

PERSONALIZING HEALTH ENHANCEMENT TO EFFECT BEHAVIOR CHANGE

In response to a long-standing trend towards higher real medical care expenses, U.S. businesses over the last twenty years have adopted a variety of techniques and programs aimed at controlling their medical care costs: managed care, disease management, and consumer driven health care have been touted, one after the other, as “cures” for our healthcare cost increase ills. Despite the clear and compelling arguments made for the effectiveness of these and other programs, they have all failed to meet the initial high expectations for their success.

Wellness programs are currently well positioned to become the next “cure”, and an industry is emerging to cater to the needs of employers in this regard. As wellness has matured, it has undergone a number of developmental changes. Trends include:

- Identification of a broad range of lifestyle health risk factors and their links to chronic diseases;
- Improved understanding of the links between healthy lifestyles and direct and indirect medical costs;
- Development of wellness programs that focus on a range of lifestyle risk factors, rather than a single risk factor;
- Recognition of the importance of health behavior psychology in driving appropriate behavior change; and currently;
- A growing focus on developing business models that can demonstrate effective health behavior change, and ROI, to businesses adopting wellness programs.

It has been well-established in the research literature that employees who lead healthy lifestyles have a better quality of life – they live longer and are healthier - while their employers benefit from a better quality of work - lower absenteeism and presenteeism. There are, however, much less robust demonstrations of the ability of wellness programs to actually change employee behavior, and to return a meaningful ROI on wellness investments.

The Vitality Group is introducing to the United States its proprietary health enhancement program that has been tested and refined internationally, with over a decade’s worth of experience. The Vitality program recognizes the need to effect positive changes in our members’ lifestyles by helping them to reduce their health risk factors, while delivering the program at a cost that will generate a meaningful ROI for the employer. We also understand that changing behavior is difficult - it requires individualized support for each member based on their own health risk profile and sophisticated health behavior change models supported by an actuarially-sound incentive program.

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VITALITY PERSONAL PATHWAYS: CUSTOMIZING WELLNESS FOR EACH MEMBER

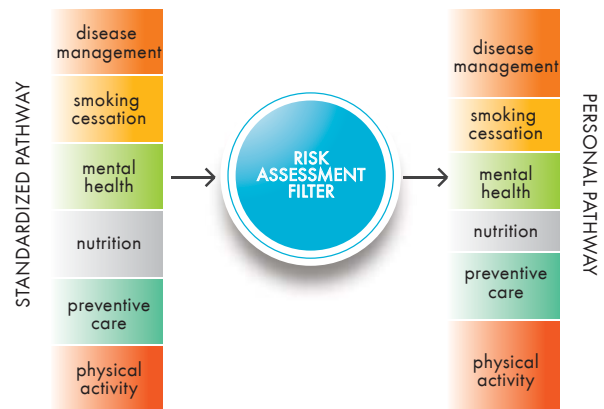
Vitality activities and outcomes are measured by Vitality Bucks®, which in turn gives the member a Vitality Status®. Members enjoy richer rewards as their Vitality Bucks, and Vitality Status, increase.

At the core of the Vitality program is Personal Pathways, a proprietary system developed by Vitality, which personalizes a health enhancement plan for each individual.

Building a unique Personal Pathway for each Vitality member is an interactive process: we gather information from the member, analyze it, and provide feedback on appropriate goals and activities that will help the member to manage their health. The Vitality Personal Pathways process is based on four simple steps:

1. *Health data input* - The member completes a Health Risk Assessment (HRA) and/or biometric screening in order to determine current health status.
2. *Risk assessment* - The HRA data is analyzed and used to determine the relative risk of the member as a result of their health behavioral risk profile.
3. *Personal Pathways components* - On the basis of the Risk Assessment, interventions across the health continuum are weighted in order to incentivize participation in risk-reducing activities appropriate to the individual. Additional Vitality Bucks, over-and-above the base Vitality Bucks, are assigned to at-risk and chronically-ill members to encourage participation and in recognition that attaining the desired goals may be inherently more difficult for them.
4. *Customized goals* - Vitality allows the member to identify a personal goal related to a particular risk factor, and assigns additional Vitality Bucks® for the attainment of the goal.

The Personal Pathways approach is summarized in the graphic below. As is evident, the weighting of the various health interventions will be customized to take into account the member's specific health characteristics and risk factors.



The elegance of the Personal Pathways approach is that it creates the appropriate incentives across the entire population, regardless of health status, age and physical ability. In this regard, Vitality aims to keep healthy members out of the healthcare system, and prolong the progression of disease in at-risk and sick members, all of which has been shown to positively impact on healthcare costs. The allocation of additional Vitality Bucks for individuals who are at-risk or ill is an important mechanism to overcome barriers to change, and to drive continued engagement in the program.

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THE COMPONENTS OF PERSONAL PATHWAYS

Each member's Personal Pathway is based on proprietary analyses of both self-reported and validated information on health status and lifestyle activities. The building blocks of the Personal Pathways structure are as follows:

1. *Modifiable Health Risk Factors* - These are scientifically identified behaviors and biometric measures that can be controlled through healthy lifestyle choices. Vitality is built around fourteen risk factors that have been identified from a review of the scientific literature to be both manageable, and have significant consequences for U.S. medical care costs.
2. *Health Risk Assessment* - The Vitality HRA is an online interactive tool that gathers self-reported information about each of the fourteen health risk factors, and develops a profile of each member's unique health risk characteristics. To ensure appropriate health outcomes, the information gathered from the Vitality HRA is leveraged into the health behavior change tools and programs.
3. *Vitality Check™* - Vitality Check is a biometric test provided by an independent medical laboratory and is the second source of member health information. Factors tested include height and weight, blood pressure, cholesterol, fasting blood sugar level, and cotinine level (tobacco use).
4. *Vitality Age™* - Vitality Age is a proprietary tool used to analyze each member's relative health risk profile. It uses the information gathered from the HRA and Vitality Check to determine a risk-adjusted age that can be used as a barometer of health status. The Vitality Age can be compared to chronological age to provide an easy-to-understand indication of health status.
5. *Health Risk Management Activities* - Behavior change is at the heart of the Vitality program. To help manage risk factors and maintain a healthy lifestyle, Vitality provides members with a choice of activities carefully chosen to address their specific risk factors. Vitality further encourages participation by subsidizing access to best-of-breed wellness providers within its extensive partner network.
6. *Vitality Rewards®* - Rewards are an important tool to encourage behavior change. Vitality uses incentives called *Vitality Bucks* as a positive reinforcement tool to encourage members to adopt and maintain healthy lifestyles. Additional *Vitality Bucks* are available to at-risk members to encourage participation in activities that will manage their specific risk factors.

VITALITY – CHANGING HEALTH BEHAVIOR THROUGH INCENTIVES

THE SCIENCE UNDERPINNING VITALITY AGE

Vitality Age is a proprietary tool used to analyze each member's health risk profile. It uses the information gathered from the HRA and Vitality Check to compare each member's health profile to that of an average risk of their same age and sex. The comparison is based on scientific evidence of the health and medical care cost consequences of each member's unique set of health risk factors.

Vitality Age has been developed using rigorous academic research. Its basic design principal is to develop relative risk factors, based on well-designed epidemiological studies, of the probabilities of people with measured degrees of health risk factors, and no existing chronic disease, being diagnosed with a severe chronic disease (e.g., heart disease, stroke, circulatory diseases, diabetes, and cancers) within 10-years of assessment. The developers have utilized their extensive clinical expertise to ensure that valid information from the medical literature has been integrated into a complex algorithm that provides an accurate measure of relative risk factors.

There are two outputs to members from Vitality Age; first is a comparison of their risk-adjusted age to their chronological age; second is a list of each member's health risk factors, and information about their relative importance in driving any difference between chronological age and Vitality Age.

Vitality Age and the individualized list of relative risk factors are powerful tools to help members to understand their health, and the actions that they can take today to improve their health in the future.

EARNING VITALITY *BUCKS* WITHIN PERSONAL PATHWAYS ENVIRONMENT

The research literature demonstrates the importance of rewards in encouraging behavior change. To ensure that Vitality is non-discriminatory to all members regardless of health status, Vitality *Bucks* are allocated at three different levels - for the base program, for undertaking activities in line with the Personal Pathway, and for achieving specific goals.

The goal of the Vitality reward program is that members will have roughly equivalent opportunities to earn Vitality *Bucks* regardless of their age, sex, and unique health risk factors. Members already leading healthy lifestyles will receive rewards for maintaining their lifestyle; members with known health risk factors will receive rewards for making positive changes in their lifestyles and for actually reducing or returning their risk factors to normal; and, members with known chronic conditions will receive rewards for participating in their employer's disease management program.

