BEFORE EMERGENCY BOARD No. 243

Between

The Railroads Represented
By The National Carriers’ Conference Committee

And Their Employees
Represented By
American Train Dispatchers Association,
International Association of Machinists and Aerospace Workers,
International Brotherhood of Electrical Workers,
Transportation Communications International Union,
Transport Workers Union,
And
The Rail Labor Bargaining Coalition.

National Mediation Board Case Nos. A-13569; A-13570;
A-13572; A-13573; A-13574; A-13575; A-13592

CARRIERS’ EXHIBIT No. 9:

REPORT OF DR. JOSEPH P. NEWHOUSE
JOHN D. MACARTHUR PROFESSOR OF HEALTH POLICY AND MANAGEMENT, HARVARD KENNEDY SCHOOL, HARVARD MEDICAL SCHOOL, HARVARD SCHOOL OF PUBLIC HEALTH

October 10, 2011
REPORT OF JOSEPH P. NEWHOUSE

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COST SHARING FOR MEDICAL CARE

Executive Summary

This Report reviews and analyzes the substantial empirical evidence that increasing patient cost-sharing at the point of service results in less use of health care services without adversely affecting an average patient’s health and well-being, except in certain low income, poor health patient populations. The railway workers, as a group, do not fall within the low income, poor health exception. Accordingly, in my view, the railroads’ proposed increases in cost-sharing, principally by means of the initiation of deductibles and coinsurance, will result in lower utilization of medical services without any negative overall impact on the average employee’s health and well-being.

Much of the empirical evidence regarding how cost sharing affects use of medical services and health outcomes is the result of a seminal study (in which I was the primary investigator) called the RAND Health Insurance Experiment. The results of that study (as well as more recent studies) have led to the following conclusions:

1. Out of pocket costs to patients affect medical use and expenditures. The higher the patient’s out of pocket costs for a particular service, the less that service is used;

2. These reductions in use are relatively constant across services;

3. Although higher out of pocket costs result in decreased use of medical services, they do not materially affect average patient health and well-being in most patient populations;

4. The exception to (3) is seen among low income persons in poor health. Such patients experienced a disproportionate share of any adverse health effects associated with increased cost sharing;

5. Increased cost sharing for physician visits and outpatient care generally did not result in higher hospitalization costs downstream; and

*Professor Newhouse’s curriculum vitae is attached as Appendix 2.
6. Increased cost sharing for emergency department visits reduced use without any measurable adverse effects; indeed, evidence suggested that use for minor conditions was primarily affected.

These conclusions suggest that the rail carriers’ proposals will, on balance, result in cost savings while at the same time not adversely affecting the average railway worker’s current state of health and well-being.

Introduction

The steady growth of medical spending has led many employers to raise the amount of cost sharing at the point of service in order to keep insurance premiums down (called “benefit buy downs” in the industry) and to encourage patients to consider costs when making decisions about using health care services. For example, in 2011, 31 percent of employees with single coverage had a deductible for in-network services of $1,000 or more, up from 10 percent in 2006 (Figure 1). The increase in cost-sharing by patients has raised the issues of (a) whether plans will realize a decrease in what their costs otherwise would have been and (b) whether patients may fail to seek care in a timely fashion or fail to comply with treatments prescribed by physicians, thereby jeopardizing their health.

Economic theory suggests rational (utility-maximizing) consumers value the marginal unit they buy at the price they have to pay; it follows that if they do not buy something, they value it less than its price. In this context the implication is that if patients cut back on services as out-of-pocket prices rise, they did not value the services enough to buy them. In other words, consumers view increases in cost sharing for medical care as no different than increases in the price of gasoline when oil prices rise or in the prices of fresh fruit and produce when bad weather in growing areas reduces supply.

To be sure, some doubt the applicability of the rational consumer assumption in the medical care context (Arrow 1963). According to this view, many patients seek a physician’s care precisely because they do not know whether what ails them is serious or not. Of course, when making a decision to seek treatment rather than to wait and see if their condition improves, consumers make a judgment that on balance they expect the medical service to be worth the cost they pay, including any gain from knowing that their condition is not serious ("better safe than sorry"). But the soundness of the judgments that consumers make when faced with varying prices of medical services is ultimately an empirical question. Accordingly, it is possible to determine, through empirical evidence,
whether a reduction in consumption of health care services that results from increases in cost sharing is generally positive, negative, or neutral in terms of health outcomes.

Empirical Evidence on the Effects of Cost Sharing from the RAND Health Insurance Experiment

Much of the evidence on how cost sharing affects both the use of medical services and health outcomes comes from the RAND Health Insurance Experiment (HIE), a large scale project financed by the federal government that I directed (Newhouse and the Insurance Experiment Group 1993). This project was carried out in the 1970s and early 1980s. Despite the three decades that have passed since the RAND Experiment ended, however, the Congressional Budget Office (CBO) continues to use its findings to estimate the costs of proposed health insurance legislation. In December 2008 the CBO said: “The best available evidence about the effects of cost sharing on spending for health care comes from the RAND Health Insurance Experiment, a large-scale study that was conducted between 1974 and 1982.” (Congressional Budget Office 2008), p. 62. In an earlier (December 2006) publication on high deductible health plans, the CBO said: “The decades-old RAND Health Insurance Experiment provides the best available evidence about how a high-deductible design would reduce total spending for a broadly representative set of enrollees.” (Congressional Budget Office 2006). These statements by the CBO focus on the Experiment’s results on health care spending, which is natural given CBO’s mission. In addition, however, the RAND Experiment is the only randomized experiment of this nature to collect data on health outcomes.

The continued prominence of the RAND Experiment’s results in the policy debate over health care financing led the Kaiser Family Foundation in 2006 to commission Jonathan Gruber of MIT, a prominent health economist, to review the principal findings of the RAND Experiment (Gruber 2006). He began by saying:

“First, to what extent do higher patient co-insurance charges reduce use of medical care? Second, to what extent is that reduction harmful in terms of personal health? Third, how do these effects vary by patient characteristics such as income and health status?

To obtain answers to these questions, researchers typically turn to the results of one of the most ambitious and important social experiments in U.S. history, the RAND Health Insurance Experiment (HIE). In the 1970s, the HIE randomly assigned several thousand families to insurance with varying levels of patient co-insurance, and then followed them over a five-year period to evaluate the effect on
their medical utilization and health. The results of that study are still the gold standard for evaluating the answers to these questions.” (emphasis added)

Gruber summarized those answers - as would I - as follows (italics and bold in original):

“Lesson #1: The Co-Insurance Rate Matters for Medical Utilization and Expenditures”

“Lesson #2: Co-Insurance Effects are Relatively Constant Across Services”

“Lesson #3: Higher Co-Insurance Rates Don’t Have Adverse Health Consequences for the Average Person”

“Lesson #4: Differential Effects on the Sick and Poor”

He also noted some other findings of interest, which included:

“No Offset Effects: One common rationale for low patient co-insurance is the existence of so-called ‘offset effects,’ whereby high co-insurance, by causing individuals to forgo efficacious preventive care, will raise costs through inappropriate care later on (particularly at the hospital)…. There is no evidence for offset effects.”

Later evidence has modified and amplified some of Gruber’s four “lessons,” but in the main subsequent studies have found results that are largely consistent with the lessons of the RAND Experiment. In what follows I sketch the design of the RAND Experiment and describe its findings on spending and health outcomes, as well as consider some more recent evidence.

The RAND Experiment randomly assigned approximately 5,800 persons in 2,000 families who lived in one of six sites around the country to one of several different health insurance plans. The plans principally varied the coinsurance rate the families faced; i.e., the percentage of the total bill that the families were expected to pay out-of-pocket. At one extreme, families paid nothing for medical care (“free care” or a zero coinsurance rate). Other families faced coinsurance rates of 25, 50, or 95 percent, but all these latter families had a stop-loss provision, or a ceiling on family out-of-pocket spending in a year. The ceiling was set at $1,000 per year, but was scaled down for low income families. The 95 percent coinsurance plan, the least generous plan, was approximately a plan with a $1,000 family deductible. The $1,000 was held constant through the lifetime of the Experiment.
Personal health care spending per capita rose from $727 in 1978, roughly the midpoint of the Experiment’s data, to $6,796 in 2009, a factor of over 9. Thus, spending $1,000 on medical care in the 1970s was approximately like spending $9,000 today. Put another way, the 95 percent plan was like a family deductible of $9,000 today, well above anything being considered in the current railway negotiations. The scope of covered services in the Experiment was very broad, meaning virtually all medical services were covered.

One plan differed somewhat from the others and is of particular relevance for the railway workers; it had 95 percent coinsurance to a maximum of $150 per person or $450 per family (again in 1970s’ dollars). Whereas in the other plans the coinsurance rate was the same for hospital and physician services and drugs, in this exceptional plan the cost sharing applied only to outpatient services; inpatient (hospital) services were free. Including this plan made it possible to address the question of whether improving insurance coverage for outpatient services saved money on inpatient services. By comparing hospitalization rates in this plan with the plan in which all services were free, one could see if better insurance for office visits in the free care plan would induce patients to seek care at an earlier stage in their illness when it could be treated more cheaply and thus would save money on inpatient services. Such a saving would exemplify what Gruber termed an offset effect. There is a theorem in economics that a change in the amount used of one good or service as a function of the price of another should be the same if the changes in spending are small relative to income. In other words, if decreasing the coverage of outpatient services decreased the use of inpatient services, it should also be the case that decreasing the coverage of inpatient services should decrease the use of outpatient services. This is relevant to the case of the railway workers, where the proposal is to increase cost sharing for inpatient care as well as for laboratory and imaging services, leaving copayments for office visits unchanged.

All the participants in the Experiment were under 65 years of age and were not institutionalized at the time of enrollment. In those two respects they are similar to the railway workers. They enrolled in the Experiment for either three (70 percent) or five years (30 percent). (The eight year span of years between the start and end of the Experiment reflects the staggered starting dates of the various sites.) Families in the bottom third of the income distribution were mildly oversampled in the Experiment, but are substantially underrepresented among the railway workers.

The results from the RAND Experiment showed that out-of-pocket prices do matter to the use of medical services (Figures 2-4) (Gruber’s Lesson #1). Relative to free care, total expenditures on medical care, including insurance payments, were around 30
percent less when consumers faced (approximately) a large deductible (in the 95 percent coinsurance rate plan) and about 20 percent less when consumers faced 25 percent coinsurance with a stop-loss feature (Figure 2). Those consumers who had to pay something out-of-pocket made one to two fewer visits per year to physicians than those with free care (Figure 3), and were hospitalized less than those in the free care plan (Figure 4). All these differences were statistically significant at conventional levels. The fewer hospitalizations and visits were the drivers behind lower expenditures by people on plans with higher cost sharing; the amount of services used per physician visit or per hospital stay did not much vary across the plans.

Both total spending and the rate of hospitalization among those in the individual deductible plan, the plan that applied cost sharing to outpatient services only, was intermediate between the free care plan and those plans that applied coinsurance for all medical services (results for the individual deductible plan are shown in the far right column labeled IndD in Figures 2-4), Figure 3. Thus, making all medical services free (relative to only making inpatient services free) added to overall cost. This is the opposite change from what is proposed by the carriers, in the sense that this plan varied cost sharing for outpatient services holding constant cost sharing for inpatient services. Nonetheless, it is reasonable to speculate that raising inpatient cost sharing while holding the outpatient cost sharing constant will also save money. The results for the individual deductible plan compared with the other plans formed much of the basis for Gruber’s comment about no offset effects.

As indicated above, the Experiment gathered a great deal of information about the health outcomes of the participants in the HIE. For the average person the difference in the use of services across plans did not materially affect their health (Gruber’s Lesson #3). This was true for both adults and children, for whom different outcome measures were collected. To reach this conclusion the Experiment gathered data on many different measures of health, including self-assessed health, physical health, mental health, a number of physiologic measures of health such as blood pressure and cholesterol, health habits such as smoking and weight, and self-assessed pain and anxiety. The principal comparison was between those with free care and those on the cost sharing plans.

Almost all of the outcome measures showed at most only a small difference in health between the two groups. Results are in Figure 5; the reader should see Appendix 1 for more detail. The notable exception to the general lack of any meaningful outcome effect was blood pressure among adults, where the mean diastolic blood pressure at the end of the HIE was 78.0 mmHg for those with free care and 78.8 mmHg for those
assigned to plans with some cost sharing. But even this exception, when measured at conventional levels, is statistically insignificant.9

Moreover, for purposes of the carriers’ proposals here, it is important to note that the blood pressure and mortality effects—the only aspects of health that showed any adverse effect as a result of higher cost sharing—were disproportionately concentrated among low income persons in poor health (defined as those who fell in the bottom 20 percent of both the income distribution and the health measure; this group was about 6 percent of the sample), and for them it translated into about a 15 percent difference in predicted future mortality rates. Unlike the overall risk of dying measure, this difference in this disadvantaged group was statistically significant at 5 percent. In fact, the difference in this group was sufficiently large to account for all of the 1 percent difference in the full sample described above. Because few, if any railway workers are in both the bottom 20 percent of the income distribution and the bottom 20 percent of health status, the evidence suggests that railway workers will not on average experience adverse health effects. Interestingly, the majority of this difference in blood pressure was not attributable to the difference in visit rates among the plans (though some was), but rather to a physician’s failure to diagnose hypertension conditional on a visit.

Likewise, results for children showed no measurable effect of cost sharing on outcomes. Accordingly, as with adults, the evidence suggests that adverse effects could be ruled out with a high degree of confidence.

At first glance, these findings appear to fit a simple economic paradigm of a rational consumer rather well; free care induced a substantially greater use of services that, with the exception of the blood pressure result, appeared to be of little or no benefit to the participant’s health or state of mind. Closer inspection of the data, however, revealed a more complicated story. Given the physician’s diagnosis, the RAND group defined instances in which medical care should be efficacious, e.g., an antibiotic for a bacterial condition, and instances in which it should not, e.g., an antibiotic for a viral condition. When analyzed in this fashion, cost sharing appeared to reduce both efficacious and non-efficacious care by approximately equal proportions. But this finding creates a puzzle; if cost sharing reduced efficacious care, why was there no effect on health status?

One possibility is that the measures of efficacious care or of health status were invalid or unreliable. Apart from the extensive tests that RAND group did to show that the measures were of high quality, there is no reason why any measurement error should differ by the plan to which the family was assigned, especially for the many physiologic
measures, where the results came from machines or nurses who were blind to plan. The more plausible explanation is that some of the additional medical care among those with free care actually harmed them, an effect the medical literature terms iatrogenesis. For example, about half of all antibiotic use on all plans was for viral conditions. Not only is it known that such use is not efficacious, it is also the case that in a certain fraction of patients there will be adverse reactions.

More generally, there is now a considerable body of literature on medical error and on poor quality care. For example, McGlynn, et al. found that only a little over half of patients seeking care in a nationally diverse study appeared to receive care in accordance with practice guidelines (McGlynn, et al. 2003). Other studies suggest that areas that deliver substantially more services to Medicare beneficiaries actually show lower quality care (Fisher, et al. 2003a; Fisher, et al. 2003b). In the late 1980s researchers carried out a study of medical errors during a hospitalization in New York state that caused either death, disability lasting beyond the hospital stay, or disability that prolonged the hospital stay. The results were disturbing; researchers found 3.7 percent rate of medical error, with around a quarter of those errors negligent (Brennan, et al. 1991). (The remainder of the errors were caused by medical care but did not meet a legal standard of negligence.) A similar study was carried out in Colorado and Utah among patients hospitalized in those two states in 1992 with similar results (Thomas, et al. 1999). With quality of American medical care now a well recognized problem (Institute of Medicine 1999; Institute of Medicine 2001), it is plausible that the incremental care received by the generally healthy people enrolled in the HIE stood as much chance of harming them as helping them. By contrast, the incremental care received by the sick poor may have had a much greater chance of being beneficial, consistent with the hypertension result in the sick, low income population.

One final result of the RAND Experiment is worth mentioning; work-loss days per employed person per year were about two-thirds of a day higher in the free care plan than in the cost sharing plans, although this difference was not significant at conventional levels. Thus, increased cost sharing may reduce the amount of time off the job due to illness. The evidence on this point is somewhat tempered because restricted activity days for reasons of health, which were measured for all persons not just the employed (i.e., including non-working dependents), were higher in the 95 percent coinsurance plan than in the free care plan and also in the Individual Deductible plan, and those differences were significant at the 5 percent level. Because restricted activity days included non-working dependents, however, the result of the measurement is less meaningful in the context of railway employees than the result of measuring work-loss days.
If the changes in cost sharing proposed by the carriers are adopted, the railway worker medical program that the carriers propose to modify will by law be required to eliminate cost sharing for preventive services. The RAND Experiment showed that the utilization of preventive services does respond to cost sharing. The increased use of preventive services resulting from their becoming free of charge to the railway worker may help to mitigate any lingering concerns about possible adverse health effects from the proposed increases in cost-sharing for other services.

More Recent Evidence

The RAND Experiment ended three decades ago, and its cost sharing provisions emulated the typical insurance policies of that time. Since then the nature of cost sharing has changed in two ways. First, insurers now typically form physician networks and their drug analog, formularies with preferred and non-preferred drugs. This means patients now pay less to see a physician who is in network or to buy a drug that is on the formulary. At the time of the HIE, there were no networks of physicians outside of a few prepaid group practices, and outpatient drug coverage of any kind was rare.

Second, rather than being uniform across services (e.g., a 20 percent coinsurance rate) cost sharing has become differential by provider (e.g., a $35 copayment for a physician visit, a $10 copayment for a generic drug prescription). In particular, many plans now charge patients a higher amount for emergency department visits than office visits. This is consistent with the finding of the RAND HIE that almost all of the additional emergency department visits in plans with less cost sharing were for minor or non-emergent problems (O'Grady, et al. 1985). For example, Figure 6 shows that the higher rate of emergency room visits for lacerations in the free care plan was almost entirely attributable to lacerations that did not require sutures; the rate of visits for lacerations that did require sutures to close were almost the same in the plan with free care as in the plans with cost sharing. In short, decisions about when to go to the emergency room appeared to match the paradigm of the rational consumer.

Reflecting the newer kinds of cost sharing, more recent studies have looked at differentially higher copayments for emergency room visits than for office visits. Like the RAND Experiment, these studies find that differentially higher copayments discourage emergency room visits with few or no adverse effects. Moreover, use of other medical services does not appear to rise. One study studied the introduction of a $25 to $35 copayment for emergency room visits in 1993 at the Kaiser Health Plan in northern California, whereas previously there had been no copayment at all (Selby, et al. 1996). Per capita medical spending increased by a factor of 2.29 between 1993 and 2009, so the
$25 to $35 dollar copayment of 1993 would roughly equal a $60-80 copayment today. The researchers matched the persons who faced cost sharing for outpatient services with a control group that did not. Based on the emergency room physician’s diagnosis, they also categorized the visits as Always an Emergency, Often an Emergency, Sometimes Not an Emergency, and Often Not an Emergency. Like the results of the RAND Experiment, their results suggested that the higher copayment differentially affected less urgent diagnoses (Figure 7). Because the rational consumer paradigm suggests consumers do not buy goods and services that have a positive value but ones valued at less than the price they must pay, these results also fit the rational consumer paradigm.

Another analysis similar, to Selby et al., also used data from the Kaiser Northern California health plan (Hsu, et al. 2006). Kaiser increased its copayments for emergency room visits for many of its members in the years 2000 and 2001 (Figure 8). Hsu, et al.’s results showed over a 20 percent reduction in Emergency Department (ED) visits for those with a copayment of $50-100 relative to those with free care (Figure 9). Personal health care spending per capita rose 65 percent from 2000 to 2009, so a $50-100 copayment in 2000 would be roughly $85-170 today. Equally importantly, despite the decrease in ED visits, hospitalization rates fell as did mortality.

Conclusions

A great deal of empirical research over the years has established that individuals respond to cost sharing for medical services in the direction that one would expect; charging more generates less use.

Much of the debate on cost sharing, however, is not around whether patients or their physicians respond in how much they use, but how those responses affect medical outcomes. In general, those opposed to greater cost sharing worry about patients not seeking care with high benefits; supporters of it believe that much of the additional care provided as cost sharing falls provides little benefit or may even cause harm.

Our understanding of the effects of cost-sharing on outcomes is best for cost-sharing that charges proportionately for all medical services, meaning that the patient pays a certain percentage of the cost of any medical service regardless of type of service. For that type of plan, higher cost sharing requirements induce less use of all services. The available evidence further suggests for most people the reduced use induced by greater cost sharing does not much affect their health for either good or ill. Because greater cost-sharing induces less use of services in general, one can infer that it reduces the use of some efficacious and some harmful services and that for most people in an
under 65 years of age population these two effects seem to roughly cancel each other out. Belief that additional medical care can actually lead to harm, especially in a general population, has gained more credibility as the evidence has piled up about the rate of medical error and substandard quality of American medical care. Moreover, in the case of copayment for emergency rooms, there is evidence that use falls with little or no adverse consequences.

Most healthcare plans, however, including that of the railway workers here at issue, no longer have the type of cost sharing that varies demand prices proportionately for all services. Instead they rely upon differing fixed dollar amounts for different types of medical services. Like the results of studies where cost-sharing is a percentage of the bill regardless of the type of health service, the results of studies analyzing the type of cost sharing proposed by the rail carriers have shown that the size of these dollar amounts affects use; the greater the dollar amount that patients are required to pay, the less the use of the service. But there is less literature about the effects of changes in the use of medical services associated with this type of cost-sharing on the health of an employed population.

For these reasons, on balance, I conclude that the increases in the proposed cost-sharing for the railway workers should reduce cost below what it otherwise would be and should not have an adverse effect on health outcomes looking across the entire group. That is, while it seems likely that some may experience adverse effects, others will likely benefit by not receiving care that would have adverse effects. Especially because the railway workers are a relatively high income, employed population, the proposed changes will likely result, in the aggregate, in the same overall level of health and well-being.
Respectfully submitted,

[Signature]

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Figure 1

Percentage of Covered Workers Enrolled in a Plan

Exhibit 7.7
Percentage of Covered Workers Enrolled in a Plan with a General Annual Deductible of $1,000 or More for Single Coverage, By Firm Size, 2006-2011

- All Small Firms (3-199 Workers)
- All Large Firms (200 or More Workers)
- All Firms

* Estimate is statistically different from estimate for the previous year shown (p<.05).

Note: These estimates include workers enrolled in HDHP/HSO and other plan types. Because we do not collect information on the attributes of conventional plans, to be conservative, we assumed that workers in conventional plans do not have a deductible of $1,000 or more. Because of the low enrollment in conventional plans, the impact of this assumption is minimal. Average general annual health plan deductibles for PPOs, POS plans, and HDHP/HSO are for in-network services.

Source: Newhouse and the Insurance Experiment Group (1993). Dollar figures for total spending are in 1991 dollars. IndD plan refers to a plan with a $150 individual deductible (to a $450 family maximum) that applied to inpatient services only; outpatient services were free. There was a stop loss of $1,000 in the 25, 50, and 95 percent coinsurance rate plans. The $150 deductible and $1,000 stop loss are in late 1970s’ dollars.
FIGURE 3

Visit Rates by Plan (per person)

25, 50, 95 plans have $1000 stop loss, late 1970s $

Source: Newhouse and the Insurance Experiment Group (1993). IndD plan refers to a plan with a $150 individual deductible (to a $450 family maximum) that applied to inpatient services only; outpatient services were free. There was a stop loss of $1,000 in the 25, 50, and 95 percent coinsurance rate plans. The $150 deductible and $1,000 stop loss are in late 1970s’ dollars. Face-to-face visits exclude claims from radiologists, anesthesiologists, and pathologists.
Source: Newhouse and the Insurance Experiment Group, 1993). IndD plan refers to a plan with a $150 individual deductible (to a $450 family maximum) that applied to inpatient services only; outpatient services were free. There was a stop loss of $1,000 in the 25, 50, and 95 percent coinsurance rate plans. The $150 deductible and $1,000 stop loss are in late 1970s’ dollars. RAP’s are radiologists, anesthesiologists, and pathologists; claims from all three specialties are excluded.
FIGURE 5

Table 5. Predicted Exit Values of Health-Status Measures for an Average Person According to Measure and Plan, and Raw Mean Difference.

<table>
<thead>
<tr>
<th>Health-Status Measures</th>
<th>No. *</th>
<th>Catastrophic</th>
<th>Intermediate</th>
<th>Individual</th>
<th>Deductible</th>
<th>Total</th>
<th>Predicted Mean Difference (free minus cost-sharing)</th>
<th>Raw Mean Difference (free minus cost-sharing)</th>
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<td>(score, 1–100)</td>
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<tr>
<td>Physical functioning</td>
<td>3862</td>
<td>86.0</td>
<td>85.9</td>
<td>84.9</td>
<td>85.3</td>
<td>85.3</td>
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<td>–0.3 (–2.3, 1.7)</td>
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<td>Role functioning</td>
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<td>95.4</td>
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<td>Mental health</td>
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<td>75.8</td>
<td>75.6</td>
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<td>0.0 (–1.0, 1.0)</td>
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<td>Physiologic health</td>
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</tr>
<tr>
<td>Diastolic blood pressure (mm Hg)</td>
<td>3232</td>
<td>79.2</td>
<td>79.1</td>
<td>79.3</td>
<td>79.2</td>
<td>78.5</td>
<td>–0.7 (–1.5, 0.02)</td>
<td>–0.8 (–1.7, –0.02)</td>
</tr>
<tr>
<td>Functional far vision (Snellen lines)</td>
<td>3477</td>
<td>2.55</td>
<td>2.50</td>
<td>2.51</td>
<td>2.52</td>
<td>2.42</td>
<td>–0.1 (–0.16, –0.04)</td>
<td>–0.13 (–0.20, –0.06)</td>
</tr>
<tr>
<td>Risk of dying (score)</td>
<td>3317</td>
<td>1.01</td>
<td>0.98</td>
<td>1.03</td>
<td>1.01</td>
<td>0.99</td>
<td>–0.02 (–0.05, 0.02)</td>
<td>–0.03 (–0.07, 0.02)</td>
</tr>
</tbody>
</table>

*Numbers of persons in various parts of the analysis are dissimilar because noncompleters were not included for physiologic health, weight, or cholesterol level and because of differences among measures in the number of persons with valid enrollment or exit data.

†Numbers in parentheses are 95 percent confidence intervals; an approximate confidence interval is given for role functioning.

Source: (Brook, et al. 1983). Higher values on measures of general health indicate better health. Predicted mean difference refers to adjusting for minor imbalances among the plans; the raw mean differences do not adjust. Except for functional far vision, values are not significant at p = 0.05 (i.e., the 95 percent confidence intervals include zero), although the null hypothesis of no difference in diastolic blood pressure can be rejected with p = 0.06. The difference in blood pressure, however, was concentrated in the low income population; see text. The difference in (corrected) functional far vision, however, is very small; Snellen line 2 is 20/20 vision and line 3 is 20/25; thus the difference between 2.42 and 2.52 is approximately the difference between 20/22 and 20/22.5.
### Table 5. Visit Rates for Sutured and Unsutured Lacerations, under Free-Care and Cost-Sharing Plans.*

<table>
<thead>
<tr>
<th>Plan</th>
<th>Annual Visit Rate/10,000 Persons</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sutured</td>
<td>Unsutured</td>
</tr>
<tr>
<td></td>
<td>Lacerations</td>
<td>Lacerations</td>
</tr>
<tr>
<td><strong>mean ± S.E.M.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free</td>
<td>205 ± 19</td>
<td>248 ± 23</td>
</tr>
<tr>
<td>Cost sharing (25%, 50%, and 95%)</td>
<td>207 ± 20</td>
<td>152 ± 17†</td>
</tr>
</tbody>
</table>

†P<0.01 for the difference between visits involving unsutured lacerations under free care and such visits under coinsurance.

Source: Selby, et al., 1996. In the COPAYMENT GROUP a copayment of $25 to $35 for an emergency room visit was introduced in 1993. This group was matched with two controls groups in which there was no copayment in either year.
FIGURE 8

Source: Hsu, et al., 2006.
FIGURE 9

Table 3: Adjusted Relative Rates of Clinical Events by ED Copayment Level

<table>
<thead>
<tr>
<th></th>
<th>ED Visits</th>
<th></th>
<th>Hospitalizations</th>
<th></th>
<th>ICU Admissions</th>
<th></th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RR            95% CI</td>
<td>RR            95% CI</td>
<td>RR            95% CI</td>
<td>RR            95% CI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial insurance population (n = 2,257,445)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0</td>
<td>1.0</td>
<td></td>
<td>1.0</td>
<td></td>
<td>1.0</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>$1–5</td>
<td>0.962</td>
<td>(0.955, 0.970)</td>
<td>0.999</td>
<td>(0.978, 1.020)</td>
<td>1.010</td>
<td>(0.972, 1.050)</td>
<td>1.086</td>
</tr>
<tr>
<td>$10–15</td>
<td>0.932</td>
<td>(0.922, 0.941)</td>
<td>0.932</td>
<td>(0.905, 0.960)</td>
<td>0.895</td>
<td>(0.845, 0.947)</td>
<td>0.909</td>
</tr>
<tr>
<td>$20–35</td>
<td>0.879</td>
<td>(0.873, 0.886)</td>
<td>0.961</td>
<td>(0.943, 0.980)</td>
<td>0.954</td>
<td>(0.922, 0.988)</td>
<td>0.857</td>
</tr>
<tr>
<td>$50–100</td>
<td>0.765</td>
<td>(0.756, 0.774)</td>
<td>0.902</td>
<td>(0.873, 0.932)</td>
<td>0.946</td>
<td>(0.891, 1.004)</td>
<td>0.903</td>
</tr>
</tbody>
</table>

Source: Hsu, et al., 2006.
REFERENCES


APPENDIX 1

Detail of Health Status/Outcome Results

Figure 5 summarizes outcomes results for adults.\textsuperscript{11} Almost none of these results reaches statistical significance, and precision is such that large effects can be ruled out. For example, the mean of health perceptions showed a difference of 0.6 of a point favoring the cost-sharing plans (i.e., those on the cost sharing plans reported better health); on this index a 5 point difference is equivalent to being diagnosed as hypertensive. More importantly for our purposes, the 95 percent confidence interval around the 0.6 value is from -1.5 to 0.3, meaning that it is very unlikely the Experiment failed to detect a true difference favoring free care of greater than 0.3 points.
Dr. Newhouse is the John D. MacArthur Professor of Health Policy and Management at Harvard University, Director of the Division of Health Policy Research and Education, chair of the Committee on Higher Degrees in Health Policy, and Director of the Interfaculty Initiative in Health Policy. He is a member of the faculties of the John F. Kennedy School of Government, the Harvard Medical School, the Harvard School of Public Health, and the Faculty of Arts and Sciences, as well as a Faculty Research Associate of the National Bureau of Economic Research. He received B.A. and Ph.D. degrees in Economics from Harvard University. Following his Bachelors degree, he was a Fulbright Scholar in Germany. Dr. Newhouse spent the first twenty years of his career at RAND, where he designed and directed the RAND Health Insurance Experiment, which studied the consequences of different ways of financing medical services. From 1981 to 1985 he was Head of the RAND Economics Department.

In 1981 he became the founding editor of the *Journal of Health Economics*. He is a current member of the editorial board of the *New England Journal of Medicine* and a past member of the editorial board of the *Journal of Economic Perspectives*. He was elected to the Institute of Medicine in 1977 and has served two terms on its governing Council. He has been elected a Fellow of the American Academy of Arts and Sciences and of the American Association for the Advancement of Science. He is a past President of the Association for Health Services Research (AHSR), now Academy Health, and of the International Health Economics Association, and was the inaugural President of the American Society of Health Economists. He is a member of the CBO Board of Health Advisers and the Comptroller General’s Advisory Committee. He has served as the vice-chair of the Medicare Payment Advisory Commission, which reviews Medicare payment policy and makes recommendations to the Congress. This Commission resulted from the 1997 merger of two predecessor commissions, the Prospective Payment Assessment Commission and the Physician Payment Review Commission. Newhouse chaired the former Commission and served as a Commissioner on the latter. He currently serves on the Committee on National Statistics and on the Science, Technology, and Economic Policy boards of the National Research Council. He served as a regent of the National Library of Medicine from 1999 to 2003. He is a director of Aetna, Abt Associates, and the National Committee for Quality Assurance.
He was the first recipient of the David N. Kershaw Award and Prize of the Association for Public Policy and Management in 1983, which honors persons under 40 who have made a distinguished contribution to the field of public policy analysis and management. In 1988 he received the Baxter Health Services Research Prize for an unusually significant contribution to the improved medical care of the public through innovative health services research, as well as the Administrator’s Citation from the Health Care Financing Administration. He and his co-authors received the Article-of-the-Year Award in 1989 from AHSR and again in 2006 from both Academy Health and ISPOR, and in 1992 he received AHSR’s Distinguished Investigator Award. In 1995 he received the Hans Sigrist Foundation Prize for distinguished scientific achievement, as well as the American Risk and Insurance Association’s Elizur Wright Award for a contribution to the risk management and insurance literature for *Free for All?*. In 2000 he and his co-authors received the first ZviGriliches award for *Are Medical Prices Declining?* In 2001 he and his co-authors won the Kenneth J. Arrow Award for *How Does Managed Care Do It?*, and in 2003 he won the Paul A. Samuelson Certificate of Excellence from TIAA-CREF for *Pricing the Priceless*. In 2009 he received the Adam Yarmolinsky medal from the Institute of Medicine.
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Harvard University
180 Longwood Avenue
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Harvard University
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Cambridge, MA  02138-5806
Phone: (617) 496-9307
Fax: (617) 496-6886

Born: Waterloo, Iowa- February 24, 1942
Citizenship: USA
**Education**

B.A., Harvard College, 1963 (Economics, magna cum laude with highest honors in Economics)

Fulbright Scholar, Göethe Universität, Frankfurt am Main, Federal Republic of Germany, 1963-1964 (Economics)

Ph.D., Harvard University, 1969 (Economics)

**Employment**

Staff Economist, The RAND Corporation, 1968-1972

Senior Staff Economist, The RAND Corporation, 1972-1981

Head of the Economics Department, The RAND Corporation, 1981-1985

Senior Corporate Fellow, The RAND Corporation, 1985-1988

Deputy Program Manager for Health Sciences Research, The RAND Corporation, 1971-1988

John D. MacArthur Professor of Health Policy and Management, Harvard University, 1988-present (Faculty of Arts and Sciences; Harvard Medical School; Harvard School of Public Health; Kennedy School of Government)

Director, Division of Health Policy Research and Education, Harvard University, 1988-present

Director, Interfaculty Initiative on Health Policy, Harvard University, 1992-present

**Other Appointments**

Lecturer, UCLA Department of Economics, 1970-1972

Faculty Member, RAND Graduate School, 1972-1988
Lecturer, UCLA School of Public Health, 1976-1983
Adjunct Professor, UCLA School of Medicine, Department of Medicine, 1983-1988
Adjunct Professor, UCLA School of Public Health, 1984-1988
Chair, Committee on Higher Degrees in Health Policy, Harvard University, 1991-present
National Bureau of Economic Research, Faculty Research Associate, 1998-present
Center for Basic Research in the Social Sciences, Harvard University, Faculty Research Associate, 2003-present
Honors and Awards

Alfred P. Sloan National Scholar (Harvard College)

Phi Beta Kappa

Fulbright Scholar, 1963-1964

Woodrow Wilson Honorary Scholar, 1964-1968

National Science Foundation Graduate Fellowship, 1964-1966

Institute of Medicine, National Academy of Sciences, elected 1977

Keynote speaker, First World Congress on Health Economics, Leiden, 1980

The David N. Kershaw Award and Prize of the Association of Public Policy and Management, 1983, for a distinguished contribution to the field of public policy and management made while under 40 (first recipient)

*Who’s Who in Economics*, 1st edition (the 640 most cited living economists from 1970-1980); 2nd edition (the 1,280 most cited living economists from 1972-1982); 3rd edition (the 1,000 most cited living economists from 1982-1992); 4th edition (the 1,000 most cited living economists from 1990-2000).

*Who’s Who in America*

Sierra Foundation Distinguished Lecturer, University of Southern California, 1986 (first lecturer)

The Baxter Health Services Research Prize, 1988, for an unusually significant contribution to the improved medical care of the public through innovative health services research

The Health Care Financing Administrator’s Citation, 1988, the Agency’s highest award to an individual who has made a significant contribution to its operations

Association for Health Services Research Article-of-the-Year Award, 1989 (for “The Taxes of Sin: Do Smokers and Drinkers Pay their Way?” shared with four co-authors)

Keynote speaker, Second World Congress on Health Economics, Zurich, 1990

Keynote speaker, First National Health Summit, Sydney, Australia, 1991


Distinguished Investigator Award, Association for Health Services Research, 1992


Carl Taube Memorial Lecturer, National Institute of Mental Health, 1994

Distinguished Fellow of the Association of Health Services Research (initial group of fellows, 1995)

Academic Geriatric Research Center Distinguished Professor for 1994-1995, University of California, Los Angeles, January 1995

Fellow of the American Academy of Arts and Sciences, elected 1995

Hans Sigrist Foundation Prize, for distinguished scientific achievement, Bern, Switzerland, 1995

Elizur Wright Award from the American Insurance and Risk Association for *Free for All? Lessons from the RAND Health Insurance Experiment*, 1995

Association for Health Services Research, Article-of-the-Year, Honorable Mention, 1995
(for “Does More Intensive Treatment of Acute Myocardial Infarction Reduce Mortality?” shared with two co-authors)

American Economics Association, Representative to the American Association for the Advancement of Science, 1995-2000

Alex G. McKenna Lecturer, Center for Economic and Policy Education, St. Vincent’s College, November 1995


George Zuidema Lecturer, University of Michigan, March 1996

Cornelson Distinguished Lecturer in Economics, Davidson College, March 1996

Elected Member-at-large, Section Committee on the Social, Economic, and Political Sciences, American Association for the Advancement of Science, 1997-2001

Keynote speaker, 25th anniversary meeting of the Health Economics Study Group, York,
England, 1997

Distinguished speaker, 10th anniversary meeting of the Portugese Health Economics Association, Evora, Portugal, October, 1997

Walras-Pareto Lecturer, University of Lausanne, November, 1997

Distinguished speaker, 25th anniversary meeting of the Spanish Health Economics Association (Asociacion de Economia de la Salud), Vitoria, Spain, May, 1998

Massachusetts Health Data Consortium’s Investing in Information Award, for the Massachusetts Health Quality Partnership’s Statewide Patient Survey Project, 1999. Also the Quigley Innovation award for the same project, 1999

Society of General Internal Medicine, runner-up award for article of the year, 1999 (for “Costs of Medical Injuries in Utah and Colorado in 1992,” shared with six co-authors)

ZviGriliches Award, for the best empirical article in the Quarterly Journal of Economics in the past four years (for “Are Medical Prices Declining?”), 2000 (shared with three co-authors)

Commencement Speaker, University of Lausanne Health Policy Program, May 2000

Chung Hua Lecturer, Academia Sinica, Republic of China, December 2000

Distinguished Speaker, 39th Economics Winter Institute, St. Cloud State University, February, 2001

Kenneth J. Arrow Award for the best article in health economics published in 2000 (for “How Does Managed Care Do It?”), 2001 (shared with two co-authors)

Albert P. Williams Memorial Lecture, RAND, October, 2001 (first lecturer)

Fellow, American Association for the Advancement of Science, 2002


Ranked 133rd among 54,000 living economists, 2003; see (http://student.ulb.ac.be/~tcoupe/update/top1000c.pdf)

Inaugural President, American Society of Health Economists, 2004-2006

ISI Highly Cited Researcher. From ISIHighlyCited.com. Being acknowledged by Thomson Reuters as a Highly Cited Researcher means that an individual is among the 250 most-cited researchers in 21 broad subject categories in life sciences, medicine, physical sciences, engineering and social sciences. These individuals are the most highly cited within each category, and comprise less than one-half of one percent of all publishing researchers.

Harriet Elliott Lecture, “Long-Term Financing of Medicare,” University of North Carolina -Greensboro, April 18, 2005

Article-of-the-Year Award, 2007, Academy Health; International Society for Pharmacoeconomics and Outcomes Research (for “Medicare Drug Benefit Caps: Unintended Consequences”)

Everett Mendelsohn Excellence in Mentoring Award, Harvard Graduate School of Arts and Sciences, 2009

Adam Yarmolinsky Award, from the Institute of Medicine to recognize distinguished service by a member who, over a significant period of time, has contributed in multiple ways to the IOM’s mission, 2009

John Eisenberg Legacy Lecture, organized by the Philip R. Lee Institute of Health Policy Studies at UCSF, the Center for Health Policy/Center for Primary Care and Outcomes Research at Stanford University, and the Center for Health Research at the School of Public Health, UC Berkeley, May 17, 2010

Finalist for article of the year, National Institute of Health Care Management, 2010 (one of 5 papers selected), for “The Impact of the Medicare Part D Drug Benefit on Pharmacy and Medical Care Spending”
Other Professional Activities

National Center for Health Statistics and National Center for Health Services Research, Technical Consultant Panel, Medical Care Expenditure Survey, 1974-1979

U.S. Congress, Committee on Ways and Means, Subcommittee on Health, Advisory Committee on National Health Insurance, 1975

National Commission on the Cost of Medical Care, 1976-1977; Chairman of Task Force on the Medical Marketplace

Research Committee, UCLA Clinical Scholar Program, 1976-1988

Josiah Macy Foundation Study Group on Graduate Medical Education, 1978-1980

Health Services Developmental Grants Review Committee, member, National Center for Health Services Research, 1978-1982


Editor, Journal of Health Economics, 1981-present (founding Editor)

Publisher's Committee, RAND Journal of Economics, 1984-1989

Board on Health Care Services, Institute of Medicine, National Academy of Sciences, 1981-1996


Technical Advisory Panel, Office of Research and Demonstrations, Health Care Financing Administration, 1984-1988

Robert Wood Johnson Foundation, Faculty Fellowships in Health Care Finance, National Advisory Committee, 1984-1988


Editorial Advisory Board, Contemporary Policy Issues, 1984-1990

Panel Study of Income Dynamics, Institute for Survey Research, University of Michigan, Board of Overseers, 1984-1990

Harvard University Institute for Smoking Behavior Advisory Board, 1984-1990
Vanderbilt Institute for Public Policy Studies, National Advisory Committee, 1986-1990

Membership Committee, Institute of Medicine, National Academy of Sciences, 1986-1989; Chairman, Social Sciences Section, 1987-1989


Chairman, Technical Advisory Panel to the Health Care Financing Administration on Revising the Adjusted Average Per Capita Cost Formula, 1987

Chairman, Technical Review Committee for the Resource Based Relative Value Scale, Health Care Financing Administration, 1988


Quinquennial Review Committee, University of Pennsylvania, Health Care Systems Department, 1988

Technical Advisory Panel, Health Care Financing Administration, Research on HMOs, 1989

Workers Compensation Research Institute, Medical Cost Research Advisory Committee, 1989-1996

Chairman, Health Services Research Grants Review Committee, Agency for Health Care Policy and Research, 1989-1993

Committee on National Statistics and Institute of Medicine, Expert Panel to Review the National Health Care Survey, 1990-1991

National Academy of Social Insurance (Founding member in health), 1991-present

Association for Health Services Research, Board of Directors, 1991-1999; President, 1993-1994

Journal of Economic Perspectives, Associate Editor, 1992-1998

RAND Summer Institute on Health Care Financing Reform, July 1992

Congressional Budget Office, Expert Advisory Committee on Managed Care, 1993

Physician Payment Review Commission, Commissioner, 1993-1996
Office of Technology Assessment, Advisory Committee for Assessing the Assumptions behind Health Reform Projections, chair, 1993-1994


Foundation for Health Services Research, President, 1994-1995

National Multiple Sclerosis Society, Research Programs Advisory Committee, 1994-1997

American Economics Association, Program Committee, Annual Meeting, 1994

Selection Committee for the Kenneth J. Arrow Award (best paper in health economics), International Health Economics Association, 1994-2005

Scientific Advisory Board, ZeitschriftfürGesundheitswissenschaften, 1994-2000

Selection Committee, National Institute of Health Care Management, Health Care Research Award, 1994-present

Technical Advisory Committee, UPBEAT program, Veterans Administration, 1995-2001

Massachusetts Health Quality Partners, chair, Board of Directors, 1995-2000, President 2000-2002 (known as Massachusetts Health Quality Partnership prior to incorporation in 2000)

National Academy of Social Insurance, Project on Restructuring Medicare for the Long Term, member of steering committee; Study Panel on Medicare Capitation and Choice, chair, 1996-1998


Prospective Payment Assessment Commission (ProPAC), chair, 1996-1997

Editorial Board Member, Kluwer Series on the Management of Medical Technology, 1996-2002

Selection Committee for Fellows and Distinguished Fellows, Association for Health Services Research, chair, 1996-2002

Board of Counselors to the Baxter Health Services Research Prize (selection committee), 1996-2006

Employment Benefits Research Institute, Fellow, 1997-present

Advisory Committee for the second international conference of the International Health Economics Association, Rotterdam, 1997-1999

National Research Council, Report Review Committee, member, 1997-present


RAND Graduate School, Board of Governors, 1998-2005

Regent, National Library of Medicine, 1999-2003


Abt Associates, Board of Directors, 2001-present (chair, Compensation Committee and Human Capital Committee; member, Audit Committee)

Aetna, Board of Directors, 2001-present (chair, Medical Affairs Committee; member, Audit Committee)

Institute of Medicine, Committee Chair for *Shortening the Time Line for New Cancer Treatments*, 2002-2004

Adjunct Associate, Center for Primary Care and Outcomes Research, Stanford University, 2002-present

Institute of Medicine, Committee for *Fostering Rapid Advances in Health Care: Learning from System Demonstration Projects*, 2002

*New England Journal of Medicine*, editorial board, 2003-present

Selection Committee, John Eisenberg Legacy Lecturer, 2003-present

National Committee for Quality Assurance, Board of Directors, 2003-present (member, Finance and Audit Committee)

Selection Committee, Paul A. Samuelson Award from TIAA-CREF for outstanding scholarly writing on lifelong financial security, 2004-2007
Exavera Technologies, Technical Advisory Committee, 2004-present

National Research Council, Board on Science, Technology, and Economic Policy, 2004-present

Government Accountability Office, Chair of Technical Advisory Committee on Implementation of a Study of Medicare Reimbursement for Outpatient Department Drugs, 2004-present

RAND Health Reform Project, Advisory Committee, 2005-present

Institute of Medicine, Annual Meeting Program Co-Chair, 2005

National Research Council, Board on Science, Technology, and Economic Policy, 2006-present

National Research Council, Committee on National Statistics, 2006-present

Congressional Budget Office Advisory Panel on Health, 2007-present

Comptroller General’s Advisory Committee, 2008-present

Institute of Medicine, Committee on Geographic Variation in Health Care Spending and Promotion of High Value Care, chair, 2010-present

Advisory Committee, China Europe International Business School Center on Health Care Policy and Management, Beijing, 2010-present

Medicare Trustees Technical Advisory Panel, Co-chair, 2010-present
Principal Investigator on the Following Grants and Contracts:

Office of Economic Opportunity and Office of the Assistant Secretary for Planning and Evaluation, DHHS, 1971-1988, Grant Numbers 90088-P7201 and 016B-80, “The Health Insurance Study,” Dollar amount: $82,000,000

National Center for Health Services Research and Development, 1972-1974, Grant Number 1 RO1 HI00840-01, “Demand for Medical Care Services,” Dollar amount: $218,000

Health Care Financing Administration, 1978-1980, Grant No. 18-P-97122/9, “Consumer Understanding of the Medical Care Delivery System,” Dollar amount: $325,000

Health Care Financing Administration, 1979-1982, “Analysis of the Clinical Laboratory Industry,” (Co-Principal Investigator); Dollar amount of contract: $193,000


Agency for Health Care Policy and Research, 1990-1991, “Costs in United States and Canadian Hospitals,” (Principal Investigator) Grant Number RO1 HS6442, $325,000

Agency for Health Care Policy and Research, 1989-1994, “Patient Outcome Research Team: The Consequences of Variation in the Treatment of Acute Myocardial Infarction,” (Co-Principal Investigator); $5,000,000, Grant No. RO1 HS 6341

Robert Wood Johnson Foundation, 1992-1994, “Evaluating the Medicaid Eligibility Expansion for Pregnant Women,” (co-Principal Investigator); $500,000

Robert Wood Johnson Foundation, 1993-1994, “The Effect of Fee Increases on Use of the Emergency Room by Medicaid Beneficiaries,” (Principal Investigator); $220,000

Agency for Health Care Policy and Research, 1993-1998, “Patient Outcome Research Team: Validation of Guidelines for the Treatment of Acute Myocardial Infarction,” (Co-Principal Investigator); $5,000,000

National Institute of Mental Health, 1993-2002, Training Grant; Grant No. 1 T32 MH19733, $1,478,000

Agency for Health Care Research and Quality, 1994-2008, Training Grant; Grant No. 5
T32 HS00055, $3,654,388
Alfred P. Sloan Foundation, 1996-1998, Center for Managed Care Industry, $1,200,000

Robert Wood Johnson Foundation, 1996-1997, Center for Managed Care Industry, $200,000


The Commonwealth Fund, 1998-1999, “Risk Adjustment,” $100,000

Alfred P. Sloan Foundation, 1999-present, Center for Managed Care Industry, $1,383,000

Agency for Health Care Research and Quality, 2000-2005, “Structuring Markets and Competition in Medical Care,” Grant No. P01 HS10803-01, $4,656,000


Agency for Health Care Research and Quality, 2008-2010, “Reimbursement Policy and Cancer Chemotherapy,” Grant No. R01- HS016873, $304,000

Referee for:

American Economic Review
Economic Inquiry
Economic Journal
Economic Letters
Evaluation Review
Harvard University Press
Health Care Financing Review
Health Services Research
Industrial and Labor Relations Review
Inquiry
Journal of the American Geriatric Society
Journal of the American Statistical Association
Journal of Community Health
Journal of Development Economics
Journal of Econometrics
Journal of Economic Education
Journal of Human Resources
Journal of Political Economy
Journal of Public Economics
Medical Care
Milbank Memorial Fund Quarterly
National Science Foundation
New England Journal of Medicine
Policy Analysis
Princeton University Press
Review of Economic Studies
Review of Economics and Statistics
Southern Economic Journal
University of Michigan Press
University of Pennsylvania Press
World Development
Teaching:

Macroeconomic Theory, UCLA Department of Economics, 1970-1972

Graduate Labor Economics, UCLA Department of Economics, 1971-1972

Health Policy Workshop, RAND Graduate School and UCLA School of Public Health, 1972-1988

Microeconomics, RAND Graduate School, 1975

Econometrics, RAND Graduate School, 1976-1987

The Economics of Health Policy (KSG HCP-272, HSPH HPM 227cd, Economics 1460), Harvard University, 1989-1999, 2001-present

Business and Labor in Health (KSG HCP-280; HSPH HPM 248cd), Harvard University, 1989-1993

Issues, Special Interests, and Health Care Reform (KSG HCP-280, HSPH HPM 248cd), Harvard University, 1994-1995

Seminar in Health Economics (Economics 2460, 2460; KSG HCP-581; HSPH 296cd), Harvard University, 1989-1999, 2001-present

Public Economics and Fiscal Policy II (Economics 2450b), Harvard University, 1991-1993

The Scientific Basis of Health Care Policy (Psychology 2200), Harvard University, 1991, 1992

Core Course in Health Policy (FAS Health Policy 2000; KSG HCP-597 and 598; HSPH HPM 246abcd), Harvard University, 1992-present

Seminar in Public and Organizational Decision Making (KSG 352y), Harvard University, 1993-1997

Reading Course in Health Economics (Economics 3460chf), Harvard University, 1994-present
PARTIAL LIST OF PUBLICATIONS

JOSEPH P. NEWHOUSE

(List does not include publications prior to 2001)


3. The Technological Change in Health Care Research Network, “Technological Change Around the World: Evidence from Heart Attack Care,” Health Affairs, 20:3, May/June 2001, pp. 25-42. (I was one of the TECH Investigators.)


29. Joseph P. Newhouse, “Comment (on Fuchs and McClellan),” in Perspectives on


34. Mary Reed, Vicki Fung, Richard Brand, Bruce Fireman, Joseph P. Newhouse, Joseph V. Selby, and John Hsu, “Care-Seeking Behavior in Response to Emergency Department Copayments,” Medical Care, August 2005, 43(8)810-16.


49. Haiden A. Huskamp, Anna D. Sinaiko, and Joseph P. Newhouse, “Future Directions for the National Health Expenditure Accounts: Conference Overview,” Health


87. Mary Reed, Mary Price, Vicki Fung, Richard Brand, Nancy Benedetti, Stephen F. Derose, Joseph P. Newhouse, and John Hsu, “High-Deductible Health Insurance Plans:


114. Neeraj Sood, Peter Huckfeldt, José Escarce, David Grabowski, and Joseph P. Newhouse, “An Examination of Bundled Medicare Payments for Acute and Post-Acute Care,” Health Affairs, September 2011, 30(9):1708-17.


118. Mary Reed, Huihui Wang, Ilana Graetz, Vicki Fung, Joseph P. Newhouse, and John Hsu, “Consumer Directed Health Plans with Health Savings Accounts: Whose Skin is in the Game and How do Costs affect Care-seeking?” *Medical Care*, in press.

ENDNOTES

1 The quote is from the summary on page xi.

2 I am presently part of a group evaluating a randomized experiment in Oregon, in which the treatment group is eligible for Medicaid and the control group is uninsured at the beginning of the experiment; those participating are low income persons who are not otherwise eligible for Medicaid, primarily low income adults without children. The Oregon experiment will be the only randomized experiment with an uninsured arm (all participants in the RAND Experiment had some insurance, though the cost sharing varied). The results from the Oregon experiment after one year show that those randomized to Medicaid use more services, have less financial strain, and rate their health better than those who remained uninsured because they “lost the lottery” (Finkelstein, et al. 2011). I think these results from Oregon, however, are not relevant to cost sharing for railway workers, partly because the variation examined in the Oregon project is between a Medicaid plan and no insurance rather than between the more generous or less generous cost sharing that is at issue here, and partly because the sample enrolled are low income adults. In addition, about two-thirds of the (self-assessed) health status effects that were measureable at one year also were found in data gathered one to three months after enrollment. Thus, the health status results could be an effect of reduced anxiety from having insurance. Clinical measures of health such as blood sugar control, cholesterol levels, and blood pressure are not yet available.

3 More precisely, the ceiling was the minimum of $1,000 or 5, 10, or 15 percent of family income; families were randomly assigned to the percentage of income.

4 The coinsurance rate was set at 95 rather than 100 percent in order to give the families a monetary incentive to file all claims.

5 These spending data are from the National Health Accounts maintained by the Centers for Medicare and Medicaid Services; see http://www.cms.gov/NationalHealthExpendData/.

6 In the 1970s it was common to cover inpatient services more extensively than outpatient services. In many cases physician office visits were not covered at all.

7 In standard economic theory, the effect of raising the price of good 1 on the use of good 2 is symmetric with raising the price of good 2 on the use of good 1.

8 There was an analogous finding for better coverage of mental health services; there was no evidence that the better coverage reduced the use of other medical services.

9 The Experiment used an index of how blood pressure, cholesterol levels, and smoking status combined to affect the likelihood of mortality in a given future year. This index is termed Risk of Dying in Figure 5. It was scaled to show effects relative to a value that reflected approximately the likelihood that a 40 year old American would die in the next 5 years. Because cost-sharing had hardly any effect on smoking or cholesterol levels, virtually all of the difference in this index between the two groups reflects the difference in blood pressure. The
values of the Index indicated a 1 percent difference favoring the free plan, but the 95 percent confidence interval around that difference went from -0.05 to 0.02, meaning that the effect is statistically insignificant. Nonetheless, the upper limit of the 95 percent confidence interval is a 5 percent difference favoring the free plan.

10 See (Newhouse and the Insurance Experiment Group 1993) and the literature cited there for a discussion of the validity of the measures.

11 Precision was sufficient to rule out clinically significant differences among almost all measures. In addition to the blood pressure result described in the text, there were a few other differences of note among the plans. Corrected vision was slightly better among the free plan participants, and free care participants were more likely to have decayed teeth filled. The prevalence of serious symptoms was less in the free plan, although it is hard to know what to make of that because medical care cannot prevent many serious symptoms. Cutting in the other direction, the frequency of disability days was less on the cost sharing plans.