Giving Competition in Medical Care and Health Insurance a Chance

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Mark V. Pauly. "Giving Competition in Medical Care and Health Insurance a Chance." Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, February 2019.

ABSTRACT

This study summarizes what we know and do not know, in both economic theory and empirical practice, about the potential to more closely approximate competitive markets in healthcare and insurance in ways that will do more good than harm to the current dysfunctional system. The alternatives to competitive markets are, on the one hand, private markets where sellers of medical products and health insurance have market power, and, on the other hand, markets in which government both funds and controls production of such items. This study briefly discusses the economic ideal of competition and its current state in hospital, physician, pharmaceutical, and health insurance markets. It then considers circumstances in which more supply-side competition would or would not improve outcomes, identifies imperfect information as a key problem, and closes by discussing competition among health plans, systems, and networks. This research combines data, theory, and reasonable conjecture to focus on market-like improvements that are likely to do more good than harm.

JEL codes: I11, I18

Keywords: healthcare, insurance, competition, monopoly, regulation, Medicare, Medicaid, Affordable Care Act, markets

This paper can be accessed at https://www.mercatus.org/publications/healthcare/giving-competition-medical-care-and-health-insurance-chance

Americans are dissatisfied with their medical care and health insurance system. While they tend to feel reasonably positive about the care they personally get, they are unhappy with the system—concerned about insurance and care for others, or for themselves if they get really sick or are unlucky enough to see insurance premium surges.[1] Even when physicians, hospitals, and drugs are thought satisfactory, high and rising insurance premiums and out-of-pocket payments make people (as consumers and employers) unhappy. That unhappiness is reinforced by experts and policymakers who criticize the system, often by making invidious comparisons with other countries. Data on the system show evidence of errors from care and from withholding care, excessive red tape and insensitivity to consumer preferences, and high and rising private spending and taxes that pay for the medical care of individual consumers or fellow citizens they care about. There is a widespread belief, not just of unsophisticated consumers but of employers, politicians, and even many people who work in the industry, that healthcare should be better and more convenient—and shouldn't cost so much.

The strong feelings of malaise just described cut across political, cultural, and ethnic lines: unhappiness with American healthcare is an equal-opportunity feeling. But opinions diverge strongly on what, if anything, to do about this situation. It is easy to hope for something better, but how can improvements be achieved? Should government step in with more regulation and higher taxes, or should there be movement toward more market-like arrangements that rely on competition among suppliers of care, drugs, and insurance to attract consumers? And what improvements can we reasonably expect from any reform that does more good than harm? There is so far a divergence between what people would like and what research suggests is

1. Justin McCarthy, "Six in 10 Americans Worry about Higher Healthcare Premiums," *Gallup News*, December 10, 2018; Jeffrey M. Jones and R. J. Reinhart, "Americans Remain Dissatisfied with Healthcare Costs," *Gallup News*, November 28, 2018.

feasible: we would all like better care for less (whether it takes more government or more market to get there), but the more realistic question is which direction of movement would lead to progress, allowing for the commonsense notion—present everywhere else in the economy and in life—that tradeoffs will have to be made among different options.

This study will summarize what we know and do not know, in both economic theory and empirical practice, about the potential for a closer approximation to competitive markets in healthcare and insurance to do more good than harm for the currently dysfunctional system. Is competition a solution or a problem—or sometimes both? The alternatives to competitive markets are, on the one hand, private markets where sellers of medical products and health insurance have market power, and, on the other hand, markets in which government both funds and controls production of such items. After a brief discussion of the economic ideal of competition, this study discusses competition's current state in hospital, physician, and health insurance markets. It then considers circumstances in which more supply-side competition would or would not improve outcomes, identifies imperfect information as a key problem, and closes by discussing competition among health plans, systems, and networks.

Ideally, one would like to compare the theoretical predictions from competition with what might arise in theory from private monopoly or from stronger government intervention. Welfare economic theory allows this comparison to be made for competition versus private monopoly in a static setting, but not in one where innovation is possible. Any comparison between market and government is necessarily ambiguous because, while there is a well-developed and validated economic theory of consumer and firm behavior in competitive markets, there is no similar theory of government behavior. An omniscient, wise, and benevolent government will beat a market every time—if only such a government "run by angels" would materialize.[2] Moreover, the economic theory on competition

2. Harold Demsetz, "Information and Efficiency: Another Viewpoint," *Journal of Law and Economics* 12, no. 1 (1969): 1–22. See also James Madison, Federalist No. 51, available at https://www.congress.gov/resources/display/content/The+Federalist+Papers#TheFederalistPapers-51.

> But what is government itself, but the greatest of all reflections on human nature? If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself. A dependence on the people is, no doubt, the primary control on the government; but experience has taught mankind the necessity of auxiliary precautions.

primarily deals with a static setting in which a given set of products is to be produced and allocated among consumers in the best possible way. But a defining characteristic of modern medical care is that new products are discovered and marketed—products which are often more beneficial but higher in cost or price than what was available before. How useful is competition (compared to the other two alternatives) in this setting? That is the complicated question this paper will address.

Even more perplexing, a competitive system in which all buyers are as informed as sellers is a theoretical thing of beauty but unlikely to happen, especially in the medical market.[3] Actual markets and governments are imperfect, always less than ideal, and sure to be unpredictable. Often the analysis in this paper will be forced to discuss more competitive markets compared to the empirical status quo—of private sellers with government-enforced patents or of flawed government interventions into flawed markets. So it can offer at best partial evidence and authoritative speculation about what alternatives to competition might mean.[4] The only solution, then, is to examine the comparative empirical evidence on outcomes—a notoriously more difficult task than theoretical speculation and one less likely to guarantee conclusions.

One can, however, offer some conditional predictions: "Thus and such will be a market improvement if government does not impede it," or "Here the market will need and expect some simple help from government." It may also be possible to say what courses of action are better bets for improvement than others. Changes in markets (such as less seller market power) produce fairly predictable changes in outcomes (for good or ill); for government actions, anyone's guess is as good as the experts'. Finally, and importantly, there are situations in which the current outcomes with reasonably competitive markets and reasonably informed medical-care buyers (consumers or their insurer proxies) are probably as good as they are going to get, given the current state of knowledge and imagination. We still in such situations may want more and better outcomes, but we waste effort trying to lament the fact of imperfection and then pursue the unattainable.

The focus on market competition means that some aspects of the US medical care and insurance system are not treated to any great extent. Public subsidization—its rationale or its extent—is not investigated. Much more attention is paid to private insurance markets than to Medicare and Medicaid (except when the latter are used as comparators to markets). Public health

3. Michael E. Porter and Elizabeth O. Teisberg, *Redefining Health Care: Creating Value-Based Competition on Results* (Cambridge, MA: Harvard Business School, 2006).
4. Ronald Coase, "The Problem of Social Cost," *Journal of Law and Economics* 3 (October 1960): 1–44.

issues, social determinants of health outcomes, and long-term demographics are not considered. The goal is to focus on explaining and evaluating the role of competition among insurers, hospitals, physicians, and drug suppliers.

WHAT'S SO GREAT ABOUT COMPETITION?

Economists are the custodians of a well-developed set of ideas about what competition looks like, how it functions, and how its results compare with feasible results from other methods of allocating scarce resources to the production of different goods and services (including medical care) for different people. Economists are predisposed to qualify any discussion with the apology that this is an idealized theoretical model, a discussion not of where society can expect to arrive but rather in what direction it might plan to head.

Here is how competition is supposed to work in economics: Many informed buyers can choose to obtain goods and services, some at differing quality levels, from many profit-maximizing and equally informed sellers. Prices prevail for all different products (and different qualities of the same product). At those given prices, consumers decide how much (if any) of each product to buy, and sellers decide how much to produce and what level or levels of quality to offer to the market. When the dust clears, there are just as many buyers demanding some total quantity of each product at each quality level as there are sellers planning to sell. Prices will then stay put until something changes. For example, they will respond to increases in demand or reductions in supply by rising until equilibrium is reestablished, but they will not continue to increase past the equilibrium.

Why do economists like this outcome? Because it has such desirable properties: Firms will be technically efficient and cost minimizing in production (since any alternative strategy reduces profits). Buyers will consume each good or service up to the point where their benefit or (in money terms) value of each product just equals the price, while sellers will sell until the cost of making one more unit just equals its price—so, in every case, the marginal benefit to buyers will just equal the marginal cost to sellers. No other quantities will make consumers better off than they are in this competitive equilibrium. In effect, a competitive economy operates as a giant cost-benefit calculator and planner, determining what is best to produce and send to which consumers, and making sure that the correct incentives are in place. A market cannot do better than a government armed with a perfect calculator chock-full of perfect data on every consumer's preferences and different models of production could do, of course. However, a market can cater better to diversity in consumer incomes and tastes

than any real government, which practically must impose some uniformity on collective choices, limiting differentiation to broad categories such as "all elderly people" or "all hospitals in rural areas." The more differences there are among consumers and what they want, the more markets can provide gains over government. This means that how people feel about markets in healthcare and insurance will be influenced by how much variation they think there is in what people want, and whether that variation is legitimate.

This hymn to the invisible hand is a siren song to some and cacophony to others. But it has the merit of being specific both about what will happen (given the assumed prior conditions) and why that outcome has some claim to being ideal. That is a lot, because "goals of government" is much vaguer in concept or measurement; there is no comparable theory of what kind of governmental structure or policy is best. Competitive equilibrium is not necessarily everything people might want. But at least they know what it is, and what it can be.

One important implication of the market model is that, although the competitive outcome yields the ideal combination of quantities and qualities given a good's or service's cost of production, it does not necessarily yield the highest feasible level of each individual outcome. This in turn implies that moving from some alternative situation to the competitive one does not necessarily imply improvement along all dimensions.

This pedantic point has an important application in healthcare. In most markets, people will agree that the best outcome is not the highest possible quality, because the cost of the highest quality may not be worth it—and we tend to accept that for most products. We don't usually seek the highest-quality automobiles, or meat, or hotels. This is a harder message when applied to the quality of medical care, but economists plunge ahead, asserting that people would not really want to maximize healthcare quality per unit, or even health itself, if the higher explicit or implicit cost of health meant that they would have a miserable long life with no fun or frills; they would not want to maximize medical quality since that would mean an unaffordable price for most consumers. This means that, even in theory, movement to a competitive arrangement will not necessarily lead to the simultaneous lowering of prices (or costs) and improvements in quality that politicians, bureaucrats, and buyers, enamored of the "triple aim," dearly want.[5] More competition may lead to an increase in one but a decrease in the other. Disappointment is even more likely in the dynamic setting where

5. Donald M. Berwick, Thomas W. Nolan, and John Whittington, "The Triple Aim: Care, Health, and Cost," *Health Affairs* 27, no. 3 (2008): 759–69.

substantial improvements in quality require large increases in cost, too large to be completely paid for by feasible ways of reducing waste. There is surely some pure waste (yet to be defined rigorously) in the healthcare industry as in any other (competitive or not), but substantial improvements in outcomes will almost surely require, at some point, higher costs as a tradeoff. State governments with Medicaid spending consuming nearly half of their budgets already are aware of this, and other tradeoffs on the horizon (for Medicare, say) are coming into focus for those willing to look. There is in healthcare only a very small amount of pure pie in the sky that can be captured; in this world it is impossible to have it all. This discouraging conclusion does not mean there is no room for improvement, but improvement in any one dimension cannot be free. Markets cannot work magic, but they can lead to better tradeoffs and better choices by reducing actions of low value to free up resources for actions of high value.

WHERE THE UNITED STATES MAY END UP

Whether this study explores small changes from the status quo while leaving all the existing peculiarities of the system in place, or whether it combines competition with other changes that transform the whole into more than the sum of the parts, it can only expect to outline better (and worse) guesses. This study will discuss some changes in the direction of more competition (in isolation or with other changes) that are likely to provide aggregate net benefit, as well as some situations in which more competition can make things worse. There will be a lot of settings where it can only be said that competition might work and deserves the benefit of the doubt and a try—and after that society will, one way or another, know much more than it did before.[6] Americans should expect no miracles, no silver bullets, but they also have reasons to think they need not stay stuck in their current rut.

Here are some propositions for which this study assembles evidence:

1. Some steps toward greater competition in the healthcare marketplace can be taken immediately and will do more good than harm.
2. Government policy, however, causes demand-side imperfections and distortions that would impede larger steps toward using more competitive market supply to improve outcomes.

6. Martin Gaynor and William B. Vogt, "What Does Economics Have to Say about Health Policy Anyway? A Comment and Correction on Evans and Rice," *Journal of Health Politics, Policy and Law* 22, no. 2 (1997): 475–96.

3. If those imperfections remain in place, more competition may in fact do more harm.
4. If those imperfections are reduced, however, competition can either improve outcomes even more or reveal that what happens after those reductions is the best feasible outcome.
5. In many cases, it is unclear whether competition might or might not work. Therefore, more empirical investigation is needed to see where and when competition works better than the alternatives of a confused status quo or an additional dose of government intervention.

The remainder of this study first discusses small-scale improvements, then moves on to identifying the demand-side impediments that hinder larger-scale supply-side progress. The paper then discusses the possibility of reducing those demand-side impediments and the complementary changes in supply-side competition. Finally, it contemplates the frontier for more market-like arrangements, contrasts them with more heavily regulated or governmentally administered alternatives, and speculates about the outcomes of each alternative.

HOW COMPETITIVE ARE MEDICAL MARKETS NOW?

The potential for supply-side competition in economics is often measured by the Hirschman-Herfindahl index (HHI), which is the sum of the squared percentage of market shares of the current distribution of firms and their sales now in the market. The concept is that the more similar sellers exist in a market, the more competition there can be. If there is only one firm in the market (a share of 100 percent) the HHI takes on the value 10,000 (100 squared). If there are four firms of equal size, the index is 2,500. That is the lower threshold the Department of Justice uses to signal concerns about concentration. The intuition is that, the lower the index, the more firms there are that complete for the consumer's business.

For hospitals nationwide, the index rose from 2,340 in 1987 to 3,161 in 2006, averaged across local markets, as hospitals consolidated to get bargaining power and small hospitals unable to do so went out of business. (The government insurance programs Medicare and Medicaid typically set administered prices per unit of service, so there is no bargaining with them.) Physician services markets are more competitive, below 2,000 for primary care, but specialist markets can be

concentrated; for example, for oncologists' services the index was 3,606. Both of these measures will be much higher in small cities than in larger ones.[7]

Finally, as noted, insurance markets have been becoming more concentrated, with private insurer HHIs around 2,500. A market with a high HHI can still be effectively competitive if there are few barriers to entry, so that incumbent firms' setting higher prices would prompt new entrants. Such barriers are low for the risk-pooling function of insurance (if only because large firms that manage insurance for themselves have the option to create their own risk-pooling entity by self-insuring, and administrative services suppliers need not be limited to insurance firms). There are higher barriers to the "managed care" part of managed-care insurance: the price an insurer can charge for this role is limited to the net value managed care furnishes—which, for some irritated consumers, is not all that much. Entry by hospitals, by contrast, requires capital; entry by physicians often is blocked by limits on the capacity of medical schools and especially residency positions; and the network construction and management of managed-care health insurance is hard to enter at scale. Competition is more likely among retail clinics or freestanding emergency care clinics, given market size. However, in the end, there are probably few sellers of medical goods and services that take the price they can charge as totally given in the market. So there are reasons to be concerned about concentration in most of this industry, though proven remedies when competition is not currently present are not easily found. Nevertheless, the use of antitrust enforcement by government can be a necessary step toward competition in large markets.

The possibilities for competition are, however, largely determined by the size of the local market; competition can be high in densely populated large markets, but it will be difficult to achieve in smaller cities and rural areas. Here is an illustration of this point: It is usually thought that a general hospital that can treat all types of illnesses exhausts economies of scale at a size of about 150 beds. Assuming an average length of stay of five days, and an admission rate (including readmissions) of 80 per 1,000 people per year, a market area would need about 140,000 people to support one efficient-sized hospital and 420,000 people to have three competitors. About 70 percent of the US population lives in areas with populations above 500,000, but the 30 percent of people who do not will not be able to experience the benefits of full competition by hospitals. Usually other medical services (other than rarer specialties) will still be competitive

7. Martin Gaynor, Kate Ho, and Robert J. Town, "The Industrial Organization of Health Care Markets," *Journal of Economic Literature* 53, no. 2 (2015): 235–84.

with smaller markets. One could offer consumers in rural areas the possibility of contracting out hospital services or franchises through competitive bidding (as imagined recently by Eric Posner and E. Glen Weyl),[8] rather than offer that privilege at little cost to the political winner of a certificate of need (CON). CON in larger markets where it is not needed has long been identified as limiting the benefits of competition.[9]

MODEST GAINS FROM MODEST CHANGES

We can best get some idea of the power and limits to competition by considering the empirical work on situations in which a more market-like arrangement is permitted in what previously had been either a legal private monopoly or a government-administered or government-controlled program, with collective choice of the dimensions of the program and production by a government-managed monopoly firm or organization. In these examples, nothing else is changed except the number of sellers from which buyers can choose.

Predicting (much less evaluating) the effect of greater supply-side competition on markets is more difficult for products and services for which price and quality can vary across sellers and across markets. With a single product type, the price under perfect competition will be as low as or lower than any other alternative in which firms remain in business. With quality as an additional seller choice variable, the form of the alternative to competition as well as the tradeoff between quality and price in any market will matter in achieving efficient outcomes.

Specifically, the effect of more sellers on both price and quality will be different depending on whether the initial state was one of unregulated monopoly (e.g., a single hospital in a small town), regulated monopoly (e.g., private Blue Cross plans in many states), or regulated competition (e.g., primary care physicians in big cities taking care of Medicare patients where Medicare sets the fee). In what follows, this study will go through these three cases for each type of healthcare product: medical and hospital services, prescription drugs, and health insurance.

A classic empirical study of deregulation in medical services illustrates the possible effect of competition on quality and its simultaneous effect on price. For many decades, states enforced prohibitions on advertising by health professionals

8. Eric A. Posner and E. Glen Weyl, *Radical Markets: Uprooting Capitalism and Democracy for a Just Society* (Princeton, NJ: Princeton University Press, 2018).
9. United States Department of Health and Human Services, *Reforming America's Healthcare System through Choice and Competition*, December 3, 2018.

(and professionals furnishing other services like law and accounting); the support for these provisions usually came from codes of ethics promulgated by professional associations. In 1962 the Supreme Court ruled that such restrictions were a violation of the First Amendment. Subsequently, advertising across all media for medical goods and services became more common. Economists Roger D. Feldman and James W. Begun examine the effect of the price and quality competition that followed the Supreme Court's decision on the market for optometrists' services, principally vision testing (refraction) and making glasses.[10] They find that prices for both testing and glasses fell significantly, largely because the ability to advertise attracted more customers to larger suppliers (such as Pearle Vision). However, the much lower price was accompanied by a modest diminution in quality (measured by the precision of vision correction). The research could not tell whether lower price made glasses a better buy, even with fuzzier vision, but the example is instructive in showing both the path to lower price (a combination of more efficient scale production and smaller markups) and the potential for quality reductions. In this case, more effective competition meant fewer sellers with less regulation.

COMPETITION AMONG HOSPITALS

There is ample empirical evidence that hospital mergers result in higher prices or revenues without significantly improving quality of care. This is the strongest empirical evidence for the beneficial effects of supplier competition. These mergers occur in market areas large enough to support several hospitals but not so large that a reduction in numbers of sellers is inconsequential. Several US antitrust cases against not-for-profit hospitals prevented mergers in metropolitan markets on this basis. Any increase in price would, in the first instance, affect insurer costs, because only 3 percent of hospital revenue comes directly from patients. The assumption is that such higher charges will lead to higher insurance premiums, although premiums usually cover populations much larger than those who would have been using only the merging hospitals. The cost reductions from potential scale economies often promised by merger partners rarely materialize when mergers do occur, because the merging hospitals individually are large enough that no further substantial returns to scale exist, and they have

10. Roger D. Feldman and James W. Begun, "Does Advertising of Prices Reduce the Mean and Variance of Prices?," *Economic Inquiry* 18, no. 3 (1980): 487–92; Roger D. Feldman and James W. Begun, "The Welfare Cost of Quality Changes Due to Professional Regulation," *Journal of Industrial Economics* 34, no. 1 (1985): 17–32.

not been shown to result in lower charges than would have prevailed without the merger.

Here is how this paper looks at studies of the relationship between competition and quality for hospital care.[11] From the earlier discussion it is clear that changed market conditions can lead to various combinations of changes in quality per unit of care and price per unit of care. The two outcomes are related because higher quality usually entails higher (marginal and average) cost per unit of quantity, and price tends to follow suit. Some researchers, such as Martin Gaynor, Kate Ho, and Robert J. Town,[12] have speculated that quality in medical care is unlikely in practice to be inefficiently high when actions that supposedly improve quality have little impact on outcome and add significantly to the unit cost of a service or product. However, not only is there evidence that inefficiencies do happen, but the presence of quality regulation and the pressure of professional judgment mean that baseline quality, even in monopoly markets, may be efficient. Nor is hospital quality necessarily significantly lower in such markets. In price-regulated markets, the additional contribution of quality to health is likely to be too low, and the price for highest quality too high, as firms compete on the basis of quality when the administered price is too high. Think of fee-for-service (FFS) Medicare covering very expensive cancer drugs that add only a few months to life and costly tests that will diagnose only rare serious conditions: lower-middle-income consumers are generally reluctant to pay the extra premiums for insurance that covers such products and services. Or, less controversially but more common, think of the provision of amenities in inpatient care like private rooms and good meals that push up charges.

The well-known model of quality competition under regulated prices predicts that setting a higher price by Medicare, say, will lead to higher quality than setting a lower price—and that the increase in quality from a too-high price may not be worth its cost. If the market is competitive, quality will be bid up until average cost is equal to price. With a single supplier but an administrative price system, quality will also rise with price, but it will be lower at any price than under competition. Competition should thus be of benefit to consumers but perhaps not the economy as a whole, since the increase in quality may not be worth its marginal cost.[13]

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11. Martin Gaynor, "Competition and Quality in Health Care Markets," *Foundations and Trends in Microeconomics* 2, no. 6 (2006): 441–508.
12. Gaynor, Ho, and Town, "Industrial Organization of Health Care Markets."
13. Studies of this kind of competition, whether among suppliers of care like dialysis units or among hospitals, generally find quality competition among hospitals to be based on acquiring sophisticated technology (or "arms race" competition).

Several studies have looked at partial deregulation (removal of limits on the number of suppliers a patient can use) in the price-regulated British National Health Service (NHS).[14] In the NHS system, on the one hand, competition among hospitals (compared to a system in which insured individuals were assigned to one monopoly hospital) was found to lower mortality because more seriously ill patients could go to a better hospital. On the other hand, allowing patient choice among hospitals that seek to earn some profits (even if they are nonprofit or governmental) may lead to lower quality (though also lower costs) if hospitals can reduce quality and find little demand response because consumers are unaware of quality variations. If buyers are well informed and capable of searching for higher quality, this ought not to happen.

If price is not specified by administrative rules, there should be a unique combination of price and quality in competitive equilibrium, assuming all consumers place a similar value on quality. If consumers have varying values for marginal increments to quality, in competitive equilibrium the marginal value of increases in quality will equal the incremental price for increases in quality. However, with a finite number of firms (because of economies of scale at small firm sizes) the equilibrium distribution of quality may not be the most efficient distribution. Firms may cluster around one popular level of quality rather than spreading out and offering a wider range of variables.

If the market is not perfectly competitive but prices are not administered, the market-level combination of price and quality will depend on the firm-level demand elasticities of price and quality. Each of these elasticities will increase as the number of sellers increases, because the percentage increase in a firm's quantity from either lowering price or increasing quality will grow as the number of other firms increases. However, it is unclear whether more sellers will reduce price or increase quality as competition increases, or what the division between price reduction and increased quality will be. At least one

14. Carol Propper, Simon Burgess, and Katherine Green, "Does Competition between Hospitals Improve the Quality of Care? Hospital Death Rates and the NHS Internal Market," *Journal of Public Economics* 88, no. 7–8 (2004): 1247–72; Carol Propper, Simon Burgess, and Denise Gossage, "Competition and Quality: Evidence from the NHS Internal Market 1991–9," *Economic Journal* 118, no. 535 (2007): 138–70; Martin Gaynor, Rodrigo Moreno-Serra, and Carol Propper, "Death by Market Power: Reform, Competition, and Patient Outcomes in the National Health Service," *American Economic Journal: Economic Policy* 5, no. 4 (2013): 134–66; Yan Feng, Michele Pistollato, Anita Charlesworth, Nancy Devlin, Carol Propper, and Jon Sussex, "Association between Market Concentration of Hospitals and Patient Gain Following Hip Replacement Surgery," *Journal of Health Services Research & Policy* 20, no. 1 (2014): 11–17; Maria Jose Aragon, Adriana Castelli, and James Gaughan, "Hospital Trusts Productivity in the English NHS: Uncovering Possible Drivers of Productivity Variations," *PLoS ONE* 12, no. 8 (2017).

of these changes must occur, and possibly both. To evaluate the benefits from increased competition relative to monopoly, one must know the separate consumer demand curves for quantity as a function of price (given quality) and as a function of quality (given price).

There have been empirical studies of the relationship between the number of hospitals and quality or price, but generally they look at the two desirable attributes (lower price and higher quality) one at a time, rather than simultaneously. For quality, the general finding is that competition does increase quality at a given price. However, if prices are set "too high," that quality may be excessive relative to cost, and inversely for price set too low. But excessively high price relative to cost may result not in higher quality for consumers, but in more profits for the hospital. It seems hard for society to squeeze out all excessive profits if the insurance reimbursement is set higher than the price that would emerge in competitive equilibrium.[15] Conversely, when price floors are removed, there is evidence that quality can fall (especially in the British NHS), though price falls too.

As already noted, studies of the effect of competition on hospital prices almost universally find that less competition is associated with higher prices and that mergers would increase prices. The punch line is that, compared with private monopoly or with regulated prices that are set too high, competition lowers price and may or may not lower quality—but if it does lower quality, the lower price makes it worthwhile to affected buyers. If reduced competition permits firms to lower cost through improved coordination, those savings seem to be elusive in reality and, even when they occur, may be captured as higher hospital salaries or profits rather than lower prices.

Most of the evidence in support of this proposition has been gathered for urban hospital mergers and acquisitions. Such combinations rarely reduce cost because economies of scale rarely extend to the size of urban hospitals. For smaller cities and rural areas, things are different. Faced with a choice between giving up some insurance benefits and not being able to go to the only decent hospital in town, many consumers will not follow the insurer, which then loses whatever bargaining leverage it might have had. So hospital competition in such geographic areas may be infeasible, leaving open the possibility that for them something else may be needed to produce good outcomes. Note that the lack of

15. Marika Cabral, Michael Geruso, and Neale Mahoney, "Do Larger Health Insurance Subsidies Benefit Patients or Producers? Evidence from Medicare Advantage," *American Economic Review* 108, no. 8 (2018): 2048–87.

competition does not affect the Medicare or Medicaid prices; there it can only affect quality or convenience.[16]

What kinds of possible gains are suggested by these results? Antitrust policy can limit mergers in larger cities that might make things worse but is limited in its ability to increase competition; it usually cannot break existing firms into more independent units. Government activities that constrain competition, such as CON laws or (more speculatively) encouragement of hospital and physicians combinations to form accountable care organizations (ACOs), should be examined carefully. Moreover, because insurance typically cushions the effect of higher prices on patient demand, the main effect of lower price, if it translates into lower payment for insurance premiums, is a transfer to consumers or Medicare taxpayers from the uses nonprofit hospitals would have made of their profits—whether it be higher wages for hospital workers, assistance for the missions in Peru, or gold-plated emoluments for managers. Finally, although monopolists charge higher prices than competitors, they do not necessarily charge more rapidly growing prices than competitors; once price is at the profit-maximizing level to begin with, there is in theory no way to increase the outrageous price faster, unless competition continues to erode or the product was underpriced (relative to the profit-maximizing price) to begin with. Empirical evidence on the relationship of static market power to dynamic price increases is not definitive.

PHYSICIAN COMPETITION AND CARTELS

Economists have long been intrigued and irritated by the cartel- or guild-like behavior of health professionals (and other professionals), but there has been little direct progress in introducing more competition in this area.[17] Some progress has been made in reducing licensure barriers—in the dispensing of eyeglasses, in the cleaning of teeth, and in counseling about life's problems—but, by and large, there is no free entry into the medical profession, and areas of work are jealously guarded. In many states, patients need a physician to write a prescription that any nurse would know how to do. There is a potentially good reason for licensure; consumers of medical services do not want to patronize someone with little

16. There are special subsidies from Medicare for such "critical access" hospitals or for ones with high Medicaid burdens. A higher administered price will cause more firms to survive, though at below-ideal scale, in small markets.

17. Milton Friedman and Simon Kuznets, *Income from Independent Professional Practice* (New York: National Bureau for Economic Research, 1945); Reuben A. Kessel, "Price Discrimination in Medicine," *Journal of Law and Economics* 1 (October 1958): 20–53.

knowledge and training, and it is easier for the government to set those qualifications by law than for consumers to search for them across sellers. The problem as usual is that these well-meaning rules can be used as weapons by agents who want to limit competition.

The professional limits on the number of competing sellers are greater in some medical specialties than others, and immigration laws have blocked the free flow of trained professionals into the United States. Limits on the number of residency positions have blocked entry into some specialties, even as limits on the total number of medical school places controlled by the profession have disappeared, only to be replaced by limits imposed by lack of public funding.

Here, again, remedies to any lack of competition would not be easy. There would be little support from taxpayers to support the training of many more specialists, and support for opening up residency training through Medicare has weakened. The best method would be to increase the substitution of trained nurses for many physician functions, a process that has already begun—but without yet showing any system-wide effects on prices. But, in principle, greater substitution of nurses who can price independently can lead to lower costs and prices.

Greater flexibility in the use of all health professionals could be enhanced if comprehensive-care organizations were allowed to provide evidence of their quality of care regardless of their employees' type of training or licensure. That is, an ACO that proves it can meet quality and outcome benchmarks could be exempted from rules about staffing and qualifications of individual types of professionals.

There are other, smaller monopolies of specialized physician services—certain procedures (such as orthopedics) or other professional services or dedicated facilities (such as sleep centers) that could be made more competitive if entry, limited by specialty-approved residencies, were easier and regulations relaxed. Breaking up such monopolies may be difficult for antitrust law but could be worthwhile.

COMPETITION AMONG HEALTH INSURERS

There is some evidence that insurance premiums are lower for nominal coverage for a given population when private insurers compete than when one insurer has a monopoly. Many private insurers are technically mutual firms, rather than profit maximizers, but their behaviors seem similar. The bulk of private insurance is arranged through employers as part of worker compensation, so the key

issue is how these proxy buyers choose or bargain. Larger employers who cover a majority of workers with insurance should be able to avoid virtually all attempts by insurers to raise their premiums above what is needed to cover claims costs and administrative costs, because those employers typically self-insure and so can, in the worst case, run their own insurance plan and just pay what it costs. Even these self-insured buyers are more at the mercy of insurance plans that have already arranged efficient or low-cost networks, but these employers can buy into existing networks or contract with the same providers that insurer-owned networks do. Smaller employers use regular insurers or the backup provided by exchange plans (if they have fewer than 50 employees), and in this case the problem from less insurer competition seems most severe. States in which the "Blue" plans traditionally had very large market shares are most subject to uncompetitive markets, and some insurance mergers have been successfully challenged under antitrust laws. Since employers should be more aggressive buyers and searchers than consumers, one would not expect large insurer markups to persist unless state regulators prevented buyers from accessing many insurance companies, including those doing business in other states.

Nearly 90 percent of Americans under 65 with private insurance obtain it through their job as members of an insurance group.[18] Employer management puts serious limits on the power of insurers to raise premiums and make higher profits in this market because of the self-insurance option. Greater possibilities for monopoly pricing exist in the individual market, but the Affordable Care Act takeover of much of that market led to regulatory constraints on pricing.

In the face of this system, it should be no surprise that the profit margin on private insurance business is not high, either as a percentage of revenue or as a return on investment. Moreover, any insurance premium per person has to be adjusted for the generosity of coverage; the price is really the ratio of the premium to the expected benefits to be collected, and this is typically not much over 1 (about 1.05 for private large-group insurance). The fraction of insurance premiums in the United States that goes to profit and administrative expenses averages about 14 percent, so any drastic increase in profit owing to monopoly (if it occurs) will at most have a modest percentage effect in total premiums.

Somewhat surprising, then, is the evidence that number of sellers does seem to affect this "premium over premium," or "loading," as it is often called—or at least some surrogate for it. Leemore S. Dafny finds that insurers seem to be able

18. Kaiser Family Foundation, Health Insurance Coverage of Nonelderly 0-64 2017 (dataset), accessed January 22, 2019, https://www.kff.org/other/state-indicator/nonelderly-0-64/.

to charge more for the same nominal coverage to more profitable employers.[19] This is evidence for not only monopoly, but even price-discriminating monopoly among insurers, and a willingness of employers to accept lower profits rather than search for lower premiums or shift insurance costs to workers. She attributes this finding to less efficient shopping by employer-benefits managers, a disquieting threat to the conventional assumption of profit maximization. Dafny, Mark Duggan, and Subramanian Ramanarayanan find that insurer mergers were followed by higher insurance premiums, as employers had fewer alternative sellers to choose from.[20]

The same finding applies to insurance exchanges, even though there is a cap on loading: states or counties with fewer insurance firms have higher charges for the same tier of coverage. That might be just a transfer of higher provider prices owing to their local monopoly, or just a hazardous-duty compensatory payment for an insurer willing to hazard this politically endorsed but risky new market.

Still, in terms of the conventional welfare cost of monopoly leading to distortions in the direction of lower quantity, the subsidies paid for health insurance to people at all income levels make it less efficient and less equitable. Another kind of regulated individual insurance—Medigap—does seem to display poor performance, but not necessarily as a function of numbers of sellers.[21] Amanda Starc shows that, while there are federal regulations that govern the pricing and medical loss ratio of private insurance that supplements traditional Medicare, they do not seem to have curbed high profits or administrative costs in some plans.

COMPETITION IN PUBLICLY SUBSIDIZED INSURANCE

The government pays for nearly all the cost of healthcare for certain parts of the US population. Medicare covers seniors, those with failed kidneys, and permanently disabled individuals; Medicaid covers low-income individuals; and the Defense Department and the Department of Veterans Affairs cover soldiers and veterans. At first thought, the large public payment share might indicate that

19. Leemore S. Dafny, "Are Health Insurance Markets Competitive?," *American Economic Review* 100, no. 4 (2010): 1399–1431.

20. Leemore S. Dafny, Mark Duggan, and Subramaniam Ramanarayanan, "Paying a Premium on Your Premium? Consolidation in the US Health Care Industry," *American Economic Review* 102, no. 2 (2012): 1161–85.

21. Amanda Starc, "Insurer Pricing and Consumer Welfare: Evidence from Medigap," *RAND Journal of Economics* 45, no. 1 (2014): 198–220.

these populations are lost to competition. But that is not the case because it is possible to use vouchers as a vehicle for transferring the subsidy to individuals, then allow them to buy their care or insurance in a competitive market. The best example of using vouchers was for subsidizing college education for returning GIs after World War II (and up to the present). Eligible veterans could get predetermined-value vouchers or grants which could then be used to cover all or part of the cost of going to any legitimate college or training institution. The veterans were only constrained to spend at least as much on education as the amount of their voucher. They could then add to it, save money if they found a lower-priced college program, and explore the full range of higher-educational offerings America could supply. Even though government financing was a very large part of the cost, government regulation and collective choice influenced very little—only the dollar amount of the voucher and the qualifications for suppliers.

This model of offering people choice with a publicly subsidized but predetermined budget to finance that choice has been fairly common in recent years as a voucher program. One application was in the United Kingdom, where people covered by the NHS could choose among subsets of doctor-hospital combinations (so-called "NHS trusts") for their care, rather than being assigned geographically or in some other way. Work by Carol Propper and others shows that these new arrangements increased quality and satisfaction without increasing costs.[22]

Another possible success story is the Medicare Advantage program, which allows every Medicare beneficiary to choose among a large number of private plans armed with a voucher equal to an estimate of what the person would have cost under traditional Medicare. Nearly a third of beneficiaries now choose these plans, which have been shown to offer better benefits at lower prices (sometimes "zero premium"), along with some options that charge an additional premium but do more and cover more. Some of those reductions come about because healthier people are attracted by their benefits, but recent research suggests that most savings are passed through to lower premiums or better benefits in competitive markets, although not in geographic areas where fewer plans are offered.[23] There has been some selection by lower-risk beneficiaries into these

22. Propper, Burgess, and Green, "Does Competition between Hospitals Improve the Quality of Care?"; Propper, Burgess, and Gossage, "Competition and Quality"; Gaynor, Moreno-Serra, and Propper, "Death by Market Power"; Feng et al., "Association between Market Concentration of Hospitals and Patient Gain Following Hip Replacement Surgery"; Aragon, Castelli, and Gaughan, "Hospital Trusts Productivity in the English NHS."

23. Cabral, Geruso, and Mahoney, "Do Larger Health Insurance Subsidies Benefit Patients or Producers?"

plans, since their offerings are tailored to appeal to those who are healthy, though plans cannot underwrite or reject applicants with preexisting conditions.

In the Medicaid program, there has been some use of private firms at the level of individual beneficiary choice, but much less than in Medicare. A more typical setting is one in which private managed-care plans compete for Medicaid contracts from the states. Now the majority of Medicaid beneficiaries is covered by private managed-care firms, rather than interacting with or being managed by a state bureaucracy. Effectiveness is yet to be definitively established, but states seeking to rein in medical spending growth are more likely to choose such plans.[24]

WHY COMPETITION CAN GO WRONG AND WHERE IT DOES GO WRONG

These modest success stories raise some hope, but there is still a profound skepticism of competition in care and insurance markets among public health experts, providers, governmental bureaucrats, and health policy advocates. They are inclined to give government at some level a presumption of unselfishness in performing major tasks, and they distrust markets.

This skepticism of markets is not unfounded, because the problems of low quality and high and growing costs exist in many places in the private sector of the American healthcare system. The consolation to advocates of competition is that direct attempts at government control, like government-imposed regulatory limits on building new facilities or expanding certain professions, often do worse than market-like arrangements when they have any impact at all. So a system with less competition than we currently have does not seem desirable, but the United States does not have any shining ideal model or medical market to point to.

Why doesn't competition always work in healthcare and insurance? One major answer is, because some of the competitive preconditions are absent even when there are large numbers of buyers and sellers. There are three major categories of market distortion:

1. Open-ended subsidies to private insurance, which lead to overly generous coverage.
2. Imperfect buyer information for both care and insurance.
3. Legal monopolies through patents and the FDA.

24. Victoria Perez, "Effect of Privatized Managed Care on Public Insurance Spending and Generosity: Evidence from Medicaid," *Health Economics* 27, no. 3 (2018): 557–75.

SUBSIDIZED DEMAND WITH COMPETITIVE SUPPLY AND DISTORTED PRICE SIGNALS

The most universally accepted criticism of the private health insurance system in the United States is the open-ended tax break given for obtaining part of one's compensation as health insurance. The tax laws permit both the employer-paid premium and any employee premium to be free of income and payroll taxes, thus in effect subsidizing more spending on more generous insurance with a subsidy that is larger for high-income workers with higher tax rates. The expected effects occur: almost all private insurance is for nonpoor workers and their dependents obtained through employment, that insurance has generous benefits, and it also has high administrative costs because buyers pay as little as 50 cents on the dollar. If the insurer supply side responds to this subsidy by selling more generous coverage (as it does), that coverage will stimulate higher levels of medical care spending—consumers will seek care because insurance pays for it, and not search so much for lower-priced sellers because insurance covers them.

This system creates some potential paradoxes. Shouldn't this inefficient and inequitable subsidy be removed? That would be done by taxing insurance benefits as income, but taxing health benefits sounds undesirable to voters, as does any increase in taxes. However, taxpayers would gain if the extra taxes thus collected were used to reduce tax rates on all parts of income and wealth. The return would on average equal the extra taxes, but taxpayers would choose less costly insurance and care, so they would be ahead by the amount of cost saving on insurer administrative costs and lower spending from avoiding low-value care. Of course, if some government used the tax savings for low-value public spending, the gain would be attenuated, but that would not necessarily happen.

Removing the tax subsidy provides a gain whether the insurance and care markets are competitive or not, but the gain is larger if subsidies are removed and markets are made more competitive at the same time, because that change will lower excessive use and high premiums and prices at the same time.[25]

Another setting in which more competition can make things worse is if an insurer sets too high a price in an FFS system. This is more likely to characterize Medicare than Medicaid but can also happen in private insurance, especially among "Blue" plans. That higher price makes suppliers of care who are interested in profits want to attract higher numbers of patients. If hospitals must compete, they may do so by investing inefficiently in new technology that

25. Charles E. Phelps and Stephen T. Parente, *The Economics of US Health Care Policy* (New York: Routledge, 2017).

attracts both doctors and patients, while physicians may try to "induce demand" by giving overly favorable statements about the benefits from additional care they can furnish, either in their offices or in owned facilities. The best cure for this is to lower the administered prices or fees to diminish providers' temptation to overdo it, but less competition may also serve to hold down some of the excess. Still, overall evaluation is a little tricky.[26] If healthcare providers are to be overpaid, patients would likely prefer that they get back some of that overpayment in amenities or greater convenience, rather than the providers taking it as a monopoly profit—even if patients' first choice would be to receive the overpayment as cash. This is especially likely to be the case for Medicare, which beneficiaries get nearly for free.

IMPERFECTLY INFORMED CONSUMERS OR SELLERS

The most difficult problem is consumers who have imperfect information about provider prices and quality. Such incomplete information can create market power for sellers such as physicians, even if there are many of them, because consumers know the quality level of their current seller better than that of other potential sellers they could switch to. That imperfect information allows the current seller to raise price above cost without losing all customers, since many fear that quality from some other seller may be worse than what they currently receive. In this setting,[27] the extent to which markets can approach ideal competitive equilibrium depends on how much information buyers can easily obtain about the idiosyncratic dimensions of quality from different sellers, their "search efficiency." If the way buyers obtain information is by asking friends and neighbors about their experience, a larger number of sellers may paradoxically make getting good information more difficult; with a given number of friends in a town, the average number of friends who can tell a buyer about a seller's quality or price goes down as the number of sellers goes up.

It is obvious that if an increase in sellers is combined with better information to patient-consumers, there will be more chance for consumer gains, but devising how to bring the latter about has proven challenging. It has been hard to collect information on measures of quality or price for different sellers. Even

26. Martin Gaynor, Deborah Haas-Wilson, and William B. Vogt, "Are Invisible Hands Good Hands? Moral Hazard, Competition, and the Second-Best in Health Care Markets," *Journal of Political Economy* 108, no. 5 (2000): 992–1005.
27. Mark V. Pauly and Mark A. Satterthwaite, "The Pricing of Primary Care Physicians Services: A Test of the Role of Consumer Information," *Bell Journal of Economics* 12, no. 2 (1981): 488–506.

when there is data on price transparency or quality transparency, it has been difficult to get consumers to pay attention to it. It has also proven difficult to get low-priced sellers to put effort into letting consumers know about those low prices. Perhaps they fear retaliation from other sellers if they are too aggressive—a fear that can be heightened if government forces them to publish their prices. This is still a conundrum with no easy solution at the provider-market level.

The other area in which some buyers are not well informed is insurance. Given the opportunity to choose policies that will yield maximum benefits, some seniors do not choose the Medicare Part D plan that does so. Some shoppers are more knowledgeable than others, but the proportion is unknown—only that the more knowledgeable group seems to increase over time.

In insurance markets, however, an additional distortion arises that can be made worse by competition—adverse selection. Adverse selection occurs if potential buyers know how they vary in expected benefits from a given nominal insurance policy. If insurers cannot observe this variation in risk but price to cover the cost of the average risk, high risks will seek to buy generous coverage, and low risks will buy less generous coverage or none at all. So adverse selection is another problem of information imperfection, but here the tables are turned: consumers know their risk levels, but insurers do not. The idea is that new plans may "conspire" with low-risk consumers by offering a plan at low risk premiums but with less generous coverage, so that the higher risks in older plans will not purchase it—thus allowing the low-risk consumers to pay less than average and the insurer to profit. One possible solution is prohibiting entry by plans that compete on the basis of risk selection rather than insurance quality.

There are some counterintuitive possibilities here. For adverse selection to be a serious problem in an unregulated insurance market, insurers must be unable to tell who is high and low risk, but insurance buyers must know and be prepared to act on that information. Thus, some consumer sluggishness due to imperfect information about consumers' own risk can be salutary.[28] The empirical evidence suggests that without regulatory constraints, private insurers are able to base premiums on risk in an accurate way.[29] In this case, either a monopoly insurer or competitive insurers would risk rate; the monopoly insurer would just charge everyone even more. So in this case, competition does help.

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28. Benjamin R. Handel, "Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts," *American Economic Review* 103, no. 7 (2013): 2643–82.
29. Friedrich Breyer, M. Kate Bundorf, and Mark V. Pauly, "Health Care Spending Risk, Health Insurance, and Payment to Health Plans," in *Handbook of Health Economics*, ed. Mark V. Pauly, Thomas G. McGuire, and Pedro P. Barros, vol. 2 (Amsterdam: Elsevier, 2011), 691–762.

A problem arises if the government requires plans to charge the same premiums for a given nominal plan to all buyers (so-called community rating) even when insurers can tell that some are high risk and some are low risk. Community rating is a mis-targeted effort to make coverage available at reasonable premiums to deserving high-risk individuals. Such regulation-caused adverse selection comes from the community rating requirement, but the problem can be made worse if there are many sellers. It will also be made worse if insurers are allowed to offer a variety of plans, since any opportunity for choice is an opportunity for adverse selection.

What ensues in reality is a cat-and-mouse game in which regulators try to offset or forbid plans from attracting lower-risk individuals, while plans eager for profit and the lower-risk individuals themselves seek to get around mandates, risk transfers, so-called reinsurance, and standardized benefits and actuarial values. There are alternative ways of preventing a situation in which someone who has become a high risk would have to pay very high premiums—either with subsidized high-risk pools or with guaranteed renewable coverage, in which people pay somewhat higher premiums when they are low risks to hold down the premiums they would have to pay if they unexpectedly became high risks. That is, compared to either community rating or single-period risk-rated coverage, risk-rated insurance with guaranteed renewability along with high-risk pools can do a superior job of protecting against the risk of reclassification at higher premiums when unexpected high risks strike. Economic research to support this assertion is growing,[30] but the second-best practical way to deal with risk variation and still maintain insurance choice and administrative efficiency in competitive insurance markets is far from settled.

With either or both of these safeguards in place, competition among insurers, if it can be achieved, would drive the system toward the lowest administrative costs consistent with pleasing customers. Most employees at large firms do have choice in coverage, and employers who find it worth the extra cost can offer more variety if worker preferences vary. What form real health-insurer competition might take is still very unpredictable because the market is in flux. There are now many more versions of insurance available than when, in many states, Blue Cross was the only option, but the market has yet to sort out the ones that can deliver more value. There is no marketing pitch that "15 minutes can save

30. Mark V. Pauly, Howard Kunreuther, and Richard Hirth, "Guaranteed Renewability in Insurance," *Journal of Risk and Uncertainty* 10, no. 2 (1995): 143–56; Sebastian Fleitas, Gautam Gowrisankaran, and Anthony T. LoSasso, "Reclassification Risk in the Small Group Health Insurance Market" (NBER Working Paper No. 24663, National Bureau of Economic Research, Cambridge, MA, 2018).

you 15 percent or more on your health insurance," even though that is often true in individual insurance markets.

SYSTEMS, NETWORKS, AND COMPETITION

There appear to be no serious barriers to entry or economies of scale in the risk-pooling function of insurance, but different firms—both insurers and medical-care delivery systems—have adopted or been encouraged to adopt networks and systems to hold down premiums, protect people from high out-of-pocket costs, and improve the quality of care for a given population. Such consolidation may impede the market's ability to offer choices. One common model is a managed-care model in which the insurance plan chooses (in effect) how much care of what type it wishes to offer in different circumstances, and then uses both (1) a narrow network of hospitals and doctors who have bought into the plan's care limits and prices and (2) patient cost sharing for out-of-network care to achieve a given outcome. Moreover, the government has encouraged ACOs, integrated entities that offer care to an enrolled and insured population in a community. These developments potentially challenge the arithmetic of competition, but they can also potentially improve the coordination and quality of care for those who remain in the plan or network.

Think of a city with three hospitals and 300 doctors. If all hospitals and all doctors are treated equally by a multitude of insurance plans, there can be competition in provider markets. But now suppose an entity such as an insurer or a health system forms a network or ACO with two of the hospitals and 200 of the doctors. The number of competing hospitals and doctors will have shrunk. If another insurer signs up the remaining hospital and the 100 leftover doctors, there will only be two sellers of insurance and medical care in the city, too few for competition.

In large cities, such rearrangements need not inhibit competition as long as antitrust enforcement is watchful and regulations do not encourage excess consolidation. Plans could compete in terms of offering different mixes of access to care of moderate benefit but moderately high cost, traded off against the lower premium that comes from rules that lead to frugal care. Consumers or employers on behalf of their employees could choose the most preferable quality-cost combination. In the most transparent framework, plans could announce their rationing policy in terms of dollars per quality-adjusted life year (QALY) they seek to supply, apply this rule to new technologies offered at varying prices, and

allow consumers to select. In effect, buyers could choose their own rationing rules, or none at all, depending on the price they were willing to pay.

Very low-cost plans would be available to workers that would cover only those services whose cost per QALY was $50,000, and other plans would pay for care as long as its cost effectiveness met a standard of $200,000 per QALY. The former plans would have a much lower premium than the latter, but consumers could choose what rationing rule they wanted to govern their care. Recently, CVS Caremark has announced the availability of a drug formulary that excludes effective drugs whose high prices mean that the implied cost per QALY is above $100,000 (however, with breakthrough drugs excepted).[31]

As noted above, such a potentially advantageous system is more difficult to imagine in smaller cities and rural areas. In both big and small cities, for example, plans will compete in part on the basis of the effectiveness of their within-plan IT systems, but they will be reluctant to share that information if their members seek care from out of network. The permissiveness, cost, and timeliness of data may differ across systems—not a problem in large areas where consumers can choose, but potentially a serious problem if the only two systems in a town refuse to offer a data-sharing system. The government has stepped in with stiff requirements for "interoperability" of data, not just in small cities but nationwide, thus making it harder for systems that seek a model of integrated care to avoid "leaking" members to other providers who furnish cost-ineffective care at high prices. There is no easy solution to this dilemma even in a static setting, and less so when systems seek to innovate but avoid being copied.

TWO CHEERS FOR COMPETITION

What does the evidence suggest so far? The most fundamental finding from empirical research is that medical competition matters—for quality, for price, and for cost of both healthcare and health insurance. Even in the case of insurance, where market power should be hard to attain and retain, the evidence suggests that greater concentration (fewer sellers) increases prices. For healthcare, the impact of competition among suppliers of care depends in part on the form and level of insurance financing. If insurance sets an (administrative) price, competition leads to higher quality but also higher cost. When insurance is competitive, coverage, insurance payment, provider prices, and provider quality are all

31. CVS Health, *Approaches to Making Drugs More Affordable*, August 2018, https://cvshealth.com/sites/default/files/cvs-health-current-and-new-approaches-to-making-drugs-more-affordable.pdf.

decided simultaneously. Compared to supply with more market power, competitive supply tends to lower price, whereas higher levels of insurance coverage tend to increase price. Quality generally follows price, so (compared to market power) competitive provider markets can lead to either low price and lower quality, or high prices and higher quality. There is no evidence that competition ever leads to high price and low quality.

Limits on provider competition sometimes come from public regulation (of organizational forms or processes, or of quality directly) or from natural monopoly. Either way, imposed limits on competition rarely lower price, but they sometimes raise quality over a more competitive outcome. It is difficult to say whether competition produces offsets in terms of the value of quality changes versus the value of price changes. However, the proposition that markets where competition is possible and buyers are reasonably well informed will lead to efficient outcomes (whatever are the values of price, cost, or quality) is a powerful one. The outcome is as good as it is going to get, and any change, at a minimum, will sacrifice quality, affordability, or access. Regulated outcomes are almost never superior to market outcomes along all dimensions of qualities that matter, price levels, or price growth and new technology of higher quality. "Two cheers for competition" might be the best summary of these outcomes.

PUBLIC POLICY TOWARD COMPETITION: WHICH WAY IS UP?

The most valid summary of the procompetition case is that more competition should be given the benefit of the doubt. If policymakers know how to make markets more competitive and competitive actors more vigorous, doing so will, more likely than not, increase overall welfare—but by a moderate amount. In that case, there is still a major gain because the impact of more competition should convince people to avoid other alluring suggestions for ways to pick the levels of price and quality, whether through public regulation or through greater provider self-rule.

Changes in market structure often cannot be accomplished (because, for example, a small town can only support one hospital). Public policy should deter movements away from competition (such as hospital mergers or a single vertically integrated coordinated-care plan) in order to keep things from getting worse. But it is less clear whether governments can enact policies that encourage more competition. Government should not get in the way of emerging competition, despite fears of lower quality, and it should block limits on competition where it can.

Probably the best way to reform the supply side of healthcare and health insurance is, paradoxically, to make the demand side work better. In part this means finding ways to improve consumers' access to information, whether through enforcing price transparency or encouraging proxy buyers like managed-care insurers and well-run employer benefits departments. In larger part it involves removing distortions to current insurance markets, especially the group-insurance tax subsidy to well-off workers and their families, and permitting more choice among different insurance plans. Insurance plans that cause prices to be too high, even when that improves quality a little, should be discouraged; but so should insurers such as Medicaid that set prices so low that quality and access suffer. What is too much or too little should be subject to consumer choice of plan (for private insurance) and careful consideration of taxpayers' desires (for public plans).

The desire to have the best care at the lowest cost probably cannot be satisfied. More plausibly, however, there are ways to make better tradeoffs—either to get much more quality or access for just a little more spending, or to lower spending a lot while sacrificing very little of value. The latter case describes what is likely to happen if the tax exclusion is limited or capped and the supply side is competitive: health plans will introduce more cost sharing, which will inconvenience consumers a little and probably will lead to an occasional avoidable episode with a bad health outcome, but which will also reduce the level of spending enough to make the sacrifice worthwhile. More importantly, it is possible (though as yet unproven) that lowering spending growth would slow the introduction of beneficial but relatively low-value new technology and would significantly bend the cost curve—not down, but to something less steep. These outcomes are not assured; people might decide, even when they pay the full price instead of sharing the cost with the Treasury, to seek new technology. But even in that case, even with spending growth persisting, the result is optimal. It reflects consumer preferences to spend still larger shares of their income on health technology that is worth it to them. Either spending growth will be cut by competitive markets or, if it isn't, it shouldn't be.

A potential positive result occurs if free entry into the drug R&D process brings forth a new product that so improves health as to lower nondrug spending over the years. The new drugs for hepatitis C seem to display this property, and the Congressional Budget Office thinks such offsets are common. Of course, with patent protection retained, at least some of the cost offsets would be captured in higher prices for the drugs that make them possible. The maximum amount of gain requires eliminating patents and FDA exclusivity, but that would

have some unknown cost in the rate of flow of new drugs, in addition to being challenging politically.

Vigorous antitrust enforcement can keep the supply side from becoming less competitive, but it is hard to find public policies to increase competition where it is currently weak. Not much can be done about hospitals in small cities or specialists in narrow specialties. Removal of barriers to entry such as CON, licensure, and community rating in insurance can help if entry would have otherwise occurred. In principle, the absence of competition should lead to high profits that attract entry—but this study has already commented on low insurer profits, and hospitals typically have small margins. Monopoly rents to physicians and drug companies may also be a complicating factor.

The toughest nut to crack is consumer information: consumers need to be motivated to search more for low prices and high quality. The ideal model would be for consumers to be able to choose among many competing health plans and firms that adopt different rationing rules for new and old technology, as described earlier. This would certainly be preferable to a model in which a single national authority picks the cutoff—as in the United Kingdom, where an "advisory" committee has chosen $46,000—because no single limit is likely to be right for everyone. How much values vary among individual consumers is an empirical question, but there is plenty of evidence in the varying choices made among ACA exchange plans that values do vary. For this scheme to achieve its full potential, both insurer competition (including more than one seller of each type of plan) and provider competition are necessary. It might not work as well in rural areas and small towns, but at least some positive outcomes would occur.

INNOVATION IN PRODUCT AND ORGANIZATION

A key issue has to be whether competition in healthcare will lead to innovation that creates greater net value. In abstract economic theory, the relationship between competition and innovation is ambiguous. Innovation can be defined as the discovery of new products or processes that have never been known before. Discovery obviously requires both effort and resources, and the return for those contributions is higher profit than would otherwise be the case. If a new idea can be easily and quickly copied by others, there are two downsides—innovators will have less incentive to invest in new ideas and more incentive to keep such ideas secret after discovery. The system of patents for products is an attempt to change these flaws in incentives: in return for describing their inventions, entrepreneurs can use the police power of government to protect their intellectual property

for a limited period of time. But this temporary monopoly may not be the ideal solution to encourage new ideas, because the possibility of competitive copying can be a powerful incentive to stay one step ahead of imitators and to search for improvements so that the best ideas will emerge.

This ambiguity has had extensive discussion in economics. Two Austrian economists, Joseph Schumpeter and Friedrich Hayek, proposed different scenarios. Schumpeter argued for temporary monopoly to allow innovators to get a measure of the fruits of their discovery, which is indeed necessary if efficient investment in innovation is to be made. However, in Hayek's view, innovation is the primary benefit from market competition because competition would incentivize better ways of doing things and facilitate their development, transmission, and implementation. Competition offers both strong incentives and an invisible hand to select the highest-value discoveries while abandoning efforts that are not going to pan out. Judge Posner has argued that the protectionist argument is not compelling for most industries, but even he allows that patents are necessary for biomedical innovation and is silent on other innovations in healthcare financing and delivery.[32]

It is certainly true that the heavy burden of regulation has stifled some innovations in medical care and specifically in insurance and care system design, especially the disruptive kinds of innovation that affect special interests with connections to regulators. It is also true that now that organized medicine and organized hospitals do not have complete control over insurance, advertising, and pricing, the industry has been awash in promising ideas. Not surprisingly, only a few of them, like managed care and nurses as physician substitutes, have panned out, and this industry has been largely left behind by the IT revolution that transformed banking, shrunk newspapers, and expanded entertainment. There is now considerable ferment in the medical sector over IT, but despite visionary statements, so far most applications have affected only a small piece of the industry and have yet to demonstrate success. Fairly intensive government subsidies and regulatory efforts to promote the sharing of data across service-delivery sites (i.e., interoperability) have not been embraced by many firms who do not want to share with competitors the systems that they have developed for superior within-system coordination. The government in the form of Medicare has also gotten into the innovation business, pushing alternative organizational forms like ACOs and alternative payment methods like bundled payment. But

32. Gary Becker and Richard Posner, "Do Patent and Copyright Law Restrict Competition and Creativity?," *Becker-Posner Blog*, September 30, 2012.

so far, these innovations have met with little success, although they have not crowded out private-sector innovation.

Consider, for example, the idea that information technology can produce radical improvements in medical care (and maybe even health). At base, ideal IT can do two things well: it can improve the transmission of information from patient to doctor, and it can filter that information in ways that lead to better medical decision-making. The transmission part means that it becomes less necessary for patient and physician to be face to face when care is rendered; the patient can be in one location while information is transmitted to one or several health professionals who interpret it. This can save on travel time and ambulance rides, but beyond that, gains are more imprecise. The filtering of information can mean that past records relevant to treatment that physicians currently do not take the time to obtain can be made available at near zero cost, and better protocols and algorithms may lead to better decisions if they can help providers sift through a sea of information.

Technological innovations might lead to better health outcomes, but they might not. Patients might not think it important to find out which hospitals and doctors in their town are most cognizant of information technology and long-distance transmission of information, unless and until that information leads to demonstrable improvements in treatment and outcomes with less bother in the form of patient time, travel, and anxiety. But the point of competition is that people do not have to make this bet collectively or socially. Different firms or entities can offer different mixes of high tech versus warm bedside manner or care coordination assistance to patients and health plans, and patients can decide what works well enough for them. That is, different suppliers can offer different takes on IT (or none at all) and let the market sort it out—which is the primary role of competitive markets. Of course, usable consumer information and motivation to use that information will be key in making sure the outcome is genuinely good rather than superficially impressive. But such choices seem eventually to characterize mature competitive markets; consumers do not need consultants.

Someone is bound to come up with a better idea sometime, but will it flourish in an environment where ideas can benefit patients in multiple care systems but be impeded by insurer efforts to sustain narrow networks in competitive environments? Common sense dictates that innovation is more likely to make headway in a competitive environment than one of government control, but policy and analysis have been unable to come to a conclusion yet about the oxymoronic idea of competition among exclusive (and exclusionary) networks.

ALTERNATIVES TO COMPETITION?

That unregulated competitive markets are likely to do better than unregulated monopoly is useful to know, but it probably will be regarded as beside the point by the market's staunchest critics. They have in mind full or virtually full collectivization of the market, with government collecting funds to pay for medical resources and government deciding how to distribute the care those resources produce. Ignoring warnings about the unavoidable imperfections of full government control, they push ahead for universal health coverage. What are the conceptual pros and cons of this alternative, and what empirical evidence exists about behavior and outcomes under it? This study now goes beyond the idea of market competition per se to deal with governmental alternatives.

The model to be considered (often labeled Medicare for All) is one in which financing comes entirely or almost entirely from taxation that increases the tax share of the consumer's income or wealth; this tax could be progressive (as in the income tax in the United States) or proportional (as in the Social Security tax for incomes below the upper limit). Uniform health insurance coverage with equal nominal benefits is to be funded with these collections, and this insurance pays the price of whatever goods and services it covers in full; there is no consumer cost sharing. The decision of what services, goods, or technologies should be covered is a collective choice that might or might not be delegated to an expert advisory body but ultimately must be supported by some decisive set of voters or their legislators (usually a simple majority against all alternatives taken one at a time, but other political processes are possible). Payments for providers are based on measures of supply—number of distinct services, number of patients served—and payment per unit of measure is to be decided by a similar collective choice. Suppliers will be willing to provide services to the market only if the price is high enough to yield profits or rents in excess of whatever else they could have obtained with their resources. There may also be protocols for the distribution of services to some patients and not to others, rather than guaranteeing supply to all patients who see a positive benefit from the service (e.g., age cutoffs for screening tests, clinical indicators for treatments).

What advantages can flow from this arrangement as opposed to a competitive market? The most obvious one is that the uniformity and universality of insurance coverage would make it unnecessary to use provider resources to determine who gets what coverage (although there will still be administrative costs if there are protocols or other types of managed care). On the buyer side, the use of compulsory taxation means that there will be no billing cost. The imposed nature of the chosen plan means that no information has to be furnished

to consumers about different plans. There will probably be a reduction in explicit administrative costs.

Another potential advantage is that the single plan can use its monopsony market power to negotiate lower prices with providers, especially drug firms. Predicting exactly how bargaining will go and how it will compare with competitive markets seeking multiple buyers is inherently imprecise. Absent price discrimination, the supply curve of services in a market is the average cost curve to the insurance plan, which implies that the marginal cost of eliciting more supply is above the average cost (because price increases have to be paid to all suppliers, including those who would have taken less). If the plan were to choose the same marginal benefit curve as the market demand curve, the governmental monopsony price would be below the competitive price.

A third potential advantage is that full insurance coverage will increase access to care, some of which may be beneficial for patients. This may be thought desirable either because the additional use associated with better access is thought to be worth its cost, or because of a social judgment that the zero-marginal-price, low-marginal-benefit quantity of care is preferable to the market outcome for redistributive reasons.

As already suggested, these advantages will be smaller when consumer preferences for care and insurance are more diverse, and when the demand of better-off consumers for insurance coverage is more responsive. In the first case, the tradeoff is between lower administrative cost and less choice of insurance and care; in the second, the cost is the stimulus to care of low value to the patient and no value to society. The monopsony gain is largely a transfer from sellers of care to buyers of care (compared to competitive markets), accompanied by artificial limits on the availability of services as the lower price causes their suppliers to divert resources to other goods and services.

At the theoretical level, some will benefit from this model of governmental control of private markets. Some will lose, including providers and demanders who would want either more or less care than what could be obtained under the collectively chosen coverage and payment system. Whether the net gain is positive or negative cannot be determined based on theory but requires empirical evidence that is hard to find.

So what does the evidence show? Unfortunately, there can be no randomized controlled trial in a parallel universe of this alternative system for the population of the United States, so one must look either at different countries or at similar programs offered to some but not all Americans and constrained by the need to attract supply away from buyers with private insurance.

One indicator whose virtue of precise measurement is offset by its ambiguity as a guide to welfare is the level and growth of both insurer and medical goods and services spending. Comparisons to other countries on the level of spending are nearly useless as measures of system performance because of differences in prices or wages.[33] The most useful fact is that the fraction of the workforce working in healthcare is fairly similar in the United States to that in other developed countries, so differences in spending are mostly because of differences in wages and, to a lesser extent, more intensive use of technology in the United States.[34] In neither case, however, is less necessarily better, because workers in medical care or patients who benefit from new technology would lose under the governmental systems in other countries. Except for the period 1980–1990, the growth rate of medical spending in the United States has been similar to that in the rest of the developed world.[35]

A potentially more relevant comparison is between the two major governmental healthcare programs in the United States, Medicare and Medicaid. Medicaid largely follows the model of full government control outlined above. Medicare differs from Medicaid in having some beneficiary premium payments (about 15 percent) as part of its insurance financing and a fairly significant fraction of medical spending paid out of pocket unless one purchases Medigap coverage, chooses a generous private Medicare Advantage program, and acquires long-term care insurance.

Medicaid is a program for which people become eligible by having low income and wealth and by falling into certain categories, such as mothers and children, disabled individuals, and elderly individuals. Adults with low income who are not in these categories are still not covered in 19 states. The dependence of Medicaid eligibility on low income means that Medicaid's aggregate numbers enrolled and spending are very much affected by unemployment in the macroeconomy.

Medicaid should have lower spending levels because it has traditionally behaved as a monopsonist, setting lower payment rates for physician services and drugs and negotiating with hospitals. Hospitals are separately subsidized to take Medicaid patients, but physicians who are not subsidized often refuse

33. Gerard F. Anderson, Uwe E. Reinhardt, Peter S. Hussey, and Varduhi Petrosyan, "It's The Prices, Stupid: Why the United States Is So Different from Other Countries," *Health Affairs* 22, no. 3 (2003): 89–105.
34. Mark V. Pauly, "U.S. Health Care Costs: The Untold True Story," *Health Affairs* 12, no. 3 (1993): 152–59.
35. Christopher J. Conover, *American Health Economy Illustrated* (Washington, DC: American Enterprise Institute, 2012).

to accept them, except for a recent period when primary-care payment rates in Medicaid were temporarily raised to higher levels.

Because each state administers its own Medicaid program, there is substantial variation in coverage and cost across states. Some state programs are admirable, as would be expected, given that Medicaid is more generous insurance than that available to any other part of the American population. But the limited physician supply and poor state management and budgeting probably mean that Medicaid is not a model that other Americans would choose for themselves.

Medicare, in contrast, is highly popular, but compared to the single-payer model envisioned at its enactment, it is now quite diverse in its offerings. Only about 15 percent of beneficiaries have only the government-administered insurance coverage. More than 35 percent have private alternative Medicare Advantage plans, and the remainder have coverage for Medicare coinsurance through privately purchased Medigap plans or through Medicaid plans. Hence the level or growth in Medicare program spending or benefits is not a good measure of the level or growth of total spending for the enrolled population, nor is it a good proxy for what might happen under the idealized single-payer model described above.

With that caveat, the empirical evidence suggests two favorable cost outcomes for the program: its growth rate per member has been slightly below the growth of the rest of national medical spending, and its administrative cost as a percentage of benefits is lower than that for the private insurance sector.

The administrative cost reported by Medicare is about 3 percent of benefits, while for all insurances the average cost is about 12 percent. The maximum percentage permissible after the enactment of the ACA is 20 percent of premiums (25 percent of benefits) on individual private insurance, and a similar limit applies to private Medigap coverage. The administrative percentage for private group insurance varies strongly with group size, but it is 5 percent or less for large self-insured groups.[36]

Some costs, however, are ignored in the administrative cost calculation for Medicare. For one thing, it is not charged with the cost of management by its management team, the US Congress and executive policymakers. Probably more important is that the administrative cost of insurances that people obtain to tailor their total package of coverage to their needs—Medigap, and Medicaid coverage for dual-eligible individuals—have much higher administrative cost percentages

36. Pinar Karaca-Mandic, Jean M. Abraham, and Charles E. Phelps, "How Do Health Insurance Loading Fees Vary by Group Size? Implications for Healthcare Reform," *International Journal of Health Care Finance and Economics* 11, no. 3 (2011): 181–207.

than base Medicare.[37] The average cost for the total package is thus close to the level for large group private insurance. In addition, Medicare avoids high selling costs, even though Parts B and D are voluntary, because it collects most of its money via taxes; with a 90 percent tax-financed subsidy, it "sells itself." However, because those taxes are tied to income, economists believe they impose an implicit but real cost on the economy in the form of distorted incentives to earn and report money and especially wage income. This excess burden of taxation is estimated to be at least 20 percent of total tax collections and could be much higher.[38] In addition, the income-related nature of Part B premiums will also distort incentives to work and invest. Finally, the Medicare average annual dollar administrative cost per beneficiary is about equal to that of a privately insured person. The reason is that elderly individuals tend to have more large medical bills, and yet it is not more administratively costly for an insurer to pay a large bill than a small one. Were current privately insured individuals to be transferred to the Medicare system, their smaller average claims would lead to an increase in the administrative cost percentage.

There is no reliable final accounting of these hidden costs of administering Medicare, nor are there estimates of the distortion caused by the tax subsidy to private group insurance. Therefore, it is not possible to make a definitive statement about whether competitive insurance, a private good which would generate no excess burden since it is a quid-pro-quo transaction, overall is more or less costly to the economy than an idealized single-payer, fully tax-financed system. However, the success of private Medicare Advantage plans, which do have additional administrative costs associated with their care management, suggests that what matters to beneficiaries is not administrative cost per se but the value of the total package. The relatively low administrative cost of countries with universal coverage that offer a wide variety of plans (such as Germany and the Netherlands) suggests that the cost of offering options is not as important as the cost of persuading people to buy insurance in a voluntary market system (versus the excess burden cost of compulsory tax financing).

The conclusion is that the administrative cost discussion does not offer a clear advantage either to market or to government. Moreover, any savings that might occur from switching from market to government would be "one time"

37. Federal regulations permit loading and profits on Medigap coverage to be as high as 35 percent, and some plans exceed that. In contrast, traditional (base) Medicare has cost percentages in the single digits.
38. Katherine Baicker and Jonathan Skinner, "Health Care Spending Growth and the Future of U.S. Tax Rates," in *Tax Policy and the Economy*, ed. Jeffrey R. Brown, vol. 25 (Chicago: University of Chicago Press, 2011), 39–68.

and would not affect future spending or premium growth rates. So if there were an advantage to government, it would most likely arise from a better way of controlling spending growth.

As already noted, the growth in Medicare benefits per person has tracked slightly below that of private benefits per privately insured person. No definitive explanations for this past trend or its future path exist, but the usual speculation is that it has to do with Medicare's purchasing power and the political downside of any hospital refusing to take Medicare patients at the Medicare payment rate. In practice, the growth in Medicare benefits from one year to the next is largely determined by political choice of the "annual update factor," a number that specifies by how much a reimbursement for a standardized unit of hospital or physician care will be permitted to rise. This factor is often set lower than what is anticipated for the private sector, and it is projected to fall even farther behind as a result of budget limits built into the ACA and the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), which governs the growth of Part B payments.

The ostensible basis for projecting low growth in reimbursement is an assumption that providers will be able to increase productivity to keep their cost growth for Medicare patients in step with the politically chosen spending growth. More realistically, Medicare payment updates to providers generally take the form, "Here is how much additional money policymakers want to spend on the care you provide next year; do the best you can." So far, despite some hospital exits and a slight trend (matched with louder complaining) for physicians to refuse new Medicare patients, this method has worked to keep spending in line with budgets.[39] Providers do sometimes bring about an increase in volume that makes the cost savings a little less, but doing so often leads to a reduction in the next annual update.

Up to this point, traditional Medicare's lower payment growth has not generated the access problems that Medicaid has experienced, has not seen a doctors' strike as other countries have, and for the most part has not seen obvious reductions in quality. The exception is the kidney dialysis program, which did experience higher mortality when payments fell behind cost, and providers responded by reducing the time on dialysis—until regulation limited that course of action.[40] So far, so good—but there is considerable concern that the increased shortfall between

39. John Reichard, "MEDPAC's Take: Hospitals, Doctors Should Get a 1 Percent Bump in Payment Rates," *Commonwealth Fund*, November 15, 2018.
40. Avi Dor, Philip J. Held, and Mark V. Pauly, "The Medicare Cost of Renal Dialysis: Evidence from a Statistical Cost Function," *Medical Care* 30, no. 10 (1992): 879–91.

Medicare reimbursements and what are forecast to be private reimbursements in the future may lead to more serious, Medicaid-like effects on access, especially access to physician care and to more costly but more beneficial new technology.[41] However, it is by no means certain that private insurers will allow their payment rates and their total benefits to rise by much more than Medicare over the next few decades of dramatic cuts in Medicare provider payment growth.

Does the power of collective choice to limit provider payment growth in a fully public system to whatever level policymakers prefer constitute an advantage for such a system over a private competitive market? There is some basis for concluding, based on the previous discussion, that the growth rate of private insurance payments (given removal of the tax subsidy) should reflect a proper balancing of the gains from higher payment (mostly access to new technology) compared to its cost—that growth in spending will reflect a consumer preference to increase spending on insured healthcare rather than to have a larger income to spend on other goods.

There is no such assurance for a collectively chosen rate of growth. In other countries with nearly universal socialized medical spending, the budgets for that spending tend to respond to other considerations, ones that affect government spending on other public goods and the tax collections needed to finance all. When Canada's federal government ran into fiscal problems, it cut payments to the provinces for its "Medicare for All" program, whereas UK Prime Minister Tony Blair presided over a substantial increase in spending in the NHS because the tax money was there and citizens were complaining. However, beyond the undebatable conclusion that collective choice will be risky and uncertain because politics are risky and uncertain—and to a greater extent than markets would be—it is hard to be definitive.

The widespread abolition of markets and replacement by government decision-making and administration is definitely overkill, but reasonable people can differ about where to set the dial for the power of government regulation when full competition is infeasible or when consumers cannot be perfectly informed. Trial and error should replace ideological certitude, and an approach that gives markets the benefit of the doubt would be a sensible one. Outrage is likely to be a poor guide to policy making in either direction. Having competitive markets as a backup in ambiguous settings and a first choice in the places where most Americans live would be the best policy.

41. Centers for Medicare and Medicaid Services, *2018 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*, 2018.

WHAT'S NEW? LOOKING UNDER A COMPETITIVE CABBAGE LEAF

The economic theory of perfect competition gives us the heartwarming conclusion that, if all of the competitive conditions are present in a market, its equilibrium will be efficient. There will be no need, and in fact it will be a waste of time, to look further for methods to lower cost and improve quality. But this is a bloodless, static model of competition. The competitive market's staunchest defenders, the Austrians Mises and Hayek, have more to say: they suppose that a process of scrambling for advantage by motivated and informed entrepreneurs will lead to the discovery of new knowledge about better ways to do things.

However attractive this proposition is in concept, and however much evidence from other industries supports it, this dynamic model has not been in evidence for medical care delivery and the financing system in the United States or other developed countries. Why has this industry been so timid (compared to others) when it comes to innovation, and would those prospects be different in a more competitive future?[42]

Some easy answers have to do with the greater presence of government and the more intense public-policy scrutiny that implies. One answer is that the source of much change in this sector for more than the last half century has either come from government or been reined in by appeals to government. With nearly half of the funds in the sector paid by taxpayers, and with a massive tax subsidy to private-group insurance providing a foundation for regulation of that part of the market, this should perhaps not be a surprise. But a quick tour through the history of health insurance and payment innovation may inspire some guesses about whether and how the healthcare sector would change if there were more competition.

The major development in this sector that occurred more than 50 years ago was the invention and spread of service benefits insurance. The initiation of what was to become the Blue Cross model of hospitalization insurance in 1929 fostered the idea that insurance would cover all or almost all of the cost of insured services. That model got a boost in the 1930s when many states passed legislation to give tax breaks and special treatment to health insurance or prepayment plans that covered hospital care and doctor care in the hospital. This kind of insurance got an even bigger boost after World War II when federal tax law was changed to confirm the exclusion of group health insurance premiums from workers' taxable incomes.

42. Mark V. Pauly, "Wussinomics: The State of Competitive Efficiency in Private Health Insurance," *International Journal of Health Care Finance* 12, no. 3 (2012): 235–45.

That model of nearly full coverage and little choice of insurance plan was the template for Medicare in 1965, but Medicare did involve a major change in extending coverage to outpatient and office-based physician services, a model soon copied by private insurance plans. Alarm at the rising cost of care, premiums, and taxpayer burden prompted a move by Medicare to a bundled payment model for hospital inpatient care in 1983, the Diagnosis Related Group (DRG) model. This model was also gradually incorporated into private coverage replacing negotiated per-day rates. The 1990s saw the major private-sector initiative in healthcare, the development of aggressive Health Maintenance Organization (HMO) models that used provider incentives and rules to hold down spending. But both the embrace of this model by the Clinton administration and the provider and patient backlash against limitations soon tamed its cost-control effects. Other developments of note were the spread of drug insurance coverage since 2000 in private insurance and (in 2006) in Medicare and then, of course, the model of government-run exchanges. These exchanges socialized the sale of private insurance bought by individuals not in employment-based groups, along with (largely prospective) changes initiated by and for Medicare to limit its spending growth while sustaining quality.

Except for the HMO interlude, the story is one in which private firms, whether insurers or providers, looked to government in general and Medicare in particular for validation of any new ideas they might have. The long-term story on spending growth in the 1990s shows a brief slowdown as private insurance purchasers were largely transferred to some kind of managed care, though often to kinder and gentler (but less effective) preferred-provider organizations (PPOs). Then growth resumed at a rate slightly below its trend from Medicare initiation to the 1990s, but still at a rate much above the growth of GDP or national income, interrupted only by the 2008 recession. The ability to bring about large-scale and persistent innovation over this period has been largely confined to government's efforts to manage its Medicare insurance plan, with any private efforts, such as mandatory second surgical opinions and corporate wellness programs, falling by the wayside.

Why has the healthcare sector been so resistant to innovation in payment and delivery, and what would it take to change? The most obvious explanation is that innovation tends to be disruptive, and status quo pressure groups allied with politicians have intimidated private pioneers; private insurers play it safe by seeking the cover of Medicare approbation for their own plans. The HMO lesson was a hard one and has not slipped from private insurers' memories, even before

the ACA exchanges' underperformance reminded them yet again of the dangers of dealing with a government that is unpredictable and unwilling to take blame.

Any innovation has downside risk, in the form of either money losses or harm to first customers. Moreover, the high failure rate of new ideas, as evidenced by the small proportion of drug ideas that make it to market, means that the road to progress in insurance (and payment design and management as well) has to be littered with wrecks. But that is a difficult message when there is high political scrutiny on top of somewhat above-average business risk.

So how has such innovation progressed in the last few years? The Obama administration set up an office for Medicare innovation, staffed with knowledgeable and motivated people who would use the government Request for Proposal method to direct funds toward what they and their advisers regarded as promising innovations. Many things were tried at a cost of billions of dollars. The final verdict on all of these is not in, as yet, but the United States now has five years of experience with some of them and the benefit of rigorous evaluation. The record does not support the hypothesis that this is a good method for developing and testing breakthrough innovations. Not all of the measures can be discussed here, but it is sufficient to note that four of the most prominent—patient-centered medical homes, ACOs, greater consumer choice of insurance (in both Medicare and exchanges), and bundled payment—have had mixed effects. The first two have failed, based on rigorous evaluations, to show major cost savings and at best show modest improvements in quality.[43] Greater choice has led to expansion of the private and popular Medicare Advantage market, but it has caused selection problems in exchanges. Bundled payment, a partial approach to HMO capitation, had some initial success, but like HMOs themselves, that evidence has become less convincing over time.[44] The private sector tried to copy two of these Medicare innovations, private ACOs and group insurance exchanges, and they have not been successful, though they also have not gone away. Probably the most hopeful model has been Medicare Advantage, a voucher plan for Medicare beneficiaries which allows them to take advantage of a competitive private market, but not without some criticism for costing Medicare more than if there had been no option.[45]

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43. Lawton R. Burns and Mark V. Pauly, "Transformation of the Health Care Industry: Curb Your Enthusiasm?," *Milbank Quarterly* 96, no. 1 (2018): 57–109.
44. Advisory Board, "Bundled Payments Did Not Significantly Lower Medicare Spending, Research Shows," July 25, 2018, https://www.advisory.com/daily-briefing/2018/07/25/bpci.
45. Austin Frakt, "Medicare Advantage Spends Less on Care, So Why Is It Costing So Much?," *New York Times*, August 7, 2017.

At present, the record does not seem to support the view that the government can necessarily lead change that does more good than harm in the medical care sector. As long as it owns and manages the large Medicare FFS plan, it needs to be able to alter that plan. But if it does not, any generalized effects on the medical sector as a whole are going to be attenuated, despite changes away from FFS in the private sector.

The one private-sector innovation in this period that seems to be sustainable is the development of narrow-network private insurance plans, a development that was stimulated by the controls on premium growth (implicit and explicit) on exchange insurance plans. This model definitely shows tradeoffs: consumers cannot go to the best doctors or hospitals in town without paying more if they are out of network, but consumers do have lower premiums caused by the lower use rates and prices of providers that are in the network. This model has not, however, spread to group insurance enrollees, perhaps because the tax subsidy counteracts part of any premium savings, or perhaps because many consumers really want full choice among sellers of care.

There is an emerging view among health economists that the solution to the supply-side problems in the medical care delivery and insurance systems will not come from large-scale transformation, but rather from multiple small, sensible changes in what is more or less the current model.[46] Reduction in use of long-term hospitals, more rational cost sharing for drugs, and better methods for helping patients make the transition from hospital to the community all individually appear to do more good than harm, and some even do lower cost while improving quality. Perhaps the view is that policymakers should focus on these trees rather than trying to redesign the entire forest. Much of the discussion focuses on the shrinking but still large traditional Medicare program as the intended recipient of advice. An alternative model of how such evidence-based suggestions—which have often been ignored by Medicare and health managers in the past—might be implemented would be through competing providers and especially health insurers, where multiple changes can be feasible and swift (not requiring an Act of Congress, pages of regulations, and months of public commentary) and where there may be willingness to take risk. It remains to be seen whether private insurers can be this agile; there are examples of new entrants trying new models and approaches (such as Oscar insurance), but none have yet gotten beyond capital burn and hype.

46. Margot Sanger-Katz, "How to Tame Health Care Spending: Look for One-Percent Solutions," *New York Times*, August 30, 2018.

However, given a choice among competitive insurance plans, most consumers prefer plans that use restrictions on choice of provider to lower premiums. This preference leads to the general question of the future form of competition and raises a paradox: The individual insured in a narrow-network plan does not have choice among all or even most competitive providers in the market area. Instead, the consumer has a choice among competitive insurance plans with different networks and with as much good information as Obamacare "navigators" could muster—and usually chooses a plan that would restrict choices when and if illness occurs because it is cheaper. For many consumers, the model of regulated managed care, where they can choose among different "private-sector regulators" and regulatory policy by picking insurance plans, may be their preferred model of the future—rather than a single regulator under which everyone must live. This model is one in which competition among insurers is the most important element, and in which informed choice at the time of insurance purchasing substitutes for free choice at the time care is sought. There is strong evidence that choice among insurers is of value to consumers.[47] Strictly managed care is unlikely to be the universally preferred model; some consumers may prefer to self-regulate by selecting high-cost-sharing plans that pay for all providers rather than choosing a regulator in advance of illness and then having to abide by that choice. But these considerations suggest that the possibility for effective competition in insurance markets is key to good functioning of the system.

CONCLUSION

There is some evidence that entry by new insurance companies with a good idea is no longer blocked or discouraged by the need for establishing political bona fides. The Oscar insurance plan, backed with a lot of venture capital money, has gotten a toehold, though it remains to be seen whether its nonhassle business model is viable. Some large nationwide insurers have entered markets where previously they had no presence, including but not limited to United. They are experimenting with physicians and advanced-practice nurses practicing up to the limit of their training as a way, once again, to get the primary–preventive care model to work. Some interesting developments are occurring in plans that try to get patients to be more aware of price differences, although greater price transparency overall can help competitors of price-reducing firms to detect and

47. Leemore S. Dafny, Kate Ho, and Mauricio Varela, "Let Them Have Choice: Gains from Shifting Away from Employer-Sponsored Health Insurance and toward an Individual Exchange," *American Economic Journal: Economic Policy* 5, no. 1 (2013): 32–58.

punish such strategies. Some of these ideas are bound to be effective to some extent, and if they fail, the only direct cost is to their investors and contracted providers; consumer welfare will not suffer if there is an alternative available. And it is this kind of competition among innovative insurance plans that holds our best hope for competitive markets to achieve a desirable mix of price, quality, and spending growth.

One might reasonably bet on health plans that use different cost-effectiveness thresholds for managed-care rules and adoption of new technologies, higher-deductible health plans with decision aids, and narrow networks able to withstand the "I didn't realize" complaint. But whatever the outcome, if the United States can remove the demand-side distortions of tax subsidies, required community rating (replaced by guaranteed renewability to protect against becoming "uninsurable"), and imperfect buyer information, whatever happens on the competitive supply side will be the best outcome possible, given the information available to entrepreneurs in the field and their knowledgeable suppliers of capital. Imaginative government employees may come up with some ideas that work better for Medicare. The evidence that spending growth is unsustainable will be the advent of greater consumer-voter willingness to move toward effective but more aggressive methods, such as serious cost sharing for nonpoor insured individuals, stricter managed care, and greater control over beneficial but costly new technology. A competitive market is likely to be the richest source of new ideas for cost containment, with necessity the mother of invention, if competition will be allowed to work. Cutting spending (not cost) by cutting wages for medical workers and investors, as has happened in most other developed countries, and reducing administrative cost of insurance by abolishing choice, are unlikely to be permanent solutions in the United States—as they have not proved to be permanent solutions in other countries. Markets may be the best solution when all the others have been tried and failed.

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