

## Selected Topics on Health Care Markets from the Economics Literature

This introduction is limited to literature freely available on the web with the exception of the attached tables and a few links that are to abstracts.

For those who only have time to read one thing on market competition in health care [Scott Gottlieb's Congressional Testimony](#) offers a reasonable summary of the issues in a non-technical form. The [same hearing](#) included testimony from the American Hospital Association and the American Medical Association.

Two sets of tables are attached for later discussion. The first set of attached tables lists the papers that have addressed the role of technology in health care spending growth. It is taken from the 2011 review of the economics literature on health care spending growth by Chernew and Newhouse.<sup>1</sup>

The second set is from a survey of the literature on competition in health care markets by [Martin Gaynor and Robert Town](#), current through approximately 2011. It contains a number of tables summarizing the work that has been done on the operation of various kinds of health care markets.<sup>2</sup>

[Pope \(2013\)](#) has an extended lucid discussion of the experience with regulated pricing aimed at a general audience. He makes the important point that just the fact that hospitals currently charge Medicaid and Medicare lower prices does not mean that they can lower prices for all customers or that government has superior skill at bargaining. He discusses efforts to control prices in Maryland and Japan along with efforts to move away from centralized pricing in the Netherlands.

### ***Pharmaceuticals as an Example***

The market for prescription drugs has been looked at in depth.

[Kessler's \(2004\) review](#)<sup>3</sup> of the empirical literature on pharmaceutical pricing and the effects of various kinds of price controls is an accessible introduction to some of the issues.

[Danzon and Furukawa \(2005\)](#)<sup>4</sup> show that studies of pharmaceutical pricing need to account for a variety of product differences including package sizes, age of the drug, national income, and strength of the formulation being sold.

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<sup>1</sup> Michael E. Chernew and Joseph P. Newhouse, "Health Care Spending Growth," in *Handbook of Health Economics*, vol. 2 (Elsevier, 2011), 1–43, <http://linkinghub.elsevier.com/retrieve/pii/B9780444535924000013>.

<sup>2</sup> Martin Gaynor and Robert Town, "Competition in Health Care Markets" (Cambridge, MA: National Bureau of Economic Research, July 2011), <http://www.nber.org/papers/w17208.pdf>.

<sup>3</sup> {Citation}

<sup>4</sup> P. M. Danzon and M. F. Furukawa, "International Prices And Availability Of Pharmaceuticals In 2005," *Health Affairs* 27, no. 1 (January 1, 2008): 221–33, doi:10.1377/hlthaff.27.1.221.

[Danzon and Keuffel \(2007\)](#)<sup>5</sup> provide a compact guide to the likely effects of various regulatory proposals in theory and in practice. Compact does not mean short as there are many regulatory strategies currently in use.

### ***Value of Spending Growth:***

A variety of authors have estimated the value of spending growth. Some find that it is worthwhile, some do not. Results often are sensitive to the metric used for value and the methodological approach chosen. The following two examples are provided to illustrate two different approaches to the problem.

[Hall and Jones \(2007\)](#)<sup>6</sup> were concerned with how people decide to allocate their consumption spending between health and other uses as income increases. They drew upon standard economic theory and the results from previous work. It implied that as people grow richer their consumption rises and they voluntarily devote an increasing share of their resources to health care because they benefit more from increased health care.

Drawing on standard economic assumptions about individual behavior, they find that health care is valuable, and people will forgo large amounts of other consumption provided they believe that spending on health will improve their health. As a result, optimal spending is higher than many people would anticipate.

Their estimates of optimal health shares depend upon the rate of technological change and how much people believe that spending on health will increase their life span at a given age. The resulting model suggests that health spending in 2000 in the US was close to optimal under reasonable assumptions. If life expectancies continue to increase, optimal health spending could rise to about 30 percent of GDP by 2050.

Looked at from this perspective, one can conclude that people should be as concerned about too little health spending as too much. The model explains why health spending as a share of GDP is rising in virtually every industrial economy in the world, and why people in the United States invests in inventing expensive health technologies and devotes so much of its consumption spending to their use.

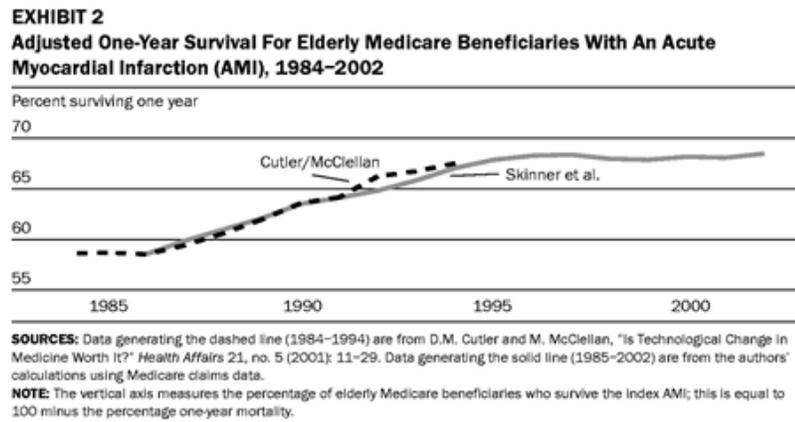
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<sup>5</sup> Danzon, Patricia M. and Keuffel, Eric L., "Regulation of the Pharmaceutical Biotechnology Industry," 2007, <http://core.ac.uk/download/pdf/6654017.pdf>.

<sup>6</sup> R. E. Hall and C. I. Jones, "The Value of Life and the Rise in Health Spending," *The Quarterly Journal of Economics* 122, no. 1 (February 1, 2007): 39–72, doi:10.1162/qjec.122.1.39.

[Skinner, Staiger, and Fisher](#) (2006) approach spending from the perspective that treatments should have a reasonable value per year of life saved and that this should be uniform over wide geographic areas. They use Medicare claims data to estimate the cost per year of life saved for heart attacks. They estimated that treatment had improved fast enough to make rising costs worth it, and that the cost per year of life saved was “less than \$25,000.”

**Adjusted One-Year Survival For Elderly Medicare Beneficiaries With An Acute Myocardial Infarction (AMI), 1984–2002.**



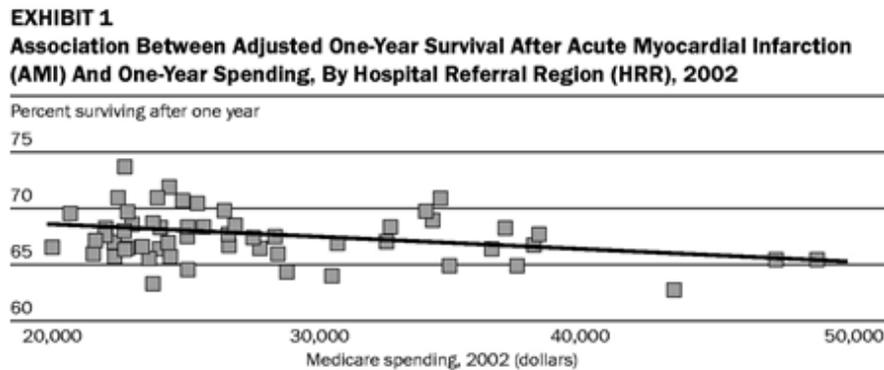
Jonathan S. Skinner et al. *Health Aff* 2006;25:w34-w47

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But claims costs varied widely by region. From this, they concluded that “aggressive cost-control policies

**Association Between Adjusted One-Year Survival After Acute Myocardial Infarction (AMI) And One-Year Spending, By Hospital Referral Region (HRR), 2002.**



Jonathan S. Skinner et al. *Health Aff* 2006;25:w34-w47

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might benefit society by eliminating unnecessary medical care for patients in high-cost regions.”

Most recently, economists have explored what happens to estimates of the value of health care if people are treated as individuals with preferences for health care spending that change as their health status changes, they have different incomes, different tolerance for risk, and different values in general.

Economic theory generally shows that optimal health spending occurs where the marginal benefit from the spending equals the marginal cost of the spending. Preliminary conclusions from research on heterogeneous preferences and biological responses suggest that the evidence does not support an assumption that the value of health spending is constant across individuals. As an example, [Finkelstein, Luttmer, and Notowidigdo \(2008\)](#) use the Health and Retirement Study’s panel data to estimate the effect of chronic disease on the marginal utility of non-medical consumption for people over 50 who are retired and have medical insurance. They find that the marginal utility of consumption substantially as health declines along with health.

[Basu, Jena, and Philipson \(2011\)](#)<sup>7</sup> applied this insight to Comparative Effectiveness Research. They show that when treatments have heterogeneous effects because different patients have different responses to the same treatment and coverage decisions are treatment specific, “precluding important health benefits from accruing to patients for which the losing treatments of CER are most appropriate.” They find that among patients with schizophrenia, CER may have reduced overall health by inducing some patients to switch from treatments that were effective for them to treatments that “won” the CER study because they were more effective on average.

In a 2014 [paper](#), Basu *et al.*<sup>8</sup> conclude that “[b]ecause CER studies describe the average effectiveness of treatments rather than heterogeneity in how individual patients respond to therapies, clinical or coverage policies that respond to CER results may undermine [the patient-centeredness of care that already exists] in clinical practice and generate worse outcomes.”

[Pauly \(2015\)](#) examines how cost effectiveness analysis should be performed and interpreted when insurance coverage has cost sharing. He concludes that

A common view that cost sharing should vary inversely with program cost-effectiveness is shown to be incorrect. A key issue in correct analysis is whether there is heterogeneity in marginal effectiveness of care that cannot be perceived by the social planner but is known by the demander. It is possible that some programs that would fail the social efficiency test at full coverage will be acceptable with positive cost sharing. Combining individual and social preferences affects both the choice of programs and the extent of cost sharing.

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<sup>7</sup> Anirban Basu, Anupam B. Jena, and Tomas J. Philipson, “The Impact of Comparative Effectiveness Research on Health and Health Care Spending,” *Journal of Health Economics* 30, no. 4 (July 2011): 695–706, doi:10.1016/j.jhealeco.2011.05.012.

<sup>8</sup> Anirban Basu et al., “Heterogeneity in Action: The Role of Passive Personalization in Comparative Effectiveness Research: Heterogeneity in Action,” *Health Economics* 23, no. 3 (March 2014): 359–73, doi:10.1002/hec.2996.

In a study of database entries on studies of comparisons of effectiveness and cost-effectiveness, [Glick et al.](#) found that disagreement in almost 20 percent of cases.

[Kravitz et al. \(2004\)](#) published a longer discussion of the relationship between evidence-based medicine, heterogeneity of treatment effects across people, and the problem with averages. The guidelines they suggest for evaluating the “value of treatments across people with heterogeneous responses include responsiveness to treatment, vulnerability to adverse effects, and utility for different outcomes.”