



The
ULTIMATE GUIDE

to

MEASURING

WELLNESS ROI

Wellness Program Analytics Done Right

WebMD[®]
health services

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The Importance of Analytics

For many organizations, helping their populations become healthier is simply the right thing to do. But with the significant investment required for wellness programs, even the most altruistic organizations need to analyze their outcomes so they can understand the efficacy of their programs and support continuous improvement.

We believe that effective measurement is a critical component of any successful, evidence-based health management program. At the same time, approaches to measurement and analytics can vary dramatically in scope and budget—as well as confidence in the results. These days, the industry is rife with confusion around outcomes. We'd like to help clear that up.

As the most-trusted brand in the country,¹ WebMD takes a rigorous and transparent approach to outcomes analysis. In this ebook, we'll explain what that means. And if you still have questions, we're here to answer them.

Components of Effective Assessment

Every analysis that WebMD Health Services delivers includes the five components that are critical to any credible outcomes evaluation.

- 1. Expert evaluation.** WebMD's experienced team of healthcare analysts are industry experts and are dedicated to providing a rigorous, comprehensive evaluation of client programs.
- 2. Methodological rigor.** Outcomes analyses must be as rigorous as possible. Whenever possible, WebMD recommends prospective randomized control studies. When randomized studies are unavailable, we recommend retrospective, matched-control, participant versus non-participant studies, which we believe to be the most rigorous retrospective methodology. Only in those cases where neither a randomized nor a matched control study is possible will we perform a longitudinal, pre- versus post-study.
- 3. Unbiased analytics.** WebMD has a vested interest in providing objective evaluations of our services. We take the lessons we learn from every analysis and use them to make continuous product improvements. Whenever possible we prefer to partner with your team or your consultants as we define your analysis methodology to ensure our work is fair, unbiased, and will be something you have 100% confidence in.



- 4. Full transparency.** We always provide full documentation on the assumptions and calculations we utilize in our analyses before we even start. We recommend independent validation of our work by third-party consultants to ensure that our analyses represent best-in-class healthcare analytics.
- 5. Long-term view.** Attributing short-term reductions in healthcare expenditures to the implementation of wellness initiatives can be challenging. We encourage organizations to set realistic, long-term goals, assuming that positive returns will likely be realized over the course of three or more years after program launch.

Analytics Requirements Change Over Time

Your evaluation focus will naturally change over the lifecycle of your program. At each stage, you'll have access to different data sets, and you should have different expectations for the results and how you'll use them. Flexible, comprehensive analytic solutions will provide you the data you need—when you need it.

WebMD Analytics Focus Over Time



The Evolution of Analytics

Pre-Launch. Prior to the launch of your program, take advantage of our extensive benchmarking data sets to help you estimate organizational risk levels, project participation rates, and set measurable goals for your program. We can also design and implement randomized control pilot studies to help you establish solid evidence for program efficacy before your full-scale population launch.

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Year One. Evaluation should focus on activity metrics such as registration, engagement, site activity utilization, population health profiles, and participant satisfaction. These metrics will help you understand how your population uses your health management tools and services, as well as identify which segments of your population are most in need of wellness interventions.

Year Two. At this stage, we'll assess the behavior changes in your population, interpret key trends in your data, identify segments of your population who need the most help, and make data-driven recommendations for program improvements. We recommend risk-based ROI analyses at this time to provide early estimates of program outcomes.

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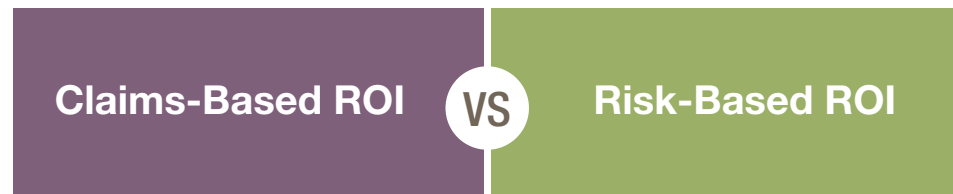
Year Three. When appropriate, we'll often recommend a claims analysis to demonstrate the effectiveness of your health management program to your stakeholders. This is also the time we recommend looking at refreshing your programs to keep them intriguing for your populations.

Methodology Decisions

At each stage of your wellness program, WebMD's expert team of analysts can help you identify the methodology that will best meet your program goals and organizational resources. By assessing two key decision points, we can find the most rigorous approach that your budget, timelines, and population size will allow.

DECISION ONE

Outcome Measure



Claims-Based ROI Methodologies

Claims-based methodologies use your actual medical and pharmaceutical claims experience to assess financial impact. These methodologies are the most applicable to your specific population and provide the most rigorous view of program impact, but also require higher expertise and more time than other approaches.

RECOMMENDED WHEN:

- **Your organization has longer evaluation timelines.** Claims-based methodologies require at least 12 months of pre-program claims data and 12 months of post-program data. Allowing for a reasonable claims run-out, the earliest a claims analysis can be delivered is 18 months post-launch.

- **You need to show “real” dollar returns.** Claims-based methodologies use your organization's actual healthcare experience to demonstrate value, something that executive sponsors are requiring with increasing frequency.
- **You need a more in-depth look at program impacts.** Claims data provides you with a broader scope of outcomes measures. In addition to paid medical claims, consider tracking trends in in-patient hospital visits, emergency room visits, preventive screenings, pharmaceutical claims, and HEDIS measures.

Risk-Based ROI Methodologies

Risk-based methodologies use peer-reviewed published studies to assess financial impact by attributing dollar values to the presence of modifiable risk in the population. Risk-based returns are not as rigorous as claims-based analyses, but are still useful.

RECOMMENDED WHEN:

- **You need quicker estimates of return.** Risk-based methodologies can be conducted starting shortly after the conclusion of the program year. Risk-based analyses are a good interim option while you wait for claims data to become available.

- **You have a limited budget.** Using the health assessment data you have already collected, risk-based ROI methodologies don't incur fees associated with integrating data from your claims vendor or health plans.
- **You have a smaller population.** Risk-based methodologies are also a good option for organizations without a large enough participant base to support a valid claims-based analysis.

DECISION TWO Study Design

Once you have determined your outcomes measures, the next decision is to determine the right study design that best meets your needs. WebMD will work with you to identify the right design for your needs. This section provides a look at your study design options.



Trend Analyses

Trend analyses use Time 1 vs. Time 2 health assessment results to measure how your outcomes have improved over time.

To ensure the fairest comparison, we recommend evaluating the cohort of people who have completed the health assessment in both Time 1 and Time 2.

We will assess your cohort's trends versus regional or national expected trends to determine savings.

This savings will be compared to your actual program-related costs to estimate your ROI.

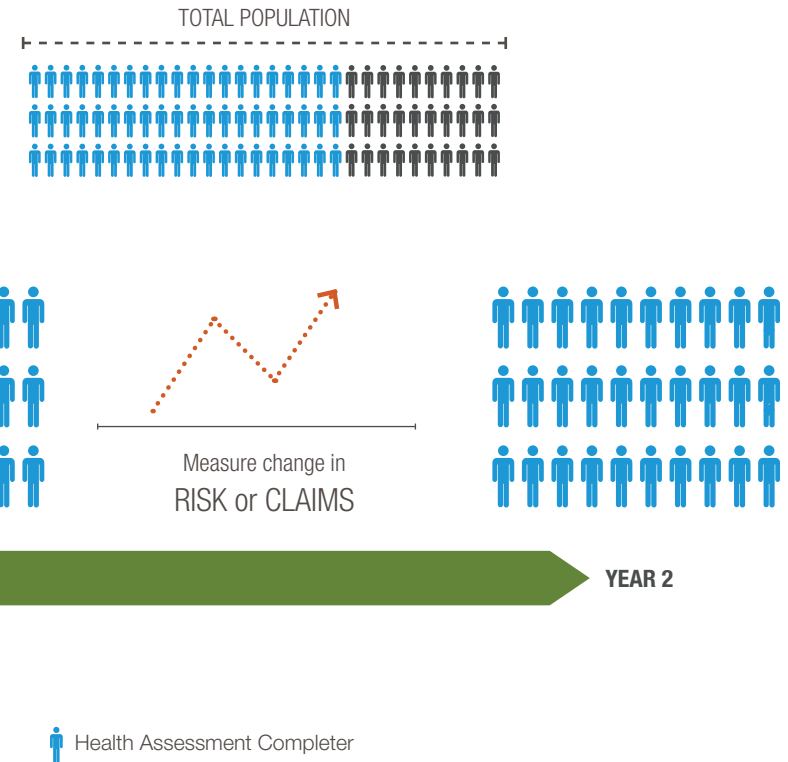
This is the least rigorous option for assessing ROI, as results may be impacted by regression to the mean and self-selection bias.

RECOMMENDED WHEN:

You want to assess your entire health management program, or don't have enough non-participants to create a good control group. Population trend assessments can help you understand the overall impact of a wellness initiative, not just your investment with WebMD, or your investment in just one intervention.

Adjustments can minimize the impact of external factors:

- Continuous Benefits Eligibility
- Catastrophic Claimants
- Irrelevant Episodes of Care
- Benefit Plan Coverage Changes
- Shifting Plan Enrollments
- Provider Network Changes
- Illness Burden
- Concurrent Wellness Programs



Matched Control Assessment

Matched control assessments retrospectively compare participants to equivalent non-participants. The control group is made up of non-participants with characteristics similar to their matched participants.

WebMD uses fuzzy matching to identify an equivalent non-participant group based on a likely-to-participate propensity score, demographics, baseline health risks/conditions, baseline expenditures, motivation to change, and participation in other wellness programs (as available). Once we identify the matched participant and non-participant groups, we use a standard difference-in-differences approach to calculate the savings/impacts associated with the intervention. Those savings are compared to actual program costs to estimate an ROI.

RECOMMENDED WHEN:

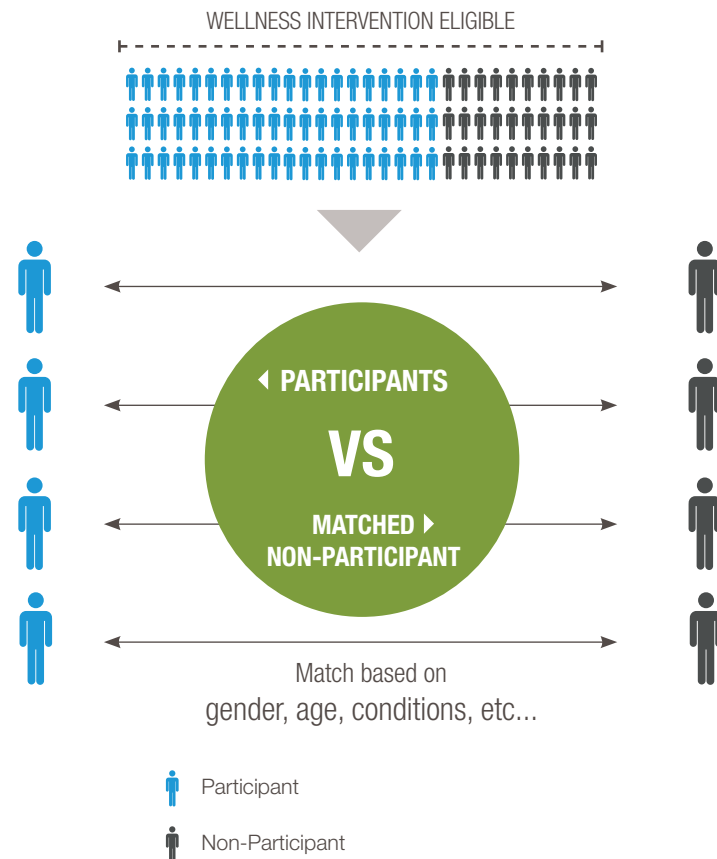
- You want to assess the impact of a specific program. This type of assessment allows you to look at the incremental value associated with interventions such as telephonic coaching.
- You want to retrospectively assess program efficacy. Matched control studies are ideal when you don't have the resources to implement a prospective trial or you are not able to withhold services from a segment of your population.

LIMITS:

While we believe this methodology is as rigorous as possible for a retrospective look, a matched control assessment can't control for all differences between participants and non-participants. It is always possible that there is some unknown factor that could skew the results.

Adjustments can minimize the impact of external factors:

- Continuous Benefits Eligibility: We include only those members eligible for the full study time frame.
- Catastrophic Claimants: We exclude individuals with outlier claims during the study period.
- Irrelevant Episodes of Care: We exclude pregnancy, neonatal claims, and other non-relevant episodes of care.





Randomized Control Trial

This study design is the most robust return-on-investment evaluation available. Participants in both the treatment and control groups must meet specific eligibility requirements during the study period, such as continuous enrollment in health benefits, not be or have been pregnant, and not have a significant identified medical condition (i.e., organ transplant, active cancer treatments, etc.). Note that this study design also requires more lead time, organizational commitment, and analytic resources than any other option.

RECOMMENDED WHEN:

- You are implementing a pilot program. Prospective randomized trials are ideal for organizations who need evidence of positive results before extending services to a larger population or who want to test the efficacy of a new product.
- You seek the most rigorous proof possible. Randomized control trials are the gold standard in research. This study design is universally acknowledged as the most rigorous evaluation of program efficacy.
- You have strong executive support for evaluation. Prospective randomized controls require careful advance planning and high levels of commitment from organizational leadership. Consider this option if your executives are willing to invest in evaluation.

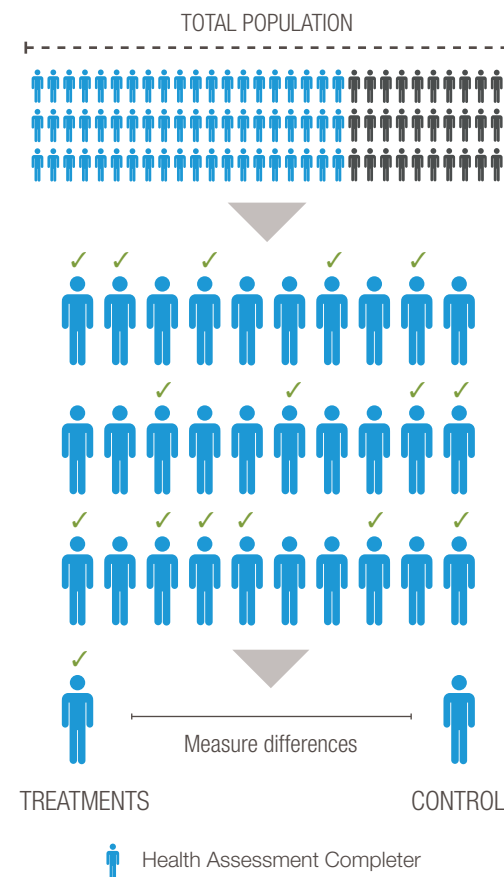
LIMITS:


Not recommended in situations where withholding programs from a control group is not feasible.

Statistical adjustments may be made to account for:

- Catastrophic claims

We assess program impacts for statistical significance using tests such as Chi-Square or Students-t test.



	Risk-Based Methodologies			Claims-Based Methodologies		
	Population Trend Assessment	Retrospective Matched Control Study	Prospective Randomized Control Trial	Population Trend Assessment	Retrospective Matched Control Study	Prospective Randomized Control Trial
METHODOLOGY DETAILS	<p>Assess changes in risks for your entire population</p> <p>Apply peer-reviewed published literature to the net changes in your population's health risks to estimate financial impact</p> <p>Compares to expected medical claims trend</p>	<p>Compare risks changes for intervention participants versus "matched" non-participants</p> <p>Apply peer-reviewed published literature to the net changes in your population's health risks (compared to the control group's net changes) to estimate financial impact</p>	<p>Prospectively identify populations to receive and not receive intervention</p> <p>Compare risks changes for intervention participants versus randomized non-participants</p> <p>Apply peer-reviewed published literature to the net changes in your population's health risks to estimate financial impact</p>	<p>Assess changes in risks for your entire population</p> <p>Apply your actual claims experience to estimate financial impact</p> <p>Compares to expected medical claims trend</p>	<p>Compare healthcare expenditure changes for intervention participants versus "matched" non-participants</p> <p>Apply your actual claims experience to estimate financial impact</p>	<p>Prospectively identify populations to receive and not receive intervention</p> <p>Compare healthcare expenditure changes for intervention participants versus randomized non-participants</p> <p>Apply your actual claims experience to estimate financial impact</p>
POPULATION ASSESSED	All people who have completed the health assessment both at the beginning and the end of the program year	People who have participated in intervention	People who have participated in intervention	All people who have completed the health assessment in the program year	People who have participated in intervention	People who have participated in intervention
WHY?	<p>Inexpensive option</p> <p>Can be delivered shortly after the end of the program year</p> <p>Provides the broadest possible view</p> <p>Assesses your entire health management investment – not just your investment in one program</p>	<p>Less expensive option</p> <p>Can be delivered shortly after the end of the program year</p> <p>Assesses efficacy of a single program or intervention</p>	<p>Less expensive option</p> <p>Can be delivered shortly after the end of the program year</p> <p>Assesses efficacy of a single program or intervention</p>	<p>Provides a robust evaluation based entirely on your population's experience</p> <p>Provides the broadest possible view</p> <p>Assesses your entire health management investment – not just your investment in one program</p>	<p>Provides a more robust evaluation based entirely on your population's experience</p> <p>Assesses efficacy of a single program or intervention</p>	 <p>Provides extremely robust methodology to assess a specific program</p> <p>Based on your population's actual experience</p>
COST	\$	\$\$	\$\$	\$\$\$	\$\$\$	\$\$\$

LESS RIGOROUS

MORE RIGOROUS

Case Study in Analytics: Large Healthcare System

A client since 2009, a southeastern healthcare system has partnered with the WebMD analytics team to provide robust, annual evaluations of its wellness programming.

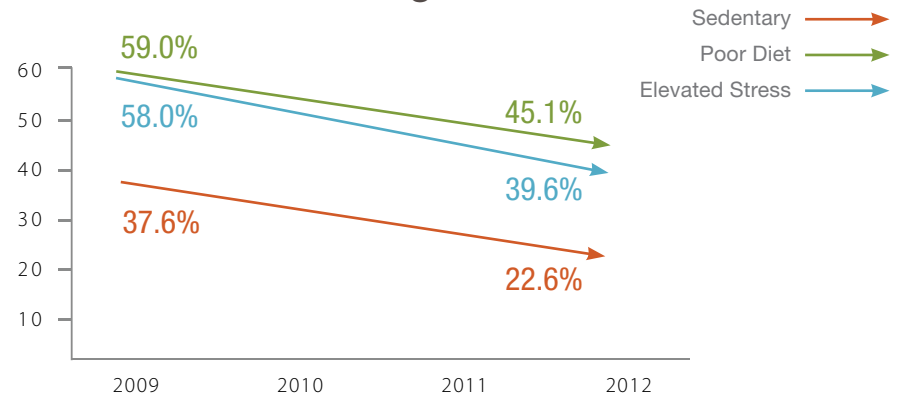
Behavior Change

As measured using time-over-time health assessment responses, the healthcare system has seen significant improvements in modifiable risk levels for its total population from 2009 to 2012.

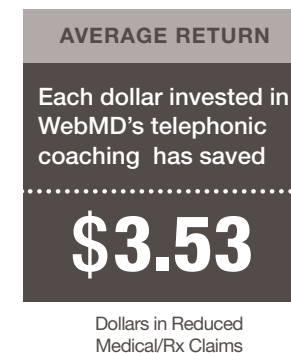
Return on Investment

We matched participants in WebMD health coaching to eligible non-participants using a propensity score, gender, coaching qualification scores, baseline modifiable risk levels, age, and willingness to make healthy changes. Comparing the difference in paid claims trend for each of these groups shows an average return over three years of \$3.53 for every dollar invested.

Risk Prevalance Changes



ROI



Case Study in Analytics: National Manufacturing Firm

A large, national manufacturing firm engaged WebMD analytics to conduct an evaluation of its first year of telephonic health coaching investment.

Behavior Change

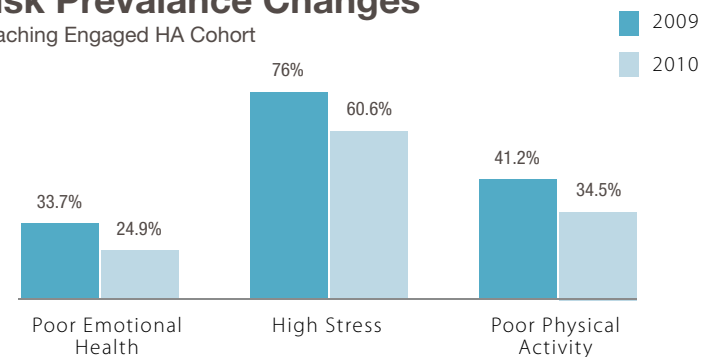
We measured by time-over-time changes in health assessment responses for the coaching-engaged population. The client saw a significant decline in rates of poor physical activity, high stress, and poor emotional health in this population.

Return on Investment

We compared the claims trend rate for coaching participants and a non-participant matched control group over a 24-month period, from 12 months prior to program launch to 12 months after program launch. The coaching participant group saw a decrease of 1.4% in paid claims, while the matched control group of non-participants saw an increase of 5.4% in paid claims. A difference-in-differences savings calculation yields a return of \$1.80 for every dollar spent on telephonic coaching in the first program year.

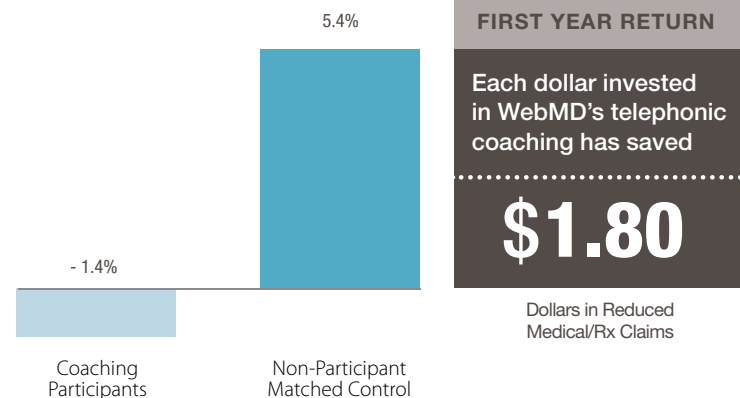
Risk Prevalence Changes

Coaching Engaged HA Cohort



Paid Claims Trend

Matched Control Comparison





According to RAND, only 44% of companies who have a workplace wellness program regularly evaluate their programs effectiveness.²

Analytics is a Critical Element of Your Wellness Program

Population wellness programs represent a significant investment for your organization. It makes sense to budget correspondingly for analytics so you can understand and manage that investment. While the health management industry is rife with confusion about the most effective ways to measure ROI and program efficacy, WebMD uses only statistically valid, rigorous methodologies with complete transparency, including independent third-party validation.

If you haven't launched your wellness program yet, this is an ideal time to discuss your analysis needs and lay any necessary groundwork. If you've already begun, we can still help you find the best approach to analyze the effectiveness of your programs and plan for the future.

To discuss customized outcomes analysis from WebMD, please contact your account manager for information on pricing and availability.

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The leading brand of **Consumer Health Information**

- More than 86 million unique visitors each month
- 1 in every 2 U.S. adults, 95% of all adults seeking health information, 5 of top 10 health-related web searches
- Most trusted consumer brand (Millward Brown)
- Leading healthcare brand for consumer privacy (TRUSTe)
- Most recommended by physicians

The leading brand of **Health Information for Physicians**

- 8 of 10 physicians who write 85% of all Rx's and see 60 million patients per week
- Over 2 million physician visits each month
- 1.5 million CME credits completed per quarter

The leading brand of **Health & Benefits Management**

- More than 250 clients operating in 30 different industries and sectors
- Large employers, including 4 of the top 20 Fortune 500
- Leading national and regional health plans
- 4 million active PHR users, 6.6 million HQ assessments completed, and 1.2 million coaching sessions

For more information about WebMD Health Services, contact us at WHSinfo@webmd.net or visit webmdhealthservices.com



Endnotes

¹ The latest Millward Brown global consumer brand study finds WebMD is the most trusted consumer brand. The WebMD brand ranked #1 in the United States ahead of Tylenol[®], Amazon.com[®], and FedEx[®].

² Workplace Wellness Programs Study, RAND Health, 2013.