Clinically Sensitive Cost-Sharing for Prescription Drugs

Thinking beyond the Silos

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Researchers, actuaries, and health care purchasers have known for decades that, as a general principle, higher patient cost sharing reduces utilization of health care services and consequently, health care spending. Evidence on this point includes the seminal RAND Health Insurance Experiment, which used a randomized controlled study design,[1] as well as numerous recent studies,[2–7] for a review, see Rice & Morrison (1994). This conventional wisdom applies to health care in aggregate, but increasingly purchasers are interested in specific services. Because of the rapid increase of spending on prescription drugs, cost sharing for pharmaceuticals has attracted considerable attention.

The evidence linking increases in prescription cost sharing to use of prescription drugs is relatively unambiguous, extending back to the HIE.[8] Specifically, increases in drug copays and shifts to tiered formularies result in decreased use of medications and lower treatment adherence. Consequently, higher cost sharing for prescription drugs lowers pharmaceutical spending.

However, many observers have noted that reduced spending on prescription drugs does not necessarily imply lower spending on health care because prescription drugs are important components of chronic disease management. Medications keep patients healthy. Healthy patients are less likely to use expensive nondrug services such as hospitalizations. Thus, the extent to which higher cost sharing for prescription drugs lowers overall health care spending (and is therefore an effective cost-containment strategy) crucially depends on the magnitude of any cost-offsetting effects in other sectors of health care. These offsets imply that the net savings will be smaller than the savings within the pharmaceutical sector. In the extreme case, the offsets may exceed prescription drug savings, resulting in higher overall spending associated with higher copays.

The article by Dormuth et al (2009), adds to the growing literature on this topic, examining changes in Ministry of Health spending in British Columbia following the introduction of 2 cost-shifting strategies on a population of elderly users of inhaled medications: the introduction of copayments and a system with income-based deductibles and coinsurance. Both strategies were found to decrease prescription drug spending, while substantially increasing net health plan spending. Specifically, the copayment introduction was associated with a C$1.98 million annual spending increase, and the IBD system cost the plan an additional C$ 5.76 million in its first 10 months of implementation.

This result is consistent with other related studies which suggest cost-offsetting effects do occur, particularly among those with chronic disease. For example, several studies report increases in inpatient and emergency medical services among patients with lipid disorders,[9,10] congestive heart failure,[11] schizophrenia,[12] and diabetes following benefit caps or increases in copayments or cost sharing.

Several studies investigate the extent to which increases in utilization of nondrug services offset reduced spending on prescription drugs. For example, Chandra, Gruber & McKnight (2007) studied the effects of an increase in cost sharing for physician visits and prescription drugs for retired public employees in California and found large offset effects

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in hospital spending. Overall, they report that for every dollar saved on prescription drug or physician spending, the purchaser spent 20 cents on inpatient services. Gaynor, Li and Vogt (2007) investigate the effects of increased drug copayments for a working age (under 65), commercially insured population and report related findings; specifically, they find a 35% outpatient offset on prescription drug savings, but no inpatient offset.[13]

Offsets appear to be higher in more targeted populations. For example, in a high risk patient group, Chandra, Gruber, and McKnight (2007) report a 50% offset and in the sickest group (Charleson index >3), they report the added inpatient spending was $1.77 per dollar spent on drugs or physician services, erasing all savings from lower drug spending.

The finding of a complete offset is not unique. Wallace et al[14] investigated the effects of introducing copayments in a population of adult Medicaid beneficiaries. Savings from reduced pharmaceutical spending were completely offset by corresponding increases in spending on nondrug services.[14] Hsu et al (2006) studied the effects of a cap on annual drug benefits and found higher spending on nondrug services nearly completely offset savings on prescription drugs. Rosen et al (2005) simulated the effects of a full coverage policy for ACE inhibitors for Medicare patients with diabetes, and concluded that the savings from averted hospitalizations would likely offset the costs of drug coverage. Likewise, a simulation by Goldman et al[10] concluded that savings from reduced hospitalizations would likely, completely offset the costs of a pharmacy benefit that eliminated copayments for high- and medium-risk patients prescribed cholesterol lowering therapy.

Collectively, these studies suggest consumers respond to increases in cost sharing or benefit caps by foregoing needed medical care or failing to adhere to treatment regimens, which leads to deteriorating health and adverse medical events. This leads to additional health spending that will reduce, or in some cases, totally offset any savings due to higher cost sharing.

However, these findings are counterbalanced by several studies that found increased copayments were not associated with significant increases in utilization of nondrug medical services.[15–19] Therefore, offsets would not result.

Inconsistencies in the findings may reflect study design, setting, or the clinical situation. For example, a study by Tamblyn et al (2001) found increases in utilization of nondrug medical services for those that decreased adherence to essential treatment regimens, but not for patients that reduced consumption of nonessential medications following the introduction of a prescription cost-sharing policy. Thus we would expect offsets to be greater for medications that are important for treating chronic diseases that entail substantial risk of adverse events and related nondrug spending.

Several lessons can be drawn from this research. First, it is clear that the efficacy of cost sharing as a cost containment strategy is critically dependent on the specifics of the clinical situation (patient population and treatment regimen). Although higher copays on health care save money in general, there are likely examples where this is not the case. Populations with illnesses responsive to known treatments, poor baseline adherence, and high sensitivity to price are particularly likely to experience large offsets. As a result, optimal copayment policy should be more sophisticated than standard across-the-board copayment rates. To the extent possible, financial barriers should not be used to discouraged use of services known to be of high value.

This is the principle behind Value Based Insurance Design (VBID).[20] Several organizations have experimented with VBID designs, demonstrating their feasibility.[20] In some cases, this simply entails lowering copays on classes of medications identified as high value (ie, typically those used for managing diabetes or heart disease). In other cases, such as the Focus on Diabetes program at the University of Michigan, the VBID program targets patients with a particular clinical condition.[21] VBID makes the benefit structure consistent with existing disease management programs. Evaluations of VBID programs demonstrate, not surprisingly, that they increase use of targeted medications by an amount consistent with existing literature on responsiveness of demand to copays.[22]. Evaluations of the financial effects of VBID are ongoing.

Second, this research illustrates the pitfalls of thinking in silos—the design of cost containment strategies must take into account interactions between the various health care sectors in spending. As much of this literature shows, savings in one area may evaporate if reduced use results in greater spending elsewhere. We should not worry about spending in any particular category (prescription drugs, hospital, or physician). Instead, we should think about overall spending, recognizing the connections that exist in the system.

Our analysis of this literature also invokes the issue of the criteria purchasers should use when evaluating any given intervention. Although the quantification of the financial effects associated with copay changes is important, it is not clear from this research that the threshold for when action should be taken to lower copays should be the break-even point. Most medical services do not save money. In many cases, health care services are cost-effective, but not cost-saving.[23] They provide substantial health per dollar spent, but do not lower expenditures.

Instead of deciding how to save money, we need to decide how to invest in health. Specifically, the health care system should promote use of high value services even if those services do not save money. It is incumbent upon benefit designers not to seek to reduce use of all services in the name of fiscal sustainability, but instead to strive to reduce the use of those services that do not provide good value. This is complex because the value of any given service depends on the characteristics of patients who use it, suggesting more sophistication in benefit design (and other managerial strategies) may be needed. On balance, purchasers must confront the question of how to finance benefits. They must seek to get the most health for any amount of spending and minimize spending for any amount of health. This will require the use of many strategies, of which benefit design is only one.

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