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Cost-sharing: Effects on spending and outcomes

By Sarah Goodell, M.A.[1]
and Katherine Swartz, Ph.D.[2]
based on a research synthesis
by Swartz

[1] The Synthesis Project
[2] Harvard School of Public Health

SUMMARY OF KEY FINDINGS

- **Cost-sharing may not be an effective tool to reduce the rate of growth of health care costs.** Most people are healthy and reductions in their service use likely would only modestly affect total spending.
- **Patients do not accurately discriminate between essential and nonessential services when responding to changes in cost-sharing.** Although patients reduced the inappropriate use of emergency department services when cost-sharing was increased, they also reduced the use of preventive care and essential drugs.
- **Cost-sharing increases are associated with adverse outcomes for vulnerable populations.** Elderly, chronically ill, and welfare patients had increased expenditures for emergency department visits and hospitalizations when cost-sharing for prescription drugs was increased.

Why is this issue important to policy-makers?

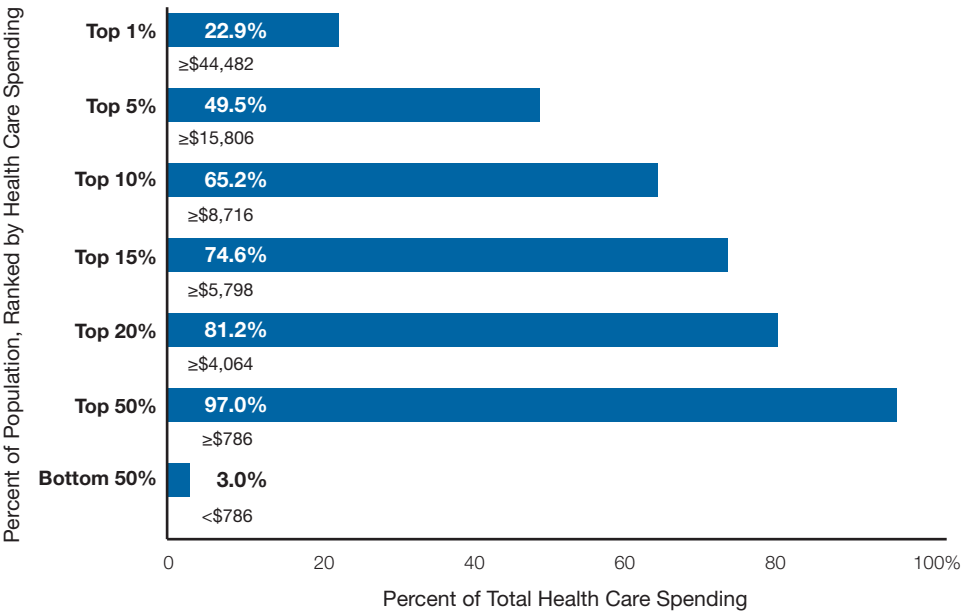
The recent passage of the Patient Protection and Affordable Care Act (PPACA)[a] requires for the first time that almost all U.S. citizens have health insurance. Implementing the largest expansion of health insurance since Medicare is a major challenge; policy-makers are also facing the challenge of how to slow the rate of growth in health care costs. Cost-sharing – how medical costs are shared between insurers and patients – is an important part of both challenges.

This brief examines how cost-sharing affects the use of services, whether some patients are more sensitive to cost-sharing than others, and whether reduced use of services as a result of cost-sharing has an effect on health outcomes. All of these issues factor into whether and how cost-sharing could be used to reduce the rate of growth of health care spending.

What is the effect of cost-sharing on the distribution of health care expenditures?

The distribution of health spending in the United States is highly skewed with 5% of the population accounting for almost half of all expenditures (Figure 1). The skewed distribution results from a relatively small percentage of people having serious medical conditions with high expenditures while the majority is relatively healthy with few or no medical expenses in a given year.

Figure 1: Concentration of Health Care Spending in the U.S. Population, 2007



Note: Dollar amounts in parenthesis are the annual expenses per person in each percentile. Population is the civilian noninstitutionalized population, including those without any health care spending. Health care spending is total payments from all sources (including direct payments from individuals, private insurance, Medicare, Medicaid, and miscellaneous other sources) to hospitals, physicians, other providers (including dental care), and pharmacies; health insurance premiums are not included.

Source: Adapted from the Kaiser Family Foundation (Reference 1)

a Public Law 111–148

THE RAND HEALTH INSURANCE EXPERIMENT

The RAND Health Insurance Experiment (HIE) (Reference 2) is the basis for much of our understanding of the effects of cost-sharing. Developed and conducted in the 1970s, the HIE randomly assigned a sample of 5,800 noninstitutionalized, non-elderly people to different levels of cost-sharing ranging from free care to 95% cost-sharing. Important findings include:

- As coinsurance increased, the number of outpatient visits and total spending decreased.
- Cost-sharing affected the number of visits, but not the intensity of services provided during the visit – suggesting that cost-sharing has little effect once a person initiates a medical contact.
- People reduced their use of ineffective care, but also reduced their use of medically appropriate care.
- Cost-sharing did not adversely affect health outcomes for the average person.

The findings from the HIE are still relevant, but should be viewed in the context of today's health care environment. There are many more medical treatments, diagnostic tests, prescription drugs, and surgical options than there were 40 years ago. Cost-sharing is much more complicated today than at the time of the HIE. Today's population has higher rates of obesity and treatable chronic conditions, and greater income inequality than that of the 1970s.

The low-income and chronically ill are disproportionately effected by cost-sharing and

It is not clear how the distribution of health spending will be affected by changes in cost-sharing. Speculation rests on the responsiveness of two factors: patient-initiated care and care delivered once the patient is in a medical setting.

Reductions in patient-initiated care in response to cost-sharing are likely to come from the half of the population with low medical expenses. If this is the case, increased cost-sharing may result in a more skewed distribution of health care spending.

Once a patient seeks medical attention, the intensity of services provided largely is driven by the provider, not the patient (Reference 2). The HIE (see sidebar) found that once a medical visit was initiated by the patient, utilization did not differ based on the patient's level of cost-sharing. For the sickest population, those with more frequent contacts with medical providers, a change in cost-sharing may shift the financial burden from insurers and public payers to patients.

Could increased cost-sharing slow the rate of growth of health care spending?

Increased cost-sharing has the potential to slow the growth of health spending if: there is a reduction in use of low-value or medically unnecessary care; any utilization reduction is not offset by the use of more expensive services; and reductions in service use do not result in adverse outcomes that may be more expensive to treat.

Patients are not able to discern between appropriate and inappropriate care in response to increased cost-sharing. Evidence from the HIE indicates patients reduced appropriate care as well as medically unnecessary care in response to cost-sharing (Reference 2). More recent studies involving the use of prescription drugs found patients reduced their use of both essential and nonessential drugs in response to increased cost-sharing, although the reduction for nonessential drugs was generally greater (Reference 3).

For vulnerable populations, increased cost-sharing may shift the types of services used rather than reduce overall health expenditures. Two studies of programs for low-income populations found that increased cost-sharing did not result in program savings either because the subsequent mix of services used was more expensive or because there was an increase in adverse events, including hospitalizations (Reference 4).

Increases in cost-sharing for the elderly may result in higher Medicare program costs. Chandra, et al. studied the effects of increased cost-sharing in an employer-sponsored Medicare supplemental plan (Reference 5). They found the reduction in physician visits and prescription drugs was associated with higher Medicare costs due to an increase in hospitalizations for chronically ill beneficiaries.

are at greater risk for adverse health outcomes than healthy or high-income people.

What are the effects of increased cost-sharing on health outcomes?

For the *average person*, increased cost-sharing may not adversely affect health outcomes (Reference 2). This finding from the HIE may have been one of the most surprising. Importantly, however, the HIE excluded people over age 62, who make up the largest share of the chronically ill and those most likely to have high medical expenses. In addition, all participants had an out-of-pocket maximum based on income which limited financial liability for high medical expenses.

For *vulnerable populations,* increased cost-sharing is associated with adverse health outcomes. The HIE found that low-income participants in poor health were more likely to experience adverse health outcomes than higher-income or healthy participants (Reference 2). More recent studies of elderly, chronically ill, and welfare beneficiaries found that cost-sharing for prescription drugs is associated with increased expenditures for emergency department services, hospitalizations and admissions to nursing homes (Reference 11).

How do responses to cost-sharing differ by socioeconomic factors and health status?

Low-income populations are likely to be disproportionately affected by increased cost-sharing. The same amount of cost-sharing represents a larger share of income for a poor person than a high-income person, creating the potential for a financial barrier to care. The HIE found poor people reduced outpatient care more than higher-income people and had larger reductions in the use of dental care and immunizations for children (Reference 2). A more recent study examined increases in prescription drug co-payments for privately insured patients and found individuals living in low-income areas were less likely to continue taking their medications than people in high-income areas (Reference 12).

Whether responses to cost-sharing differ by race and ethnicity is unknown. In studies looking at responses to cost-sharing by racial and ethnic minorities in the use of preventive services, it appears low income has a stronger association with the use of such services than race and ethnicity.

People in poor health respond differently to cost-sharing changes than healthy people (Reference 13). One study found retirees in poor health who had cost-sharing increases had larger reductions in spending on physician visits and prescription drugs than those in relatively good health (Reference 14). Those who were healthy reduced expenditures on physician office visits by 3% and by 8% on prescription drugs. In contrast, those who were chronically ill reduced the dollars spent on physician visits and prescription drugs by 15% and 27%, respectively. Significantly, however, the chronically ill used more inpatient hospital care after the cost-sharing increased. The result was a 122 percent increase in Medicare spending on the chronically ill retirees for Part A.

COST-SHARING AND TYPES OF SERVICES

Some types of medical services may be more sensitive to cost-sharing than others. Services for which increased cost-sharing significantly reduces utilization may be viewed by patients as optional or ones for which lower-cost substitutes are available.

Preventive services: Recent studies focusing on Pap tests, mammograms, and colorectal cancer screening found that cost-sharing reduces the use of preventive care (Reference 6).[b]

Emergency department (ED) visits: ED utilization was 10% to 15% lower in groups with higher co-payments compared with control groups (Reference 7). Most of the reduction was for visits classified as low or intermediate severity. The studies were of patients in integrated delivery systems who had alternatives to EDs so the results may not be generalizable.

Mental health and substance abuse: Demand for mental health and substance abuse treatment is quite sensitive to patient cost-sharing. Increased cost-sharing reduced the likelihood of follow-up substance abuse treatment and for schizophrenic patients resulted in higher ED use and inpatient care (Reference 8).

Prescription drugs: Increased cost-sharing of about 10% is associated with a decline of 1% to 6% in spending on prescription drugs (Reference 9). There is mixed evidence as to whether people shift to generics or other less expensive substitutes (Reference 10).

b PPACA eliminates or provides incentives to eliminate cost-sharing for many preventive services.

Policy Implications

Recent studies of patient cost-sharing confirm the primary conclusion of the HIE — demand for most health care services is price sensitive. When people have to pay more, they reduce their use of health care. The HIE's exclusion of the elderly, the increase in the prevalence of chronic conditions, and changes to medical care and insurance design since the 1970s, however, make it important to re-examine the role of cost-sharing. Findings from more recent research highlight important implications for policy-makers, including:

- **Patient cost-sharing is not necessarily an effective mechanism for significantly slowing health care spending.** Most people are healthy and cost-sharing would only modestly affect their health care spending. People who are very sick or who have serious chronic health conditions are typically deferring to their physicians rather than making choices about medical care based on cost-sharing. Moreover, by itself, cost-sharing is highly unlikely to slow the growth in spending unless the expected increases in the costs of appropriate care for the very sick also slow.
- **Cost-sharing is not well-targeted on low-value services.** Patient cost-sharing generally has been organized in broad categories (e.g., outpatient care, inpatient care, emergency department care). These broad categorizations do not help people distinguish between essential and nonessential services. Comparative effectiveness research could help insurers and government programs better target cost-sharing to improve value.
- **Caution should be used when increasing cost-sharing for low-income populations or the chronically ill.** Not only are low-income populations disproportionately affected by increased cost-sharing, but they also are more price sensitive than other income groups. Unless the cost-sharing increases are concentrated on services that are ineffective or unnecessary, low-income groups may avoid necessary medical care as a result. Increased cost-sharing for people with chronic conditions may result in higher expenditures for hospitalizations and other adverse outcomes if necessary care is reduced.

THE SYNTHESIS PROJECT (Synthesis) is an initiative of the Robert Wood Johnson Foundation to produce relevant, concise, and thought-provoking briefs and reports on today's important health policy issues.

PROJECT CONTACTS

David C. Colby, Ph.D., the Robert Wood Johnson Foundation
Brian C. Quinn, Ph.D., the Robert Wood Johnson Foundation
Sarah Goodell, M.A., Synthesis Project

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The Synthesis Project
The Robert Wood Johnson Foundation
Route 1 & College Road East
P.O. Box 2316
Princeton, NJ 08543-2316
E-Mail: synthesisproject@rwjf.org
Phone: 888-719-1909

www.policysynthesis.org