



Better Health, Better Bottom Line

Case Study: Health Alliance Medical Plans value-based benefits for diabetes and asthma

Carle Clinic Association is a 342-physician group practice providing medical benefits, administered by Health Alliance Medical Plans, for approximately 5,400 employees and their family members. Predictive modeling software from MEDai forecasted total 2007 direct medical costs for employees with diabetes at \$1,675,000 and for those with asthma at \$1,380,000. This forecast was only for direct medical costs such as medications, physician office visits, hospitalizations, diagnostic services and emergency room visits. The American College of Occupational and Environmental Medicine has estimated that direct medical costs represent only one third of total employer medical costs, with indirect costs such as absenteeism, presenteeism (employees at work but less productive due to illness), and disability representing two thirds. Thus, Carle Clinic's total estimated 2007 cost related to these two diseases was over nine million dollars.

Better Health By Choice

Under the leadership of its Chief Medical Officer Dr. Robert Scully, Health Alliance had created a new employer focused health and wellness initiative called *Better Health By Choice* to be piloted in 2007 with key employer groups. Dr. Scully's team used *Total Value Total Return*, published in 2006 by David Hom and Jack Mahoney, as one tool to help employers in the pilot groups understand how to optimize employee health benefits for a healthier and more productive workforce. As Michael Critelli, Pitney Bowes Chairman and CEO said in the book's foreword, "Better health, we have learned, is actually better for the bottom line."¹

Carle Clinic embraces the concept

Carle Clinic was the first and most enthusiastic supporter of the new wellness program. Their customized program included:

- incentives for completing on-line health risk assessments,
- on-line support tools,
- telephonic lifestyle coaching for high risk members, and
- use of a preexisting employee wellness committee.

After reading *Total Value Total Return* and learning of the experience of Pitney Bowes and other employers, Carle Clinic decided to add a value-based pharmacy benefit component to their wellness program. Reducing the economic barriers to taking medications for asthma and diabetes was seen as a tool for driving better health outcomes and lowering medical costs.

It requires a leap of faith to lower copays and plan to pay more for medications believing the outcomes will be lower costs and increased productivity in the long run. "The approach of investing upfront for a long-term healthier and more productive workforce made sense to us," said Dr. Scully. Chronic diseases represent significant cost to health plans, and if members can't afford the copays or coinsurance for the drugs that help control these diseases,

Robert Scully, CMO of Health Alliance Medical Plans, was influenced by this quote from former Pitney Bowes Chairman and CEO Michael Critelli:

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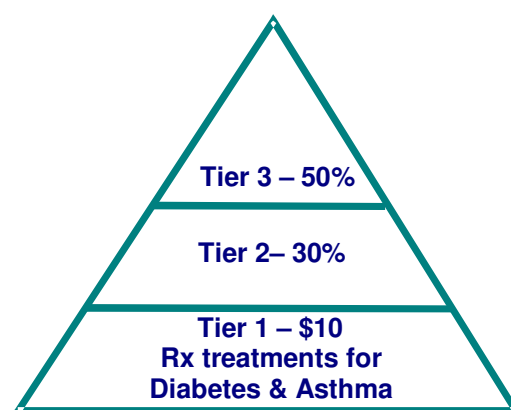
then the long-term implications are higher costs for expensive treatment for uncontrolled disease.

The value-based benefit plan

A plan was developed to create a value-based design with the goal of improving outcomes, reducing medical costs and increasing use of medications and adherence to treatment plans for diabetes and asthma in the context of the broader health and wellness program being piloted in 2007. The components of the plan were:

1. Move all pharmaceutical treatments for diabetes and asthma on the standard formulary to Tier 1, which required a \$10 copay. The step-therapy program for diabetic medications was kept in place.
2. Assist Carle Clinic in communicating the new design to the employees, particularly those with diabetes and asthma.
3. Monitor the data closely to identify unintended consequences and manage emerging risk. Specifically, compare diabetics and asthmatics with this value-based benefit to others in the plan without the benefit. Interim analysis after six months would compare:
 - the number of members using the medications
 - adherence—calculated as a Medication Possession Ratio
 - drug costs for medications in the new benefit.

Longer term analysis after 12 months would compare costs for all medications in the diabetic and asthmatic population, as well as total costs. ER visits and hospital admissions would be used as plausibility indicators.
4. Revise the program based on the data.



Medication Possession Ratio (MPR)

The MPR is the number of eligible days in the measurement period that the member possessed any medication in the class divided by the number of days in the period. The measurement was performed on the same population (matched) at the beginning and the end of the study period.

Analysis

Preliminary results identified two main confounders in analyzing the asthma program:

1. Some asthma medications have multiple indications (e.g. Singulair is prescribed for both asthma and allergic rhinitis, some drugs are prescribed for COPD as well as asthma).
2. Both relief and control medications were included in the analysis.

This later analysis was confined to only ICD9-defined asthmatics, with rescue and maintenance medications analyzed separately.

After 12 months, data from the new benefit was compared to the corresponding 12 months of the prior year for the intervention and control groups.



Table 1. Results of 12-month analysis for Diabetes.

	Baseline	12-mo pilot data	% Change
# Members using medications	205	223	8.8% increase
MPR \geq .8	75.9%	84.8%+	10.6% increase
Monthly costs for medications	\$10,071	\$13,681	35.8% increase vs. a 16.3 %increase in the control population

Table 2. Results of 12-month analysis for ICD 9 Defined Asthmatics.

	Asthmatics	12-mo pilot data	% Change
# Members using medications	246	263	6.9% increase
# Members using maintenance meds	158	169	24% increase
# Members using rescue meds only	88	67	24% decrease
MPR \geq .8	40.7%	60.5%+	32.7% increase
Monthly costs for medications	\$10,599	\$19,047	79.7% increase vs. a 23% increase in the control population

+ Sig. at $p < .05$

Conclusions

Diabetes – Increase in the cost of diabetes medications was considered acceptable given the increase in number of utilizing members and more importantly improved adherence.

Asthma – Directionally appropriate changes were achieved in medication adherence at a significant cost increase. Results to date deterred the plan from expanding the benefit plan wide in 2008. Further analysis is planned.

Next Steps

“We think one of the ways to improve health is to lead by example,” says Christina Barrington, Director of Pharmacy Services at Health Alliance. Building on the success and challenges of the Carle Clinic trial, Health Alliance has developed a value-based pharmacy benefit plan that will be in place for the fully-insured marketplace July 1, 2008. The same plan became available for self-funded groups as early as January 1, 2008.

Cost data on the 11,000+ diabetics Health Alliance covers, the results of the Carle Clinic pilot and published data from employers like Pitney Bowes helped Health Alliance design the benefit plan.



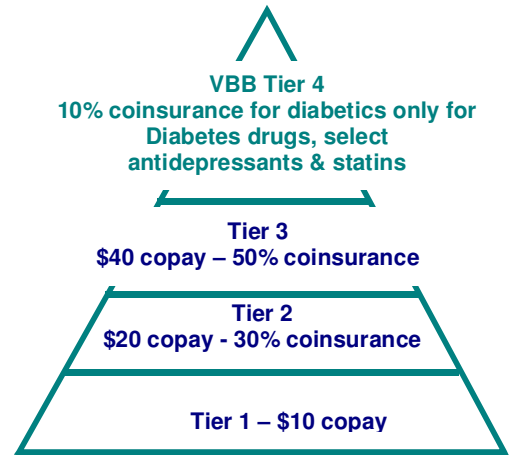
Value-based 4th Tier

The plan creates a Value-based 4th tier in the standard formulary. The member pays 10% coinsurance for drugs in this tier, which include:

- All drugs for diabetes
- Select antidepressant medications for diabetics
- Select cholesterol-lowering drugs for diabetics

The addition of antidepressants and statins is an innovation at Health Alliance that, according to Dr. Scully, was based on two premises.

1. Depression or poorly controlled pain affects compliance with the plan for management of diabetes.
2. Since diabetics have the same risk of a heart attack as non-diabetics who have already had a heart attack, reducing economic barriers to the use of statins to lower the risk of heart attack is important.



Future Analysis

Carle Clinic study

Medical cost analysis will be added to the comparisons of medication use and adherence and pharmacy costs; and ER visits and hospital admissions will be used as plausibility indicators.

Outcomes measurement

Health Alliance plans to develop a standardized model for measuring outcomes in value-based benefit designs. Partnerships are being explored for developing a model that integrates not only pharmacy and medical claims data, but lab values and employer productivity data as well. Outcomes from the 4-tier model will be used as a basis for roll-out in other disease states, (e.g. asthma, osteoporosis, hypertension).

¹Mahoney, J., Hom, D., 2006. Total Value Total Return™. Philadelphia: GlaxoSmithKline.