Russell Korobkin

Richard C. Maxwell Professor of Law

Russell Korobkin teaches Contracts, Negotiation and Health Care Law. Prior to joining the UCLA Law faculty in 2001, he held appointments at the University of Illinois College of Law and the University of Illinois Institute of Government and Public Affairs. He is a regular visiting professor at the German Graduate School of Business and Law in Heilbronn, Germany and LaTrobe University in Melbourne, Australia.

Professor Korobkin is the author of the leading negotiation textbook, *Negotiation Theory and Strategy*, the contracts casebook, *K: A Common Law Approach to Contracts*, both published by Wolters Kluwer, and *Stem Cell Century: Law and Policy for a Breakthrough Technology*, published by Yale University Press. He has also published more than 50 law journal articles in the fields of behavioral law and economics, negotiation and alternative dispute resolution, contract law, health care law and stem cell research, including "Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics," which is currently the most cited law review article published in the 21st century.

COMPARATIVE EFFECTIVENESS RESEARCH AS CHOICE ARCHITECTURE: THE BEHAVIORAL LAW AND ECONOMICS SOLUTION TO THE HEALTH CARE COST CRISIS*

Russell Korobkin

INTRODUCTION

Since the 1960s, health care spending in the United States has consistently increased—often by significant amounts—as a percentage of gross domestic product ("GDP").[1] Accounting for 5.2% of GDP in 1960, health care expenditures grew to 7.2% of GDP in 1970, 9.2% in 1980, 12.5% in 1990, 13.8% in 2000, and 17.9% in 2011.[2] In 2013, the Congressional Budget Office predicted that without sharp, systemic change, 22% of domestic economic production will be devoted to health care by 2038.[3]

As total health care spending has increased, so too has the cost of private health insurance. As of 2013, the average cost of insurance coverage for a single adult with an employer-sponsored plan was $5,884, and a standard employer-sponsored policy for a family of four ran $16,351.[4]

The United States is a wealthy country, so it is not obvious that it should not spend such a large share of its national resources on medical care. But rapidly increasing costs, coupled with the well-known fact that the health and longevity of Americans lag behind those of citizens of other developed nations that spend less of their wealth on medical care,[5] at least suggests that the nation probably allocates an inefficiently large fraction of national resources to health care, compared to competing goods and services. At a bare minimum, the continuing rapid escalation of health care costs will—if unchecked—result in the nation allocating a larger percentage of national wealth to medical care than is efficient at some point in the not-too-distant future.

The primary market-based approach to reining in health care costs is generally referred to in policy discussions as "consumer directed health care" ("CDHC"). The simple idea underlying CDHC is that patients will demand less care if they are burdened with a greater responsibility for paying the actual cost of that care than is common in our current system, in which costs are largely borne by public or private health insurance with little patient cost sharing.[6] CDHC implicitly relies on the "rational choice" assumption of neoclassical economics that, given the proper incentive structure,

individual consumers will allocate resources between medical care and other goods and services (and, within the category of medical care, between competing treatment options) in a manner that maximizes their "subjective expected utility" ("SEU").[7] As I explain below, there are compelling reasons to believe, however, that most consumers, as boundedly rational decisionmakers, would be particularly bad at making efficient trade-offs when asked to make point-of-service medical care decisions.

This Article describes a novel, "choice architecture" approach that can help individuals to more optimally allocate their resources between medical care and other goods and services. Under this approach, the government would produce and dispense information concerning the costs and benefits of medical treatments sufficient to enable consumers and health insurers to contract for what I call "relative value health insurance" ("RVHI"), a product that covers medical interventions that meet or exceed a given level of cost-effectiveness.

Having survived Supreme Court review,[8] the landmark 2010 health care reform legislation, the Patient Protection and Affordable Care Act ("ACA" or "the Act") is now set to significantly expand access to medical care.[9] While most commentators agree that the Act is unlikely to have more than a modest effect on stemming the rapidly increasing cost of medical care,[10] a relatively overlooked provision can serve as the starting point for the promotion of RVHI. The Act provides significant funding for government-sponsored "comparative effectiveness research" ("CER"),[11] designed to evaluate the relative efficacy of different treatment options for a particular condition or ailment.

To facilitate the market for RVHI, government-sponsored CER should be used to evaluate different treatments for various medical conditions and rate them on a scale of "1" (high) to "10" (low) in terms of cost-effectiveness. Health insurance agencies could then use these transparent ratings as the basis for different coverage offerings. For example, an insurance company might offer three plans: (1) a policy that covers only treatments with a rating of "3" or higher at annual premium price $X, (2) a policy that covers only treatments rated "5" or higher at annual premium price $Y, and (3) a policy that covers only treatments rated "7" or higher at annual premium price $Z.

Consumers of health care would then decide at the time they purchase insurance—not at the time of illness—whether they wish to purchase relatively "shallow" insurance that covers only the most cost-effective interventions at a correspondingly modest price, or relatively "deep" insurance that covers increasingly less cost-effective treatments but at a higher price. The simple numerical rating scale would provide boundedly rational consumers with a useful tool for allocating resources between their medical care and other goods and services. If consumers wish to forgo expensive medical treatments that provide limited benefits, health care cost inflation will decrease. If consumers choose to buy high-priced insurance that covers marginally beneficial services, health care cost inflation will continue until marginal costs exceed marginal benefits, but these increases will represent an efficient allocation of national wealth.

I. THE PROBLEM OF MORAL HAZARD

The economically efficient amount of medical care is provided when its marginal cost equals its marginal benefit. When an individual patient decides whether to obtain treatment, however, he will usually compare its expected benefits only to the marginal cost of that care to him. When marginal costs are borne by a third party, the individual patient has a private incentive to overconsume care, a problem known as "moral hazard."[12]

As medical technology improves, the scope of the moral hazard problem increases. Because private or public insurance finances most medical care, producers of new drugs, medical products, diagnostic devices, and the like know that there will be a market for new treatments that promise to reduce mortality or morbidity, almost without regard to the cost of such innovations. As more medical interventions with such positive expected benefits are developed, inefficient marginal overconsumption of medical care occurs at an increasing rate.[13] This is the case even if the total value of a new medical technology exceeds its total cost,[14] and even if patients sometimes also inefficiently *underconsume* care because they misestimate its value or because they can externalize high costs that arise tomorrow when they fail to take cheaper preventative measures today.[15]

II. CONSUMER DIRECTED HEALTH CARE

A. CDHC as an Approach

In current academic and policy debates, CDHC is the conceptual approach to reducing the costs of medical care that most directly seeks to addresses the problem of moral hazard. Proponents of CDHC propose increasing the marginal financial cost of medical care imposed directly on patients, thus providing patients with a greater incentive to equate marginal cost with marginal benefit.[16] To satisfy this goal, CDHC proponents support policies that subsidize or otherwise encourage health insurance with high annual deductibles or high copayments at the point of service.[17]

B. Bounded Rationality

The fundamental problem with the CDHC approach is that it assumes a heroically implausible level of decisionmaking ability on the part of patients faced with treatment choices at the time of illness. The theoretical power of CDHC to rationalize medical care decisions requires consumers to make two kinds of judgments with a high degree of skill: First, they must be able to interpret complex, probabilistic information concerning the consequences of various treatment alternatives (including forgoing treatment) in an unbiased manner. Second, given the differences in attributes of different treatment alternatives, they must be able to select the alternative with the combination of attributes, including price, that will provide the most overall utility. Only when these requirements are satisfied, such that we can say that consumers have made "accurate" decisions—those that maximize their expected utility subject to constraints—can we be confident that the efficient amount of social resources will be allocated to medical care.

Notwithstanding the prevalence of rational-choice-based economic models of behavior that assume such capabilities, social scientists now broadly recognize

that most decisionmakers, and especially consumers, are boundedly rational: our limited working memory and cognitive capacity causes us to simplify complicated decisionmaking problems and seek mental shortcuts to solving them, economizing on decisionmaking costs but compromising accuracy of outcomes.[18] Put another way, faced with a difficult question, people often answer an easier one instead, often without even recognizing the substitution that is taking place. As Nobel Laureate Daniel Kahneman describes this process, our mind operates a "System 1" function, which automatically assesses and responds to data but is poor at logic and statistical reasoning, and a "System 2" function, which deliberately and laboriously makes more reasoned judgments but requires substantially more effort.[19] Because the mind prefers to conserve effort, it tends to favor System 1. Unconscious reliance on System 1 makes it possible for us to navigate the complexities of daily life reasonably well without being struck by paralysis, but the shortcuts on which it relies will sometimes lead to suboptimal decisions.

Reliance on the mind's System 1 function means that consumers fail to make accurate decisions in many contexts. But what we know about the decisionmaking process suggests that making medical care decisions at the point of service is particularly problematic.

C. Empirical Research on Medical Decisionmaking

It is almost always difficult to determine whether a particular decision is an accurate reflection of an individual's deeply held values, since there is no foolproof way of eliciting what exactly those values are or how they compare to one another. But, consistent with the theoretical account above, the existing empirical research on decisionmaking in the medical care context provides substantial circumstantial evidence that, contrary to the assumption of CDHC proponents, patients are unlikely to do a very good job of making efficient medical care decisions at the point of treatment.

Studies do suggest that patients are more conservative about seeking medical care when they are forced to spend their own dollars on that care.[20] Thus, the fundamental prediction of microeconomic theory that demand falls as price rises is borne out in the medical care context. This indicates, as supporters of CDHC like to argue, that CDHC would probably encourage healthy price competition among providers of medical care.[21] One consistent finding, dating back to the well-known RAND study,[22] however, is that patients demand less care when faced with increasing marginal costs[23] but do not do well at distinguishing between high- and low-value interventions.[24] For example, studies have found that patients with higher cost-sharing obligations economize by not taking prescription drugs only to have "higher rates of serious adverse events[ ] and . . . emergency department visits," the costs of which offset any prior savings.[25]

III. RELATIVE VALUE HEALTH INSURANCE

Rather than hoping against evidence that patients will be able to make optimal resource-allocation decisions at the point of service or offering financial incentives to physicians to break trust with their patients, a better approach

to rationalizing the amount of resources allocated to medical care would be to facilitate patient contracting for different depths of medical care when purchasing insurance coverage, before treatment is needed. I call insurance coverage fashioned in this way "relative value health insurance" ("RVHI"). Patients who wish to devote relatively fewer resources to medical care and more to competing goods and services could purchase relatively shallow insurance that covers only the most cost-effective medical interventions; patients who wish to devote relatively more resources to medical care could purchase insurance that would cover increasingly less cost-effective interventions.

For this ex ante, contractual approach to succeed, however, careful attention must be paid to the choice architecture of the decisionmaking process. Complex information concerning what medical interventions would and would not be covered by different insurance products must be presented in a way that is tractable enough to enable boundedly rational consumers to make purchasing decisions that reflect their individualized preferences for allocating their resources between medical care and other goods and services. This function can be satisfied by the government better facilitating private contracting for health insurance by producing and analyzing comparative effectiveness research, using funding already provided by the ACA as a starting point.

A. The Legal Status of Relative Value Health Insurance

1. Limitations on Ex Post Utilization Review

An important feature of the "managed care" revolution in the provision of medical care, which reached its high-water mark in the 1990s,[26] was the widespread institution by health insurance companies of "utilization review." With medical care cost exploding and nearly all health insurance contracts written to cover "medically necessary" care,[27] insurance contracts began to require that the insurer pre-approve certain interventions to ensure that the prospective procedures were, in fact, medically necessary. Through utilization review, insurers became willing to deny coverage to policyholders for treatments recommended by their physicians, a practice that was exceedingly rare prior to the rise of managed care.[28]

As part of the public backlash against managed care cost-containment efforts,[29] forty-four states and the District of Columbia enacted "external review" statutes,[30] which give patients the right to challenge an insurer's medical necessity-based denials of care in a quasi-judicial procedure.[31] Prevailing patients are entitled to an order requiring the insurer to provide or pay for the requested treatment.[32] In most jurisdictions, external reviewers determine medical necessity de novo and based on a statutory definition of medical necessity, rather than merely applying an insurer's definition of the term (if the insurer even defines the term, which insurers often do not).[33] According to most statutory definitions, medical necessity depends entirely on whether a treatment has any clinical efficacy, regardless of the magnitude of the benefit. The relevant standards rarely include any hint of cost–benefit balancing or consideration of cost-effectiveness, except to the extent that a treatment is not considered "medically necessary" if there is an equally efficacious treatment available (presumably at a lower price).[34] Consequently, health insurers have little if any legal

space to mitigate moral hazard by refusing to cover low value treatments at the point of service.

Consistent with this legal structure, health insurers now generally pay for any treatment recommended by a treating physician that offers the potential for any positive clinical benefit unless explicitly excluded from the contractual scope of coverage.[35] When insurers do deny a physician's treatment proposal and subsequently defend their position to external review boards, the issue is nearly always either whether the disputed treatment is at all effective for treating the patient's condition[36] or whether a requested procedure is cosmetic or lifestyle-related rather than medical in nature.[37]

There is a strong public policy justification for limiting the ability of insurance companies to deny coverage through utilization review conducted at the point of treatment. Insurance companies that sell mid-quality health care at a mid-range price could plausibly use the utilization review process to deny even mid-quality medical care to their customers. If permitted the discretion to judge "medical necessity" after receiving customers' premium dollars, insurance companies would face a clear conflict of interest: the more treatments they deny, the more dollars would flow to their bottom lines.[38] Put another way, aggressive ex post utilization review could mitigate patient moral hazard but at the cost of creating insurer moral hazard; insurers have an incentive to provide too little medical care because they benefit from cost savings while patients bear much of the cost of not receiving treatments.

Although understandable, the legal limits placed on utilization review by external review laws have the unfortunate consequence of requiring consumers to purchase "Cadillac"-quality health care at a Cadillac price, even if they would prefer to purchase "Chevrolet"-quality health care at a more modest price.[39] This limitation of options works out well for two groups: wealthy individuals who are able to purchase deep medical care coverage without liquidity constraints forcing them to skimp on other highly valued goods and services, and those consumers who place a particularly high subjective value on even marginally beneficial health care compared to the other goods and services that they might have to forgo because medical care consumes so much of their income. External review laws have the consequence of requiring consumers who would prefer cheaper and less comprehensive coverage to buy deeper coverage than they wish to purchase or go without any coverage at all. With the new ACA "individual mandate," most people who choose the latter option will now be fined.[40]

2. Ex Ante Exclusions

The legal limitations on point-of-treatment utilization review by insurers contrast starkly with the fact that, in most cases, insurers may legally refuse to pay for interventions that are explicitly excluded by the insurance contract.[41] A patchwork of state "mandated benefits" laws requires insurers to cover specified categories of treatments.[42] Pre-ACA federal law includes a handful of private insurance treatment mandates,[43] and the ACA requires that a set of minimum benefits be included in all insurance policies sold

in the individual and small-group markets.[44] Beyond these mandates, however, insurers may legally exclude specified interventions from coverage, and courts routinely uphold their right to do so as a matter of freedom of contract.[45]

Against this background, there is no impediment, in theory, to insurers excluding from coverage treatments that fail to satisfy a cost–benefit test, as long as the exclusions can be adequately specified at the time of contracting. Further, there is no impediment to insurers offering multiple products, priced differently, that exclude from coverage specifically enumerated categories of care.

B. The Information Problem

If insurance companies may legally sell health insurance that covers only cost-effective treatments, why does no such product exist in the marketplace? The primary impediment to the sale of health insurance that covers only cost-effective interventions appears to be the difficulty of adequately specifying the relevant coverage exclusions ex ante.[46] There are three related problems:

First, there is very little solid information about even the basic effectiveness of most medical interventions—according to some estimates, there is scientific evidence for the efficacy of less than half the treatments doctors recommend.[47] Even clinical practice guidelines are notoriously based on consensus opinion rather than scientific fact.[48] There is even less information about the comparative effectiveness of alternative plausible interventions.[49] Even when the law requires a treatment, such as a new pharmaceutical, to obtain regulatory approval before being marketed, its producers usually must demonstrate only that it is safe and effective relative to a placebo rather than comparatively effective vis-à-vis other treatment options for the same condition. This dearth of information makes it extremely difficult for any insurer interested in marketing a policy that covers treatments that satisfy a cost-effectiveness standard to identify ex ante which treatments are, in fact, cost-effective.

Scholars have long advocated for insurers to contract to provide care that satisfies a well-specified cost–benefit algorithm, which the insurer would then apply at the point of treatment.[50] This creative idea has fallen on deaf ears in the marketplace, probably because the lack of good data would likely subject any insurer's attempt to apply the algorithm to second-guessing, charges of moral hazard, and lawsuits.

Second, the measures of marginal effectiveness of competing interventions are dynamic; the measures can change quickly when new effectiveness data is produced, when new interventions are developed, or when the market changes (such as when a drug goes off-patent). Even if an insurer could fully specify cost-effective interventions at the time of contracting, the lag time between contracting and use of services would mean that, at the point of treatment, a policy would cover some no-longer-cost-effective interventions and would not cover some now-cost-effective interventions.

Third, a detailed list of covered and excluded interventions would provide far too much information for boundedly rational consumers to take into account at the time of contracting. Consumers have the working memory to take into account only a handful of attributes when making purchasing decisions, and they almost invariably selectively consider only the most salient product attributes when bombarded with information.[51] Except for patients with significant preexisting conditions, there would be an extremely low probability that any potential condition-intervention pair would become relevant during the policy period. This suggests that consumers are likely to ignore most detailed coverage information. If consumers did not incorporate information provided at the time of contracting into their purchase decisions, the same reverse moral hazard problem associated with post-contractual utilization review would exist: insurers would have a profit incentive to claim to provide cost-effective care but actually not provide even cost-effective care.[52]

C. CER and Relative Value Ratings

These informational impediments that prevent insurers from marketing insurance policies that cover only cost-effective treatments can only be overcome with a significant investment in "comparative effectiveness research" ("CER"). The goal of CER is to provide a firmer scientific understanding of the relative clinical benefits of competing medical treatments, services, and interventions.[53] The American Recovery and Reinvestment Act of 2009 (commonly known as the "stimulus bill") provided $1.1 billion to three agencies to conduct CER.[54] The ACA doubled down on this investment, providing $500 million annually beginning in 2013 to 2014.[55]

For CER to facilitate RVHI, its findings should be used to assign scores to potential medical interventions for different conditions based on marginal costs and marginal benefits. I call such scores "relative value ratings," and I propose that they range from a high score of "1" (extremely cost-effective) to a low of "10" (not at all cost-effective), although other scales would be plausible as well. As an illustration of how the ratings scale would work, consider the following three examples:

* Standard treatment regimens for cardiovascular disease are understood as one of the great success stories of improved medical technology in the second half of the twentieth century. In 2004, health economist David Cutler estimated that the expected lifespan of an average forty-five-year-old would increase by 4.5 years as a result of this technology, at a total cost of about $30,000.[56] This intervention—or set of interventions—would likely earn the highest possible relative value rating of "1" for patients with relevant symptoms.

* At the other end of the relative value spectrum, consider an intervention that harkens to President Obama's example of the two different colored pills with identical effectiveness and radically different prices. According to an executive of a health insurance company, the brand-name acne medication, Minocin PAC, retails for $668 per month, which is $618 more than the generic equivalent. The brand-name product is distinguished only by the inclusion of an ingredient designed to have a soothing effect on the user's skin.[57] This

medication, which offers a minimal marginal benefit and comes at a very high cost compared to the alternative, would presumably earn a relative value rating of "10."

* In between these examples is lumbar discectomy, a common surgical procedure for patients with herniated spinal discs.[58] In a recent study, 1,191 surgery-eligible patients with herniated discs were randomly assigned to receive either surgery or nonsurgical medical management. The researchers measured the benefits (i.e., reduced pain, increased physical mobility) and costs (direct and indirect, including lost labor productivity) for each group for a two-year period.[59] The analysis revealed a slight marginal benefit of surgery, on average, but at a much higher cost. Consequently, the researchers calculated that the cost of surgery per marginal "quality-adjusted life year" ("QALY") is slightly more than $69,000 for patients younger than age sixty-five.[60] Based on this data, lumbar discectomy for a herniated disc would likely receive a middling relative value rating—perhaps a "5."

In a perfect world, all relative value ratings would be based on the results of randomized, double-blind experiments—the "gold standard" of medical research.[61] Realistically, however, the rating authority would usually have to rely on less definitive sources of scientific evidence, including retrospective analyses of clinical data. Many relative value ratings would apply to all patients with a particular condition, but different subgroups could receive different ratings when justified by the best available evidence. For example, a particular treatment with a score of "5" for an average patient might be awarded a score of "3" for patients who have a comorbidity that makes the treatment more likely to benefit them.

With an established set of relative value ratings issued by an expert group, whose members would not profit from higher or lower health care expenditures, insurance companies would be able to contract with patients for health insurance that pays for care rated at or above a specified relative value score. A Level 8 policy—i.e., one that covers all interventions rated "8" or better—would cover a deeper array of treatments than would a Level 3 policy. A Level 8 policy would also cost more, of course. The market would set the precise difference in price, determined by each health insurer's projections of the difference in its cost of covering the relevant array of interventions for a subscriber population.

With relative value ratings available to enable insurers to specify different depth of care levels at the time customers make insurance purchasing decisions, a variety of slightly different products could flourish, depending on consumer preferences. For example, rather than marketing policies that provide no coverage for treatments that fall below a specified relative value level threshold, insurers might choose to sell policies that offer some coverage for all rating levels but vary cost-sharing arrangements based on the rating level of treatments. Interventions rated a "1" might qualify for 100 percent payment, for example, whereas interventions rated a "10" might require a 50 percent copayment.

IV. ADVANTAGES OF RELATIVE VALUE HEALTH INSURANCE

The fundamental benefit of RVHI, enabled by relative value ratings, is its ability to help boundedly rational consumers to more rationally allocate their resources between medical care and other desirable goods and services. Secondary benefits of RVHI include aligning the interests of patients and physicians and providing incentives for the efficient innovation and pricing of medical care advances.

A. Better "Choice Architecture" for Consumers than CDHC

In a world of hyper-rational individuals, people can be expected to make choices and express preferences that maximize their SEU and, assuming limited externalities, maximize social efficiency in so doing. The role for policymakers is to facilitate access to information. If individuals are incompetent decisionmakers, paternalistic intervention with substituted decision-making becomes appropriate.[62] When individuals are boundedly rational decisionmakers, the best policy response is often to structure choices in a way that helps decisionmakers to maximize accuracy at a realistic level of cost and effort.[63] This policy focus has been called "choice architecture,"[64] which reflects the fact that preferences are constructed (as an architect constructs buildings) rather than simply uncovered (as an archaeologist uncovers objects through excavation), and that it is possible for constructed choices to be more accurate or less accurate depending on how they are presented.[65] Creating the rating information that would facilitate RVHI can be understood as choice architecture that assists boundedly rational consumers in acting through private markets to register their preferences for allocating resources between medical care and other goods and services.

1. Complexity

Most obviously, RVHI would reduce the complexity individuals must navigate when making trade-offs between medical care and competing goods and services compared to point-of-treatment decisionmaking required under CDHC proposals. Rather than being asked to understand pros and cons of numerous treatment options, with difficult-to-compare attributes (such as mortality and various measures of morbidity) and a range of probabilistic outcome possibilities, consumers would need only to understand a single depth-of-coverage rating. They would then make resource-allocation decisions by trading off price against depth of coverage (i.e., a Level 4 policy for $4,000 per year, a Level 5 policy for $4,900 per year, or a Level 6 policy for $6,200 per year).

The extent to which consumers could accurately make the trade-off between the cost of insurance and depth of coverage depends not only on collapsing the virtues and vices of various medical interventions into a single metric but also on the ability of consumers to achieve a qualitative understanding of the different rating levels—that is, the difference in medical care they could expect by purchasing a Level 6 policy rather than a Level 5 policy. An important virtue of relative value ratings is that their qualitative nature can be communicated to consumers relatively readily. At the time of insurance enrollment, consumers could consult the current list of relative value ratings for all treatments, organized by condition, which would provide concrete examples of what interventions would be covered by policies set at different rating levels. Consumers would not need to understand the nuances of each intervention on the list; they would need only to skim the list to obtain a qualitative sense of the dis-

tinctions between rating levels. Whatever cost–coverage trade-off a consumer made, he would know that his premium dollars would cover the most relatively valuable medical interventions and would not cover those of relatively lesser value. Paying a higher price for deeper coverage would buy access to increasingly more marginally beneficial care.

Perhaps the most obvious practical problem with moving to a relative value system is the paucity of data with which to make relative value judgments. Even assuming that ratings could be based on data less definitive than double-blind, randomized, controlled studies of a broad cross-section of patients, there is currently insufficient information on which to base reasonably informed ratings for the vast majority of medical interventions.[66] This same problem helped doom Oregon's effort to employ a cost-effectiveness standard for determining Medicaid coverage in the 1990s.[67] It would take years of significant funding of the CER endeavor, plus a more efficient institutional structure for conducting CER, before we could hope to have good information for most treatments.[68]

While discouraging, this reality need not undermine the move to relative value ratings. The present lack of data might require that all commonly accepted treatments for which there is no good comparative effectiveness data be grandfathered into the system with a rating of "1." For new interventions to obtain a rating—necessary for reimbursement under relative value insurance policies—the Patient-Centered Outcomes Research Institute could require drug or device manufacturers to submit comparative effectiveness data. In the meantime, congressionally allocated funds for CER could fund relative value research on common conditions or treatments for which large sums of money are spent without the support of scientific evidence.

Launching a ratings system by giving the highest possible rating to interventions that we simply do not know enough about and thus cannot reasonably rate on a relative value scale will mean that, in the early years of RVHI, the moral hazard problem endemic in the medical system will still be severe. As time progresses and more new interventions come on line that are not grandfathered in at high ratings levels, the moral hazard problem will gradually recede. Although a delay in phasing relative value ratings into the health insurance system is not optimal, it is important to remember that, in the current state of the world, every intervention recommended by a doctor is essentially granted a relative score of "1" by health insurance plans, and the current system offers no hope of this ever changing. A phased-in system of relative value ratings offers the promise of bending the curve of health care costs over time, even if improvements would be gradual.

Other countries that have instituted some form of cost-effectiveness analysis into their health care systems have used this type of grandfathering. Australia, for example, began requiring cost-effectiveness data in 1992 for all *new* pharmaceuticals before the country's national drug formulary would consider providing them. It then added similar requirements for services, procedures, and diagnostics some years later.[69]

* Russell Korobkin is the Richard C. Maxwell Professor of Law at UCLA School of Law. This article is an abridged version of Russell Korobkin, *Comparative Effectiveness Research as Choice Architecture: The Behavioral Law and Economics Solution to the Health Care Cost Crisis*, 112 Mich. L. Rev. 523 (2014).

1. *See* Council of Econ. Advisors, *The Affordable Care Act and Trends in Health Care Spending*, White House, 2 (2013), http://www.whitehouse.gov/sites/default/files/docs/fact_sheet_implementing_the_affordable_care_act_from_the_erp_2013_final1.pdf.
2. *National Health Expenditure Tables*, Centers for Medicare & Medicaid Services, tbl.1, http://www.cms.gov/NationalHealthExpendData/downloads/tables.pdf (last visited Sept. 15, 2013).
3. *The 2013 Long-Term Budget Outlook*, Cong. Budget Office, 43–44 (Sept. 2013), http://www.cbo.gov/sites/default/files/cbofiles/attachments/44521-LTBO2013_0.pdf; *cf.* Sally T. Burner et al., *National Health Expenditures Projections Through 2030*, Heath Care Financing Rev., Fall 1992, at 1, 2 (estimating that health care spending will rise to 32 percent of GDP in 2030); Council of Econ. Advisers, Exec. Office of the President, *The Economic Case for Health Care Reform*, White House, 2 (June 2009), http://www.whitehouse.gov/assets/documents/CEA_Health_Care_Report.pdf (estimating that health care spending will rise to 28 percent of GDP in 2030).
4. The Kaiser Family Found. & Health Research & Educ. Trust, Employer Health Benefits: 2013 Annual Survey, 3, 12 (Aug. 20, 2013) [hereinafter KFF 2013 Annual Survey], *available at* http://kaiserfamilyfoundation.files.wordpress.com/2013/08/8465-employer-health-benefits-20132.pdf.
5. As of 2013, the United States ranked fifty-first in the world in terms of life expectancy. *Country Comparison: Life Expectancy at Birth*, Centr. Intelligence Agency, https://www.cia.gov/library/publications/the-world-factbook/rankorder/2102rank.html (last visited Sept. 15, 2013). In 2011, the United States ranked fourth in terms of per capita health care expenditures. *See Health Financing: Health Expenditure Per Capita Data by Country*, World Health Org., http://apps.who.int/gho/data/node.main.78?lang=en (last visited Sept. 15, 2013). Compared to twelve other industrial nations, relative health care spending per capita increased in the United States between 1975 and 2010 while relative life expectancy for middle-aged citizens decreased. Peter A. Muennig & Sherry A. Glied, *What Changes in Survival Rates Tell Us About US Health Care*, 29 Health Aff. 2105, 2111 (2010).
6. Under typical twenty-first century "managed care" insurance plans, coinsurance rates (in the form of deductibles and copayments) are very low. *See, e.g.*, KFF 2013 Annual Survey, *supra* note 4, at 126 (showing rates of 3% for health maintenance organization plans, 15% for preferred provider organization plans, and 4% for point-of-service plans for in-network primary care physician office visits). Patient cost sharing has, in fact, been decreasing as a percentage of total U.S. health care expenditures for fifty years. *See National Health Expenditure Tables*, *supra* note 2, tbl.3. In 2002, less than 14% of U.S. health care spending came directly from patients. Michael F. Cannon & Michael D. Tanner, Healthy Competition: What's Holding Back Health Care and How to Free It 53 fig. 4.1 (2d ed. 2007).
7. *See* Russell Korobkin, *What Comes After Victory for Behavioral Law and Economics?*, 2011 U. Ill. L. Rev. 1653, 1655 (2011) (discussing the concept of subjective expected utility).

8. Nat'l Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566 (2012) (plurality opinion in part).
9. Following the Supreme Court's ruling that made the Act's expansion of Medicaid eligibility optional for states, *id.* at 2607–08 (plurality opinion), the Congressional Budget Office ("CBO") estimated that an additional twenty-five million Americans will obtain public or private health insurance coverage by 2023. Jessica Banthin & Sarah Masi, *CBO's Estimate of the Net Budgetary Impact of the Affordable Care Act's Health Insurance Coverage Provisions Has Not Changed Much over Time*, Cong. Budget Off. (May 14, 2013), http://www.cbo.gov/publication/44176.
10. *See, e.g.,* Michael K. Gusmano, *Do We Really Want to Control Health Care Spending?*, 36 J. Health Pol. Pol'y & L. 495, 495 (2011) (noting that "few analysts accept" the administration's claim "that health care reform will reduce spending"); Richard S. Saver, *Health Care Reform's Wild Card: The Uncertain Effectiveness of Comparative Effectiveness Research*, 159 U. Pa. L. Rev. 2147, 2149 (2011) ("Many health policy experts believe that the [ACA] . . . does not sufficiently address intractable cost and quality problems . . . .").
11. *See* Harold C. Sox, *Comparative Effectiveness Research: A Progress Report*, 152 Annals Internal Med. 469, 470–71 (2010), *available at* http://annals.org/article.aspx?articleid=746204#xref-ref-10-1.
12. *See, e.g.*, Katherine Baicker & Dana Goldman, *Patient Cost-Sharing and Healthcare Spending Growth*, J. Econ. Persp., Spring 2011, at 47, 52–53.
13. *See, e.g.*, Peter R. Orszag & Philip Ellis, *The Challenge of Rising Health Care Costs—A View from the Congressional Budget Office*, 357 New Eng. J. Med. 1793, 1794 (2007) ("The bulk of [health care] spending growth . . . [results] from the development and diffusion of new medical technologies and therapies. . . . [E]vidence strongly suggests that many treatments and services are provided to patients who could do just as well with less expensive care.").
14. *See* David M. Cutler & Mark McClellan, *Is Technological Change in Medicine Worth It?*, Health Aff., Sept.–Oct. 2001, at 11, 18, 21 (claiming that advances in certain technologies return 6 to 7 dollars of benefits for every dollar of cost).
15. *See generally* Ronen Avraham, *Private Regulation*, 34 Harv. J.L. & Pub. Pol'y 543, 556–57 (2011) (discussing the problem of underuse); Amitabh Chandra et al., *Patient Cost-Sharing and Hospitalization Offsets in the Elderly*, 100 Am. Econ. Rev. 193, 194 (2010) (finding that increases in copayments for prescription drugs can reduce drug utilization spending but simultaneously increase hospitalization costs).
16. *See, e.g.*, Amelia M. Haviland et al., *Growth of Consumer-Directed Health Plans to One-Half of All Employer-Sponsored Insurance Could Save $57 Billion Annually*, 31 Health Aff. 1009, 1009, 1012–13 (2012).
17. *See, e.g.*, Allison Woo et al., *Consumer-Directed Health Arrangements*, KaiserEDU.org, http://web.archive.org/web/20121124013523/http://www.kaiseredu.org/Issue-Modules/Consumer-Directed-Health-Arrangements/Background-Brief.aspx (last updated June 2006) (accessed by searching for KaiserEDU.org in the Internet Archive index) ("[The term] 'consumer-directed health care' . . . . applies to a broad range of health plan designs . . . . but is most commonly used to describe the combination of a high-deductible health insurance plan with a tax-preferred savings account used to pay for routine health care expenses.").

18. *See, e.g.*, James R. Bettman et al., *Constructive Consumer Choice Processes*, 25 J. Consumer Res. 187, 187 (1998).
19. *See* Daniel Kahneman, Thinking, Fast and Slow 12, 28 (2011).
20. *See, e.g.*, Paul Fronstin & Sara R. Collins, Findings from the 2007 Ebri/ Commonwealth Fund Consumerism in Health Survey 9 (2008), *available at* http://www.commonwealthfund.org/~/media/Files/Publications/Issue%20Brief/2008/Mar/Findings%20From%20the%202007%20EBRI%20Commonwealth%20Fund%20Consumerism%20in%20Health%20Survey/Fronstin_consumerism_survey_2007_issue_brief_FINAL%20pdf.pdf.
21. *See, e.g.*, Cannon & Tanner, *supra* note 14, at 6–11.
22. *See* Willard G. Manning et al., *Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment*, 77 Am. Econ. Rev. 251 (1987).
23. *See id.* at 258; Baicker & Goldman, *supra* note 12, at 55 (calling this finding of the RAND study "remarkably resilient in [similar] studies over time").
24. *See* Manning et al., *supra* note 22, at 265–66; Baicker & Goldman, *supra* note 12, at 65 (concluding that increasing patient cost sharing at the point of service "would reduce use of both low-value and high-value services").
25. Peter J. Neumann et al., *Do Drug Formulary Policies Reflect Evidence of Value?*, 12 Am. J. Managed Care 30, 30 (2006); *see also* John Hsu et al., *Unintended Consequences of Caps on Medicare Drug Benefits*, 354 New Eng. J. Med. 2349, 2356 (2006).
26. *See* Nan D. Hunter, *Managed Process, Due Care: Structures of Accountability in Health Care*, 6 Yale J. Health Pol'y L. & Ethics 93, 121 (2006) (noting that from 1992 to 1998, enrollment in "managed care" forms of health insurance increased by over 50 percent).
27. *See* E. Haavi Morreim, Holding Health Care Accountable: Law and the New Medical Marketplace 47 (2001).
28. *See* M. Gregg Bloche, The Hippocratic Myth : Why Doctors are Under Pressure to Ration Care, Practice Politics, and Compromise Their Promise to Heal 105 (2011).
29. *See* Mark A. Hall, *State Regulation of Medical Necessity: The Case of Weight-Reduction Surgery*, 53 Duke L.J. 653, 664 (2003) (identifying from interviews that "public backlash" is one reason for insurers becoming "'managed care lite'—i.e., scaling back on the list of procedures that require medical necessity review prior to treatment").
30. *An Update on State External Review Programs, 2006*, AHIP Center for Pol'y & Res., app. B at 8 (July 2008), www.ahip.org/PDFs/StateExternalReviewReport.pdf.
31. The breadth of these statutes varies, but all permit patients to challenge treatment requests declined on the basis that they were not medically necessary. Hunter, *supra* note 26, at 129. The U.S. Supreme Court upheld the enforceability of these statutes when they were challenged as preempted by the federal ERISA regime. Rush Prudential HMO, Inc. v. Moran, 536 U.S. 355, 359 (2002).
32. Hunter, *supra* note 26, at 136.
33. *See* Hall, *supra* note 29, at 666 ("[F]or the most part, insurers . . . cannot enforce [individualized medical necessity standards] when a case goes to external review . . . ."). A handful of state statutes instruct the reviewer to apply the insurer's standard. *See* Alaska Stat. § 21.07.050(d)(1) (2012); Ariz. Rev. Stat. Ann. § 20-2537(E) (2013); Kan. Stat. Ann. 40 22a15(c) (Supp. 2012); Or. Rev. Stat. § 743.862(2) (2011); Wis. Stat. Ann. 632.835(3m) (West 2004 & Supp. 2012).

34. California's statute, for example, states that medical necessity must be determined based on the evidence of a service's effectiveness, expert opinion, standards of medical practice, and a treatment's likelihood of providing a benefit to the patient for which other treatments are not clinically effective. CAL. HEALTH & SAFETY CODE § 1374.33(b) (West Supp. 2013). North Carolina appears to be one exception to this trend. *See* N.C. GEN. STAT. § 58-3 200(b) (2011).
35. Hall, *supra* note 29, at 655, 658, 671 ("Insurers have largely abandoned their direct attempts to limit the utilization rate for most medical procedures."); *see also* PETER J. NEUMANN, USING COST-EFFECTIVENESS ANALYSIS TO IMPROVE HEALTH CARE: OPPORTUNITIES AND BARRIERS 24 (2005).
36. Even denials on this basis are risky in light of external review statutes that impose a relatively low standard of proof on the patient. Gregg Bloche describes a recent HealthNet plan denial of a physician-recommended unusual treatment on the ground that there was insufficient proof of its efficacy. Bloche, *supra* note 28, at 21, 28 (footnote omitted). The denial was subsequently overturned on independent review notwithstanding Bloche's analysis that the scientific basis for the treatment included "flawed studies published in second-line journals . . . . [with] methodological deficiencies [that] left lots of room for quibbling." *Id.*
37. *E.g.*, Hall, *supra* note 29, at 658 ("Medical necessity review is now taking place mainly at the margins, focusing on treatments that might be considered cosmetic, custodial, or lifestyle enhancing rather than medically indicated."). Bariatric surgery, breast reduction surgery, Viagra prescriptions, residential care, and power-operated wheelchairs are frequent subjects of dispute. *See, e.g.*, Carole Roan Gresenz & David M. Studdert, *External Review of Coverage Denials by Managed Care Organizations in California*, 2 J. EMPIRICAL LEGAL STUD. 449, 457 tbl.1 (2005) (breaking down California external review challenges by service type); *see also* Hall, *supra* note 29, at 655–62 (discussing the dispute over bariatric surgery across jurisdictions).
38. *See* Russell Korobkin, *The Efficiency of Managed Care "Patient Protection" Laws: Incomplete Contracts, Bounded Rationality, and Market Failure*, 85 CORNELL L. REV. 1, 35 (1999).
39. CLARK C. HAVIGHURST, HEALTH CARE CHOICES: PRIVATE CONTRACTS AS INSTRUMENTS OF HEALTH REFORM 5 (1995).
40. Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 1501, 124 Stat. 119, 242 (2010) (titled "Requirement to maintain minimal essential coverage").
41. *See* Hall, *supra* note 29, at 669 (noting that the exclusion of specific treatments succeeds by "keep[ing] the issue away from external reviewers").
42. Employer-sponsored self-funded health plans, in which the employer retains the risk rather than purchasing third-party insurance, are exempt from state-level benefits mandates as a consequence of the preemptive effects of ERISA. *See* Russell Korobkin, *The Battle over Self-Insured Health Plans, or "One Good Loophole Deserves Another"*, 5 YALE J. HEALTH POL'Y L. & ETHICS 89, 89 (2005).
43. For example, private insurance policies must cover the cost of new mothers spending forty-eight hours in the hospital postpartum and ninety-six hours following a Cesarean-section delivery. Newborns' and Mothers' Health Protection Act, 29 U.S.C. § 1185(a) (2006).
44. Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 1302, 124 Stat. 119, 163 (2010).

45. There are known examples of neutrals hearing appeals of treatment denials under state external review laws ordering an insurer to cover a treatment deemed "medically necessary" even though it is clearly excluded from coverage by the policy. *See* Gresenz & Studdert, *supra* note 37, at 464–65. These decisions, however, are clearly outliers and are not justified by external review statutes themselves. Hall, *supra* note 29, at 667–68.
46. *See* Neumann, *supra* note 35, at 145 (noting that "practical limits on the details specified in contracts" impede insurers contracting with patients from considering cost-effectiveness as part of coverage decisions); Baicker & Goldman, *supra* note 12, at 52 ("[I]t is impossible to write down contingent contracts that cover the infinite array of health outcomes.").
47. Inst. of Med., Learning What Works Best: The Nation's Need for Evidence on Comparative Effectiveness in Health Care (2007), *reprinted in* LeighAnne Olsen et al., Inst. of med., Learning What Works: Infrastructure Required for Comparative Effectiveness Research 333, 341 (2011).
48. Saver, *supra* note 10, at 2172; Pierluigi Tricoci et al., *Scientific Evidence Underlying the ACC/AHA Clinical Practice Guidelines*, 301 JAMA 831, 833 (2009).
49. *Cf.* Saver, *supra* note 10, at 2150 & n. 7.
50. *See, e.g.*, Havighurst, *supra* note 39, at 93–96; Einer Elhauge, *Allocating Health Care Morally*, 82 Calif. L. Rev. 1449, 1502–04 (1994).
51. Russell Korobkin, *Bounded Rationality, Standard Form Contracts, and Unconscionability*, 70 U. Chi. L. Rev. 1203, 1222–34 (2003).
52. *Cf. id.* at 1234–44 (analyzing the market consequence of consumers not considering product attributes in their decisionmaking behavior).
53. Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 6301, 124 Stat. 119, 727 (2010).
54. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 804, 123 Stat. 115; *see also Comparative Effectiveness Research Funding*, HHS.gov/recovery, http://wayback.archive-it.org/3909/20130927155638/http:/www.hhs.gov/recovery/ (accessed by searching for HHS.gov/Recovery in the Internet Archive Index).
55. Patient Protection and Affordable Care Act §§ 6301(d)–(e) (2010).
56. David M. Cutler, Your Money or Your Life: Strong Medicine for America's Health Care System 48–56 (2004).
57. *This American Life: Someone Else's Money: One Pill Two Pill, Red Pill Blue Pill* (radio broadcast Oct. 16, 2009), *available at* http://www.thisamericanlife.org/radio-archives/episode/392/someone-elses-money?act=1#play.
58. Anna N.A. Tosteson et al., *The Cost Effectiveness of Surgical Versus Nonoperative Treatment for Lumbar Disc Herniation over Two Years*, 33 Spine 2108, 2108 (2008).
59. *Id.*
60. *Id.*
61. M. Gregg Bloche, *The Invention of Health Law*, 91 Calif. L. Rev. 247, 268–69 (2003).
62. If basic values and stable preferences are so heterogeneous that decisions that maximize SEU for one maximize SEU for all, substituted decisionmaking might be justified as a way to minimize transaction costs.
63. *See* Robin Gregory et al., *Valuing Environmental Resources: A Constructive Approach*, 7 J. Risk & Uncertainty 177, 178–79 (1993).

64. *See generally* Richard H. Thaler & Cass R. Sunstein, Nudge: Improving Decisions About Health, Wealth, and Happiness (rev. ed. 2009).
65. *See* Gregory et al., *supra* note 63, at 179.
66. *E.g.*, Carl E. Schneider & Mark A. Hall, *The Patient Life: Can Consumers Direct Health Care?*, 35 Am. J.L. & Med. 7, 22–23 (2009) ("'Evidence-based medicine' is today's watchword, but there is decent evidence for only a fraction (albeit a large fraction) of medicine. . . . [T]reatments' cost-effectiveness. . . . is even less available than information about efficacy.").
67. Neumann, *supra* note 35, at 64–65.
68. For a thoughtful essay on how to provide institutional support for large-scale CER, see Robert B. Giffin & Janet Woodcock, *Comparative Effectiveness Research: Who Will Do the Studies?*, 29 Health Aff. 2075 (2010).
69. Neumann, *supra* note 35, at 97.