Why Financial Incentives Aren’t Enough to Move the Needle on Compliance

Emily Cox, PhD

Well established is the fact that prescription copayments (ie, the price paid by members) and how they are structured play a role in influencing the demand for prescription medications. Many plan sponsors are banking on the tenet of price responsiveness by lowering copayments to increase utilization of select chronic therapies. But is lowering copayment, or financial incentives in general, the answer to achieving the desired behaviors when it comes to prescription utilization (ie, compliance with therapy and use of the most cost-effective agent within a therapeutic class)?

Let us examine this by starting with some basics. The metric economists use to represent the relationship between price and demand is called “price elasticity of demand” and is expressed as the relative change in quantity demanded over relative changes in price. When it comes to demand for prescription drugs, numerous studies have found that the price elasticity of demand is less than 1, ranging from -0.18 to -0.60, a situation referred to as “inelastic demand.” This means that the relative change in quantity demanded is always less than the relative change in price. For prescription drugs, a 10% increase in price or in copayments leads to a decrease of 1.8% to 6.0% in utilization, all else being equal.

So what happens when copayments are decreased instead of increased? Classic economics would predict that copayment reductions would lead to comparable increases in compliance, which leads to better disease control, which leads to better health outcomes, which results in lower healthcare costs. That is the basic premise of value-based benefit design and the premise examined most recently by Nair and colleagues in this issue of the journal. Using a pre-/post-research design (admittedly, not the strongest), they found that per member per year utilization for antidiabetes medications increased significantly by 9% in the first year—from 11.62 to 12.72. However, these gains in prescription utilization did not result in medical cost offsets 2 years after copayments had been reduced.

Although not formally calculated, a back-of-the-envelope calculation of price elasticity of demand given the average change in copayment and a 3.3% marginal increase in utilization (the difference between 9.5% and 6.2%, the national trend cited by Nair and colleagues) was approximately -0.04. This is similar to elasticity estimates my colleague and I recently found for copayment reductions with statin therapy, where elasticities ranged from 0.02 and -0.02 for copayment reductions of $0 to $5 and > $15, respectively. These price elasticity estimates from lowering copayments are orders of magnitude smaller than estimates obtained from studies examining utilization changes from price increases.

Why did we find much less price sensitivity (ie, smaller changes in quantity demanded) when prices decreased than when prices increased? Greater response to copayment increases than to decreases is supported by one of the most well-documented principles of behavioral economics: aversion to losses. Under this theory, patients have a more pronounced demand response when required to increase their contribution as opposed to when they pay less than their usual cost. And when it comes to monetary gains, it is estimated that individuals value a loss twice as great as a similar gain.

So what does this mean for plan sponsors designing pharmacy benefits? It means that financial incentives are not the sole solution to influencing patient behavior. Important psychological principles—such as procrastination, expectations, social norms, and framing, in addition to price, side effects, and drug effectiveness—are also at play in shaping decisions about con-

Dr Cox is Senior Director of Research, Research and Trend Management, Express Scripts.
consumption of pharmaceutical products. It further means that we should recalculate the return on investment from lowering copayment strategies and consider win-win strategies for lowering member out-of-pocket costs that include use of equally effective lower-cost brands and generics, which lowers costs for both plan sponsors and members, while also increasing adherence. And it means that one size does not fit all in designing interventions to shape the decisions of patients. It also means that we have a lot of work to do to figure this out.

References