

# Sutter Health Partners

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## **Cost Savings Analysis**

August 24, 2007

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## Executive Summary

- Sutter Health Partners (SHP) offers a comprehensive wellness program including a health risk assessment, health screenings and personal wellness coaching to all participants. The differentiators of the SHP program are the personal face-to-face meetings with the coaches and periodic review of key biometric indicators and progress toward health goals.
- This study shows the potential savings for:
  - Medical and pharmacy costs
  - Decreased absenteeism, including short-term disability (STD)
  - Improved presenteeism
- The cost savings estimates were developed from a wide variety of published studies and internal Towers Perrin information. The general savings estimates were then applied to the specific program design and personal coaching delivery of the SHP program.

## Executive Summary

- Current year savings estimates from SHP programs for a typical employee population is shown below for two salary scenarios.

**\$40,000 average salary**

	<b>Year 1</b>
Medical	\$ 224
Absenteeism/STD	\$ 145
Presenteeism	\$ 620
<b>Total</b>	<b>\$ 989</b>

**\$75,000 average salary**

	<b>Year 1</b>
Medical	\$ 224
Absenteeism/STD	\$ 272
Presenteeism	\$ 1,162
<b>Total</b>	<b>\$ 1,658</b>

- Given that an average employer cost of medical plans for 2007 is projected to be \$8,796 per employee, the 2007 medical savings represents about 2.5% per employee. Absenteeism and presenteeism savings is about 1.9% of pay.

## Introduction

- Sutter Health Partners(SHP) offers a comprehensive wellness program including a health risk assessment, health screenings and personal wellness coaching to all participants. The entry point to participation is completion of a Health Risk Assessment (HRA). All participants are provided a coupon to have a fasting lipid panel with glucose to be completed at the local hospital. Other lab data may be collected from their physician office if done within the past 12 months.
- Employees who complete the HRA are then assigned to an individual wellness coach. They meet face-to-face and the coach completes additional screenings, including blood pressure, weight, body fat, and waist to hip measurements. At the same meeting, the coach reviews the responses and results of screenings individually with each participant and establishes goals to lower any risk factors that have been identified.
- Based on responses indicated on the HRA and the results from the screenings, the HRA scores each biometric with a risk category and provides an overall risk category of each participant. The coach and participant agree upon subsequent follow-up meetings, intended to provide the participant with support, accountability and assist in lifestyle behavior changes toward those wellness goals.

## Introduction

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- The purpose of this study is to quantify the potential financial savings an employer may realize by implementing a program of this design. Actual claims and payroll data were not available for specific SHP clients, so cost savings estimates were developed from a wide variety of published studies and internal Towers Perrin information. The general savings estimates were then applied to the specific program design and personal coaching delivery of the SHP program.
- For a given plan design, medical and pharmacy costs can be impacted by reducing high risk behaviors and by managing chronic conditions, encouraging healthier employees. The expected result is more efficient and less expensive consumption of health care.
- Reducing health risks also significantly impacts absenteeism and short-term disability rates as well as presenteeism or productivity rates. This results in more efficient use of payroll dollars for an employer.

## Methodology

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- A number of studies have been published in recent years that address the issue of chronic conditions and preventable health risk factors. These studies attempt to quantify the potential cost savings that an employer could achieve by both managing chronic conditions and reducing health risk factors among covered employees and their dependents.
- The data used for this study were compiled from a variety of sources including:
  - Published studies containing specific data
  - Published articles containing anecdotal information
  - Published Towers Perrin studies
  - Internal Towers Perrin information
- A summary of the published studies is provided in the Appendix

## Methodology

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Specifically, the following components were developed and quantified:

- Prevalence of various diseases and conditions
- Medical and pharmacy claims cost improvement
- Absenteeism and STD reduction and cost improvement
- Presenteeism increase and cost improvement
- Participation rates for typical wellness programs
- Impact on participation and cost improvement due to Sutter Health Partners' high-touch programs

The three primary components of savings addressed are:

- Reduction in medical and pharmacy claims costs,
- Lowered absenteeism and short term disability periods, and
- Increased presenteeism or productivity from those at work but not performing to full potential.

## Methodology

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- To create a general model to estimate the savings that a general employee population could achieve by implementing the SHP program, we gathered information from nationally published studies and Towers Perrin internal data. We did not have access to specific claims, payroll, or enrollment data for current SHP clients. Once the data from all sources were normalized and adjusted to 2007, we applied them to the specific risk categories that are managed by SHP, then adjusted the results to account for the personal coach delivery model.

## Methodology

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- The risk factors specifically addressed by SHP programs are:
  - Blood pressure
  - Body fat
  - Body Mass Index (BMI)
  - Waist to hip ratio
  - Total cholesterol
  - Bad cholesterol
  - HDL and LDL
  - Triglycerides
  - Glucose
  - Stress
  - Smoking
  - Exercise
  - Sick days

## Methodology

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- The specific risk factors addressed by SHP were applied to the results of the available published data in the following areas:
  - Asthma
  - Depression/Mental Health
  - Diabetes
  - Heart disease
  - High cholesterol
  - Hypertension
  - Obesity
  - Respiratory disease

## Methodology

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- While much of the focus historically has been around medical and pharmacy claims costs, there has been considerable activity recently around absenteeism and presenteeism, as these two components can be a significant part of the total costs for employees affected by chronic conditions and risky behavior
- Absenteeism, or the days or work missed by an employee, is a fairly straightforward measure using payroll data. Presenteeism, or the actual effectiveness of employees when they are at work, is much more difficult to quantify. Measuring presenteeism relies to some extent on employee self-assessment, so the range of results in the published information is wide. However, employers do recognize that having an employee on site and not productive does not make sense, and there are significant cost savings opportunities in keeping employees healthy and productive.

## Methodology

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- This study shows the potential savings for:
  - Medical and Pharmacy costs,
  - Decreased absenteeism, including short-term disability (STD)
  - Improved presenteeism
- The results are illustrated in ten-year projections of estimated overall Per Employee/Per Year (PEPY) savings based on a typical employee population
- Because absenteeism and presenteeism savings are directly related to pay, the projections were calculated using two different average salary assumptions:
  - \$75,000 per year average salary
  - \$40,000 per year average salary

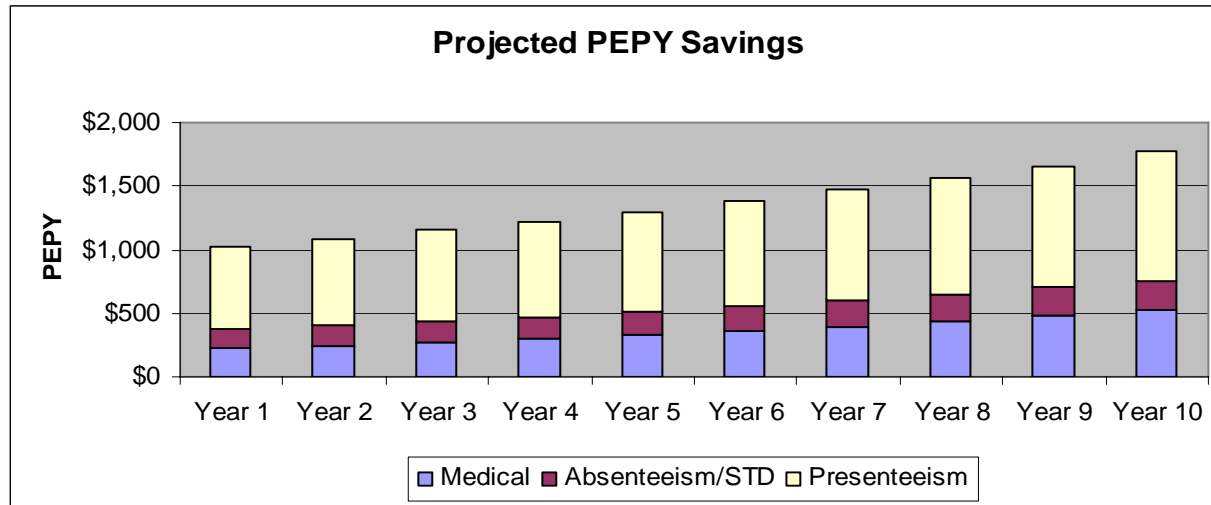
## Methodology

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- The resulting ten-year projections are shown in two ways:
  - Projected year-by-year cost savings for years one through ten, and
  - Cost savings for years one through ten, discounted to today's dollars
- The ten-year projections were calculated using the following assumptions:
  - Health cost trend – 10% per year
  - Salary increases – 5% per year
  - Discount rate – 4% per year
- Results are shown in aggregate, taking into account co-morbidities between risk factors and associated chronic conditions

## Projected Cost Savings

- Assuming average salary of \$40,000 per year

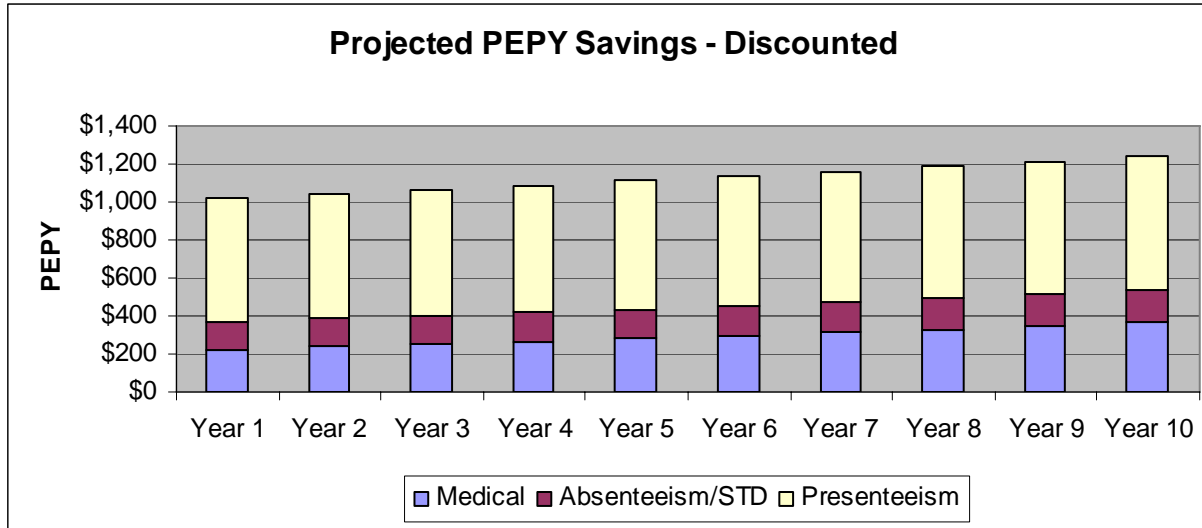


	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Medical	\$ 224	\$ 246	\$ 271	\$ 298	\$ 328	\$ 361	\$ 397	\$ 436	\$ 480	\$ 528
Absenteeism/STD	\$ 145	\$ 152	\$ 160	\$ 168	\$ 176	\$ 185	\$ 194	\$ 204	\$ 214	\$ 225
Presenteeism	\$ 620	\$ 651	\$ 683	\$ 717	\$ 753	\$ 791	\$ 830	\$ 872	\$ 916	\$ 961
<b>Total</b>	<b>\$ 989</b>	<b>\$ 1,049</b>	<b>\$ 1,114</b>	<b>\$ 1,183</b>	<b>\$ 1,257</b>	<b>\$ 1,337</b>	<b>\$ 1,421</b>	<b>\$ 1,512</b>	<b>\$ 1,610</b>	<b>\$ 1,714</b>

2007 medical savings represents about 2.5% per employee assuming a projected annual medical cost of \$8796 per employee. Absenteeism and presenteeism savings is about 1.9% of pay.

# Projected Cost Savings

- Assuming average salary of \$40,000 per year, discounted 4% per year

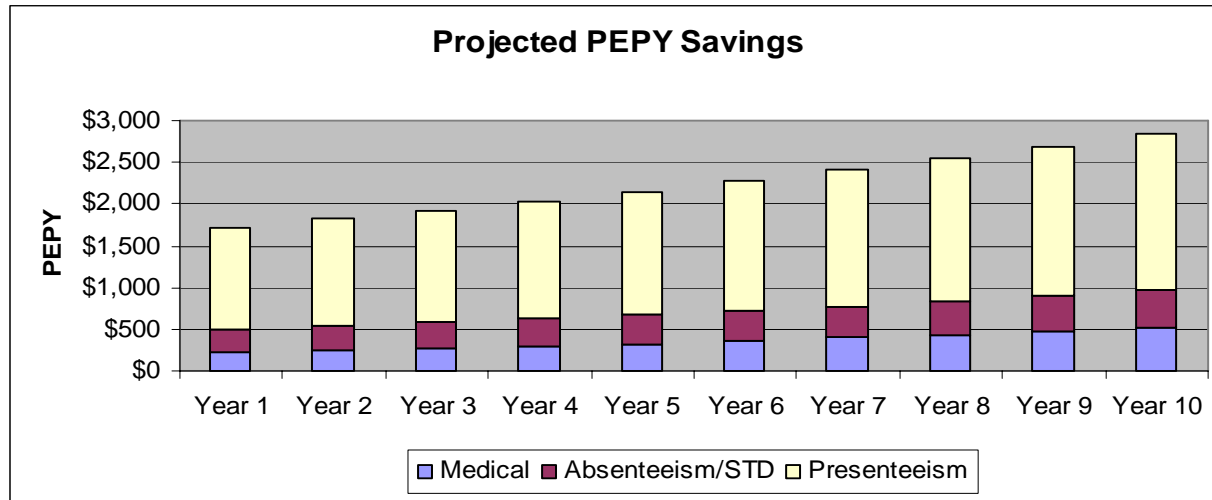


	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Medical	\$ 224	\$ 237	\$ 251	\$ 265	\$ 280	\$ 297	\$ 314	\$ 331	\$ 351	\$ 371
Absenteeism/STD	\$ 145	\$ 146	\$ 148	\$ 149	\$ 150	\$ 152	\$ 153	\$ 155	\$ 156	\$ 158
Presenteeism	\$ 620	\$ 626	\$ 631	\$ 637	\$ 644	\$ 650	\$ 656	\$ 663	\$ 669	\$ 675
<b>Total</b>	<b>\$ 989</b>	<b>\$ 1,009</b>	<b>\$ 1,030</b>	<b>\$ 1,051</b>	<b>\$ 1,074</b>	<b>\$ 1,099</b>	<b>\$ 1,123</b>	<b>\$ 1,149</b>	<b>\$ 1,176</b>	<b>\$ 1,204</b>

2007 medical savings represents about 2.5% per employee assuming a projected annual medical cost of \$8796 per employee. Absenteeism and presenteeism savings is about 1.9% of pay.

# Projected Cost Savings

- Assuming average salary of \$75,000 per year

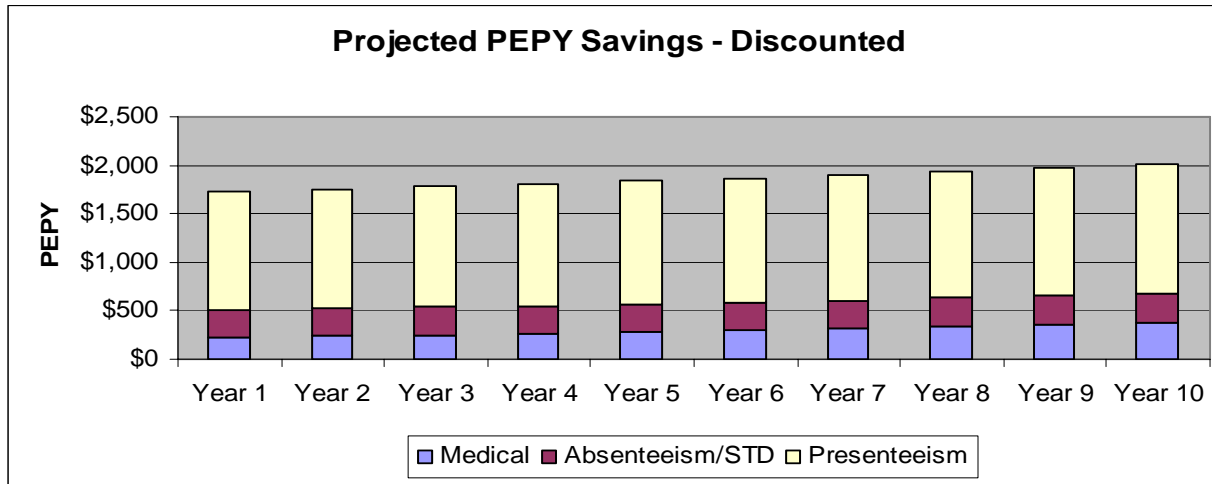


	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Medical	\$ 224	\$ 246	\$ 271	\$ 298	\$ 328	\$ 361	\$ 397	\$ 436	\$ 480	\$ 528
Absenteeism/STD	\$ 272	\$ 285	\$ 299	\$ 314	\$ 330	\$ 347	\$ 364	\$ 382	\$ 401	\$ 421
Presenteeism	\$ 1,162	\$ 1,220	\$ 1,281	\$ 1,345	\$ 1,412	\$ 1,483	\$ 1,557	\$ 1,635	\$ 1,717	\$ 1,802
<b>Total</b>	<b>\$ 1,658</b>	<b>\$ 1,751</b>	<b>\$ 1,851</b>	<b>\$ 1,957</b>	<b>\$ 2,070</b>	<b>\$ 2,191</b>	<b>\$ 2,318</b>	<b>\$ 2,453</b>	<b>\$ 2,598</b>	<b>\$ 2,751</b>

2007 medical savings represents about 2.5% per employee assuming a projected annual medical cost of \$8796 per employee. Absenteeism and presenteeism savings is about 1.9% of pay.

# Projected Cost Savings

- Assuming average salary of \$75,000 per year, discounted 4% per year



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Medical	\$ 224	\$ 237	\$ 251	\$ 265	\$ 280	\$ 297	\$ 314	\$ 331	\$ 351	\$ 371
Absenteeism/STD	\$ 272	\$ 274	\$ 276	\$ 279	\$ 282	\$ 285	\$ 288	\$ 290	\$ 293	\$ 296
Presenteeism	\$ 1,162	\$ 1,173	\$ 1,184	\$ 1,196	\$ 1,207	\$ 1,219	\$ 1,231	\$ 1,242	\$ 1,255	\$ 1,266
<b>Total</b>	<b>\$ 1,658</b>	<b>\$ 1,684</b>	<b>\$ 1,711</b>	<b>\$ 1,740</b>	<b>\$ 1,769</b>	<b>\$ 1,801</b>	<b>\$ 1,833</b>	<b>\$ 1,863</b>	<b>\$ 1,899</b>	<b>\$ 1,933</b>

2007 medical savings represents about 2.5% per employee assuming a projected annual medical cost of \$8796 per employee. Absenteeism and presenteeism savings is about 1.9% of pay.

## Discussion of Results

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- It is important to keep in mind that these savings estimates are derived from general published information, applied to a typical population with the specific SHP program in place. Actual results based on specific data for a given client could vary from these estimates if the specific client data becomes available.
- The savings projections are based on a typical employee population, with average risk and condition prevalence rates along with participation rates applied to get an estimated group in the program.

## Discussion of results

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- Absenteeism and presenteeism depend on payroll. To show a range of savings, the projections are shown at both \$40,000 and \$75,000 average annual salary
- The savings due to presenteeism are the least well quantified, so the results shown are based on averages from the materials available
- Given that an average employer cost of medical plans for 2007 is projected to be \$8,796 per employee, the 2007 medical savings represents about 2.5% per employee. Absenteeism and presenteeism savings is about 1.9% of pay.

## Appendix

- "Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers" Goetzel, Ron Z. PhD et al Journal of Occupational and Environmental Medicine, 2004.46 - Volume 46, Number 4, April 2004 pages 398-412
- "A Review and Analysis of the Clinical and Cost-Effectiveness Studies of Comprehensive Health Promotion and Disease Management Programs at the Worksite: Update IV" Pelletier, Kenneth R. PhD, MD Journal of Occupational and Environmental Medicine 2005.47 - Volume 47, Number 10, October 2005 pages 1051-1058
- "Prevention Makes Common 'Cents'" U.S. Department of Health and Human Services September, 2003
- "The Dollars and Sense of Health Promotion" Lowe, Graham Canadian HR Reporter Sept 23, 2002 Vol 15 Number 16 Pages 7-8
- "Latest Evidence for the ROI of Worksite Wellness Programs: What Program Strategies Work the Best?" Presentation given by Chapman, Larry MPH, Summex Health Management

## Appendix

- "The Relationship Between Health Promotion Program Participation and Medical Costs: A Dose Response" Serxner, Seth et al Journal of Occupational and Environmental Medicine Vol 45 Number 11 Pages 1196 – 2000
- "The Business Case for Quality: Case Studies and an Analysis" Leatherman, Shiela et al Health Affairs Vol 22 Number 2
- "Pull the Plug on Stress" Cryer, Bruce et al Harvard Business Review July 2003 Vol 81 Number 7 Pages 102 – 107
- "Selling Health to High-Risk Workers" Gale, Sarah Fister Workforce Dec 2002 Vol 81 Number 13 Pages 74 – 76
- "The Relationship Between Modifiable Health Risks and Health Care Expenditures: An Analysis of the Multi-Employer HERO Health Risk and Cost Database" Goetzel, Ron Z. PhD et al Journal of Occupational and Environmental Medicine Vol 40 Number 10 Pages 843 – 854
- Health Care Cost Survey Towers Perrin (annual) 1995 through 2007