

Alliance for Wellness ROI, Inc.

Alliance for Wellness ROI, Inc. Calculating Return on Investment for Wellness Programs: A Unique Solution

Alliance for Wellness ROI, Inc.

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The Alliance for Wellness ROI, Inc.

The Alliance for Wellness ROI, Inc. (the Alliance) is an inter-company cooperative, formed to standardize the terminology and measurement of the net savings and the return on investment (ROI) of Wellness Programs. The Alliance is a non-profit corporation founded in 2005, and qualified under Internal Revenue Code Section 501(c)(3) as a scientific, educational and testing organization. Following are the founding members of the Alliance:

- BMW North America
- Henry Ford Health Systems
- Kraft Foods
- MasterCard Worldwide
- Schlumberger

The goal of the Alliance is to promote wellness, to demonstrate that a wellness expenditure is a corporate investment, and that the ROI of a corporate wellness program can be objectively measured.

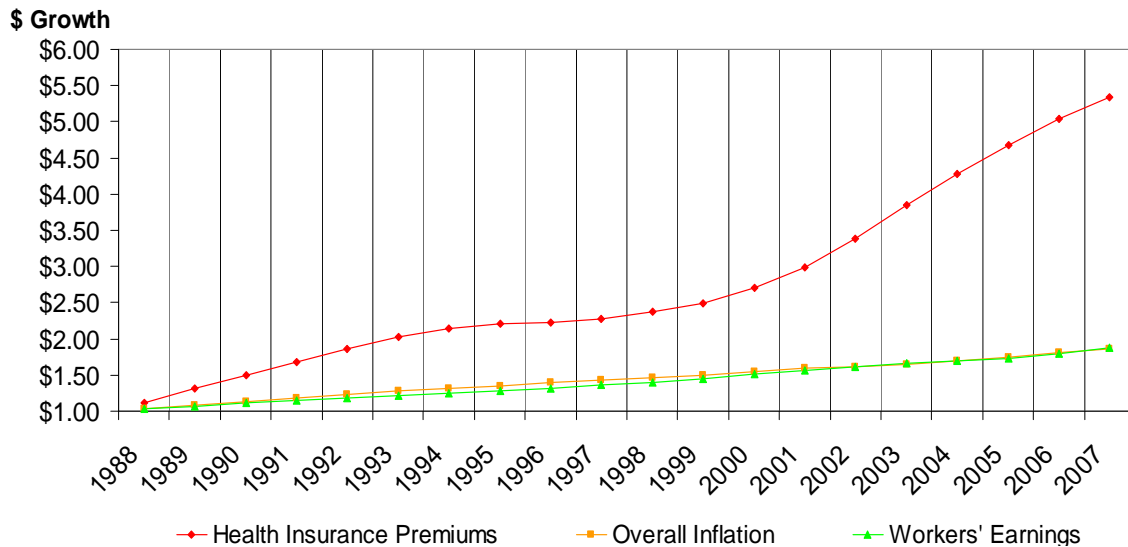
There have been numerous attempts to measure the financial return on corporate wellness programs, and a plethora of articles published — virtually all by related parties, and virtually all claiming positive financial experience. Although published results of these have convinced many observers that there is probably some sort of financial return, the lack of objectivity in the tools and terms used have convinced many that there is no accepted standard of measurement — no way to arrive at financial results believable to all stakeholders — and that an expenditure for a wellness program is just another expense of already-overburdened corporations — a nice idea socially perhaps, and a nice perk, but expensive.

For this reason the Alliance is focusing attention on the development of standardized terminology and methodology, to the end that any claim of financial savings and return on investment, whether positive or negative, will be credible.

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The Cost of Healthcare in America

As illustrated in the following chart, healthcare cost increases have been far outpacing overall inflation and workers' earnings, especially from the late 1990s to the present.



Source: Kaiser/ Health Research and Educational Trust 2007 Survey

The measures used to control healthcare costs have historically focused on the financing side of delivering healthcare. Some examples of this include negotiated service provider discounts, increased employee cost sharing through contributions and point of service deductibles, co-payments, and coinsurance, the influence of managed care plans, and the introduction of high deductible health plans (e.g., Consumer Directed Health Plans), as well as tiered networks that encourage utilization at more “cost-effective” healthcare facilities. These initiatives have had an impact on moderating the plan sponsor’s healthcare costs, and in some instances the employees’ costs, over the short term. With healthcare cost increases continuing to outpace inflation and workers’ earnings, employers are increasingly turning to health management initiatives to reduce healthcare costs. These initiatives are collectively referred to as what has become the last bastion of healthcare cost control — Prevention and Wellness Programs.

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Why America Needs Corporate Prevention and Wellness Programs

Although some types of Wellness Programs have been around for many years, the reluctance of many employers to introduce or expand them is based in part on the following reasons:

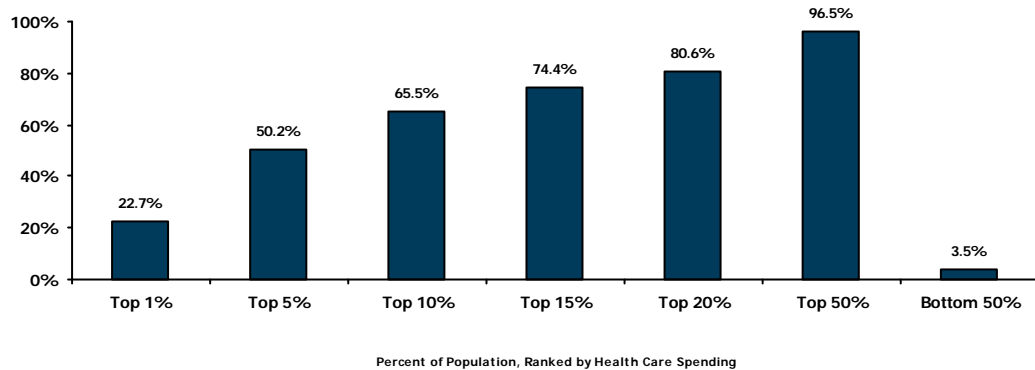
1. the lack of identifiable savings in the short-term; and, most significantly,
2. the inability to objectively measure net savings and ROI, particularly as the cost of such programs becomes increasingly large and visible.

Despite this reluctance, the number of companies offering one or more Wellness Program components is increasing. This increase is more pronounced at large companies, as may be noted in the following chart from the *2008 Kaiser Family Foundation HRET* survey, that illustrates the percent of companies that offer one or more selected Wellness Program Components.

| Employer Group | Gym Membership Discounts or Onsite Exercise Facilities | Smoking Cessation Program | Web-based Resources for Healthy Living | Wellness Newsletter |
|------------------------------|--|---------------------------|--|-------------------------------------|
| Small (under 200 employees) | 22% | 19% | 32% | 27% |
| Large (200 employees and up) | 60% | 59% | 69% | 51% |
| | Weight Loss | Personal Health Coaching | Classes in Nutrition/Healthy Living | Offer at Least One Wellness Program |
| Small (under 200 employees) | 13% | 10% | 13% | 53% |
| Large (200 employees and up) | 47% | 35% | 43% | 88% |

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The majority of medical claims cost is incurred by a relatively small portion of an employer's covered participants; therefore the impact of changes affecting healthcare cost will have a marginal impact on overall claims reductions. The following chart, also from the *2008 Kaiser Family Foundation HRET survey*, illustrates this. [In the following bar-chart, it may be noted that 80.6% of healthcare costs come from 20% of the employee population.]



Of the individuals whose costs make up the bulk of the claims costs, many can reduce such costs through targeted lifestyle changes. It is generally accepted that 70% of all healthcare costs generated in the United States are attributable to preventable risks and unhealthy choices. According to the Centers for Disease Control and Prevention (CDC) **“chronic diseases account for more than three quarters of the nation's \$2.3 trillion medical care costs and a significant share traces to lifestyle factors such as smoking, poor eating habits and the lack of physical activity”**.

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Savings from Corporate Prevention and Wellness Programs

The large volume of studies suggesting the positive financial impact of targeted lifestyle interventions might suggest that a decision to expand Wellness Programs should be an easy one; however, the same large volume of studies “proving” positive ROIs of up to 20-to-1 and higher, almost never negative, is perhaps what has led to skepticism on the part of corporate CEOs and CFOs.

A simple internet search of return-on-investment (ROI) for Wellness Programs yields references to the numerous studies demonstrating returns that vary wildly. Much of this variation is due to a number of factors, such as (to name just a few):

- ROI formulas lacking consistency;
- differences in the program components being measured;
- differences in seemingly-similar program components being measured;
- differences in how the ROI is being communicated; e.g., does the ROI measurement net out the wellness expenditure;
- studies by the same persons who designed the program;
- variations in the input costs being measured; e.g., company incurred claims only, or total incurred claims inclusive of the employee out-of-pocket, or net cost after network discounts; and
- does the ROI include medical claims savings only or are savings for decreased absenteeism and increased worker productivity included?

These wide-ranging ROIs, when used to justify the existence of a wellness program at a company, are understandably met with increasing skepticism.

What is lacking, and what the Wellness Alliance is focusing attention on, is a standard measurement, the results of which will be accepted as uniform and objective, and credible to all users. Ultimately, results that are considered credible may be recognized as an offset to a company's profit and loss statement; or at a minimum an offset to health care costs.

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Calculating the Wellness ROI

Determining the return-on-investment based solely on a change in healthcare claims appears at first to be straightforward. The formula that the Alliance uses for calculating the ROI, which is not in general use, is this algebraic equation:

$$\text{ROI} = [A - B - C] / C, \text{ where:}$$

A = What claims would have been without the program;

B = What claims are with the program; and

C = Expenditures for the Wellness Program

The difficulty is determining the “A” value in this equation: that is, what claims would have been absent the wellness program. The reason for this is that we are calculating a numeric value for something that never happens — which is a financial determination requiring actuarial measurement.

The hypothetical standard in determining “A” is to assign wellness program participants to various program components randomly. The healthcare claims would then be analyzed by program component for program participants against non-participants. However, this is expensive, it takes a long time, is probably unethical, and not palatable to the employee. Add to this the fact that, in practice, the results could probably not be used in a corporate wellness program.

An alternative is the observational (quasi-experimental) study that compares the costs for wellness program participants with the costs for non-program participants using historical data. The advantages of this approach are that it is ethically achievable, it reflects the real world of a company, is more readily received by the CEO/CFO, and is less expensive to conduct. The main disadvantage is that the results must be adjusted for such statistical confounders as self-selection, which allows the introduction of some degree of subjectivity. The worst case scenario is that all of the sickest employees will join a truly efficacious program, and make it look like the program causes increased health care claims cost.

In addition to adjusting for self-selection, the availability of multiple Wellness Program components must be adjusted for. For instance, suppose participation in an EAP produces an ROI of 3:1 and participation in a smoking cessation program produces an ROI of 5:1. Is the ROI for a participant in both components the sum of these, or the average, or something higher, on the presumption that there is some degree of synergy between the components that leads to an ROI greater than the sum?

The ROI measurement methodology must consider these, and many other factors, in order to be useful.

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The Alliance's Integrated ROI Modeler

The ROI Modeler is an integrated approach, developed by the Alliance in concert with actuaries, epidemiologists and a data warehouse partner that coordinates the following four functions:

- continual collection of healthcare claims and wellness participation data, organized into a standardized data repository;
- actuarial and epidemiological analysis of the data in the repository, to develop increments and decrements to be used in calculating the ROI;
- development of individual companies' savings and ROIs; and
- individual company reports that show results, and benchmark the companies' wellness programs against the aggregate database, or some subset of these.

Data Repository

The Alliance collects data from numerous companies and aggregates this data into one standardized database, from which ROI increments and decrements are derived. Because the collection and maintenance of data from more than one company in the same format is a formidable task, the Alliance enlisted the help of a data warehouse vendor to collect the data by first creating a data request that includes standard data fields, grouped to include:

- eligibility data,
- medical claims data,
- pharmacy claims data, and
- wellness participation data.

The aggregate database can also be used to produce:

- ROI for all companies combined, or subsets of these; and
- ad-hoc queries by member companies of the Alliance.

ROI Analysis

The data base includes claims and Wellness Program participation data. Wellness Program participants included in this historical data elected to participate in one or more Program components for a variety of reasons, not randomly. Therefore, the Alliance ROI study uses an observational approach, meaning the Alliance will "observe" the results of the individuals that elected to Participate after adjustment for self-selection as well as the effect of participation in multiple Wellness Program components.

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Before the ROI calculation can be performed, all program components must be identified. In an effort to standardize the ROI calculation, the Alliance has identified eleven such components:

1. Work Life Balance
2. Employee Assistance Plan (EAP)
3. Disease Management
4. Health Risk Appraisal
5. Telephonic Coaching
6. On-site Medical
7. Weight Management
8. Smoking Cessation
9. Wellness Education/Communication
10. Preventive Care
11. Fitness

Once the components are identified, the next step in the analysis is to identify the individual self-selection variables and to mathematically adjust for these variables. Of course the number of reasons a participant decides to participate in a Wellness Program is virtually endless. Therefore, the Alliance has identified the variables that have the largest impact on selection and are the easiest to receive from healthcare and wellness vendors. The variables the Alliance adjusts for in the ROI calculation are:

1. Age and gender - utilizing healthcare claims distribution tables
2. Geography – average claims by primary diagnosis code from a national database
3. Medical Plan design – use total incurred claim without reduction for participant out-of-pocket (does not account for utilization differences due to plan design)
4. Underlying health factor – utilize Health Risk Appraisal data to the extent it is available.

The ROI formula then compares the average adjusted participant claims over the entire study period with that of the adjusted non-participant claims. The selection issue is then further adjusted by comparing the trend in claims for both groups over the entire study period as opposed to the actual mean claims.

The process of calculating and comparing adjusted participant and non-participant claims over the study period is performed for each combination of Wellness Program components. Extracting and measuring each combination results in extremely low population samples which in turn will yield a relatively large statistical variance.

To illustrate, assume the following examples:

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Example 1

Company ABC has 20,000 healthcare plan participants and a wellness program that consists of an EAP and a Smoking Cessation program. Assume that each wellness program component has a 10% participation rate. The ROI measure of each component will utilize 2,000 participants however a subset of that population will have participated in both wellness program components and no adjustment has been made for the effect of participating in both programs. Therefore, we must look at just the individuals that participated in both. Assuming the combined EAP and Smoking Cessation participation rate is 2.5%, our sample has decreased to 500 participants.

Example 2

Company ABC and 10 other companies agree to aggregate their healthcare and wellness participation data. Combined there are 500,000 healthcare plan participants. Assuming the same EAP and Smoking Cessation program component participation rate of 2.5%, we now have 12,500 participants with which to apply our ROI formula.

It is safe to assume that the study using 12,500 wellness program participants will yield a much more statistically-credible ROI. However, very few companies have 500,000 participants to study.; therefore bringing data from multiple companies together can significantly increase the statistical validity of the ROI and allow for the effect of participation in multiple wellness program components. A by-product of this is increasing corporate benchmarking comparisons of program components as well as reduced skepticism from CFOs.

The final step in the process is to validate the ROI results. This step consists of two sets of analyses:

1. The first test is the use of multivariate analysis by an epidemiologist to determine the confidence interval of the results; and
2. The second is the use of predictive modeling software as a benchmark to compare the difference in claims (A-B) in our formula with the results of what the software produces for A-B.

Provided the results are validated, an ROI range is finalized. A large difference between the initial calculation and the validation will require an understanding of why the results vary and the proper adjustment for this variance.

Individual Company Reports: The Alliance Member Product

A report for each member company is produced with the ROI results for that company as well as the summary data produced by the queries. This information is benchmarked to that of the aggregate database so that each company can compare its results with that of all other member companies.

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Modeling Software

The final step in the Integrated Modeler process is the Modeling Software. The calculated ROI results for each combination of Wellness Program components are input into the software. These results include the adjustments for demographic differences. Additional required input by the user includes certain demographic information such as age and gender distribution, estimated wellness participation in each program, and total estimated wellness expenditures. Using this input, the modeling software will produce estimated ROI results for an entire Wellness Program adjusted for a specific company's demographic differences.

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Conclusion

The goal of the Alliance for Wellness ROI, Inc. is to promote wellness by demonstrating that a wellness expenditure is an investment and its ROI can be objectively measured.

To this end the Alliance is inviting additional membership to contribute to the data repository, which in turn will increase the statistical credibility of the results and provide more in-depth comparative ROI measurement of program results and impact of strategies.

Participation in the Wellness Alliance is open to any company that commits to becoming involved in the goals of the Alliance.

Additional information about the Alliance and how to become a member can be found at www.roiwellness.org.