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RELATIVE VALUE HEALTH INSURANCE: A BEHAVIORAL LAW AND ECONOMICS SOLUTION TO THE MEDICAL CARE COST CRISIS

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Now that the Supreme Court has upheld the constitutionality of the Patient Protection and Affordable Care Act ("PPACA"), access to medical care will sharply increase. But the new law will do little to reign in the rapidly increasing cost of medical care in the United States. Regulatory controls on prices or benefits, favored by some on the left, are political non-starters in today's environment. Consumer directed health care ("CDHC") proposals, which seek to provide patients with financial incentives to equate marginal costs and benefits at the point of treatment and is favored by many on the right, is infeasible because of the skewed distribution of health care expenses and patient bounded rationality. New approaches are desperately needed.

This article proposes a government-facilitated but market-based approach to improving efficiency in the market for medical care that I call "relative value health insurance." The approach would enable even boundedly-rational patients to contract for the efficient level of health care services ex ante through their health insurance purchase decisions. The key to facilitating efficient contracting by boundedly-rational consumers is the creative use of comparative effectiveness research ("CER"), which the PPACA funds at a significant level for the first time. CER should be used to create public ratings of medical treatments on a scale of 1-10 based on their relative value, taking into account costs and expected benefits. These relative value ratings would enable consumers to contract with insurers for different levels of medical care at different prices, reflecting different cost-quality tradeoffs.

After situating the concept of relative value health insurance within the context of a health insurance system that encourages overuse of resources and CDHC proposals that cannot mitigate the problem, the article describes the considerable benefits of relative value health insurance and considers some of the formidable obstacles to making it a reality.

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INTRODUCTION

Having survived Supreme Court review,[1] the landmark 2010 health care reform legislation, the Patient Protection and Affordable Care Act ("PPACA," or "the Act"), is set to significantly expand access to medical care.[2] Most commentators agree, however, that the Act is unlikely to have more than a modest effect on stemming the rapidly increasing cost of medical care,[3] widely identified as one of the most serious public policy challenges facing the United States.

Health care spending has exceeded the growth of GDP in every decade since the 1960s.[4] Health care costs equaled 7.2 percent of GDP in 1960.[5] In 2010, that number was nearly 18 percent,[6] meaning that the country spent an average of $8,402[7] in medical care costs per person. The average cost of insurance coverage for a single adult in the workforce is was $5,049 in 2010 and a standard employer sponsored policy for a family of four runs in excess of $13,770, more than double the figure from only ten years earlier.[8] The

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[1] National Federation of Independent Businesses v. Sebelius, 132 S.Ct. 2566 (2012).

[2] Following the Supreme Court's ruling that made the Act's expansion of Medicaid eligibility optional for states, id., the Congressional Budget Office ("CBO") estimated that an additional 30 million Americans will obtain public or private health insurance coverage by 2022. Congressional Budget Office ("CBO"), Estimates for the Insurance Coverage Provisions of the Affordable Care Act Updated for the Recent Supreme Court Decision 18 tbl. 1 (June, 2012).

[3] See, e.g., Richard S. Saver, Health Care Reform's Wild Card: The Uncertain Effectiveness of Comparative Effectiveness Research, 159 U. Pa. L. Rev. 2147, 2149 (2011) ("most health policy experts believe that [the PPACA]…does not sufficient address intractable cost and quality problems"); Michael K. Gusmano, Do We Really Want to Control Health Care Spending? 36 J. Health Politics, Pol'y & L. 495, 496 (2011) ("few analysts accept" administration's claim that health care reform will reduce spending).

[4] Kaiser Family Foundation ("KFF"), Trends in Health Care Costs and Spending 3 (2009) (http://www.kff.org/insurance/upload/7670.pdf).

[5] Centers for Medicare & Medicaid Services, National Health Expenditures Aggregate Tbl. 1 (http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/tables.pdf).

[6] Id.

[7] Id.

[8] KFF, Employer Health Benefits 2010 Annual Survey 1 (http://ehbs.kff.org/pdf/2010/8086.pdf).

Congressional Budget Office predicts that, without sharp, systemic change, by 2035 health care will consume more than 30 percent of GDP.[9]

For American families, the skyrocketing cost of health care has meant that workers who continue to enjoy employer-based health insurance have seen wages stagnate and out of pocket health care costs increase rapidly as employers have scrambled to maintain benefits. For the average worker with family coverage, annual contributions to premiums have increased 147 percent over the last decade.[10] Out-of-pocket deductibles increased 30 percent from just 2007 to 2008,[11] and the number of people having a copayment of more than $25 increased 61 percent between 2004 and 2008.[12] One study estimates that, over the last decade, nearly all of the real wage increases enjoyed by the median family with employer-provided health insurance went to higher health care costs.[13] Public expenditures on medical care are also increasing sharply. In fiscal year 2010, the Medicare, Medicaid and CHIP programs cost the federal government an estimated $753 billion, 21 percent[14] of its total budget, up from 9.7 percent in 1985.[15] Medicaid spending alone now comprises 21.1 percent[16] of all state government spending, more than double the 1987 figure.[17]

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[9] CBO, The Long-Term Budget Outlook 22 (2009).

[10] KFF, Employer Health Benefits 2010 Annual Survey, supra note __.

[11] KFF, Employer Health Benefits 2008 Annual Survey (http://ehbs.kff.org/pdf/7790.pdf).

[12] Healthreform.GOV, Hidden Costs of Health Care: Why Americans and Paying MORE but Getting LESS, (http://www.healthreform.gov/reports/hiddencosts/hiddencosts.pdf).

[13] David I. Aurerbach & Arthur L. Kellerman, A Decade of Health Care Cost Growth Has Wiped Out Real Income Gains for An Average US Family, 30 Health Aff. 1630, 1633 exh. 2 (2011).

[14] Center on Budget and Policy Priorities, Where Do Our Federal Tax Dollars Go?, available at http://www.cbpp.org/cms/index.cfm?fa=view&id=1258.

[15] Calculated using data from: Christopher Chantrill, US Federal State and Local Government Spending, http://www.usgovernmentspending.com/year1985_0.html; Ben Wilcox, Medicare and Medicaid, Harvard Political Review, *available at* http://hpronline.org/arusa/medicare-and-medicaid/.

[16] Center on Budget and Policy Priorities, Where Do Our State Tax Dollars Go?, (http://www.cbpp.org/cms/index.cfm?fa=view&id=2783).

[17] Kaiser Family Foundation, Kaiser Commission on Medicaid and the Uninsured, (http://www.kff.org/medicaid/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=13581).

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 other developed nations that spend less of their wealth on medical care[18] at least suggests that the nation probably allocates an inefficiently large fraction of national resources to medical care, compared with competing goods and services. At a bare minimum, the rapid escalation of 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.

Proposals for rationalizing medical care expenditures typically rely on one of two mechanisms. Those on the political left tend to favor proposals, such as a single-payer insurance system, that rely on some combination of administrative rationing of care and price controls: government officials with expertise on cost and efficacy decide, to a greater or lesser extent, what medical interventions are provided or reimbursed and how much providers are paid. Although this type of approach could restrain spending, its bluntness could never take account of the heterogeneity in preferences for medical care, and thus would almost certainly result in significant inefficiencies, even assuming political decision makers were able to roughly determine the overall, socially efficient amount of resources to allocate to medical care. In any event, there is little doubt that the country's current political climate makes such an approach a non-starter in Washington D.C., whatever its merits, at least outside of public insurance programs.[19]

Those on the political right, in stark contrast, tend favor approaches – generally referred to as "consumer directed health care" ("CDHC") – that would give patients more responsibility for paying the actual cost of medical interventions than is common in our current system, in which costs are largely

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[18] As of 2010, the United States ranked 49th in the world in terms of life expectancy but first in terms of per capita health care expenditures. Peter A. Muennig & Sherry A. Glied, What Changes in Survival Rates Tell Us About U.S. Health Care, 29 Health Aff. 2105, 2105 (2010). Compared to 12 other industrial nations, relative health care spending per capita increased in the U.S. between 1975 and 2010 while relative life expectancy for middle-aged citizens decreased. Id. at 2111.

[19] See, e.g., Brian Keough, Curbing U.S. Health Care Costs: Lessons from Europe?, 104 J. National Cancer Institute 1119, 1119 (2012). The PPACA enacted significant price controls on payments to Medicare providers and established an independent commission with considerable power to reduce compensation to providers further if future Medicare spending exceeds target levels, although the commission was not given the authority to alter Medicare benefits. PPACA §1899A.

borne by public or private health insurance with little patient cost-sharing.[20] CDHC implicitly relies on the "rational choice" assumption of neoclassical economics: specifically 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. There are compelling reasons to believe, however, as I explain below, that the majority of consumers would be particularly bad at making efficient tradeoffs when asked to make point-of-service medical care decisions.

One view within the field of behavioral law and economics is that policy makers should use hard law and softer institutional structures to "nudge" imperfect decision makers in the presumably efficient direction, while allowing them the liberty to make other choices should they strongly desire.[21] But a less paternalistic approach, and one that is eminently more practical when public officials do not know ex ante which choices would maximize the subjective expected utility of most decisionmakers,[22] is for public officials to facilitate private choices in ways that will increase the likelihood that the individuals will be able to make personally utility-maximizing choices. The article describes a novel approach that can help individuals to allocate resources between medical care and other goods and services more efficiently. The method is for the government to produce and dispense information on the cost and benefits 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.

Used creatively, a relatively minor provision of the PPACA could serve as a starting point for promoting RVHI, and thus help to rationalize the provision of medical care without undermining either consumer choice or the centrality of insurance (as opposed to self-funding) to the medical care delivery system. The

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[20] Under typical 21st century "managed care" insurance plans, coinsurance rates (in the form of deductibles and copayments, are substantially lower than historical rates under traditional fee-for-service insurance plans. See Kaiser Family Foundation and Health Research and Educational Trust, Employer Health Benefits 2010 Annual Survey __ (2010) (http://ehbs.kff.org).

[21] See generally Richard H. Thaler & Cass R. Sunstein, Nudge: Improving Decisions About Health, Wealth, and Happiness (2008). Thaler and Sunstein have called this approach "libertarian paternalism." Cass R. Sunstein & Richard H. Thaler, Libertarian Paternalism is Not an Oxymoron, 70 U. Chi. L. Rev. 1159 (2003).

[22] See generally Russell Korobkin, Libertarian Welfarism, 97 Calif. L. Rev. 1651, 1666 (2009) (raising the "indeterminacy" objection to the concept of libertarian paternalism).

Act provides funding of up to $500 million per year[23] for government-sponsored comparative effectiveness research ("CER"), and creates an administrative structure for producing and compiling such research. The goal of CER is to provide a firmer scientific understanding of the relative clinical benefits of competing medical treatments, services, and interventions.[24] As promoted by supporters of health care reform, CER can reduce health care costs by delivering better information to providers about what treatments either do not work at all or provide no marginal benefits relative to cheaper interventions, and thus stop their provision. As President Obama put the point while promoting health care reform in 2009, "if there's a blue pill and a red pill, and the blue pill is half the price of the red pill and works just as well, why not pay half price for the thing that's going to make you well?"[25]

As impeccable as the President's logic is on this point, eliminating treatments that have absolutely no marginal benefit is unlikely to "bend the curve" of health care costs (that is, reduce the rate of health care inflation) to any perceptible degree. Used to its full potential, however, CER can help reduce the provision of care that has a positive expected benefit but is not justified by its cost. By facilitating understanding not just of the absolute effectiveness of treatments but their *cost effectiveness*, CER can provide the informational basis necessary for private insurers to sell relative value health insurance.

The principle function of government-sponsored CER should be 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. This set of transparent ratings can then be used by health insurance companies as the basis for different coverage offerings. An insurance company might offer a policy that covers only treatments with a rating of 3 and higher at annual premium price $X, a policy that covers treatments rated 5 or higher at annual premium price $Y, and treatments rated 7 or higher at an annual premium price $Z.

Consumers of health care would then determine at the time of the insurance purchasing decision – not at the time of illness – whether they wished to purchase relatively "shallow" insurance that covers only the most cost effective interventions at a correspondingly modest price, or relatively "deep" insurance

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[23] M.S. Lauer & F.S. Collins, Using science to improve the nation's health system: NIH's commitment to comparative effectiveness research, 303 JAMA 2182 (2010) available at http://www.annals.org/content/early/2010/08/02/0003-4819-153-7-201010050-00269.full?aimhp#xref-ref-10-1.

[2424] Patient Protection and Affordable Care Act of 2010, PL 111-148, §6301.

[25] July 22, 2009 Press Conference (transcript available at: http://www.kaiserhealthnews.org/Stories/2009/July/22/ObamaTranscript.aspx).

covers increasingly less cost-effective treatments but at a higher price. By using a simple numerical scale when making their insurance purchasing decision, boundedly rational consumers would have a tractable framework by which they could satisfy their preferences for medical care compared to other goods and services. If consumers wish to forego 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 those increases will represent an efficient allocation of national wealth.

Part I of this article describes how the combination of rapid technological innovation combined with the fundamental problem of moral hazard in the market for health insurance has driven our country to – or at least towards – the inefficient overallocation of resources to medical care, and it explains how law has to some degree entrenched the moral hazard problem. Part II explains how CDHC proposals appropriately target this moral hazard problem but cannot sufficiently rationalize medical care expenditures because (a) the approach will not properly align incentives and, more fundamentally, (b) boundedly rational consumers cannot make the complex cost-benefit tradeoffs at the point of treatment that the theory demands. Part III describes why the moral hazard problem cannot be solved by encouraging patients to use physicians as choice agents and redesigning payment mechanisms such that physician compensation depends on more efficient utilization of resources.

Part IV introduces the concept of relative value health insurance, in which private insurance markets coalesce around publicly provided relative value ratings of medical interventions. It then explains how CER, viewed expansively, can facilitate the implementation of this type of insurance. Part V describes the benefits of a health care system oriented around RVHI: that it would minimize moral hazard, provide consumers with informed but reasonable amounts of choice, promote efficiency without bureaucratic rationing, and encourage efficient investment in medical care innovation. Part VI considers the theoretical drawbacks and practical obstacles associated with RVHI, from the current lack of useful data, the value choices implicit in any rating system, and the risk of industry capture of the rating process, and extending to the problem of adverse selection, the interaction between relative value insurance and the coming health insurance "exchanges," and the fact that different subgroups of patients will sometimes obtain different benefits from identical treatments.

Part VII concludes by discussing how building a public system of relative value ratings could facilitate more rational political discussion about cost control for the major public health insurance programs, Medicare and Medicaid.

I. THE HEALTH INSURANCE SYSTEM AND MEDICAL COST INFLATION

A. 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 usually will compare (with greater or lesser sophistication) 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."[26]

When an individual has health insurance, the financial costs of care to him are usually low, and in some cases zero. The financial costs of the care still exist, of course, but they are shouldered by someone else: insurance companies, who then pass on the cost to all policy holders (or, in the case of public insurance, to the taxpayers). This means that most patients will choose to consume nearly all medical care that has a private expected benefit that exceeds the non-financial costs of the care, such as inconvenience, time away from work, and physical discomfort. To be sure, these non-financial costs often are not trivial, so the moral hazard problem associated with health insurance is less severe than would result from, say, ice cream insurance. But there is no doubt that the widespread use of public or private insurance to fund medical care leads to greater consumption than the efficient amount.[27]

As medical technology improves over time, the scope of the moral hazard problem increases. Because most medical care is financed through private or public insurance, 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 interventions are developed that have such positive expected benefits, inefficient marginal overconsumption of medical care occurs at a greater and greater rate.[28] This is the case even if the total value of a new

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[26] See, e.g., Katherine Baicker & Dana Goldman, Patient Cost-Sharing and Healthcare Spending Growth, 25 J. Econ. Perspectives 47, 52 (2011).

[27] See, e.g., Michael F. Cannon & Michael D. Tanner, Healthy Competition: What's Holding Back Health Care and How to Free It 37 (2d. ed. 2007) ("When individuals perceive health care to be free, the quantity demanded increases.")

[28] See, e.g., Peter R. Orszag & Philip Ellis, The Challenge of rising Health Care Costs – a View from the Congressional Budget Office, 357 N. Eng. J. Med. 1793, 1794 (2007) (attributing the "bulk of [health care] spending growth" to new technologies and

medical technology exceeds its total cost,[29] 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.[30]

Improved efficiency in the delivery of medical care might help to modestly reduce the cost of that care, and some provisions enacted as part of the PPACA might facilitate incremental improvements in this regard.[31] And there are certainly medical treatments that could be eliminated solely by providing patients or medical care providers with better information, because the treatments have non-financial costs but do not make patients any healthier on average, or even make them less healthy on average.[32] But fundamental and ongoing cost containment requires institutional reforms that discourage the health care delivery system from providing treatments with a positive expected benefit when the costs of producing positive results exceed the value of the benefits.

B. The Legal Establishment of Overutilization

The current health insurance regulatory structure not only fails to encourage efficient reductions in the utilization of medical care, it actively discourages it.

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therapies, where "evidence strongly suggests that many treatments and services are provided to patients who could do just as well with less expensive care").

[29] David M. Cutler & Mark McClellan, Is Technological Change in Medicine Worth it?, 20 Health Aff. 11 (2001) (claiming that advances in certain technologies return $6-$7 of benefits for every dollar of cost).

[30] See generally, Ronan Avraham, Private Regulation, 34 Harv. J. Law & Public Policy, 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 (2010) (finding that increases in copayments for prescription drugs can reduce drug utilization spending but simultaneously increase hospitalization costs).

[31] See Peter R. Orszag & Ezekiel Emanuel, Health Care Reform and Cost Control, 363 N. Eng. J. Med. 601 (2010).

[32] See, e.g., Elliott s. Fisher, Expert Voices: More Care is Not Better Care, National Institute for Health Care Management, No. 7, January 2005 (http://www.nihcm.org/~nihcmor/pdf/ExpertV7.pdf).

1. The "Medical Necessity" Standard

Within categories of care covered by health insurance contracts, nearly all contracts are written to cover "medically necessary" care.[33] In order to enforce the medical necessity limitation, insurance contracts often require that the insurer pre-approve certain interventions to ensure that they meet the medical necessity requirement, a process commonly known as "utilization review." During the 1980s and 1990s, the period in which the concept of "managed care" was in ascendancy,[34] insurers became more willing than before to use this process to deny coverage to policyholders for treatments recommended by their physicians.[35]

The inherent vagueness of "medical necessity" contract provisions, however, made it unpredictable whether insurers would prevail when their denials of care were challenged in court.[36] A Supreme Court ruling that an insurer's medical necessity determinations were entitled to judicial deference if the insurance contract assigned the company authority to make such determinations helped protect utilization review,[37] but courts still did, from time to time, find such decisions "arbitrary and capricious" and thus not entitled to deference.[38] At best, controlling costs through utilization review was always a risky strategy for insurers.

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[33] See E. Haavi Morreim, Holding Health Care Accountable 47 (2001).

[34] 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) (identifying the period of 1992-98 as the period with the most rapid growth in "managed care" forms of health insurance).

[35] See Bloche, supra note __, at 105.

[36] Compare Heiser v. Blue Cross, 401 N.E.2d 483 (Ohio Ct. App. 1979) (deciding that private nurse was "necessary" given the patient's condition and overturning insurer's denial of claim) with Lockshin v. Blue Cross of Ne. Ohio, 434 N.E.2d 754 (Ohio Ct. App. 1980) (deciding that private nurse was not "necessary" for a different patient and upholding insurer's denial of coverage); see generally Sarchett v. Blue Shield of California, 729 P.2d 267 (Cal. 1987) (holding that "'medical necessity' or similar policy language is an objective standard to be applied by the trier of fact").

[37] Firestone Tire & Rubber Co. v. Bruch, 489 U.S. 101 (1989).

[38] See, e.g., McGraw v. Prudential Insurance Co. of Am., 137 F.3d 1253, 1258, 1263 (10th Cir. 1998) (finding arbitrary and capricious insurer's denial of physical therapy for multiple sclerosis patient on grounds it was not "medically necessary") ; Bedrick By and Through Humrickhouse v. Travelers Ins. Co. 93 F.3d 149 (4th Cir. 1996) (reversing insurance company denial of benefits when utilization reviewer determined treatment would not have the potential for patient to achieve "significant progress," noting that

More importantly, as part of the public backlash against cost containment efforts by health insurers that began in the late 1990s,[39] 44 states and the District of Columbia[40] enacted "external review" statutes, which give patients the right to challenge an insurer's medical necessity-based denials of care to a state-selected quasi-judicial body.[41] Prevailing patients are entitled to an order requiring the insurer to provide or pay for the requested treatment.[42] In most jurisdictions, external reviewers determine medical necessity de novo and often based on a statutory definition of the concept, rather than merely applying an insurer's definition of the term (if the insurer even defines the term, which they often do not).[43] According to these definitions, medical necessity depends entirely on whether a treatment has any clinical indication, and in almost no jurisdictions does the relevant standard include any hint of cost-benefit balancing or consideration of cost-effectiveness,[44] except to the extent that a treatment is not "medically necessary" if there is an equally efficacious

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the standard of "significant progress" was not in the insurance plan or the insurers internal guidelines and that insurer breached duty of loyalty to patient).

[39] Mark Hall, State Regulation of Medical Necessity: The Case of Weight-Reduction Surgery, 53 Duke L. J. 653, 664 (2003) (identifying from interviews with insurers that "public backlash" is one reason for becoming "'managed care lite' — i.e., scaling back on the list of procedures that require medical necessity review prior to treatment.")

[40] AHIP Center for Policy & Research, An Update on State External Review Programs, 2006 at 8 (Appendix B) (July, 2008) (available at www.ahipresearch.org).

[41] The breadth of these statues varies, but all permit patients to challenge treatment requests declined on the basis that they were found not medically necessary. Hunter, supra note __, at 129. The legality of these statutes was upheld by the U.S. Supreme Court against a challenge that they are preempted by the federal employee retirement income security act (ERISA). Rush Prudential HMO, Inc. v. Moran, 536 U.S. 355 (2002).

[42] Hunter, supra note __, at 136. If the health insurance policy was procured through an employer plan, however, any claims sounding in tort are preempted by the Employee Retirement Income Security Act (ERISA). Aetna Health Inc. v. Davila, 542 U.S. 200 (2004).

[43] See Hall, supra note __, at 666 ("for the most part, insurers…cannot enforce [individualized medical necessity standards] when a case goes to external review"). A handful of state statutes provide that the reviewer is to apply the insurer's standard. Alaska Stat. §21.07.050(d)(1); Ariz. Rev. Stat. Ann. §20-2537(E); Kan.Stat. Ann. §40-22a13(b); Or. Rev. Stat. §743.862(2); Tenn. Code Ann. §56-32-227(b)(6); Wis. Stat. Ann. §632.835(3m).

[44] One exception appears to be North Carolina. N.C. Gen. Stat. §58-3-200(b).

treatment available (presumably at a lower price).[45] Consequently, health insurers have little if any legal space to mitigate moral hazard by refusing to cover low value treatments.

Consistent with this legal structure, health insurers usually 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.[46] 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 the patient's condition[47] or whether a requested procedure is cosmetic or lifestyle-related rather than medical in nature.[48] Bariatric surgery, breast reduction surgery, Viagra prescriptions, residential care, and power-operated wheelchairs are frequent subjects of dispute.[49] Today, it appears to be rare, if not completely nonexistent, for a private insurer to refuse to cover a physician-recommended treatment with recognized positive expected clinical value that is not

[45] 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).

[46] Hall, supra note __, at 655, 658, 671 (finding that "insurers have largely abandoned their direct attempts to limit the utilization rate for most medical procedures"); Neumann, supra note __, at 24 ("few, if any, [health] plans are using cost-effectiveness as a formal policy tool").

[47] 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, which 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." M. Gregg Bloche, The Hypocratic Myth, 21, 28 (2011).

[48] See, e.g., Hall, supra note __, 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.")

[49] See, e.g., Carole Roan Gresenz & David M. Studdert, External Review of Coverage Denials by Managed Care Organizations in California, 2 J. Empirical Leg. Stud. 449, 457 tbl. 1 (2005) (breaking down California external review challenges by service type); see also Hall, supra note __, at 655-62 (bariatric surgery across jurisdictions).

specifically excluded by contract on the ground that the treatment is not cost-justified.[50]

The consequence is that the insurance system requires consumers to purchase "Cadillac" quality health care at a Cadillac price, even if they would prefer to purchase a more modest level of care at a more modest price.[51] This limitation of options works out well for two groups: wealthy individuals who are able to purchase deep medical care coverage without being forced by liquidity constraints to then skimp on other highly valued goods 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 so much of their income is devoted to medical care. Those who would prefer cheaper and less comprehensive coverage must buy deeper coverage than they wish to purchase or go without any coverage at all. Under the PPACA's "individual mandate," most people who choose the latter option will now be fined.[52]

2. The Normative Problem with Insurer Utilization Review

External review statutes effectively prevent consumers who would prefer shallower coverage at a correspondingly lower price from purchasing it. Although this is a significant problem, 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 tool of 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.[53] 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 costs of not receiving treatments.

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[50] Neumann, supra note __, at 25.

[51] Clark Havighurst, Health Care Choices 104-05 (1995).

[52] PPACA, §1501 ("Requirement to maintain minimal essential coverage").

[53] See Russell Korobkin, The Efficiency of Managed Care "Patient Protection" Laws: Incomplete Contracts, Bounded Rationality, and Market Failure, 85 Cornell L. Rev. 1, 35 (1998).

This type of moral hazard is typically mitigated in markets by the desire of sellers to please their customers and earn repeat business.[54] For example, an automobile manufacturer's desire for you to return when it is time to buy your next car limits its incentive to cut costs on the assembly line. A company that advertises high-quality cars and delivers lemons will not win much repeat business. But the market force that limits moral hazard is less potent in health insurance markets. Because the profitability of serving a customer depends on how much medical care he demands in a given year, and because the correlation between the cost of caring for a patient in one year and in future years is positive, an insurance company's bottom line will often be helped rather than hurt if customers who ask for expensive treatments this year decide to take their business elsewhere in the future.[55]

It is normatively problematic, then, in addition to being legally impermissible in most states, to rely on health insurers conducting utilization review at the point of service to promote a more efficient allocation of resources between health care and other goods and services.

II. CONSUMER DIRECTED HEALTH CARE AND CONSUMER CHOICE

In current academic and policy debates, the conceptual approach to reducing the costs of medical care that seeks to directly address the problem of moral hazard is known by the general label of consumer-directed health care (CDHC). Proponents of this approach seek to increase the marginal financial cost of medical care imposed directly on patients, thus providing them with a greater incentive to equate marginal cost with marginal benefit.[56] The usual policy recommended by proponents of CDHC is subsidization of health insurance with high co-payments at the point of service and high annual deductibles. The Health Savings Account ("HSA") program, instituted as part of a 2003 Medicare Modernization Act,[57] is a favorite of CDHC advocates.[58]

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[54] See, e.g., Russell Korobkin, Bounded Rationality, Standard Form Contracts, and Unconscionability, 70 U. Chi. L. Rev. 1203, 1240 (2003).

[55] Korobkin, Patient Protection, supra note __, at 40-41..

[56] See, e.g., KFF, Consumer Directed Health Arrangements (2006) (available at http://www.kaiseredu.org/Issue-Modules/Consumer-Directed-HealthArrangements/Background-Brief.asp).

[57] Medicare Prescription Drug, Improvement, and Modernization Act of 2003, 26 U.S.C. §§223-224.

[58] See, e.g., Cannon & Tanner, supra note __, at 69 (calling for "enhancing and expanding" HSAs).

This program permits individuals who purchase qualified health insurance with high deductibles to establish tax-advantaged savings accounts. These accounts, which have achieved considerable popularity among employer-based health insurance plans,[59] can be used for out-of-pocket medical expenses, and any funds not spent on medical care carry over from year to year and can eventually become part of the account holder's estate.

In theory, there is much to like about the concept of CDHC. Unfortunately, however, it suffers from two serious problems that substantially limit its ability to bend the cost curve, even if its adoption were to become widespread. First, medical care costs in any given year are extremely skewed, with a small percentage of patients incurring extremely high costs and most patients incurring low or no costs.[60] Second, the lack of expertise and bounded rationality of consumers make most highly unlikely to effectively equate marginal cost and marginal benefit at the point of care in the way necessary in order for CDHC to result in the rational allocation of resources to medical care.[61]

A. Bipolar Distribution of Medical Costs

For individuals to have an incentive to equate the marginal costs and marginal benefit of care, it is necessary both that patients have not yet reached their annual deductible limit at the time a treatment choice must be made and that they believe they might not exceed that limit during the policy year.

Medical costs are notably bipolar, with 5 percent of patients responsible for about half of all costs in a given year.[62] This means that most treatment decisions that involve significant costs will be made by patients who will exceed their annual out-of-pocket limit. Even a patient with an annual $11,900 deductible – the *highest* out-of-pocket limited permitted for family policies

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[59] One estimate finds that these plans made up more 13 percent of employer-sponsored policies as of 2011. Baicker & Goldman, supra note __, at 48.

[60] See text accompanying notes __-__, infra.

[61] See text accompanying notes __-__, infra.

[62] In 2002, the top five percent of the U.S. population, ranked according to expenditures, accounted for 49 percent of overall medical spending, and the bottom 50 percent represented only 3 percent and were responsible for less than $664 of spending per person. L.J. Conwell and J.W. Cohen, Characteristics of people with high medical expenses in the U.S. civilian noninstitutionalized population, 2002. Statistical Brief #73, March 2005, Agency for Healthcare Research and Quality, Rockville, MD. available at http://meps.ahrq.gov/mepsweb/data_files/publications/st73/stat73.pdf.

offered in coordination with tax-advantaged HSA savings accounts[63] – loses the incentive to balance costs and benefits, for all practical purposes, the day he is admitted to a hospital or diagnosed with a serious ailment.[64]

This problem could be avoided, of course, if there were no health insurance at all and mitigated with higher and higher deductible levels. But as out-of pocket liability increases, more and more people would forego medical care not because they prefer to allocate their resources elsewhere, but because they are wealth constrained and simply do not have the assets needed to pay the high cost of much medical care – even if they would choose to spend any resources they do have on such care and even if they would have chosen to pay the ex ante actuarial cost of the care through the purchase of insurance.[65] That is, as out-of-pocket liability for care increases, the problem of inefficient overconsumption of medical care quickly is replaced by the problem of inefficient underconsumption, as patients forego medical care that would be valued at its cost.[66] Perhaps recognizing this, few if any supporters of CDHC favor eliminating health insurance entirely, or even setting out of pocket limits high enough that most patients with serious ailments would expect not to exceed those limits.

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[63] The 2010 out-of-pocket maximums (including co-payments are deductibles) for HSA policies were $5,950 for self-only coverage and $11,900 for family coverage." See IRS, Revenue Procedure 2009-29, available at http://www.irs.gov/pub/irs-drop/rp-09-29.pdf.

[64] As examples, recent reports have estimated the average cost of a hospital stay in the United States at $15,734 and the cost of hospitalization for appendicitis $33,611. Renee Y. Hsia et al., Health Care as a "Market Good"? Appendicitis as a Case Study, 172 Arch. Intern. Med. 818 (2012); Sabrina Rodak, U.S. Hospital Stay Costs Outpace Other Countries Three Fold, Becker's Hospital Review (www.beckershospitalreview.com);

[65] In 2007, the middle quintile of American families based on income reported a median total value of assets (including retirement accounts) of only $18,600. America Foundation, Savings in American Households tbl. 6 (2009) available at http://assets.newamerica.net/files/1109SavingsFacts.pdf.

[66] If we assume preferences exist only to the extent that people back them up with a willingness to pay, this problem goes away; by definition, a person who has no money does not "value" a $100,000 life-saving operation at its cost. But given that one's total wealth is – at least to a large extent – beyond one's control, most of us would say that willingness to pay is a reasonable surrogate for "value" or "utility" only if a decision maker could access the money necessary to purchase the service in question by sacrificing the ability to make other purchases. For a more detailed discussion of this point, see M. Gregg Bloche, The Invention of Health Law, 91 Cal. L. Rev. 247, 262-63 (2003).

B. Bounded Rationality

The second and more fundamental problem with CDHC is that it assumes a heroically implausible level of decision making 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 foregoing 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 that will provide the greatest possible subjected expected utility, or overall value. 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 decision problems and seek mental shortcuts to solving them, economizing on decision costs but compromising accuracy of outcomes.[67] Put another way, faced with difficult questions, people often answer an easier one instead, often without even recognizing the substitution that is taking place.[68] 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 at the cost of requiring substantially more effort.[69] 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 upon which it relies will sometimes lead to suboptimal decisions.

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[67] See, e.g. James R. Bettman et al., Constructive Consumer Choice Preferences, 25 J. Consumer Res. 187, 187 (1998).

[68] See Daniel Kahneman, Thinking Fast and Slow 12 (2011).

[69] Id. at 28.

Reliance on the mind's System 1 function causes consumers to fail to make accurate decisions in many contexts. But what we know about the decision making process suggests that making medical care decisions at the point of service is particularly problematic. Drawing on established findings from research on decisionmaking, this section describes various reasons to believe consumer choices are likely to fall well short of the rational ideal in this context.

1. Complexity

The difficulty in making value maximizing decisions increases when the relevant factual information is highly complex and alternatives have multiple attributes. To even hope to select the "accurate" treatment option, the patient would need to be able to learn and understand the cost, inconvenience, mortality and morbidity (along a variety of metrics) implications of each choice. This information is almost never reasonably available to patients,[70] but even if we assume it could be made available, accurate choices by consumers would remain highly unlikely.

Processing large amounts of complex information is mentally costly, even for individuals with the mental capability and educational background necessary to do so. As the cost of processing information increases, people tend to simplify the decisions[71] – in effect, solving an easier problem than the one that must actually be solved in order to be sure that their expressed preference actually maximizes the expected satisfaction of their underlying values.

One way to simplify complex problems without obvious, easy answers is to selectively consider only a limited amount of information and/or to adopt non-compensatory decision strategies when evaluating that information – strategies that do not require the comparison of difficult-to-compare attributes.[72] What is

[70] For a thorough, and thoroughly depressing, account of just how unavailable relevant information about both costs and clinical benefits is to patients in the current medical care environment, see Carl E. Schneider & Mark A. Hall, The Patient Life: Can Consumers Direct Health Care?, 35 Am. J. L. & Med. 7, 19-31 (2009). See also Uwe Reinhardt, Can Efficiency in Health Care Be Left to the Market, 26 Journal of Health Policy, Politics, and Law, 967, 986 (2001) ("The price[s] of health services are jealously guarded proprietary information).

[71] Payne, et al., supra note __, at 247 ("the use of simple (heuristic) decision processes increases with task complexity"); Kahneman, supra note __.

[72] Cf. Payne et al., supra note __, at 251 ("people often focus on a single option, a single objective or attribute, or a single assumed state of the world when reasoning about a decision problem").

known as a "lexicographic" decision strategy, for example, requires the decisionmaker to select the choice alternative that rates highest on the single most important attribute, ignoring all other attributes.[73] This approach can be implemented by the System 1 mental process, which is adept at comparing data points on a single metric (i.e., System 1 allows you to look at two people and immediately know which one is taller) but unable to compare across attributes or consider multiple issues at one time.[74]

A prostate cancer patient choosing between surgery and "watchful waiting," for example, might favor surgery if his primary concern is life expectancy but watchful waiting if his primary concern is quality of life or cost. If there are several important attributes at stake and a range of possible outcomes on these attributes for each of the alternatives, this type of simplification can often lead to an inaccurate decision (i.e., one that fails to maximize the expected overall welfare of the decisionmaker). For example, if the decisionmaker selects surgery because it is associated with greater average life expectancy (the most important attribute to him), but the advantage in mortality reduction is small and the differences in expected quality of life and cost – also important attributes – strongly favor watchful waiting, it is quite likely that the choice failed to maximize his expected welfare. In this example, the result is an inefficient overspending on medical care, but it is also possible that such simplification strategies will result in inefficient underspending on medical care.

2. Novelty

While traditional economic theory assumes that people have stable and coherent preference orderings,[75] modern decision scientists believe that many choices and behaviors reflect preferences that are "constructed" in response to the contextual features of the decision problem rather than revealing the decisionmaker's static values.[76] This is not to say that expressed preferences are randomly determined or even that no preferences are well-considered and stable. But expressed preferences should be understood as being a function of both innate, subjective desires and of the decisionmaking context in which the

[73] Bettman et al., supra note __, at 190.

[74] Kahneman, supra note __,at 36.

[75] See, e.g., Matthew Rabin, Psychology and Economics, 36 J. Econ. Lit. , March 1988, at 11.

[76] See generally John W. Payne et all, Measuring Constructed Preferences: Toward a Building Code, 19 J. Risk & Uncertainty 243 (1999); Gregory et al, 1993.

preference is solicited.[77] The greater the effect of context – that is the extent to which the preference is constructed (rather than merely uncovered) at the time it is solicited – the less likely that the decision made will achieve the normative goal of accuracy.

The more times an individual has considered a particular decision, the more likely he will be to fully understand, and fully account for all relevant attributes of the available alternatives, including how he will feel, subjectively, in the different states of the world that he will choose now but experience later. This is why most people have distinct and stable preferences between chocolate and vanilla ice cream. We have tasted both many times; we can identify their different attributes (taste, smell, etc.); we can recall, if imperfectly, how we have felt in the past after finishing bowls of each; and we can recall making this very choice before and what emotions we experienced in the aftermath of making the choice.

The extent to which expressed preferences are unstable and mutable is likely to increase with the novelty of the decision making problem, because the decision maker has less prior experience on which to draw.[78] And individuals facing marginal medical care decisions of significance often find themselves in a tremendously novel position.[79] A breast cancer patient forced to choose between a variety of different surgical and medical treatment options, each with a very different price tag, is unlikely to have any decision-relevant affective experience on which to rely. In this situation, the patient will have a difficult time, to say the least, determining how she will subjectively experience the different attribute-bundles associated with the different treatment choices.

3. Inconsistent Comparative Information

Attributes of decision alternatives vary in how difficult they are to value. The value of some attributes is clear to most decisionmakers without contextual clues; the value of other attributes is less obvious without points of comparison.

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[77] See Payne et al., supra note __, at 246 ("Expressed preferences (measured values for decision objects), in our view, generally reflect both a decision maker's basic values for highlighted attributes (e.g., more money is preferred to less) and the particular (contingent) heuristics or processing strategies used to combine information selectively in order to construct the required response to a particular situation.").

[78] Cf. Payne et al., supra note __, at 245 ("the assumption of well-articulated preferences is tenable only when people are familiar and experienced with the preference object").

[79] Cf. Schneider & Hall, supra note __, at 46 ("choosing health plans, providers, and medical treatments swamps you in the unfamiliar").

A consequence is that decisionmakers, who instinctively wish to economize on decision costs, tend to give attributes more weight in decision problems if they are easy to compare than if they are not, regardless of whether comparability is correlated with how informative the attribute is.

For example, when asked to choose between a dictionary with a mint-condition cover and 10,000 entries or a dictionary with a torn cover and 20,000 entries, most subjects prefer the latter: 20,000 entries is a lot more than 10,000, and the tear in the cover does not significantly affect the dictionary's functionality.[80] But when asked to independently value one of the two dictionaries standing alone, subjects on average place a higher value on the 10,000-entry book.[81] The condition of the cover is more "evaluable" than the number of entries. Clearly, a mint-condition cover is desirable, and a torn cover is undesirable. It is much harder to determine the absolute value of a stated number of entries, so people tend to give attention to the cover when valuing one of the two options. The value of the number of entries is easier to judge when two dictionaries can be compared on the same attribute, however, so that attribute is given more weight in the decision process when there is a clear point of comparison.

The evaluability problem is likely to be highly relevant in many medical care determinations. For example, nearly all medical procedures present some risks, and it is often difficult for individuals to judge their significance. A CT scan of the head exposes a patient to approximately 150 millirems of radiation.[82] Because few people would have any idea if this amount is low or high, it is likely that most patients would ignore the attribute of "radiation exposure" when deciding whether to undergo a CT or forgo the test. An MRI scan provides no radiation exposure, however, which is obviously less than 150 millirems and thus clearly superior to the CT on attribute of radiation exposure. This suggests that radiation exposure is far more likely to be an attribute considered by a patient if she is given the choice of a CT, an MRI, or no imaging test than if she is merely given the choice of a CT or no imaging test.

Closely related to the evaluability problem is that individuals often compare complex alternatives on the basis of the attributes most easy to compare, at which point they tend to favor an alternative that dominates another

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[80] Christopher Hsee, The Evaluability Hypothesis, 67 Org. Behavior & Cons. Decision Proc. 247 (1996).

[81] Id.

[82] P.C. Shrimpton et al., Doses from Computed Tomography (CT) Examinations in the UK, National Radiological Protection Board (2005) (available at http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947420292.

on a comparable feature (tradeoff contrast) or selecting an alternative that seems to lie in between others on a distribution (extremeness aversion).[83]

The tradeoff contrast effect causes decisionmakers to give more weight than is justified to an alternative that clearly dominates a second, as compared to a third alternative whose comparative value is more ambiguous, because the fact the chosen alternative dominates another is seen as a good reason for choosing it.[84] For example, imagine a condition for which there were two possible treatments, one involving surgery and one not, that differ on a variety of attributes (i.e., price, mortality risk, likely quality of life, etc.), making comparison difficult. The likelihood of the patient choosing the surgical option would almost certainly be increased if a second surgical option that is inferior to the first on all relevant attributes is added to the choice set. Effectively, at least some decisionmakers faced with the difficult decision – surgical option #1 or the non-surgical option – would reduce the cost of decisionmaking by solving the easier (but logically irrelevant problem) of whether surgical option #1 is preferable to surgical option #2.

The extremeness aversion effect suggests that decisionmakers are more likely to prefer Choice B to Choice A if a Choice C that as opposite benefits and costs to Choice A is also considered. For example, assume that a patient's choice between two diagnostic tests is difficult because Test A costs $1000 but identifies a potentially dangerous condition when it exists 95% of the time, whereas Test B identifies the condition only 85% of time but costs only $250. If Test C, which costs $100 but will only identify the condition 25% of the time is also considered, the likelihood of the patient choosing Test B will increase.

Decision strategies such as these lead to what has been called "coherent arbitrariness." The outcomes are locally reasonable given the information that is compared but result in inaccurate decisions because logically relevant information is omitted from the decision analysis.

4. Emotion-Laden Decisions

The more difficult it is to compare attributes, the more likely decisionmakers will adopt choice strategies that are non-compensatory. Trading off one attribute against another different type of attribute can be difficult not only cognitively, however, but emotionally. This is especially likely to be the case when individuals believe deeply held values are at stake

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[83] Bettman et al., supra note __, at 207; see also Amos Tversky & Itamar Simonson, Context-Dependent Preferences, 39 Mgmt. Sci. 1179 (1993).

[84] Huber et al. supra note __, at 82; Bettman et al., supra note __, at 207. This situation is known is "asymmetric dominance." See, e.g., id. at 198.

that are difficult, or even morally improper, to sacrifice.[85] In such situations, in order to avoid negative emotions, individuals often employ simple, non-compensatory decisionmaking strategies that allow them to avoid confronting such fraught tradeoffs.[86] For example, research has indicated that certain individuals express a reluctance to consent to any actions that will result in environmental degradation, even if permitting the action could generate enough money to pay for more than a compensating amount of environmental protection.[87]

The potential application of this finding to decisions in the medical care context is clear. We all make decisions in our everyday life that demonstrate we do not place infinite value on avoiding morbidity or mortality—for example, by purchasing cars that do not have the highest possible safety ratings in order to save money or obtain other desirable features. When faced with illness, however, many individuals are likely to feel extremely uncomfortable trading off medical interventions against money, and thus seek out simple decision strategies that allow them to avoid confronting such tradeoffs, even though this might reduce the accuracy of decisions. As insurance law experts Tom Baker and Peter Siegelman write, "shopping for a health care service on the basis of price strikes so many people as bizarre, even a bit repugnant, and [] the idea of negotiating over a fee with a physician is, quite literally, unimaginable for many people….[O]ur sense is that many people experience discomfort in thinking about [] health care in relation to money and, thus, would be willing to pay at least something extra to avoid that."[88]

5. Hedonic Misprediction

One way to simplify a problem that is novel, complex, and emotion-laden and involves some attributes that are easier to evaluate than others is to make choices that are responsive to the most salient risks or benefits and ignore the rest. The availability heuristics suggests that decisionmakers will often overweight the likelihood of consequences that are most vivid or easily

[85] See Bettman et al. supra note __, at 196.

[86] Id. at 197.

[87] Jonathan Baron & Mark Spranca, Protected Values, 70 Org. Behavior & Hum. Decision Proc. 1 (1997).

[88] Tom Baker & Peter Siegelman, Law and Economics after the Behavioral Turn: Learning from Insurance (draft at 48).

imaginable.[89] A woman asked to decide whether to have a mammogram at age 40 at the cost of $500 might make the choice based on whether she knows any women who had been diagnosed with breast cancer at that age. A man diagnosed with prostate cancer and forced to choose between surgery and "watchful waiting" might choose the latter if his friend who recently received the same diagnosis and chose surgery became impotent as a result and the former if the friend recovered quickly from the surgery with no lasting ill-effects – regardless of the typicality of such results.

Whether salience biases lead to overuse or underuse of medical care, they are likely to be exacerbated, especially in novel decisionmaking contexts, by the poor quality of many people's predictions of the hedonic consequences of future events. A significant amount of research over the past decade demonstrates that people are very bad at predicting the extent to which future events will make them happy or unhappy.[90] One particularly relevant finding for resource allocation decisions in the medical care context is that people predict their hedonic reaction to disability would be far worse than it actually is for people who have suffered a disability.[91] More generally, studies often show that patients afflicted with a particular health condition rate the value of their health state higher than do non-patients.[92]

On its own, our inability to make accurate predictions about our hedonic future does not necessarily suggest an inability to make accurate resource allocation decisions: a person might overestimate how much happiness he would gain from devoting a marginal dollar to medical care, but he might overestimate how much happiness he would obtain by devoting that same dollar to a Hawaiian vacation instead. But to the extent that resource allocation decisions implicitly overweight the likelihood of salient outcomes, a failure to predict the hedonic consequences of that outcome might magnify the decisionmaking distortion. That is, if a patient faced with the decision of whether to order an expensive test that diagnoses an unusual condition is more likely to order the test because he has a friend who happens to have that

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[89] Amos Tverksy & Daniel Kahneman, Availability, in Judgement Under Uncertainty: Heuristics and Biases 163 (1982).

[90] See Timothy D. Wilson & Daniel T. Gilbert, Affective Forecasting, 35 Advances in Experimental Soc. Psychol. 345, 351 (2003).

[91] See John Bronsteen et al., Hedonic Adaptation and the Settlement of Civil Lawsuits, 108 Colum. L. Rev. 1516, 1538-40 (2008) (reviewing literature).

[92] See Neumann, supra note __, at 121-22 (noting that some studies have also found similar ratings).

condition, he will be even more likely to order the test if he overestimates the negative hedonic consequence of having the condition.

C. Empirical Research on Medical Decisionmaking

1. Inefficient Choices

It is almost always difficult to determine whether a particular decision is an inaccurate 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 patients are unlikely to do a very good job of making efficient medical care decisions at the point of treatment, in the way that proponents of CDHC implicitly assume.

Studies do suggests that patients are more conservative about seeking medical care when forced to spend their own dollars on that care.[93] Thus, the fundamental prediction of microeconomic theory that demand falls as price rises is borne out in the medical care context. This suggests, as supporters of CDHC like to argue, that CDHC would probably encourage healthy price competition amongst providers of medical care.[94] One consistent finding, dating back to the well-known RAND study,[95] however, is that patients demand less care when faced with increasing marginal costs[96] but do not do well at distinguishing between high and low-value interventions.[97] For example, patients with higher cost-sharing obligations have been found to economize by

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[93] See, e.g., Paul Fronstin & Sara R. Collins, Findings from the 2007 EBRI-Commonwealth Fund Consumerism in Health Survey, 315 EBRI Issue Brief 1, 9, (2008) (http://www.commonwealthfund.org/publications/publications_show.htm?doc_id673661).

[94] See, e.g., Cannon & Tanner, supra note __, at 6-11.

[95] See Manning, Willard G., et al., Health Insurance and the Demand for Medical Care: Evidence form a Randomized Experiment, 77 Am. Econ. Rev. 251 (1987).

[96] See Baicker & Goldman, supra note __, at 55 (calling this finding of the Rand study "remarkably resilient [in similar studies] over time").

[97] R.H. Brook et al., Does Free Care Improve Adults' Health? Results from a Randomized Controlled Trial, 309 N. Eng. J.. Med. 1426 (1983); Baicker & Goldman, supra note __, at 65 ("concluding that increasing patient cost-sharing at the point of service "would reduce both low-value and high value services").

not taking prescription drugs only to have higher rates of serious adverse events and emergency room visits, the costs of which offset any prior savings.[98]

A second finding is that, when choosing between treatments, patients' revealed preferences are often inconsistent over time.[99] Although it is possible that experience causes patients to change their deeply held and well-considered preferences, these results seem to suggest that medical care preferences can be highly unstable and thus subject to contextual effects.

Research has also documented evidence of a high degree of one-reason decisionmaking when patients consider treatment options for serious ailments that would seem to warrant a more careful comparison of multiple attributes. One study of treatment choices made by dialysis patients, for example, concluded many patients seemed to opt for hemodialysis when hearing a dispiriting fact about peritoneal dialysis or peritoneal dialysis when hearing a single undesirable consequence of hemodialysis.[100]

Finally, but importantly, average functional health literacy in the United States is extremely low. A shockingly large percentage of the population is only marginally literate and functionally innumerate,[101] suggesting a likely inability to understand, let alone make a reasoned choice between, treatment options with different risks, likelihoods of success, and morbidity and mortality consequences. Documents often provided for the direct purpose of facilitating informed decisionmaking in similar contexts – such as privacy disclosure forms used by academic medical centers – have been evaluated as far too difficult for the average patient to comprehend.[102] And very few patients are familiar with

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[98] See John Hsu et al, Unintended Consequences of Caps on Medicare Drug Benefits, 354 New Eng. J. Med. 2349, 2356 (2006); Peter J. Neumann et al., Do Drug Formulary Policies Reflect Evidence of Value?,12 Am J. Managed Care 30 (2006).

[99] See, e.g., Terri R. Fried et al, Inconsistency Over Time in the Preferences of Older Persons with Advanced Illnesses for Life-Sustaining Treatment, 55 J. Am. Geriatrics Society 1007 (2007).

[100] Carl E. Schneider, The Practice of Autonomy: Patients, Doctors, and Medical Decisions 94-95 (1998).

[101] See generally Schneider & Hall, supra note __, at 36-38.

[102] S. Walfish & K.M. Watkins, Readability Level of Health Insurance Portability and Accountability Act Notices of Privacy Practices Utilized by Academic Medical Centers, 28 Eval. Health Prof. 479 (2005); see also M.K. Paasche-Orlow et al., Readability Standards for Informed-Consent Forms as Compared with actual Readability, 20 New Eng. J. Med. 348 (2003).

even relatively basic features of their health insurance plans,[103] suggesting that they will also likely fail to understand relevant features of alternative medical interventions.

2. The Desire to Delegate

Whether patients realize their necessarily boundedly-rational treatment decisions are likely to be inaccurate or they merely wish to avoid the emotional costs of making such decisions, evidence strongly suggests that many patients would prefer their physician to make treatment decisions for them.[104] One study found that 78 percent of colorectal and 52 percent of breast cancer patients registered such a preference.[105] A broader study of medical decisionmaking in hypothetical settings found that, on a scale of 1-100, with 0 indicating no desire to make medical decisions and 100 indicating an intense desire to do so, the average patient registered a score of only 33, and even lower when considering more severe illnesses.[106]

Even when patients make treatment decisions, as is legally required under modern informed consent principles, a large number employ the simple heuristic of adopting their physician's recommendation.[107] This strategy is particularly attractive to hospitalized patients, who face even more serious obstacles to obtaining and processing information than outpatients.[108] This fact suggests that, rather than providing incentives for consumers to make more efficient cost-benefit tradeoffs at the point of treatment, perhaps consideration should be paid to giving physicians the incentive to incorporate cost-benefit

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[103] See Peter J. Cunningham et al., Do Consumers Know How Their Health Plan Works, 20 Health Aff. 159 (2001); Deborah W. Garnick et al., How Well Do Americans Understand Their Health Coverage, 12 Health Aff. 204 (1993).

[104] See generally Schneider & Hall, supra note _, at 47 (concluding that "the evidence that patients do not long to make medical decisions ins compelling").

[105] Kinta Beaver et al., Decision-Making Role Preferences and Information Needs: A Comparison of Colorectal and Breast Cancer, 2 Health Expectations 266 (1999).

[106] Jack Ende et al., Measuring Patient's Desire for Autonomy: Decision Making and Information-Seeking Preferences Among Medical Patients, 4 J. Gen. Intern. Med. 23, 26-27 (1989).

[107] For a compelling example described by a patient facing a complicated set of options for treating breast cancer, see Ann Kim, Dr. Me: Cancer Patients Want a Say, But Do We Have to Be the Doctor Too?, Zocalo Public Square, May 16, 2012 (http://zocalopublicsquare.org/thepublicsquare/2012/05/16/dr-me/read/nexus/).

[108] See Schneider and Hall, supra note __, at 31.

tradeoffs into their treatment recommendations. Part III considers this possibility.

III. MEDICAL PROVIDERS AS DECISIONMAKING AGENTS

One obvious way of dealing with the problem that most individuals will not be very good at making cost-benefit tradeoffs about medical options at point of service is to encourage them to rely on or even completely delegate decisionmaking responsibility to agents. But delegating decisionmaking authority to agents can only rationalize the provision of medical care if the agents are motivated to recommend only efficient levels of treatment. It will be difficult to structure the financial incentives of providers appropriately for this task, even if that is accomplished, the incentives would work at cross purposes with ingrained professional norms of physician culture.

A. Provider Financial Incentives.

It is widely believed that one of the drivers of the inefficient overallocation of resources to medical care is that most providers are compensated on a piece-work basis.[109] Under standard compensation arrangements with public and private insurers, for each marginal diagnostic test or treatment procedure that a doctor performs, he earns more money, creating a moral hazard similar to the one that affects the incentives faced by patients themselves.[110] In theory, the provider moral hazard problem is even worse. Whereas patients have the private incentive to demand all tests and treatments with a positive expected value net of non-financial costs, providers have a profit incentive to provide even tests and treatments that have a negative expected value to the patient!

The risk of malpractice lawsuits creates another incentive for physicians to recommend more than the efficient amount of medical care, a problem often

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[109] See, e.g., Schneider & Hall, supra note __, at 31 ("[W]e got consumerism because doctors had little reason to control costs and much reason to drive them up. The more services doctors sold and the more they charged for a service, the wealthier they got."); Orszag & Ellis, supra note __, at 1794 (observing that fee-for-service reimbursement remains the predominant financial arrangement in both private insurance and Medicare).

[110] See Orszag & Ellis, supra note __, at 1794; cf. Atul Gawande, The Cost Conundrum: What a Texas Town Can Teach Us About Health Care, The New Yorker, June 1, 2009, at 36-37 (providing strong anecdotal evidence of overtreatment of patients in McAllen, Texas).

labeled "defensive medicine."[111] Physicians have a private incentive to overtreat – particularly in the form of prescribing diagnostic tests with high costs and low expected benefits – if it will reduce the perceived likelihood that they will later be sued,[112] especially when there is little or no risk that the procedure will affirmatively harm the patient (which might lead to a lawsuit).

Not all provider compensation mechanisms produce an incentive for the overutilization of care, but those that don't usually create a private incentive for providers to recommend too little care, rather than the efficient amount. Some physicians (usually primary care physicians) who practice in HMO structures receive a capitated monthly payment for each patient they serve regardless of that patient's utilization of their resources.[113] Others, who work in staff-model physician networks are paid a flat salary.[114] Still others receive bonus payments for minimizing costly referrals.[115] These arrangements create a financial incentive for providers to provide too little care, because each quantum of care is costly to the physician in either time or money but provides no private benefit, no matter how beneficial the intervention may be to the patient.

The incentive problems with standard physician compensation mechanisms have led some scholars to recommend compensation structures according to which physicians would be compensated based on patient outcomes.[116]

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[111] See Richard Anderson, Billions for Defense: The Pervasive Nature of Defensive Medicine, 159 Arch, Intern. Med. 2399 (1999).

[112] See, e.g., Avraham, supra note __, at 558-59 (citing estimates that defensive medicine costs the U.S. healthcare system between $45 and $200 billion a year).

[113] See generally Samuel Zuvekas and Steven Hill, Does Capitation Matter? Impacts on Access, Use, and Quality, 43 Inquiry 316 (2004).

[114] In the most famous of these, Kaiser Permanente, the HMO contracts with multi-specialty physician groups, which pay physicians on a salary basis. http://www.kaiserpermanentehistory.org/tag/the-permanente-medical-group/.

[115] See Begoña Garcia Mariñoso and Izabela Jelovac, GPs' payment contracts and their referral practice, 22 J. Health Econ. 617 (2003); see also Shea v. Eisenstadt, 107 F.3d 625 (8th Cir. 1997).

[116] See, e.g., David A. Hyman & Charles Silver, You Get What You Pay For: Result-Based Compensation for Health Care, 58 Wash & Lee L. Rev. 1427 (2001). Most proponents of outcome-based payments believe that such payments should be adjusted for patient-specific health indicators, so that physicians won't try to avoid sicker patients who, because they are sick, are likely to enjoy worse outcomes on average. Hyman & Silver provocatively suggest that physicians should be compensated based on *non*-risk adjusted outcomes in order to incentivize them to screen out patients unlikely to benefit from treatment, much the way that contingent-fee plaintiff lawyers screen out weak cases from litigation. Hyman & Silver, supra note __, at 1466-67. Although the

Unfortunately, basing compensation on outcomes without adjusting for the cost of achieving those outcomes would do little to mitigate the fundamental moral hazard problem caused by the medical care payment structure. Outcome payment would eliminate the financial incentive that providers have to provide completely useless, and even potentially harmful, tests and treatments, because such activities would not increase provider compensation. But it would still incentivize physicians to recommend all care with a positive expected value, regardless of its cost, as long as they did not personally bear those costs.

Outcome-based pay could produce its desired incentive effect only if physicians who implement a treatment program internalized *all* related costs: medical support staff, assistance from other medical specialists, tests, prescription drugs, etc. Legislative encouragement for Accountable Care Organizations (ACOs), included in the PPACA,[117] seeks to edge in this direction by incentivizing the formation of provider groups that will bear the costs of a patient's care.[118]

The development of ACOs, or similar institutional structures, would create a different problem, however. Compensating cost-effective medicine in such a world would incentivize physicians to break trust with their patients.[119] A patient with a contractual right to all "medically necessary" care would presumably want his physician to recommend the most effective treatment, whatever its cost. Patients subject to such a payment structure would eventually learn which doctors were recommending all efficacious treatments that would be covered by insurance and which doctors responded to the payment incentives to push only cost-justified interventions. Assuming patients could distinguish the payment-focused physicians from the patient-focused physicians, the former group would have a difficult time attracting patients in

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approach could help in reducing the provision of inefficient care, the problem is that many treatments will be efficient to provide ex ante even for patients less likely than others to achieve good outcomes. By rendering this group of patients less profitable, Hyman's suggestion would likely lead to one of two results: if payments to physicians are low, many unhealthy patients for whom treatment would still be cost-justified will be unable to obtain care; if physician reimbursements were high enough that doctors would still be willing to treat the relatively sick for whom treatment was efficient, doctors who cherry picked the relatively wealthy would be grossly overcompensated, thus encouraging providers to spend more time screening for more profitable patients and less time actually treating.

[117] PPACA, §1899(a)-(b).

[118] Health Policy Brief: Next Steps for ACOs," Health Aff., January 31, 2012.

[119] Cf. Bloche, supra note __, at 108 (calling it "betrayal" for doctors to take money for not pursuing pricey treatment options and "toxic to the doctor-patient relationship").

the long run. Outcome-based pay thus would likely create a marketing problem for physicians. Physicians who failed to identify the most effective treatment might also run a legal liability risk. Even if the treatment provided did not constitute malpractice, a failure to disclose high cost but effective treatments could run afoul of informed consent or even fiduciary duty principles.[120]

B. Physician Culture

Even assuming that physicians could serve their own financial self-interest in a value-based system by providing only the efficient amount of care, and that patients were either unable to identify the self-interested behavior of their agents or to prevent it through market behavior or the assertion of their legal rights, an outcome-based pay structure could only rationalize the allocation of resources to medical care on the assumption that physician utility functions are based solely on their financial self-interest. This proposition will strike all but the most unreconstructed of neoclassical economists devoted to rational choice theory as extremely unlikely on its face.

There is little doubt that physicians, like other members of society, prefer more wealth to less and are motivated to respond to financial incentives. But it has long been recognized that professional culture matters as well in treatment decisions.[121] And the professional culture of physicians, beginning with the Hippocratic oath, emphasizes a duty to doing everything possible to heal individual patients.[122] In contrast, the professional culture of medicine is notoriously resistant to principles like cost-effectiveness[123] or, more generally, serving the collective needs of the community as a whole at the expense of

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[120] In Pegram v. Herdrich, the U.S. Supreme Court dismissed a breach of fiduciary duty claim against an HMO physician who's patient suffered a burst appendix after the delay of a diagnostic test, on the ground that the cause of action was duplicative of the plaintiff's malpractice claim. Pegram v. Herdrich, 530 U.S. 211 (2000). Some judges, however, have recognized the possibility that the self-interested treatment recommendations provided by physicians could run afoul of fiduciary obligations even while falling short of malpractice. See, e.g., Neade v. Portes, 739 N.E.2d 496 (Ill. 2000) (dissent).

[121] See, e.g., Kenneth Arrow, Uncertainty and the Welfare Economics of Medical Care, 53 Am. Econ. Rev. 941 (1993).

[122] See Schneider & Hall, supra note __, at 32 (discussing the professional norm of "Hippocratic individualism").

[123] See Schneider & Hall, supra note __, at 34 ("foregoing care to conserve costs conflicts with much that is elemental in the training and culture of doctors").

identifiable individuals.[124] Inculcation into this professional culture means that a large number of physicians will choose to do everything physically and technologically possible to help individual patients, even if interventions are not cost-effective according to a global standard of efficient resource allocation.[125] This is likely to be true even when doing so would affect their paycheck, at least within limits.[126]

C. Heterogeneous Preferences

Even in the unlikely world in which (a) physician earnings were highly correlated with the efficiency of their resource allocation recommendations, (b) physicians cared only about maximizing their incomes (or maximizing the efficiency of social resource expenditures) to the exclusion of what was best for individual patients, and (c) patients could not use legal or market power to affect physician recommendations but continued to rely on such recommendations, relying on physician incentives would necessarily fail to account for heterogeneity in patient preferences for distributing their resources between medical care and competing goods and services. Whatever level of tradeoff between the costs and benefits of interventions were incentivized through physician payment practices would implicitly be imposed on all patients who rely on professional recommendations, even though some of these payments would prefer to spend more on medical care and have fewer resources for other goods and services than others.

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[124] See M. Gregg Bloche, The Hypocratic Myth 10 (2011); E. Haavi Morreim, Moral Justice and Legal Justice in Managed Care, 23 J. L. Med. & Ethics 247, 248 (1995).

[125] See Avraham, supra note __, at 561 (calling overtreatment resulting from a good faith desire to do everything possible to help patients "cost-apathetic medicine"). At the extreme even cost-apathetic physicians are implicitly somewhat sensitive to cost, as extremely expensive tests and treatments will very little benefit will often fail to become a part of customary practice. See Bloche, supra note __, at 40 (noting that an expensive breast MRI is considered appropriate only for patients with a high risk of breast cancer, even though, in theory, the test could provide some positive expected value for low-risk patients).

[126] The size of the effect would undoubtedly be sensitive to significance of the personal cost involved. A reasonable hypothesis seems to be that physicians satisfice, emphasizing additional income until they reach a target level but then valuing other goods. Cf. Robert G. Frank, Behavioral Economics and Health Economics, in Behavioral Economics and Its Applications 195 (2007).

IV. RELATIVE VALUE HEALTH INSURANCE

Health insurers are poor candidates to decide at the point of service, through the utilization review process, whether particular medical tests or treatments are efficient, because they face a moral hazard problem: they can profit by refusing to pay for even cost-effective care. Providers are poor candidates to make such decisions, because even if their profit incentives could be aligned with the goal of cost-effectiveness, they would face market, legal, and cultural pressures to provide beneficial care even when it is not cost justified. Because of the skewed distribution of medical costs in any given year, most insured patients facing significant medical problems would lack the incentives to select only cost-justified interventions even under CDHC proposals because of the limits of even relatively large annual deductibles. Even for patients who do not exceed deductible levels, what we know about bounded rationality suggests most patients would have an extremely difficult time making important medical care decisions in a way that actually did equate marginal costs with marginal expected benefits.

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. This ex ante approach would force consumers to internalize the expected costs of care in a way that is impossible if decisions are made ex post at the point of treatment because of the fact that most patients with significant illness would exceed even relatively high deductible levels. It would also allow for consumers to satisfy heterogeneous preferences for allocating resources between medical care and other goods and services: patients who wish to devote relatively fewer resources to medical care and more to competing goods and services could purchase insurance covered 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 an 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 (a) is tractable enough to allow boundedly-rational consumers to make purchase decisions that reflect their individualized preferences for allocating their resources between medical care and other goods and services, and (b) does not subject consumers to a reverse moral hazard risk. This function can be satisfied by the government better facilitating private contracting for health insurance by producing and analyzing comparative effectiveness research.

A. The Legal Status of Ex Ante Contracting for Depth of Care

As discussed above, external review statutes, which exist in most states, effectively prohibit health insurers from refusing to cover the cost of medically indicated treatments on the grounds that their expense does not justify the potential benefits.[127] This contrasts starkly with the fact that, in most cases, insurers are legally able to refuse to pay for interventions that are explicitly excluded by the insurance contract, thus avoiding the need to apply ex post medical judgment subject to external review laws.[128]

A patchwork of state "mandated benefits" laws require health insurance policies to cover specified categories of treatments,[129] and federal law currently includes a handful of private insurance treatment mandates.[130] In the absence of enumerated benefits mandates, however, insurers are legally able to exclude specified interventions from coverage, and courts routinely uphold their rights to do so as a matter of freedom of contract.[131]

It is common for insurance companies that sell policies that provide very broad coverage at a high price to also offer policies that are much narrower in their scope, such as a policy that covers only in-patient hospital care. Many insurance plans come with a list of "formulary" pharmaceuticals that are covered according to the standard cost-sharing rules when medically indicated, while non-formulary drugs require higher co-payments or are even excluded from coverage altogether.[132] Using an emerging practice known as value-based

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[127] See Part I.B, supra.

[128] See Hall, supra note __, at 669 (exclusion of specific treatments succeeds by keeping the issue away from external reviewers).

[129] See Allison K. Hoffman, An Emerging Vision of a Right to Health (draft at 7).

[130]For example, private insurance policies must cover the cost of new mothers spending 48 hours in the hospital post-partum and 96 hours following a Cesarean-section delivery. Newborns' and Mothers' Health Protection Act. 29 U.S.C. §1185(a).

[131] 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 __, at 464-65. These decisions are clearly outliers, however, and not justified by external review statutes themselves. Hall supra note __, at 667-68.

[132] See, e.g., KFF, Employer Health Benefits 2009 Annual Survey 144 (http://ehbs.kff.org/pdf/2009/7936.pdf)..

insurance design (VBID),[133] insurance companies and self-insured employers have experimented with offering reduced or even zero co-payments for prescription drugs that, when taken as directed, are particularly likely to reduce future health care costs.[134] And, of course, health insurers can and do, by contract, limit coverage to care provided by hospitals and physicians within their provider network and/or requiring greater cost-sharing if a patient chooses to go "out of network" for treatment.[135] By limiting drug formularies and practitioner networks, insurers can try to use bargaining leverage to negotiate lower prices for covered services.

Against this background legal principle, there is no impediment, in theory, to insurers excluding from coverage treatments that fail to satisfy a cost-benefit analysis, as long as the exclusions can be adequately specified at the time of contracting.[136] Further, there is no impediment to insurers offering multiple products, priced differently, that exclude from coverage specifically enumerated categories of care. 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.[137] There are three related problems:

First, there is very little solid information about even the basic effectiveness of most medical interventions – the Institute of Medicine has reported that there is scientific evidence for the efficacy of less than half of the treatments doctors recommend.[138] There is even less information about the comparative effectiveness of alternative plausible interventions.[139] Even clinical practice

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[133] See Michael E. Chernow, et al., Value-Based Insurance Design, Health Aff., Jan. 2007, at w195.

[134] See, e.g., Niteesh K. Choudry et al., Assessing the Evidence for Value-Based Insurance Design, 29 Health Aff. 1988, 1990-91 (2010).

[135] See, e.g., Peter R. Kongstvedt, The Managed Health Care Handbook 40 (4th ed. 2001).

[136] How this will change for individual and small group policies when the PPACA is fully implemented is considered in Part V.B.2, infra.

[137] Accord Baicker & Goldman, supra note __, at 52 ("it is impossible to write down contingent contracts that cover the infinite array of health outcomes"); Neumann, supra note __, at 145 (noting that "practical limits on the detail specified in contracts" impedes insurers contracting with patients to consider cost effectiveness as part of coverage decisions).

[138] Institute of Medicine, Learning What Works Best: The Nation's Need for Evidence on Comparative Effectiveness in Health Care 2 (2007).

[139] See Saver, supra note __, at 2170-71.

guidelines are notorious for being based on consensus opinion rather than scientific fact.[140] This dearth of information makes it extremely difficult, to say the least, 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. 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 comparative effectiveness vis-à-vis other treatment options for the same condition. Scholars have long advocated that insurers contract to provide care that satisfies a well-specified cost-benefit algorithm, which would then be applied by the insurer at the point of treatment.[141] This creative idea has fallen on deaf ears in the marketplace, probably because the lack of good data would subject any attempt by an insurer to apply the algorithm to second guessing, charges of moral hazard, and lawsuits.

Second, the measures of marginal effectiveness of competing interventions are dynamic and can change quickly when new effectiveness data is produced, when new interventions are developed, or when there are 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 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 relative handful of attributes when making purchase decisions, and almost invariably selectively consider only the most salient product attributes when bombarded with information.[142] Except for a patient with a significant pre-existing condition, there would be an extremely small probability that any potential condition-intervention pair would become relevant to them during the policy period, which suggests that the information is quite likely to be ignored. If consumers do not incorporate information provided at the time of contracting into their purchase decisions, the same reverse moral hazard problem associated with post-contractual utilization

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[140] Id. at 2172; P. Tricoci et al., Scientific Evidence Underlying the ACC/AHA Clinical Practice Guidelines, 301 JAMA 831 (2009).

[141] See, e.g., Einer Elhauge, Allocating Health Care Morally, 82 Calif. L. Rev. 1149, 1502-04; Havighurst, supra note __, at 178-85.

[142] Russell Korobkin, Bounded Rationality, supra note __ at 1222-34.

review would exist: insurers would have a profit incentive to claim to provide cost-effective care but actually not provide even cost-effective care.[143]

B. CER and Relative Value Ratings

These impediments can be overcome, thus facilitating the marketing of insurance policies that cover cost effective treatments, with a significant investment in CER. Two pieces of major legislation have provided a significant, although still insufficient, down payment toward such an investment. The American Recovery and Reinvestment Act of 2009 (commonly known as the "stimulus bill") provided $1.1 billion to three agencies to conduct CER.[144] The PPACA provides an increasing amount of annual funding for CER, beginning with $10 million in 2010 and increasing to $500 million annually in 2013-14.[145]

The stimulus bill created a federal commission called the "Council for Comparative Effectiveness Research" to coordinate CER among federal agencies and tasked the Institutes of Medicine with recommending research priorities.[146] The IOM quickly provided a list of 100 "top priority" topics for CER, including many studies that would explicitly compare alternative treatments for common medical conditions.[147] The PPACA then changed the administrative structure, replacing the Council for CER with a private non-profit corporation called the Patient-Centered Outcomes Research Institute (PCORI).[148] PCORI is now charged with setting CER priorities.[149] Its governing board includes government officials and representatives of various stakeholder groups, such as patients, physicians, insurers, and drugs and device

[143] Cf. Korobkin, Bounded Rationality, supra note __, at 1234-44 (analyzing the market consequence of consumers not taking into account product attributes in their decisionmaking behavior).

[144] Pub. L. No. 111-5, sec. 804, 123 Stat. 115 (2009) (see also http://wwww.hhs.gov/recovery/programs/cer/ recoveryacttext.html)

[145] PPACA §§6301(d)-(e), 6302.

[146] See Patrick H. Conway, How the Recovery Act's Federal Coordinating Council Paved the Way for the Patient-Centered Outcomes Research Institute, 29 Health Aff. 2091, 2091 (2010).

[147] Institute of Medicine, Initial National Priorities for Comparative Effectiveness Research (2009).

[148] PPACA §1181(b)(1).

[149] PPACA §1181(d)(1).

manufacturers, but it is required to ensure peer review of research it funds and may appoint expert advisory panels.[150]

The key to enabling CER to help rationalize the allocation of resources to medical care is to assign potential medical interventions for different conditions a single score based on their marginal costs and 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 being one of the great success stories of improved medical technology in the second half of the 20th Century. In 2004, health economist David Cutler estimated that the expected lifespan of an average 45 year-old would increase by 4.5 years as a result of this technology, at a total cost of about $30,000.[151] This intervention – or set of interventions – would likely earn the highest possible relative value rating of "1" for patients with relevant symptoms.
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> * 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.[152] This medication, which offers positive but minimal marginal value and comes at a very high cost compared to the available alternative, would presumably earn a relative value rating of "10."
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> * In between these examples is lumbar discectomy, a common surgical procedure for patients with herniated spinal discs.[153] In a

[150] PPACA §§1181(d)(4), 1181(d)(7), 1181(f).

[151] David M. Cutler, Your Money of Your Life 48-56 (2004).

[152] This American Life: Some Else's Money, Act One: One Pill Two Pill, Red Pill Blue Pill, Chicago Public Media (Oct. 16, 2009) (available at http://www.thisamericanlife.org/radio-archives/episode/392/someone-elses-money).

[153] 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)

> recent study, 1191 surgery-eligible patients were randomly assigned to either a surgery or medical-management condition for treatment, and benefits (i.e., reduced pain, increased physical mobility) and costs (direct and indirect, including lost labor productivity) were measured for each group for a two-year period.[154] The analysis revealed a slight marginal benefit for surgery, on average, but at a much higher cost. Consequently, the researchers calculated that the cost of surgery per marginal QALY (quality adjusted life year) is slightly more than $69,000 for patients younger than age 65.[155] 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.[156] Realistically, however, the rating authority usually would have to rely on less definitive sources of scientific evidence, including retrospective analyses of clinical data. Many relative value ratings would be population wide, but different ratings for different subgroups would be possible when justified by the best available evidence. For example, a particular treatment awarded a score of "5" for an average patient might be awarded a score of "3" for patients who have a co-morbidity that makes the treatment likely to be more beneficial for them.

With an established set of relative value ratings issued by an expert group, the members of which would not profit from higher or lower health care expenditures, insurance companies would then 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 precise difference would be set by the market, determined by each health insurer's projections of the difference in its cost of covering the relevant array of interventions for a subscriber population. An insurer able to negotiate lower prices from its provider network might be able to offer a deeper policy at a price comparable to that charged by a competitor for a shallower policy.

It is not impossible to imagine that the relative value ratings necessary for RVHI could be produced privately, and many scholars have championed

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[154] Id.

[155] Id.

[156] Bloche, Invention, supra note __,a t 268-69.

private sector solutions to the more general problem of the dearth of existing information concerning the cost effectiveness of most medical treatments.[157] The three problems of collective action, moral hazard, and bounded rationality suggest, however, that this information probably must be publicly produced. Although a couple of large health insurers have sponsored some CER,[158] the minimal amount produced by the private sector to date suggests that the costs are far too high to justify the potential benefits for any individual insurance provider.[159] If a private company did produce proprietary relative value ratings, potential customers would properly fear the company's incentive to give high-cost treatments improperly low ratings. A third-party, like "Consumer Reports" magazine, could theoretically rate the ratings, but this would mean numerous different companies and organizations developing redundant expertise. And, in any event, competing relative value rating algorithms would eliminate the value to consumers of simplifying the comparison of depth of coverage provided by insurance plans across insurers.

C. Relative Value Health Insurance vs. VBID

As a variation on the pure vision of RVHI, insurance companies might choose to market policies that provide coverage at all rating levels but vary cost-sharing arrangements based on the rating level of treatments. Interventions rated a "1" might qualify for full coverage, for example, whereas interventions rated a "10" might require a 50 percent copayment.

Using relative value ratings as the basis for different levels of cost-sharing, rather than as a basis of including or completely excluding treatments form coverage, can be viewed as an expansion of sorts of currently nascent efforts by some insurance companies to institute elements of VBID into their products, according to which more cost-effective prescription drugs carry lower co-payments than less cost-effective drugs.[160] But RVHI and VBID are fundamentally different. One difference is the focus of the approach: VBID proponents usually emphasize the inefficient underconsumption of care that can

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[157] See Neumann, supra note __, at 139 (citing proposals).

[158] See Neumann, supra note __, at 82-83 (citing Kaiser Permanente's and the Blue Cross Technology Evaluation Center's occasional use of cost-effectiveness analysis).

[159] See also Alan S. Gerber & Eric M. Patashnik, The Politicization of Evidence-Based Medicine, 3 Calif. J. of Politics & Policy DOI:10.2202/1944-4370.1188 at 4 (describing the "public good" nature of CER).

[160] See, e.g., Choudhry et al., supra note __, at 1988 (noting that the concept of value-based insurance design "may be applied beyond drugs to other health care services).

result when consumers are dissuaded by deductibles from using medications that can prevent the need for more expensive interventions in the future.[161] More importantly, however, VBID is a company-by-company or insurer-by-insurer approach, whereas RVHI emphasizes the public provision of information to allow insurers to offer comparable policies thereby facilitating consumer comparisons between sellers.[162] While VBID provides a tool that can help manage costs on the margin, RVHI offers a new paradigm for insurance coverage.

V. ADVANTAGES OF RELATIVE VALUE HEALTH INSURANCE

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 expected utility and, assuming limited externalities, maximize social efficiency in so doing. The role for policy makers is to facilitate, where possible and necessary, access to information. If individuals are incompetent decisionmakers, paternalistic intervention, with substituted decisionmaking, becomes appropriate.[163] When individuals are boundedly-rational decisionmakers, the best policy response is often to attempt to structure decision problems in a way that helps decisionmakers maximize accuracy at the level of decision cost it is realistic to expect them to be willing to incur. This policy focus has been called "choice architecture,"[164] to reflect 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 or less accurate. Creating the rating information that would facilitate RVHI can be understood as choice architecture that enables boundedly rational consumers to act through private markets to register their preferences for allocating resources between medical care and other goods and services.

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[161] See, e.g., Chernow et al., supra note __ (describing the attempts of several employers to implement VBID principles in their prescription drug benefits).

[162] Id.

[163] 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.

[164] See Robin Gregory et al., Valuing Environmental Resources: A Constructive Approach, 7 J. Risk & Uncertainty 177 (1993).

1. Complexity

Most obviously, RVHI would reduce the complexity individuals must navigate when making tradeoffs 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 different probabilistic outcome possibilities, these factors would be reflected in a single rating. Consumers would then make resource allocation decisions by trading off price against a general level of medical care coverage: i.e., a Level 4 policy for $4000 per year, a Level 5 policy for $4900 per year, or a Level 6 policy for $6200 per year.

The extent to which consumers could make accurately the tradeoff 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, only to skim the list in order to obtain a qualitative sense of the distinctions between rating levels. Whatever cost-coverage tradeoff a consumer made, she would know that her premium dollars would cover the relatively most valuable medical interventions and not cover those of relatively lesser value. Paying a higher price for deeper coverage would by her access to increasingly more marginally beneficial care.

2. Novelty

The novelty of the decisionmaking process required of consumers would also be significantly reduced under a relative value insurance regime compared to the CDHC model.

With the exception of individuals with chronic recurrence of the same illness, most medical treatment decisions are highly novel for patients, which increases the difficulty of making accurate resource allocation decisions. In contrast, ex ante insurance purchasing decisions that require consumers to

allocate resources between categories of consumption are far less novel, and consumers would obtain experience each year in making this type of decision and receive feedback on the consequences of that decision that would be useful in future years.

3. Points of Comparison

By collapsing the various attributes that together comprise the benefits of medical care into a single scaled rating, relative value insurance reduces the likelihood that the medical care choices will vary based on the vagaries of how information is presented.

If patients are asked to make point-of-treatment purchase decisions, there is little hope of controlling or standardizing the presentation of information. If many alternatives, or many attributes of alternatives, are provided by a physician or hospital, the patient is likely to selectively use only pieces of that information, and perhaps not the pieces most highly correlated with accurate decisionmaking. If cost information is straightforward but treatment information is not, cost information might be salient, causing patients to favor the lower cost intervention; if cost information is complicated or uncertain and mortality information is straightforward, on the other hand, patients might be inclined to favor the choice that dominates on that attribute. Relative value health insurance, in contrast, enables the straightforward comparison of two numbers: rating level of the insurance coverage and its corresponding price.

4. Emotion-Laden Choices

When purchasing RVHI, some individuals might find it emotionally costly to trade off future access to medical care for themselves or their dependents against money, and thus seek to adopt non-compensatory strategies for making the decision: for example, purchasing the most extensive coverage available – i.e., a Level 10 policy – regardless of price. But the emotional nature of cost-health tradeoffs are likely to be less severe when the decisions are made ex ante, before services are required, rather than at the point of treatment, when the potential costs of going without the most comprehensive treatment are highly salient and the potential costs of overinvesting in medical care at the cost of forgoing other goods and services are far easier to overlook.

Few people purchase the safest possible car, completely ignoring the tradeoffs this would entail, as they would do if they were truly to adopt a non-compensatory decision strategy that refused to trade off health and safety against other product attributes. In this sense, the RVHI purchase decision would probably look much the same to most consumers. The promise of infinite and unlimited medical care would be nice to have, just as the safest car

that technology can produce would be nice to have. The reality, however, that resources are scare and dollars spent on medical care cannot be spent on other things likely would encourage boundedly-rational decisionmakers to employ a consciously compensatory decision making approach, leading to more efficient resource allocation decisions.

B. Non-Bureaucratic Rationing

The subject of CER inevitably raises fears that the results will be used to "ration" medical care,[165] a term that has a history in the United States of striking a political death knell for any health care proposal.[166] One view is that the fear of rationing in American political discourse cannot possibly be overcome, and thus rationing – which is inevitable – must be accomplished *sub rosa*.[167] Another perspective, though, is that what inevitably creates strong objections in the American political system is not rationing *per se*, but rationing decisions that are made by distant public officials or faceless corporations, rather than the individuals who must live with the consequences of the inevitable hard choices.[168]

Political opposition in the United States to even hints that health care might be rationed based on cost has usually been in response to suggestions of government rationing. Past attempts by the Health Care Financing Administration to explicitly consider cost effectiveness as part of Medicare

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[165] See, e.g., Michael F. Cannon, A Better Way to Generate and Use Comparative-Effectiveness Research, CATO Institute Policy Analysis #632, February 6, 2009, at 8.

[166] See generally Neumann, supra note __, at 139-140 (concluding that, "for the most part, "U.S. policy makers haven't attempted to use [cost effectiveness analysis in health care] for political reasons")

[167] See, e.g., Lauridsen, Norup & Rossel, The secret art of managing healthcare expenses: investigating implicit rationing and autonomy in public healthcare systems, 33 J. Med. Ethics 33 (2007) (summarizing hidden healthcare rationing.

[168] Jonathan Oberlander & Joseph White, Public Attitudes Toward Health Care Spending Aren't the Problem; Prices Are, 28 Health Aff. 1285, 1288 (2009) (citing Republican opposition to health care reform focusing on government rationing of care). Cf. Hall, supra note __, at 671-72 (noting "social and professional antipathy to medical decisions being made by anyone other than the affected patient and the treating physician"). In reality, it is almost certainly the case that Americans, collectively, dislike *any* notion of limits, and dislike limits imposed on them by others *even more*. See Neumann, supra note __, at 57 (attributing American opposition to cost-effectiveness analysis to both "our distaste for limits" and "our deep-rooted suspicion of governments or corporations that impose them").

coverage decisions met with fierce political opposition and never became government policy, and even the suggestion that it would consider cost when two treatments offered equivalent benefits drew so much opposition it failed to become law.[169] The state of Oregon's highly publicized attempt to determine what services would and would not be covered by Medicaid based on cost effectiveness criteria is largely viewed as a political disaster, having been quickly abandoned by Oregon itself and not imitated by any other state.[170] The 2003 Medicare Prescription Drug, Improvement, and Modernization Act forbid the government from using CER to withhold coverage of new drugs.[171] The PPACA includes provisions designed to prohibit the use of CER as a basis for specifically *government* determinations as to what medical interventions will be provided to either the privately or publicly insured populations.[172] The PPACA explicitly provides that results of CER cannot be used to mandate coverage or reimbursement for private or public health insurance,[173] and it also prohibits the use of CER as the "sole[]…basis" of Medicare coverage decisions.[174]

But there is no reason to think that the American polity would prove to be as virulently opposed to self-imposed ex ante rationing. The language of the PPACA itself is consistent with a distinction between bureaucratic rationing and providing information to inform self-directed rationing decisions.[175] The Act prohibits PCORI from using dollars-per-quality adjusted life year statistics "as a threshold to establish what type of heath care is cost effective or recommended,"[176] suggesting that using cost information for other, less directive purposes is permissible. And the Act explicitly calls for the

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[169] Peter J. Neumann, Using Cost-Effectiveness Analysis to Improve Health Care 20-23, 149 (2005).

[170] For an analysis of the Oregon Health Plan's experiment with using cost effectiveness criteria in the 1990s, see Neumann, supra note __, at 58-70.

[171] Medicare Prescription Drug, Improvement, and Modernization Act, Pub. L. 108-173, 117 Stat. 2066 (2003).

[172] See Garber & Fox, supra note __, at 1806 (observing that critics of CER in the health care reform debate "raised the specter of rationing and government interference in patient care").

[173] PPACA §1182(c)(1).

[174] PPACA §1182(b)(2).

[175] Cf. Alan M. Garber & Harold C. Sox, The Role of Costs in Comparative Effectiveness Research, 29 Health Aff. 1805, 1810 (urging PCORI to provide information on costs that lets others make cost effectiveness determinations).

[176] PPACA §1182.

development of guidelines that permit insurers to "utilize value-based insurance design."[177]

Unlike cost effective analyses of medical treatments conducted under government auspices in other countries – the most well-known being the United Kingdom's National Institute for Clinical Excellence (NICE)[178] – relative value ratings would carry no recommendation concerning whether the treatment should or should not be provided by health insurers. The rating would merely indicate that the relative value of the treatment is greater than interventions with worse ratings and less than interventions with better ratings. Patients would indicate whether or not they wish to expend resources on treatments that present this value proposition as part of their decision concerning what level of health insurance to purchase. The end result is that the government, through CER, would provide the public good of information, while enabling individuals acting in markets to maximize their overall expected welfare through their purchase decisions.

C. Aligning the Interests of Physicians and Patients

A third important benefit of RVHI is that it can rationalize the amount of resources allocated to medical care without driving a wedge between the interests of physicians and patients. Unlike proposals to pay physicians based on the efficient use of resources that rely on them to compromise their fiduciary duties and undermine professional norms,[179] RVHI can reduce the inefficient overuse of medical care without encouraging doctors to stray from the sole focus on patient health.

In a RVHI world, physicians can recommend whatever interventions they believe have the greatest expected clinical benefit. Such recommendations will then be mediated by patient preferences for allocating resources to medical care as opposed to other goods and services, as is reflected by the level of insurance that they purchased ex ante. That is, in some cases a physician will convey to the patient her belief that Treatment A is the most clinically desirable option, even though it is not covered by the patient's health insurance policy (or

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[177] PPACA §2713(a).

[178] Established in 1999, NICE provides non-binding recommendations to the UK's National Health Service as to whether it should cover the cost of new technologies, based in large part – but not entirely – on evidence of clinical effectiveness and cost effectiveness. See Neumann, supra note __, at 99-104. In about half of cases, NICE reports the cost per QALY as part of the basis for its recommendation. Id. at 102.

[179] See Part IV.A, supra.

covered at a much higher level of cost sharing) because of its low relative value ranking.

D. Incentives for Pricing Patented Drugs and Devices

The ability of prescription drug and medical device manufacturers to obtain patents on their products gives them monopoly pricing power for a term of years.[180] Under normal market conditions, a monopolist's pricing is constrained by the amount potential customers are willing to pay for the product (i.e., the elasticity of demand).[181] When a monopoly exists, consumers lack the option of buying a fully substitutable good from a seller's competitor, but they still have the option of doing without the product altogether. The moral hazard problem created by health insurance weakens this constraint. If patients are contractually entitled to all medically necessary treatments, regardless of cost, drug and device manufacturers that produce a product for which there is no equally effective substitute will face a highly inelastic demand curve and enjoy almost unlimited pricing power.

Health insurers' primary source of bargaining power stems from their ability to exclude from coverage or impose higher cost-sharing burdens on patients for drugs and devices ex ante.[182] Insurers commonly create prescription drug formularies, for example, according to which patients are charged higher copayments for some drugs than others.[183] They are then in a position to demand price concessions in return for granting a drug "preferred" status (i.e., lower patient copayments) in their formularies, which translates to greater demand.[184] While this approach might be a necessary means of controlling prescription drug prices in the current environment, it creates many subtle differences between the benefits packages offered by different insurers, thus increasing the complexity of the insurance choice faced by boundedly-rational consumers seeking to select the optimal balance of price and coverage.

RVHI would create downward pressure on the prices of drugs and devices without the cost and complexity of each insurer bargaining individually with

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[180] 35 U.S.C §154(a)(2).

[181] See Richard A. Posner, Economic Analysis of Law §9.1 (7th Ed. 2007).

[182] See Part IV.B, supra.

[183] See KFF, Employer Health Benefits 2011 Annual Survey 140 (88% of workers with employer-sponsored have prescription drug formulary with tiered pricing) (http://ehbs.kff.org/pdf/ 2011/8225.pdf).

[184] See Haiden A. Huskamp et al., The Impact of a National Prescription Drug Formulary on Prices, Market Share, and Spending, 22 Health Aff. 149, 150 (2012).

manufacturers over price discounts and formulary placement. Regardless of the marginal benefit it offers, any product will earn a higher relative value ranking the lower it is priced. And, much like lower copayments in a formulary structure, a higher relative value rating will translate into more unit sales, as more consumers will be insured for interventions with higher ratings, leading to greater demand.

The incentive to keep prices low would be particularly strong for products that offer relatively small marginal benefits compared to other available treatments, because these products are most at risk of receiving a rating low enough that that it would not be covered by policies purchased by a substantial portion of Americans. Take, for example, the patented drug Xolair, which is extremely effective at preventing asthma attacks when injected.[185] At a current price of up to $30,000 per year for large doses, Xolair would likely earn a low relative value score because cheap, generic inhaled steroids can provide most of the benefit if used every day.[186] At a lower price point, however, it could potentially garner a higher rating that would facilitate its sale to patients with shallower health insurance coverage.

VI. OBSTACLES

Notwithstanding its advantages, RVHI represents an imperfect, second-best structure for the allocation of resources to medical care, and the challenges to operationalizing the basic concept are substantial. Although the details of creating an institutional structure to facilitate RVHI is beyond the scope of this article, this Part briefly identifies some of the major implementation challenges and contends that, while significant, none render the approach impossible to implement.

A. Creating the Ratings

1. Getting from Here to There

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. There is currently sufficient information on which to base reasonably informed ratings for a very few interventions[187]–a problem that, along with political

[185] Bloche, supra note __, at 89-90.

[186] Id.

[187] See, e.g., Schneider & Hall, supra note __, at 22-23 ("'Evidence based medicine" is today's watchword, but there is decent evidence for only a fraction (albeit a large

backlash, helped doom Oregon's effort to employ a cost effectiveness standard for determining Medicaid coverage in the 1990s.[188] 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.[189]

While discouraging, the extent of the ratings endeavor does not stand as an obstacle to RVHI. The present lack of data might require that all currently common 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 – PCORI could require drug or device manufactures to submit comparative effectiveness data. In the meantime, Congressionally allocated funds for CER might be used to fund relative value research on common conditions or on treatments for which large sums of money are spent without the support of scientific evidence.

The need to grandfather currently available treatments means that moral hazard problem endemic in the medical system would still be severe in the early days of relative value insurance. 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. A phased-in relative value rating system offers the promise of bending the health care cost curve over time, even if improvements would be gradual.

This type of grandfathering has been used in other countries that have instituted some form of cost-effectiveness analysis in to their health care systems. Australia, for example, began requiring cost effectiveness data for all *new* pharamaceuticals before they would be considered for that country's national drug formulary in 1992, and added then added similar requirements for services, procedures and diagnostics some years later.[190]

2. Implicit Value Choices

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fraction) of medicine….treatments' cost-effectiveness…is even less available than information about efficacy.").

[188] See Neumann, supra note __, at 64-65.

[189] For a thoughtful essay on how to provide institutional support for large-scale CER, see Robert B. Griffin & Janet Woodcock, Comparative Effectiveness Research: Who Will Do the Studies?, 29 Health Aff. 2075 (2010).

[190] Neumann, supra note __, at 97.

Building a relative value rating system requires reducing disparate interventions for disparate conditions to a single scale of expected marginal benefit divided by marginal cost. There is no way around the fact that measuring the benefits side of the equation requires the making of value choices, and no basis for assigning a rating of "6" to one intervention and "7" to another will mirror the values of all concerned. It might be non-controversial to say that an intervention expected to extend life by an average of 4 years provides a greater benefit than one expected to extend life by only 3 years. But what if the latter intervention usually results in a higher quality of life during the shorter time period? And how, for example, should the value of an intervention that tends to result in better cognitive functioning but less physical mobility be compared to one with the opposite likely outcome? What methodology should be used to compare two interventions with similar average effects on mortality where one is subject to greater variation, such that some patients live much longer and some experience no benefit at all, and the other provides more predictable, intermediate benefits for all patients? Should more weight be given to an intervention expected to increase a patient's lifespan from one year to two years than one expected to increase a patient's lifespan from eight years to nine years? Should more weight be given to an intervention that is the only one available for a certain condition than one with several alternatives, on the ground that the former provides patients with the psychological benefit of hope that they otherwise would not have? The list of difficult value tradeoffs could go on.[191]

It is a partial answer to say that health services researchers routinely compare the benefits of incommensurable interventions by converting them to a metric of QALYs (quality-adjusted life years), which takes into account mortality and quality of life indicia such as pain, illness, and disability.[192] But this is only a partial response. First, different elicitation measures will yield different results in QALY calculations, and social scientists have yet to reach consensus on a single methodology.[193] Even more significantly, though, any methodology for determining the expected value of an intervention in terms of QALYs would necessarily compromise one of the supposed virtues of RVHI: that whatever level of coverage an individual were to purchase, he would know that he would be entitled to all care that was *more* cost-effective. By choosing a

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[191] See generally Neumann, supra note __, at 55 (noting that "researchers have long struggled" with how to reconcile preference variations within a population when measuring cost effectiveness of medical treatments).

[192] See Garber & Sox, supra note __, at 1806 ("Health benefits are typically measured by the additional quality-adjusted life-years (QALYs) produced by an intervention.")

[193] See, Neumann, supra note __, at 31-34 (describing methodological differences).

low-cost policy, that customer would understand that very expensive treatments that reduce mortality or morbidity only modestly, or have only a very small chance of reducing mortality or morbidity, would not be covered, but he would believe that treatments with the greatest bang for the buck would be covered. Since individuals often value different types of benefits differently,[194] however, it is possible that a given patient would find himself covered for an intervention that (to him) offers modest cost-adjusted expected value and not covered for an intervention that (to him) has much greater cost-adjusted expected value.

The justification for this result is that a balance must be achieved between optimizing the theoretical potential for maximal efficiency and creating decision environments that are manageable for boundedly rational actors. Creating a system in which individuals could fully optimize their allocation of resources between medical care and competing goods and services would requiring providing detailed and nuanced information about the distinct benefits profile of various interventions, but the introduction of this type of information would make it more costly and difficult for those same individuals to trade off benefit levels against prices.[195] Attempting to get the macro decision "right" – that is, providing the architecture that enables consumers to make informed and stable choices about the allocation of their resources to medical care – requires simplifying information on the benefits side of the equation, even though it is clear that this strategy will fail to account for heterogeneous preferences for different types of benefits.

3. Industry Capture

Because value choices will necessarily affect measurement of benefits, it would be impossible to keep politics out of relative value ratings entirely. But the ability of relative value ratings to help rationalize medical care expenditures would be greatly compromised if the ratings were set to conform with the profit interests of drug and device manufacturers and other innovators who stand to earn more money if their interventions are awarded higher ratings and thus become reimbursable under more insurance policies.

Two dangers of capture of the ratings process by industries with a financial incentive lurk. First, the value choices that underlie the measurement of benefits could be designed to benefit, on average, those with a profit incentive. For this reason, the constitution of the PCORI board under PPACA, which

[194] See, e.g., Neumann, supra note __,at 122 (concluding from studies that there are "wide individual-to-individual variations" in the value people place on different health statuses).

[195] See also Bloche, Invention, supra note.

includes representatives of the drug and device manufacturing community, is probably suboptimal for the task.[196]

Second, the process of evaluating CER and assigning relative value ratings could be unduly influenced by the interests of industries with a financial interest in the outcomes to the extent that the research is funded and provided primarily by entities seeking a rating for their interventions. Undoubtedly, the developers of new technologies would attempt to design their data collection practices in ways that place their products and services in the best possible light.[197]

It would be a mistake to underestimate the risk of industry capture and manipulation posed by a system in which hundreds of millions dollars of profits to companies in the pharmaceutical, medical supply, and health care industries could potentially turn on ratings assigned to their products and services.[198] But this threat could be countered, to a significant degree, by creating an administrative structure for CER that is shielded from political pressure. In addition, one important advantage of the relative ratings process, as compared with current FDA approval processes for drugs and devices, is that lobbying efforts and/or research biased in favor of one company or interest group would often invoke counter-efforts by others. For example, when a pharmaceutical manufacturer seeks FDA approval of a new drug, it must demonstrate only safety and efficacy relative to a placebo,[199] a subject about which its competitors have little to say. To support a high relative value rating, in contrast, the manufacturer would have to demonstrate its cost-adjusted superiority to existing drugs, and the CER process could and should be designed to permit the manufacturers of those competing drugs to submit their own data concerning that comparison.

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[196] Accord Bloche, supra note __, at 51 (calling the make-up of PCORI's governing board seem "almost designed to enable stakeholders to block studies that threaten their interests")

[197] See generally Neumann, supra note __, at 38-43 (describing criticisms of cost effectiveness analysis on the ground that interested parties often sponsor the research).

[198] A related risk is that if the effected economic interests are unable to control CER, they might attempt to kill it. In 1995, a group representing back surgeons fought, ultimately unsuccessfully, to eliminate the Agency for Health Care Policy and Research (AHCPR) after that agency issued a report that found no evidence to support the effectiveness of spinal fusion surgery. Bradford H. Gray et al., AHCPR and the Changing Politics of Health Services Research, Health Affairs, W3-283, 297-98 (2003)

[199] See Gail R. Wilensky, Developing a Center for Comparative Effectiveness Information, 25 Health Affairs w572, 574 (2006).

B. Operating a Ratings-Based Market

Once relative ratings are assigned to various medical interventions and insurance companies began to use ratings levels as the basis for contracting, would the market operate acceptably?

1. Adverse Selection

A significant fear in any insurance market in which the insured can select different levels of coverage is adverse selection and an accompanying unraveling of the market in what is sometimes called a "death spiral."[200]

The specific concern here is that patient preferences concerning depth of insurance coverage, as indicated by relative value ratings, might be based primarily on a patient's likelihood of becoming ill rather than on uncorrelated heterogeneity of preferences for consuming medical care relative to other goods and services. If, for example, the relatively sick purchased Level 7 coverage and the relatively healthy purchased Level 3 coverage, the actual cost to the insurer of providing Level 7 insurance would be higher than if it were providing Level 7 insurance for patients of average health. This, in turn, would drive up the price of that coverage and drive away the healthiest of Level 7 customers, who are willing to pay the extra price for the deeper menu of benefits that policy would provide but not willing to subsidize the sicker patients with whom they find themselves pooled in the Level 7 group. Assuming that sicker consumers cannot be charged more than others as a result of their health status – a rule that has been applied to group health insurance since HIPAA was enacted in 1986[201] and was extended to the small group and individual markets as part of the PPACA[202] – severe adverse selection can cause a cycle that leads, eventually, to all customers purchasing less extensive coverage than they actually would like to buy in order to avoid joining a risk pool with sicker (and more expensive) customers. The market conceivably could unravel to the point at which only insurance products that provide the minimal coverage level permitted would be financially viable.

Although severe adverse selection cannot be ruled out entirely, there is a reason to be optimistic that the market would reach a stable equilibrium in which the relatively unhealthy are distributed across the distribution of relative-

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[200] See, e.g., David Cutler & Richard Zeckhauser, Adverse Selection in Health Insurance, 1 Frontiers in Health Policy Res. (1998).

[201] HIPAA, 29 U.S.C. §1182 (2006).

[202] PPACA §1201.

value products. On one hand, for the relatively sick, medical needs are likely to be more salient, increasing the likelihood that they will seek a more comprehensive coverage package. On the other hand, the relatively wealthy are likely to demonstrate similar preferences, since the marginal value of the dollars necessary to purchase the more comprehensive coverage is less as wealth increases. Since income is positively correlated with good health, the pool of people electing more comprehensive coverage is likely to contain both a less-healthy-than-average slice of the population and a more-healthy than average slice of the population.

A system of relative value insurance would have to include features that prevent individuals from gaming the system by buying shallow policies when they are healthy and then switching at the next enrollment period to deeper policies after becoming ill, thus effectively paying for more extensive coverage only after they know that they will need it. The most likely procedure would be to allow insurers to cover individuals who switch to deeper policies only to the level of their prior policy for any preexisting conditions, for a specified period of time. For example, if a customer purchased a Level 3 policy and then switched to a more generous Level 7 policy, he would be covered for Level 7 interventions for any new conditions he might develop, but he would be covered only for Level 3 interventions for preexisting conditions.[203]

2. Integrating RVHI into the PPACA Framework

For Americans with employment-based large-group health insurance (more than 100 employees),[204] the process of insurance selection in light of RVHI will be no different than it is today. Employers would continue to act as

[203] The PPACA provides that, beginning 2014 when insurance is mandated, insurers cannot exclude coverage or charge differentially for preexisting conditions. Because the PPACA assumes that coverage depth will not differ across policies, this provision allows customers to change insurers without losing benefits that they would have effectively been paying for under a prior policy. The general policy is not undermined if, in a world in which customers contract for difference benefit depths, they are not permitted to shift into deeper coverage after becoming ill, as long as they are free to choose initially which rating-level risk pool to enter and are covered for preexisting conditions up to that rating level if they later choose to shift into a different rating-level pool.

[204] See Sara R. Collins, Chapin White, and Jennifer L. Kriss, Whither Employer-Based Health Insurance? The Current and Future Role of U.S. Companies in the Provision and Financing of Health Insurance, Common Wealth Fund, September 2007 (55% of total U.S. population has employment-based insurance) available at www.commonwealthfund.org/usr_doc/Collins_whitheremployerbasedhltins_1059.pdf.

intermediaries, providing one or many insurance options for their employees. The only difference would be that the options might differ in the coverage level offered, rather than just in the breadth of services, identities of providers, or cost sharing arrangements, as is largely the case today. Self-insured employer groups – groups that directly bear the cost of medical claims for members rather than purchasing third-party insurance policies[205] – might choose to provide coverage for their employees to a specified relative value rating level as well, regardless of the group's size.

The PPACA requires that, beginning in 2014 (with exceptions for grandfathered plans), small-group and individual health insurance policies, whether offered through a system of state health insurance exchanges or outside of the exchange system, must provide a minimum set of "essential health benefits."[206] The Act provides that, to meet this requirement, benefits must be at least equal in "scope" to benefits provided by a typical employer plan and cover 10 benefit categories, ranging from hospitalization to laboratory services to pediatric oral vision care.[207] Within these parameters, the statute grants the Secretary of HHS the authority to specify what will and will not comply with the essential health benefits requirement.[208] In a pre-regulatory guidance document, HHS recently announced that it will approve policies that vary substantively from the relevant benchmark plans as long as they offer "substantially equal coverage" to those benchmarks, meaning they are "actuarially equivalent."[209]

Although not entirely clear, it appears from this guidance that HHS would believe that shallow RVHI policies would not satisfy PPACA requirements if sold to individuals or small groups. The range of employer-provided plans that could serve as "benchmark" plans cover all medically necessary treatments within coverage categories, so a RVHI policy that covered the same breadth of categories but only to a depth of, say, Level 5, would not be actuarially equivalent to the benchmark.

Since the PPACA statutory requirements speak only to breadth of coverage, not to depth, however, there is no apparent bar to HHS establishing a floor

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[205] See Bureau of Labor Statistics, Definitions of Health Insurance Terms, available at http://www.bls.gov/ncs/ebs/sp/ healthterms.pdf

[206] PPACA §1302. For the provision establishing the health care exchanges, see §1311(b).

[207] Id.

[208] Id.

[209] Dept. of Health & Human Services, Center for Consumer Information and Insurance Oversight, Essential Health Benefits Bulletin, December 16, 2011, at 12.

concerning the depth of coverage that small group and individual insurance policies must provide in addition to a minimum breadth of benefits, rather than requiring insurers to cover all medically necessary treatments within covered categories. By setting a relatively low floor (i.e., Level 4 or 5), HHS could enable RVHI products to flourish within the PPACA framework, to the extent that consumers prove willing to trade-off depth of coverage for lower insurance prices.

In order to make health insurance more affordable, the PPACA establishes a system of tax credits that will subsidize the purchase of insurance on the health insurance exchanges by low and moderate income individuals and families without employer-sponsored coverage. The size of the tax credit is a complicated function of both the purchaser's income and the cost of insurance policies on the exchange that cover 80 percent of the actuarial value of the benchmark plan.[210] RVHI could provide much-need flexibility here as the health insurance exchanges are established and the actual cost of the subsidies becomes more clear. Rather than setting subsidy levels based on the costs lawmakers believe makes a benchmark policy (that essentially covers all treatments to Level 10) affordable,[211] subsidy levels could be reduced if lawmakers determine a shallower level of coverage represents an appropriate entitlement. For example, if the cost of the subsidies turns out to be higher than the Congressional Budget Office's estimate of just $1 trillion over ten years,[212] future lawmakers might choose to subsidize exchange customers only to the extent that they could then reasonably afford to purchase, say, a Level 7 policy, rather than a Level 10 policy.

The fact that regulators would need to choose a rating level on which to base health insurance exchange subsidy levels might appear to undermine the notable feature of RVHI that it avoids government rationing. After all, public choices concerning subsidies would impact the affordability of different levels of RVHI policies. But whatever relative value rating level the government uses as the basis for subsidy determinations, subsidy recipients would still be permitted to purchase insurance at whatever rating level they wish, thus making their own ex ante rationing decision. In other words, if an individual receives a $1000 subsidy because the government decides that this amount is necessary to

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[210] PPACA §§1401-02.

[211] Affordability is in the eye of the beholder of course. Subsidy levels established by the PPACA might or might not make health insurance "affordable" for Americans with various levels of income. But the subsidy levels are based implicitly on the ideology that the government should make it possible for all Americans to afford insurance that covers all "medically necessary" treatments within covered categories of care.

[212] CBO, supra note __, at 6.

make a Level 5 policy affordable for a person of her income level, she should be able to purchase a Level 4 policy and effectively put part of the subsidy toward non-insurance goods and services if she so chooses, or purchase a Level 6 policy by skimping in other areas to save the incremental cost.

It is fair to say that the government's selection of a rating level on which to base subsidy calculations would have an indirect effect on private rationing decisions, in the following sense. The larger the subsidy the government provides, the deeper the insurance recipients will purchased, at least on average. Larger subsidies will increase the income of lower-income Americans, and wealthier individuals can be expected to spend more money on medical care (as well as other goods), everything else being equal. But any effect of government policy on the depth of health insurance purchased would be due to the subsidies, not due to the relative value rating system.

3. Individual and Sub-Group Variation

The medical community has traditionally been suspicious of clinical practice guidelines and similar attempts to use a general algorithm to specify the type of care that they should provide to an individual patient.[213] This is sometimes attributed to a self-interested desire to protect their realm of autonomy, regardless of its effects on patient health.[214] The more charitable explanation, however, is that the best treatment for a particular patient sometimes depends on that patient's unique health characteristics – such as personal illness history, co-morbidities, family history, genetics, etc. – that are simply too subtle and individualistic to be captured by algorithms that specify the best care for a large population group, on average.[215]

The problem of individual variation presents a similar problem for relative value ratings. Drug A might be no more effective than Drug B for most people and more costly, earning it a "10", the worst possible relative value rating for a clinically effective treatment. But for a minority of patients with a stomach

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[213] See, e.g., Terrence Shaneyfelt & Robert Centor, Reassessment of Clinical Practice Guidelines: Go Gently Into That Good Night, 201 J. Am. Med. Ass'n 868 (2009).

[214] See Stefan Timmermans & Aaron Mauck, The Promises And Pitfalls Of Evidence-Based Medicine, 24 *Health Aff.* 21(2005) (the assumption that good clinicians would automatically follow scientifically-based treatment recommendations "ignores a key characteristic of professionalism: autonomy and discretion in professional work").

[215] See, e.g., Robert Hayword et al., Canadian Physicians' Attitudes About and Preferences Regarding Clinical Practice Guidelines , 156 Can. Med. Ass'n J. 156 (1997) *(*"A sizeable minority felt that guidelines are too rigid to apply to individual patients, challenge physician autonomy and are oversimplified").

sensitivity to Drug B, Drug A might provide a substantial marginal benefit.[216] To generalize the problem, a patient who has purchased a Level 5 policy might find that he is ineligible for a treatment that would be as cost-effective *for him* as other interventions rated "2" because its lower average cost-effectiveness for the population in general earns it only a relative value rating of 7 from the rating agency.

As briefly mentioned above,[217] relative value ratings should be contingent and flexible enough to incorporate all relevant variations between sub-groups.[218] Thus, in an ideal world, a particular intervention would not simply be rated "Level 5," but instead might have different ratings for different population subgroups based on characteristics of that group that are correlated with the benefits provided by the intervention, the benefits provided by alternative interventions, or the costs of either.

One implication of sub-group contingent relative value ratings is that, in some cases, relatively "sicker" individuals would be entitled to treatments not provided to healthier individuals who purchased insurance of the same depth, because the former will sometimes obtain greater relative benefits from a treatment. This is consistent, however, with basic nature of health insurance, according to which people who are healthier generally fail to see the same direct return of their premium dollars as do people who are sicker.

Another implication, however – and one that might be more controversial[219] – is that those who stand to obtain greater benefit from an intervention because they are healthier would sometimes qualify for treatment that sicker patients would not. For example, a kidney transplant for a patient with end stage renal disease might be rated a "3" for an otherwise healthy person expected to tolerate the transplant well but be rated "7" for a patient with a compromised

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[216] E.g., Carolanne Dai, et al., National Trends in Cycloosygenase-2 Inhibitor Use Since Market Release: Nonselective Diffusion of a Selectively Cost-Effective Innovation, 165 Archives of Internal Med. 171, 171 (2005) (discussing clinical choice between classes of drugs with similar efficacy but differential risk of gastrointestinal side effects predicted by risk factors).

[217] See Part IV.B, supra.

[218] Cf. Garber & Sox, supra note __, at 1807 (CER should take into account "patient-specific characteristics that account for differences in the way individuals respond to therapy").

[219] See Rob Stein, Under Kidney Transplant Proposal, Younger Patients Would Get the Best Organs, The Washington Post, February 24, 2011 (quoting University of Chicago bioethicist and physician Lainie Friedman Ross as calling kidney allocation proposal that would favor younger transplant patients for health and longevity reasons "age discrimination.")

immune system or other co-morbidities that indicate he would likely be a less successful transplant recipient.[220]

The more significant problem with subgroup variation in ratings, though, is the practical obstacles to generating the CER necessary to derive nuanced and contingent relative value ratings. Some sub-group differentiation would be possible, but actual differentiation will undoubtedly fall short of the ideal.[221] To purchase health insurance at a lower price, many consumers would be willing to accept health insurance that will only provide them with relatively cost-effective interventions, rather than with all treatments medical science is capable of generating regardless of how meager the potential benefit and extensive the costs. But the same consumers might balk if the ratings are not well-tailored, such that they might one day be denied an intervention that is highly cost effective given their unique circumstances but carries a relative value rating based on its lower average value for the population as a whole.

C. The Inevitability of Context Effects

Relative value insurance presents a relatively tractable decision problem, requiring consumers to compare only the two variables of depth of coverage and price. Still, even this single tradeoff is far from simple or straightforward, and many individuals undoubtedly will search for heuristics that can help make this decision easier to make and to justify ex post.

Empirical evidence in the prospect theory tradition indicates that losses loom larger than gains for many people, which leads to a general bias in favor of the status quo state of the world.[222] Changes from the status quo imply a combination of losses and gains, but the affective value of the losses is greater,

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[220] Under current rules, kidneys are primarily allocated based on how long a candidate has been waiting (although certain extreme co-morbidities can make a patient categorically ineligible. See generally Organ Procurement and Transplantation Network, Policies (http://optn.transplant.hrsa.gov/policiesAndBylaws/policies.asp). In 2011, the Organ Procurement and Transplantation Network a new metric that would allocate 20% of kidneys based on survival matching and 80% of kidneys by age matching in order to better maximize health and longevity of transplant recipients. Organ Procurement and Transplant Network, Concepts for Kidney Allocation (2011).

[221] Cf. Bloche, supra note __, at 53 ("There's a fractal geometry of clinical differences – and endless variation in patients' responses to pathogens, pills, and procedures. So it's just about always possible to argue, "Our patients are different'—different enough to benefit from a therapy that's been proven inferior for the population as a whole.")

[222] See Russell Korobkin, The Endowment Effect and Legal Analysis, 97 Nw. U. L. Rev. 1227, 1250 (2003).

thus promoting conservatism. It seems quite likely that individuals required to choose between RVHI policies and unsure of how to compare cost and coverage depth will search for evidence of what price-coverage constitutes the status quo, and then select that option. Some might view the status quo as insurance that covers all clinically effective treatments, because that is what is covered today under today's dominant "medical necessity" standard. These people might view accepting any type of cost-benefit limitations in their health insurance as a "loss" to be avoided at almost any cost.

Other consumers will undoubtedly use other heuristics. The principle of extremeness aversion[223] suggests that many might gravitate toward "Level 5" policies: their central location on a 10-point relative value scale would likely imbue them with the patina of moderation. Others might see the rating level assumed by the government for purposes of determining subsidy levels for low income individuals as a coordination point and simply purchase a policy that provides that level of coverage. A general tendency toward myopia might cause still other consumers to discount future benefits too steeply, thus purchasing inefficiently shallow insurance coverage compared to what percentage of income their more carefully considered selves would allocate to health care.

This analysis suggests that the criticism that consumers are likely to use simplifying heuristics that lead to inaccurate decisions when making purchase decisions under CDHC can also be leveled against RVHI. The difference in the degree of the problem, however, seems substantial. In a world of RVHI, the information that must be assimilated to make critical decisions is far more manageable than in the world of CDHC.

VII. CONCLUSION: RELATIVE VALUE RATINGS AND PUBLIC INSURANCE

This article has argued that using CER as the basis for relative value ratings of medical interventions could form the basis for a market approach to rationalizing medical care utilization in a way that takes consumer bounded rationality seriously but simultaneously avoids bureaucratic rationing. As such, it has emphasized the portion of the U.S. population that has private health insurance or is expected to purchase private health insurance once the PPACA is fully implemented. It is also possible, however, to also use the power of relative value ratings to rationalize expenditures of public insurance programs as well. Although a thorough consideration of the public insurance

[223] Tversky & Simonson, supra note __, at 1183 ("[O]ptions with extreme values within an offered set will be relatively less attractive than options with intermediate values.")

implications require a separate article, a few brief observations can be made here.

Medicare, and to a lesser extent, Medicaid, suffer from the same moral hazard problem as private health insurance: in some cases, categories of treatments are excluded from coverage, but within categories of covered care, insurance covers patients for most medically indicated care consistent with professional standards, without regard to cost effectiveness.[224] If CER were harnessed to create relative value ratings, individuals *qua* citizens (working through their elected officials) could choose between allocating public dollars for public health insurance programs and for other goods and services by comparing the cost of covering the insured populations at different ratings levels. For example, at the time of budgeting, government actuaries could project the total cost of covering the Medicare population during the next fiscal year at a variety of different relative value levels. By looking at the current relative value rankings, lawmakers could see quite clearly what interventions would be covered, and what interventions would not be covered, depending on the final budget allocation, mirroring the decision process that relative value ratings would allow individuals to enter into when purchasing private insurance. Legislators (and voters) would be able to see, for example, that if they wish to cover brand name drugs for Medicare beneficiaries where equivalent generics exist, they would have to fund Medicare at Level 8; or that if they wanted to provide extraordinary interventions to maintain life in its final days for that population, they would have to fund Medicare at least at Level 5; or that if they wanted to enable otherwise healthy Medicaid-eligible citizens to receive costly organ transplants, they would have to fund that program at Level 7.

Because the payers and the beneficiaries of Medicare and Medicaid are different groups, RVHI would not necessarily mimic economic efficiency or reduce moral hazard in the public insurance context in the way that it would in the private insurance context. But relative value ratings would have the virtue of making more clear and transparent the tradeoffs between funding public medical care on one hand and funding other public priorities, reducing taxes, or paying down the national debt on the other.

Relative value ratings also would be extremely valuable if Medicare (or Medicaid) were changed from a fixed entitlement to a voucher program, as the most recent congressional budget, drafted by vice presidential candidate Paul

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[224] See Saver, supra note __, at 2167; Sean R. Tunis, Why Medicare Has Not Established Criteria for Coverage Decisions, 350 N. Eng. J. Med. 2196, 2197 (2004) ("Health care services are generally covered when there is adequate evidence that they improve health outcomes, irrespective of the unit or aggregate cost.") By statute, Medicare covers care that is "reasonable and necessary." 42 U.S.C. § 1395y(a)(1).

Ryan, has proposed[225] and some conservative health economists support.[226] If health care inflation continues to exceed the general rate of inflation, as the Congressional Budget Office predicts it will, Medicare premium support payments would lose purchasing power over time.[227] Relative value insurance would enable beneficiaries to control out of pocket co-insurance costs by purchasing shallower coverage, if they so chose. As is the case in the private insurance context, relative value ratings would have the virtue of ensuring that, at whatever level of coinsurance payments were chosen, the more cost effective interventions would be provided and less cost effective interventions would not.

[225] H. Con. Res. 11295 (March 2012) .

[226] Joseph R. Antos et al., Bending the Cost Curve through Market-Based Incentives, N. Eng. J. Med., Aug. 1, 2012 (10.1056/NEJMsb1207996) (favoring "premium-support model" for Medicare).

[227] CBO, Long-Term Analysis of Budget Proposal by Chairman Ryan, April 5, 2011, at 23.