

INSIGHTS

FROM VITALITY



Wearables at Work

A TECHNICAL BRIEF

Vitality[®]

APRIL 2014

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WEARABLES AT WORK: How the latest trends in digital health can impact employee health

The products are cutting edge. The market is booming. The enthusiasm is infectious. It's safe to say that the trend of wearable technology is showing no signs of stopping. "Wearables" fall into the category of technological devices that a person wears and are capable of tracking data relative to the wearer's physical health and exercise. In 2013, activity trackers generated an estimated \$290 million in American retail sales, according to Ben Arnold, an analyst at New York's NPD Group, who says the market could double this year.¹ But are the numbers telling us the whole story? Are consumers purchasing the newest, latest fitness devices because they are cool for the time being or do they actually improve one's health?

Vitality™ offers insight on the growing trend. The Vitality wellness program helps large employers improve the health of their employees. The program caters to individuals across the health continuum regardless of health status, age or physical ability. The Personal Pathways™ approach

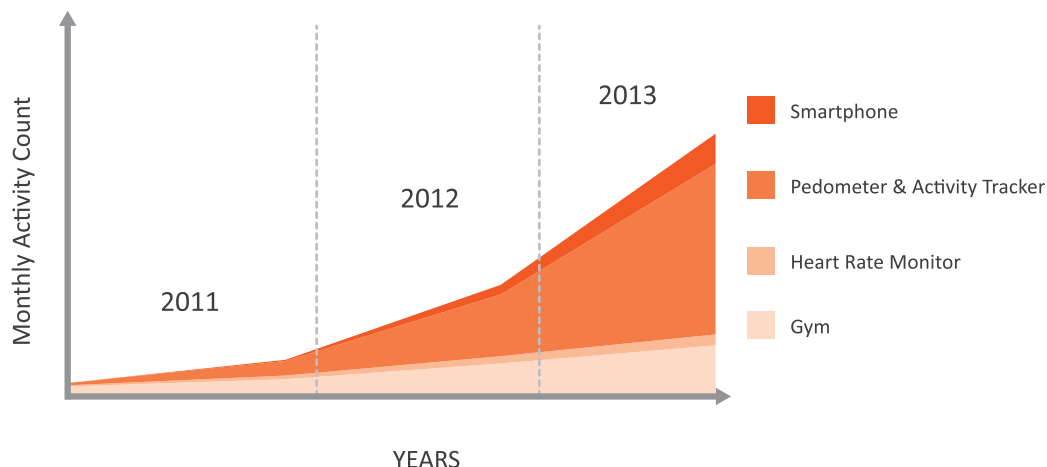
customizes a plan for each member, creates appropriate incentives and weighs various actions to address each participant's specific health characteristics and risk factors. As members complete healthy activities, including verified workouts, they earn Vitality Points™. Vitality members are embracing fitness devices as an integral way to engage with the program. This brief shares some of our data and aims to answer the following key questions:

- What is the real take-up like in a workplace setting? From the introduction of devices to Vitality members until now, what have we learned?
- Who is using them? Are devices just for those who are already fit or do they have more wide-range appeal?
- Do devices really have the power to alter habits? What role do incentives play?
- What is the impact on health? Can these promising technologies genuinely improve health?

THE HYPE IS REAL

After years of evolution from the first pedometers that used USB plugs to upload data, today's devices continue to intrigue consumers by providing more accurate, smarter data with simple designs and a user-friendly experience.

Vitality has been plugged in since 2005 with the integration of the pedometer as a means of tracking verified workouts. In 2008, it was one of the first wellness programs to integrate with Polar® and its heart rate monitors to sync data back to the program. Today, pedometers, activity trackers, heart rate monitors and smartphone applications are all integrated into the program from more than 100 unique devices. The graph below illustrates the increase in the activity count for each device type over the last three years.



This analysis reflects Vitality members use of gyms and devices, and includes any point-earning physical activities or workouts submitted.

While there is a wide variety of wearable technologies, activity trackers like the Fitbit®, which monitor daily activity and sleep, have proven to be among the most popular devices.

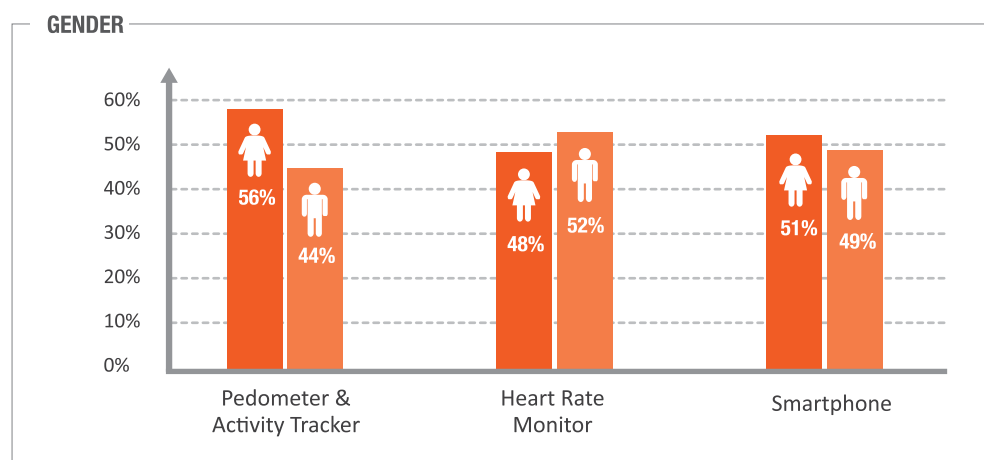
29,538,643,597

The number of steps taken by Vitality members wearing a Fitbit device in 2013

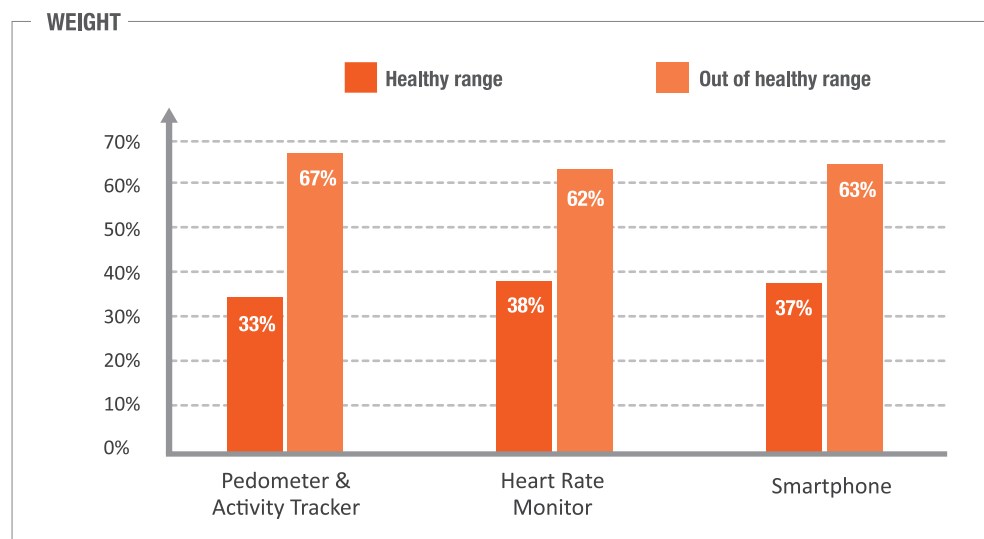
Sales of activity trackers are forecast to
INCREASE THREEFOLD
over the next five years,
according to research company, IHS Technology²

DEVICE USERS COME IN ALL SHAPES AND SIZES

An obvious question is: Who's wearing a wearable? Do wearables only attract young, fit people who are tech-savvy or do they have a more wide-range appeal? Looking at participants in a workplace setting, we are able to determine that members of all ages, weights and both genders are embracing wearables to track their physical activity in real-time. The statistics below represent members who submitted a workout to Vitality through a device as of December 2013. The results help to illustrate that activity devices can be adopted by a diverse population of users when introduced as part of a well-designed, comprehensive wellness program.



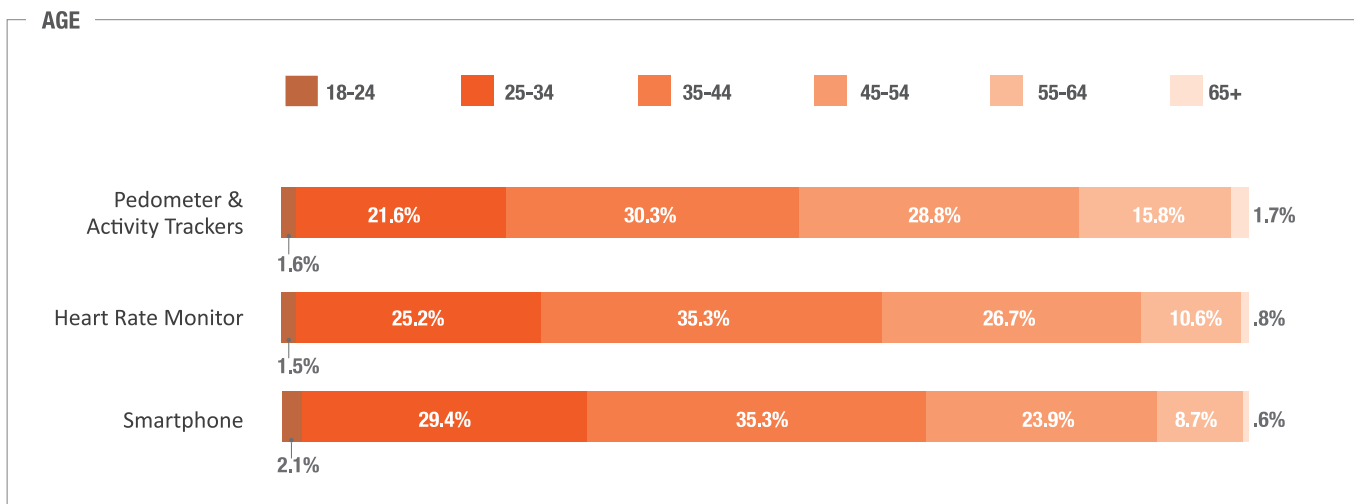
A slightly larger percentage of women are using a pedometer, activity tracker or smartphone device, whereas heart rate monitors are more popular with men.



The member data indicates that devices are more widely used by people who are overweight or obese.

DEVICE USERS COME IN ALL SHAPES AND SIZES (CONTINUED)

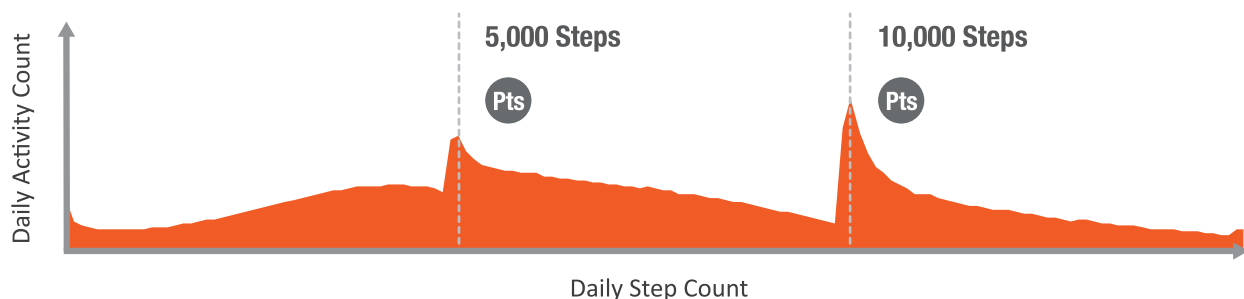
The following distribution shows device usage based on age category. The largest percentage of the distribution, for all devices, is among middle-aged members. Pedometers and activity trackers are more popular with the older demographic and smartphones show an expected younger user group.



THE RIGHT INCENTIVES MOTIVATE CHANGE

Research published in the *Workplace Wellness Program Study* by the RAND corporation suggests that incentives can encourage healthy lifestyles. Evidence from the peer-reviewed literature shows that targeted incentives can help to influence behaviors in the short term and increase participation in wellness programs.³

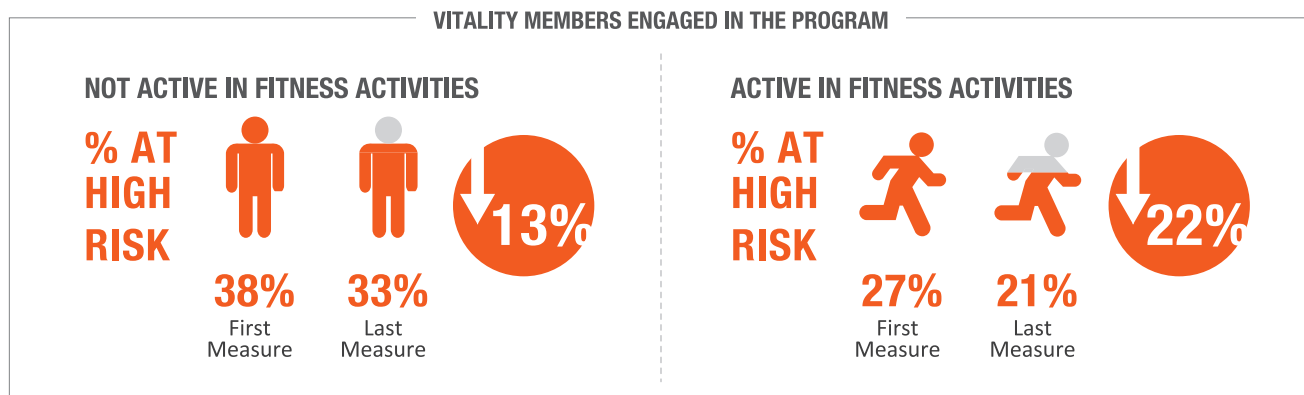
Vitality uses principles of behavioral economics to promote engagement and target risk improvements in its members. The program motivates behavior change through the use of rich and immediate rewards, which are obtained by earning Vitality Points for healthy behaviors. The following graph shows data from one of our more popular devices. It illustrates an example of how member steps peak at the Vitality point incentive thresholds: 5,000 and 10,000 steps per day respectively. We can conclude that many members who would not ordinarily reach 5,000 and especially 10,000 steps are taking the extra step to ensure that they are eligible for the incentive. This is powerful evidence of Vitality at work.



Members earn Vitality Points for performing a wide range of verifiable activities. Vitality Points determine Vitality Status® and convert to Vitality Bucks™ which can be redeemed for merchandise in the Vitality Mall™.

MOVEMENT CAN MODIFY RISK FOR DISEASE

The body of proof showing that chronic conditions can be prevented, delayed or alleviated by addressing unhealthy behaviors — such as physical inactivity — continues to grow. Vitality's analysis of verifiable and self-reported biometric and lifestyle data from those engaged in our comprehensive wellness structure adds to this evidence. Overall, members who engaged in the program reduced their number of health risk factors, with those members engaged in fitness activities seeing the greatest improvement. For members who did not submit any fitness activities, the high-risk group moved from 38% of the population to 33%. For members who engaged in fitness activities, the high-risk group was reduced from 27% of the population to 21%, lowering the number of high-risk people in this segment by 22%.



The analysis looks at individual risk factor transitions using a consistent base of members within each risk factor. To be included, members must have at least two recorded measurements on file with at least 90 days between the first and last measurements for all 10 risk factors (BMI, systolic blood pressure, diastolic blood pressure, total cholesterol, fasting glucose, physical activity, tobacco use, nutrition, alcohol and stress). High-risk individuals are characterized as having five or more risks out of range.

The results of our device study are consistent with material we published previously in a peer-reviewed journal:

PUBLISHED STUDY FROM VITALITY

A five-year longitudinal study looked at more than 300,000 adults, 192,467 of whom were Vitality program members and 111,587 who were not on the program. The peer-reviewed retrospective study examined the changes in participation in verified and incentivized Vitality fitness activities over a three-year period and the impact on hospital claims over the fourth and fifth years.

The findings: Members who consistently maintained or increased engagement with fitness-related activities had the best outcomes relative to hospital admission and costs. Hospital costs were 6 percent lower for those members who were inactive and became active, and 16 percent lower for those members who were active throughout the study compared to those individuals who remained inactive.⁴

The activity trackers on the market today are designed for everyday use by everyday people and those who use them are seeing results. Below is just one example of how a Vitality member invested in not only an activity tracker, but in his long-term health.

IN 9 MONTHS Vitality Member ANDREW COOKE



2013

apr

Received less-than-favorable **VITALITY CHECK™** results



A Vitality Check measures BMI, cholesterol, blood pressure and fasting glucose levels.

Set a **GOAL** to lose weight

Knowing his health was at risk, Andrew resolved to change his sedentary lifestyle and lose weight.



Invested in an **ACTIVITY TRACKER**



He conveniently purchased it from the Vitality Mall at a discount using Vitality Bucks he had earned.

Started **WALKING** everywhere

He tracked his steps and earned Vitality Points when he met the 10,000 daily step target.



"I love being privy to all the synced data the Fitbit Flex™ provides me. It has motivated me to get my sleep and exercise. I walk at least 10,000 steps every day instead of driving or taking mass transit."

Organized a step **COMPETITION** with co-workers

He motivated his colleagues to join him, leading to a self-sustained competition across the country to see who can take the most steps each week and even each day.



Received improved **VITALITY CHECK** results



After a follow-up screening, Andrew learned that his numbers were much improved.

"The best part of my experience with Vitality is enjoying the quest to achieve Platinum Vitality Status and earning Vitality Points and Vitality Bucks, knowing that the process of earning is benefiting my health."

LOST 40 LBS!



Purchased **FITBIT DEVICES** for friends and family

With his hard-earned Platinum Status, Andrew used his Vitality Bucks to purchase several Fitbit Flex devices as Christmas gifts!

"I am happy to say I have lost 40 pounds in 9 months ... all without ever setting foot in a gym!"

jan

2014

CONCLUSION: FITNESS DEVICES ARE DRIVING REAL MOTIVATION TOWARD WELLNESS

Employers who are looking to initiate engagement and outcomes in a workplace wellness program may well consider the purchase and integration of wearable fitness devices. Vitality's supportive data goes beyond consumer enthusiasm to establish:

- The benefits of wearable devices apply to a broad employee population, not just the tech-savvy Millennial generation.
- Within the context of a comprehensive wellness program, those who participate in verifiable fitness activities show a reduction in health risk factors.
- Well-crafted incentives work to ensure adoption.
- Wearables at work can make health improvement highly accessible, spark motivation and contribute to greater outcomes sustained over time.

ABOUT THE VITALITY GROUP

The Vitality Group is a member of Discovery Limited, a leading international financial services organization and the originator of the Vitality wellness program – a rewards program for health that empowers positive change. It was developed as a means to engage individuals in the management and improvement of their health through the use of incentives, and is supported by a rich body of clinical, behavioral and actuarial science. Vitality focuses on increasing engagement across a broad set of verified activities. With more than fifteen years of experience and an established global record of success, the program today has over six million members worldwide. A true health innovator, Vitality is constantly evolving with robust enhancements and empowerment technologies.

For more information about Vitality, visit www.TheVitalityGroup.com.

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www.TheVitalityGroup.com

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