## Case Study:

# How Understanding Pre-disease Risk Burden Helped One Municipality Reduce Cancer Risk

Targeted interventions are the key to health advancement (wellness) program success. The ability to predict what pre-disease risk burden and lifestyle factors are brewing in your plan is critical to measuring success. Many times health advancement programs have more of a shotgun approach, which wastes time, often without measurable results.

The trick is to incorporate tools that measure risk burden by disease and lifestyle category. The tools provide the data to calculate both ***frequency and severity*** of the pre-disease risk in your population. This approach creates the ability to measure the health risk burden by disease at the beginning and the end of the program, and the opportunity to understand success and R.O.I..

Let's take a look at how one City addressed this problem, made changes in their health risk management benefit structure, and ultimately improved health and reduced costs.

*The City needed to find a way to predict and cost-justify a benefit plan change*

The City has approximately 850 employees and 450 insured spouses on the health plan. Initially included in the health advancement program was a health risk assessment consisting of a finger stick blood sample for cholesterol and basic body measurements with a paper-based HRA. Aggregate results indicated typical lifestyle issues such as smoking, nutrition, stress and the number of people with one or more "risk factors." Good incentives were in place to encourage participation. However, the tools to measure progress financially and measure the improvement in specific health conditions were not available.

As the population aged, more age appropriate screening tests were necessary for plan members; creating potentially higher costs for members due to plan deductibles. The unions wanted the City to determine how age appropriate tests such as colorectal cancer screening could be covered without imposing costs on the members. The City needed to understand the future risk burden for this condition.

The City needed to find a way to predict and cost-justify the benefit plan change for colorectal cancer screenings. To facilitate this effort, their benefit consultant suggested the use of a *sophisticated pre-disease and morbidity-based HRA* for those members over 50. Plan members found to be at risk for colorectal cancer would have their deductible waived (a cost hurdle of approximately $800.00 for the member). A special provider network of proctologists was created to cap costs and simplify the process.

### In Year One,

70% of the eligible members took advantage of the program. The colorectal cancer screening identified 63

high risk cases and more than $1 million in colorectal cancer health risk burden. The morbidity-based HRA also identified 460 cases with over $5.3 million of risk burden.

## In Year Two,

the City determined that a comprehensive morbidity-based HRA created information needed to determine a return on their wellness program dollar. The HRA was provided to all employees, with premium discounts to encourage participation. Eighty eight (88%) or 754 employees participated, identifying over $9.3 million in future risk burden. A personal onsite HRA result review with a health coach was provided with a focus on colorectal cancer risks and steerage to the special provider network.

*Colorectal Cancer risk burden was reduced by 42%*

The colorectal cancer risk burden by HRA participant was reduced by 42%. This reduction was primarily the result of targeted pre-emptive intervention around the specific condition of colorectal cancer. Due to this program, cancer awareness increased, positive action was taken by the plan member to participate in free screenings, and follow up coaching encouraged compliance for members to follow through on recommendations.

## In Year Three,

the program expanded to include insured spouses, and participation increased to 97% of all plan members. To accommodate spouses, special clinics were set up throughout the City. Continuous onsite coaching was provided throughout the year.

Year Three results yielded a reduction in colorectal cancer risk burden by 49% per participant. Again, this was due mainly to increased awareness, action taken by the plan member to participate in free screenings, as well as follow up coaching to encourage compliance.

The morbidity-based HRA also identified 1387 cases with over $13 million of health risk burden across 14 different conditions. This reflected a reduction in health risk burden per HRA participant of 25% or $2,432 per participant.

The consultant for the City expected an increase in total claims costs after the acceleration of the screening program. The City did experience a largely "Trend" related increase in claims costs of approximately 11% in the first year. However, at the end of the 2nd year of accelerated screenings, the City experienced a claim expense *decrease* of 3.5%. This decrease in costs came despite a significant inflationary increase in the costs of medical services at the City's preferred providers. The medical claims savings allowed the City to be under projected expense by $2.5 Million and to have *no increase* to premium equivalents or employee payroll deductions for the subsequent year.

| | Year One | Year Two | Year Three |
|---|---|---|---|
| **Total Colorectal Cancer Risk Burden** | $1,013,596 | $1,303,194 | $1,158,395 |
| **Total Participants** | 338 | 754 | 1308 |
| **High Risk Colorectal Cancer Cases** | 63 | 81 | 72 |
| **Colorectal Cancer Risk per HRA participant** | $2,998.80 | $1,728.37 | $885.62 |
| **Reduction in Risk Burden per Participant (%)** | - | 42% | 49% |

Going forward, the City has instituted continued onsite coaching focused on high risk participants, which will result in more specific savings results. A points driven incentive program with a focus on targeted inventions has been implemented is being designed. This benefits plan design serves as a model for municipalities looking to improve the health of their health plan members and reduce medical costs.