries significant risks of manipulation, depending on who is providing information, in what manner, and with what incentives.”<sup>163</sup> But the flip side of this argument is that the most effective way to obtain goals *after* they have been defined is to select performance measures that support them. This makes the preservation of regulatory pluralism especially important. In short, regulators of all types will and should continue to contribute to the goal-setting process because of their broader role in remedying information failures: patients rely on them to winnow information sufficiently to make it usable in democratic and market processes.

### 3. Public Regulators’ Roles in an Information Age

Regardless of how regulatory goals are ultimately defined, public regulators should play a major role in providing the informational tools used to build each form of health care quality regulation. In theory, if commercial organizations or third-party regulators can efficiently fill the information gaps that currently render markets imperfect, then governmental entities can redirect their efforts toward other pressing problems. In practice, most new market-facilitating regulatory initiatives depend on public-private partnerships.<sup>164</sup> Many of the private entities that report quality ratings rely at least in part on data compiled pursuant to Medicare reporting programs.<sup>165</sup> At the same time, government quality reporting programs often depend on

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<sup>162</sup> Davies and his coauthors point out that if the performance measures chosen do not reflect the interests of vulnerable patient groups, they may “further enhance neglect of services for these groups” by diverting attention from their concerns. Davies et al., *supra* note 127, at 393.

<sup>163</sup> Sage, *supra* note 4, at 1788.

<sup>164</sup> Of course, there is a long history of joint public-private regulation in the health care context. See generally FIELD, *supra* note 51, at 222-28 (discussing public-private collaboration in health care regulation).

<sup>165</sup> See, e.g., Checkpoint: About the Measures, [http://www.wicheckpoint.org/reports/about\\_measures.php](http://www.wicheckpoint.org/reports/about_measures.php) (last visited Mar. 25, 2007) (describing data sources for Wisconsin Hospital Association’s hospital quality ratings); HealthGrades, Quality Reports: Frequently Asked Questions, <http://www.healthgrades.com/> (follow “FAQs” hyperlink; then follow “Quality Reports” hyperlink; then follow “See All Answers” hyperlink) (last visited Mar. 28, 2007) (reporting that HealthGrades gets data from CMS, states, and state medical boards, among other sources).



collaborations with private entities. For example, California's medical group report card was developed in conjunction with various health plans, the Pacific Business Group on Health, and the Integrated Healthcare Association, whose pay-for-performance quality measures are included among those made available on the report card website.<sup>166</sup> In addition, CMS has worked with the National Quality Forum in developing a number of CMS quality measures and has announced plans to work with the American Medical Association to develop still more such measures.<sup>167</sup>

These examples suggest that public entities may look to private organizations' expertise in their efforts to create a framework for disseminating quality information. At the same time, public entities may play an important role in collecting raw data, standardizing quality measures, and disseminating the quality ratings that the health information revolution makes possible. One reason for a broad public role in health care quality regulation is that government entities have access to enforcement tools that private entities may lack.<sup>168</sup> Another reason is that public entities are major purchasers of health care services in the United States. The Medicare program, for example, insures more than forty million enrollees and is responsible for about 17% of U.S. health care expenditures.<sup>169</sup> This means both that it has internal access to a large amount of claims data and that it will have

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<sup>166</sup> See State of Cal., 2005 HMO Report Card: About the Medical Group Ratings, [http://www.opa.ca.gov/rc2005/med\\_groups/about\\_this\\_data.asp](http://www.opa.ca.gov/rc2005/med_groups/about_this_data.asp) (last visited Mar. 28, 2007) (describing information underlying California report cards).

<sup>167</sup> See Glendinning, *supra* note 81 (describing efforts to develop quality measures); CMS, Home Health Quality Initiatives, [http://cms.hhs.gov/HomeHealthQualityInits/01\\_Overview.asp](http://cms.hhs.gov/HomeHealthQualityInits/01_Overview.asp) (last visited Mar. 28, 2007) (home health care measures); CMS, Nursing Home Quality Initiative, [http://cms.hhs.gov/NursingHomeQualityInits/01\\_Overview.asp](http://cms.hhs.gov/NursingHomeQualityInits/01_Overview.asp) (last visited Mar. 28, 2007) (nursing home measures); CMS, Physician Focused Quality Initiatives, <http://www.cms.hhs.gov/PhysicianFocusedQualInits/> (last visited Mar. 28, 2007) (physician care measures).

<sup>168</sup> States requiring submission of health care data to administrative agencies, for example, can impose fines for noncompliance with data disclosure requirements. Pennsylvania authorizes a penalty of \$1,000 per day for health care data not submitted and provides that "[a]ny person who knowingly submits inaccurate data . . . commits a misdemeanor of the third degree and shall, upon conviction, be sentenced to pay a fine of \$1,000 or to imprisonment for not more than one year, or both." 35 PA. CONS. STAT. ANN. § 449.12(b) (West 2007).

<sup>169</sup> See CMS, Medicare Enrollment — All Beneficiaries: As of July 2004, *available at* <http://www.cms.hhs.gov/MedicareEnRpts/Downloads/04All.pdf> (last visited Mar. 28, 2007); CMS, The Nation's Health Dollar, Calendar Year 2004: Where It Came From, *available at* <http://www.cms.hhs.gov/NationalHealthExpendData/downloads/PieChartSourcesExpenditures2004.pdf> (last visited Mar. 28, 2007).

significant financial influence over the health care provider community as a market-channeling entity.<sup>170</sup> Governments' roles as both health care payers and public entities also make them natural candidates to take the lead in coordinating the efforts of multiple regulators, whenever coordination might be beneficial. Finally, governmental entities may also lend needed credibility to market-facilitating information dissemination efforts.<sup>171</sup> Patients may find it difficult to judge the relevance and quality of the information they have been provided. Governmental entities may be able to remedy information failures in the information markets that are needed to make health care markets work properly.<sup>172</sup>

Perhaps the most important justification for government involvement in regulation in an information age, however, is the public good aspect of information. Information is often classified as a public good, something that is nonrival and nonexcludable.<sup>173</sup> Because public goods are nonrival in consumption, they have the potential to benefit many people simultaneously. Because they are nonexcludable, people may be able to access them without paying, which undermines financial incentives for their production. As a result, public goods are generally undersupplied relative to the social optimum.<sup>174</sup> While information can be excludable — producers such

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<sup>170</sup> Sage has similarly noted the importance of government participation in pay-for-performance programs, in part because "Medicare is so big that it can produce modal change in health care quality rather than marginal change." Sage, *supra* note 47, at 322.

<sup>171</sup> Cf. IOM, *supra* note 8, at 6 (stating that performance measures "may not be viewed as authoritative, credible, or objective since the measures developed by most stakeholders are more apt to reflect the interests of their constituencies than those of others").

<sup>172</sup> Cf. The Commonwealth Fund, *Finding Doctors in Chicago: A Project to Improve Online Physician Directories*, ISSUE BRIEF, Mar. 2005, at 3-4, available at [http://www.cmwf.org/usr\\_doc/807\\_finddocsinchicago\\_ib.pdf](http://www.cmwf.org/usr_doc/807_finddocsinchicago_ib.pdf) (reporting that consumers look for third-party validation of physician data and that data from physicians' own sites is not viewed to be as credible as data from other sites). Of course, public regulators are not the only entities that could perform this function. Private regulators such as accreditation organizations or other health providers may also supply or validate quality information.

<sup>173</sup> See, e.g., Thomas L. Greaney, *Quality of Care and Market Failure Defenses in Antitrust Health Care Litigation*, 21 CONN. L. REV. 605, 638-39 (1989) (defining "public good" and explaining that information about quality is type of public good).

<sup>174</sup> See *id.* (noting that information may be underprovided); see also Jost, *supra* note 2, at 858 (arguing for continuing public oversight over quality because information's public-good nature means that it is often undersupplied).

as HealthGrades<sup>175</sup> and *U.S. News & World Report*<sup>176</sup> limit access to some of their data to customers willing to pay fees — it may be difficult to prevent sharing of that information.<sup>177</sup> To the extent that quality information is nonrival and nonexcludable, government intervention may be required to ensure an efficient supply of data. It may also be desirable because it helps to ensure equity in access to information.<sup>178</sup>

The health information revolution has lowered the costs of information in health care markets, helping to remedy the imperfections that introduce inefficiencies into market operations and inhibit their delivery of the quality of care that informed patients would demand. But because these markets will never be perfect, and because society may value goals other than those achieved by well-functioning markets, there will continue to be a role for health care regulation. As this subpart has shown, however, the health information revolution should alter the roles of market participants and regulators in their collective efforts to ensure that the health care system fulfills our needs. The information revolution should expand the role of consumers, patients, and members of the public in defining health care goals; expand the role of third-party regulators such as employers and insurers by increasing the availability of informational tools; and expand the role of public regulators, who can provide the informational foundation upon which the new health care regulatory framework will be built. Part IV of this Article draws on these principles to recommend alterations that would enable the health care regulatory framework to better suit the needs of an information age.

#### IV. RESHAPING HEALTH CARE REGULATION

What should the health care regulatory framework of the future

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<sup>175</sup> See HealthGrades, <http://www.healthgrades.com/> (last visited Mar. 28, 2007) (providing various types of provider quality information).

<sup>176</sup> See *Best Hospitals 2006*, U.S. NEWS & WORLD REP., July 9, 2006, available at <http://www.usnews.com/usnews/health/best-hospitals/tophosp.htm> (detailing hospital rankings).

<sup>177</sup> See Hal R. Varian, *Markets for Information Goods* (Oct. 16, 1998), <http://www.ischool.berkeley.edu/~hal/Papers/japan/index.html> (describing characteristics of information goods and discussing extent to which they are nonrival and nonexcludable).

<sup>178</sup> See BRENNAN & BERWICK, *supra* note 152, at 206 (arguing that government regulation of data reporting may not be necessary for those represented by large employer benefit administrators, but that for others, publicly supplied data may be appropriate).

look like? This Article has argued that improvements in information technologies should lead to an expansion in the use of detailed quality information in all forms of quality regulation. The information revolution increases the likelihood that regulatory approaches using such information will be cost-justified. For example, market-displacing regulatory regimes should evolve to make more use of health care data. The more access that regulators have to information about treatment patterns and provider quality, the more accurately they can identify providers of low quality. As Jost argues, for example, instead of just waiting for complaints or malpractice claims to trigger investigations, licensure boards should systematically investigate the competence of those providers falling in the tail of the quality distribution.<sup>179</sup>

At the same time, however, Part II's analysis suggests that the fact that we can more easily learn the full distribution of quality among providers, and not just the identity of providers falling into the tail, should not tempt us to elevate the minimum threshold for continued practice. It is important to maintain some sort of threshold for quality, given that information failures can never be completely eliminated and that some patients will always need protection against care that is likely to be of very low quality. But the market-displacing threshold in an information-rich environment should be no higher and should probably be lower than the ideal threshold in an information-poor environment. As discussed in Part II, for example, scopes of practice of nonphysician medical professionals could be further expanded in situations in which access to care is an issue.<sup>180</sup> A

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<sup>179</sup> See Timothy S. Jost et al., *Consumers, Complaints, and Professional Discipline: A Look at Medical Licensure Boards*, 3 HEALTH MATRIX 309, 310-11 (1993) (noting that public complaints, reports, and referrals from other entities trigger board investigations); Jost, *supra* note 2, at 864-65 (advocating that state licensure boards analyze practice pattern data to identify underperforming physicians). Similar arguments apply to peer review processes within health care institutions. Improvements in information technology allow hospital committees to increase the quality of their regulation by making more intensive use of performance data in their monitoring process.

<sup>180</sup> Increased quality tracking can also support the development of evidence-based scopes of professional practice — scopes of practice defined based on process measures of quality, outcomes measures, or both, rather than solely structural measures of quality such as education and training. Using these more detailed measures of quality would likely improve the accuracy of scope of practice regulations in separating those likely to be high quality providers from those likely to be low quality providers. As Esty suggests, information technology can reduce regulatory mistakes. Esty, *supra* note 1, at 182. It is possible that outcomes-based evidence will

similar theoretical argument supports redefining the standards that determine liability for medical malpractice. If patient preferences for quality vary, then the more informed patients become about provider quality, the more it makes sense to maintain the legally mandated standard of care at a relatively low level, all else equal. Instead of relying on market-displacing regulation to maintain uniformly high quality levels, we should take advantage of declining information costs to expand market-channeling and market-facilitating regulations that permit better tailoring of quality levels to patient demands. With the increased information available about medical care quality, patients can make more informed decisions about the tradeoffs between quality and cost, ultimately obtaining the care that best suits their needs. In this way, we can increase pressure to improve quality for patients who prefer higher quality, while relatively low market-displacing thresholds preserve access for others.

For these market-channeling and market-facilitating approaches to function effectively, however, further regulatory intervention is required. Drawing upon the discussion of regulatory roles and regulatory goals in Part III, the remainder of this Part discusses

additional regulatory reforms and innovations that should shape the health care regulatory framework of the future.<sup>181</sup>

#### A. *Expanding the Role of the Patient*

Imperfect information hinders markets' ability to ensure a match between patient preferences and quality levels. In order for market-facilitating regulations to generate competition that fulfills patients' needs, patients must actually use the information available in the marketplace. If uninformed about the benefits that may flow from the use of information, however, patients may inefficiently decline to seek

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justify expanding scopes of practice for non-physician professionals. Note, however, that this argument is distinct from the argument that the availability of alternative forms of regulation should justify relaxing market-displacing approaches to regulation.

<sup>181</sup> Political considerations will of course affect the nature and effectiveness of public regulatory mechanisms, including the ones proposed here; interest groups necessarily influence the regulatory environment. Similarly, the private interests of private regulators will shape the quality-improvement initiatives they adopt. An analysis of these issues, however, is beyond the scope of this Article.

it.<sup>182</sup> Patients may need to be alerted to the existence of substantial quality disparities and the availability of provider-specific information about quality. One potentially problematic aspect of traditional market-displacing quality controls such as licensure and malpractice liability is that they place physicians into two categories: competent or not, and negligent or not. Following the lead of these quality control mechanisms, patients may place providers into one of two categories: “good” or “bad.” Even more problematic, they may think that the traditional quality controls protect them against physicians or hospitals falling into the bad category, so that there is little need to scrutinize physician practices or performance further.<sup>183</sup> Survey evidence suggests that although the percentage of Americans who believe there are “big differences” in the quality of hospitals and physicians has been increasing over time, more than 10% of respondents to a 2000 survey believed that there were no differences in provider quality of care.<sup>184</sup> Patients’ optimism biases and their trust

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<sup>182</sup> In some cases it may be inefficient for patients to seek out or to use information. Because it reduces information costs, however, the health information revolution increases the likelihood that patient use of information would be efficient.

<sup>183</sup> Based on a focus group study of consumer understanding of quality of care indicators, researchers have concluded that “[c]onsumers perceive health care as highly regulated by the government or other organizations, for example, believing that hospitals are all the same by law and that standards of quality are monitored continuously.” Jacquelyn J. Jewett & Judith H. Hibbard, *Comprehension of Quality Care Indicators: Differences Among Privately Insured, Publicly Insured, and Uninsured*, 18 HEALTH CARE FIN. REV. 75, 90 (1996). Many Americans underestimate quality problems; nearly half of respondents to a survey estimated that the number of Americans who die annually from preventable medical errors was in the 5000 range or lower. KAISER FAMILY FOUND. ET AL., *supra* note 60, at 8. The most often-cited report on medical errors, however, provides an estimate of 44,000 to 98,000 annual deaths. See TO ERR IS HUMAN, *supra* note 13, at 26. On the other hand, there is also survey evidence that half of Americans are dissatisfied with health care quality in the United States and that about one-third have been involved in a situation in which a preventable medical error was made. HENRY J. KAISER FAMILY FOUND. ET AL., *supra* note 60, at 2, 9.

<sup>184</sup> KAISER FAMILY FOUND. & AHRQ, SUMMARY, NATIONAL SURVEY ON AMERICANS AS HEALTH CARE CONSUMERS: AN UPDATE ON THE ROLE OF QUALITY INFORMATION, 12, 15 (Dec. 2000), available at <http://www.ahrq.gov/downloads/pub/kffsummary00.pdf>. In 1996, with respect to specialists, for example, 18% believed that there were no differences in the quality of care, 32% believed there were small differences, and 28% believed there were big differences. In 2000, the corresponding percentages were 11%, 27%, and 42%. *Id.* at 12. For hospitals in 1996, 17% of Americans thought there were no differences in quality, 32% small differences, and 38% big differences. In 2000, the comparable numbers were 11%, 31%, and 47%. *Id.* at 15. For both hospitals and physicians, a significant number of respondents did not know or refused

in their personal physicians may also discourage them from seeking out information about health care quality.<sup>185</sup> The reality, however, is that there can be significant variation in the quality of both physicians and hospitals and that traditional quality controls are imperfect. As a result, patients who have a choice of providers can potentially benefit from learning about the distribution in quality levels.

It may at first seem that the awareness problem can remedy itself, without regulatory intervention: enterprising high quality providers will tout their top-notch ratings, and then second-rate providers will follow suit, in order to avoid being lumped with third-rate providers. In other words, competition will remedy the information shortage with respect to both the existence of quality disparities and quality levels. In fact, however, competition may not follow this path. Individual providers, even highly ranked ones, may be reluctant to draw attention to potential quality issues out of concern that they will discourage patients from seeking health care services.<sup>186</sup> For this reason, third-party regulators are better candidates for increasing awareness of the implications of variations in quality among physicians, hospitals, and other health care providers.<sup>187</sup>

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to answer, which again suggests that consumers may not be fully aware of quality differentials. See *id.* at 12, 15.

<sup>185</sup> See Arnold Milstein & Nancy E. Adler, *Out of Sight, Out of Mind: Why Doesn't Widespread Clinical Quality Failure Command Our Attention?*, 22 HEALTH AFF. 119, 122-24 (2003) (identifying cognitive biases that impede recognition of and response to quality problems, and describing measures that have been taken to address them).

<sup>186</sup> After finding that HMOs in highly competitive markets are less likely to disclose HMO performance ratings, Ginger Jin concludes that her findings “challenge the intuition that competition should lead to more provision of quality information.” Ginger Zhe Jin, *Competition and Disclosure Incentives: An Empirical Study of HMOs*, 36 RAND J. ECON. 93, 93 (2005). She explains that firms may not always want to draw attention to their performance in areas of particular concern to the consumer. Even if their products are superior to those of others with respect to the attribute in question, increasing the consumers' awareness of remaining quality deficiencies may reduce demand for their products. See *id.* at 97 (arguing that cigarette manufacturer may not disclose degree to which its cigarette is addictive, even if it is less addictive than its competitors' cigarettes). In addition, individual firms may choose not to disclose because they do not want to bear the costs of educating consumers about the implications of their quality ratings, especially given that other firms will free-ride on their efforts. *Id.*

<sup>187</sup> Based on their focus group interviews, Jacquelyn Jewett and Judith Hibbard place among the “important big ideas to include in educational efforts” the facts that “quality differences do exist among plans and hospitals (and regulation can not be relied upon to alter quality differences)” and that “medical problems (such as asthma, heart attack deaths, and hospital infections) are controllable or reducible.” Jewett & Hibbard, *supra* note 183, at 91.

The National Committee for Quality Assurance (“NCQA”) recently took a step toward encouraging third-party involvement in raising awareness about quality issues. It developed new accreditation standards based on “how health plans measure the quality and efficiency of care provided by network physicians and hospitals, and how the plans share the results with their members to help inform consumer choice.”<sup>188</sup> This accreditation process will encourage health plans to find ways to communicate information about providers’ quality of care to their enrollees. In addition, payers such as employers or the Medicare program could use monetary incentives to encourage the development of information tools that consumers will use and will be able to use correctly. Contracts between these intermediaries and health plans, for example, could reward a health plan for implementing report card features that research shows are more user friendly, such as star ratings for quality.<sup>189</sup> Alternatively, employers could reward plans for increasing actual patient awareness or use of information. A health plan’s payment could depend on the percentage of employees who logged onto its quality-of-care site; the percentage of employees, who, when surveyed, said they found the quality-of-care site useful; or the increase in the percentage of employees seeking out higher-quality providers (if patients are not required to pay a premium for choosing higher-quality providers).<sup>190</sup>

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<sup>188</sup> Press Release, NCQA, Major Employers, Coalitions and Consumer Organizations Endorse New NCQA Physician and Hospital Quality Standards (Apr. 4, 2006), available at [http://www.ncqa.org/communications/news/phq\\_finalstandards.htm](http://www.ncqa.org/communications/news/phq_finalstandards.htm).

<sup>189</sup> Researchers have found that ordering choices by level of performance and using “star” ratings result in more frequent choices of high performing health plans. Hibbard & Peters, *supra* note 131, at 421. Much recent research has been directed toward increasing the usability of information about quality. See, e.g., Jewett & Hibbard, *supra* note 183, at 92 (recommending strategies to improve comprehension of quality indicators based on results from focus group study). Researchers have found that information overload poses a major challenge to market-facilitating regulatory approaches; higher volumes of information can actually hinder patients’ efforts to use the information provided. See Korobkin, *supra* note 20, at 52 (discussing information overload problem). While the inclusion of statistical confidence intervals surrounding a quality measure might give a more precise picture of a provider’s quality, for example, it may confuse patients, leading them to disregard quality ratings. See Hibbard & Peters, *supra* note 131, at 426 (reporting that inclusion of confidence intervals undermines evaluability of information and therefore effect of information on choice). The use of multiple quality measures can also be overwhelming; quality indicators that bundle these measures together to produce an overall assessment might be more useful to patients.

<sup>190</sup> The NCQA has already focused managed care organizations’ attention on



Any of these measures will increase a health plan's incentive to increase the prominence and usability of the quality information it provides.

Finally, if market-facilitating mechanisms are to ensure that quality levels properly reflect patient demand, it is critical that patients respond to price as well as to quality information. To the extent that health care regulation's goal is to reap the efficiency benefits of well-functioning health care markets, as opposed to simply improving quality, information failures with respect to health care prices are at least as much in need of remedying as information failures with respect to health care quality. Very recently, some health care price-related information has become available, through government entities, insurers, and commercial information providers.<sup>191</sup> In addition, the Secretary of HHS recently announced that various government agencies would "compile non-personalized claims information and release the information in sufficient detail that a statistically reliable foundation of transparent price and quality data will be available for each hospital and doctor."<sup>192</sup> It will be a challenge

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similar issues through their accreditation process. The NCQA's "Quality Plus" accreditation program includes among its criteria whether the managed care organization monitors enrollees' use of health-related (as opposed to health care quality-related) Internet-based information tools. See NCQA, QUALITY PLUS PROGRAM FOR MANAGED CARE ORGANIZATIONS AND PREFERRED PROVIDER ORGANIZATIONS: MEMBER CONNECTIONS 36 (2005) ("Element D").

<sup>191</sup> See, e.g., State of Cal., Office of Statewide Health Planning & Dev., Healthcare Quality & Analysis Div., Find Data — Hosp. Chargemaster, <http://www.oshpd.cahwnet.gov/HQAD/Hospital/chargemaster/index.htm> (last visited Mar. 25, 2007) (describing California hospital chargemaster data); Press Release, Wis. Hosp. Ass'n Info. Ctr., On-Line Access to Hospital Charge Information Now Available (Feb. 11, 2005), available at <http://www.wha.org/newsCenter/pdf/nr2-11-05pricepoint.pdf> (announcing availability of Wisconsin hospital charge data); MyFlorida.com, Florida Compare Care, <http://www.floridacomparecare.com> (last visited Mar. 28, 2007) (providing hospital-specific average charges by diagnosis); Press Release, HealthGrades, HealthGrades Launches Nation's First Medical-Care Cost Reports to Help Consumers Shop for Health Care (Mar. 20, 2006), available at <http://www.healthgrades.com/media/dms/pdf/HealthGradesMedicalCareCostReportsrelease032006.pdf> (announcing availability of provider pricing data supplied by health plans). See also January W. Payne, *The Secret's Out: Aetna Members Gain Access to Care Price, Quality Data*, WASH. POST, Aug. 22, 2006, at F1 (describing Aetna's program allowing over two million members to view prices and quality ratings for individual providers); Press Release, CIGNA, CIGNA HealthCare Posts More Cost and Quality Information Online (Sept. 20, 2006) (describing CIGNA's new program publishing costs for surgical procedures and certain radiology tests, as well as certain quality and cost efficiency measures for physician specialists).

<sup>192</sup> Mike Leavitt, U.S. Sec'y of Health & Hum. Servs., Remarks at the

to make prices meaningful, in part because patients do not have enough information to predict the care they will need. Even if they can easily obtain the price for a particular service, they may not be able to predict the costs of an entire episode of care when choosing a provider.<sup>193</sup> Nevertheless, regulators, both public and private, should work to increase the availability of such information. If consumers are able to obtain and have an incentive to use accurate price and quality information, more competition will emerge in the health care marketplace.

### B. Improving Regulation's Informational Foundation

Even if patients become enthusiastic report card users, quality levels might not adjust to meet their needs if the most relevant quality measures are faulty or absent. In fact, market-displacing, market-channeling, and market-facilitating regulations all require accurate, relevant performance measures to function effectively. Providers rely on patient data to improve their own services so that they can better meet patients' needs; health care payers, to operate pay-for-performance programs; and patients, to determine the quality of care they purchase in health care markets. In other words, clinical data is valuable regardless of the regulator's identity, the regulatory approach, or the regulatory goal.<sup>194</sup> Given the many uses of such data and the

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Commonwealth Club of California (Mar. 14, 2006), *available at* <http://www.hhs.gov/news/speech/2006/060314.html>. Medicare has now posted price ranges showing what it pays hospitals for selected admissions. See CMS, Health Care Consumer Initiatives, [http://www.cms.hhs.gov/HealthCareConInit/01\\_Overview.asp](http://www.cms.hhs.gov/HealthCareConInit/01_Overview.asp) (last visited Mar. 28, 2007) (providing payment data). A recent executive order instructs agencies to make available to beneficiaries and enrollees of a federal health care program "the prices that it, its health insurance issuers, or its health insurance plans pay for procedures to providers in the health care program with which the agency, issuer, or plan contracts." Exec. Order No. 13,410, 71 Fed. Reg. 51,089 (Aug. 22, 2006).

<sup>193</sup> In addition, pricing is often health plan-specific. Furthermore, providers and health plans may resist disclosing such detailed information, given uncertainty about the effects of transparency on price negotiations. Even with an increase in the volume of market-facilitating regulation, the development of health care markets is still very much a work in progress.

<sup>194</sup> See IOM, *supra* note 8, at x (stating that performance measures "can be used for many purposes: data collection, public reports, provider awareness, quality improvement, purchaser benchmarks, and payment incentives"); *id.* at 79 ("Performance measures and quality information represent public goods regardless of one's political perspective or preferred policy approach: a competitive market driven by consumer choice, regulatory approaches based on provider accreditation, or self-

significant declines in information storage and processing costs, it is likely that an expansion in data collection efforts is cost-justified. While private users of data — providers, payers, patients, researchers, and others — can contract individually with providers and patients to obtain access to the data they need, doing so is costly. As explained in Part III.B, several factors justify a special role for government in the regulatory process, including information's public good characteristics. Government entities can work to overcome information- and coordination-related problems by facilitating the collection and use of data.

### 1. Facilitating Data Collection

First, government entities can encourage the adoption of electronic health record systems, which will further lower the costs of information, enhancing our abilities to overcome information failures. The federal government already has begun promoting efforts to standardize data collection systems, helping to solve coordination problems that would otherwise impede information sharing.<sup>195</sup> But it also should take more substantial steps to incentivize electronic record system adoption. Government institutions could in theory mandate system adoption, either as a condition of participation in public insurance programs or through more direct forms of regulation. This would help overcome free-rider problems that might otherwise exist, particularly in a world in which market imperfections and failures persist. Without some form of coordination, each payer who benefits from the adoption of information technologies might choose to wait for other private payers to absorb the fixed costs of implementing new information technologies. A more flexible approach is to incentivize adoption by rewarding providers directly for installing electronic systems, or indirectly through pay-for-performance programs that depend on data collected electronically.

Second, government entities can expand the availability of data by granting increased access to patient-related information. Even large insurers may have access to data about patient treatment for only a small subset of the patients treated by a given provider. This limited

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motivated efforts by providers to improve.”).

<sup>195</sup> See Office of Nat'l Coordinator for Health Info. Tech., U.S. Dep't of Health & Human Servs., Health IT (HIT) Adoption Initiative, <http://www.hhs.gov/healthit/measuring.html> (last visited Mar. 28, 2007) (describing federal efforts to promote electronic health record adoption).

access can make compiling meaningful statistics impossible, and while some private data aggregation initiatives are underway,<sup>196</sup> it may be difficult to develop acceptable mechanisms for pooling data across a multitude of small payers.<sup>197</sup> CMS, however, collects vast amounts of data in connection with its administration of Medicare claims.<sup>198</sup> While CMS already shares much of this information with medical and health services researchers, payer organizations would like CMS to make available larger datasets and to permit them to be used for physician profiling.<sup>199</sup> CMS has so far resisted these requests<sup>200</sup> but should develop mechanisms to disclose this information in a cost-efficient way that protects patient privacy yet permits the development

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<sup>196</sup> For example, the Care Focused Purchasing project involves a group of large private employers working with health plans to assemble claims data for millions of individuals in order to assess provider performance. See John W. Rowe et al., *The Emerging Context for Advances in Comparative Effectiveness Assessment*, 25 HEALTH AFF. WEB EXCLUSIVES w593, w593 (2006), available at <http://content.healthaffairs.org/cgi/reprint/25/6/w593>. Twenty Blue Cross plans have also joined to create Blue Health Intelligence, a program under which they will pool data from 79 million people. They will share the information initially with employers and eventually with consumers. See Press Release, BlueCross BlueShield Ass'n, Blue Cross and Blue Shield Plans Unveil Blue Health Intelligence: Resource Will Enhance Knowledge Sharing (Aug. 4, 2006), available at <http://www.bcbs.com/news/bcbsa/bcbsa-blue-health-intelligence.html>.

<sup>197</sup> See IOM, *supra* note 8, at 28 (describing difficulties in aggregating sufficient data to produce meaningful performance measures).

<sup>198</sup> See, e.g., CMS, Identifiable Data Files: Overview, <http://www.cms.hhs.gov/IdentifiableDataFiles/> (last visited Mar. 28, 2007) (describing Medicare datasets).

<sup>199</sup> See Robert Pear, *Employers Push White House to Disclose Medicare Data*, N.Y. TIMES, Apr. 11, 2006, at A1 (reporting that Business Roundtable had requested access to Medicare data); see also CMS, Standard Analytical Files, [http://www.cms.hhs.gov/IdentifiableDataFiles/02\\_StandardAnalyticalFiles.asp](http://www.cms.hhs.gov/IdentifiableDataFiles/02_StandardAnalyticalFiles.asp) (last visited Mar. 28, 2007) (describing Medicare physician claims dataset available to researchers, which includes only 5% of physician claims).

<sup>200</sup> See Pear, *supra* note 199 (reporting that Medicare had declined Business Roundtable request for data). Agency officials cited administrability concerns — that because the volume of claims is large “we cannot produce a single file larger than 5 percent of the total” — as well as limitations on the use of identifiable data. *Id.* While the data sets involved would be large, it is likely that the technical barriers to assembling them could be surmounted; users would have little reason to request files too large to use. In addition, even if a federal district court was correct in holding that disclosure of individual providers' Medicare reimbursement was prohibited under the Privacy Act, see *Fla. Med. Ass'n v. Dep't of Health, Educ. & Welfare*, 479 F. Supp. 1291, 1311 (M.D. Fla. 1979), it is likely that given the evolution in reimbursement practices, disclosure of provider-specific reimbursement rates under current circumstances would be distinguishable from the practices challenged in that case. Any remaining limitations on the ability to share information could be overcome by a change in statute.

of higher-quality ratings.<sup>201</sup> State entities, too, can expand their collection of patient data. The IOM has made the further recommendation that a Quality Board “[e]nsure that a data repository system and public reporting program capable of data collection at the individual patient level are established and open to participation by all payers and providers.”<sup>202</sup> More generally, government entities are uniquely positioned to facilitate collaboration in pooling data about patients. They can also take the lead in developing measures to protect patient privacy, a critical step in ensuring continuing willingness to pool data for research and quality assessment purposes.

A third way government entities can facilitate the development of databases is to ensure the quality of the raw data collected.<sup>203</sup> If information supplied to quality raters is riddled with errors about hospital features, patient characteristics, medical treatments, or health outcomes, the resulting quality ratings will mislead patients and others who use them to assess the quality of care.<sup>204</sup> Both auditing mechanisms and certification requirements, particularly ones reinforced with penalties for false certification, can help ensure data quality.<sup>205</sup>

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<sup>201</sup> See *Transparency in Health Care: The Time Has Come: Hearing on “What’s the Cost? Proposals to Provide Consumers with Better Information About Health Care Service Costs” Before the Subcomm. on Health of the H. Comm. on Energy & Commerce*, 109th Cong. 9-10 (2006) [hereinafter *Transparency in Health Care*] (statement of Sara R. Collins, Senior Program Officer, The Commonwealth Fund) (discussing importance of Medicare data and data pooling efforts more generally).

<sup>202</sup> IOM, *supra* note 8, at 12.

<sup>203</sup> *Cf. id.* at 43 (noting importance of data verification and auditing).

<sup>204</sup> In a recent report on the quality of the data that underlies the federal Hospital Compare website, the Government Accountability Office stressed the importance of submitting data that is both accurately abstracted from patient records and complete. U.S. GAO, *HOSPITAL QUALITY DATA: CMS NEEDS MORE RIGOROUS METHODS TO ENSURE RELIABILITY OF PUBLICLY RELEASED DATA* 2-3 (2006). Based on a review of program auditing practices, it recommended an increase in the number of patient records reviewed and the adoption of a requirement that hospitals certify having taken measures to ensure completeness of the records. *Id.* at 6-7.

<sup>205</sup> See Sage, *supra* note 4, at 1793 (noting that data integrity could be protected through independent audit requirements and fraud penalties); see also *id.* at 1822 (“Without direct monitoring, audit requirements, public penalties, a private right of action, or an equivalent mechanism, theoretically comprehensive disclosure duties are meaningless in practice.”). For an example of a statute penalizing false statements in the context of the Medicare program, see 42 U.S.C. § 1320a-7b(a) (2006) (providing that “[w]hoever . . . knowingly and willfully makes or causes to be made any false statement or representation of a material fact in any application for any benefit or payment under a Federal health care program . . . at any time knowingly and willfully makes or causes to be made any false statement or representation of a material fact for

## 2. Facilitating Data Use

In addition to facilitating raw data collection, regulators can exercise limited oversight over the development and use of quality measures. Poor quality performance measures can undermine many regulatory efforts. It is widely acknowledged, for example, that provider report cards can be problematic, particularly when based on health outcomes such as mortality. If providers believe that they can identify patients who are very sick (and who are therefore likely to have worse outcomes), and they also believe that that report cards' risk adjustment mechanisms do not reflect this higher level of illness severity, they may decline to treat these patients.<sup>206</sup> Evidence suggests that such behavior does sometimes occur.<sup>207</sup> Risk adjustment mechanisms will never be perfectly accurate, and there may be statistical limits on the accuracy of quality rankings in situations in which providers treat small numbers of patients. However, many groups are working to create measures that accurately measure health care quality, and, as the IOM has recognized, it is important that work continue in this direction.<sup>208</sup> Private regulators can help assure quality of such measures through an accreditation-like process.<sup>209</sup> Given the public-good nature of the research and development efforts that underlie quality measures, however, public regulators should continue

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use in determining rights to such benefit or payment" shall under certain circumstances be fined up to \$25,000 and imprisoned up to five years).

<sup>206</sup> See David Dranove et al., *Is More Information Better? The Effects of Report Cards on Health Care Providers*, 111 J. POL. ECON. 555, 557-58, 581 (2003) (describing potential for providers to game reporting system).

<sup>207</sup> See *id.* at 583-84 (reporting evidence of report card-related changes in provider selection of patients to treat).

<sup>208</sup> See IOM, *supra* note 8, at 11 (recommending formulation of research agenda for development of national performance measures that includes "[a]ppplied research focused on underlying methodological issues, such as risk adjustment, sample size, weighting, and models of shared accountability"); see also A DOSE OF COMPETITION, *supra* note 116, Executive Summary, at 21 (recommending that "particular attention be paid to the criticism that report cards and other performance measures discourage providers from treating sicker patients").

<sup>209</sup> The National Quality Forum, for example, serves an accreditation function when it endorses specific quality measures. See Nat'l Quality Forum, Mission, <http://www.qualityforum.org/about/mission.asp> (last visited Mar. 28, 2007). The National Quality Forum is a nonprofit organization whose board includes representatives of health care providers, health plans and other purchasers, consumers, and federal agencies. See *id.*, About the National Quality Forum, <http://www.qualityforum.org/about/> (last visited Mar. 28, 2007) (describing National Quality Forum's membership).

to be involved in their development.<sup>210</sup>

Government entities can also expand their efforts to standardize measures of quality developed by others.<sup>211</sup> The justification for government involvement in standardizing quality measures is perhaps not as strong as it is for facilitating raw data collection. Once raw data exists, organizations can create their own proprietary quality measures for their members' use. The public may nevertheless benefit from standardization. First, the use of quality measures is nonrival, and the federal government can help reduce duplicative development costs by coordinating efforts to develop a single standard set of quality measures. Second, certain quality measures may require new data elements to be captured and separately stored in medical records. By defining standard measures, the government can help define a standard minimum data set. If a particular type of quality measure becomes a focal point, the likelihood that providers would have to create and store slightly different versions of the same information to meet the requirements of different data users would be diminished. In addition, standardizing performance measures will help avoid the production of conflicting health quality ratings that might undermine the trust of information users, who often will be incapable of determining which type of quality rating is the "best." If one health plan gives a provider a three star rating for cardiac care, while a commercial information provider gives only one star, then patients may not know which provider to trust and may simply ignore the

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<sup>210</sup> See IOM, *supra* note 8, at 6 ("Public goods, such as investments in better risk adjustment methodologies and data aggregation methods, are unlikely to be addressed adequately in a competitive market among current developers of measures."). AHRQ has already participated in the development of a variety of quality measures. See *Testimony Before the Subcomm. on Health of the H. Ways & Means Comm.*, 108th Cong. (2004) (statement of Carolyn Clancy, Director, AHRQ), available at <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=1249> (describing hospital discharge record-based and survey-based quality measures developed by AHRQ).

<sup>211</sup> Sage points out that standardization can benefit information suppliers, by reducing data collection and processing costs, and information users, by increasing data integrity and comparability. He advocates standardization of risk adjustment mechanisms and notes that government involvement in the process might be beneficial. Sage, *supra* note 4, at 1741-42; see also Jost, *supra* note 2, at 858 (arguing that oversight is important to assure accuracy and that government involvement may be needed to ensure data comparability); *Transparency in Health Care*, *supra* note 201, at 3 (advocating adoption of uniform quality metrics and transparent risk adjustment methodologies).

information.<sup>212</sup> While it would be detrimental to attempt to inhibit the development of innovative quality measures tailored to community interests — a point stressed by the IOM<sup>213</sup> — it may be helpful to lend government leadership to efforts to identify a core quality measure set that would be reported consistently across information platforms.<sup>214</sup> A recent executive order makes progress toward this end. It orders federal agencies to develop programs measuring the quality of provider services based on standards developed “in collaboration with similar initiatives in the private and non-federal public sectors.”<sup>215</sup>

### C. Reorienting Health Care Regulation

The IOM has emphasized the importance of regulatory involvement in many of these informational foundation functions. In its recent comprehensive report on performance measurement, it argues for the creation of a National Quality Coordination Board that would designate or possibly develop standardized performance measures, ensure the creation of data aggregation and validation processes, and fund a research agenda for the development of new performance measures.<sup>216</sup> Expressing concern about existing organizations’ abilities

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<sup>212</sup> Developing standardized risk adjustment methods would help alleviate this problem. See Sage, *supra* note 4, at 1741 (describing advantages of standardization, including of risk adjustment mechanisms).

<sup>213</sup> The IOM has stated that “[l]ocal innovation in pursuit of national goals for improving health care quality should be encouraged . . . local communities should also be encouraged to identify and pursue local priorities, in addition to helping to achieve national goals.” IOM, *supra* note 8, at 76.

<sup>214</sup> One example of an entity that has taken on some of these functions is the AQA (formerly the Ambulatory Care Quality Alliance), a collaboration of the American Academy of Family Physicians, the American College of Physicians, and America’s Health Insurance Plans, along with the federal agency AHRQ. It seeks consensus on performance measures and models for aggregating data. See The Ambulatory Care Quality Alliance: Improving Clinical Quality and Consumer Decision-Making, available at <http://www.ahrq.gov/qual/aqaback.pdf> (last visited Mar. 28, 2007).

<sup>215</sup> Exec. Order No. 13,410, 71 Fed. Reg. 51,089 (Aug. 22, 2006). The order also states that “[a]n agency satisfies the requirements of this subsection if it participates in the aggregation of claims and other appropriate data for the purposes of quality measurement.” *Id.*

<sup>216</sup> See IOM, *supra* note 8, at 68 (listing proposed Quality Board functions). Others have previously proposed creating various forms of health information boards. See Sage, *supra* note 4, at 1742 (discussing proposals to standardize data reporting, including Paul Ellwood’s vision of body that would regulate collection and reporting of health care performance information); *id.* at 1779 (noting that Clinton Administration’s Health Security Act proposal included national health board).



to formulate national goals, the possibility of wasteful duplication, and the likelihood of underprovision of public goods, among other factors, it recommends that these functions be undertaken by an independent board, rather than by a newly created large federal entity, an office within an existing federal agency, or other stakeholder groups.<sup>217</sup> Through its discussion of the potential benefits of performance measures, its emphasis on formulating national goals, and its analysis of comparative institutional capabilities for building an informational foundation, it provides a helpful blueprint for reshaping health care regulation.<sup>218</sup>

The IOM has identified six quality-related goals: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. For analysis purposes, it is helpful to categorize and distinguish among these goals. Safety, effectiveness, timeliness, and patient-centeredness are all dimensions of quality. Safety, effectiveness, and timeliness directly affect the health status of patients; unsafe medical care, ineffective treatments, and delayed treatments can injure patients or undermine efforts to improve health outcomes. Patient-centeredness is a multifaceted quality measure. On the one hand, it is a frame through which other quality-related concepts, such as effectiveness, can be viewed. A patient-centered system relies on patient preferences to assess the benefit of health interventions and the value of health outcomes. On the other hand, it can stand alone as a separate value to be realized; it is associated with personal autonomy, and more broadly, with consumer satisfaction. (Timeliness, when it refers to waits in physicians' offices or on the telephone, could also be treated as an element of patient satisfaction.) Together, these four goals are proxies for quality, measures that should be incorporated into the numerator of the "efficiency" variable. The denominator of the efficiency variable is health care costs; health care is efficiently produced if costs are as low as possible for producing a given level of quality. Equity is a goal of an altogether different sort: its central

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<sup>217</sup> IOM, *supra* note 8, at 66-67.

<sup>218</sup> Sage observes that governments may use information reporting requirements as a tool to pursue national access, cost, and quality goals. Sage, *supra* note 4, at 1778. Professors Brennan and Berwick stress the importance of establishing systemic goals, and, like the IOM, argue that these goals should be customized at the local level. BRENNAN & BERWICK, *supra* note 152, at 371-73. This Article argues that improvements in information technologies will permit quality goals to be set through market competition, but that equity-related goals will need to be established outside of the marketplace, perhaps at the community level, whether geographically defined or otherwise.

concern is arguably the distribution of care (or of high quality care) among patients.<sup>219</sup>

### 1. Defining Quality-Related Goals

Each of these goals is important, and each deserves attention from regulators and patients. This Article's analysis, however, suggests that the Quality Board should focus on some of these goals more than others. The Quality Board's first focus should be on solidifying the foundation of health care markets by remedying information failures. This implies that the Quality Board should focus more on facilitating measures of technical quality (especially safety and effectiveness) and less on facilitating measures of patient-centeredness, particularly those related to patient satisfaction. Research has shown that patient choices are influenced by aggregate patient satisfaction measures,<sup>220</sup> and that such measures matter apart from the technical quality of care that is delivered.<sup>221</sup> Patient satisfaction measures are currently being incorporated into provider quality measures,<sup>222</sup> and CMS and AHRQ are currently developing a hospital patient satisfaction survey.<sup>223</sup> CMS, employers, health plans, and other organizations that serve as

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<sup>219</sup> For the IOM's description of the content of these goals, see *CROSSING THE QUALITY CHASM*, *supra* note 13, at 41-54.

<sup>220</sup> See, e.g., Jennifer Schultz et al., *Do Employees Use Report Cards to Assess Health Care Provider Systems*, 36 *HEALTH SERVS. RES.* 509, 510 (2001) (concluding that "health care consumers are using satisfaction and service-quality information provided by their employers" based on regression analysis of 1998 survey results of more than one thousand employees of Minnesota firms).

<sup>221</sup> In an experiment using simulated reported cards on primary care providers, nearly one third of participants forced to make a tradeoff between interpersonal and technical quality chose physicians who rated highly in interpersonal quality (communication, courtesy, and promptness, for example) but relatively poorly in the delivery of acute, chronic, and preventive care services. See Constance H. Fung et al., *Patients' Preferences for Technical Versus Interpersonal Quality When Selecting a Primary Care Physician*, 40 *HEALTH SERVS. RES.* 957, 971 (2005).

<sup>222</sup> See, e.g., R.I. DEP'T OF HEALTH, *PATIENT SATISFACTION WITH HOSPITAL CARE IN RHODE ISLAND I* (2003), available at <http://www.health.ri.gov/chic/performance/quality/quality19.pdf> (Rhode Island hospital report card); Mass. Health Quality Partners, *Quality Reports*, <http://www.mhqp.org/quality/whatisquality.asp?nav=030000> (last visited Mar. 25, 2007) (Massachusetts physician office report card, "Patient Experiences"); State of Cal., *supra* note 166 (California medical group report card, "Patient Rating of Care Experience").

<sup>223</sup> See, e.g., Elizabeth Goldstein et al., *Measuring Hospital Care from the Patients' Perspective: An Overview of the CAHPS Hospital Survey Development Process*, 40 *HEALTH SERVS. RES.* 1977, 1977-79 (2005) (describing development of hospital patient satisfaction survey instrument).

intermediary-regulators in an effort to ensure that patients receive the quality of care they desire should continue to compile the patient satisfaction measures that patients want.

Of all of the potential quality measures, however, patient satisfaction is the aspect of quality least likely to be subject to market failures, particularly in the context of physician services. Unlike technical quality measures, such as the delivery of clinically appropriate medications, measures such as timeliness or communication skills are straightforward for patients to evaluate, based on their own experiences or experiences of others. Patients often engage in multiple interactions with physicians; if one physician is not adequately responsive, they may choose another physician. Even in cases where patients are not engaged in repeated interactions with a provider, they can ask friends with similar preferences for their recommendations. They can also seek evaluations provided informally by other patients on the Internet. While ratings can still be helpful, because they aggregate the views of many patients and guide patients' thinking about qualities that might be important, health care providers or commercial organizations might respond to patient demand by providing them directly. Ultimately, patient satisfaction measures do not fill an information void in the same way that technical quality measures do. They might also undermine efforts to increase awareness and use of technical measures of quality.

After the Quality Board, third-party regulators, the market, and patients themselves together supply the informational foundation necessary for health care markets to function properly, they should allow markets to define the quality-related goals of health care services. The Quality Board should pursue goals that are truly universal; it should facilitate adoption of quality-improving practices that reduce costs, for example. It should not, however, strive to achieve specific safety or effectiveness targets. Instead, it should improve the tools that patients and their intermediary-regulators, such as Medicare, employers, or health plans, can use to achieve the goals that they individually set. The health information revolution benefits society not just by helping providers identify quality deficiencies to be remedied, but also by allowing patients to reveal and satisfy their own preferences. After advancing the health information revolution by supporting the development and dissemination of quality measures, the Quality Board should take advantage of the information revolution's benefits by allowing markets to set initial quality levels.

## 2. Emphasizing Equity as a Public Regulatory Goal

Effective market-facilitating and market-channeling regulations can help markets work more efficiently, providing incentives for health care providers to find ways to deliver the services that individual patients and payers demand. If providers adhere to guidelines and adopt systems to better manage the process of care, then we may begin to see both higher average quality levels and less variation in quality levels. But, as described in Part III, markets will always be imperfect. We may not want to leave the uninformed at the mercy of the market if doing so generates poor health outcomes. Moreover, even if perfect, markets do not necessarily generate the outcomes that we as a society would collectively prefer. If individual patients must ultimately bear the costs of their own care, for example, their budget constraints will likely generate disparities of quality levels. While disparities already exist, the information revolution will make them more visible than ever before and may increase their correlation with income levels. At the same time, however, the information revolution will provide the data necessary to begin to address disparities, regardless of their cause. If we are concerned about equity in access to care, or equity in access to high quality care, then this trend should be something that we monitor and ultimately work to address.

The very feature of market-facilitating and market-channeling forms of regulation that makes them well-suited for tailoring health care services to individual needs — the fact that they guide decision-making for just one individual or for a subset of individuals, rather than mandating it for all — makes them poorly suited for addressing the concerns of an entire population. Market-channeling organizations may lack the incentive to focus on or the capability to address equity concerns on a broad scale. Organizations that are responsible to society as a whole, as the Quality Board would be, therefore need to take on the responsibility for assuring equity in accordance with society's wishes. Thus, in addition to facilitating the development of performance measures, the Quality Board should focus on equity issues. As Sage argues, information can serve an important role in a democratic society, serving "goals with respect to both consulting and educating the public."<sup>224</sup> At a minimum, the Quality Board should take on the task of monitoring the distribution of high quality care, so that we as a society can better determine what

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<sup>224</sup> Sage, *supra* note 4, at 1807. See generally *id.* at 1801-25 (exploring democratic rationale for mandatory disclosure laws).

further steps would be merited.<sup>225</sup>

#### CONCLUSION

The information failures that plague health care markets have long been an important justification for regulation of health care quality. They undermine the ability of health care markets to deliver the level of quality that patients desire. Recent reductions in the costs of collecting, analyzing, and disseminating information will undoubtedly help remedy these failures, but they do not obviate the need for regulation. The health care regulatory framework will and should survive the health information revolution, but in altered form. By reducing the costs of information inputs into the regulatory process, the health information revolution will make possible an expansion in the supply of information-intensive regulation. At the same time, it should prompt a shift away from market-displacing approaches toward the market-channeling and market-facilitating regulatory approaches that can more easily accommodate variations in patient preferences for the quality of care.

An expansion in market-channeling and market-facilitating regulatory efforts has already begun, but it has not yet concluded. Information technologies continue to develop, potentially making even more information-intensive regulation feasible. Other forces, such as the growth of high-deductible health plans and health savings accounts, may further increase the demand for and benefit from market-facilitating forms of regulation, potentially leading to still more evolution in the framework for regulating health care quality.<sup>226</sup>

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<sup>225</sup> The IOM notes that few measures of equity currently exist; the Quality Board would need to develop them. IOM, *supra* note 8, at 41.

<sup>226</sup> Trends that expand patient choice and increase patient financial responsibility for care, such as growth in consumer-driven health care plans, will tend to increase patient demand for information that will allow them to make decisions that better suit their financial as well as health care needs. While patients would ordinarily be concerned about the quality of their care, regardless of the source of their funding, patients who lack insurance or who face higher cost sharing responsibilities through copayments or deductibles will be especially sensitive to quality-cost tradeoffs of health care services. See, e.g., A DOSE OF COMPETITION, *supra* note 116, Executive Summary, at 21 (suggesting that tiered plans would likely increase consumer incentives to use price and quality information). On the nature of consumer-driven health care, see John V. Jacobi, *Consumer-Directed Health Care and the Chronically Ill*, 38 U. MICH. J.L. REFORM 531, 549-55 (2005); Timothy S. Jost & Mark A. Hall, *The Role of State Regulation in Consumer-Driven Health Care*, 31 AM. J.L. & MED. 395, 395-97 (2005).

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Regulators should support this continued evolution. Public regulators in particular have an important role to play in promoting development of performance measures that support both internal quality improvement efforts and the operations of health care markets. By focusing on creating a common set of basic informational tools, public regulators can ameliorate the burdens of a pluralistic regulatory environment, while helping to realize the benefits associated with allowing individual market actors to define the nature of health care services to be delivered.

Even well-functioning markets may not obtain results consistent with the preferences of society as a whole, however. While market mechanisms reinforce current efforts to improve health care quality, they will likely benefit the health of some groups of patients, particularly the wealthy and well-informed, more than the health of others. As information begins to reach markets, public regulators should monitor its implications for the distribution in the levels of quality of care that patients receive. Ultimately, if the regulatory goal is to improve the quality of care for all, or to obtain uniformly high levels of quality, society will have to do more than just solve information failures. It will have to find a way to redistribute societal health care resources so that all can afford to obtain the health improvements made possible by the health information revolution. The health information revolution can help solve some market failures, but the need for health-related regulation is likely to remain.