



Vitality®

ENGAGEMENT WHITE PAPER

2022

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The US faces a healthcare and well-being crisis. As costs continue to spiral and poor outcomes prevail, a mental health crisis has emerged alongside a concerning reduction in preventive care throughout the pandemic. Leading into the pandemic, the US battled with the rise of chronic conditions. However, the decline in preventive care has resulted in a lack of treatment and detection of various medical conditions over the period, resulting in more members with chronic conditions and the increased severity of existing conditions.

To counter these challenges, organizations are seeking new and innovative ways to offer support to their members. Many have moved to provide a host of new benefits and programs to tackle these issues and contain costs. Employers are facing the added challenge of dealing with an attrition crisis – with a pressing need to attract, retain and engage employees.

Well-being programs are a vital tool available to organizations, but they need to be implemented strategically. The first step to achieving better outcomes from any health and well-being program is getting strong, sustained engagement. But how does an organization measure engagement? To date, a robust definition of engagement does not exist in the context of health and well-being programs. Most definitions of engagement only consider participation and frequency of interactions, but this definition is insufficient. Organizations looking to measure engagement need to consider other important aspects, such as to what degree the engagement will lead to the desired outcome, whether the engagement is frequent and sustained, and whether the engagement is improving over time. Once engagement is well-defined, understanding what drives engagement is critical for formulating an effective program strategy.

In this context, I welcome the publication of the 2022 Vitality Engagement White Paper. In this paper, we offer a view of engagement that is useful for measuring and assessing the success of a program in sustainably engaging people to achieve results. Our actuaries and analysts have conducted an in-depth analysis of our client data to understand the most impactful drivers of engagement and the key behaviors employed by our most successful clients in achieving high levels of engagement.

As the challenges facing US healthcare and well-being continue, we hope that the best practices and learnings outlined in this paper provide a firm foundation for employers and health plans to craft programs that engage their people, improve outcomes, reduce costs, and, ultimately, make people healthier.

In good health,

Maia Surmava
CEO
Vitality USA



EXECUTIVE SUMMARY



To help employers and health plans craft effective health and well-being programs, we provide a robust definition for measuring and assessing engagement and conducted a study of our engagement data to share insights into what drives engagement.

DEFINING ENGAGEMENT

Defining engagement is critical when assessing program engagement. In this paper, we propose four dimensions for measuring engagement and suggest metrics that are useful for assessing each one:

- 1

Breadth
The number of people the program reaches in an eligible population, including an assessment of the diversity of participation.
- 2

Depth
How frequently registered participants engage.
- 3

Quality
How significant/meaningful the engagement is in the context of the program's goals.
- 4

Momentum
How well the program sustains and improves engagement over time.

DRIVERS OF ENGAGEMENT

To understand what drives engagement, we fitted two models to our engagement data and supplemented this with further analyses, case studies, and research. We found that:

INTEGRATING INCENTIVE PLANS AND BENEFITS IS KEY

Integrated incentive plans and benefits are a powerful, if not vital, mechanism for driving program participation and ongoing engagement. An increase in integrated incentive plan size and difficulty from average to high corresponds to an 8% increase in registration rates and up to an 19% increase in depth of engagement, as measured by the percentage of registered members that achieve Gold or Platinum Vitality Status (our highest engagement levels).

PROGRAM SPONSOR SUPPORT AND COMMITMENT MAKE ALL THE DIFFERENCE

In our modeling, we found that leadership support, a strong Champs program, and communications strength were among the most significant factors driving Vitality program participation and depth of engagement in a population and, for employers, are critical elements for creating a culture of wellness.

- » **Leadership support** was the most significant driver of depth of engagement with an improvement in manager support from average to high corresponding to an almost doubling (92% increase) in the percentage of registered members achieving Gold or Platinum Vitality Status. This is also reflected in the number of monthly interactions per member, with an increase in manager support from average to high corresponding to an increase in program interactions of 47%.
- » When we assessed the significance of **Champs programs**, we found that strong Champs programs drive stronger engagement. The strength of Champs programs was found to be significant for depth of engagement, with an increase in Champs program strength associated with a 34% increase in the rate of members who achieve Gold or Platinum Status and a 18% increase in the number of activities per member per month.
- » **Frequent and deeply penetrating communications** were a significant driver of high levels of registration in our participation model. An increase in communications strength from average to strong was associated with an 11% increase in registration rates.

IN-PROGRAM REWARDS ARE A DRAW FACTOR AND ENGAGEMENT ENABLER

Targeted, sophisticated incentives are proven to be a powerful and necessary component of any successful program. Beyond driving engagement, our engagement data modeling showed that in-program rewards levels drive program uptake and interest. Increases in rewards levels are associated with increases in registration rates of up to 12% and increases in depth of engagement of up to 19%.

VITALITY'S ENGAGEMENT

Finally, we conducted a longitudinal analysis of our members over five years and used the findings to assess Vitality's engagement across the proposed dimensions. We found that Vitality drives industry-leading health and well-being engagement, from initial enrollment to keeping members frequently engaged, to creating quality engagement in meaningful activities across populations.

Vitality's focus is on sustained engagement strategy guidance and a data-driven approach to create continuous improvement over time. The result is a significant health impact with improvements in population health, lower healthcare costs, and improved employee productivity. Our data demonstrates that Vitality drives inclusive engagement across demographics and social determinants of health.



INTRODUCTION

How we perceive health and well-being has evolved. Society's understanding of what determines a person's well-being has matured to encompass a mixture of demographics, psychographics, various risk factors, and social determinants of health. It has become clear that guiding people toward a healthier lifestyle and helping them engage in the right health behaviors is a powerful mechanism for improving lives, reducing healthcare costs, and creating a culture of health.

However, effectively engaging people in their well-being and achieving results is challenging. Success is attainable with the right approach backed by the right technology and strategic support.

This white paper will:

- » Guide readers on how to think about and define engagement
- » Share insights into how to drive engagement
- » Demonstrate how Vitality has used our expertise in engagement to produce exceptional results

Our hope is that this white paper helps employers and health plans craft health and well-being programs that utilize best practices and learnings to engage people in their health, improve their well-being, and achieve returns.

Certain Vitality program elements are referenced and briefly described in this report. Full descriptions and context behind these program features can be found in the Glossary at the end of this paper.



DEFINING ENGAGEMENT

Health and well-being programs address urgent, far-reaching challenges facing organizations, like reducing the cost of care, improving workforce productivity, and engaging members in their health.. Regardless of how comprehensive the program is, the first step to achieving any of these goals is driving robust, diverse engagement.

The definition of program "engagement" has fluctuated over the years. Engagement has traditionally meant how many people use a program and how long or how frequently they use it. This definition is no longer sufficient. To achieve engagement that delivers results, how we view engagement must also consider other important aspects of engagement. For example, can the engagement lead to the desired outcome? Is the engagement frequent and sustained? Is the engagement improving over time? We, therefore, consider four dimensions of engagement critical

to the success of a health and well-being program:

1. BREADTH

Getting members into the program is the first step to activating any strategy. It requires the right technology, communications strategy, on-the-ground initiatives, and strategic support.

We define "breadth of engagement" as the number of people the program reaches in an eligible population. This can be broadly measured by the percentage of the eligible population registering for the program and how many registered individuals participate in at least one activity in a program year.

When looking at how many people the program reaches, measuring the diversity of participation is vital. Health and well-being programs can be the catalyst to creating more inclusive environments and equitable health outcomes. To measure this requires cutting engagement data across various social and demographic factors to ensure that the program reaches all members, not just pockets within the population.

2. DEPTH

After onboarding new users into the program, keeping members regularly engaged is foundational to supporting well-being and creating behavior change.

We define "depth of engagement" as how frequently people registered in the program engage. This can be measured by looking at active user program interactions, particularly the percentage of members completing daily, weekly, or monthly activities and the number of interactions over these periods. Many programs have a status, level, or tiering system where members can move up in status/level by engaging and achieving more in the program. The percentage of members achieving higher statuses, levels, or tiers is a useful measure for assessing depth of engagement.

Finally, just as measuring the number of people the program reaches is important, it's key to assess user retention to ensure that those who have registered for the program continue to engage.



3. QUALITY

For engagement to create value for program sponsors and members, it must be relevant to achieving the program's goals. This constitutes our definition of quality of engagement: how significant/meaningful the engagement is in the context of the program's goals.

This is especially relevant in making people healthier to reduce costs, and it requires incentivizing and rewarding measurable, clinically relevant healthy activities. Published, peer-reviewed research in association with Vitality has shown that 27% of US healthcare spending is attributable to modifiable behaviors¹. As the number of people living with controllable co-morbidities continues to rise and puts pressure on these costs, driving targeted engagement is critical. This requires an evidence-based, structured process that segments member populations to identify risks and inspires high value engagement.

To measure quality, analyzing engagement by different categories and activities is beneficial. It is essential to look at clinically significant activities like Health Risk Assessment completions, biometric screenings, and physical activity. It is also essential to assess whether the program/platform can engage at-risk members who may face significant barriers in their well-being journeys.

ENGAGEMENT COMPOSITION: THE IMPORTANCE OF VERIFIED, SUBSTANTIAL WELL-BEING ACTIVITIES

When assessing quality, it's important to look at what level of the engagement is verified and whether the data demonstrates substantial health activity. Self-reported and less clinically relevant activities (like self-attestation to an unverifiable mental health or productivity-boosting activity) can be important where it aligns with the program's objectives. Rewarding these activities must be carefully balanced with rewarding verified, high value, clinically significant activities. The benefits of well-being engagement in a population are derived from healthy behavior change, and the program must be structured to assess, validate, and reward such change.



| SIGNS OF VERIFIED AND SIGNIFICANT DATA | SIGNS OF UNVERIFIED AND INSIGNIFICANT DATA |
|---|---|
| Data recorded by devices, backed by credible evidence of activity completion or from a reputable source are given more emphasis | Self-attested data with no evidence provided, or from a dubious source, are substantially rewarded |
| Activities are only counted as engagement if substantial | Passive or potentially insignificant data are included; for example, a small number of steps in a day |
| Only relevant data points are included in reported engagement | Other data points that are not indicative of healthy behavior included |
| High levels of engagement correlate strongly with health outcomes | High levels of engagement have loose or low correlation to health outcomes |
| Strong signs of at-risk members engaging | Only healthy members engage |
| Feels realistic | Sounds too good to be true |

VITALITY'S ENGAGEMENT NUMBERS

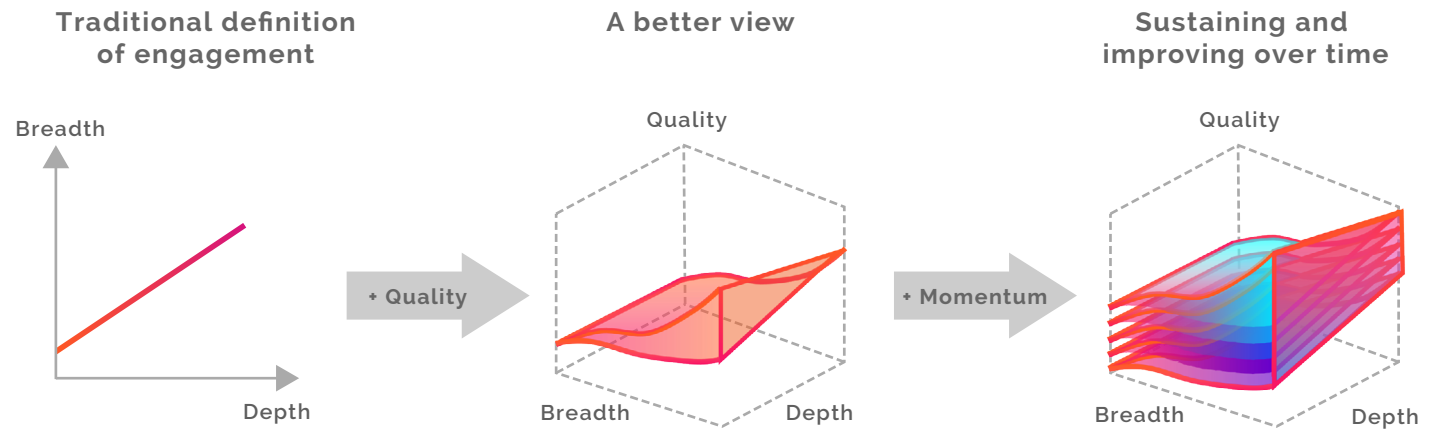
Throughout this paper, the figures we show represent the health behavior changes a prospective client can expect to achieve with the Vitality program, given sufficient organizational commitment and our core program design. Our flexible program allows us to support engagement in fun, social, and participation-based activities aligned with client objectives. Still, our principal focus is driving verified, substantial health and well-being activities.

4. MOMENTUM

Time is the fourth important, but often neglected, dimension when evaluating program engagement. We define engagement momentum as how well the program sustains and improves engagement over time. Many programs may generate initial interest but see a decrease in engagement from year to year. To sustain and improve engagement, programs must closely monitor the program's performance, evaluate progress, and adjust strategy when necessary.

Longitudinal analyses of member engagement over a substantial period, usually three years or longer, are the best method to assess engagement momentum. This is preferable to a static point-in-time comparison as it prevents selection effects and survivorship bias where conclusions may be skewed toward members or clients in the dataset that outperformed or outlasted others.

PUTTING IT TOGETHER: A MULTI-DIMENSIONAL VIEW OF ENGAGEMENT



DRIVING ENGAGEMENT

To understand how Vitality drives engagement, we fitted two models to our 2021 engagement data: one which attempts to explain the **breadth of participation**, defined as the percentage of eligible employees who register for the Vitality program, and another that attempts to explain the **depth of ongoing engagement**, defined as the percentage of registered members who achieve Gold or Platinum Vitality Status (our highest status levels).

We started with a base set of 18 factors. We then fitted a model with these factors, removing factors that were insignificant or had a significant correlation with other variables. From this model, we then inferred approximate marginal impacts of the different program elements.

Here are our findings:

Important note:

This analysis was done on a large sample of our clients. Variability may exist depending on a client's specific membership demographics and program initiatives; however, results represent our average client. Although this analysis was done on our employer clients, we believe that most, if not all, of the learnings are applicable to health plans and other program sponsors.

Marginal impacts are approximate based on the fitted regression models, keeping all other factors constant, and are based on a medium-sized client in program year 3 with our average book of business demographics. The sample employer has an incentive plan with a \$500 incentive available per year that is classified as easy to achieve. Manager support, communications strength, and physical activity rewards are based on the book of business average. The client has low Vitality Check access, a low Vitality Mall level, and a weak Champs program.

1. INTEGRATING INCENTIVE PLANS AND BENEFITS IS KEY

Employers have used incentives for years to drive engagement in valuable activities like completing compliance courses and important surveys, participating in company-sponsored events, and engaging in well-being activities. Whether they involve additional time off work or health plan contribution decreases, such incentives have historically driven high levels of desired activities.

Health plans have also used incentives and benefits design like contribution decreases, deductible and co-payment decreases, and cash rewards to drive key behaviors like screenings and primary care utilization, albeit with mixed results and often inefficiently in terms of engagement achieved per dollar of benefit/incentive.

Previous studies on our engagement data and our experience as a health plan have shown that well-designed, integrated incentives are a powerful, if not vital, mechanism for driving program participation and ongoing engagement.

The flexibility to accommodate different incentive designs is important for health and well-being engagement platforms. However, having simple, cost-effective, proven methods of establishing and integrating incentives is less common.

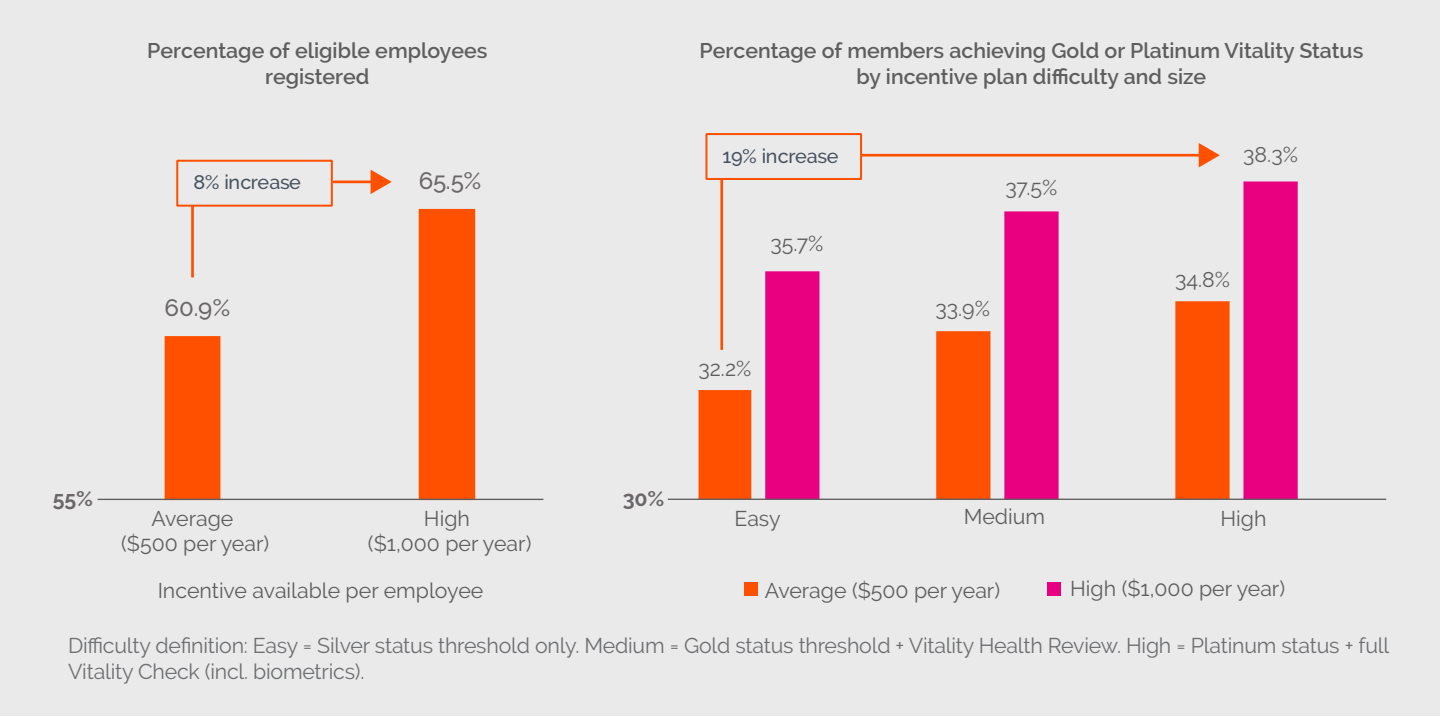
For health plans and insurers, Vitality has time-tested, validated methods for doing this, like dynamic pricing, underwriting frameworks, and other benefit features. For employers, we have our employer incentive plan – a highly configurable mechanism which allows employers to integrate an incentive or benefit based on a set of criteria in the Vitality program. This can be used to drive immediate and longer-term program engagement or to target specific activity engagement and outcomes criteria – whatever aligns with clients' goals.

Any incentive can be facilitated in our employer incentive plan. Most commonly, employers choose to set the incentive as the ability for employees to earn discounts on their health plan contributions or additional Health Savings Account contributions, as this represents the sharing of value with employees created through their health and well-being engagement. Other incentives commonly integrated include additional paid time off or access to additional perks or benefits.

When the member requirement for achieving the employer incentive plan is tied to achieving a high Vitality Status, members must sustain engagement in the Vitality program and various lifestyle improvement activities for a longer period of time and at a higher level. As such, having a Vitality Status criterion in an employer's incentive plan is consistently correlated with better engagement outcomes across our book of business and is recommended.

Two metrics for employer incentive plans were considered for our models: one that measures the size of the incentive, as indicated by the maximum dollar amount available per year through the incentive plan, and another that measures the difficulty of achieving the incentive plan as noted in the percentage of employees that would achieve the incentive plan requirements based on our book-of-business average engagement.

Both metrics emerged as significant in driving program participation, with an increase in incentive plan size from average to high corresponding to a **19% increase in registration rates** and an **11% increase in participants** achieving Gold or Platinum Vitality Status. Employer incentive plan difficulty emerged as significant for depth of engagement, with an increase in difficulty corresponding to an increase in the percentage of registered members achieving Gold and Platinum Status by as much as 8%. The combined impact of increasing incentive plan difficulty and size can **increase the depth of engagement by up to 19%**.



It may seem peculiar that program engagement depth (the percentage of members that achieved Gold or Platinum Vitality Status) *increases* with incentive plan difficulty, but this is consistent with previous modeling, which has shown that higher incentive plan requirements positively impact population engagement levels as members do more to receive their health plan contribution discount.

Beyond incentive programs, integrating the program sponsor's vendors, benefits, and other initiatives into the well-being program increases engagement in those areas and well-being program engagement. In our modeling, we found that access and integration to preventive biometric screenings, especially providing multiple avenues to do so, were key to supporting deeper program engagement. We also found that point solution and benefits integration into our ecosystem were highly significant for driving engagement depth, though they were excluded in the final model due to multicollinearities.

2. PROGRAM SPONSOR SUPPORT MAKES ALL THE DIFFERENCE



Schenck & Schenck Photography

"Culture eats strategy for breakfast"
– Peter Drucker, famed management consultant, educator, and author

Over the last decade, the concept of having a well-being strategy that can support employees to bring their best, healthiest, happiest selves to work has gone from novel to ubiquitous. Initially, the concept arose from the need to keep healthcare costs down and boost organizational productivity. While these remain equally relevant, in the wake of the "Great Reshuffle", where 43% of employees in 2022 are still somewhat or highly likely to consider leaving their current job in the coming year², employees are looking more to employers to support their well-being. The [2022 Microsoft Work Trend Index](#) revealed that 18% of people left their jobs in 2021, with the top two reasons for quitting being personal well-being or mental health (24%) and work-life balance (24%). The same study showed that 53% of employees are more likely to prioritize health and well-being over work than they were before the pandemic.

LEADERSHIP SUPPORT

In our fitted models, manager support, as measured by the percentage of employees who agree with the statement: "I feel encouraged by my direct supervisor/manager to participate in Vitality," was a driver of initial participation – an improvement in manager support from average to high corresponded to a **21% increase in registration rates**.

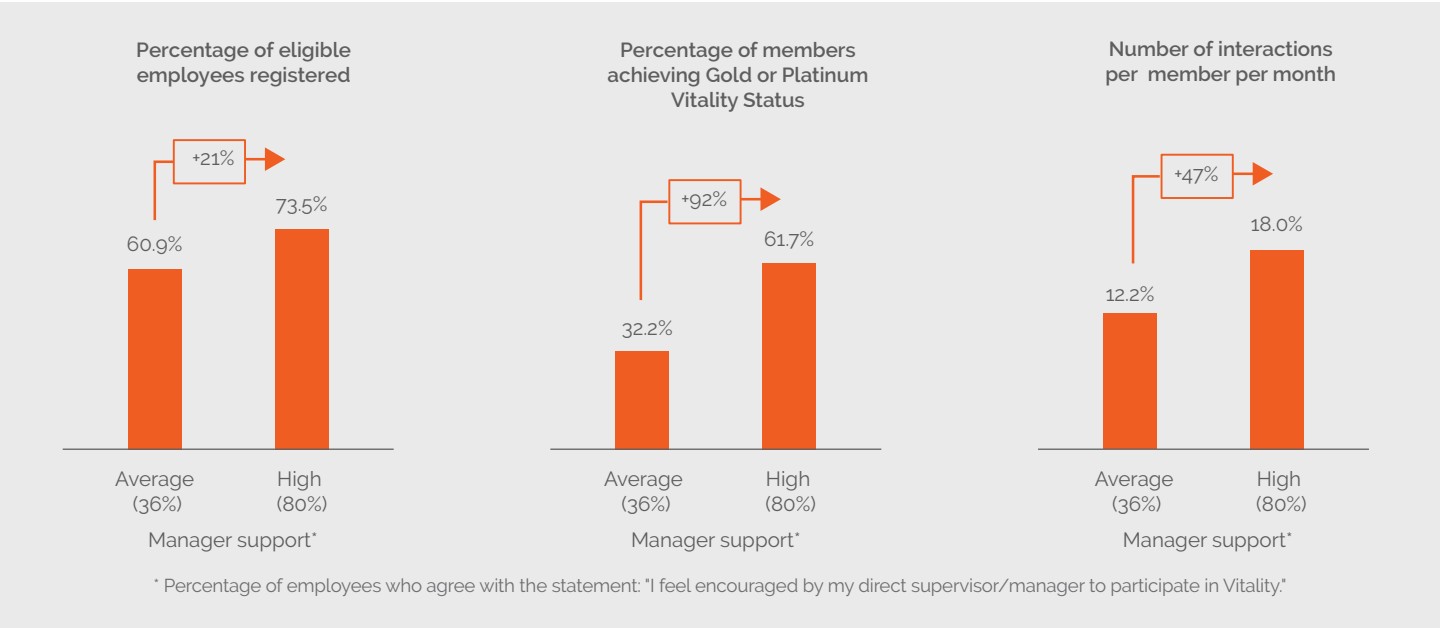
The importance of orienting company culture around connecting employees, engaging them in their well-being, and caring for them extends beyond attracting and retaining employees - it is also vital for future organizational success. McKinsey's research identified key areas of the employee experience that affect business performance; organizational support of employees' physical, mental, and social well-being was a key theme throughout³.

It's clear then that having a strong well-being strategy is essential, but the strategy is only the recipe. Effectively implementing a well-being strategy requires the commitment of leaders to encourage participation in the program across the organization. Beyond implementation, it requires cultivating a culture of wellness in the organization focused on an employee experience that supports well-being and social connection, fostering a sense of belonging at work. This requires a higher-level commitment from leadership to make well-being a core part of their organizational culture. It also requires the right initiatives with the right strategies, which in turn requires the right support and expertise.

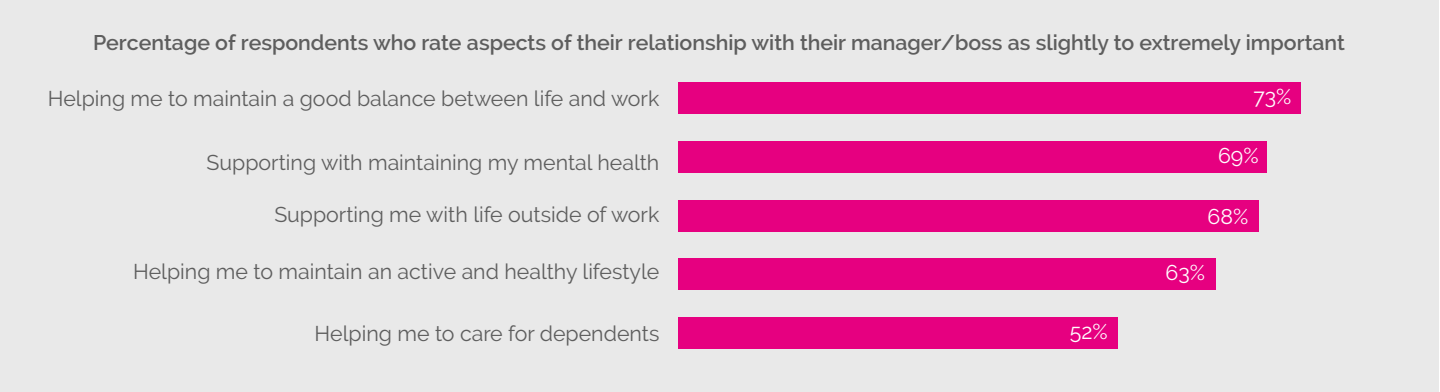
In our modeling, we found that leadership support, culture, and communications were among the most significant factors driving Vitality program participation and depth of engagement. This also suggests initiatives that are key to creating a culture of wellness.

Manager support was also a *significant* driver of the depth of engagement, with an improvement in manager support from average to high corresponding to an **almost doubling** (92% increase) of the percentage of registered members achieving Gold or Platinum Vitality Status. This is also reflected in the number of monthly interactions per member, with an increase in manager support from average to high corresponding to an **increase in program interactions of 47%**.

In the many publications on the role and impact of managers in the workplace, the consensus is that managers are the gatekeepers to employees and are the principal determinant of an employee's experience with –and engagement in– the workplace. For example, a Gallup Business Journal study in 2015 titled *The State of the American Manager: Analytics and Advice for Leaders* explains that 70% of the variance in team engagement across business units can be attributed to the team's manager.



The impact of managers on employee well-being is also stark. 73% of workers in our [Healthy Hybrid](#) study said that their managers helping them maintain a good balance between life and work is an important aspect of their relationship. Other important elements of the employee-manager relationship identified were supporting and maintaining mental health (69%), supporting life outside of work (68%), and helping the employee maintain an active and healthy lifestyle (63%).



Unfortunately, our study revealed that these employees felt unsupported by their manager to take time out of their day for well-being activities like maintaining mental health, exercising, looking after children or relatives, and participating in work-organized well-being-focused activities.



The problem is not that the managers don't want to support well-being but that they often don't feel supported or empowered to create the time and space for it. In the Microsoft Work Trends Index 2022 study, 74% of managers said they don't have the influence or resources to make change happen for employees, and, worse, 54% of managers say leadership is out of touch with employees.

It's clear that direct manager health and well-being support starts with company leadership. Then the managers must inspire and enable participation and ongoing engagement. When done correctly, this can significantly impact program engagement and company culture.

STRENGTH OF CHAMPS PROGRAM

Social connection is a key dimension of well-being. People are social beings, and there is significant evidence that social connection is linked to health and helps people maintain a healthy weight, eat well, improve cancer survival, decrease cardiovascular mortality, decrease depressive symptoms, mitigate posttraumatic stress disorder symptoms, and improve overall mental health⁴. As much as social connection is linked to health, social isolation is associated with negative physical and mental health.

COVID-19 amplified the relevance of social connectedness in well-being⁵. Distancing has been shown to present massive challenges to mental health, associated with increases in depressive symptoms, generalized anxiety disorder, intrusive thoughts, and acute stress⁶. Many studies have shown that social connectedness during the pandemic was a key determinant of mental health and overall well-being, especially during the lockdowns^{7,8,9,10}. Prosocial behaviors like volunteering over this period were seen to have a major positive impact on mental health^{11,12}.

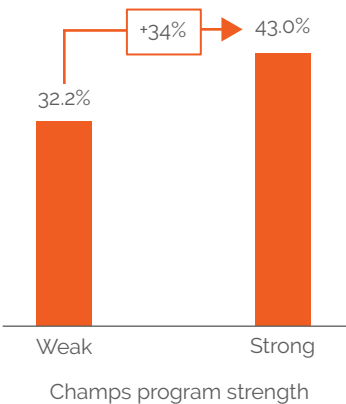
A network of advocates who connect people across an organization and the company's health and well-being program is a powerful mechanism for engagement and amplifying well-being efforts. More so, creating a deeply embedded ethos of wellness is vital.

Validity's team of Wellness Strategy Managers works with clients to establish an internal "Validity Champs" network that aims to find a diverse group of influential volunteers within the workplace to promote Validity and company health and well-being events to their coworkers. Champs operate as well-being ambassadors, spreading a culture of health throughout their organization.

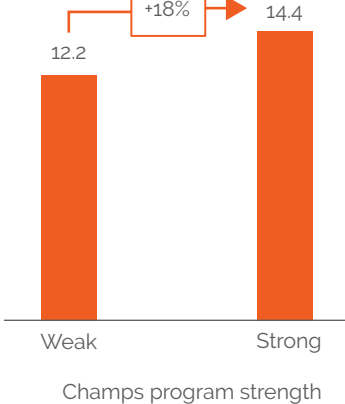
When we assessed the significance of Champs programs, we found that strong Champs programs drive stronger engagement. The strength of Champs programs, as measured by our wellness strategy team and described below, was found to be significant for members achieving the highest Validity Status levels, with an increase in Champs program strength associated with a **34%** increase in the rate of members achieving Gold or Platinum Status. The Champs program strength increase is also associated with a **18%** increase in the number of activities per member per month.

| CATEGORIZATION OF CHAMPS PROGRAMS | | |
|-----------------------------------|---|--|
| NONE | WEAK | STRONG |
| No Champs program | Champs program set up with members identified, but meetings are infrequent, sparsely attended or frequently canceled. Champs have little support and/or are not empowered to run activities at their discretion. Champs may have been assigned rather than volunteered. | Champs program firmly established. Champs are motivated and active, regularly connecting and coordinating initiatives in the organization. They are given freedom and support to run events and activities, with access to the employer portal. Significant management buy-in toward program observed. |

Percentage of members achieving Gold or Platinum Validity Status



Number of interactions per member per month



While the strength of a Champs program was significant in encouraging and inspiring long-term, sustained engagement, it was not found to be a significant predictor of initial program participation rates.

CASE STUDY:
LEVERAGING SOCIAL CONNECTEDNESS TO ENGAGE AND SUPPORT MEMBERS



Baylor College of Medicine (BCM) is an established leader in health sciences education, research, and patient care. Their employee wellness program, BCM BeWell, reflects their longstanding commitment to improving the health and well-being of their employees. BCM's combination of healthcare expertise, focus on wellness at the forefront of employees' lives, and collaboration with the Vitality program has delivered tremendous results in building a culture of health throughout their organization. This culminated in BCM being awarded the prestigious C. Everett Koop Award in 2019. Vitality's Wellness Champs initiative is one of the key strategies BCM BeWell uses to drive engagement and participation in the program, which has been shown to improve health risks across BCM's population significantly.

Wellness Champs serve as peer-to-peer motivators who help organize and coordinate wellness initiatives and educate and influence their peers to live healthy lifestyles. BCM's Wellness Champs originated as an informal network and have since evolved into a customized, Vitality-recommended three-tier model of engagement to ensure that anyone who wants to get involved as a Wellness Champ can do so at a level that works for

them. Champs self-select their desired participation tier: the top tier, promoting BCM BeWell activities and facilitating in-person events; the middle tier, spreading the word about existing BCM BeWell activities and encouraging participation; or the bottom tier, learning about the Champs program and how they can get more involved in the future. By offering a three-tier approach to engagement, any employee who wants to get involved can do so without job responsibilities and time constraints acting as barriers to participation.

To maximize engagement for employees who work in clinics outside the main Houston location, the BCM BeWell team sought to identify employees who are highly engaged with BCM BeWell activities and invite them to become Wellness Champs. These individuals help spread the word about BCM BeWell across the large organization. Further, BCM BeWell encourages employees of all ages and job levels, from new employees to C-suite executives, to consider becoming Wellness Champs. To date, BCM has recruited and supported approximately 100 Wellness Champs across all levels of the organization and multiple BCM locations to reach a broader demographic and expand their reach.

According to Jesse Gavin, Wellness Director at BCM, Champs are now a fundamental driver of engagement across the company.

“We have onsite activities, challenges, and presentations. Champs help to promote everything we do – literally, everything. We ask people how they heard about certain events, and Champs are always one of the primary avenues.”

Of particular importance is getting inclusive engagement in the program, and BCM BeWell achieves this through its diverse representation among Wellness Champs. While one might expect that Wellness Champs are athletes in peak physical condition, many of the most effective and passionate Wellness Champs are those who have overcome personal health challenges or are currently managing a health condition. These Champs demonstrate that engaging in wellness activities is important regardless of your health journey. They often inspire others facing similar challenges to participate and work toward becoming healthier.



While the central role of the Wellness Champs is to drive engagement in wellness activities, they also serve an essential role in supporting members by acting as gatekeepers of information. They help members access the right resources, such as mental health support, within the BeWell program and the greater Baylor community.

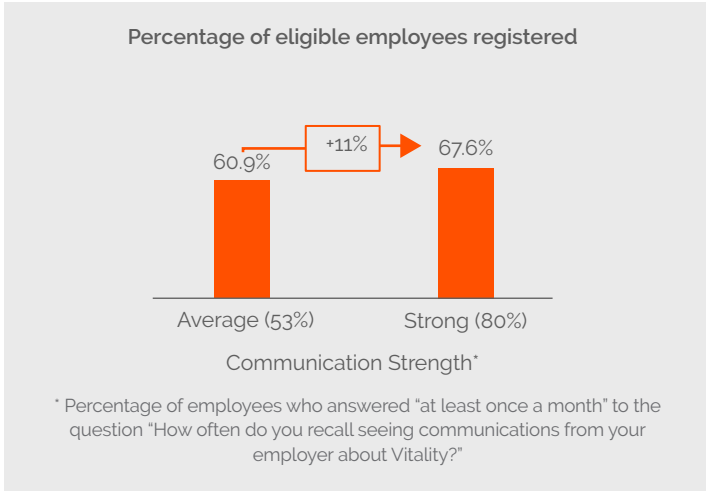
While the pandemic shifted to more virtual activities and events, the BCM BeWell team hopes that the Wellness Champs will help foster social connections by developing mutual interest groups to unite people. With hybrid work environments here to stay, the Wellness Champs play an even more important role going forward in reaching employees across the organization.

COMMUNICATIONS STRENGTH

Communication is a critical enabler of any health and well-being program. From attracting people to keeping them engaged, the communication strategy must utilize multiple channels to ensure visibility while striking the right tone to maximize interest and reach a diverse audience.

Frequent and deeply penetrating communications were a significant driver of high levels of registration in our participation model. An increase in communications strength from average to strong, as determined by the percentage of employees who answered “at least once a month” to the question, “How often do you recall seeing communications from your employer about Vitality?”, was associated with an **11% increase** in registration rates.

Effective communication requires the right strategies combined with resource commitment. When we partner with clients, we provide a range of resources and support to help clients construct a powerful communications strategy – from our Communications Center to an annual customized communications plan that leverages our expertise, time-tested communications strategies, and more.



When we've analyzed communications strength across our client book, we've seen that business support is the difference between a successful and unsuccessful communications strategy. Robust communications strategies create frequent, consistent, engaging, and innovative communications that leverage all the Vitality tools available plus more. Looking deeper into these clients, we see that communications regarding the health and well-being program are driven not just by one person but by senior leaders, Champs, and others across the business. This demonstrates that successful communications require more than automatic emails – organizational commitment is required to achieve a culture of health that permeates the company.

3. IN-PROGRAM REWARDS ARE A DRAW FACTOR AND ENGAGEMENT ENABLER

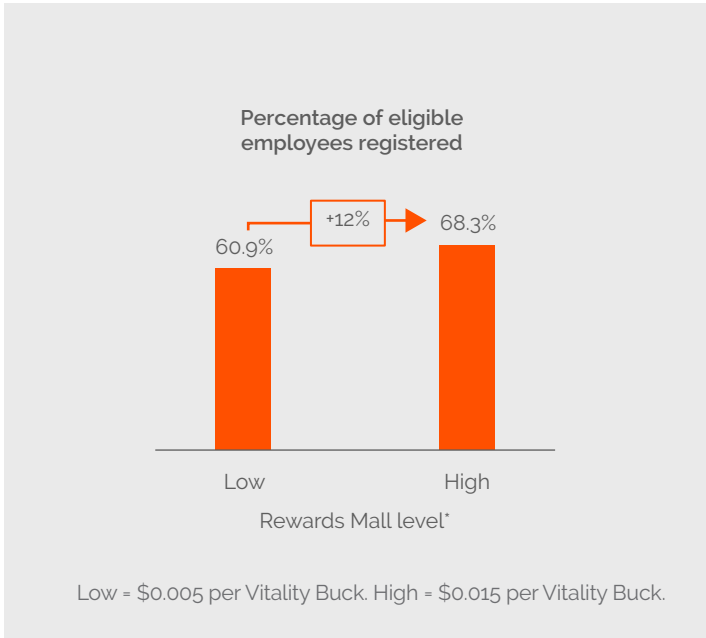
The ability of intelligent incentives to create well-being behavior change has been repeatedly proven. In a published Vitality study¹³ on the power of incentives to improve physical activity, the evidence was clear: a targeted and appropriately-designed incentive structure can lead to significant, persistent changes in physical activity across different geographies. Notably, at-risk and sedentary individuals saw the most significant increases, with a 200% increase in tracked activity in the USA.

In another pragmatic trial of smoking cessation in

association with Vitality¹⁴, incentives played a powerful role in behavior change. Financial incentives added to free cessation aids resulted in a higher rate of sustained smoking abstinence than free cessation aids alone. Previous studies by Vitality and others have shown that behavioral incentives can significantly improve health-promoting behavior, such as fruit and vegetable intake, health screenings, and other health and wellness activities^{15,16,17}, and reduce hospital admissions and lengths of hospital stays^{15,16}.

Targeted, sophisticated incentives are a powerful and necessary component of any successful program. Beyond driving engagement, our engagement data modeling showed that in-program rewards levels, specifically the dollar value of rewards available for participating, drive program uptake and interest.

Our built-in rewards mall, where members can spend their earned Vitality Bucks on gift cards and products from high-appeal consumer brands, also came up as a driver of program participation, with a shift in the rewards mall level from low to high corresponding with an increase in eligible employee Vitality enrollment by 12%.



Beyond our rewards mall, our program has other built-in gamification mechanisms like Vitality Squares, a game of chance where members can win everything from Vitality Points to gift cards, and our Vitality Wheel, a rewards wheel members can spin to earn gift cards when they achieve goals. These base mechanisms create the extrinsic motivation that drives our base program engagement. They're also designed to be cost-effective, creating high engagement per dollar value of incentive.

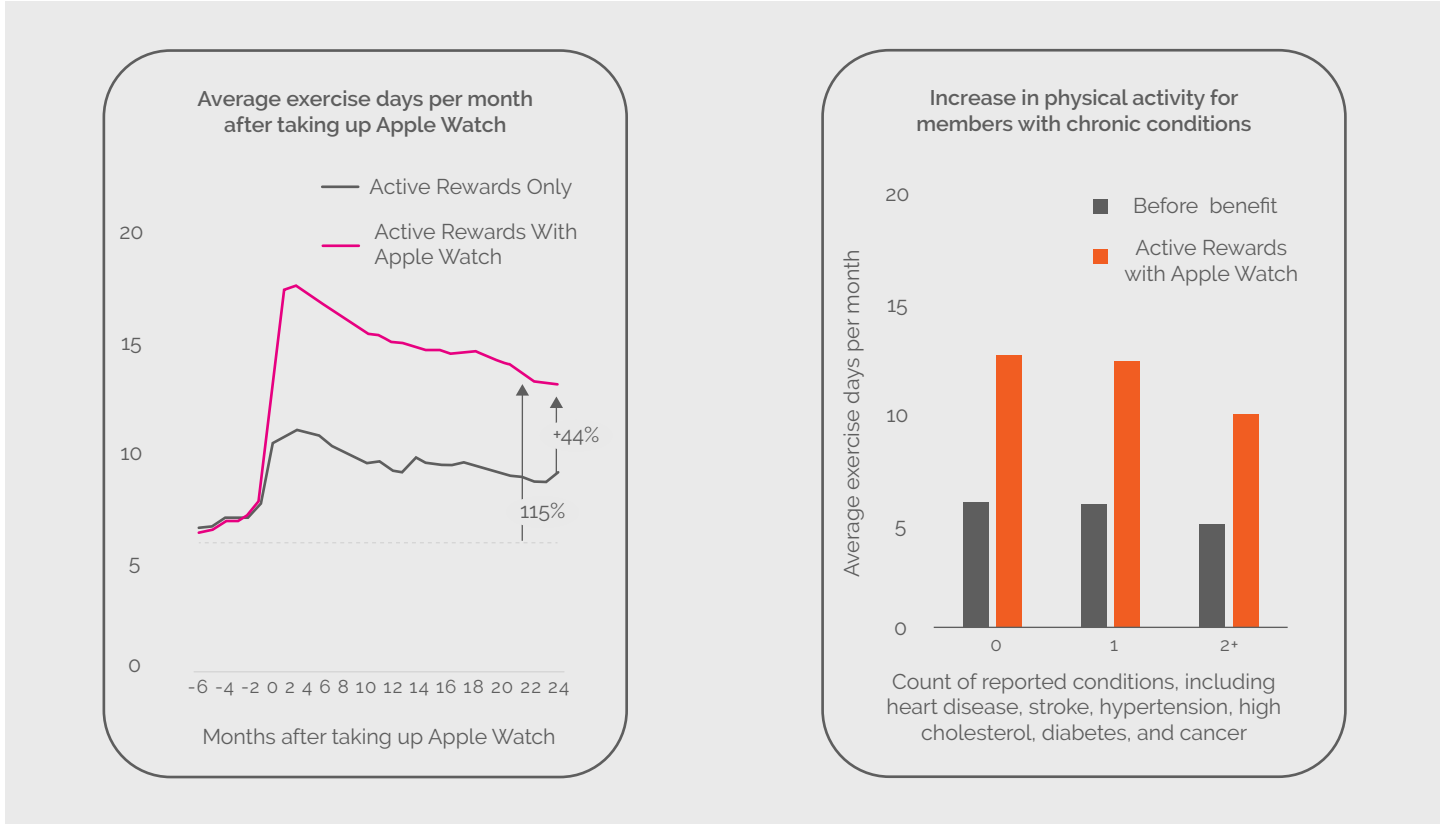


SPOTLIGHT: INCENTIVES AND PHYSICAL ACTIVITY

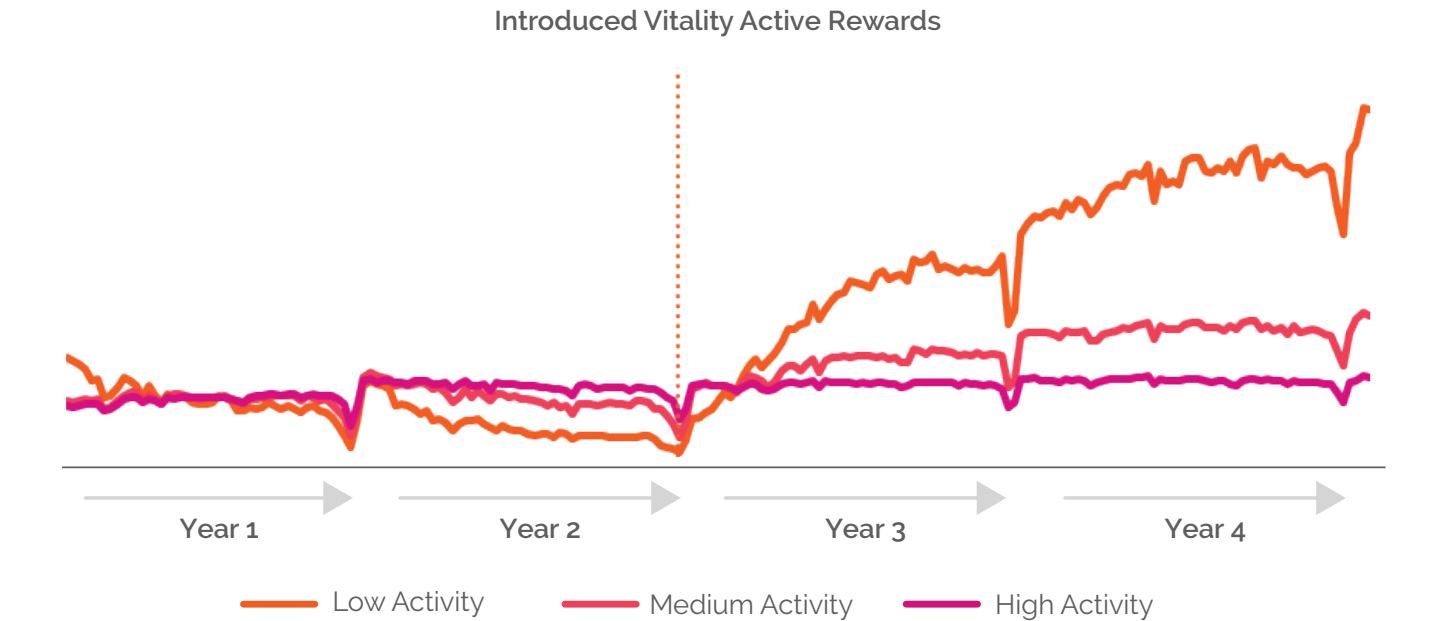


Sophisticated incentives are especially important to convert individuals from being inactive to active. This is because physical activity presents one of the starkest examples of hyperbolic discounting: the mind overweighs a small immediate reward for a significant effort and discounts the full rewards of consistent effort because they only become evident far into the future. In such cases, humans naturally prefer the easier option with the immediate reward. When designed around behavioral science principles, incentives can be an effective way to tip this scale. In addition, the incentives must carefully balance short-term and long-term incentives to create long-term engagement rather than a short-lived bump in engagement and decreasing interest over time.

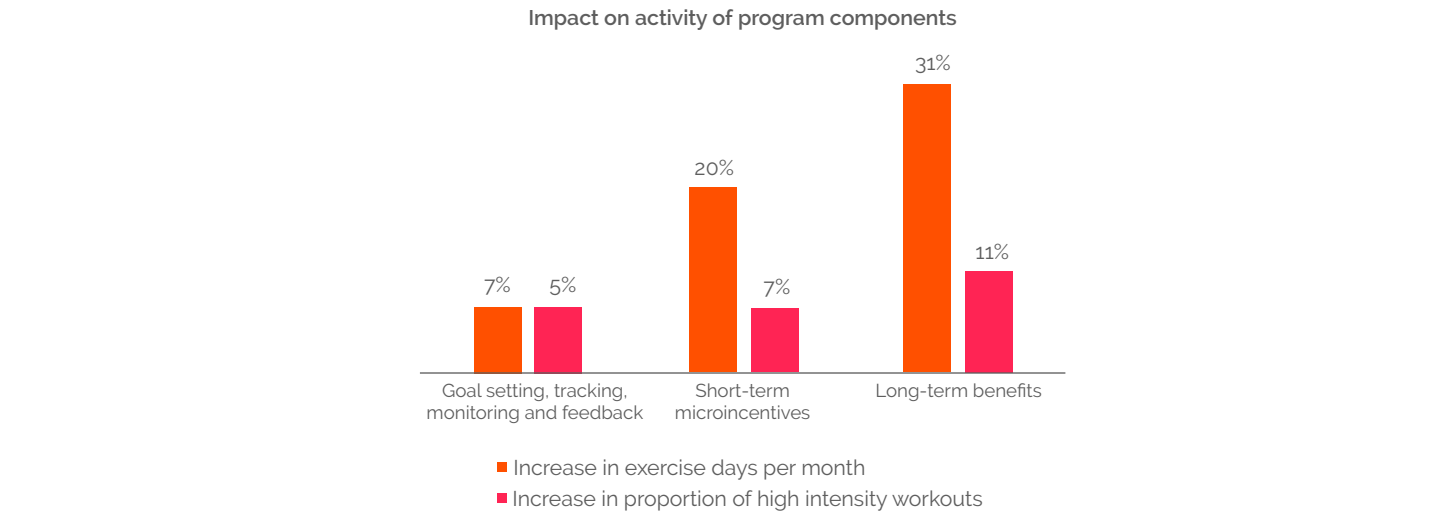
At Vitality, we've developed the incentive mechanisms to do this with our Active Rewards with Apple Watch program. In a published study of the impact of these programs on physical activity engagement¹³, we saw that in the US, the combination of these incentive structures reversed declining activity levels by increasing exercise days by 115% up to 24 months post-benefit. The reversal of low activity levels was also prominent in at-risk populations.



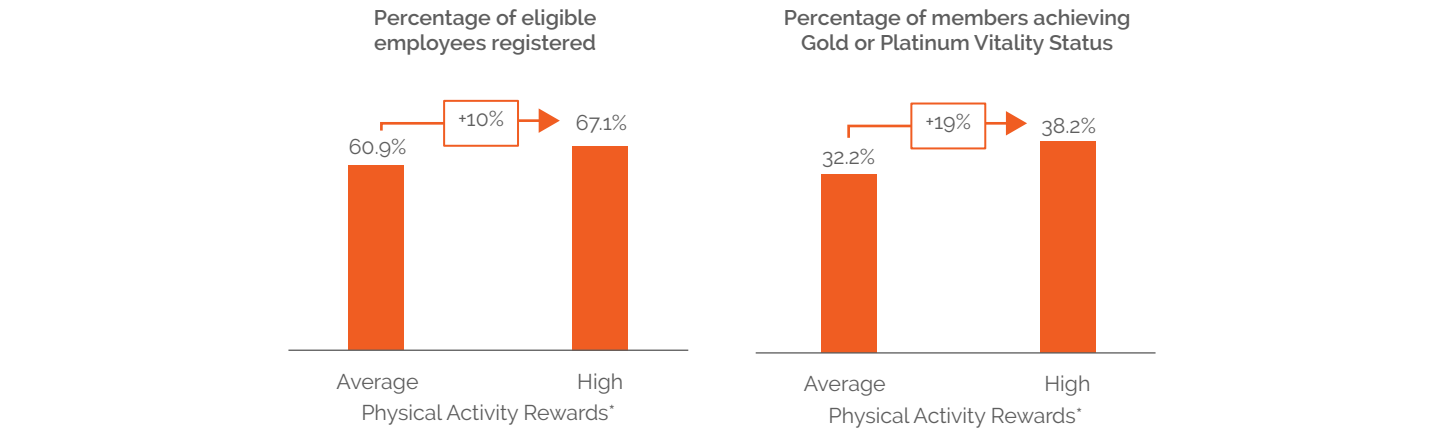
In another longitudinal study on over 11,500 participants in the UK published in NPJ¹⁸, Vitality Active Rewards led to a five-fold increase in physical activity, which was sustained and still increasing after two years.



Finally, we've developed and balanced a range of short-term and long-term incentives to drive behavior change over time. An attribution analysis of the impact of our program components on physical activity engagement in South Africa shows how the combination of goal setting, tracking, monitoring, short-term micro-incentives, and long-term benefits cumulatively increase physical activity engagement.



In our fitted models, Vitality program physical activity rewards, as measured by the potential combined value of rewards available for Active Rewards, Apple Watch, gym rebates, and other device subsidies, were significant for program engagement – in terms of enrollment and engagement depth. An increase in physical activity rewards from average to high corresponded to a 10% improvement in registration and a 19% increase in registered members achieving Gold and Platinum Vitality Status.



* Average consists of a gym/program rebate of \$250, a \$50 device subsidy, and no Active Rewards or Apple Watch. High consists of a \$500 gym/program rebate, \$100 device subsidy, and Active Rewards and Apple Watch benefits for employees and spouses.

SKIN IN THE GAME

Total rewards and incentives our employer clients have sponsored over the last three years:

- » **>\$100 million** in rewards unlocked
- » **2.85 million** incentives earned
- » **\$30** average rewards per employer member per year

CASE STUDY:
EMPOWERING CHAMPS, INTEGRATING BENEFITS
AND LEVERAGING INCENTIVES TO CREATE INCLUSIVE ENGAGEMENT



Carhartt is an American apparel company based in Dearborn, Michigan producing high-quality workwear and outdoor gear for hardworking consumers everywhere. A partner of Vitality's since 2013, Carhartt has a particularly diverse population, from supply chain associates in Kentucky and Tennessee, to retail associates across 35 different stores, to their corporate headquarters in Michigan. Carhartt's Vitality program has worked hard to meet the needs of its entire U.S. workforce.

One way the workwear company is able to do so is by giving their Champs the autonomy to create programming they feel resonates with their colleagues, rather than only helping to promote company-wide initiatives. Danyetta Gray, Senior Benefits Manager at Carhartt, notes, "We have such strong Champs in certain areas. They are not afraid to ask if they can do X, Y, or Z through the Vitality program, and they look for different ways to really engage the folks at their locations." For example, one particularly successful event is an Easter egg challenge. Gray explains, "Associates will have Easter eggs hidden outside around the facility and an exercise in each of the eggs. So when an associate finds an egg, they might do five squats,

then they'll go on to find more eggs and do that exercise. They get Vitality points for participating, and it's a really fun event that works with the culture of that particular location."

To ensure other Champs can learn from their peers, the Champs get together monthly to share ideas and learnings. Theresa O'Rourke, Benefits Specialist at Carhartt, shares, "At our monthly Champ meeting, we have Champs talk about what they're doing at their location that is working well. This helps to inspire someone at another location to want to do that or adopt it for their coworkers." Gray adds, "Hearing about different events taking place at different locations – our hope is that it will inspire interest in other facilities to create something of their own, something that will work for their culture and their associates." Gray shares the value of the Vitality Champs: "The Champs use their creativity to come up with things that will resonate with associates where they work. The Champs look for different opportunities to run their challenges and find unique ways for associates to earn Vitality Points by engaging with the program."

Carhartt's Vitality Champs are valuable on-the-ground resources with their fingers on the pulse of what's working well and where there's room for improvement. The Carhartt Wellness Team learned through regular meetings with the Vitality Champs across the organization that many people were reaching the upper limit of their potential engagement and were lacking an incentive to keep them engaged in the program. As a result, the Wellness Team increased the difficulty of their Employer Incentive requirement to help drive further engagement at a higher level. In addition, they added the Active Rewards program in 2022 to help keep their workforce engaged and continually challenged to reach new goals each week.



The Champs are also focused on building inclusive engagement. With many non-technical employees across the organization, a program focused purely on engaging with the program via the smartphone app would exclude many of the workforce. The Champs have helped advocate for rewarding participation in other ways for the non-technical employees, such as by completing printed wellness handouts. The Carhartt Wellness Team continues to make necessary adjustments to ensure that the program is personalized and tailored to maximize organizational engagement.

Another key area of focus for the Carhartt Wellness Team is to ensure their associates are up to date on preventive

care they may have forgone during the height of the pandemic. They recently launched a new partnership with Catapult Health, allowing associates to conduct their health screenings from home. Gray explains, "Our associates will be able to do their full screening from the comfort of their homes, and they'll be able to use those screening results to meet the Vitality Check requirements. We're hoping that will get even more folks engaged in the Vitality program because we're removing the barrier of having to visit a physician to physically get your Vitality Check."

Carhartt is also taking advantage of the flexibility of the Vitality program through partner ecosystem integrations by looking for opportunities for individuals to earn Vitality Points for doing things important to the company, such as taking a DEI-related course on LinkedIn Learning or watching safety videos. They have also recently partnered with Lyra, a company that helps match people with the mental health services they need.

Looking forward, Carhartt hopes to increase engagement with the program among senior leadership by helping to make the connection between well-being and workplace productivity. Gray elaborates, "We want to help connect a person's well-being and their performance at work, and why it's important that they engage in programs like Vitality. The end result is that folks are going to be in better health, and thus, they're not going to need to take leaves of absence from work." Another goal is to increase the diversity of their Champs to better reflect the workforce. "We want to identify where there are areas that aren't represented by a Champ and work to find folks who would be interested in supporting the program."





ASSESSING VITALITY'S ENGAGEMENT

Motivating members to join a program and keeping them engaged requires more than technology; it requires effective strategy with the right on-the-ground initiatives and support to ensure smooth implementation. It combines the drivers of engagement, from program, benefits and incentives design to communications strategy, leadership support, and the setup of a strong Champs program.

We know what it takes to get strong engagement. When we partner with clients, we provide the technology, a range of resources, and support to help clients construct these elements and bring them together. We leverage our expertise, data, and time-tested strategies to do this. Post implementation, our Wellness Strategy team leverages in-house actuarial analytics to create data-led program reviews, reporting, and strategy recommendations that carefully segment risk and steer the program to better outcomes.

VITALITY'S INDUSTRY-LEADING STRATEGIC SUPPORT

Vitality is more than just a vendor. We partner with clients to elevate their well-being by combining our engagement platform with data-backed, time-tested wellness strategy support. Averaging ten years of experience, our Wellness Strategy Managers implement validated strategies that ignite program participation and engagement, connecting employees and helping create a culture of wellness in organizations. Boasting an **average rating of 9.5/10** from our clients with a **96% client satisfaction rate**, our Wellness Strategy team leads the industry.



Their comprehensive strategy development, implementation, and evaluation process tailor the Vitality program to clients' unique needs, with **92% of our clients saying that Vitality understands their demographics' unique needs**. This process also ensures a smooth, continuously improving well-being program, with challenges along the way quickly addressed. During COVID-19, a challenging time for well-being programs, **95% of our clients were delighted with the support they received** – demonstrating the agility and speed of our support team in adapting to challenging situations.

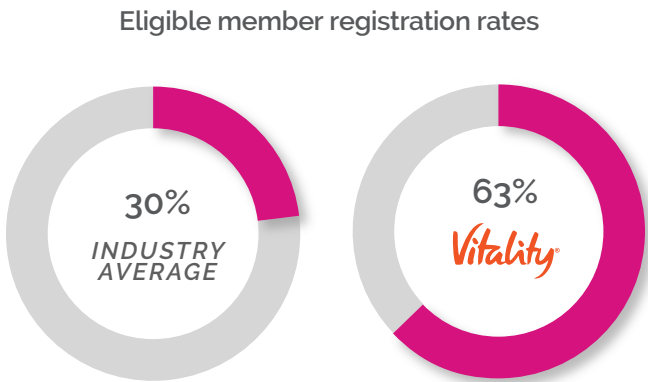
The result is industry-leading engagement. Beyond testimonies and case studies, our success is externally validated. Vitality has had **three clients win the C. Everett Koop Health Award in the last five years it was awarded**. To win these awards requires winning results from meticulous, rigorous analyses of health and well-being initiatives, where Vitality is the central engagement platform and catalyst for success.



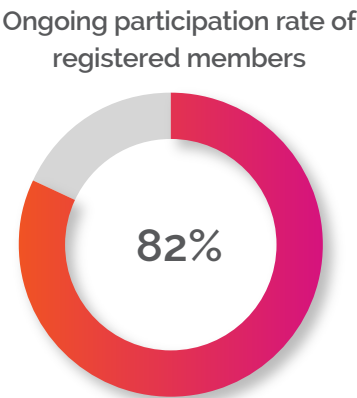
In section 1, we defined engagement across four dimensions. To assess Vitality across these dimensions, we analyzed our book of business and conducted a longitudinal analysis of our members.

1. BREADTH

Vitality drives industry-leading participation. In the health and well-being industry, program registration rates average around 30% of eligible users. Over the last three calendar years, Vitality achieved an average of 63% of our eligible users registering for the Vitality program on our website or mobile app.



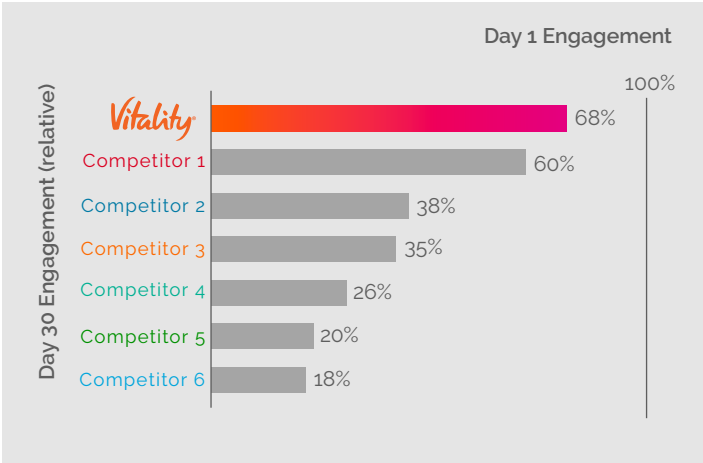
Once registered, 82% of our members completed at least one points-earning activity each year over the most recent three calendar years.



A healthy breadth of engagement in a population is achieving diverse, inclusive engagement. The modeling of the drivers of our engagement and analysis of our data demonstrate that Vitality drives inclusive, barrier-breaking engagement. At the end of this section, we unpack this in more detail.

2. DEPTH

After enrollment, our program and support keep members coming back for more. Looking at active user program interactions for the year ending April 30 2022, **53% of Vitality members earned points each month**. Per independent app engagement data, Vitality has the highest 30-day app retention rate* in the health and well-being engagement platform market at 68%. This is 107% higher than our average competitor.



While the above shows that the frequency of interactions is high, the scale of these interactions is notable. Our registered members interacted an average of 12 times each month by completing activities in the program.



Engagement is also sustained over time, with an average of **38% of our members achieving Gold or Platinum Vitality Status** over the last three calendar years. To achieve higher Vitality Statuses, members must sustain engagement over time (on average, achieving Silver Status requires 3.5 months of sustained engagement, Gold 5.4 months, and Platinum 7.2 months). Our members attest to regularly engaging, with a recent survey of our members revealing that **65% of them see themselves using Vitality at least once per week over the next year**.

* Data from *Apptopia* for the year ending April 2021. 30-day app retention rate is a measure of how many users are logging in 30 days after initially logging in/registering

3. QUALITY

At Vitality, our approach to creating quality engagement derives from our Shared Value model —the engine that enables our core purpose of making people healthier. We strive to **create value** from **targeted behavior change** that **reduces risk** and then **share that value with members through smart incentives** that motivate behavior change.

To create value for members and clients, the program must drive engagement made up of a considerable portion of substantial and verified activities proven to make people healthier. We carefully balance assessing, validating, and rewarding verifiable behaviors with recognizing self-reported or camaraderie-building activities important to achieving our clients' goals.

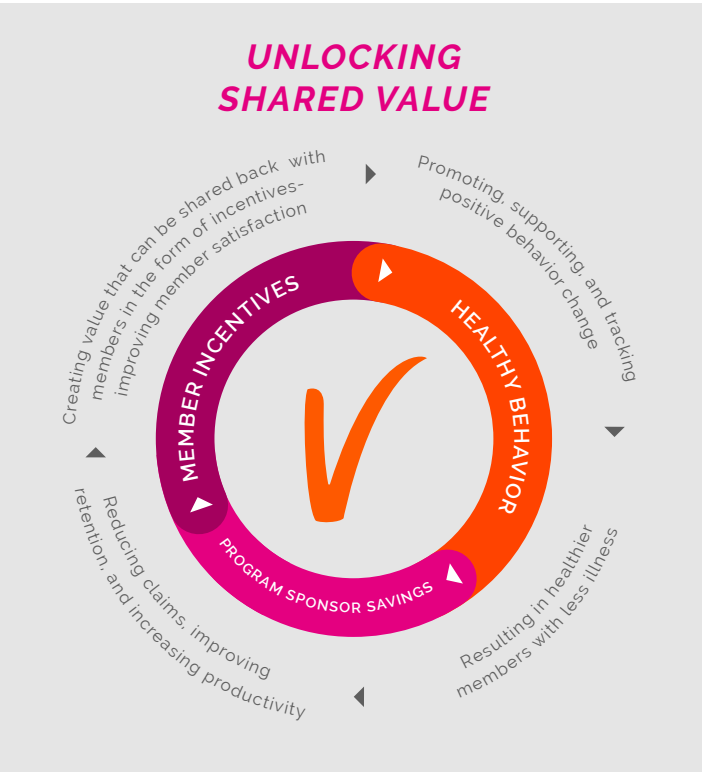
Vitality Points are our primary mechanism to incentivize members to participate in activities. As a member engages, points accumulate to determine their Vitality Status. Earning more Vitality Points and achieving a higher Vitality Status unlocks the ability to earn gift cards, devices, health subscriptions, and more.

To determine the number of points members can earn for a given activity, we first calculate the value of the activity per member to the client. To do so, we combine actuarial science with behavioral science to consider the following:

1. The cost to get the member engaged (i.e., how much the incentive costs for the Vitality Point allocation)
2. How much engagement/behavior change we can create with this given incentive value
3. The change in risk that such behavior change would create

$$\frac{\text{Value}}{\text{Member}} = \underbrace{\left(\frac{\text{Incentive}}{\text{Member}} \right) \times \left(\frac{\Delta \text{Behavior}}{\text{Incentive}} \right)}_{\text{Behavioral Science}} \times \underbrace{\left(\frac{\Delta \text{Risk}}{\Delta \text{Behavior}} \right) \times \left(\frac{\text{Value}}{\Delta \text{Risk}} \right)}_{\text{Actuarial Science}}$$

This methodology forms the basis of our points allocation framework and, therefore, the composition of Vitality Statuses. This means that the program, by design, engages members in high-value activities. It also means that Vitality Status is more than just a measure of the frequency of member engagement. It also becomes a helpful proxy for health status and risk* and, therefore, a good standard of quality of engagement. That's why 38% of our members achieving Gold or Platinum Status represents frequent, sustained engagement and a substantial shift in health risk.



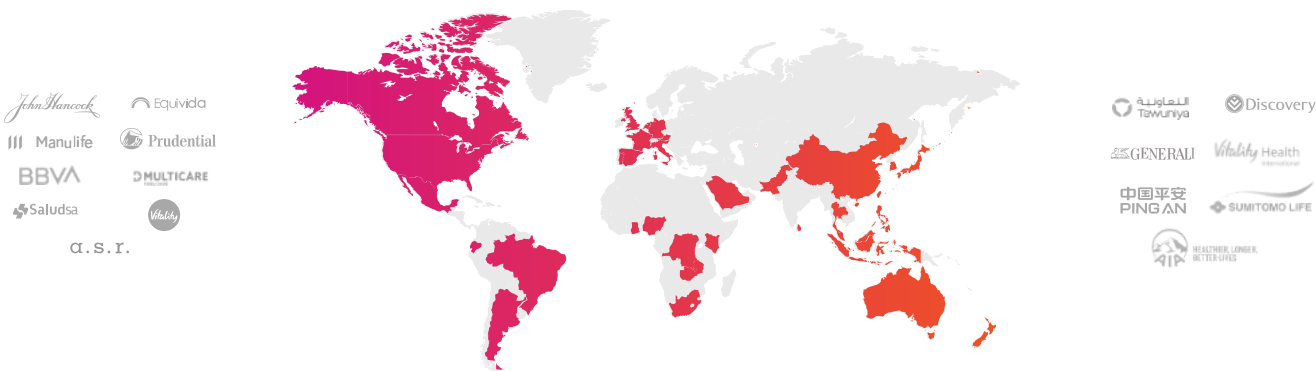
Understanding and calculating the pieces in this "Shared Value formula" requires deep expertise and data. It also requires the technology, features, and functionality to educate, motivate, and reward members – enabling the behavior change.

DATA AND EXPERTISE: THE CRITICAL INGREDIENTS FOR QUALITY ENGAGEMENT

Vitality has the world's deepest health risk and behavior database. Born out of a health insurer and now impacting over 27 million lives globally through a network of partnerships with leading global insurance organizations, Vitality's database is over 4,000 terabytes, consisting of over 50 million life years of data.

Underpinning our program design is an unmatched behavioral and actuarial science research base, continually validated by over 40 leading research institutions and universities. We've published over 50 papers in 27 leading publications covering preventive medicine, nutrition, and workplace health.

VITALITY'S GLOBAL EXPERTISE AND NETWORK OF INSURANCE PARTNERS



LIFE YEARS OF DATA

>50M

ORGANICALLY GROWN

27M
LIVES WORLDWIDE

IMPROVING HEALTH

25 years

The combination of our scientific expertise and our comprehensive data delivers a program that drives the right care and right time engagement across the health spectrum – from those living a healthy lifestyle to those requiring support for chronic conditions.

When we look at our clients' engagement results, we see high engagement in clinically significant health and well-being activities that assist with risk segmentation and contribute to targeted behavior change. Over the last three calendar years, of our registered members:

- » **65%** completed their Vitality Health Review (Health Risk Assessment) each year
- » **38%** completed their Vitality Check (full biometrics assessment) each year
- » **60%** have linked a device
- » **53%** completed a verified workout each year

- Over the year ended April 30 2022, of our registered members:
- » **40%** completed verified workouts **each month**
 - » **33%** engaged in mental well-being activities
 - » **21%** interacted with nutrition content and activities

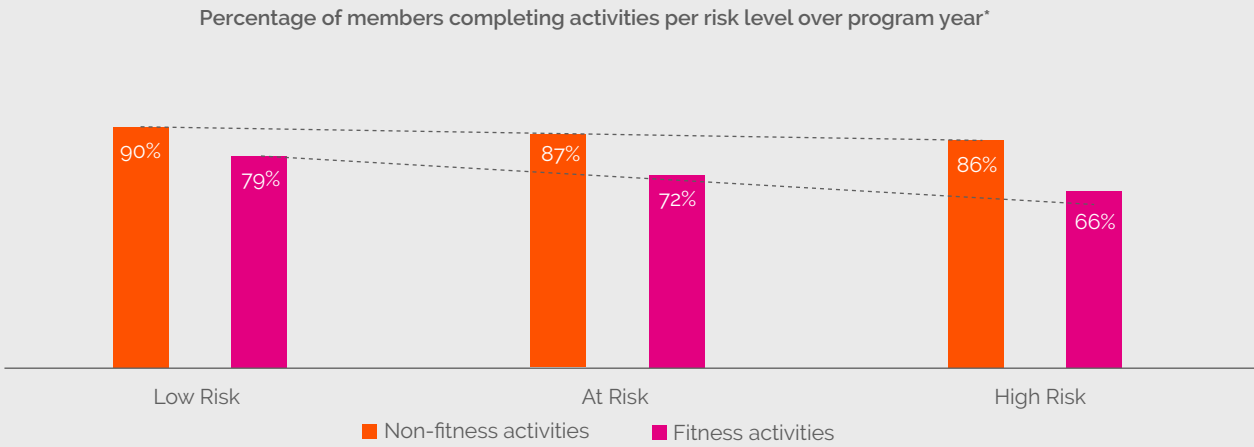
SPOTLIGHT: AT-RISK MEMBERS

Nearly half of adults in the US (45%) suffer from chronic conditions¹⁹, making up 86% of all healthcare costs²⁰. One in four Americans has two or more chronic conditions²¹, accounting for almost \$3 out of every \$4 spent on healthcare²⁰. Another critical component of quality engagement is the ability to engage members who are at-risk or in poor health, not just the healthy.

In the Vitality program, one of our primary mechanisms for segmenting and measuring risk is Vitality Age, an actuarial calculation of a risk-adjusted age that translates self-attested behaviors and biometric screening outcomes (if applicable) into a personalized health-related age over the last calendar year. The difference between a member's Vitality Age and actual age, which we call the Vitality Age differential, is a good proxy for health status, with many Vitality analyses showing a

strong correlation between Vitality Age differential and risks and outcomes*. In 2021, 76% of our registered members had a positive Vitality Age differential, and 41% of our members were "high risk," having a Vitality Age differential of five years or more. This demonstrates that our program is attractive to everyone, not just healthy individuals.

Once registered in the program, we can engage members across the health risk spectrum – from low-risk, healthy members to at-risk and high-risk individuals. Participation levels in non-fitness activities are similar across Vitality Age differentials. However, high-risk individuals also engage highly in physical activity, with 66% of these members completing fitness activities during the program year.



* Low risk = zero or negative Vitality Age differential. At Risk = Vitality Age differential between 0 and 5, High Risk= Vitality Age differential five years or more. Includes only members who completed their Vitality Health Review (required to assess Vitality Age).

Given our high levels of program participation, especially among at-risk and high-risk individuals, the Vitality program also acts as a digital front door to connect members to meaningful, relevant resources in our vendor and partner ecosystem. As such, we've seen that we can drive higher levels of engagement in these critical resources with a **20-25% higher likelihood of at-risk members engaging in Vitality-integrated point solution activities** versus unintegrated resources.

* See Vitality Status and Vitality Age in Glossary for data showing the relationship between Vitality Status/Age and risks and outcomes.

4. MOMENTUM

Success in a program over time requires more than just initial activation success. It requires ongoing support in evaluating and improving strategy. It also requires expert guidance to use data and reporting most effectively to troubleshoot any areas for improvement.

Effectively utilizing data is the first step, whether on-demand from a digital portal or a custom report on trends. Data should identify initiatives that are working and those that aren't, which population segments are engaging, how rewards are being redeemed, movements in health risk cohorts, detailed activity engagement, and more. Regular surveys of members can derive insights into ongoing

program successes and challenges. These data points should be consolidated to guide health and well-being strategies.

At Vitality, the combination of our industry-leading Wellness Strategy Managers, technology, and actuarial-led reporting provides clients with the tools they need to maintain the velocity of their engagement.

To assess how we engage members over time, we conducted a longitudinal analysis of our eligible member population over the last five years. The analysis showed that our program drives substantial engagement that is sustained and improves over time:

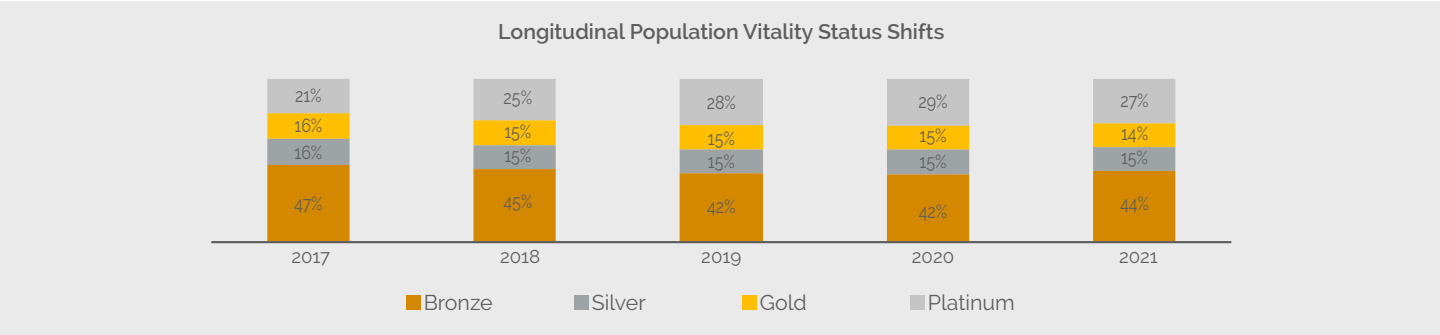
IMPROVEMENTS OVER 5 YEARS

- » **15%** increase in eligible member registration rates

» **12%** increase per year in points earned per registered member

» Significant shifts in Vitality Status, with an **11%** increase in highly engaged (Gold and Platinum) members over time, on top of a strong engagement base
- » **23%** more registered members completed verified workouts by the end of the five years, with 56% more verified workout events annually

» **5%** increase in registered members doing preventive activities and a 6% increase in the number of preventive activities annually



These substantial shifts in engagement create population health improvements. In a separate longitudinal analysis of over 160,000 Vitality members with at least two verified biometric and lifestyle data captures occurring an average of 3.5 years apart, we looked at granular data of a range of biometric and lifestyle risk factors to classify members by health risks at first and last reading.

RISK FACTORS

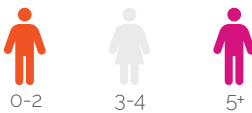
Biometric Risk Factors

- » Body Mass Index > = 25 kg M²
- » Systolic Blood Pressure > 120 mmHg
- » Total cholesterol > = 200mg/dL
- » Fasting Glucose > = mg/dL

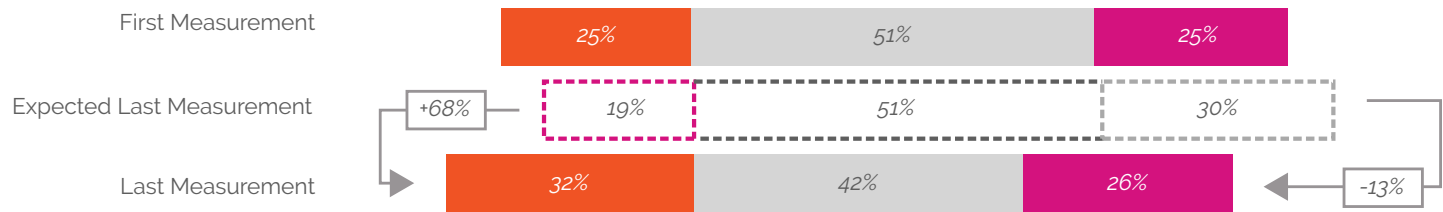
Lifestyle Factors

- » Physical Activity < 150 minutes per week
- » Fruits & Vegetables < 5 daily servings
- » Stress > = Kessler Score (high stress)
- » Current Tobacco User
- » Alcohol Consumption > 7 units/week

Classified by number of elevated risks



We would expect that due to natural age progression, there would be a risk level shift with people becoming less healthy over time. We found that Vitality can stop **and** reverse this shift, improving population health. At the end of the observation period, we had a 68% higher proportion of members with two or fewer biometric or lifestyle risks and a 13% lower proportion of members with five or more biometric or lifestyle risks than expected.



These results hold across industries. We saw the following net changes in risk, as measured by the difference between the number of members who improved their risk classification and the number of members who worsened their risk classification divided by the total number of members in the cohort:

| INDUSTRY | NET CHANGE IN RISK |
|---|--------------------|
| Construction | 4.2% improvement |
| Educational services | 2.9% improvement |
| Finance | 2.9% improvement |
| Healthcare and social assistance | 7.0% improvement |
| Information technology | 6.7% improvement |
| Management of companies & enterprises | 1.3% improvement |
| Manufacturing | 5.4% improvement |
| Mining, quarrying, and oil and gas extraction | 6.4% improvement |

In our fitted models, we observed further evidence of improvement over time. We saw that program year was highly significant in explaining participation, indicating that Vitality penetrates deeper into a population over time. A two-year increase in the program year corresponds to a **7.4% increase in registration rates**.

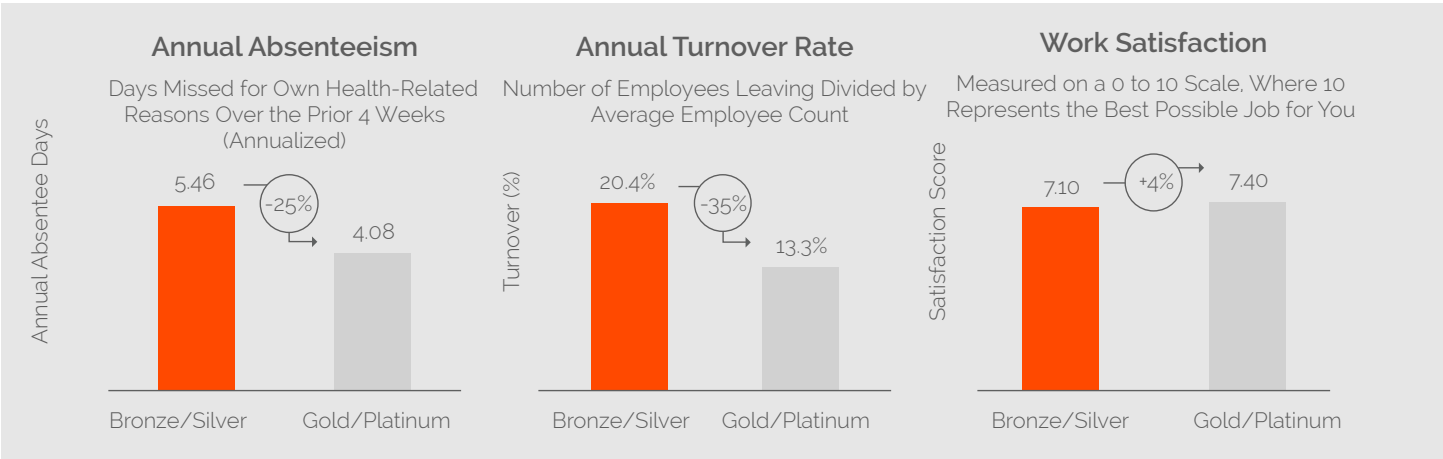


THE IMPACT OF OUR ENGAGEMENT

Our engagement substantially impacts healthcare costs, improves employee productivity, and reduces turnover.

We showed how we've decreased the proportion of at-risk members over time, which would significantly impact healthcare costs. An analysis of our clients' medical claims over 32 combined program years shows 15-19% lower costs for engaged Vitality members. Digging deeper, using the Propensity Score Matching technique (where members are matched into Engaged and Unengaged cohorts using a generalized linear model based on age, gender, relationship, chronic conditions, and geographic region), we found that Vitality reduced medical and pharmaceutical claims by 4% on average. For our most successful clients, we've helped reduce claims by up to 16%, bending the medical cost curve.

Data from our clients across our book of business also reveal that highly engaged Vitality members are more present at work, have lower turnover, and have higher job satisfaction.



91% of our clients are satisfied with their engagement results, according to a recent client survey. At the same time, members love the Vitality experience, with a survey of over 42,000 of our members this year revealing:

- » **97%** of members say Vitality helps them be more aware of their health and well-being
- » **78%** of members say that Vitality provides them with enough choices to keep them interested in the program
- » **8 out of 10** members say Vitality is personalized and fun

Over 300 members provided written testimonies of how Vitality had helped them, and 1,394 volunteered to serve as Vitality Champs for their organizations.

INCLUSIVE ENGAGEMENT: EVIDENCE OF VITALITY'S DIVERSE ENGAGEMENT

Well-being programs can play a critical role in creating inclusive and equitable well-being outcomes. The ability to use granular, data-driven personalization to recommend the right activities at the right time in the right context can unlock engagement that penetrates various social and demographic determinants of health.

To understand whether Vitality can make an impact in this regard, five available client demographic factors were considered when fitting the models to our data:

- » Percentage of females
- » Average age
- » Social factors estimated using employee ZIP codes
- » Number of employees (organization size)
- » Percentage of employees considered "white collar"

None came up as significant in terms of engagement depth, and only one, the percentage of females, had significance in participation rates. This demonstrates Vitality's ability to engage all members in their health, regardless of population demographics, social factors, and client-specific considerations. To look deeper into these results, we looked at demographic and social determinants of health cuts of our engagement data over the last year. Here are our findings:

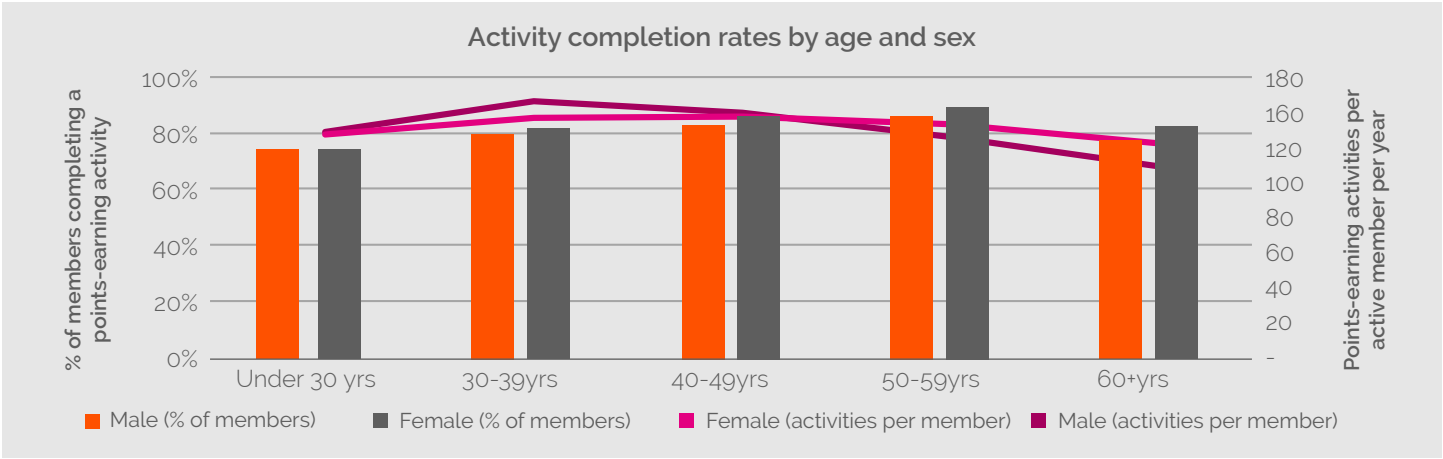
CONSISTENT ENGAGEMENT ACROSS AGES AND SEXES

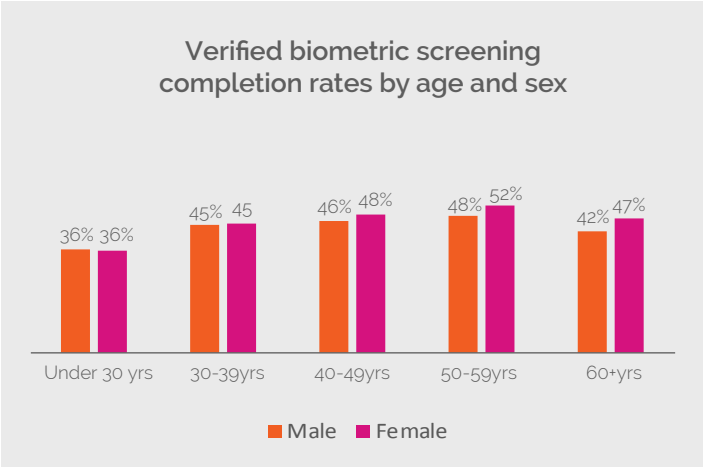
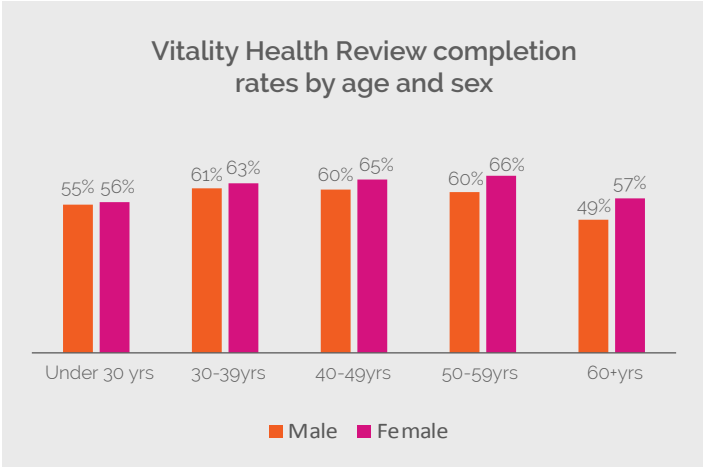
A prevailing perception is that getting populations over 50 years old engaged in digital programs is difficult. However, research shows that people over 50, particularly those between 50 and 64, use technology and social media almost as much as younger generations²². The truth is that the right technology and the right approach can engage most age groups.

Sex is another key demographic variable that has historically been a significant determinant of engagement. Age and sex together are generally powerful determinants of well-being behavior. A study published in the Journal of Medical Internet Research²³ showed that younger people and females are usually much more inclined to engage in their well-being, from setting goals to taking "action steps" to the number of interactions. This makes it surprising and notable that when we considered sex and age in the fitting of our models, only sex came up as significant and only for initial participation. Regarding age as a variable

in our model, both participation and depth of ongoing engagement were insignificant. In terms of program participation, the proportion of females was significant. Still, in our modeling of the percentage of members who achieve Gold or Platinum Vitality Status, the rate of females was insignificant.

This suggests that Vitality engages different ages well, and once in the program, Vitality engages different sexes well. However, there is work needed to get more males into the program. A look at cuts of our engagement data confirms these findings, showing consistent activity, especially among high-value activities like health risk assessments and biometric screenings. However, there are still slightly lower levels of male engagement across the board.



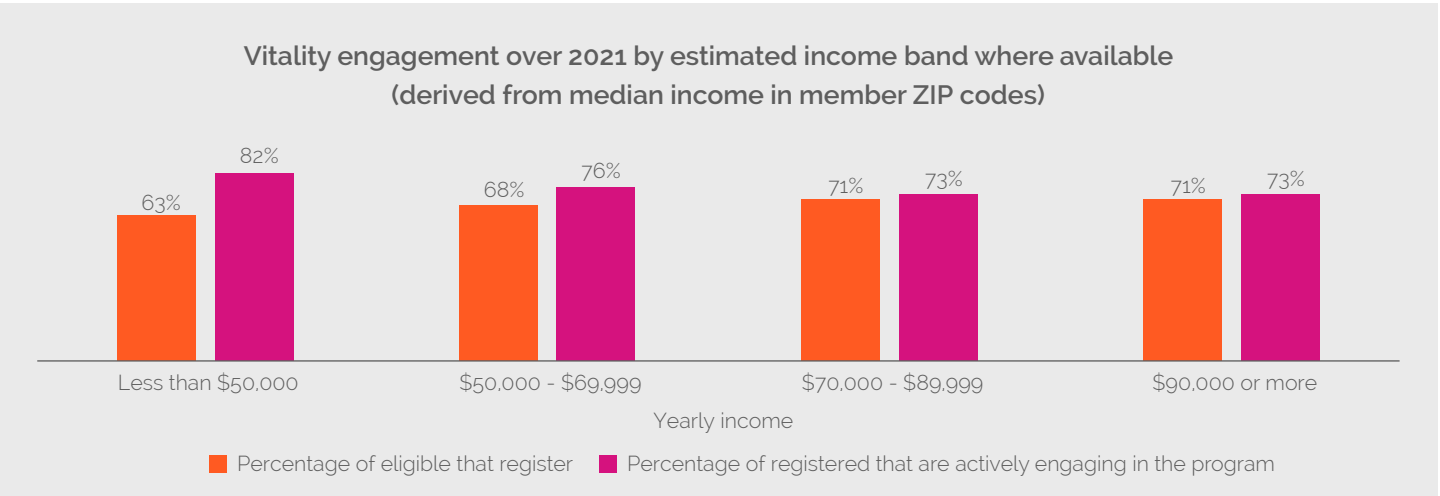


CONSISTENT ENGAGEMENT ACROSS SOCIO-ECONOMIC CLASS

Economic and social factors like income stability, education access, neighborhood, built environment, healthcare access, and social and community context have been shown to drive up to 80% of health outcomes across individuals and groups²⁴. People affected negatively by these factors are likely to delay or ration care and engage less in healthy behaviors, leading to poorer physical and mental health and higher rates of chronic diseases²⁵.

These conditions, commonly termed “social determinants of health” (SDoH), are tied to a person’s income, with income often determining these conditions. Individuals who earn a low income are disproportionately affected by conditions such as low educational levels, unreliable access to transportation, housing, food insecurity, and exposure to stressful environments²⁶. They use preventive services less, with four times more avoidable hospital admissions compared to higher income groups²⁷.

Engaging people in their health and well-being across all socio-economic classes is therefore vital to achieving more equitable health outcomes. ZIP code, a commonly available data point, is a strong proxy for many socio-economic and SDoH factors. A study on over 142,000 adults found that ZIP codes are good predictors of income and health outcome differences, which can be useful for monitoring disparities within health care systems²⁸. ZIP codes can also reasonably assess and classify built environments. Commonly, built environments can be classified through ZIP code USDA population density designations, a measure of the number of people per square mile of land area.

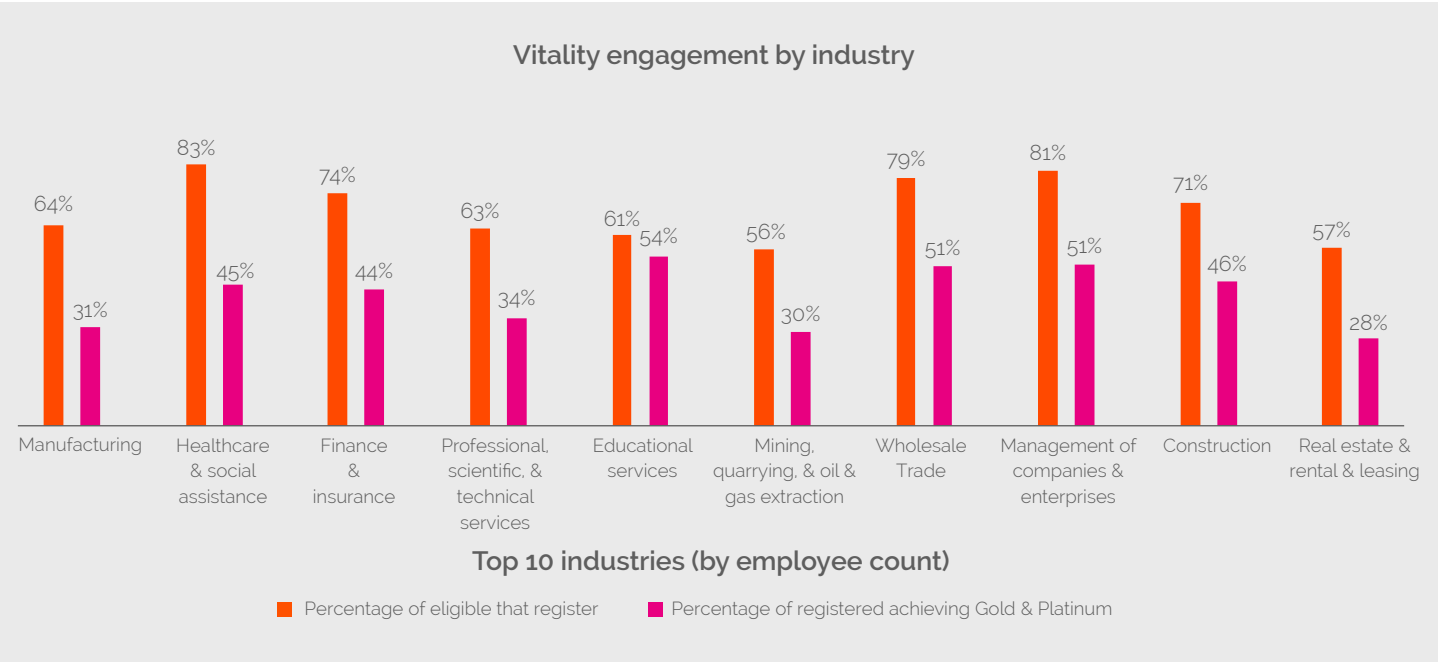


ACROSS CLIENT SIZE, INDUSTRY, AND JOB TYPE

Driving and coordinating engagement in a population generally gets more difficult as organizations become larger and more dispersed. This gets even more complicated when work conditions, job types, and locations become more varied. Achieving diverse and inclusive health and well-being participation across client sizes, industries, and job types is essential to achieving equitable health outcomes.

When fitting our two engagement models, we assessed the number and percentage of employees considered “white collar”. For both variables, no significance was found. This indicates that Vitality can drive diverse participation and engagement depth across organization sizes and that we engage manual and hourly workers as well as we do with office and salaried workers.

Additionally, we looked at our engagement rates by industry in our book of business. Although variability was seen across sectors, participation and engagement depth remain robust.





CASE STUDY:
ENGAGING A DIVERSE WORKFORCE

E. & J. Gallo Winery is one of the largest wineries in the US, with over 7,000 blue- and white-collar employees.

As an essential workforce during the COVID-19 pandemic, hourly staff remained on site to maintain production while corporate staff transitioned to working remotely. Pivoting to a hybrid model presented a new challenge in keeping the entire workforce engaged, connected, and supported, whether at home or on site.

"20% of our population at any given time was not here for two years. It created a lot of challenges," said Carmella Smyth, Senior Benefits Manager at Gallo. "We were challenged to go outside what we used to do to reach people. We had to open our minds to communicate to our employees."



E&J. Gallo Winery



Gallo utilized their on-site clinic to help reach employees and bring care to where they were, whether in person or remotely. Essential workers relied heavily on the on-site clinic for information regarding COVID-19 testing and vaccinations. Through a partnership with their clinic vendor, Gallo could encourage employees to seek primary care and behavioral health support through virtual interactions. "Behavioral health was at the intersection of dealing with the pandemic, returning to work, and balancing family life," stated Smyth. "The on-site clinic tripled their volume in calls per week of people calling in for virtual care and COVID support. It also became critical to building support and connection and helping people feel comfortable returning to work."

Today, Gallo has been working hard to engage its diverse workforce. "We still have challenges in engaging our Spanish-speaking population. Many workers come from different backgrounds, work long hours, and have

a different culture," notes Smyth. A one-size-fits-all communication strategy does not work for such a diverse workforce. Smyth elaborates, "We have workers who work rotating 12-hour shifts, seven rotating days, day and night. Physically it's hard for them. Psychologically it's hard for them. From a communications standpoint, we start with simple sound bites. We try to bring our employees information in the easiest way possible through emails, flyers, posters, and jumbotrons throughout all our plants."

In addition to honing their simple and clear communication strategy, Gallo is also working on personalization. "One thing we've learned is that we still do information overload, where instead we should stop and sit with the employees at the different levels and listen to them. Where can we meet you where you are? What can we do, knowing your calendars are crazy with work? This will be crucial for us in the next year or two." Another element of personalization Gallo is pursuing is learning how best to communicate with employees of all ages. Gallo has engaged a team of experts to help craft the most engaging messaging for employees of different generations.

Another tactic Gallo is utilizing to enhance its strategy is having representative advocates in the organization deliver messages to build trust. Smyth spoke about how Gallo's Vitality Champs have played a vital role in creating inclusive engagement. "Information can't be top down from the same person all the time, or people will lose interest. Our Vitality Champs have come up on their own. People trust the folks that they work with. We find we get more engagement when information is shared from the Champs."





CONCLUSION

When assessing health and well-being program engagement, how we define engagement is critical and needs to consider more than just participation and frequency of interaction. This includes assessing:

- » The quality of the interactions and to what degree activities are verified and substantial to achieving the program goals
- » Whether the engagement is sustained and improves over time
- » Whether the engagement achieved is diverse and inclusive, reaching people across demographic and social factors

Beyond the technology and features of the program, other elements impact the level of engagement a program achieves. Firstly, the most significant drivers of engagement are program sponsor factors like leadership support, communications strategy and implementation,

and an effective well-being advocates network. Secondly, the level and structure of incentives and the integration of benefits and initiatives into the program are crucial program draw-factors and ongoing engagement mechanisms. Finally, the well-being program's strategic support can differentiate between stagnation and continuous improvement.

Vitality drives industry-leading health and well-being engagement, from enrollment to keeping members frequently engaged to creating quality engagement in meaningful activities across populations. Then, over time, ongoing strategy guidance and a data-driven approach create continuous improvement. The result is a significant health impact with improvements in population health, lower healthcare costs, and improved employee productivity. Ultimately, getting equitable engagement is critical, and our data demonstrate that Vitality drives inclusive engagement that cuts across demographics and social determinants of health.

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GLOSSARY

In this report, a number of Vitality program features are referenced. These are defined below:

ACTIVE REWARDS leverages behavioral science principles to make working out fun and engaging and helps members achieve and exceed global recommended levels of weekly exercise. Members can earn a spin on the Vitality Wheel each week to win prizes, including everything from Vitality Points to gift cards.

It works by assigning members an exercise goal each week. The goal starts low so that a member can achieve it by recording steps on a device. It then progressively increases over time as a member achieves their goals such that members eventually must engage in vigorous workouts to achieve the goal. This creates a dynamic goal that balances achievability, based on previous activity levels and performance, with challenge, getting progressively more difficult over time.

This design leverages cognitive biases like present bias and the framing effect by breaking up long-term behavior change and rewards for this change into smaller increments. It also helps members exceed the minimum recommended level of physical activity, as research indicates that there is no upper limit to cardiovascular health improvement from increased exercise¹. The result is that members increase the frequency and vigorousness of their workouts over time to meet and exceed global recommended weekly activity levels. Combined with the Apple Watch benefit, the results are even more stark. In a study by RAND² on over 400,000 participants in three countries, the largest study of its kind, Active Rewards was shown to increase sustained physical activity levels by 37% over 24 months post launch. The Apple Watch benefit increased this by an additional 34%. High-risk groups saw even more impressive improvements, with a 200% improvement in physical activity from Active Rewards and Apple Watch observed in the US. These improvements were observed across ages.

APPLE WATCH (EARN APPLE WATCH, VITALITY ACTIVE REWARDS WITH APPLE WATCH, EARN YOUR WATCH) allows members to get an Apple Watch at a substantially reduced price. Members can pay as little as \$19 plus tax for a new Apple Watch. This activation fee is paid upfront, and then a member can maintain zero payments by achieving their monthly physical activity goals over 24 months.

DEVICE SUBSIDY is when employers contribute toward purchasing a device in the Vitality Mall.

EMPLOYER INCENTIVE PLAN (EIP) is a highly-configurable employer incentive mechanism to drive immediate and longer-term program engagement or target specific activity engagement and outcomes criteria. The EIP can be configured in various ways to align with clients' goals. Most commonly, achieving the requirements for their EIP rewards members with discounts on their health plan contributions or additional Health Savings Account contributions. Other employer rewards like additional time off can also be facilitated.

When the member requirement for achieving their employer incentive is set at Silver or Gold Vitality Status, members must engage in the Vitality program for longer periods and various lifestyle improvement activities—as such, having a Vitality Status requirement in an employer's incentive plan is consistently correlated with better engagement outcomes across our book of business and is therefore recommended.

GYM AND WELLNESS REBATES allow members to earn an annual rebate for gym memberships, smoking cessation initiatives, and weight loss programs, with rebates usually based on participation.

VITALITY AGE – see "Vitality Health Review."

VITALITY BUCKS™ is the Vitality program's primary rewards currency. Members earn 1 Buck for each Vitality Point and can earn bonus Bucks for increasing their Vitality Status. The monetary value of Vitality Bucks is configurable for the employer, generally with a Low, Standard, and High option.

VITALITY CHAMPS® finds influential members within the workplace and enables them to promote the program to their coworkers. Champs are wellness ambassadors, spreading the culture of health throughout their client's organization, and our data have consistently shown them to be significantly influential in driving engagement.

VITALITY CHECK is a series of clinically-validated biometric assessments that help identify which areas of a member's health are strongest and which may need some work, as well as risk for any potential health problems like diabetes or heart disease. It includes physical measurements and a blood draw to determine a member's fasting blood glucose levels, blood pressure, total cholesterol, and body mass index (BMI). Some - not all - Vitality Checks also include a cotinine test, allowing members to earn additional points if they are a non-smoker.

VITALITY HEALTH REVIEW™ (VHR), more commonly known as a health risk assessment, is Vitality's interactive online tool that gathers information about each of the ten modifiable health risk factors and conditions targeted by Vitality as well as readiness to change, perceived health status and performance. With more than 25 years of experience and 50 million life years of member data collected, our VHR has been developed with considerable behavioral and clinical rigor. The VHR, in collaboration with biometric screening outcomes (if applicable), provides members with their Vitality Age®. This risk-adjusted age translates everyday behaviors and choices into a personalized health-related age. The difference between a member's Vitality Age and actual age, which we call the Vitality Age differential, is a good proxy for health status, with many Vitality analyses showing strong correlation between Vitality Age differential and risks and outcomes.

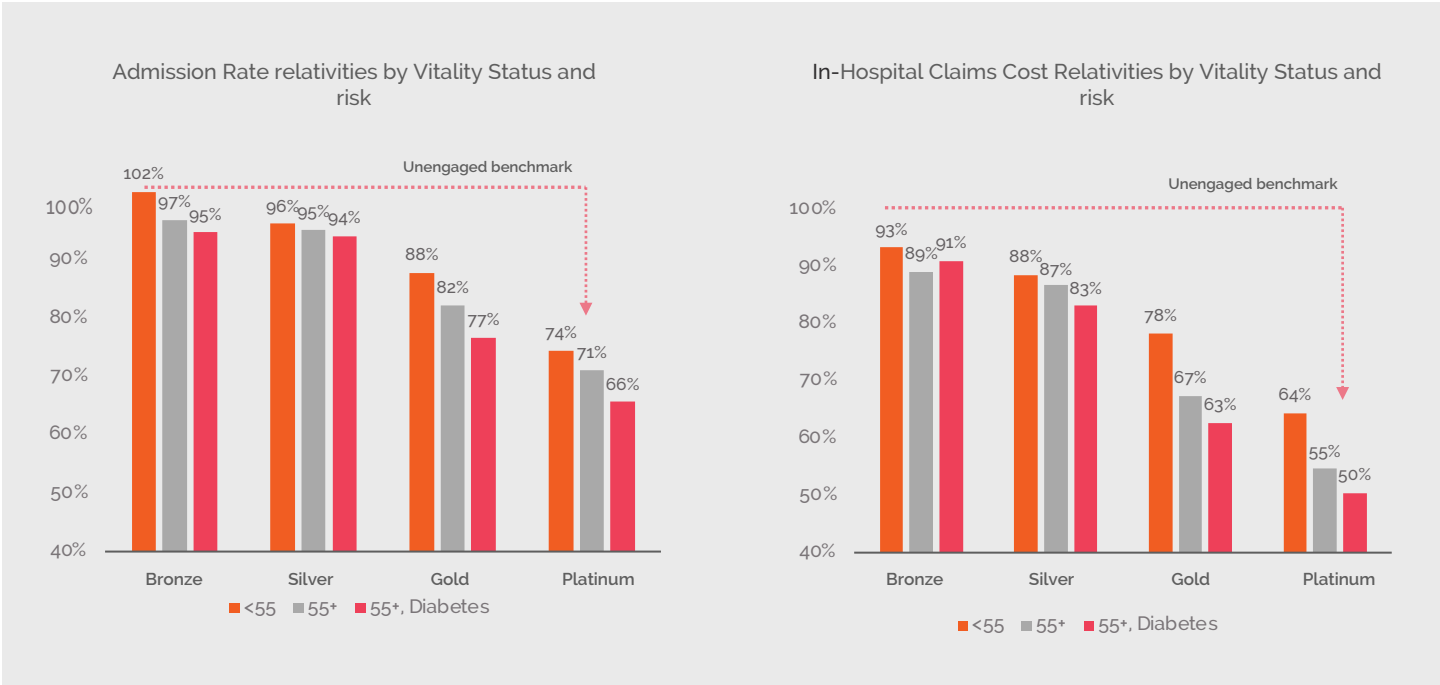
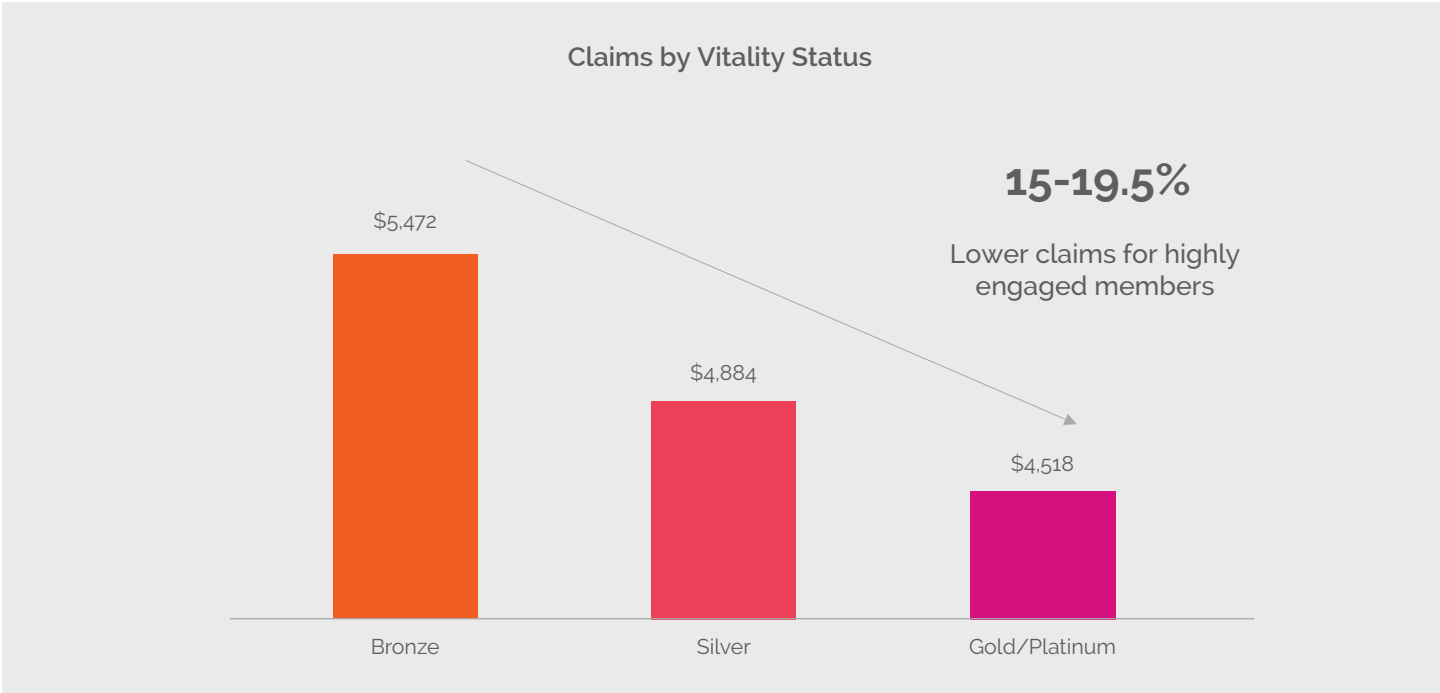
VITALITY MALL® allows members to spend their Vitality Bucks, earned from engaging in the program, on gift cards and products from high-appeal consumer brands.

VITALITY POINTS are earned in the Vitality program by completing various activities and milestones. Earning Vitality Points accrues Vitality Bucks and can help a member advance their Vitality Status.

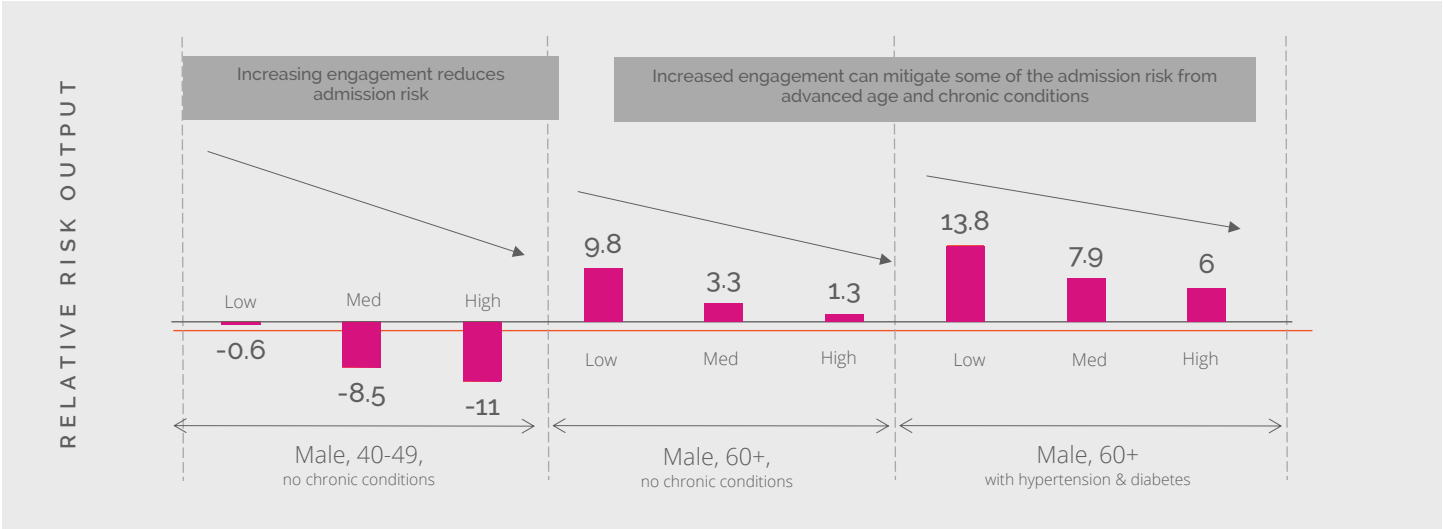
VITALITY SQUARES is a monthly game of chance in the Vitality program that gives members the opportunity to win prizes, from Vitality Points to up to a \$500 gift card.

VITALITY STATUS® is an actuarially- and clinically-verified measure to classify and motivate members based on their engagement in well-being. Status combines activity and outcomes into one simple and easy-to-understand engagement metric. Vitality Status starts at Bronze (lowest engagement level) and moves to Silver, Gold, and Platinum status as members earn Vitality Points. Members reach higher levels of Vitality Status by earning points in the program through completing activities. Reaching higher levels of Vitality Status requires long-term engagement in the program. Vitality Status is risk-adjusted so that regardless of a member's health status or starting point, anyone can reach Platinum status and experience the health benefits associated with long-term engagement.

Status has a proven correlation to healthcare costs and risk.




Even for COVID outcomes, Vitality Status strongly correlates with COVID hospitalization and mortality risk. The effect of Vitality Status was so strong that it modulated the elevated COVID-19 mortality risk from chronic conditions and aging.



A strong correlation exists between employee performance and Vitality Status, with higher Vitality Status associated with higher satisfaction at work, higher perceived job performance, and lower reported health-related absences - see page 32.

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For over 25 years, Vitality has been living out its core purpose of making people healthier and enhancing and protecting their lives. Borne from a health plan, Vitality leverages scientifically proven principles of behavioral economics, combining them with the world's deepest dataset on health and behavior and unique actuarial expertise to create a program that inspires real behavior change and rewards members for engaging in their health and well-being.

Vitality's flexible platform integrates our ecosystem with our clients' programs and initiatives, creating a fun and rewarding experience for members with personalized goals, activities, and rewards. Vitality's team of market-leading Wellness Strategy Managers works consultatively with clients. Our best practices are developed from extensive experience and leveraging data and actuarial analytics to activate and enhance well-being strategy and help create a culture of health that attracts, retains, and engages talent.

Vitality[®]

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