Reflective Choice in Health Care: Using Information Technology to Present Allocation Options

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I. INTRODUCTION

Over the last few decades, the U.S. health care system has been the beneficiary of tremendous growth in the power and sheer quantity of useful medical technology.¹ As a consequence, our society has, for some time, had to make cost-benefit tradeoffs in health care.² The alternative—funding all health care interventions that would produce some health benefit for some patient—is not feasible, because it would effectively consume all of our resources.³

Managed care plans,⁴ which have emerged as the market’s preferred mechanism for making cost-benefit tradeoffs,⁵ frequently make such tradeoffs by giving physicians financial incentives of various sorts to reduce their spending on medical testing, hospitalization and referral.⁶ Alternatively, plans may give third-party utilization reviewers the authority to deny approval for treatments proposed by plan physicians.⁷ Yet managed care organizations (MCOs) are typically under no legal

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¹ See generally Joseph Newhouse, An Iconoclastic View of Health Care Cost Containment, HEALTH AFF., Supp. 1993, at 152 (emphasizing new technology as the major reason for health care cost increases).

² Students of health policy have long observed that cost-benefit tradeoffs are inevitable. See, e.g., David M. Eddy, Health System Reform: Will Controlling Costs Require Rationing Services?, 272 JAMA 324, 326 (1994) (analyzing rationing mechanisms as a means to contain health care costs unavoidably driven up by technological advances); Henry Aaron & William B. Schwartz, Rationing Health Care: The Choice Before Us, 247 SCIENCE 418, 418–19 (1990) (considering the benefits of technological advancements and their costs).

³ See Einer Elhauge, Allocating Health Care Morally, 82 CAL. L. REV. 1451, 1459 (1994) (noting that the United States could easily spend 100% of its gross national product on beneficial medical interventions).

⁴ Managed care refers to organizational structures that integrate health care finance and delivery in a structured way that allows for oversight of the quality and cost of health care services. See KENNETH WING, MICHAEL JACOBS & PATRICIA KUSZLER, THE LAW AND AMERICAN HEALTH CARE 83–84 (1998).

⁵ See Gail A. Jensen et al., The New Dominance of Managed Care: Insurance Trends in the 1990s, HEALTH AFF., Jan./Feb. 1997, at 125, 134. More than 75% of insured workers are enrolled in managed care plans. See id. at 125.


⁷ See WING, JACOBS & KUSZLER, supra note 4, at 84.
obligation, common law or statutory, to disclose to prospective plan enrollees information regarding physician financial incentives or utilization review guidelines. Indeed, the promotional materials issued by these organizations often promote the misconception that no cost-benefit tradeoffs will be made. Managed care plans impose on enrollees spending tradeoffs that may be quite different from those that the enrollees would have chosen at the time of enrollment, had they been given an explicit, open choice regarding tradeoffs.

As an alternative to this type of sub rosa rationing, a number of commentators argue in favor of systems that allow individual consumers to make choices among health plans with explicit rationing schemes. However, one important argument that frequently has been advanced by commentators opposed to consumer choice-oriented approaches is that these approaches falsely assume that consumers can make considered, autonomy-enhancing choices about their health care priorities. This Article examines the issue of consumer choice with an eye toward determining whether and how information technology could assist individuals in making truly reflective health care rationing choices. The Article argues that information technology could squarely address the concerns voiced by opponents of choice by giving consumers a genuine understanding of how different allocation mechanisms worked. Information technology could also facilitate communication among patients who


9 See Gail Agrawal, Chicago Hope Meets the Chicago School, 96 Mich. L. Rev. 1793, 1816–17 (1998) (arguing that a “knowledgeable consumer of health care services searches in vain in the promotional materials for any statements conveying to the unsuspecting that the coverage or the medical care will be less than optimal.”).

10 Significantly, the relevant comparison must be between tradeoffs that the enrollee would have made ex ante (i.e., at enrollment) and those made by the physician and/or third-party utilization reviewer. If cost containment is the goal, the ex post preferences of insured individuals cannot be used. If an individual is fully insured, she has little incentive to consider costs.

11 This Article uses the term rationing to encompass cost-benefit tradeoffs generally, not simply cost-based denials of beneficial care by administrative bodies. See, e.g., MARK A. HALL, MAKING MEDICAL SPENDING DECISIONS 6 (1997) (using the terms rationing and allocation interchangeably to denote the “implicit or explicit denial of marginally beneficial treatment out of consideration for its cost”). But see Clark C. Havighurth, Prospective Self-Denial: Can Consumers Contract Today to Accept Health Care Rationing Tomorrow?, 140 U. Pa. L. Rev. 1755, 1762–64 (1992) (arguing that the term rationing applies only to government decisions that limit the amount of beneficial health care individuals can purchase in the private market).

12 See discussion infra Part II. An issue that arises in discussions of explicit rationing concerns whether disclosures regarding such rationing need to be made only at the time of enrollment or should be made both at enrollment and when a specific, cost-based decision not to recommend certain services is made. Compare Hall, supra note 11, at 202–12 (arguing that disclosure and consent at enrollment represents consent to future cost-saving medical spending decisions) with Agrawal, supra note 9, at 1809–21 (arguing that disclosure is needed both at enrollment and at the time of the specific clinical decision). Because this Article addresses only the question of informed choice at enrollment, it does not focus on this issue.

13 For further discussion of this argument, see infra notes 57–58, 60–63 and accompanying text.
have chosen a particular allocation mechanism.\textsuperscript{14}

This Article divides into three parts. Part II briefly surveys various consumer choice-orientated approaches to health care rationing. Part III addresses the objection that choice in the health care arena is not desirable, because consumers cannot make autonomy-enhancing, reflective choices in this arena. Part IV discusses the range of mechanisms by which information technology could facilitate reflective choice.

II. CONSUMER CHOICE–ORIENTED APPROACHES TOWARD RATIONING

A number of commentators have suggested approaches toward rationing that focus on consumer choice. Market theorists have developed one set of choice based literature. Market-oriented commentators view choice as necessary because individuals, particularly individuals of different income levels, will have different preferences regarding how they want to trade off health care spending against other spending priorities. For example, although wealthier consumers may prefer a "Cadillac" plan, the less wealthy might prefer a "Chevrolet" plan, which leaves them money to spend on other activities.\textsuperscript{15} Market-oriented commentators, therefore, suggest that managed care contracts make explicit their level of rationing, in other words, the extent to which cost-benefit tradeoffs will be made.

For example, Ira Ellman and Mark Hall propose a scheme under which the contractual obligations of various insurance plans are defined in terms of budgets for particular pools of patients.\textsuperscript{16} Thus, for a certain premium, a subscriber could elect a policy that spent an annual sum of two million per 1,000 insured individuals on health care; alternatively, for a higher premium, the subscriber could elect a policy that spent a larger pool of money, say four or six million.\textsuperscript{17} This allocation model, which Ellman and Hall term Budgeted Risk Preferences (BRPs), could also be applied to particular categories of procedures.\textsuperscript{18} For example, some plans might allocate $50,000 per year per 10,000 members for magnetic resonance imaging (MRI) or computed tomography imaging scans; for a higher premium, others might allocate $100,000.\textsuperscript{19} Whether the BRP pool was general or procedure-specific, the dollars within the pool would be allocated on a comparative need basis among subscribers. For example, in the case of the MRI allocation, those for whom an MRI had the highest probability of revealing useful new information would receive the MRI.\textsuperscript{20}

Clark Havighurst's proposed contractual approach also focuses on different levels of rationing.\textsuperscript{21} According to Havighurst, the health insurance contract of a relatively economical plan could specifically state that by "subscribing to the Plan, you agree to accept the risk that some services you may desire in the future may not

\textsuperscript{14} To be sure, information technology will only be useful to the extent that all individuals, including the poor and other underserved populations, have access to such technology. The Article assumes that public funding would play a role in ensuring such access.
\textsuperscript{15} See, e.g., Ira Mark Ellman & Mark Hall, Redefining the Terms of Health Insurance to Accommodate Varying Consumer Risk Preferences, 20 AM. J.L. & MED. 187, 188 (1994) (discussing "Cadillac" and "Chevrolet" care).
\textsuperscript{16} See id. at 189.
\textsuperscript{17} See id.
\textsuperscript{18} See id. at 193.
\textsuperscript{19} See id. at 193–94.
\textsuperscript{20} See id.
be provided under this Contract."\textsuperscript{22} To illustrate the type of risk involved, the contract could give examples of services not provided by the plan. For example, the contract may state that the "Plan will pay only for the drug streptokinase for heart attack victims rather than the more costly drug TPA, even though some physicians believe that the latter is slightly more effective in preventing subsequent heart attacks."\textsuperscript{23}

Havighurst acknowledges that merely including some contractual language regarding cost-benefit tradeoffs is far from ideal; an ideal contract would specify the health plan's manner of trading off costs and benefits in every possible medical exigency.\textsuperscript{24} Havighurst believes that this ideal could ultimately be approached by having health care contracts incorporate by reference specific health care practice guidelines.\textsuperscript{25} These health care practice guidelines would be "selected from a universe of alternative guidelines, each expressing different, scientifically supportable, variously cost conscious conclusions on specific clinical issues."\textsuperscript{26} In Havighurst's view, although current practice guidelines generally are not structured to confront the issue of cost,\textsuperscript{27} various sets of guidelines that did make different levels of cost-benefit tradeoffs could be developed.\textsuperscript{28}

As an example of how practice guidelines could incorporate cost considerations, Havighurst invokes the three tier American College of Cardiology/American Heart Association approach to classifying indications for coronary angiography.\textsuperscript{29} Class I indications are "conditions for which there is general agreement that coronary angiography is justified"; Class II indications are "conditions for which coronary angiography is frequently performed, but there is divergence of opinion with respect to its justification in terms of value and appropriateness";\textsuperscript{30} and Class III indications are "conditions for which there is general agreement that coronary angiography is not ordinarily justified."\textsuperscript{31} Havighurst proposes that the health plan contract for a less generous plan would state that it covered coronary angiography for patients who fell into Class I.\textsuperscript{32} A more generous plan contract would state that it covered the procedure for patients who fell into Classes I and II.\textsuperscript{33} Havighurst also argues that a RAND Corporation approach, in which researchers rate medical procedures on various different scales of "appropriateness" and "necessity/cruciality," could be used to establish different tiers of rationing.\textsuperscript{34} Less generous plans would cover only procedures that ranked high on these scales.\textsuperscript{35} More
generous plans would cover not only highly ranked procedures, but also procedures that were ranked further down on these scales.36

By contrast with market-oriented commentators, those commentators who argue from an explicitly moral-ethical standpoint emphasize that, even independent of income level, individuals have divergent health values and allocational preferences.37 For example, when individuals are asked what they would be willing to pay to avoid particular types of morbidity and mortality, their responses vary widely—anywhere from $25 to $145 per day to avoid a headache and from $40,000 to $130,000 per year to avoid the morbidity associated with lung cancer.38 Moreover, these differences in valuation persist even when the economic status of the respondent is factored out.39 Similarly, data from a telephone survey of Oregonian citizens demonstrate that individuals who are asked to rank various health states on a scale of 0 (a situation “as bad as death”) to 100 (a situation that describes “good health”) rank the same health states quite differently.40 Individuals who view the same health states in divergent ways would presumably also have divergent preferences as to how health care dollars to alleviate those states should be allocated. A single mechanism for making cost-benefit tradeoffs would override these diverse individual views and preferences. Commentators who argue from an ethical standpoint, therefore, suggest that choices as to how rationing is done, as contrasted with choices about rationing levels, should be available.41 Thus, for example, some of the following schemes could be offered: (1) schemes that require significant deductibles and copayments at each level of expenditure; (2) schemes in which physicians operating under modest, clearly disclosed financial incentives are given rationing responsibility; (3) schemes that use random allocation or ration according to greatest need; and (4) various utilitarian schemes that maximize certain measures of health benefit.42

This last category of benefit maximization schemes could include plans that operate according to what is perhaps the most systematic rationing technique available: the technique of medical cost effectiveness.43 In cost-effectiveness analysis, policy-makers evaluate interventions according to their cost and to the additional quality-adjusted life years (QALYs) that they produce.44 For any given intervention, cost-effectiveness analysis thus produces a cost-per-QALY gained ratio.45 The

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36 See id.
37 See Elhauge, supra note 3, at 1524–25; Ezekiel Emanuel, The Ends of Human Life 139–44 (1991); see generally Rai, supra note 25, at 1032 (supporting the proposition that value, not income levels, often determines an individual’s health choices).
39 See Rai, supra note 25, at 1030.
41 See Rai, supra note 25, at 1030–35; Elhauge, supra note 3, at 1525–26; Emanuel, supra note 37, at 185–92.
42 See Rai, supra note 25, at 1037–38.
43 Medical cost-effectiveness analysis, which measures effectiveness in terms of “quality-adjusted life years” (QALYs), has been used since the mid 1970s. See Richard Zeckhauser & Donald Shepard, Where Now for Saving Lives?, Law & Contemp. Probs., Autumn 1976, at 5, 11.
44 See id. at 15–17.
quality of various health states is typically measured on a cardinal scale of zero to one, with zero weighted as the worst possible state and one weighted as the best. Analysts determine rankings of various health states on this cardinal scale by asking individuals how many years of life they would give up to avoid living in a particular state of diminished health. For example, if an individual would relinquish ten percent of her life to avoid being in a state of diminished health, then that health state would be worth ten percent less than perfect health, or 0.9 on the zero to one scale. This mechanism exchanges length of life for quality of life, and thus, it is known as the “time trade-off” approach.

Under cost-effectiveness analysis, interventions that extend life or improve quality of life have positive QALY benefits. Consider, for example, an individual with cancer who will die without surgery. With surgery, she will live for five additional years in a quality-adjusted state of, say, 0.8. For that individual, surgery would be worth 0.8 times five, or four QALYs. Alternatively, consider an individual for whom hip replacement surgery will not extend length of life. She will live fifteen additional years whether or not she has surgery. The hip replacement will, however, improve her life by a factor of 0.2 on the zero to one scale. For that individual, surgery is worth 0.2 times fifteen, or three QALYs.

Under a choice-based scheme, different versions of rationing based on cost-effectiveness analysis might be available. These different versions could embody the different approaches to health state valuation that individuals clearly have. For example, some individuals may view all health states as fairly similar and would therefore want their health plan to focus on interventions that maximized length of life. Others may consider quality of life to be extremely important and would thus place greater priority on interventions that improved such quality.

Consider the situation of a patient who has chosen a plan with a $30,000 cost-per-QALY gained limit. To use a highly simplified example, the patient has cancer, and the question is whether the plan should cover a $50,000 course of chemotherapy that will yield an additional two years of life. Now suppose this patient has chosen a QALY-based plan that focuses on maximizing length of life. Under this plan, most health states are viewed as fairly similar. Thus, the plan enrollees do not perceive the mildly adverse symptoms associated with the chemotherapy as diminishing quality of life. For the patient, chemotherapy yields a quality adjusted state of one times two years, or two QALYs. At a cost of $50,000, chemotherapy’s cost-per-QALY ratio is, therefore, $25,000 per QALY, and the plan will

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46 See Zeckhauser & Shepard, supra note 43, at 11.
47 For a discussion of this and other approaches to eliciting health state rankings, see George W. Torrance, Measurement of Health State Utilities for Economic Appraisal: A Review, 5 J. HEALTH ECON. 1, 18–25 (1986).
48 See id. at 22. Other mechanisms for measuring health state values include the ratings scale approach and the standard gamble approach. See id. at 18–22. The ratings scale approach asks interviewees to rate various health states on a scale of zero to one, where death is valued at zero and perfect health is valued at one. See id. at 18–20. The standard gamble approach asks interviewees what chance of death they would risk in order to avoid living in a particular diminished state of health. See id. at 20–22.
49 See Weinstein & Stason, supra note 45, at 718.
50 See id. at 721.
51 See id. at 719.
52 This figure, at least as calculated in 1991 dollars, is one that many health economists have used. See Robert Fabian, The Quality Approach, in VALUING HEALTH FOR POLICY, supra note 38, at 118, 129.
53 To be sure, the practice of medicine is rarely as exact or predictable as the example in the text suggests. The simplification aids in conveying how cost-per-QALY analysis may work.
cover the chemotherapy.

In contrast, if the patient had chosen a QALY-based plan that emphasized quality of life, chemotherapy's adverse symptoms could diminish quality of life by a factor of say 0.3, to a rating of 0.7 on the zero to one scale. In this case, chemotherapy would yield only a total 0.7 times two, or 1.4 QALYs and, thus, would go over the $30,000 cost-per-QALY limit. On the other hand, a plan that emphasized quality of life would cover all sorts of life-improving interventions, such as hip replacements for elderly people, that would not be covered under the plan that emphasized length of life.

III. IS REFLECTIVE CHOICE IN THE HEALTH CARE ARENA POSSIBLE?

As discussed in Part II, those who favor choice in the health care arena generally assert that allowing such choice respects diverse preferences, whether wealth-based or nonwealth-based. Respecting these diverse preferences is, in turn, important because it affirms the principle of autonomy, a principle that is central to medical ethics and to Western moral philosophy. So stated, the argument is a bit facile. A distinguished philosophical tradition argues that the exercise of autonomy consists not in simply expressing one's immediate, unreflective preferences, often termed "first-order preferences," but in examining those preferences carefully to formulate reasoned goals, often termed "second-order preferences." Moreover, because of the complexity of health care information, commentators question whether such critical reflection in the health care arena is possible. Indeed, concerns about consumer vulnerability in the face of complex health care information lie at the heart of various court decisions that have aggressively construed health insurance contracts against the insurer and in favor of insurance

54 See supra notes 15, 37–42 and accompanying text.

55 See, e.g., Tom Beauchamp & James Childress, Principles of Biomedical Ethics 120–88 (4th ed. 1994) (discussing the history of autonomy in biomedical ethics); H. Tristram Engelhardt, The Foundations of Bioethics 102–34 (1996) (discussing the central role of autonomy in medical ethics). The moral philosophical literature on autonomy is voluminous. Autonomy is prized not only by deontologists, who consider self-governance to be central to personhood, see Immanuel Kant, Grounding for the Metaphysics of Morals 41 (James Ellington trans., 3d ed. 1993) ("Thereby is he free as . . . he obeys only those laws which he give to himself."); but also by utilitarians, who argue that an individual's assessment of her own welfare is more likely to be accurate than an assessment made by a third party. See John Stuart Mill, On Liberty 74 (Elizabeth Rapaport ed., Hackett Publ'g Co. 1978).


57 See Ezekiel J. Emanuel & Linda L. Emanuel, Preserving Community in Health Care, 22 J. Health Pol'y, Pol'y & L. 147, 168 (1997); see also Thomas L. Greaney, How Many Libertarians Does It Take to Fix a Health Care System?, 96 Mich. L. Rev. 1825, 1831 (1998) (arguing that "health care markets are uniquely plagued by informational deficits"); Susan Edgman-Levitan & Paul D. Cleary, What Information Do Consumers Want and Need, HEALTH AFF., Winter 1996, at 42, 53 (1996) (noting that "[m]any elements of information that consumers said would be useful [in choosing health plans] are complicated and difficult to present and interpret"). It bears mention, however, that the informational difficulties that are important for the purposes of this Article are not those specifically associated with making individual treatment decisions at the time of illness. In the specific context of individual treatment decisions, the patient must have particularized knowledge of the costs and benefits of various alternative medical treatments and must be able to make a rational decision despite the fact that she is ill. By contrast, in the context of a health insurance choice, a healthy consumer would be looking at different levels of, and/or methods for, economizing.
coverage. Some commentators have even argued that judicial hostility to the concept of contractual choice in health care is a major reason why the market has not embraced explicit rationing contracts and has relied instead on sub rosa rationing. Because the argument that consumers cannot make truly considered, autonomy-enhancing choices in the health care arena is so central to discussions of health insurance, it is the focus of the remainder of this Article.

The concern that individuals will choose foolishly often focuses on the fact that they must make health insurance rationing choices, and health insurance choices generally, on an ex ante basis, before the onset of illness. According to this view, until individuals are faced with a particular medical situation, they will find it difficult to consider their health care priorities carefully. This argument is supported somewhat by the available empirical data. Studies show that healthy individuals tend to estimate the probabilities of health risks incorrectly. The limited empirical evidence also suggests that increased information about health plans can sometimes confuse rather than educate potential enrollees. For example, consumers may have difficulty choosing among health plans that experts have assessed on many different cost and performance measures, particularly if the plans perform well on some measures and poorly on others.

The arguments against choice suggest the alternative of adopting, through a centralized political process, a single rationing standard. Indeed, proponents of a

58 See David Charny, Hypothetical Bargains: The Normative Structure of Contract Interpretation, 89 Mich. L. Rev. 1815, 1854–55 (1991) (noting that the application of the contra proferentum (against the proffering party) rule by courts is rooted in concerns about the nonproffering party’s lack of meaningful choice or lack of information in accepting the bargain in question). For a discussion of various cases in which courts have construed exclusionary clauses in health insurance contracts extremely narrowly, see Mark Hall & Gerard Anderson, Health Insurers’ Assessment of Medical Necessity, 140 U. Pa. L. Rev. 1637, 1645–47 (1992).

59 See HAYIGHURTST, supra note 21, at 21–22. Another argument that could be made against choice is that, because of the collective nature of health insurance, it is unlikely that individuals would be able to find a rationing scheme that precisely reflected their every preference. Nonetheless, the limitations on individual preferences imposed by a choice-based framework would be less substantial than those imposed by a single, centrally administered rationing scheme.


62 See Hibbard et al., supra note 60, at 398–99. Individuals are particularly confused by information about quality variables. See id. For example, with respect to a quality variable, such as a managed care plan’s rate of mammography in women, individuals may fail to understand the concept of a rate, may erroneously believe that breast cancer is largely found in men or may erroneously believe that screening programs are not efficacious. See Jacquelyn Jewett & Judith Hibbard, Comprehension of Quality Care Indicators: Differences Among Privately Insured, Publicly Insured, and Uninsured, Health Care Fin. Rev., Fall 1996, at 75, 83.

63 See Hibbard et al., supra note 60, at 396–400 (discussing the effect of too much information on decision making).

64 See generally Leonard M. Fleck, Just Health Care Rationing: A Democratic Decision-making
single rationing standard could argue that reflective political deliberation by citizens is more expressive of autonomy than nonreflective individual choice. However, in assuming that individual choice must be nonreflective, this argument sets up a straw man. Reflective choice is not an oxymoron. To the contrary, there has simply been little considered effort to encourage reflective choice. For example, employers often offer only one health plan to their employees. Moreover, even among consumers whose employers give them a choice as a formal matter, reflective choice is not encouraged. The failure to encourage reflective choice is particularly important in the context of rationing choices. Because health plans fail to offer information on how they will make rationing decisions, individuals lack the opportunity to make informed rationing choices. Consumer passivity is exacerbated because many employers pay all or most of the cost of their employees health care premiums. The remainder of this Part outlines a system that would encourage individuals to make reflective choices among plans with different allocation mechanisms. The discussion assumes that individuals would have access to such plans and that they would be responsible for the costs of their decision to choose a particular plan.

In a system that encouraged reflective decision making regarding allocation, critical reflection would occur on two levels: individual and collective. Individual reflection would occur at enrollment, as potential subscribers weigh the relative advantages and disadvantages of plans with competing approaches toward rationing. Such reflection could be fostered through various forms of regulation that incorporated the key insights of health care decision-making research.

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65 See ANDERSON, supra note 56, at 142 ("Autonomy can be realized on a collective scale through democratic institutions. Collective autonomy consists in collective self-governance by principles and valuations that everyone, or the majority, reflectively endorses.").


67 See supra notes 8–9 and accompanying text.

68 Compare Agrawal, supra note 9, at 1816–17 ("If selection of a health maintenance organization is intended to express a preference for 'less than optimal' medical benefit, consumers also may be affirmatively misinformed about the nature of their purchase.").

69 See Renee Blankenau, Confused Consensus: When Given Options, What Health Plans Do Consumers Choose and Why, HOSP. & HEALTH NETWORKS 31, 31 (July 5, 1993). Employer willingness to pay for health insurance and employee willingness to accept such payment in lieu of higher wages stem, of course, from the federal tax subsidy for private health insurance.

70 Notably, even in a system that allows a wide range of choices, choices that seem clearly foolish or ill-considered might be barred. For example, ex ante rationing choices that contemplate serious and irreversible deprivations of liberty might be disallowed. See Gerald Dworkin, Paternalism, in MORALITY AND THE LAW 107, 118 (Richard A. Wasserman ed., 1971) (arguing that paternalism can be justified when it preserves "a wider range of freedom for the individual in question"). Similarly, choices that bind individuals for excessively long periods of time, say over three to five years, could be barred: barring such choices would address the concern, expressed by some commentators, that allowing individuals to make choices that bind their future selves is problematic, because individuals do not value their future selves sufficiently. See RICHARD A. POSNER, AGING AND OLD AGE 91–95 (1995); PARFIT, supra note 60, at 326–29.

71 The details of how these conditions would be satisfied are beyond the scope of this Article. For discussions of publicly funded schemes under which individuals would be given vouchers that they could use to choose among health plans with different approaches to rationing, see Rai, supra note 25, at 1035–48; Elhaug, supra note 3, at 1525–41; EMANUEL, supra note 37, at 185–92.

72 See Rai, supra note 25, at 1039.

73 Such regulation could be adopted at either the federal or state level. For purposes of uniformity
key insight involves the idea that information is best understood when presented on several different levels.74 The initial level, which will be accessed by all, is the most important. At this level, the information should be presented simply and include relatively few variables for consideration.75 More detailed information should be “layer[ed]” so that only individuals who seek a greater level of detail with respect to a particular variable would have to confront it.76 Thus, one possible regulation could require each plan to provide to all subscribers a simple, readily comprehensible description of how the plan rationed care.77 The regulation could also require the plan to provide detailed information on the plan’s rationing criteria to those who desired it. Under the regulation, the government would be responsible for monitoring the content and form of the initial disclosure.78 It could also set up mechanisms by which consumers could make a side-by-side comparison of different initial disclosures.

Decision-making research also suggests that consumers benefit from access to expert assessments of different health care delivery systems.79 Thus, government as well as private organizations could provide professional counseling to assist individuals in assessing the risks and benefits of different rationing schemes. Government would play an important role in providing counseling and information to those individuals who could not afford to pay the fees charged by private organizations. Finally, decision-making studies show that consumers often need to understand certain basic general information about managed care, such as how MCOs affect the

it may be advantageous to adopt the regulation at the federal level.

74 See Hibbard et al., supra note 60, at 407.
75 See id. at 403-04; see also Jewett & Hibbard, supra note 62, at 77 (noting that “big ideas” and concepts are much easier for individuals to understand than a large number of small facts).
76 See Jewett & Hibbard, supra note 62, at 92; Hibbard et al., supra note 60, at 405. It bears emphasis, however, that this question of “information overload”—whether consumers can make good choices when confronted with multiple alternatives that have many different attributes—is much disputed. For example, some researchers argue that the empirical evidence demonstrates that “information overload” is a myth. These researchers interpret the evidence as showing that, when consumers are faced with multiple alternative choices, each of which has multiple attributes, they choose appropriately by focusing on a small number of attributes that are salient to them—they “optimize.” See David M. Grether et al., The Irrelevance of Information Overload: An Analysis of Search and Disclosure, 59 S. CAL. L. REV. 277, 279 (1986). Moreover, because salient attributes vary across consumers, “if a substantial number of consumers shop for attributes in which they are interested, the full set of salient attributes will be supplied at competitive price-quality levels.” Id. at 300-01 (citing Schwartz & Wilde, Product Quality and Imperfect Information, 52 REV. ECON. STUD. 251 (1985)). Whether consumers do come up with good heuristic devices to negotiate through large amounts of information is not critical for the purposes of this Article; the layering approach suggested here provides a ready-made heuristic device for all consumers.

77 Although most health plans are currently not required to disclose information about how they ration care, see supra note 8 and accompanying text, there is precedent for requiring such disclosure. HMOs are, for example, required to disclose a wide variety of other information. See 42 C.F.R. § 417.124(b) (1996) (requiring “full and fair disclosure” of participating providers, service area, benefits and procedures to be followed in obtaining benefits). Moreover, Medicare regulations require that MCOs with physician financial incentive schemes disclose the existence of these schemes to beneficiaries who ask. See 42 C.F.R. § 417.124(b). Similarly, in areas other than health care, the government requires that contracting parties disclose information. See, e.g., Consumer Credit Protection Act, 15 U.S.C. §§ 1601-1693 (1994) (requiring the disclosure of standardized finance terms in credit transactions or offers to extend credit); Interstate Land Sales Full Disclosure Act, 15 U.S.C. §§ 1701-1720 (1994) (mandating the disclosure of certain information to purchasers of land in interstate transactions).

78 In other areas of health care, the government monitors the delivery of information. For example, the government, through the Food and Drug Administration, monitors the accuracy of claims made with respect to drugs and medical devices. See 21 U.S.C. § 352 (1994).
79 See Hibbard et al., supra note 60, at 405, 408, 410.
cost and quality of health care delivery. Again, both government and private organizations could provide such information. Moreover, these suggestions to assist individual reflection could be implemented through information technology.

Regulation could also work to foster reflection at the collective level. Plans could be required, for example, to have subscriber representatives on the governing bodies authorized to make allocation decisions. Thus, basic allocation policies could be further developed and elaborated with the assistance of subscribers to the plan. Information technology could assist in this collective deliberation.

Notably, this proposal for deliberation at both the individual and collective levels combines the economic model of “exit”—the idea that individuals will refuse to buy products that are inferior, with the political model of “voice”—the idea that individuals should try to participate in shaping and changing the institutions to which they belong. Within this framework, individual choice among plans with different approaches to rationing would do more than simply reflect the diversity of existing allocation preferences. Rather, such choice would help individuals think about what their allocation preferences should be.

IV. USING INFORMATION TECHNOLOGY TO ASSIST CHOICE IN ALLOCATION

A. INFORMING CONSUMER CHOICE: THE CURRENT STATE OF INFORMATION TECHNOLOGY

In recent years, there has been explosive growth in the amount of online health care information. For example, an estimated 10,000 to 25,000 Internet sites are dedicated to health care. Information technology is also being used to inform consumer choice. In this regard, one of the more ambitious efforts has been made by the federal government, which has developed a set of Internet sites for assisting Medicare beneficiaries who choose to enroll in a managed care plan through the Medicare+Choice program. These Internet sites follow the principles of decision-

80 See Jewett & Hibbard, supra note 62, at 91.

81 In the somewhat analogous context of ex ante decision making regarding advance directives, see supra note 60, tools to help patients think about future medical decisions have been developed. See Wolf et al., supra note 60, at 1668. These tools provide valuable general information on how to assist individuals in thinking about health values.

82 Albert Hirschman coined the terms “voice option” and “exit option” several decades ago. See ALBERT HIRSCHMAN, EXIT, VOICE, AND LOYALTY: RESPONSES TO DECLINES IN FIRMS, ORGANIZATIONS, AND STATES 4 (1970). More recently, Ezekiel and Linda Emanuel have argued that although the voice model views health care as a community good, the exit model views it as a market good. See Emanuel & Emanuel, supra note 57, at 147.

83 Cf. Suzanna Sherry, Responsible Republicanism: Educating for Citizenship, 62 U. CHI. L. REV. 131, 202 (1995) (arguing, in the context of school choice, that the very act of choosing a school could be educational). Of course, because of advanced age or other considerations, some individuals may prefer not to play an active role in determining their health care priorities ex ante. These individuals could choose among various default options: one obvious default option would be the allocation scheme chosen by the largest number of individuals.

84 See Frances H. Miller, Health Care Information and Informed Consent: Computers and the Doctor-Patient Relationship, 31 IND. L. REV. 1019, 1021 (1998). In response to this explosive growth of information, much of it intended for direct consumption by patients and potential patients, there has been much discussion about mechanisms for rating the quality of Internet health care information. See Alejandro R. Jadad & Anna Gagliardi, Rating Health Care Information on the Internet: Navigating to Knowledge or to Babel?, 279 JAMA 511, 511 (1998) (identifying ratings of health care information on the Internet and evaluating their rating criteria).

85 See Miller, supra note 84, at 1021 n.19.
making research discussed in Part III. For example, one site provides basic information about Medicare managed care, such as a description of who is eligible to participate, a glossary of managed care terminology and resources for seeking further assistance.86 Another site, known as the Medicare Compare database, enables potential Medicare managed care enrollees to find and compare the basic Medicare plan, with or without a supplemental insurance policy, to various managed care plans available to them in their geographical area.87 The Medicare Compare database uses something of a layering approach with respect to information.88 At the initial level, the following relatively discrete set of information is available with respect to each plan: premium cost, physician visit cost, inpatient hospital cost, amount of doctor and hospital choice, prescription drug coverage, physical exam coverage, vision coverage and dental coverage.89 The Medicare Compare site also allows potential enrollees to go into more detail with respect to those benefits in which they are particularly interested. For example, potential enrollees can select one of thirty-three individual benefits in which they are interested and compare the plans in their area with respect to the provision of that particular benefit.

The National Committee for Quality Assurance (NCQA), a private, nonprofit organization that accredits health plans, also maintains a variety of Internet sites to assist consumers in deciding among health plans. For example, the NCQA Consumer Brochure, which outlines a simple four-step procedure for how to make an informed choice among health plans, is available on the Internet.90 NCQA also provides expert assessments of the MCOs it evaluates. Its Internet database of these assessments can be searched by plan name.91 Each assessment gives the plan’s accreditation; explains the possible accreditation decisions NCQA can make, including full accreditation, one-year accreditation, provisional accreditation and denial; and defines the six categories—quality improvement, physician credentials, utilization management, member rights and responsibilities, preventive health services and medical records—in which NCQA rates plans.

A few consumer organizations and states also maintain Internet sites that give consumers report card information on various health plans and thus allow consumers to compare these plans on quality. For example, Consumer HealthScope, an organization created by a private nonprofit business consortium, maintains Internet sites that provide customer satisfaction data and preventive care evaluation data on California health plans.92 Like the Medicare and NCQA Internet sites, Consumer

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88 See id.
89 See id.
90 See National Committee for Quality Assurance, Consumer Brochure Page (visited May 26, 1999) <http://www.ncqa.org/pages/communications/publications/98btn.htm>. With respect to any particular plan, this procedure encourages consumers: (1) to investigate quality by determining whether the plan has been accredited by the National Committee for Quality Assurance (NCQA), by determining whether it reports Health Plan Employer Data and Information Set data, and by comparing it with other plans in terms of report cards and other consumer ratings; (2) to evaluate their own needs and priorities by looking at whether their doctor is in the plan’s network, whether the plan covers conditions and therapies that are important to the consumer; and at plan cost; (3) to investigate whether the plan uses financial incentives to encourage physicians to limit care; and (4) to combine the results of steps 1, 2 and 3 to make a final decision.
92 See Pacific Business Group on Health, Consumer HealthScope (visited May 26, 1999)
HealthScope's site follows the principle that information must be clearly and simply presented to be understood. For example, Consumer HealthScope's customer satisfaction report card provides a single, summary customer satisfaction rating for each plan. Similarly, the Consumer HealthScope preventive care services report card rates California MCOs with respect to a few key preventive care measures: cervical cancer screening, childhood immunization, adolescent immunization, breast cancer screening, prenatal care, check-ups after delivery and beta blocker treatment after a heart attack. Both report cards give ratings on a scale of one to one hundred and clearly identify below and above average scores. Finally, Consumer HealthScope maintains an Internet site that provides useful expert evaluation in the area of preventive services and for specific chronic conditions, such as diabetes, cancer and asthma. The site asks physicians for an evaluation of how effectively the MCO worked to improve performance in each area. New Jersey also maintains a comprehensive Internet site that allows for the easy comparison of managed care health plans within the state. The site's table of contents directs consumers to information on how to choose a health plan, as well as information on how different types of MCOs work. The site also contains a number of different rating tables. These rating tables indicate whether each plan scored above average, average or below average on such global indicators as the overall rating of health plans, overall rating of the quality of care and overall rating for doctors. For those consumers who are interested, the tables also provide information on how health plans did on various preventive care measures, on acute and chronic care and on care for children.
Finally, it bears mention that health plans themselves rarely provide information that is useful for consumers choosing among plans. The material on the majority of health plan sites is promotional rather than informational. At best, the plan’s Internet site has what may be termed rate information—a list or brief table explaining what copayments are charged for routine office and emergency room visits, as well as annual deductibles.\textsuperscript{109}

One notable exception is the Internet site for the Pacificare of California Health Plan.\textsuperscript{110} Its site has various features that reveal useful information about the plan. For example, the site includes a “Quality Index” that rates the largest provider groups and hospitals with which Pacificare contracts on fourteen measures.\textsuperscript{111} However, these fourteen measures are presented individually in a chart and no attempt is made to offer a global or summary rating.\textsuperscript{112} Ultimately, even the Pacificare Internet site, which is one of the best in the class of health plan Web sites, falls short.

B. PRESENTING ALLOCATION MECHANISMS THROUGH INFORMATION TECHNOLOGY

Much of the extant information technology focuses on presenting comparative information about quality. However, information technology, in particular the Internet, could also be deployed in the service of presenting diverse allocation mechanisms to consumers.

Information technology would be well suited for presenting the BRP approach.\textsuperscript{113} An Internet site that assisted consumers in choosing among BRP-based plans might be somewhat similar to the Medicare+Compare database discussed above.\textsuperscript{114} This site could provide a concurrent comparison of the following information: (1) each plan’s overall budget per group of insured subscribers; (2) the specific comparative need mechanism used by each plan to allocate within the BRP;\textsuperscript{115} and (3) some examples of how this mechanism would work in specific medical scenarios. Using the same scenarios for each plan would allow a potential enrollee an opportunity to understand the differences between the plans more easily.


\textsuperscript{111} See id. at Quality Index (visited May 26, 1999) <http://www.pacificare.com/california/members/qindex/qindex.pdf>. The underlying data for the measures are derived from claims and encounter data that provider groups and hospitals submit to Pacificare. The measures on which Pacificare focuses are preventive measures (e.g., cervical cancer screening); service measures (e.g., access-related complaints, disenrollments or transfer due to dissatisfaction with a physician or provider group); and administrative measures (e.g., submission of data regarding visits to a physician provider or hospital).

\textsuperscript{112} See id.

\textsuperscript{113} See supra notes 16–20 and accompanying text.

\textsuperscript{114} See supra notes 87–89 and accompanying text.

\textsuperscript{115} Possible comparative need allocation schemes could include the likelihood of saving life, the likelihood of saving the largest number of years of life and the likelihood of saving the largest number of QALYs.
As with the Medicare Compare database, subscribers could search the BRP database for plans that specified BRPs for conditions and interventions of interest to the particular subscriber.

Subscribers interested in pursuing a specific BRP plan could then link to the plan's site for more detailed information. This detailed information could include, for example, a test to determine how well the consumer understood the allocation scheme. The consumer could read various medical scenarios and give answers regarding whether the plan would provide coverage under that scenario. Through further linking, the consumer could determine how well her answers matched the correct answers and also receive explanations about the correct answers.

Similarly, information technology could be very useful in the context of rationing plans that rely on practice guidelines. A summary comparison page of these plans would specify the set of practice guidelines on which each relied, the organization that had been responsible for developing each set of guidelines and some examples of how different plan guidelines would operate in particular medical scenarios. Consumers interested in a particular plan could then link to its Internet site for more information about the guidelines the plan used and about the organization that developed the guidelines. At the most detailed level of the plan's Internet site, the entire set of guidelines would be available and could be searched for guidelines dealing with particular diseases or conditions.

Information technology would be useful in assisting consumer choice not only when the choice was not among different levels of rationing, but also when it was among different methods of rationing. At the summary or "top" level, there would be an Internet site asking the consumer to choose among plans with different approaches to rationing. As noted earlier, these could include plans that required significant deductibles at each level of expenditure; plans in which physicians are given rationing responsibility; plans that rationed according to greatest need; and plans that maximized various health measures. Clear explanations of who had rationing responsibility and how it would be exercised would facilitate choice among these different approaches.

Consumers interested in one or more of the approaches could then dig deeper. For example, consumers interested in plans that maximized certain health benefit measures may have to decide among plans that maximized QALYs gained in different ways. To make this decision, they could link to a page that did a summary comparison of how each of the plans traded off length and quality of life. In addition to giving a formal description of the respective tradeoffs, this page would cite particular medical scenarios and reveal how each of the plans would address that scenario. For example, plans that focused on improving the quality of life rather than extending its length might cover hip transplants for elderly individuals over chemotherapy that extends life but does not produce a high quality of life; plans that emphasize length of life may make the opposite choice.

Government, as well as private organizations, could also facilitate choice by establishing Internet sites that present expert evaluations of the risks and benefits of various rationing schemes. These sites could, for example, provide short reports on each scheme. These reports would be comparable in length and simplicity to the accreditation reports currently supplied by NCQA. Finally, because much evidence suggests that individuals do not understand the fundamental organizing

116 See supra notes 21–36 and accompanying text.
117 See supra note 42 and accompanying text.
118 For discussion of the NCQA reports, see supra notes 90–91 and accompanying text.
principles of managed care, government and private Internet sites could be established to provide basic general information about managed care allocation policies.

Each of the mechanisms described thus far would use information technology to foster reflective choice on the individual level. Information technology might also be used, however, to foster collective reflective choice. For example, a given health plan could set up an Internet or intranet group for all subscribers. This group could be used not only for general discussion of the plan and its objectives but also to facilitate participation in the governance of the plan. For example, subscriber representatives elected to the governing boards of the plan could communicate with their constituents through the group.

V. CONCLUSION

As many observers have noted, perhaps the most significant obstacle to the proper functioning of health care markets has been the asymmetry of information between health care providers and consumers. Information technology, in particular the Internet, has the potential to be instrumental in correcting this flaw. As this Article has discussed, the Internet already provides some information that should be very helpful to consumers deciding among health plans. Thus far, however, it has not provided important information about how health plans make allocation decisions. In large part, this has been because health plans are under no requirement to release such information. Once regulations requiring disclosure of allocation information are in place, information technology will be able to present this allocation information in a clear and readily comprehensible manner. Ultimately, because of information technology, objections to consumer choice in health care that focus on information asymmetry should largely be rendered moot.

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119 See supra note 80 and accompanying text.
120 See, e.g., David Blumenthal, The Future of Quality Measurement and Management in a Transforming Health Care System, 278 JAMA 1622 (1997) (discussing the need for the health care community to utilize new information technologies, and the effect that improved information systems will have on the decisions made by health care consumers).
121 See supra Part IV.A.
122 See supra note 8 and accompanying text.