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Source: *The Independent Review*, Winter 2014, Vol. 18, No. 3 (Winter 2014), pp. 401-420

Published by: Independent Institute

Stable URL: https://www.jstor.org/stable/24563243

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The Economics of Health Care and Health Insurance

D. ERIC SCHANSBERG

Almost everyone agrees that the status quo in the markets for health care and health insurance is suboptimal with respect to *(a)* access to health care and health insurance; *(b)* affordability to individuals and cost to taxpayers; *(c)* the unfortunate connection of health insurance to employment—and thus, problems with portability;[1] and *(d)* inequities in the available subsidies. To deal with some of these problems, recent reform efforts—most notably, the Affordable Care Act of 2010 (called "ObamaCare")—have focused almost exclusively on dramatically increasing government involvement.[2]

The political debate on health care and health insurance often begins with the assertion that both now operate as "free markets."[3] This claim is easy to refute by pointing to the proportion of spending in the health care sector by the government and the scope of government regulation in each arena. But it also raises a number of

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1. Scott Adams (2004) finds that "job mobility" was reduced by 22 percent among married men and 33 percent among married women because of insurance concerns.

2. Most of this involvement continues to be on the side of increasing demand—through heightened access to health insurance ("coverage") and, we would hope, health care. John Goodman notes that increasing demand while leaving supply unchanged (or restricted further) is likely to increase the yawning gap between good intentions and good outcomes in this arena (2012, 6–9). Goodman also points to the usefulness of promoting (unshackling) entrepreneurial efforts in the delivery of health care services. All recent reform "involves people on the demand side of the market trying to take the place of entrepreneurs. . . . Successful innovations are produced by entrepreneurs, challenging conventional thinking—not by bureaucrats trying to implement conventional thinking. . . . Can you think of any other market where the buyers of a product are trying to tell the sellers how to efficiently produce it?" (74).

3. For example, Arnold Relman states, "There can be little doubt that today's health care system has become thoroughly saturated with market ideology" (2007, 31).

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questions about the market for health care—how it currently operates; how it would likely operate with many more regulations; and how it would likely operate in a far less regulated environment. In particular, to what extent do health care and health insurance *naturally* deviate from the competitive norm?

To address these questions, this paper lays out the theoretical ways in which the markets for health care and health insurance might differ from the competitive model and then weighs the available empirical evidence. In brief, what are the potential difficulties inherent in the provision of health services, and what does the academic literature say about the extent of those concerns in practice?

How Competitive Are the Markets for Health Care and Health Insurance?

The competitive model is the standard by which markets are judged: many buyers and sellers; limited barriers to entry; and reasonable levels and symmetry of information for market participants. Competitive markets typically produce efficient social outcomes. Despite this efficiency, consumers and producers may turn to political markets to distort economic markets in their favor. But here the question is: How far do the market characteristics and outcomes in health care and health insurance *naturally* deviate from the competitive model?

First, there are many service providers in health care, resulting in a high elasticity of demand for individual physician services.[4] That said, the market for general practitioners and common specialties is more competitive than the market for rarer specialties or hospital services.[5] Likewise, the market for health care services in a city will be more competitive than in a rural setting.[6] But with transportation and communication costs declining substantially over the past thirty to fifty years, this distinction has diminished in importance. Finally, competition is also (naturally) lessened to the extent that consumers perceive health care services to be heterogeneous and are reluctant to change providers.

Second, natural and artificial barriers to entry are significant. A high level of training is required to provide most health care services. Doctor offices can be set up with modest fixed costs, but hospitals have tremendous fixed costs. The American Medical Association is a cartel that limits labor supply—directly in terms of the number of doctors and indirectly by seeking restrictions on other service providers. Even so, the barriers are small enough to generally allow for significant competition between doctors.

4. Folland, Goodman, and Stano (2013) cite work with elasticities varying from 2.8 to 5.1.

5. Robinson (2011) notes the varying degrees of concentration in the market for hospital services and finds that prices rise with market concentration.

6. Dunn and Shapiro (2012) note the varying degrees of concentration in the market for physician services and finds that prices rise with market concentration.

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In the market for health insurance, consumers have access to relatively few providers. There are significant natural barriers; the endeavor requires substantive start-up costs. But the artificial barriers are also significant because government regulations severely limit the number of insurance providers available to consumers and the terms under which insurance is available. As such, James Robinson (2004) uses the Herfindahl-Hirschman Index and finds significant market concentration rates in the market for health insurance.

That said, David Hyman and William Kovacic write as "anti-trust enforcers" and note that market concentration "does not, standing alone, indicate the presence of problematic (anticompetitive) behavior" (2004, 25). They also question the geographical definition of markets used by Robinson and point to most antitrust complainants' self-interested pursuit. Nevertheless, a less-regulated insurance market would clearly result in lower overhead costs, more health insurance providers, and increasing competition.

Third, we can draw inferences about the level of competition from profitability. Health insurance companies in particular have received withering criticism about their profits along with the claim that these profits can explain runaway health care costs. In fact, however, health insurance profits are quite modest. Because health insurance companies are large, their profit levels are impressive in dollar terms, but their rates of return are unexceptionable in percentage terms (4.52 percent for the ten largest companies from 2010 to 2012).[7] And even if the rates of return were much higher, they certainly could not explain *chronically increasing* health care costs.[8]

Information Problems

Profound information limitations or significant information asymmetries can challenge the equity and efficiency of market outcomes. Information problems can lead to a range of inadvertent inefficiencies and purposeful shenanigans.[9] In this, they are akin to monopoly power in that one party can use its superior knowledge to take advantage of another party. As for the provision of health care and health insurance by

7. See *CNNMoney*'s "annual ranking of America's largest corporations" for 2010, 2011, and 2012 at http://money.cnn.com/magazines/fortune/fortune500/2010/industries/223/; http://money.cnn.com/magazines/fortune/fortune500/2011/industries/223/; and http://money.cnn.com/magazines/fortune/fortune500/2012/industries/223/.

8. The monopoly power of health insurance can also offset the monopoly power of health care service providers in an example of bilateral monopoly (power).

9. On the former, Craig Richardson, Mark Hall, and Zagros Madjd-Sadjadi (2010) discuss the "market failure" within the (very limited) use of electronic medical records. They draw an analogy to the development of credit market bureaus in pointing to the potential evolution of a market for "health information bureaus."

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markets, there is particular concern about the "moral-hazard" problem and "adverse selection" as subsets of asymmetric information.[10]

Let's start by noting that "public" information can be "difficult." For example, if an insurer knows that I have a chronic health condition, it will want to charge me a higher premium to compensate for the higher expected costs. Or if it is known that a hospital does a poor job in treating a certain condition, then patients will be more reluctant to trust their care to that provider.

From an objective view, however, the more troubling issue is "private" information—information held by one party but not available to another. For example, doctors generally know much more about health than patients. Moreover, health care knowledge may often be difficult for consumers to "learn by doing" and may not be commonly conveyed to other consumers. Kenneth Arrow (1963) points to ethical restrictions on doctors and the importance of generalized trust in the profession. Beyond that, reputations convey information about service providers and allow some level of market discipline (Satterthwaite 1979; Pauly and Satterthwaite 1981).

Consumers still face an information disadvantage in this realm, but the gap has narrowed in recent years, especially with the easy availability of low-cost information through the Internet. Beyond that, consumers face similar disadvantages in other markets and are generally capable of using market signals and relatively low-cost information to navigate markets without systematic abuse.

In terms of health insurance, patients generally know more than insurance providers about their health going into the contract and even within the contract. Insurers have a strong incentive to close this gap, but such efforts are themselves imperfect and costly.[11]

This information asymmetry, precontract, can lead to "adverse selection." For example, all things equal, I am more likely to pursue insurance if there is a higher probability that I will rely on that insurance.[12] This information asymmetry, postcontract, can also lead to the moral-hazard problem. For example, I am more likely to behave in a way that will trigger an insurance payment once I have the insurance in hand. My incentives are changed in a way not easily monitored and enforced by the insurer. Both the adverse-selection and moral-hazard problems can put insurers in a

10. See Arrow (1963) and Pauly (1968) for the first two key articles in the field. Arrow's article is "seminal," but some analysts unfortunately don't read the subsequent literature that was critical of the original work. As an example of this highly selective literature review, see Relman (2007, 22–24, 27, 96). Avik Roy identifies five market distortions in health care from Arrow's piece: unpredictability, barriers to entry, the importance of trust, asymmetric information, and "idiosyncrasies of payment" (the prevalence of third-party payment). "Arrow isn't wrong to point out these distortions. Where he is wrong is in believing that they are ***unusual***, and that government intrusion is required to correct them. Indeed, the phenomena that Arrow identifies are widespread throughout the economy and [often] are made worse by government policy" (2010).

11. Goodman notes that "wellness programs" are used by employers—as the cost-bearing middleman between employers and insurers—to attract healthier workers and discourage unhealthier workers (2012, 131).

12. In contrast to "adverse selection" based on private and asymmetric information, "selection" is based on public information and results in premiums that are adjusted for risk—an efficient outcome because expected benefits would line up with expected costs.

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difficult position and make it important for them to find low-cost information and monitoring devices to limit these concerns and mitigate the subsequent costs.

Liran Einav and Amy Finkelstein note that "adverse selection exists in some markets but not in others" (2011, 115). They provide an excellent overview of the "textbook model" of adverse selection in insurance, noting the policy prescriptions that obtain: mandating coverage, subsidizing insurance, or community ratings. Then they add administrative costs and heterogeneous preferences for risk to the model, resulting in the potential for overinsurance from these public policies. Finally, they extend the model to describe the potential for "advantageous selection," where preferences for risk aversion may align with preferences for more health care services, mitigating or even offsetting adverse selection. In addition to the theoretical existence of advantageous selection, they document its empirical existence in insurance for automobiles, long-term care, reverse mortgages, and health care.[13]

Doctors also know more than insurers about the health care they provide, which presents another difficulty for insurers. This difficulty relates to the potential for deception—in reporting billing codes, pursuing higher-quality but socially inefficient care, using self-referrals and being involved in conflicts of interest, and practicing "defensive medicine."[14]

Concerns about all of this imply that health insurance would ideally be available but quite limited in scope.[15] Two contexts for insurance seem by far the most attractive: (1) costly but rare outcomes and (2) inexpensive and regular but beneficial preventative treatments. In the first case, consumers of health care in "catastrophic" cases will be less responsive to price and less able to exploit their information advantage (at least within the contract).[16] In the second case, cost-effective preventative care can be encouraged for the good of the consumer and the insurer. Neither of these contexts is inherently or prohibitively difficult for private insurance.[17]

13. Einav et al. (2013) is another helpful piece on the relationship between adverse selection and moral hazard, given health expectations and risk aversion.

14. Michael Cannon and Michael Tanner (2005, 50) cite Sidney Bogardus, David Geist, and Elizabeth Bradley (2004), who find that 39 to 50 percent of physicians manipulate third-party reimbursement rules and that 70 percent would manipulate those rules in certain circumstances. Goodman (2013) is helpful for understanding the unintended consequences of a system that deals only with malpractice instead of with all adverse events.

15. Arrow (1963) assumes the desirability of broad health insurance. In this view, its absence would imply market failure with social welfare losses and the likelihood of government intervention to enhance efficiency. Interestingly, Arrow ignores the probability that government policies are responsible for any flaws and failures in the market for health insurance. Instead, as Mark Pauly observes, "even if all individuals are risk-averters, insurance against some types of uncertain events may be suboptimal" (1968, 531).

16. Later in this article, we'll see how the market can avoid this information problem before the contract is established.

17. This holds even with little effort to get information about lifestyle choices. Another mitigating factor is that, in practice, the correlation between lifestyle choices and difficult illness is not as strong as often asserted.

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Elasticities of Demand for Health Care Services

Arrow (1963) was correct to observe that insurance is more effective when consumer demand is highly price inelastic, but incorrect for assuming it is so. As such, what is good for society—for individuals to self-ration health care services as if they were paying the full cost—will almost certainly yield to what is good for the individual (in response to prices that are reduced by the presence of insurance coverage).

The empirical literature on the elasticity of health care services is substantial.[18] For example, Douglas Lundin (2000) finds the moral-hazard problem among doctors with respect to giving prescriptions to consumers: as prices increase, doctors were more likely to prescribe alternatives. Michael Hurd and Kathleen McGarry (1997) determine that more health insurance for the elderly is correlated with more health care services, and they argue that this correlation is causal rather than a function of adverse selection. Thomas Buchmueller (2006) finds considerable price elasticity to the price of health insurance by retirees—sensitivity to price that implies an ability (at least for the elderly) to seek out and process information. Jay Bhattacharya and his colleagues find "strong evidence that being insured increases body mass index and obesity," with public insurance causing a bigger effect than private insurance (2.1 versus 1.3 point increases on average) (2009, 1, 25). When Rene Van Vliet analyzed the relation between deductibles and expenditures in the Netherlands, he found an overall price elasticity of −0.14. He also estimated elasticities in six subsets of health care, ranging from −0.40 for general practitioner care to −0.12 for specialist care, −0.08 for prescription drugs, and virtually zero for hospital care (2004, 283). Another study (Davis and Schansberg 2013) finds considerable flexibility in emergency room visits by day of the week, with little traffic on weekends and heavy traffic on Mondays, implying that considerable ER traffic is more discretionary than is usually assumed. Other studies have reviewed the then-contemporary literature and concluded that "the demand elasticities in the Rand Experiment (Newhouse [and the Insurance Experiment Group] 1993) have become the standard in the literature. . . . [A]ll economists accept that traditional health insurance leads to moderate moral hazard in demand" (Cutler and Zeckhauser 2000, 584).

Finally, Amy Finkelstein investigates the effects of marketwide changes in health insurance by examining the introduction of Medicare—"the single largest change in health insurance coverage in American history" (2007, 2). She finds that the impact of Medicare on hospital spending is more than six times larger than what one would have predicted from the evidence on individual-level changes in health insurance—through,

18. Folland, Goodman, and Stano (2013, 184) survey some of the literature. One theoretical piece is relevant: Pauly and Blavin (2008) find that the existence of moral hazard with some price elasticity is equivalent to "value-based cost sharing" (lower copays if objective benefits outweigh costs), assuming that information is reasonably symmetric.

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for example, the partial-equilibrium analysis of the Rand Experiment.[19] She concludes, "This disproportionately larger effect may arise if market-wide changes in demand alter the incentives of hospitals to incur the fixed costs of entering the market or of adopting new practice styles" (1). She estimates that Medicare is associated with a 37 percent increase in real hospital expenditures (for all ages) between 1965 and 1970 and that the genesis of Medicare explains about half of the increase in real per capita health spending between 1950 and 1990.

In summary, then, the empirical literature underlines some of the theoretical concerns about the moral-hazard problem—at least with the artificially extensive health insurance we have at present. Likewise, the literature on selection may quell but certainly does not dispel the relevant theoretical concerns.

For example, David Cutler and Sarah Reber find evidence of an "adverse selection death spiral" (1998, 439) with health insurance coverage at Harvard University.[20] Likewise, Melissa Thomasson (2002) finds evidence of selection problems for Blue Cross and Blue Shield in the 1950s with its use of community ratings for individual insurance.

But the problem is not universal. Remember that Einav and Finkelstein (2011) describe "advantageous selection" that theoretically and empirically offsets "adverse selection." Thomas Buchmueller and John DiNardo (1999) do not find evidence of a community-rating death spiral in New York from 1987 to 1996. James Cardon and Igal Hendel find no evidence of adverse selection or information asymmetries in health insurance markets, arguing that a lack of buyer commitment in long-term contracts may be the primary cause of market struggles in health insurance (as in Cochrane 1995): "Absent long-term commitment, healthy individuals (and small employers) would drop coverage, leaving only bad draws in the pool. In contrast, large employers, who base their decisions on the average draw of all their employees, are less likely to withdraw from the pool" (2001, 426).

Along those lines, Keith Crocker and John Moran (2003) consider a full-information model—with an empirical test—in which insured individuals are initially identical but anticipate receiving a public signal that will provide information about their expected future health care costs. In contrast to private-information arguments, they argue that "the evidence increasingly suggests . . . that the market for health insurance is more accurately characterized as one in which participants possess symmetric information about the evolving health status of insurance purchasers" (715).

19. As Finkelstein notes, "[E]arly work by Feldstein (1973, 1977) suggested that the spread of health insurance was a primary cause of the rapid rise in health spending. Such arguments prompted the undertaking of the Rand Health Insurance Experiment. . . . Its findings suggested that the responsiveness of health spending to health insurance was substantially smaller than what Feldstein had estimated, and consequently, that the spread of health insurance was not an important cause of the rise in health spending" (2007, 2).

20. Cutler and Reber (1998) also argue that adverse selection is more problematic with the status quo in health insurance and that adverse selection can be minimized with a well-constructed voucher program.

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The market's shortcomings in providing health care and (appropriate) health insurance are relatively modest and exacerbated greatly by government intervention, most notably in Medicare and through the massive distortions created by the subsidy of health insurance through employers. As Shmanske expresses the problem, "[S]everal of the alleged market failures in the provision of health services actually reflect economic scarcity. Hence they are best dealt with by market institutions, not government interventions" (1996, 192).

Personal Preferences, Rationality, Information Constraints, and the Prospects of Paternalism

Individuals have different values for risk versus rate of return. In the context of insurance, they are willing to make various trade-offs between known and uncertain expenses, for their own health and for the health of those in their spheres of influence. So even in a well-functioning market, one can imagine a range of choices with respect to health insurance—from heavy to minimal third-party coverage or even self-insurance.

Beyond that, health insurance is heavily regulated, resulting in fewer choices. And health insurance is artificially and significantly inflated in terms of cost (Schansberg 2011). As such, one can easily imagine rational individuals who would choose not to purchase health insurance—to self-insure or to rely on charity if they decide to pursue health care. Going into the market for health insurance can become prohibitively unattractive for an individual if that individual is forced to subsidize high-cost consumers and is regulated into purchasing higher-cost policies. This is particularly true of the young, who tend to be healthier and less willing to trade cash for artificially expensive health insurance.[21]

Kate Bundorf and Mark Pauly (2006) estimate that between one-quarter and three-quarters of the uninsured can afford health insurance. Moreover, of those uninsured between the ages of twenty-five and sixty-four, only 22 percent live in households with incomes below the poverty line, 30 percent are in households with incomes more than three times the poverty line, and 48 percent have incomes between one and three times the poverty line. Although Bundorf and Pauly do not address this distinction, these numbers presumably point to some combination of those who choose to routinely self-insure for a long period of time and those who are temporarily without (cost-effective) insurance because of a change in job-market status.[22]

21. Aaron Yelowitz (2009) notes that "uninsurance" rates peak at ages twenty-three to twenty-four, with more than one-third in 2008.

22. The U.S. House of Representatives Ways and Means Committee found that, in 2002, 47 percent of the uninsured have incomes double the poverty level or more; 29 percent have incomes between 100 and 200 percent of poverty level; and 24 percent are below the poverty level (2003, appendix C). Andrew Rettenmaier and Thomas Saving (2009) report that 57 percent of the uninsured are younger than thirty-five years old and that 21 percent have incomes greater than $75,000.

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But how well do people make decisions about health, health care, and health insurance? Economists start with the assumptions of self-interest and "rationality"—that people, at least generally, weigh costs and benefits in a coherent manner. Disparate preferences can yield wildly different outcomes—some of which might be judged as "bad" decisions. And some of these bad decisions can have direct, negative social implications.[23] So what is the public-policy role of paternalism in helping people make health care decisions?

We noted earlier that decisions about health care are responsive to changes in price, which is consistent with a rational cost-benefit analysis. Bundorf and her colleagues (2009) observe, for example, that information on fertility clinics serves to influence choices. However, people may not be able to understand the expected costs of low-probability events far into the future.[24] And many people make clearly unhealthy choices with respect to smoking and obesity. Beyond that, they also seem to make all sorts of "bad" decisions in choosing premium cable TV, impressive electronics, extensive cell phone use, elaborate fingernails, and so on rather than seemingly more important goods and services such as health insurance.

Philosophically, those disposed toward freedom will want to allow people to make choices—even those choices that are unhealthy or otherwise unwise. And as a practical matter, promoting freedom and allowing people to bear the good and bad consequences of their choices will tend to develop decision-making skills.[25]

The Role of Information (Revisited)

If one is attracted to government paternalism, two policies follow, promoting information and education so that better choices might be made[26] and some combination of subsidies and mandates to encourage "good" decisions along with taxes and prohibitions to discourage "bad" decisions.[27]

23. Vaccines and communicable diseases are within a category where "bad" personal decisions can have direct, negative consequences on others. We can extend this definition to less direct considerations: if society decides to subsidize poor health decisions and outcomes—for example, those stemming from obesity—then bad decisions will impose costs on taxpayers. See Folland, Goodman, and Stano (2013, 266–67, 394), on positive and negative externalities in health care.

24. Behavioral economists find that people often underestimate the probability of severe, negative outcomes and may not appropriately discount future costs and benefits.

25. Especially in light of New York City's recent attempt to ban large soft drinks, see the literature review on food-price policy and taxation in Powell and Chaloupka (2009). See also Folland, Goodman, and Stano (2013, 524–27).

26. Among those who are most paternalistic, one can observe the argument that additional choice and transparency (more information in terms of quantity and symmetry) can actually harm market outcomes by confusing decision makers. An example of this argument in practice is direct-to-consumer advertising of prescription medicine, which is regulated in New Zealand and the United States and prohibited elsewhere. See Bradford and Kleit (2006).

27. One other line of reasoning bears mention: given the negative externalities of one's health care decisions (especially under the status quo), one can argue that health insurance of some sort should be mandatory—to reduce the cost of my bad decisions imposed on others.

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Note that well-functioning markets typically produce information (on price, quality, heterogeneity of services, etc.) that is useful to consumers. And markets typically send signals that result in a positive correlation between quality and price. Moreover, most markets do not require most people to be well informed to make effective decisions. Markets are equilibrated by consumers "at the margin." And these consumers typically are the most informed and assertive in the market. In many market settings, the average consumer knows relatively little about many things—from cars to food, personal computers to landscaping. Yet markets function well even with a dearth of knowledge. The same is presumably true for health care as well (see Herzlinger 2007, 9).

That said, all things equal, more low-cost, high-quality information should be efficiency enhancing, and one would expect this enhancement to be extended to a health care market setting. Even with the current levels of regulation and subsidy, HealthCareBlueBook.com, OutOfPocket.com, PriceDoc.com, and state-specific websites can be helpful. MediBid allows customers to solicit bids for a variety of surgeries, including knee replacement, colonoscopies, and hernias.[28]

Along the same lines, mandating price transparency is a policy prescription that seems attractive—at least on the surface. More information should result in better decisions and a more competitive market. The philosophical concern is, again, the use of force to accomplish a policy goal. The practical concerns are interesting as well. David Dranove and his colleagues describe "health care report cards"—public disclosures of health outcomes directed by physicians or hospitals. On paper, such efforts can "address important informational asymmetries in markets for health care." But in practice "they may also give doctors and hospitals incentives to decline to treat more difficult, severely ill patients" (2003, 555). Providers may choose to "game" the system—especially if report cards are not (or cannot) be adjusted for differences in patient characteristics (e.g., risk). If not, providers who treat the most serious cases will necessarily appear to have low quality.[29]

To that point, these authors find that cardiac surgery report cards in New York and Pennsylvania led to "selection behavior by providers . . . and to worse health outcomes, particularly for sicker patients." They conclude that "at least in the short run, these report cards decreased patient and social welfare." The good news? "Report cards could be constructive if designed in a way to minimize the incentives and opportunities for provider selection" (Dranove et al. 2003, 584).[30]

28. See John Goodman's description of this market enhancement of health care at http://healthblog.ncpa.org/an-online-market-for-medical-care/.

29. Dranove and his colleagues also point to risk aversion and the problem of small sample sizes in this context. "In practical terms, the utility loss from a few bad (risk-adjusted) outcomes that drove a provider to the bottom of the rankings, generated bad publicity, and catastrophically harmed his or her reputation exceeds the utility gain from a corresponding random positive shock" (2003, 557).

30. Though not without some complaints, Pennsylvania seems to have had more success with a similar program, publishing medical outcomes—deaths, complication rates, and readmission rates (Burton 2009).

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A broader issue is that transparency may be a natural by-product of a less dysfunctional market for health care and health insurance. If so, then report cards and information in a far less regulated market will largely take care of themselves.

Preventative Care

There are two potential reasons why preventative care might be "underutilized" in a market setting. First, some individuals may be unable to weigh costs and benefits appropriately. Second, insurance companies may not find it worthwhile to provide those benefits relative to higher premiums. On the former, it is certainly plausible that individuals might struggle with weighing short-term, concrete costs against long-term, abstract benefits. Again, if true, what is the best policy response? On the latter, insurance companies may not find it worthwhile to invest in preventative care, especially in the heavily regulated and heavily subsidized market for insurance. But if the market develops for long-term health insurance for individuals, one can easily imagine these incentives changing dramatically.

In any case, the literature on preventative care indicates that it is often oversold by focusing on its obvious benefits in lieu of its subtle but larger costs. Louise Russell, the author of a seminal work in this area, skewers a simplistic approach to the topic: "First impressions about something as complicated as preventative care can prove incomplete in important ways, or flatly wrong. . . . It takes considerable information, thought, and care to arrive at correct conclusions about whether . . . a preventative measure improves health; how much the measure costs . . . and whether the health benefits represent a reasonable return for the money" (1986, 5).

For example, Pieter van Baal and his colleagues find that effective obesity prevention leads to a decrease in the cost of obesity-related diseases. But this decrease assumes effectiveness and is in any case offset by cost increases due to diseases unrelated to obesity. They conclude that "obesity prevention may be an important and cost-effective way of improving public health, but it is not a cure for increasing health expenditures" (2008, e29).

David Howard (2005) illustrates another confounding principle of preventative care. He finds a low benefit of preventative care for the elderly, given the competing causes of death and other health problems. This contrasts with the low benefit of preventative care for the young, when the probability of having any given illness is generally quite small.

Joshua Cohen, Peter Neumann, and Milton Weinstein analyze the contents of the Tufts–New England Medical Center Cost-Effectiveness Analysis Registry[31] with data on hundreds of published cost-effectiveness studies. They argue that the "evidence does suggest that there are opportunities to save money and improve

31. Available at http://www.tufts-nemc.org/cearegistry.

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health through prevention" on "preventable causes of death," such as smoking, diet, inactivity, and alcohol abuse. Further, some measures—for example, "counseling adults to quit smoking, screening for colorectal cancer, and providing influenza vaccination"—decrease mortality at low cost. But "sweeping statements about the cost-saving potential of prevention . . . are overreaching. Although some preventive measures do save money, the vast majority reviewed in the health economics literature do not. Careful analysis of the costs and benefits of specific interventions, rather than broad generalizations, is critical" (2008, 661).

Again, we must compare a central planner's ability to estimate an amazing array of costs and benefits and the efficacy of a well-functioning market whose participants may well be more likely to assess the true net value of preventative care. Moreover, if health care were less impeded by government regulation, subsidies, and third-party payers, doctors would be more incentivized to act as an agent for the patient more than for the insurer (Goodman 2012, 55–59; see also Singer 2013).

Preexisting Conditions and Time-Consistent Health Insurance

How would the market handle the thorny issue of "preexisting conditions"? John Cochrane (1995, 2009a, 2009b) describes a model of insurance for health care costs combined with additional insurance against "health status changes." Medical insurance covers medical expenses in a given time period (minus deductibles and copayments). "Health status" insurance would cover the risk that one's health status deteriorates in the current period—and thus that future medical insurance premiums will increase.

If one moves into a more expensive medical insurance premium category, then health status insurance would pay out a lump sum that is sufficient to cover all future higher medical insurance premiums (with no change in out-of-pocket expenses). If you contracted a chronic or serious illness but had the lump sum to pay higher premiums, you could always pay for new insurance without an additional financial burden. More important, insurers would then compete for sick people, too.

The root issue here is the inability of *each* side to credibly commit to an ongoing relationship, especially as more information is revealed over time—in particular, a "health status change" that will ex post become a "preexisting condition." Ironically, the larger commitment problem is on the side of consumers.[32] Insurance providers can be forced by law to continue an insurance relationship, but individuals cannot be

32. Cardon and Hendel make a useful distinction between large employers, on the one hand, and small employers and individuals, on the other: "Lack of long-term contracts can explain why small firms and individual buyers cannot find affordable insurance. Absent long-term commitment, healthy individuals (and small employers) would drop coverage, leaving only bad draws in the pool. In contrast, large employers, who base their decisions on the average draw of all their employees, are less likely to withdraw from the pool" (2001, 426).

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reasonably compelled to continue that relationship.[33] Both sides of the coin create problems if health status changes. If an individual's health status gets worse, the insurer will want to charge higher rates or get out of the relationship. But if the insurer is forced to commit, and the individual's health status improves, another insurer will be able to lure him or her away with lower rates.[34]

In brief, conventional long-term contracts are ineffective for insuring long-term health risks (Diamond 1992), but they can be replaced by a series of time-consistent short-term contracts (Malcomson and Spinnewyn 1988; Fudenberg, Holmstrom, and Milgrom 1990; Rey and Salanie 1990). The result is self-enforcing and mutually beneficial for both parties, independent of changes in health status.[35]

Aside from lack of policy imagination, John Cochrane (1995, 2009a, 2009b) deals effectively with a number of other potential challenges to implementing this reform, including the transition to this market arrangement.[36] So why don't we see this already? Cochrane notes the impediments caused by subsidies and regulatory barriers. But, as he observes, it is encouraging to see the individual health insurance market already moving in the direction of health status insurance—even in the current environment.[37]

In a competitive market, health insurers must charge higher premiums to sicker people and lower premiums to healthier people. The only other pooling system that can cover long-term insurance is a monopoly-mandated, nationalized health care.

The Key Issue: Getting to True Insurance

In health care and health insurance, the most significant distortion is the subsidy of health insurance by the federal government through the workplace. It creates or extends every concern documented so far in this article. Because the government does not tax fringe benefits provided by an employer, health insurance—if received

33. Crocker and Moran's model follows Cochrane's idea. They find that impediments to worker mobility ironically create a de facto commitment mechanism that allows for more complete insurance of health risks than would be possible in the absence of such friction. They find that "the quantity of insurance provided is positively related to the degree of worker commitment," underlining the importance of commitment in the design of long-term contracts (2003, 694).

34. We see the same sort of process with interest rates and home mortgages as well as with changes in the actuarial probabilities attached to life insurance when insuring someone becomes more or less risky. Cardon and Hendel (2001) cite Hendel and Lizzieri's (2000) study of the life insurance industry to illustrate the importance of commitment in long-term contracts.

35. This proposal appropriately parallels a technique from the field of finance, "where replacing long-term contingent claims with dynamic trading in short-term securities is a fundamental technique" (Cochrane 1995, 448).

36. See Schansberg (2011) for a summary of these issues.

37. Mark Pauly and Bradley Herring (1999) determined that three-fourths of private medical insurance policies were guaranteed renewable even before this guarantee was mandated in 1996. Herring and Pauly (2006, 416) found evidence that individual health insurance premia were beginning to reflect an "incentive compatible" structure which is equivalent to medical insurance plus health-status insurance premia.

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from an employer—is a subsidized form of compensation for workers. A subsidy lowers the cost of receiving a good or service. The result is more activity in that realm—"too much" from the perspective of economic efficiency because resources are transferred from higher-valued to lower-valued uses.

What does "too much insurance" look like? Relatively low copayments and deductibles and relatively extensive coverage of health services. Copayments elevate the price of services above zero, but the presence of a copayment implies that the cost to the consumer is less than the market cost. Deductibles reduce this impact; one must pay the full cost out of pocket until the deductible is met. But artificially lower deductibles inefficiently reduce this threshold. And, of course, artificially expanded coverage implies that some services are the subject of insurance only because they are subsidized.

This point becomes more obvious when one considers the purpose of traditional insurance and other common forms of insurance. People pay a modest premium to avoid low-probability but "catastrophic" losses. Even though the expected net present value of this arrangement is less than zero, risk-averse consumers willingly pay the premium. (This behavior also explains why insurance companies are willing to engage in mutually beneficial trade.)

All other types of insurance fit this description—life, auto, unemployment, disability, fire, flood, and so on. But auto and fire insurance probably provide the most intuitive and compelling comparisons. Both provide insurance against rare, catastrophic events—auto accidents and the destruction of a house. In contrast, health insurance often covers everything from allergy shots to cancer, from hair transplants to heart attacks.

Imagine a world where an auto insurance policy covers door dings, oil changes, and upholstery rips or a world where home insurance covers broken gutters, a patch of shingles, and cracks in your driveway. We'd probably pay $100 for an oil change and wouldn't care because 90 percent of it would be covered by insurance. There would be a blizzard of paperwork and amazing administrative costs for insurance and service providers. Consumers would focus on the cost to them rather than true costs. And so on. Most important, the cost of the policy would be staggering, and the relationship between costs and services would be profoundly distorted.[38]

In fact, most health "insurance" can as easily be described as "cost-sharing" or prepayment of health services. For the insured and the insurer, the question is not "if" but "when" the policy will be invoked and how often. Unfortunately for the insured, the prevalence of third-party payers implies that the key relationship is between the insurer and the health care providers.[39]

38. Regina Herzlinger draws a helpful analogy to a "defined benefit breakfast insurance" (2004, 61–73).

39. Goodman compares insurers and providers in health care, home and roof repairs, autos and car repairs and notes that health care is unique in this regard because of the nature of third-party participation in a vastly distorted market (2012, 125–28).

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It doesn't need to be this way. Consider the case of medical services that are not typically covered by insurance—for instance, Lasik and elective plastic surgery for humans; medical tourism (see Goodman 2012, 15–19, 104–5); and veterinary care for animals.[40] These function like typical markets: mutually beneficial trade between consumer and service provider, no complaints about technological advance and its costs,[41] transparency about prices, no significant cost inflation,[42] no nonprice rationing, and so on. There is nothing inherent in the market for health care that attracts the plethora of problems we see in it today. The problems are completely a function of "health insurance" and its subsidy.[43]

Today, the subsidy is not only inefficient but massive: $226.2 billion in 2008. Interestingly, its cost dwarfs the cost of other medical subsidies in the income tax code: $10.7 billion for the medical expenses deduction; $5.2 billion for the self-employed health insurance deduction; but only $500 million for Health Savings Accounts (U.S. Joint Committee on Taxation 2009, table 1.2).

Finally, Andrew Rettenmaier and Thomas Saving make a crucial but overlooked point regarding the cultural implication of this inefficient arrangement: "The health insurance enjoyed by employees has also become the measuring stick" by which health care coverage is judged. Their conclusion: "Because of these expectations, bending the health care curve must start with reforming employer-based health insurance. The first and most fundamental change we suggest would limit the tax exclusion to the price of a guaranteed renewable health insurance plan that has a comparatively high cost sharing" (2009, 2). In addition, reforms to introduce

40. Goodman compares knee replacement for dogs and humans, finding the latter more expensive despite the comparable skills and resources used. He argues that the key differences are government regulations, malpractice liability, and inefficiencies caused by the prevalence of third-party payments (2012, 15–17). Thomas Dalrymple compares human and veterinary health services in Great Britain and argues that "on the whole it is better to be a dog" (2009). The comparison/analogy falls short in that owners make decisions for animals, creating potential agency problems. But he notes that dog owners can freely choose a veterinarian; one's choices for treatment are not investigated by a bureaucracy; and treatment is immediate. "There are no waiting lists for dogs, no operations postponed because something more important has come up, no appalling stories of dogs being made to wait for years because other dogs—or hamsters—come first. . . . The conditions in which you receive your treatment are much more pleasant than British humans have to endure. For one thing, there is no bureaucracy to be negotiated . . . the atmosphere is different. . . . Nevertheless, there is one drawback to the superior care [that] British dogs receive by comparison with that of British humans: they have to pay for it, there and then."

41. Frank Lichtenberg (2009) analyzes increases in life expectancy from 1991 to 2004 and finds that the benefits of innovation outweigh the costs—in particular, the increased use of diagnostic techniques and newer drugs.

42. Cannon and Tanner note that inflation-adjusted prices for cosmetic surgery decreased every year from 1992 to 2001 and the cost of Lasik fell by nearly 25 percent from 1999 to 2004 (2005, 6–8).

43. The economic literature on this problem is quite mature. Victor Fuchs (1996) cites Martin Feldstein's dissertation (published in 1967) and points to him as a pioneer in the application of quantitative methods such as two-stage least squares to the estimation of production functions and other important economic aspects of medical care. Fuchs cites Davis and Rorem (1932) as the earliest writing on "the crisis in hospital finance" (1996, 2). The concerns expressed were presumably steeped in the standard issues of affordability and access. From there, Feldstein authored a number of prominent papers in the 1970s on the social welfare costs of the subsidy for insurance (Feldstein 1973, 1977) and its implications for hospital cost inflation (Feldstein and Freeman 1977).

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vouchers and to extend the use of Health Savings Accounts are helpful for promoting healthy incentives, transparency about price and quality, lessening the prevalence of third parties, and so on.

Conclusion

There certainly are ample political difficulties in trying to reform health care and health insurance. Beyond that, one might reasonably question the free market's ability to provide health care and health insurance. That said, after the theoretical concerns about market struggle are wrestled with and the relevant empirical data weighed, those concerns generally turn out to be overblown. And, of course, the difficulties of market provision must be weighed against the sizable costs of government intervention in the markets for health care and health insurance.

One final caveat: our country's health care problems may not be "fixable." Consider an analogy. Markets require honesty and morality to function well. With perfect morality, market disciplines and legal constraints for fraud and theft would be unnecessary. As morality diminishes, market mechanisms and government enforcement can limit the damage. But without a threshold level of honesty and morality, markets and government will be insufficient to avoid significant harm. In other words, there are limits to what either or both can accomplish as a constraint to immoral market conduct.

The same is true in health care. For example, according to the U.S. Centers for Disease Control, about half of all Americans live with at least one chronic condition (e.g., diabetes, heart and lung ailments); chronic diseases account for 70 percent of all deaths in the United States; people with chronic diseases account for more than 75 percent of the nation's medical care costs; and chronic diseases account for one-third of the years of potential life lost before age sixty-five.[44] Most of these conditions are connected to unhealthy lifestyle choices, and although smoking is decreasing, the problem of obesity is getting bigger.

If people are determined to live unhealthy lives, then there is no system that can fix the underlying problem. Markets might dictate that the unhealthy pay higher health insurance premiums and otherwise bear higher costs for health care. Markets and government can work to educate people about the cost of unhealthy choices. Governments might regulate unhealthy substances and ration the availability of care. But the root issue of unhealthy people cannot be fully addressed by either markets or government. At the end of the day, it is largely a matter of personal responsibility.

44. For this information from the Centers for Disease Control, go to http://www.cdc.gov/nccdphp/overview.htm.

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Acknowledgments: I thank Edward Lopez, Arun Srinivasan, and anonymous referees for their comments but insist on retaining property rights to any remaining errors.

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