Health plan sponsors may consider increasing employees’ share of specialty drug costs, but that strategy can backfire as high out-of-pocket costs result in lower adherence.
smart pharmacy benefit management has always been important, both to keep employees healthy and productive through guiding medication use and improving outcomes, and to help plan sponsors make wise use of health care dollars by controlling spending.

Two recent trends have made effective pharmacy benefit management more important than ever: an increase in the number of people with chronic, complex conditions and an explosion in the quantity of expensive specialty drugs available to treat them.

The upsurge in chronic, complex conditions is well-documented. Our aging population combined with an escalating rate of obesity has spurred an increase in a number of conditions, including diabetes, heart disease, cancers and so on. Meanwhile, in 2010, although specialty drugs made up less than 1% of all prescriptions, they accounted for 21% of the $307 billion spent on drugs. By 2016, they are expected to reach one-third of all pharmacy spending, and by 2030 that number will climb to as much as half of all such spending.

Predictive Models Versus Real-World Experience

Given that the rise of specialty drugs is the primary driver behind increasing pharmacy costs, some employers are moving aggressively to:

- Add pharmacy benefit tiers for specialty drugs, with separate copay and/or coinsurance levels
- Increase coinsurance amounts for specialty drugs, with the average around 18% to 20%.
The downside of these tactics is that higher out-of-pocket costs are associated with a greater likelihood employees will not stay on their drug regimens. A number of studies, most of them based on predictive models, have shown a relationship between a decline in adherence (or persistence) and a rise in out-of-pocket costs. For instance, studies on specialty drugs to treat multiple sclerosis (MS), rheumatoid arthritis (RA) and oral cancer all show a relationship between high costs and lower adherence.\(^3\),\(^4\) Lower adherence could potentially result in sicker patients and higher medical costs. While predictive models have consistently shown a relationship between higher out-of-pocket costs and lower adherence, the actual real-world impact of high cost share on specialty medication use has seldom been studied.

When one of its self-insured clients—despite advice to the contrary—made a benefit change that dramatically increased out-of-pocket costs for specialty drugs, Prime Therapeutics (Prime) was able to observe what happened in a real-world setting. The results confirm that the unintended consequences of high out-of-pocket costs for specialty drugs are real, and potentially quite serious.

### TABLE I

**Persistency Assessment (Drug Supply at 90 Days and 180 Days)**

<table>
<thead>
<tr>
<th></th>
<th>Implementation Group (n=59)</th>
<th>Control Group (n=120)</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 90 days</td>
<td>38 (64.4%)</td>
<td>96 (80.0%)</td>
<td>0.029</td>
</tr>
<tr>
<td>At 180 days</td>
<td>48 (81.4%)</td>
<td>95 (79.2%)</td>
<td>0.844</td>
</tr>
</tbody>
</table>

*Chi-square statistic comparing implementation group to control group.

Note: At 120 days, the implementation group lowered its specialty fourth tier out of pocket to $100 from $200, which likely resulted in the at-180-days persistency improvement.

### TABLE II

**Adherence Measured Using Proportion of Days Covered (PDC)**

<table>
<thead>
<tr>
<th></th>
<th>Implementation Group (n=59)</th>
<th>Control Group (n=120)</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC ≥80% post 90 days</td>
<td>28 47.5%</td>
<td>86 71.7%</td>
<td>0.003</td>
</tr>
<tr>
<td>PDC ≥80% post 180 days</td>
<td>32 54.2%</td>
<td>83 69.2%</td>
<td>0.068</td>
</tr>
</tbody>
</table>

*Chi-square statistic comparing implementation to control group.

The employer, with 43,000 employees, was spending $1.9 million a year on MS and RA drugs, about 8% of its total annual pharmacy expenses (and a full three-quarters of its total spending on specialty drugs). The benefit design in place set maximums for a 30-day supply of formulary brand-name drugs at $40, and $70 for nonformulary drugs, despite average ingredient costs of $1,818 and $1,403 for monthly supplies of MS and RA drugs, respectively.

In order to gain control over its drug costs, the employer implemented a new tier for specialty medications and imposed a 20% coinsurance on all specialty drugs. The maximum out-of-pocket cost was set at $200 per 30-day supply. This was a big change from a benefit design that had employees paying about $40 for specialty prescriptions, on average.

Employees were extremely unhappy with this change and immediately voiced their concerns to management. Four months later, in reaction to continued complaints, the company decided to reduce the monthly maximum to $100 and refund affected employees for the extra expense.

### Analysis Finds Real Damage to Medication Adherence

Prime compared adherence data for this employer (implementation group) to similar employers (control groups) to see what effect, if any, these changes had on medication adherence and persistence.

Prime used pharmacy claim data to follow the drug usage behavior of employees using specialty medications for MS and RA. The implementation
Patrick Gleason, Pharm.D., BCPS, FCCP, serves as director of clinical outcomes assessment for Prime Therapeutics, an integrated pharmacy benefit manager serving nearly 20 million employees and owned by 13 Blue Cross and Blue Shield plans. He is a board-certified pharmacotherapy specialist and an elected fellow of the American College of Clinical Pharmacy. Gleason earned his B.S. and pharmacy doctorate degrees at the University of Minnesota. He completed an ambulatory care pharmacy practice residency at the University of Pittsburgh Medical Center, followed by a fellowship in outcomes research through the university’s School of Pharmacy.

High Out-of-Pocket Costs Do More Harm Than Good

In the end, Prime found that raising out-of-pocket costs did damage even beyond negatively affecting medication use. It also caused disruption and dissatisfaction, resulting in adherence rates that never fully recovered even after the out-of-pocket maximum was lowered.

Furthermore, increasing out-of-pocket costs did not even result in significant savings on specialty drugs. Shifting costs to employees saved the employer group less than $30,000, or about 3.2% of total MS and RA drug spending.

This example confirms what the predictive studies suggested: High out-of-pocket costs for specialty medications have the potential to do more harm than good and should be considered carefully in designing a specialty pharmacy benefit.

Effectively managing specialty drugs requires walking a thin line between engaging employees in the cost of their care and asking them to pay more than they can afford. Get it wrong, and the unintended consequences may be sicker employees and higher medical costs. When it comes to specialty drugs, Prime has found through real-world experience that a $100 to $150 maximum on preferred drugs is best, since there can be a dramatic increase in abandonment above that price.

Benefit management is all about guiding employees to choices that will achieve specific goals. If the goal is to support employees with serious illnesses, it makes more sense to keep out-of-pocket costs relatively low, use formulary and trade contracts to optimize spending, and use care management to improve adherence and optimize health outcomes.

Endnotes