A group of commercially insured members with diabetes cost two-and-a-half times what a similar group without the condition cost, according to a recent analysis of pharmacy and medical claims data. But when members with diabetes took a statin to prevent heart disease per 2013 updated guidelines, their risk for having a cardiovascular event dropped by more than 23%, according to a second study of the same patient population. Both studies were presented by Prime Therapeutics LLC last month at the Academy of Managed Care Pharmacy’s 2017 Annual Meeting.

“There is some information out there, but not a lot [that looks at] the total cost of care” across the pharmacy and medical benefits for diabetes, says Pat Gleason, Pharm.D., director of health outcomes at Prime and a co-author of the studies. The first study looked at “actual paid amounts to providers,” he tells AIS Health.

The study analyzed 250,000 commercial members with diabetes who were less than 65 years old and matched them based on their age, gender and where they lived with 1 million members without diabetes, from 2014 to 2015. Calculating the mean pharmacy benefit and medical benefit claims per member per year (PMPY), researchers found that the plans paid $15,771 for the first group. “This is what we really paid for a person with diabetes,” says Gleason. The bulk of the total — $11,082 — was from inpatient and outpatient claims adjudicated under the medical benefit.
That almost $16,000 compares with $6,385 spent on the members without diabetes. That means "we’re expending 2.5 times the rate" of expenses for this group on the set of people with diabetes, he points out, with a total of $9,386 in excess expenses for people with the condition (see table, p. 6). Of those excess costs, 64.8% — $6,080 — was for claims under the medical benefit. Within the $3,306 spent under the pharmacy benefit, 72.2%, or $2,386, was for diabetes drugs and supplies.

According to the study, “With slightly more than one-third of the excess expense for an individual with diabetes coming through the pharmacy benefit, $3,306 excess PMPY, and the diabetes drugs and supplies accounting for nearly three-fourths of the excess pharmacy benefit costs, medical benefit cost offsets from antihyperglycemic drug therapy will need to be substantial.”

“Once we have that [total pharmacy and medical benefits cost] number,” payers can know where member interventions may be most useful and what to expect in terms of costs if adherence increases, which in many situations means a drop in costs on the medical side due to avoidance of adverse events from members taking their prescribed therapies.

However, with the diabetes drugs that fall on the pharmacy side, “it generally takes five years of being on medication and being adherent” for the therapies to really have an impact, so an offset shouldn’t be expected immediately, says Gleason. “There is an assumption that event avoidance happens quickly.” He clarifies that he’s not saying these people shouldn’t be treated, but rather that payers need to be “realistic about their expectations on the medical cost offset.”

“The drug costs you have to have, and they will go up if members are adherent,” he tells AIS Health. On the medical side, “you can’t have the expectation that you will avoid all” those excess expenses if members are adherent — “not even half.”

In addition, because many diabetes drugs “have gotten expensive,” and “the generic utilization rate has been flat the last few years,” if drug utilization increases, those costs could be substantial. Already “diabetes accounts for $1 of every $10 in pharmacy benefit expense,” said co-author Kevin Bowen, M.D., principal health outcomes researcher at Prime, in a statement.

The study also found that “categories of potentially avoidable medical claims cost from reduction of diabetes complications accounted for half, $3,112 PMPY, of the medical benefit excess PMPY. Atherosclerotic cardiovascular and kidney disease accounted for the largest diabetes complications attributable cost.”

“The excess expense associated with members who have diabetes identified in this analysis allows insurers to identify potential cost containment areas and focus interventions with known impact on excess expense categories,” concluded researchers. “High priority goals might include optimal use
of statins to lower risk of cardiovascular events and antihypertensives to lower risk or progression of diabetic nephropathy.”

And that’s where the second study comes in. Researchers wanted to know the impact of adherence to statins in 2014 on adverse cardiovascular events in 2015. The study period occurred after the American College of Cardiology and the American Heart Association published updated cholesterol guidelines in 2013. Those guidelines recommended statins for most people between the ages of 21 and 75 years with clinical atherosclerotic cardiovascular disease (ASCVD) as a form of secondary prevention. In addition, for most people between the ages of 40 and 75 who have diabetes but not ASCVD, the associations recommended primary prevention with statins.

Researchers took the same 250,000 diabetic members from the first study and split them into three groups:

1. **Those with ASCVD aged 21 to 64,**

2. **Those without ASCVD aged 40 to 64,** and

3. **Those without ASCVD aged 21 to 40.**

The focus was on the middle group, says Gleason, which accounted for 81.8% of the overall group.

Eighty-plus percent of statins are generic, Gleason says. They cost “$4 per month” — “pennies per day,” he says. “This is a drug class with a return on investment savings opportunity.”

Of the age 40 to 64 group, 1.5% had a cardiovascular event in 2015, researchers found. That means, according to Gleason, “we need to treat 67 people with a statin to avoid one event per year.”

Among those within that group who were adherent to a statin — defined as the proportion of days covered in 2014 of at least 80% — their odds of any cardiovascular event in 2015 was 23.4% lower than among those not adherent to statin therapy. When attributing the difference to statins, there would have been 557 fewer members — 11.6% — who had cardiovascular events, points out Gleason. He cites data showing that a heart attack is “$56,000 in true costs after it happens,” which in turn means “$30 million in costs that could have been avoided” by members’ being adherent to a statin.

Through its GuidedHealth program, Prime contacts providers who have written prescriptions for diabetes drugs and asks them to assess members' history to see whether they would be good candidates to have statins added to their treatment regimens.
Prime, he says, does not recommend step therapy for statins. The PBM has a 90% generic fill rate on the drugs.

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### Mean Pharmacy and Medical Claims Expense per Member per Year (PMPY) for Members With Diabetes Versus Members Without Diabetes

<table>
<thead>
<tr>
<th>Claims expense category</th>
<th>Members with diabetes (N = 250,000)</th>
<th>Members without diabetes* (N = 1,000,000)</th>
<th>Excess diabetes expense†</th>
<th>% of total excess diabetes expense†</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pharmacy benefit</strong></td>
<td>$4,689</td>
<td>$1,383</td>
<td>$3,306</td>
<td>35.2%</td>
</tr>
<tr>
<td><strong>Medical benefit</strong></td>
<td>$11,082</td>
<td>$5,001</td>
<td>$6,080</td>
<td>64.8%</td>
</tr>
<tr>
<td><strong>Inpatient</strong></td>
<td>$3,928</td>
<td>$1,281</td>
<td>$2,647</td>
<td>28.2%</td>
</tr>
<tr>
<td><strong>Outpatient</strong></td>
<td>$7,154</td>
<td>$3,720</td>
<td>$3,434</td>
<td>36.6%</td>
</tr>
<tr>
<td><strong>Total medical benefit plus pharmacy benefit</strong></td>
<td>$15,771</td>
<td>$6,385</td>
<td>$9,386</td>
<td>100%</td>
</tr>
</tbody>
</table>

PMPY = per member per year, expense defined as member plus plan amount

*Matched to members with diabetes by sex, one year age group, Blue Cross and Blue Shield client and state of residence.

† Excess diabetes expense defined as the mean PMPY extra expense per member with diabetes compared to matched members without diabetes.

Expense = allowed amount paid to the provider including the member share and the plan paid.