Three Years of Worksite Wellness

A Zero Trend Case Study

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From 2011 to 2014, a Western school district implemented a comprehensive wellness strategy. This white paper summarizes the published research that shows how elevated health risks were reduced and medical costs lowered.

Three Years of Worksite Wellness

The cost of employee medical care continues to increase while worker health declines. Worksites are implementing wellness programs to improve employee health and productivity while reducing medical expenses. This white paper summarizes the one, two and three-year outcomes of one large employer with a well-designed, well-implemented wellness program. This paper is based entirely on peer-reviewed, scientific evidence.

The Worksite

For the three years prior to the implementation of a wellness program, (between 2009 and 2011), the 3,269 employees of large school district located in the Rocky Mountains, experienced medical costs of between $11,000,000 and $13,000,000 per year. Equally sized employers in the Western U.S. experienced similar health care cost trends.[1] During this time period, 60 percent of district employees had become overweight or obese, 61 percent had hypertension or prehypertension, 39 percent had high or borderline high cholesterol, and 5 percent had diabetes or pre-diabetes. The average age was 50. Approximately 15% of employees worked in manual occupations. The district health care bill was paid for by local taxes.

The district was, and continues to be, fully insured with a retained-retention agreement which gives their medical plan the benefits a self-funded health plan; meaning that health care premium payments in excess of health care costs are returned to the district. Claims costs above $250,000 are reinsured by a stop loss policy. The combination of poor health behaviors, elevated health risks and increasing medical cost trends convinced the district to begin a comprehensive wellness strategy.

The Wellness Program

A full time wellness program coordinator was hired and WellSteps LLC was hired as the wellness vendor. The wellness program design was based on the premise that employee-related expenses such as absenteeism, presenteeism, and medical costs are greatly influenced by poor employee health. Poor health is the direct result of elevated health risks most of which are driven by poor lifestyle choices. Therefore, to impact employee-related expenses, wellness programming must focus on the root cause of poor health – unhealthy behaviors.

The wellness program at the district was designed to help employees improve health behaviors and to make the overall work culture more supportive of good health practices. The program provided employees with the education, awareness, motivation, tools, strategies, supportive policies and social support needed to adopt and maintain healthy behaviors. This scientific approach to behavior change has been well-documented and is summarized by O'Donnell, 2013.[2]

Before participating in the program, employees completed a self-reported Personal Health Assessment (PHA) after which they received individualized electronic feedback. Additionally, to assess health-promoting policies and environments, the onsite wellness program coordinator and some committee members completed a health culture audit called "The Checklist to Change." Data from the PHA and Checklist to Change were summarized and discussed by a WellSteps account manager with the onsite Wellness coordinator.

Figure 1. Wellness Program Components

Figure 1 shows the components that were used to design the overall wellness strategy. The program incorporated administrative planning, baseline data evaluation, culture change and communication strategy, biometric screening, behavior change campaigns, and more. Four campaigns lasting four to eight weeks were offered each year. Campaigns are designed to improve health behaviors and build self-efficacy by reducing the behavior change process to manageable weekly tasks. Detailed explanations of each aspect of the wellness program used by the district can be seen at www.wellsteps.com.

Incentives

Two types of incentives were used to promote program participation. Those who completed behavior change campaigns were entered into a drawing for gift cards to local retail stores. A second, more robust incentive was benefits-based. These were changed each year and are described in Table 1.

Table 1. Benefits-based Incentive Requirements and Descriptions

Year	Must complete:	Incentive
2011-2012	PHA Biometric screening	$20 lower office copay $700 deductible reduced to $350
2012-2013	PHA Biometric screening	$20 lower office copay $700 deductible reduced to $350 $40/month premium discount
2013-2014	PHA Biometric screening WellSteps campaign or approved alternate activity	$20 lower office copay $700 deductible reduced to $350 $40/month premium discount

Program Results

The WellSteps model suggests that improved health behaviors will lead to lower health risks and subsequent reductions in medical costs. Peer-reviewed scientific papers documenting the effectiveness of the model at this district have been previously published.[3,4] Other manuscripts are in press or review.[5,6]

Table 2 shows improvements in nutrition, physical activity, tobacco, and alcohol use among those with the unhealthiest baseline behaviors. These behaviors improved from baseline and continued improving through at least two full years. Table 3 shows changes in biometric health risks. There was consistent risk reduction among those who had the unhealthiest numbers at baseline.

Table 2. Improvements in Health Behaviors Among Those With the Worst Health Behaviors

Health Behavior	Baseline	Year 1	Year 2*
<2 days of exercise/week, n=502	1.46 days	2.29 days	2.47 days **(+69%)**
<60 minutes/week, n=373	18.79 min	113.20 min	134.71 min **(+617%)**
<3 daily servings fruits/veggies, n=426	2.46 servings	3.48 servings	3.63 servings **(+47%)**
<3 days of restful sleep/week, n=407	2.23 days	3.17 days	3.36 days **(+51%)**
Smokers (days per week, n=77)**	4.35 days	5.43 days	4.27 days **(-1.6%)**
Alcohol Use (drinks/day, n=691)	1.31 drinks	1.16 drinks	1.10 drinks **(-16%)**

*All changes are statistically significant
** 11 of 77 smokers quit at 2 years

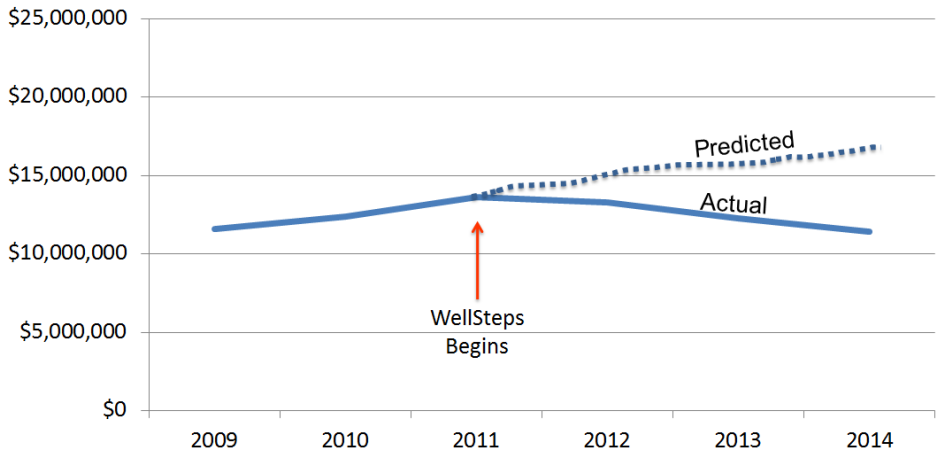
Table 3. Changes in Risk According to Risk Classification at Baseline

	Number of Employees	Baseline	Change After One Year
Systolic Blood Pressure (mmHg)			
Pre- hypertensive (120-139)	1086	128.3	3.9
High (140-159)	322	146.3	-3.7
Dangerous (≥160)	38	168.3	-12.6
Diastolic Blood Pressure (mmHg)			
Pre-hypertensive (80-89)	778	83.8	-4.2
High (90-99)	209	93.2	-8.7
Dangerous (≥100)	33	105.6	-15.9
Glucose (mg/dL)			
Pre-Diabetes (110-125)	117	115.3	-7.4
Diabetes (≥126)	72	170.5	-27.1
Total Cholesterol (mg/dL)			
Borderline (200-239)	691	216.4	-1.7
High risk (≥240)	216	261.5	-14.6
BMI (kg/m^2)			
Overweight (25.0-29.9)	738	27.2	0.07
Obese (≥ 30.0)	683	35.2	-0.28

Figure 2 below shows the predicted medical costs had the district followed the same cost trends of comparable worksites. This prediction provides a good estimate of what the cost trend would have been in the absence of a wellness program. But the district did *not* experience the predicted trend of comparable worksites.

Rather, district medical costs peaked in 2011, then decreased each year through the end of the evaluation period (2014). The district medical costs in 2014 ($11,390,481) were *lower* than the costs in 2009 ($11,590,407) basically showing a zero trend across the six-year evaluation period.

Figure 2. Predicted versus Actual Medical Costs for the District



Predicted Values from Kaiser Family Foundation[1]

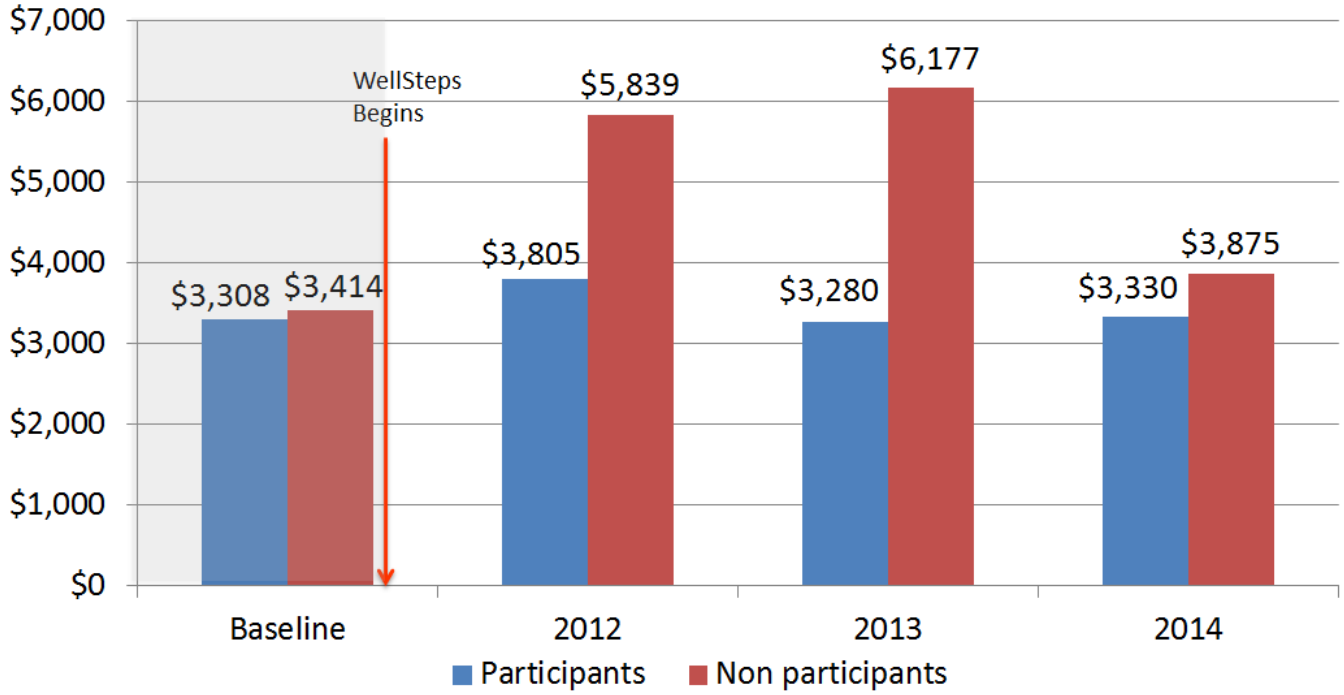
Individual wellness program participation data were then combined with individual medical cost data to allow for comparison of the medical costs between wellness program participants and non-participants.

Six years of medical cost data were evaluated including the three years prior to wellness program implementation. The "pre-program" cost data was used to statistically remove pre-existing differences in cost between participants and non-participants. During the three-years prior, program non-participants had slightly higher medical costs ($3,414 vs $3,308). No differences existed in age or sex between participants and non-participants.

Post-implementation, there was a dramatic difference in the cost of medical care between wellness program participants and non-participants in 2012 and 2013, and to a lesser extent in 2014 (Figure 3).

From 2012 to 2014, the program participants cost the district $5,025,138 less in medical costs than non-participants. It is highly likely that this cost savings is primarily due to the impact of the comprehensive wellness program. The cost of providing the wellness program during the same three year period was $1,412,736. Thus, the benefit to cost ratio for the program was 3.56 ($5,025,138/$1,412,736). During this study there were no changes in the district's health plan design.

Figure 3. Medical Costs for Wellness Participants and Nonparticipants



> If an employee population can create a healthy culture and reduce health risks and unhealthy behaviors, over time the company will get to zero trend.
>
> Dee Edington, Ph.D.
> Professor Emeritus
> University of Michigan Health Management Research Center

Shortcomings

Despite the improvements in health behaviors and risks, BMI did not improve. But while the U.S. population as a whole grew heavier during the three years under evaluation, the participants in this study did not. So, while there was no loss of weight, participants did not gain weight either.

Takeaways

Randomized clinical trials (RCTs) are an evaluation gold standard and none of the studies on which this report is based were (RCTs). However, it is currently illegal to randomize employees to a non-wellness program condition. This criticism aside, we ask: If the wellness program was not responsible for these documented improvements in health behaviors, health risks, and medical costs, than what was?

These findings show that a comprehensive wellness program helped employees adopt and maintain healthy behaviors thereby lowering elevated health risks. This wellness program also impacted the medical cost trend in a dramatic way. A worksite with a zero medical cost trend over a six-year period is extremely rare. This paper provides ample evidence to show that worksite wellness strategies can be effective at promoting health and reducing employee medical expenses.

References

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3. Merrill RM, Sloan A. Effectiveness of a health promotion program among employees in a western United States school district. J Occup Environ Med. 2014 Jun;56(6):639-44.

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