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Costs *Per Se* May be a Misleading
Policy Objective**

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I. MOTIVATION

There is nearly universal agreement that a restructuring of the health care system is required, particularly with regard to the public financing of health care. Longevity has greatly increased, and the current public health care programs are not designed to sustainably afford such life-long additional expenses. But the policy discussions are almost always in terms of the total cost of health care, which is not, *per se*, a socially useful metric. Costs can rise for a number of good, socially desirable reasons.

In this article I argue that, instead, policy should focus on the price per constant quality of health care. There are reasons to think that prices may be inefficient in this market, and there may be policy options that could address that. Allowing for interstate competition between insurance companies would likely reduce premiums and significantly reduce health care costs.

Still, even “reducing price” must be attempted judiciously. Measures punishing innovation may allow for lower prices in the present, but to the extent they discourage current R&D, they will represent a large social cost in the future.

II. REDUCTION IN HEALTH CARE COSTS OR TOTAL EXPENDITURES AS THE POLICY OBJECTIVE

Health care spending per capita in the United States has been increasing as a percentage of GDP and has roughly tripled as a share of GDP over the past forty years, reaching almost 15 percent in 2005, with projections to exceed 19 percent by 2019. Furthermore, the United States spends more on health care per capita than other industrialized countries.² While such rapid growth is widely seen as a cause for great concern, much of the discussion on cost growth fails to address whether “more rather than less” health care expenditure is necessarily bad. For example, a 2008 report by the Congressional Budget Office (“CBO”) seems to interpret the higher U.S. spending as intrinsically bad, implying that at the very least, the marginal benefit from one additional unit of health care is lower than its marginal cost (if not even zero), and hence should not be pursued.

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² CBO (2008); Referring to the CBO’s comparison, these countries are Luxembourg, Norway, Switzerland, Austria, Iceland, Belgium, France, Canada, Germany, Australia, The Netherlands, Denmark, Sweden, United Kingdom, Italy, Japan; CBO (2008), Table 1, page 5.

What is important to address is if Americans are “getting more for higher spending.” If the marginal benefit of spending is less than the marginal cost, then there is no social gain to spending more. But if benefits exceed costs on the margin, then increasing costs are not, in and of themselves, “bad.” This of course would not mean that cost growth cannot and should not be slowed down, and that there aren’t inefficiencies in the system or other markets such as insurance which should become more competitive in order to allow a slowdown in health care costs. But, even granting all of that, if marginal benefits exceed marginal costs, society’s net gain from increased expenditures will be positive. In a recent article,³ I present a summary of findings from multiple studies providing empirical evidence that benefits have, in fact, been larger than costs. In that same article I also present new evidence from two different empirical comparisons between benefits and costs in the United States versus a group of other countries and show that higher spending in the United States has been correlated with higher benefits.

Having provided such empirical evidence, in the current article I focus instead on whether “total costs” is the appropriate way to measure value to society in this industry. In my view, total expenditures or total costs is a poor metric for policymakers. It is easy to imagine good, positive changes that every consumer of health care would welcome but which increase—not decrease—total costs. And it is easy to imagine policies which are designed to curb costs but which result in less (and less effective) health care for all.

We must be very careful to distinguish costs from prices. Prices inform the relative expense of one item or procedure over another. It is perfectly reasonable to lament the high price of health care. Most people would prefer to face lower prices than higher, and most of us would welcome a general decline in the price of health care since that would mean, all else equal, that more people could more easily afford more of it.

Costs, on the other hand, are total expenditures—the total dollars spent. Cost is price times quantity. If the price of an aspirin is \$1, many might feel that this is too high since some can’t afford it. When we buy 10 aspirins, the total cost becomes \$10. But if the price *falls* to \$0.75 and we then buy 20 (either because some of us buy more than we did before, or because new people are able to afford it for the first time), the total cost *rises* to \$15. Once we realize that a decline in price could lead to an increase in total expenditures, we are forced to question whether expenditure is a useful metric for policy.

In fact the two goals—reducing costs and increasing coverage—are generally incompatible. Suppose we decide that it is socially unacceptable to have so many uninsured people. We take the most direct route and subsidize their purchase of health insurance. This has the immediate effect of raising costs, since we now have more social dollars chasing the same amount of health care. It will also have the effect of raising prices, since initially there are no more doctors, nurses, or hospital beds than there were before the subsidies began. Prices—including salaries to doctors and nurses—are likely to rise, and this will, over time, lead to more people entering the health care industry and thus a greater supply and consumption of “health

³ Rosa Abrantes-Metz, *Benefits to Society from Health Care Expenses: Do we Get More for Higher Spending?*, (May 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2079133.

care.” The policy will succeed—we will see an increase in coverage—but only through the mechanisms of higher prices and higher costs.⁴

If policy makers decide that the rise in price and cost is itself undesirable and prohibit those increases through price controls and the like, an increase in actual coverage might not materialize. With more dollars chasing the same amount of health care, but with prices not permitted to rise due to controls, new providers of health care are not likely to enter the industry and there will be no effective increase in coverage. The end result would be rationing. Roughly speaking, if we have \$10 chasing 10 apples, the price will settle at \$1 per apple. If we subsidize apple consumption and have \$20 chasing 10 apples, the price will be bid up, but that will induce more people to grow more apples, so we may for example end up with 16 apples available at \$1.25 each—a greater consumption of apples, yes, but at a higher price and greater total cost. If we prohibit the price of apples from rising, then we will have \$20 chasing 10 apples at \$1 per apple—so there will not be enough apples to go around. There will be “apple rationing.” This same logic applies to the market for any “widget,” including health care.

As illustrated with our aspirin example above, it is easy to imagine a drop in price leading to increased costs by inducing a more-than-offsetting increase in consumption. This is the first indication that cost can be a poor metric for discussing health care reform. Consider now a second example: new products. Suppose a pharmaceutical breakthrough leads to a treatment for a condition which was previously untreatable. People now spend money on something which literally didn’t exist before. “Health care costs” therefore rise. But no one is worse off than before the breakthrough, and many people are better off. Shouldn’t this be a welcome development?

Finally, consider a third example: better products. Imagine a new medical procedure doubles the 5-year survival rate for a heart transplant, but costs 50 percent more than the old procedure. Many rational consumers prefer the newer, better, more expensive procedure. “Health care costs” again rise. But by what rationale would this seem socially undesirable?

This illustrates a very subtle point even about price. We must always ask, “the price of what?” In this last example the simple answer is “the price of a heart transplant,” and that price went up. That seems “bad” until we realize that the new heart transplant is really very different from the old. The expected survival rate doubled. The price per expected year of survival actually went down. If something is better, it is not necessarily bad that it has a higher price. What we really need is a largely hypothetical “constant quality price.” It seems more appropriate to evaluate proposals on the level of this constant quality price. Is it not almost tautological that anything that lowers the price per unit of quality is socially desirable, even if it leads to an increase in the total “cost” of health care as conventionally measured?

An important study addressing this question is that by Lucarelli & Nicholson,⁵ in which the authors build a quality-adjusted price index for colorectal cancer drugs. Given that the

⁴ This analysis is abstracting from the fact that prices might be originally inflated due to market power by insurance companies. As in any other market, the road to a decrease in market power is competition, which can be attained by allowing purchase of insurance plans across states. If it is true that prices are inflated due to such absence of competition, then it is possible to increase coverage and decrease prices through measures that eliminate protections to insurance companies.

average price of treating this type of cancer with chemotherapy increased from about \$100 in 1993 to \$36,000 in 2005, due largely to the approval and widespread use of five new drugs between 1996 and 2004, the authors question whether the substantial increase in spending has been worth it. They construct a price index for colorectal cancer drugs that takes quality into account of each drug on the market and the value that oncologists place on the drug quality. It is shown that a naïve price index, which makes no adjustments for the changing attributes of drugs in the market, greatly overstates the true price increase. By contrast, when quality is taken into account through a hedonic price index and quality-adjusted indexes, the authors find that prices have in fact remained fairly constant over the 13-year period studied. The new treatment may be 360 times as expensive, but it appears to be about 360 times as effective too.

There is reason to think that prices are unnecessarily inflated in health care, and addressing these inefficient prices will as a corollary lead, *ceteris paribus*, to reduced costs. The growth in insurance markets over the last several decades and the consequent reduction in patient cost sharing over time may have contributed to inappropriately high prices. Consumers may not be as well informed about their options in health care as they are in other markets. Evaluating quality is difficult, and prices are not usually posted so that consumers can make their choices with full information.⁶ Finally, it is likely that the absence of competition by insurance companies across states may contribute to inflated prices as well.⁷

Arguments for lowering health care costs today are typically based on a premise that consumer surplus generated by the use of a particular technological advancement will increase if its price decreases. Of course this ignores the production side and the returns to those who invest in research and development. When evaluating such a policy, one must keep both static and dynamic efficiencies in mind. In order to have better technology in the future, firms must invest in R&D today, and hence prices charged today must generate sufficient revenues to offset these investments. Only then can new and better technologies be delivered in the future and thereby increase future social welfare. This trade-off between static/short-run efficiency (that we might lower costs today and transfer social surplus from producers to consumers today) and dynamic/long-run efficiency (that we will have less innovation tomorrow and thus lower-than-otherwise social surplus tomorrow) must be carefully balanced in any policy discussion.

Jena & Philipson⁸ show that consumer surplus is a poor guide for dynamic welfare in situations when new technologies involve costly R&D. Consider the rationale behind the patent system. The extent to which the net total social value of a new drug is captured by producers in the form of profit determines the level of R&D and hence dynamic efficiency. The reason patents are in place is precisely to transfer consumer surplus to producer surplus in the short-run so that

⁵ C. Lucarelli & S. Nicholson, *A Quality-Adjusted Price Index for Colorectal Cancer Drugs*, National Bureau of Economic Research Working Paper No. 15174 (2009).

⁶ D. Cutler, *Technology, Health Costs and the NIH*, National Institutes of Health Economics Roundtable on Biomedical Research, p. 8 has also pointed the relevance of potentially inflated factor prices in the growth of health care expenses, page 8 (1995).

⁷ J. Cochrane, *Health-Status Insurance: How Markets Can Provide Health Security*, Policy Analysis No. 633, Cato Institute (2009).

⁸ A. Jena & T. Philipson, *Innovation and Technology Adoption in Health Care Markets*, American Enterprise Institute for Public Policy Research (2008).

efficient dynamic decisions on R&D can be made, thus enhancing consumer surplus in the long run. Jena & Philipson argue that, since patents are socially beneficial despite lowering consumer surplus in a static analysis, optimal policy in general cannot focus only on consumer surplus. The authors also present a theoretical model and find that, in order to promote dynamic efficiency, the optimal policy is to encourage the sort of “costly innovation” in the long run which will allow for further increases in consumer surplus in the future.

Jena & Philipson demonstrate this point in the context of HIV/AIDS medications. Under the existing U.S. system, innovators involved in the development of HIV/AIDS medications in the late 1980’s were capable of appropriating surplus from their breakthroughs. Jena & Philipson estimate that consumer and producer surpluses from these drugs amounted to \$1.33 trillion and \$63 billion, respectively. This means that the producer kept 5 percent of the total net social surplus from these socially important breakthroughs. If producers are not able to keep even 5 percent, they are likely to develop fewer important drugs, and the loss to consumers and the society as a whole will far outweigh whatever savings may be realized in the short-run.

III. CONCLUDING REMARKS

It has been argued that the United States spends more on health care as a percentage of its GDP than any other industrialized country, and that presumably is inherently bad. In a previous article I provide empirical evidence showing that more spending in the United States has, in fact, been correlated with higher benefits.

In this article I argue that much of the debate over health care reform in the United States has been focused solely on short-run (even static) analysis without consideration for longer-term efficiencies. It is important to keep in mind that it is today’s costly innovation that allows for better quality health care tomorrow. Imposing policies that punish innovation as a way to reduce costs can lead to lower costs today, but it may not be true that they will lead to lower costs tomorrow—particularly if cost is measured in units of quality care. Indeed, I argue that “total health care expenditures” is not the relevant metric for policymakers, but rather that the price of one unit of constant quality health care is a more appropriate concept. Unfortunately, to my knowledge such measures have yet to be appropriately developed.