

Report to the Legislature

SmartHealth Effectiveness

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EXECUTIVE SUMMARY

This report is an evaluation of the effectiveness of SmartHealth—an online portal launched in January 2015 as a way for PEBB program members to improve their health and well-being. Eligible employees who register for SmartHealth, complete a well-being assessment, and participate in enough of the program’s health and wellness activities to earn at least 2,000 points. Those that earn 2,000 points receive a \$125 discount on their medical deductible in the following calendar year.

In 2016, E2SHB 2376, Subsection 213 (2)(b)(i) directs the Health Care Authority (HCA) to evaluate the effectiveness of the SmartHealth program on a quarterly basis, with the first report to the legislature due on June 30, 2016. HCA worked collaboratively with the Office of Financial Management (OFM), the Washington State Institute for Public Policy (WSIPP), and Limeade (the SmartHealth portal vendor) to create a data analysis team to determine the metrics for the evaluation and conduct the evaluation.

This is the first report of the effectiveness of the SmartHealth program. It covers the baseline period of calendar year (CY) 2015. Details about CY 2015 program costs and a description of communications strategies used in years 1 and 2 are included, along with a literature review of research on wellness programs, as recommended by WSIPP. This initial report focuses on participation and engagement in the baseline year. Additional metrics on employee wellness and cost-effectiveness will be included in future reports.

KEY FINDINGS

PARTICIPATION

In the first year of the SmartHealth program (2015), 39 percent of the 132,373 eligible public employees registered; and about 24 percent of eligible employees earned enough points to qualify for the \$125 incentive. Of the employees who registered, 94 percent completed the well-being assessment and 61 percent of those who registered earned enough points to qualify for the incentive. These results are consistent with the launch of a new wellness program. Wellness programs take several years to become completely mature.

HEALTH STATUS

SmartHealth participants who completed their well-being assessments reported a fairly small set of self-assessed risk factors, indicating a relatively healthy population enrolled in the 2015 baseline year of the program. In future reports HCA will work to identify whether these results are similar to comparable groups of workers.

INTERVENTIONS

Research shows that programs that allow for customized intervention (wellness activities that participants choose based on their interests and abilities) tend to have somewhat better participation results than those that offer a one-size-fits-all solution. The data from the baseline year shows participation in a broad variety of activities indicating participants were trying out a number of wellness activities as they interacted with the program.



ORGANIZATIONAL METRICS

The data included in this report shows a broad range of overall participation by organizational entity, with state agencies having higher participation rates than higher education institutions.

MEASURING WORKPLACE WELLNESS PROGRAM EFFECTIVENESS

One major methodological challenge to measuring the SmartHealth program's effectiveness is potential selection bias. PEBB program members who choose to participate may be different (e.g. more motivated to change behaviors) than non-participants. Selection bias is a consideration with much of the research on the effectiveness of workplace wellness programs. The data analysis team is evaluating various methods for examining program effectiveness for future reports, such as:

- Comparing trends in PEBB program claims data in the years before SmartHealth with the years after implementation.
- Identifying a set of worksites that have not adopted the program, or that have low participation rates, and comparing outcomes for those sites with outcomes from sites with high participation rates.
- Using statistical techniques, such as propensity-score matching, to compare outcomes for SmartHealth participants with outcomes of non-participants.

NEXT STEPS

The data analysis team (HCA, OFM, WSIPP and Limeade) will continue to identify the best approach for assessing and reporting on cost-effectiveness. Limeade normally conducts these analyses by combining program data with third party data from their customers related to medical and pharmaceutical claims data, Paid time off, vacation and sick time used, turnover/tenure, workers compensation/disability claims, and employee engagement surveys.

By the end of Year 3, there may be enough data to start examining initial outcomes and charting trends in health risk profiles. After three years most wellness program designs allow for a comprehensive program value analysis as described in this report.

To measure whether the SmartHealth program is effectively reducing costs for PEBB program members, an analysis of claims and productivity data for SmartHealth members over time would need to be conducted. One of the barriers to participation in employer-sponsored wellness programs is a concern on the part of employees that their employer will have access to their personal health information. Having a third party (e.g. Milliman) conduct the cost-effectiveness analysis would ensure independence and objectivity in the analyses and would guarantee compliance with privacy and legal requirements. This creates the ability to link eligibility data, well-being assessment data, and claims data, for example, for the participant cohort and compare it with the non-participant cohort. However, to complete this added level of sophisticated, statistical analysis of cost-effectiveness, additional resources would be required. If authorized, this analysis could begin at the end of Year 3.



OVERVIEW

“It makes practical sense for employers to play a positive role in influencing the health behaviors of their workforce...Thus, many employers have added wellness programs...to their health plans and there is growing evidence for their benefits.”¹

In January 2015, the Health Care Authority’s Public Employees Benefits Board (PEBB) launched the SmartHealth online portal as a way for PEBB program members to improve their health and well-being by using an online portal to complete a well-being assessment and track their wellness activities. The program offered a \$125 reduction on members’ medical deductible for the following calendar year to those who achieve the 2,000 point goal by completing the assessment and participating in wellness activities. (Subscribers and their spouses or registered domestic partners enrolled in PEBB medical coverage can participate in SmartHealth through the SmartHealth website; however, *only the subscriber can qualify for the \$125 financial wellness incentive.*)

This report is the first in a series of five quarterly reports to the legislature evaluating the effectiveness of SmartHealth, Washington State’s voluntary, confidential wellness program for public employees. It has been developed in response to Second Engrossed Substitute House Bill (E2SHB) 2376 Section 213 (2)(b)(i) enacted in 2016. This provision requires the Health Care Authority (HCA) to review the SmartHealth program and report to the legislature on its effectiveness on a quarterly basis, beginning not later than June 30, 2016. While this initial report focuses mostly on employee participation in the program during 2015, the baseline year, we anticipate being able to provide additional measures of effectiveness over the course of the next year as more data from SmartHealth is available and additional analysis can be completed.

E2SHB 2376 mandates that the report include:

- The contractors’ communication strategies.
- Rates of employee engagement.
- Identification and quarterly measurement of employee wellness outcome criteria, such as rates of sick leave use and improvements in chronic medical conditions among wellness plan participants.

E2SHB 2376 also mandates that HCA and the Public Employees’ Benefits Board (PEBB) consult with the Washington State Institute for Public Policy (WSIPP) on the cost-effectiveness of the wellness plan and any changes to the plan that can be made to increase its health care efficiency.

At WSIPP’s recommendation, HCA has included a literature review of research on wellness programs, highlighting the evolution of these types of programs, relevant findings on the success of

¹American College of Occupational and Environmental Medicine. (July 2012). Joint Consensus Statement: Guidance for a Reasonably Designed, Employer-Sponsored Wellness Program Using Outcomes-Based Incentives. *JOEM* 54:7.



these programs, and challenges and best practices in conducting analyses of their effectiveness. A description of communications strategies used in years 1 and 2 of the program, along with plans for future years is also included.

For this initial report, only one full year of data—the baseline for further analyses—is available. As a result, this report’s findings focus on employee participation and engagement. While it is not yet possible to include an analysis of employee wellness outcomes and cost-effectiveness, a detailed discussion identifying potential metrics for future reports is included, along with considerations, challenges, and possible methods for tracking each metric.

This report was produced by a collaborative team that included representatives from HCA, WSIPP, the Office of Financial Management (OFM), and Limeade, the contracting organization that developed and maintains the SmartHealth program.

HISTORY OF THE WASHINGTON STATE WELLNESS PROGRAM

Washington State has been a leader in providing innovative, value-based medical and dental insurance benefits, including giving employees tools to manage their own health.

Prior to 2006, the Uniform Medical Plan (UMP) operated the Health Counts program through its third party administrator, Regence Blue Shield. Once a year, subscribers who completed the Regence Health Risk Assessment and attested to completing a set of activities earned an incentive in the form of a gift card. This program continued through December 2013.

In January 2006, former Governor Chris Gregoire directed the launch of Washington Wellness, a statewide wellness initiative to improve the health of Washington State employees and retirees. This initiative instituted worksite wellness programs and a network of Wellness Coordinators. In 2007, Senate Bill 5930 was enacted with the stated goals of improving health outcomes, boosting employee productivity, having a positive impact on the cost of medical care, and having a positive return on the investment.

In October 2013, Governor Jay Inslee issued Executive Order 13-06, directing the creation of a State Employee Health and Wellness Steering Committee to develop a comprehensive wellness program for state employees that:

- Required agencies to participate in HCA’s Washington Wellness Worksite Designation Program.
- Developed a health insurance wellness plan for PEBB program members that aligned to the Worksite Designation Program, including implementation of the Diabetes Prevention program.
- Created a food and beverage service policy for all state executive agencies to ensure access to healthful food choices.



In 2014, the Legislature required PEBB program members who use tobacco products to pay a \$25 surcharge. In addition, the PEB Board and Legislature authorized the value of a financial incentive to encourage healthy behavior: members who attested to choosing a primary care provider, completed their health plan's Health Risk Assessment, and completed at least one of seven "healthy activities," could receive a discount of \$125 on their medical deductible in the next plan year or a contribution to their Health Savings Account (HSA).

The Diabetes Prevention Program and the Diabetes Control Program were implemented January 1, 2014, in partnership with the Diabetes Prevention and Control Alliance, the vendor that provides electronic billing and provider network management.

In 2014, funding was approved for the PEBB program to procure an online tool so members could track their wellness activities and qualify for the financial incentive. This provided a greater level of programmatic accountability. HCA selected Limeade as the online portal vendor after a competitive process. Limeade provides a web-based platform for employer-based wellness programs. The Limeade platform allows employees to create a customized set of wellness activities, track their participation, and earn points toward a wellness incentive.

HCA designed the SmartHealth program during 2014 with considerable input from the State Health and Wellness Steering Committee, which included representation from OFM, HCA, the Department of Health (DOH), higher education, and unions. This committee continues to advise HCA on the design and operations of the SmartHealth program.

In January 2015, the SmartHealth online portal was launched to the PEBB program population overall. SmartHealth-eligible members could receive "points" if they registered on the online portal, completed the well-being assessment, and documented their participation in activities customized to reflect the results of their assessment. Members who earned at least 2,000 points by June 30, 2015, were eligible to receive a \$125 discount on their deductible payments in 2016 or a contribution to their HSA. (SmartHealth-eligible members are defined as individuals who have access to the SmartHealth Wellness program and are eligible to receive the financial incentive.)

For plan year 2016, HCA extended the deadline for achieving 2,000 points to September 30 to encourage greater participation, and so members would be able to use the summer months to participate in outdoor activities to qualify for the financial incentive. The incentive will be distributed in January 2017.

PROGRAM COST

In calendar year (CY) 2015, the first year that the Limeade portal was offered, the SmartHealth budget consisted of two major components, the Limeade program cost and the incentive costs paid out in the following year in the form of reduced deductibles. The Limeade program cost starts with a basic fee of \$1.23 per adult unit per month (PAUPM). This fee was approximately \$2,715,000 in CY 2015 and projected to be \$2,738,000 in CY 2016. Sales tax amounted to approximately \$239,000 in CY 2015 and is projected to be approximately \$241,000 in 2016. Limeade also



provides phone-based access for members who do not have access to the internet; the cost for this service is approximately \$63,000 per year. There was also \$4,000 of miscellaneous Limeade expenses in CY 2015.

In 2015, 28,659 employees qualified for the incentive by completing the well-being assessment and participating in enough activities to reach 2,000 points. As a result, the program paid \$3,582,000 in incentives in CY 2016.

By comparison, in CY 2014, 76,562 employees attested to completing the pre-SmartHealth incentive qualification requirements, resulting in \$9,570,000 in incentives in CY 2015.

SMARTHEALTH COMMUNICATION STRATEGIES

OVERVIEW

The first year of the SmartHealth Program focused on optimizing program design, collecting baseline data, gaining an understanding of population profiles, identifying needs and interests, and keying in on what communication methods best drive registration and program engagement.

Year two put in place necessary program design modifications and an updated communications strategy to better reach and engage eligible members.

Moving forward, the team will continue to review, measure, and adjust using the methods that show greatest impact for program goals.

GOALS FOR YEAR ONE

In year one, the SmartHealth communication's strategy focused on three main goals:

1. Member awareness of and registration on the SmartHealth website (www.SmartHealth.hca.wa.gov)
2. Well-being assessment completions
3. Program engagement

The goals focused on getting eligible members to visit the SmartHealth website, gathering baseline data from registrants, and engaging them in risk-reducing activities, such as eating and sleeping better, and moving more. Worksite wellness coordinators who had at least 50 eligible employees in their organization were also provided with aggregate data about well-being assessment completion rates so they could tailor messaging and promotions within their workplace accordingly.

The emphasis was on clearly communicating the SmartHealth program to eligible members. The SmartHealth team focused on developing a comprehensive communications strategy that could reach as many members as possible.



KNOWN BARRIERS

Going into year one, the known barriers to effective communication were:

- Inability to reach all eligible members via email (because PEBB members are not required to provide emails to the PEBB program in order to maintain benefits).
- Complex structure: 450 work organizations, with different and distinct cultures.
- The need for continuous engagement from leadership, while managing competing priorities.
- Educating and sustaining agency wellness coordinators on the new program and providing them with aggregate participation data and turnkey communications to help support their efforts. There are some limitations on the use of SmartHealth; for example, non-PEBB employees do not currently have access.
- The need for continued member participation: providing ongoing value to registered subscribers, particularly after members' deadlines to qualify for financial incentives.
- Addressing the unique needs of the higher education population, such as reaching across geographic distances and communicating across diverse populations.

OVERALL APPROACH—ADDRESSING THE BARRIERS

The SmartHealth team developed core messaging that could transcend different audiences and motivate a diverse population. To address the inability to email all eligible members, the SmartHealth team used a multi-channel approach that included:

- Sending home mailers (brochures, postcards, and the PEBB program's *For Your Benefit* newsletter) to launch the program and inform eligible members about program updates.
- Promoting SmartHealth on several websites, including the PEBB program and its contracted medical plans (UMP, Group Health, and Kaiser Permanente).
- Marketing SmartHealth at the PEBB program's open enrollment benefits fairs.
- Engaging agency leadership to establish the importance of the program and underscore their commitment (e.g., Governor's kickoff video, program launch talking points and messaging, and agency-sponsored activities).
- Promoting SmartHealth via Governor Inslee's [Executive Order](#), at Governor's Cabinet meetings and via emails from Governor Inslee.
- Educating worksite wellness coordinators about the SmartHealth program through trainings, communication materials, talking points, FAQs, etc.
- Leveraging worksite wellness coordinators in each agency, higher education institutions, participating K-12 school districts, and employer groups (with 50 or more employees) to reach eligible members through turnkey communication toolkits, and agency-specific challenges and activities.
- Running campaigns and featured activities to generate interest and draw members to participate in the program (e.g., Seahawks and Mariners ticket giveaways).



ELECTRONIC COMMUNICATIONS

In addition to the more traditional methods listed above, the SmartHealth team implemented a robust email communications strategy for registered participants as well as eligible members who had not yet registered on SmartHealth's website. This included:

- Monthly emails promoting new activities on SmartHealth's website.
- Weekly reminders to participate in ongoing activities.
- Communications highlighting campaigns, sponsored challenges, deadlines, and required activities.

YEAR ONE RESULTS

Year one saw a smooth launch with early program adoption. The program was able to capitalize on the eagerness about a new program. SmartHealth captured interest through exciting early promotions (such as the Seahawks playoff tickets), and built on participants' need to earn points and complete required activities by June 30, 2015 to qualify for the \$125 incentive in 2016. These efforts resulted in consistent uptake from January through June, with 51,500 members registering, 94 percent of whom completed their well-being assessment. However, the program also experienced a drop-off in program engagement and registration after the June 30, 2015 incentive period deadline.

YEAR TWO STRATEGIES

Results from year one made clear that a more vigorous and extended campaign was needed to register and engage more eligible members. Additionally, to encourage a longer period of engagement in activities, the SmartHealth deadline for achieving the financial incentive was moved to September 30, 2016.

Without the benefit of the "new-program buzz" and more time to earn the financial incentive, the communications strategy has focused on a more sustained effort, with a focus on a midyear kick-off. This step is intended to encourage year-long engagement and drive ongoing interest.

In addition to these program modifications, the SmartHealth team has partnered with a marketing consultant to better engage all audiences (eligible members, agency leaders, wellness coordinators, labor, etc.) and tackle unique challenges. These include:

- **Wellness coordinators:** Deeper engagement with wellness coordinators including training, toolkits, custom activities, and development of tailored communications.
- **Higher-education focus:** Greater focus and customized strategy for higher education, which accounts for roughly 30 percent of SmartHealth-eligible members.
- **Continuous leadership engagement:** Increased focus on agency leadership engagement via Governor's emails and other focused communications.
- **Using data to improve communications:** Using year-over-year reporting to gain insights to better address population needs.



LITERATURE REVIEW

EVOLUTION OF EMPLOYER-BASED WELLNESS PROGRAMS

As the cost of providing health insurance to employees has risen, interest in health promotion programs has risen as well. Consequently, many employers have instituted some type of workplace wellness program in an effort to control the costs of providing health benefits, as well as trying to maintain a healthy and productive workforce.

The beginnings of workplace wellness programs can be traced to the middle of the last century, as employers began to offer healthcare coverage and other benefits to attract employees. In 1964, a Surgeon General's report linked cigarette smoking with lung cancer. As the impact on public health began to be understood, business leaders recognized that their employees' behavioral decisions could impact the state of their health, with an associated impact on claims costs, productivity, and profitability. Prevention was the focus during those years, the primary concern being to prevent absences and injuries in the workplace.

In the 1980s, health promotion and disease prevention programs such as smoking cessation, stress management, and nutrition became commonplace aspects of health benefits packages offered by employers. In addition, companies began creating programs that focused on treating their high-cost employees; these programs, often referred to as "disease management programs," had low participation and high failure rates. By the early 2000s, research began to show that programs that focused only on high-cost populations were not effective for two reasons: (1) It can be difficult to identify a high-cost employee until after a health-related event, and (2) absent any intervention, low-cost employees often progressed to become high-cost employees.

Around the mid-2000s, employer-based wellness programs were focused on reducing health care claims costs, and tended to ignore factors that can play a role in the health and well-being of employees including stress, job satisfaction, fitness, nutrition, and sleep. By 2010, wellness programs had begun to broaden their focus toward population-wide programs and an emphasis on the whole person, as opposed to focusing only on an individual's health risks.

Defining what constitutes a workplace wellness program can be challenging. These programs generally fall into three categories:

- **Programs to prevent illness or disease from occurring**, including activity challenges, stress management programs, and anti-smoking campaigns—programs designed to "keep healthy people healthy."
- **Programs directed at high-risk individuals**, including weight loss classes, smoking cessation telephone quit lines, and improving access to medication.
- **Disease management programs for those with existing conditions**, including depression and diabetes programs.



GENERAL RESEARCH

Because program offerings can vary from a single-focused program such as a weight loss class, to a more comprehensive program tied to an employer's health plan, it can be difficult to measure the effectiveness of worksite wellness programs. Nevertheless, there is considerable research that attempts to evaluate the effectiveness of wellness programs in terms of reducing claims costs, improving health, and the impact on productivity. It is important to note that this challenge is not limited to worksite wellness programs, but to any intervention designed to improve the health of a population. With the exception of interventions to reduce the use of tobacco, very few behaviorally-based interventions can be definitively linked to health improvement in a population. Even more challenging are the extended time frames needed to evaluate the outcomes of prevention activities.

In 2010, researchers conducted field visits with 10 organizations' workplace wellness programs including Biltmore, Chevron, Johnson & Johnson, and Lowe's. The writers concluded that "although some health risk factors, such as heredity, cannot be modified, focused education and personal discipline can change others such as smoking, physical inactivity, weight gain, and alcohol use—and, by extension, hypertension, high cholesterol, and even depression."² The authors specifically focused on the benefits in terms of lower costs, greater productivity, and higher morale among employees in these organizations. "Most analyses of workplace wellness programs focus on hard-dollar returns: money invested versus money saved. Often overlooked is the potential to strengthen an organization's culture and to build employee pride, trust, and commitment. The inherent nature of workplace wellness—a partnership between employee and employer—requires trust. Because personal health is such an intimate issue, investment in wellness can, when executed appropriately, create deep bonds."³

A review of more than 100 peer-reviewed studies of employee wellness programs over the past three decades was conducted by researchers and published in *Health Affairs* in 2010.⁴

Their findings were as follows:

- By far the most frequently used method of delivery is the health risk assessment, a survey that gathers baseline self-reported health data from the employee. These assessments are used by the employer to tailor subsequent interventions.
- The second most common wellness intervention mechanism was the provision of self-help education materials, individual counseling, or on-site group activities.

30 percent of the programs used incentives to motivate participation. Incentives were more common in recent interventions. More than 60 percent of the programs focused on weight loss and

² Berry, L., Mirabito, A.M., & Braun, W.B. (2010). What's the Hard Return on Employee Wellness Programs? *Harvard Business Review*.

³ Ibid.

⁴ Baicker, K., Cutler, D., & Song, Z. (2010). Workplace Wellness Programs Can Generate Savings. *Health Affairs*, 29:2.



fitness. Averaging across all programs, the interventions produced \$358 in savings through reduced health costs per employee per year, while costing the employer \$144 per employee per year. Health care cost studies generally spanned three years. Absenteeism studies were carried out for two years on average. For these, the average program savings was a more modest \$294 per employee per year with costs of \$132 per employee per year.

EFFECTIVENESS OF WORKPLACE WELLNESS INTERVENTIONS—SUMMARY REVIEWS

Since thousands of studies have researched the effectiveness of wellness interventions in the workplace, HCA—with input from WSIPP—identified the following three summary reviews that effectively sorted through the evidence to test the strength of the conclusions.

1. WORKPLACE INTERVENTIONS FOR SMOKING CESSATION

Background

This study summary review⁵, done in 2014, looked at the evidence about workplace programs to help employees stop smoking and the information about their costs and benefits. It concluded that the workplace appears to be a useful setting for helping people stop smoking. Large groups of smokers are available who can easily be reached and helped using proven methods. It is also in the employers' interests to improve the health of their workforce.

Results

The reviewers searched for studies in July 2013, and identified ten new trials that fit the criteria, making a total for this update of 61 comparisons across 57 included studies. These were grouped into two broad categories: those aimed at helping individual smokers, and those that targeted the workplace environment as a whole. Programs in the first group included individual or group counselling, self-help, nicotine replacement therapy (NRT), and use of other medications, help from workmates or other staff, and helping quitters stay smoke-free. Programs in the second group included environmental cues (posters, reminders), financial or material incentives, and comprehensive smoking cessation or health promotion programs.

The reviewers found that programs based on group behavior therapy, individual counselling, and use of medications, along with programs that combined several interventions, helped people to stop smoking. The chances of individuals stopping smoking using these interventions are about the same in the workplace as they are in other settings.

The reviewers also found that the following do not help people to stop smoking when delivered in the workplace: self-help methods; support from friends, family, and workmates; relapse prevention programs; environmental cues; and comprehensive programs aimed at changing several high-risk behaviors. Results were mixed for the use of incentives in these programs, with one high-quality trial finding a clear benefit for incentives while the remaining five did not.

⁵ Cahill, K. & Lancaster, T. (2014). Is the workplace an effective setting for helping people to stop smoking? *Cochrane Library*. 26 February 2014. 2:CD003440.



2. WORKPLACE INTERVENTIONS TO INCREASE PHYSICAL ACTIVITY

Background

The World Health Organization recommends that most people should do at least 30 minutes of moderate-intensity physical activity on most days, as it reduces the risk of cardiovascular disease, diabetes, and some cancers. However, less than 40% of the world's population is performing adequate amounts of physical activity and these rates have been declining. This summary review⁶ assessed whether pedometer workplace interventions increase physical activity and thereby lead to subsequent health benefits.

To assess this, the reviewers searched for randomized controlled trials of workplace health promotion interventions that involved the use of a pedometer with employed adults. Between January 20 and February 6, 2012, they searched a range of electronic libraries and references of relevant papers, retrieving 3,282 potential papers.

Results

Four studies were included in the review. One study compared pedometer programs with an alternative physical activity program, but there were important baseline differences between the intervention and control groups that made it difficult to distinguish the true effect. The three remaining studies compared participants in pedometer programs with minimally active control groups. One study observed an improvement in physical activity in participants in the pedometer program, but two other studies found no significant difference between the pedometer group and the control group.

Single studies found beneficial changes in body mass index, fasting plasma glucose, the mental component of quality of life, and the incidence of worksite injuries associated with participants in the pedometer programs as opposed to the control group. However, none of the studies identified consistent differences between participants in the pedometer program and the control group for waist circumference, blood pressure, and quality of life outcomes. In addition, the reviewers judged the majority of included studies to have a high risk of bias, due to participants and staff knowing who was in the intervention and who was in the control group, attrition of participants, and not having published a protocol prior to running the study.

The reviewers concluded that there was insufficient evidence to assess whether workplace pedometer interventions are of benefit. There is a need for further high-quality randomized controlled trials to be conducted with a range of health outcomes and assessment in the long term.

⁶ Freak-Poli, R.L.A., Cumpston, M., Peeters, A., & CLemes, S.A. (2013). Do workplace pedometer interventions increase physical activity. *Cochrane Database of Systematic Reviews*. 30 April 2013.



3. WORKSITE INTERVENTIONS FOR OBESITY PREVENTION AND CONTROL

Background

Fernandez, Becerra, and Chin reviewed evidence from randomized trials of interventions aimed at obesity prevention and control.⁷ The questions the reviewers addressed were:

- Are worksite environmental interventions which target the food and physical activity environment effective in the prevention and control of obesity?
- Are worksite environmental interventions, based on systematic formative research, published in sufficient detail to evaluate the adequacy of the interventions design and implementation to the worksite and organizational culture?

Results

The types of physical activity and food environment changes were fairly similar across studies and included buying fitness equipment, developing walking routes, organizing team walking competitions, offering fitness classes, and promoting stair and pedometer use. The food environment was changed by offering more low-calorie energy and nutrient-rich foods in vending machines and cafeterias, point-of-sale signage, price reductions for healthier food, workshops, seminars, taste testing, snack carts, etc.

The reviewers found that the effect of these interventions on the measures of body weight or fat was modest and sometimes in the unexpected direction. They suggest that the true effect of this kind of intervention is weak because environmental changes generally consist of subtle modifications aimed at all employees—and employees may or may not choose to adopt the healthier features of their environments. They note also that previous reviews found a larger effect with intense individual-level worksite interventions (e.g., specific dietary prescriptions) although these effects were not sustainable over time. It is also possible that the length of the environmental interventions reviewed was too short to observe changes in weight or body fat measures, and that the actual implementation of the environmental change should be the outcome of interest.

Another interpretation given for the small magnitude of the effect is that, although employees spend many hours immersed in their worksite environment, there are other strong sources of influence, such as the family and characteristics of the built environment that may compete with and neutralize any influence at the worksite level. The reviewers suggest an additional area of research to examine the dynamic interrelationships of variables at multiple levels of analysis at the same time to identify leverage points. Without these additional insights, interventions run the risk of missing the underlying cultural issues. For example, they refer to previous research indicating the impact of corporate culture which induced stress and uncertainty, and made food a constant source of comfort while making physical activity seem like a dangerous luxury.

⁷ Fernandez, I.D., Becerra, A., & Chin, N.P. (2014). Worksite Environmental Interventions for Obesity Prevention and Control: Evidence from Group Randomized Trials. *Obesity Prevention*. 3:2, 223-234. <http://link.springer.com/article/10.1007/s13679-014-0100-4#page-2>



THE USE OF INCENTIVES

Federal regulations and the Affordable Care Act allow employers to use financial incentives based on meeting certain health status factors. A national survey of employer-based health and wellness programs done by Redbrick Health in 2010⁸ identified three key factors as statistically significant predictors of strong engagement:

1. The existence of explicit goals around health engagement.
2. The use of financial incentives tied specifically to engagement.
3. Leveraging independent primary vendors (vs. self-management of programs or reliance on health plans) to deliver programs that drive engagement.

Factors with little predictive value include employer size, industry, geography, and the number of programs offered.

Respondents reporting that they provided financial incentives for engagement experienced higher engagement rates than employers that did not provide any incentive at all. Nearly two-thirds (65%) of respondents offered some form of incentive, financial or otherwise. Employers that provided incentives in any amount experienced average engagement rates nearly 107% higher than those that did not provide any incentive at all.

Many employers use incentives to encourage employee engagement in wellness activities. In a recent annual market survey, about 35% of companies reported using rewards or penalties based on smoking or tobacco-use status. Some companies have significant financial penalties for employees who do not achieve certain goals within their wellness programs. A recent ruling by the Equal Employment Opportunity Commission (EEOC) attempted to address the issues around coercion and wellness programs, limiting the amount that is considered voluntary participation to 30% of the total cost of coverage applicable to those who may participate fully in the wellness program.

While financial incentives can increase simple behaviors such as completing a health assessment or preventive screen, they are not enough for a sustained improvement in population health. Literature indicates that the key to a successful worksite wellness program with the capacity to sustain behavioral change is the creation of a culture and environment that supports health and wellness.⁹ Consequently, the role of an incentive is to activate employees to learn about health and wellness, engage in wellness program components, and begin to make behavior changes.

⁸ Redbrick Health. November 2010. Driving Engagement: Predictors of Success. *Engaging Employees in their Health: A National Survey of Large Employers*.

⁹ Berry, L., Mirabito, A.M., & Braun, W.B. (2010). What's the Hard Return on Employee Wellness Programs? *Harvard Business Review*.



Behavioral economics research suggests that people may be more motivated to avoid loss (i.e., penalties or surcharges) than to make equivalent gains.¹⁰

Future literature reviews will address other questions related to incentives and wellness programs, including:

- Does tying a financial incentive to health plan design have an impact—positive or negative—on employee health behavior?
- What is the role of worksite culture and employer leadership in improving participation, engagement, and outcomes?
- What are the most effective ways, other than financial incentives, to influence health behaviors in an employed population?

THE VALUE OF WORKPLACE WELLNESS PROGRAMS

In a February 2009 *Health Affairs* article, Goetzel argues that “prevention should not be held to a higher standard than treatment; both should be evaluated on their relative cost-effectiveness...in achieving positive health outcomes and improved quality of life.”¹¹ He gives the example of two employees. One has just suffered a heart attack and undergoes a coronary bypass procedure. He is offered and engages in counseling to quit smoking, eat a healthy diet, exercise regularly, and take medications to control blood pressure. The second employee is overweight, smokes, eats an unhealthy diet, gets no exercise, and has hypertension. He has not yet had a heart attack but is at high risk for it. The first employee receives treatment for an existing disease for which the employer pays. The second employee receives (or is at least offered) a program that can prevent a similar event. Why, the author asks, would an employer fund the first type of benefit but not the second? What is the return on investment on these two programs for treatment vs. prevention?

LIMITATIONS OF THE RESEARCH ON WELLNESS PROGRAMS

The bill directing HCA to develop this report also directed us to consult with WSIPP regarding the cost-effectiveness of the program and any changes that could be made to increase the effects on health care efficiency. Although time and data constraints do not allow for the inclusion of cost-effectiveness estimates in this initial report, WSIPP has provided the following discussion of the methodological challenges and potential approaches we may want to consider in the future. It is hoped that this will begin a dialogue around the potential for additional research beyond the metrics provided in this initial set of reports.

The major methodological challenge to identifying SmartHealth’s effects on health care efficiency is potential selection bias. PEBB program members who decide to participate in the program may be

¹⁰ American College of Occupational and Environmental Medicine. (July 2012). Joint Consensus Statement: Guidance for a Reasonably Designed, Employer-Sponsored Wellness Program Using Outcomes-Based Incentives. *JOEM* 54:7.

¹¹ Goetzel, R. (Jan/Feb 2009). Do Prevention or Treatment Services Save Money? The Wrong Debate. *Health Affairs*. 28:1, 37-41.



systematically different from those who do not. Studies that compare participants to nonparticipants are subject to potential bias; we do not know to what extent differences in outcomes (e.g., health care costs) are due to the wellness program versus differences in unobserved group characteristics.

The more rigorous studies address this issue by randomizing worksites to the intervention or control group. Since SmartHealth was introduced to all state employees in the same year, it would be challenging to approximate randomization. Although it is not as rigorous, another strategy that might be useful is an interrupted time series. For this type of analysis, HCA could compare trends in claims data and other administrative measures (e.g., plan data on condition management participation) in the years before SmartHealth began to trends in the years after SmartHealth was implemented. This analysis would be strongest with multiple years of data before and after the implementation of SmartHealth. Alternatively, if it is possible to identify a set of worksites that have not adopted the wellness program, a “difference-in-differences” analysis might be possible in which the changes in outcomes could be observed in implementation sites and compared to the changes in non-implementation sites. The comparison sites would have to be comparable to the implementation sites, and pre-implementation trends in outcomes should be similar.

If such an evaluation is not possible, it may be possible to estimate the potential program benefits from a systematic review of workplace wellness studies; this exercise has already begun. It will be critical to examine the studies in these reviews carefully for potential selection bias. Based on WSIPP’s literature search of workplace-wide interventions to promote physical activity and healthy eating, they anticipate that there are few rigorous studies on this topic. However, WSIPP has encouraged us to review the literature on two aspects of workplace wellness programs that WSIPP has not reviewed: 1) programs that target a broader range of health behaviors than healthy weight, and 2) studies that examine the impact on employee retention and productivity.

A second challenge to identifying program effects is that some occur only after a long lag. For example, a change in health behavior might not have an effect on health care costs until several years downstream. One way to mitigate this problem is by focusing the analysis on selected shorter-term health behaviors (e.g., smoking), health risk indicators (e.g., obesity), and utilization of cost-effective preventive care (e.g., cancer screenings). The objective of this analysis would be to estimate the effect of the program on these behaviors and indicators. Note that these estimates also require having a comparison group, rather than relying solely on participant program data.

Finally, in terms of maximizing program impact on health care efficiency, PEB could consider analyzing the potential effects of altering the size and structure of participant incentives. Again, it may be useful to conduct literature reviews of the effectiveness of various workplace wellness activities (e.g., smoking cessation, exercise promotion). What, for example, does the literature find regarding the effects of well-being assessment completion on health care utilization or costs?



EVALUATION METHODOLOGY

Measuring the effectiveness of wellness programs is an evolving process and is usually driven by the goals of the employer organization. A data analysis team that included representatives from HCA, OFM, WSIPP, and Limeade identified a set of measures on which to evaluate the program in the first years and conducted the analysis.

Given the short lead time between the authorizing legislation and the first quarter (Q1) report, it was not possible to include all of the potential metrics the team identified. The following sections outline: (1) metrics for the baseline year that are included in this report; (2) metrics the team identified but was unable to include in the initial report due to the short development timeframe; and (3) additional metrics that could be included in future reports, along with potential issues and considerations associated with some of these metrics.

HCA welcomes an ongoing partnership with the Legislature in identifying the most useful metrics and measuring the program's effectiveness.

BASELINE YEAR (2015) REPORT METRICS

The online version of the SmartHealth program has been operative for 16 months. For this report, one full year of data is available. Relevant metrics at this stage of the program focus on quarterly trend data of participation rates, participant health status, interventions, and participation by work organization. Tables 1 and 2 (on the following pages) outline the measures that are included within this initial report. Year-to-year comparisons will not be available until the 2017 reporting cycle.



Table 1. Employee Metrics

| | Metric | Timeframe |
|----------------------|---|--|
| Participation | Registration <ul style="list-style-type: none"> Percent of SmartHealth-eligible members who registered for SmartHealth | Quarterly trend data |
| | Well-being Assessment <ul style="list-style-type: none"> Percent of eligible members who completed the Well-being Assessment Percent of registered SmartHealth members who completed the Well-being Assessment | Year-to-year comparison and quarterly trend data |
| | Incentive <ul style="list-style-type: none"> Percent of SmartHealth-eligible members who achieved Level 1 (2,000 points) Percent of registered SmartHealth members who achieved Level 1 (2,000 points) | Year-to-year comparison and quarterly trend data |
| | Engagement <ul style="list-style-type: none"> Average Limeade “2-week engagement” calculation per week through the quarter and year. Engagement is defined as the number of registered participants who have used the site in the last two weeks. | Year-to-year comparison and quarterly trend data |
| | Activity Participation <ul style="list-style-type: none"> Percent or number of SmartHealth registered eligible members who participate in activities | Year-to-year comparison and quarterly trend data |
| Health Status | Population Risk Profile <ul style="list-style-type: none"> Percent with Well-being Assessment completion who are in each risk category | Year-to-year comparison |
| | Self-assessed Health Status <ul style="list-style-type: none"> Percent with Well-being Assessment completion who self-assess by health status level | Year-to-year comparison |
| | Preventative Care <ul style="list-style-type: none"> Percent of registrants who completed a preventative health or dental visit | Year-to-year comparison |
| | Enrollee Satisfaction <ul style="list-style-type: none"> Percent of registrants who would recommend SmartHealth to a coworker | Year-to-year comparison |

*Analysis of quarterly trend data will be revisited later.



Table 2. Organization Metrics

| Metric | |
|------------------------------------|--|
| Participation by Work Organization | Well-being Assessment <ul style="list-style-type: none"> Percent of work organizations that achieved 65% Well-Being Assessment completion among eligible employees |
| | Incentive <ul style="list-style-type: none"> Percent of work organizations that achieved 60% incentive qualification among eligible employees |

METRICS FOR FUTURE REPORTS

The following metrics were not included in this report, due to the short lead time, but can be incorporated in future reports.

Employee metrics:

- Incentive Plus: Percentages of SmartHealth-eligible members and registered SmartHealth members who achieved more than 2,000 points (year-to-year comparison and quarterly trend data)
- Top 10 activities quarterly (year-to-year comparison)
- Condition management: Percentage of individuals who are in the diabetes and smoking risk categories that complete a verified program (year-to-year comparison)

Organization Metrics:

- Additional data about specific communications campaigns within organizations and employee participation in those campaigns

POTENTIAL FUTURE METRICS

The data analysis team identified additional metrics to be considered for future reports that need more vetting or consideration. These include data on the following measures.

ACTIVITY PARTICIPATION

Participation in activities by at-risk individuals could be tracked. For example, participants whose well-being assessment shows at-risk health status could be tracked to see if they were involved in activities such as tobacco cessation, diabetes prevention, physical activity, and sleep or back health.

Because this analysis would require the use of identified data for individual participants, for privacy and legal reasons, a third-party contractor would need to conduct this analysis. We are looking into this for future reports.



RISK REDUCTION PERCENTAGE CHANGE

This measure would follow the cohort participating in the SmartHealth program from the baseline year into future years, and would identify whether their self-assessed risk scores changed over time.

Again, this will require identified data to define the cohort, but could potentially be done within the Limeade database and provided to HCA in aggregate without compromising participants' privacy.

PRODUCTIVITY—ABSENCE MANAGEMENT, TURNOVER, OVERTIME AND DISABILITY

The relationship between individuals participating in a wellness activity and its impact on their use of sick leave, turnover, overtime, and long-term disability is complex and driven by many variables including age, sex, job type and classification, and the nature of the work itself.

The data analysis team agreed to continue to review the literature on wellness and productivity measures and to explore ways to measure this effectively for future reports.

ORGANIZATIONAL CULTURE—FIT WITH ORGANIZATION, BELIEF IN ORGANIZATION, AND SUPPORTIVENESS OF ORGANIZATION

The data analysis team reviewed the initial analysis comparing employee survey metrics (administered by OFM) for organizations with high wellness scores vs. those with low wellness scores.

While the data appeared to suggest a relationship between those organizations with high participation rates and higher scores on the employee survey, the initial data was correlative, not causal, and will require additional analysis, possibly in future reports.

COST-EFFECTIVENESS

Measures of cost-effectiveness could include medical and pharmacy costs, disability costs, worker's compensation costs, tobacco use, and participation in the Diabetes Prevention Program or the Diabetes Control Program.

To measure whether the SmartHealth program is effectively reducing costs for PEBB program members, an analysis of claims and productivity data for SmartHealth members over time would need to be conducted. This could be achieved by following the cohort of participants from the baseline year, and matching their claims and productivity data over time to see whether or not the overall impact has been positive.

Population health measures such as these normally take several years to show a measurable impact. We propose initiating this evaluation after the fourth year of the program, in 2019.

Due to privacy and legal issues, this analysis will need to be done by a third-party organization to match claims data with participants' self-reported health status measures. One of the barriers to participation in employer-sponsored wellness programs is a concern on the part of employees that their employer will have access to their personal health information. Wellness programs often collect information that the employee reports through a health assessment tool, although some



programs conduct on-site biometric assessments such as weight, blood pressure, cholesterol, and other measures of health status. Washington State employees who participate in the SmartHealth Program understand that when they elect to voluntarily complete their well-being assessments, that data will not be shared with HCA or the PEBB program in any way that can be linked to an individual.

To conduct an evaluation of the effectiveness of the wellness program on reducing claims costs would require linking an individual's claims history with the data they supplied when they completed their well-being assessment. Limeade has done this for other clients through a third-party and in compliance with HIPAA. HCA is exploring the possibility of evaluating the impact on claims for future reports and expect to get input from stakeholders on the risks and benefits associated with conducting such an analysis. At any rate, improving an individual's health status to the extent that claims show a decline is a population-based strategy that can take years to realize. HCA will continue to explore this method of evaluation. If the agency finds that the legal and ethical issues can be resolved, it will be proposed for future reports.

One final caveat: The research literature indicates that finding a direct causal link between wellness interventions and health improvement is extremely difficult. The evaluation team will need to do a careful review of assumptions prior to drawing conclusions about the effectiveness of the program based on claims data.

COMMUNICATIONS—PORTAL VISITS AND PORTAL CLICKS

Due to time limitations, measures of the effectiveness of various elements of the portal and electronic communications will not be available for the first report. We are looking into providing it in future reports.

FINDINGS

EMPLOYEE PARTICIPATION AND ENGAGEMENT

BASELINE

Table 3 (next page) shows the total number of employees in 2015 that were eligible for SmartHealth, as well as totals broken out by age group, gender and agency type. Percentages and total numbers of eligible employees in each of these groups that enrolled in SmartHealth, completed the well-being assessment (WBA), and participated in enough activities to receive an incentive are also shown.

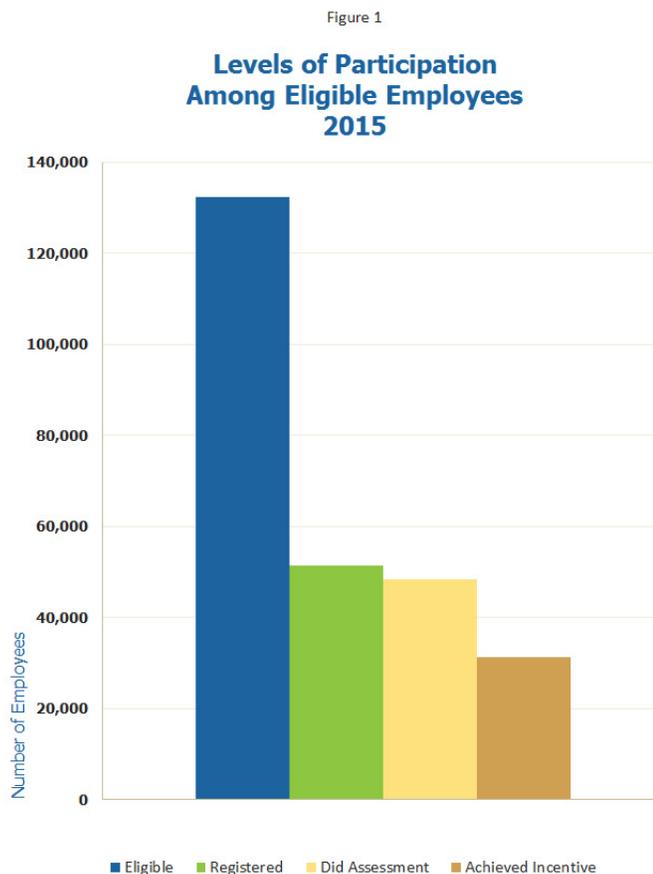


Table 3. SmartHealth eligibility, enrollment, and participation—Calendar Year 2015.

| | Number of Persons | | | | Percentages of Eligibles | | | Percentages of SmartHealth Enrollees | |
|--------------------|-------------------|-----------------------|---------------|--------------------|--------------------------|---------------|--------------------|--------------------------------------|--------------------|
| | Eligible | SmartHealth Enrollees | Completed WBA | Achieved Incentive | SmartHealth Enrollees | Completed WBA | Achieved Incentive | Completed WBA | Achieved Incentive |
| 18 to 35 | 28,368 | 10,279 | 9,740 | 6,727 | 36% | 34% | 24% | 95% | 65% |
| 36 to 50 | 43,982 | 17,726 | 16,750 | 10,843 | 40% | 38% | 25% | 94% | 61% |
| 51 to 64 | 53,633 | 21,342 | 20,089 | 12,711 | 40% | 37% | 24% | 94% | 60% |
| 65 and Over | 6,385 | 2,059 | 1,873 | 995 | 32% | 29% | 16% | 91% | 48% |
| Female | 74,375 | 33,654 | 31,951 | 21,271 | 45% | 43% | 29% | 95% | 63% |
| Male | 57,995 | 17,751 | 16,501 | 10,005 | 31% | 28% | 17% | 93% | 56% |
| Higher Ed | 54,872 | 19,672 | 18,519 | 11,448 | 36% | 34% | 21% | 94% | 58% |
| Agency | 54,735 | 25,152 | 23,711 | 16,270 | 46% | 43% | 30% | 94% | 65% |
| Political Subs | 12,748 | 3,664 | 3,393 | 1,836 | 29% | 27% | 14% | 93% | 50% |
| Retiree/Self-Pay | 7,386 | 2,214 | 2,205 | 1,424 | 30% | 30% | 19% | 100% | 64% |
| K-12 | 2,632 | 705 | 624 | 299 | 27% | 24% | 11% | 89% | 42% |
| State Total | 132,373 | 51,407 | 48,452 | 31,277 | 39% | 37% | 24% | 94% | 61% |

Figure 1 shows that, among the 132,373 employees eligible for SmartHealth:

- 39 percent (51,407 employees) registered for the program.
- 37 percent of those who were eligible (48,452 employees)—completed their well-being assessment.
- 24 percent of those who were eligible (31,277 employees) participated in enough activities to receive an incentive.
- 94% of the employees who *registered* with SmartHealth completed the well-being assessment and 61% earned the incentive.



Among the four age groups shown in Figure 2:

- Employees ages 51 to 64 had the highest number of eligibles (53,633).
 - Within that age group, 40 percent registered for SmartHealth.
 - 37 percent of those eligible completed their well-being assessment, and nearly 24 percent of those who were eligible received an incentive.
- Employees ages 36 to 50 were the second largest group, with 43,982 eligible individuals.
 - Of those, 40 percent registered for SmartHealth.
 - 38 percent of those who were eligible completed their well-being assessment and 25 percent of eligible employees received an incentive.
- 28,368 employees ages 18 to 35 were eligible for SmartHealth.
 - Among them, 36 percent registered for the program.
 - 34 percent of those who were eligible completed their assessment and 24 percent of eligible employees received an incentive.
- The 6,385 eligible employees ages 65 and older were the smallest group.
 - 32 percent registered for the program.
 - 29 percent of those who were eligible completed their assessment and 16 percent of eligible employees received an incentive.

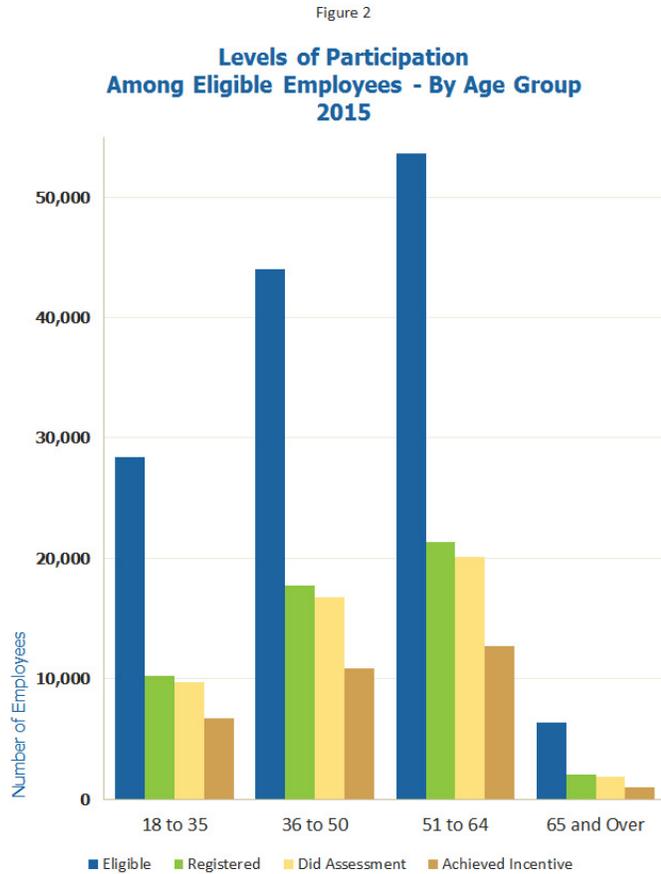


Figure 3 compares women and men.

- Of the 74,375 eligible women, 45 percent registered for SmartHealth.
 - 43 percent of those who were eligible completed their well-being assessment and 29 percent of eligible women received an incentive.
- Of the 57,995 men, only 31 percent registered for SmartHealth.
 - Almost 28 percent of those who were eligible completed their well-being assessment and 17 percent of eligible men received an incentive.

Among agency types, shown in Figure 4, higher education and state agencies had similar numbers of eligible employees: 54,872 and 54,735 respectively.

- However, among the eligible higher education employees, only 36 percent registered for SmartHealth, while 46 percent of eligible state agency employees registered.
 - When comparing assessment completion rates between eligible higher education and state agency employees, the differences are similar (34 percent vs. 43 percent).
 - It should be noted that assessment completion rates for *registrants* in both of these groups were essentially the same (94%).

Figure 3
Levels of Participation
Among Eligible Employees - By Gender
2015

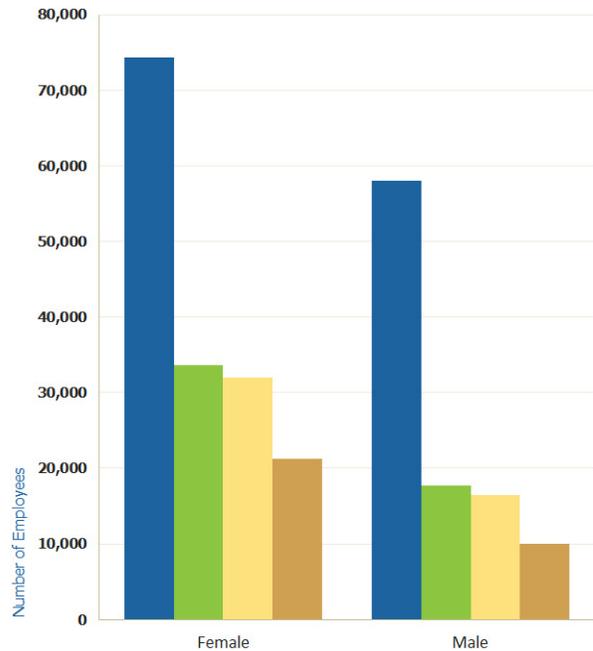
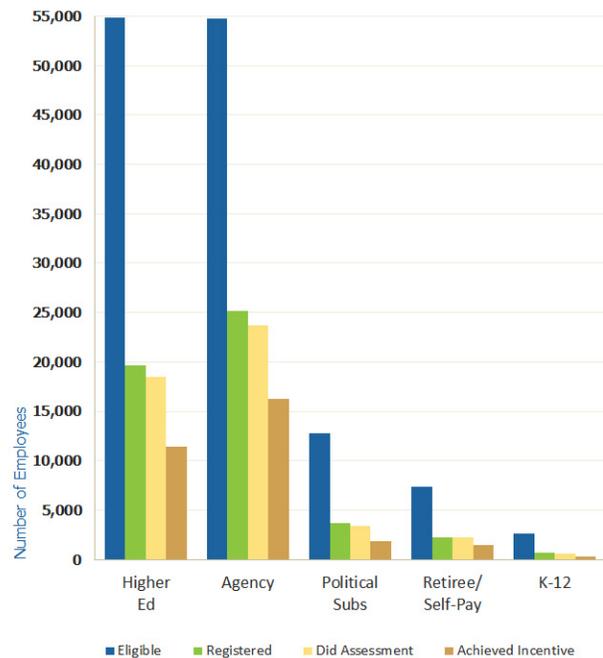


Figure 4

Levels of Participation
Among Eligible Employees - By Agency Type
2015

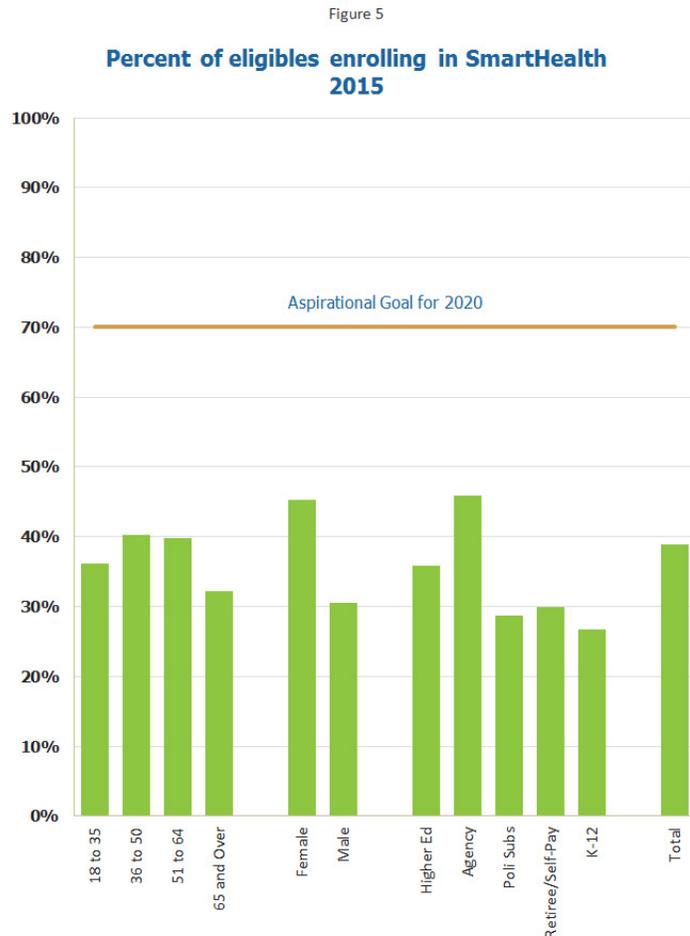


- In terms of completing enough activities to receive an incentive, there were some differences among registrants in these groups—58 percent of higher education registrants received an incentive, compared to nearly 67 percent of agency registrants. Among those who were eligible, the percentage of higher education employees who earned an incentive trailed state agency employees—21 percent compared to 30 percent.
- Political sub-entities had the third largest number of eligible employees, and one of the poorer participation rates: Among the 12,748 eligible employees, 29 percent registered for SmartHealth. 27 percent completed their well-being assessment and 14 percent received an incentive.
- Retirees’ rates were slightly better: 30 percent of the group of 7,386 eligible retirees enrolled, 30 percent completed the well-being assessment, and 19 percent received incentives.
- Worst were K-12 employees with these numbers: 2,632 were eligible, 27 percent enrolled, 24 percent completed the well-being assessment, and 11 percent received incentives.

Figure 5 shows the percentages of eligible employees who enrolled, or registered, in SmartHealth across all of the groups detailed above.

From Figures 1 through 5, a few points seem clear:

- In 2015, the first year of implementation, SmartHealth was able to enroll 39 percent of eligible employees. The goal for 2020 is 70 percent.
- While the youngest (ages 18 to 35) and oldest (ages 65 and over) groups had the lowest enrollment percentages, because these two groups constitute the smallest proportions of eligibles, efforts to increase their participation may not be as efficacious as targeting the 36 to 50 and 51 to 64 populations who collectively constitute 74 percent of eligible employees.



- Women’s enrollment, at 45 percent, was 1.5 times greater than men’s, at 31 percent. And, while more women are eligible than men, men nonetheless constitute 44 percent of eligible employees; targeting the male population would, therefore, seem reasonable.
- Among agency types, the two largest, higher education institutions and state agencies, constitute 83 percent of all eligible members. Targeting these two agencies would also likely be more efficacious than targeting those which have lower participation rates but are appreciably smaller.

As shown in Figure 6, once eligible employees register in SmartHealth, they appear to be very likely to complete the well-being assessment.

However, as seen in Figure 7, among those enrolled in SmartHealth, only 61 percent overall completed enough activities to achieve an incentive. The highest rate for achieving the incentive was 65 percent.

Figure 6

Percentages of SmartHealth Enrollees who Completed the Well-being Assessment 2015

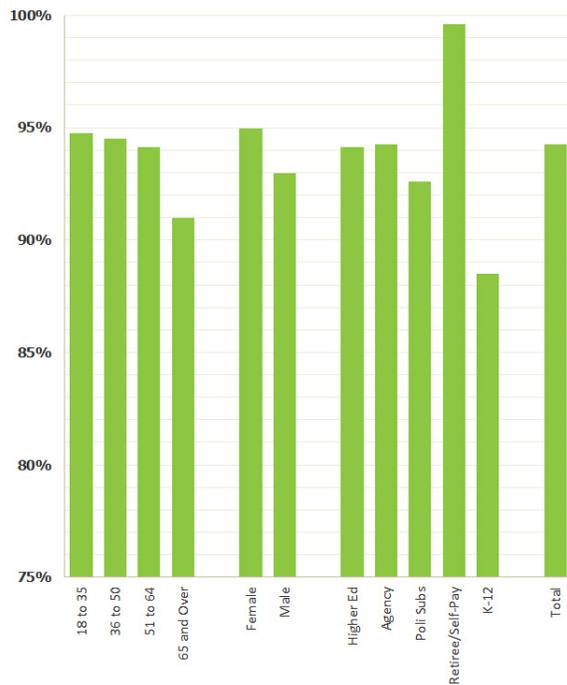


Figure 7

Percentages of SmartHealth Enrollees Who Received an Incentive 2015

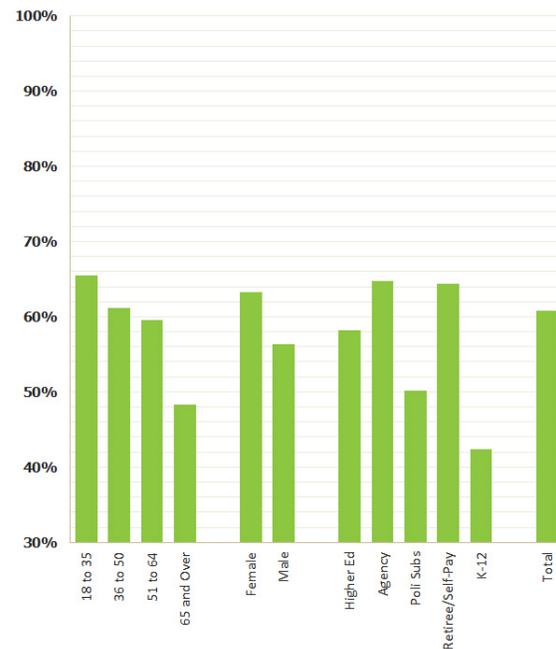


Figure 8 shows “engagement”, which is broadly defined: it may include participation in an activity or it may simply include signing into the online program. This shows the fall-off in participation once the window to qualify for incentive points ended, at the end of the second quarter.

While these baseline data appear to be demonstrating less than optimal participation, it is important to keep in mind that they only represent a starting point. What these data do provide is a further understanding of who is—and who is not—participating in the SmartHealth program. Such information is essential in developing outreach initiatives to improve enrollment, wellness assessments and activity participation rates.

HEALTH STATUS—BASELINE

As seen in Figure 9, among SmartHealth enrollees completing their well-being assessment, nearly three-fourths of the respondents had zero or one self-assessed risk factors, and only four percent had four or more.

Figure 8

Percentage of SmartHealth Enrollees who Signed into the Portal or Completed an Activity within a Two-week Period 2015

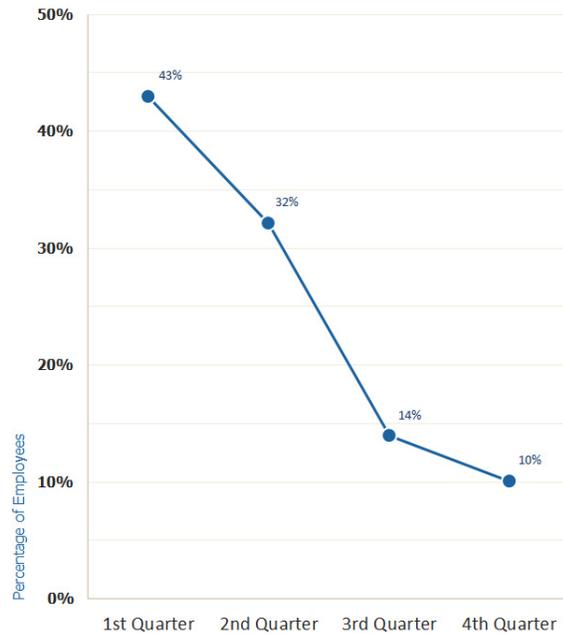


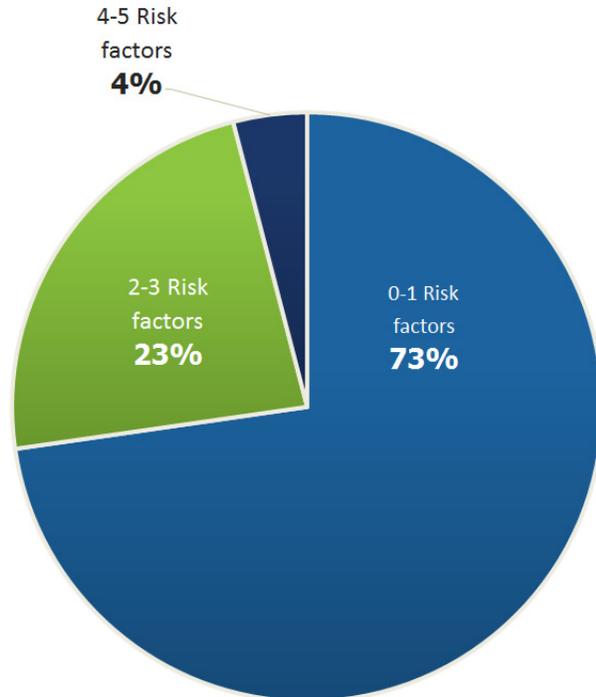
Figure 9

Cumulative and Quarterly Percentages of SH Enrollees Participating in Any Activities 2015



Figure 10

Self-assessed risk factors among SH enrollees completing WBA 2015



Correspondingly, in Figure 10, 70 percent or more of participants completing their well-being assessment fell into the “ideal” category for self-care, heart health, nutrition, drinking, healthy blood sugar and smoking. More than 50 percent met the ideal standard for exercise and back health, and about 45 percent met the ideal for sleep. However, for weight, only slightly more than one-third met the ideal standard.

ORGANIZATIONAL METRICS

In 2015, 10 organizations had 70% or more of their eligible employees register for SmartHealth; the goal for 2016 is 20 organizations. 11 organizations had 65% or more of their eligible employees complete a well-being assessment in 2015; the goal for 2016 is 22 organizations. And two organizations had 60% or more of their eligible employees participate in enough activities to earn an incentive in 2015; the goal for 2016 is four organizations.

FUTURE REPORTS

In future reports the data analysis team will look for comparisons with other populations to determine if conclusions can be drawn with regard to the risk status of the SmartHealth participant population.

MEDICAL CONDITIONS

As indicated above, given the timeline and the lack of data at this point in the program (16 months of data) metrics on medical conditions will be included in future reports if legal and privacy issues can be addressed.



COST EFFECTIVENESS

Metrics showing the cost effectiveness of the program will be included in future reports, as discussed above.

KEY FINDINGS AND CONCLUSIONS

PARTICIPATION

In the baseline year of SmartHealth (2015), 39 percent of eligible public employees registered, and about 24 percent of those earned enough points to qualify for the \$125 incentive.

These results are consistent with the launch of a new program, and the relatively low financial incentive provided. The literature suggests that wellness programs take several years to become completely mature.

In addition, the incentive period (the period during which SmartHealth-eligible subscribers could earn points during 2015) ended at the midpoint of the year, on June 30, 2015, providing no further incentive to participate in subsequent quarters. This timing was intended to synch up with the budget cycle for the first year launch of the program.

One key point: Of the 39 percent of eligible public employees who registered, nearly all—94 percent—completed the well-being assessment and close to two-thirds—61 percent—completed enough activities to earn the incentive.

HEALTH STATUS

SmartHealth participants who completed their well-being assessments reported a fairly low set of self-assessed risk factors, indicating a relatively healthy population enrolled in the 2015 baseline year of the program. In future reports we will work to identify whether this can be validated through comparison with other similar groups of workers.

INTERVENTIONS

Research shows that programs that allow for customized interventions (wellness activities that participants choose based on their interests and abilities) tend to have somewhat better results than those that are not customized. The data from the baseline year shows participation in a broad variety of activities indicating that participants were trying out a number of interventions as they interacted with the program.

ORGANIZATIONAL METRICS

The data shows a broad range of overall participation by organizational entity, with state agencies having higher participation rates than higher education institutions.

MEASURING WORKPLACE WELLNESS PROGRAM EFFECTIVENESS

One major methodological challenge to measuring the SmartHealth program's effectiveness is potential selection bias. PEBB program members who choose to participate may be different



(e.g. more motivated to change behaviors) than non-participants. Selection bias is a consideration with much of the research on the effectiveness of workplace wellness programs. Some potential approaches for examining effectiveness are:

- Comparing trends in PEBB program claims data in the years before SmartHealth with the years after implementation.
- Identifying a set of worksites that have not adopted the program, or that have low participation rates and comparing outcomes for those sites with outcomes from sites with high participation rates.
- Using statistical techniques, such as propensity-score matching, to compare outcomes for SmartHealth participants with outcomes of non-participants who were matched based on key characteristics such as age, sex, health plan enrollment tenure, total health care costs, emergency department visits, hospital admissions, and comorbidities.

FUTURE PLANS AND NEXT STEPS

In the course of developing this initial report the data team identified a number of effectiveness measures and, while only a few could be obtained for this first report, plans are already underway for gathering and reporting on additional metrics in future reports. HCA is working with its partners to identify an approach for assessing and reporting on cost-effectiveness, and determining timing and resource needs.

The following is an overview of these plans:

- Year One (2015): During the first year, the main goal was to collect baseline data, commence health and well-being engagement activities, and optimize program design.
- Year Two (2016): During the second year (in progress), the focus has shifted to understanding subpopulation profiles, what their needs and interests are, and how to engage them more through the portal and through a tighter connection with their organizational leaders.
- Year Three (2017): By the end of the third year there may be enough data to start examining initial outcomes and charting trends in behavior and risk profiles which can be used to guide further program modifications.
- Fourth and fifth years (2018 – 2019): After three years most wellness program designs allow for a comprehensive program value analysis. Changes in behavior and risk are evaluated and trends are examined.

Limeade normally conducts these types of analyses by combining Limeade program data with data from their customers related to medical and pharmaceutical claims data, paid time off, vacation,



sick time usage, turnover/tenure, workers compensation/disability claims, and employee engagement surveys.

Having a third party (e.g. Milliman) conduct the cost-effectiveness analysis would ensure independence and objectivity in the analyses as well as guarantee compliance with privacy and legal requirements. We would be able to link eligibility data, well-being assessment data, and productivity and claims data (for example) for the participant cohort and compare it with the non-participant cohort. This would allow us to evaluate outcomes such as productivity and sick leave usage, biometric data (currently self-reported, not collected through onsite screening or directly from lab), health improvement among people at risk, engagement of general and at-risk populations in wellness activities, utilization of medical services by participants vs. non-participants around total cost, preventive visits, preventable emergency room visits, etc., and benefits of preventive screenings (such as percentages of employees diagnosed with colon cancer after a colonoscopy). Additional resources would be required to conduct this type of sophisticated, statistical analysis of cost-effectiveness. If undertaken, this analysis could be conducted at the end of Year 3.

PROGRAMMATIC DESIGN CHANGES

This evaluation of the effectiveness of the SmartHealth program has raised a number of ideas for design changes, including the way the incentive is currently designed. As was noted in the Findings section, participation dropped off considerably in the baseline year after the second quarter, coinciding with the end of the incentive period.

The SmartHealth financial incentive (\$125) is currently delivered through:

- A reduction in the deductible beginning January 1 of the following year, which lowers the deductible to \$0 for those subscribers enrolled in Uniform Medical Plan (UMP) Plus; or
- A deposit into a subscriber's Health Savings Account (HSA) for those subscribers enrolled in a Consumer Directed Health Plan (CDHP).

The threat of a potential loss of \$125 *in the following year* is only an effective incentive if (a) the participant feels fairly certain they will use enough medical services to meet their deductible, (b) the amount is high enough to cause concern, and (c) the participant is aware that this has occurred.

In future evaluation reports we will explore these questions:

1. What percent of subscribers qualifying for the incentive on January 1 use none or only part of the incentive because the total dollar value of their annual deductible-eligible claims is too low?
 - UMP Plus subscribers would benefit from the incentive at the first dollar of deductible-eligible claims.
 - CDHP subscribers benefit from the entire \$125 deposit into their HSA.



- All subscribers in other plans would benefit when their deductible-eligible claims were greater than the deductible minus \$125, up to their deductible level.
2. What behavior changes in health and well-being status can be measured by comparing year-to-year well-being assessment results measured on a population basis?
 3. What advantages and disadvantages does the current method of incentive delivery contain? A literature review would be the basis for exploring this question.
 4. What are the impacts of other strategies on participation and performance including: communication channels, different types of activities, and different values of activities?



APPENDIX 1:

2014 - 2016 SMARTHEALTH COMMUNICATION HIGHLIGHTS

YEAR ONE PRE-LAUNCH COMMUNICATIONS (2014)

SEPTEMBER 2014

- In-person presentations to personnel, payroll, and benefits office staff and worksite wellness coordinators

OCTOBER 2014

- FAQs, information on the PEBB program's website
- Links on UMP, Group Health, and Kaiser Permanente websites to PEBB program's SmartHealth page
- PEBB program's *For Your Benefit* newsletter
- Uniform Medical Plan's (UMP) open enrollment newsletter

NOVEMBER 2014

- Handout at PEBB program's open enrollment benefits fairs (22 statewide)
- Website notices, emails, and FAQs for personnel, payroll, and benefits office staff and worksite wellness coordinators

DECEMBER 2014

- Information in 2015 Employee Enrollment Guide and 2015 Retiree Enrollment Guide, for new PEBB program members
- Talking points for Cabinet members, agency leaders, and managers
- Follow-up emails to agency leaders, with forwardable messages to employees
- Toolkit (forwardable email messages, posters, table tents) for personnel, payroll, and benefits office staff and wellness coordinators to announce SmartHealth launch

YEAR ONE LAUNCH COMMUNICATIONS (2015)

JANUARY 2015

- Introduction to SmartHealth (launch) mailer to eligible SmartHealth participants
- Governor Inslee's email to state agency employees
- Governor Inslee's video on SmartHealth website
- Emails with forwardable messages for employees and FAQs re: Seahawks playoff game tickets giveaway, sent to personnel, payroll, and benefits office staff and worksite wellness coordinators
- Updated FAQs, information on the PEBB program's website
- Follow-up email to agency leaders, with forwardable message to employees
- Follow-up emails to personnel, payroll, and benefits office staff and worksite wellness coordinators



YEAR ONE POST-LAUNCH COMMUNICATIONS:

FEBRUARY 2015

- Emails from Limeade to SmartHealth-registered participants (starting monthly)
- Emails from PEBB program to eligible SmartHealth participants who have not registered (starting monthly)
- Postcard to eligible SmartHealth participants who had not completed Well-being Assessment to notify them of Governor's Early Bird Challenge to complete the assessment by March 30, 2015 for bonus points
- Emails and toolkit (forwardable messages, poster) re: Governor's Early Bird Challenge for personnel, payroll, and benefits office staff and wellness coordinators

MARCH 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB program to eligible SmartHealth participants who have not registered (monthly)
- Presentations and handouts at various stakeholder and leadership meetings
- Emails re: program updates sent to personnel, payroll, and benefits office staff and worksite wellness coordinators

APRIL 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB program to eligible SmartHealth participants who have not registered (monthly)
- SmartHealth 2015 activity calendar shared with worksite wellness coordinators, to help them promote upcoming activities and develop customized activities for their worksite
- Governor Inslee's letter to SmartHealth participants who earn 3,000 points (starting monthly)
- Emails and toolkit (forwardable messages, poster) re: new SmartHealth activities for personnel, payroll, and benefits office staff and wellness coordinators

MAY 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB program to eligible SmartHealth participants who have not registered (monthly)
- Handouts at Public Service Recognition Week fair in Olympia
- Email reminders re: June 30, 2015 deadline to earn 2,000 SmartHealth points and qualify for wellness incentive in 2016, sent to personnel, payroll, and benefits office staff and worksite wellness coordinators
- Deadline reminder in PEBB Program's *For Your Benefit* newsletter mailed to eligible members
- Mariners ticket giveaway toolkit (emails, poster, flyer) sent to personnel, payroll, and benefits office staff and worksite wellness coordinators



JUNE 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- One Mariners' ticket package giveaway for registered SmartHealth participants
- Governor Walks for SmartHealth event on June 17: Inviting state employees to join Governor Inslee on a walk around Capitol Campus
- Email reminders from Limeade and PEBB Program re: June 30th deadline to earn 2,000 points to qualify for \$125 wellness incentive in 2016 (sent both directly to members and through personnel, payroll, and benefits office staff and worksite wellness coordinators)

JULY 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Two Mariners ticket package giveaways for registered SmartHealth participants
- Created "Whole U Summer Fitness Challenge" activity tile on SmartHealth website for eligible UW employees.
- SmartHealth Summer Series Triathlon Training (July through early October), which included promotions on SmartHealth's website and toolkits (emails, flyer) sent to personnel, payroll, and benefits office staff and worksite wellness coordinators
- Changes for SmartHealth program in 2016 based on PEB Board vote (announcement posted on PEBB Program's website)

AUGUST 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- SmartHealth Summer Series Triathlon Training (July through early October), which included promotions on SmartHealth's website and emails sent to personnel, payroll, and benefits office staff and worksite wellness coordinators

SEPTEMBER 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- SmartHealth Summer Series Triathlon Training (July through early October), which included promotions on SmartHealth's website and emails sent to personnel, payroll, and benefits office staff and worksite wellness coordinators
- SmartHealth participation results through June 30, 2015 in PEBB Program's *For Your Benefit* newsletter



OCTOBER 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- SmartHealth Summer Series Triathlon Training (July through early October), which included promotions on SmartHealth’s website and emails sent to personnel, payroll, and benefits office staff and worksite wellness coordinators
- Changes for SmartHealth Program in 2016 in PEBB Program’s *For Your Benefit* newsletters (4 versions)
- Changes for SmartHealth Program in 2016 on PEBB Program’s website
- Toolkit (email, flyer) re: changes to SmartHealth in 2016 sent to worksite wellness coordinators

NOVEMBER 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- SmartHealth table at PEBB Program’s open enrollment benefits fairs (22 across Washington)
- Changes for SmartHealth program in 2016 on PEBB Program’s website
- “SmartHealthcare Your Success Stories” campaign on SmartHealth’s website (November – December)

DECEMBER 2015

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Changes for SmartHealth Program in 2016 on PEBB Program’s website
- “SmartHealthcare Your Success Stories” campaign on SmartHealth’s website (November – December)
- Toolkit (email, intranet articles) re: SmartHealth’s “Renew, Restart, Refresh” campaign sent to worksite wellness coordinators to promote new year of SmartHealth (points start over)



YEAR TWO COMMUNICATIONS (2016):

The focus shifts to understanding population profiles, what members' needs and interests are, and what works in driving registration and program engagement.

JANUARY 2016

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Emails to worksite wellness coordinators re: points start over on SmartHealth's website starting January 1, 2016

FEBRUARY 2016

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Postcard mailer re: 100-point Early Bird Bonus if Well-being Assessment (WELL-BEING ASSESSMENT) is completed by March 30, 2016; sent to eligible subscribers who had not completed WELL-BEING ASSESSMENT in 2016
- Email reminder sent to worksite wellness coordinators re: Early Bird Bonus

MARCH 2016

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)

APRIL 2016

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Toolkit (email, flyer) re: "Share Your Success Stories" campaign sent to worksite wellness coordinators

MAY 2016

- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Members' success story shared on SmartHealth website (May – October 2016)

JUNE 2016

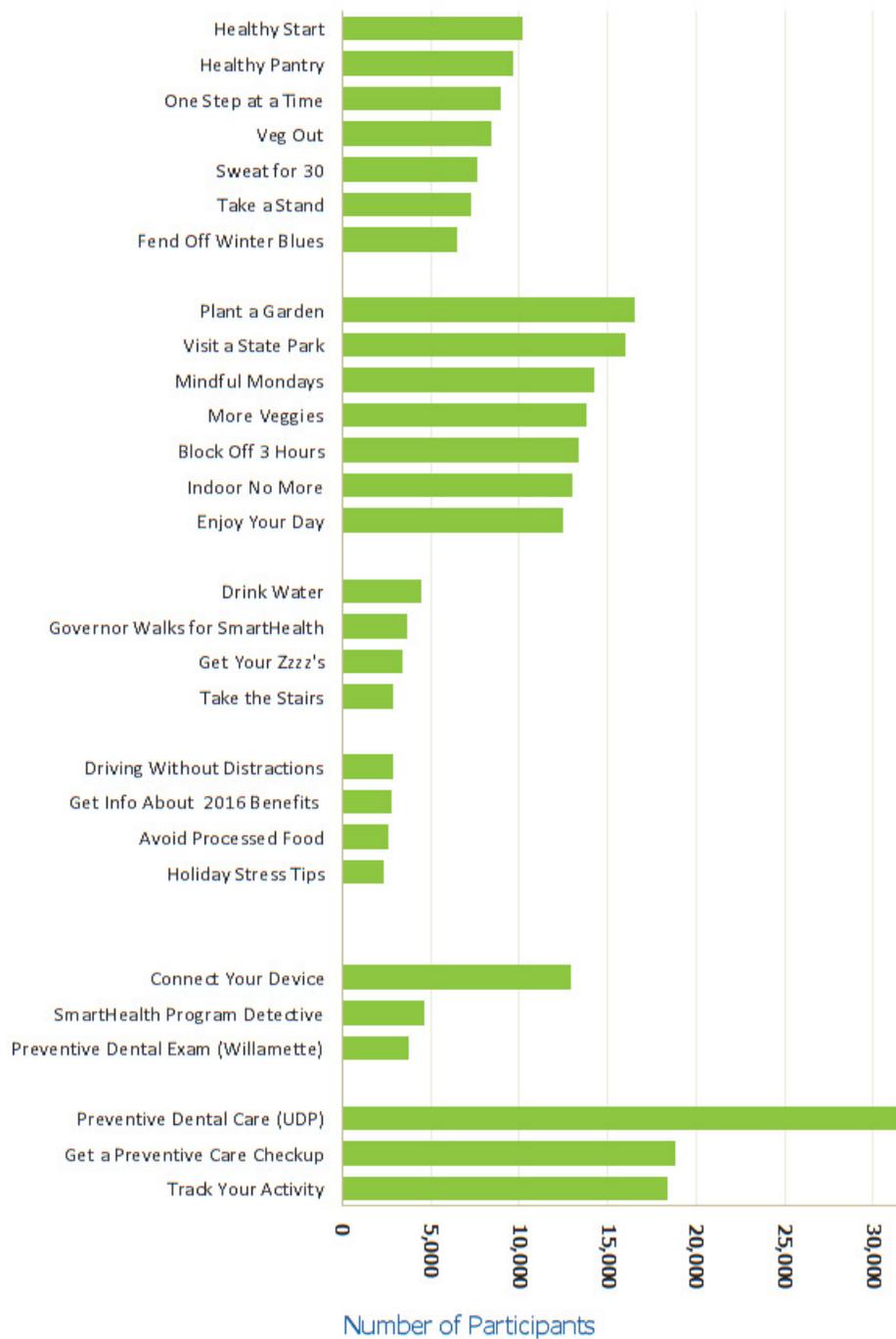
- Emails from Limeade to SmartHealth-registered participants (monthly)
- Emails from PEBB Program to eligible SmartHealth participants who have not registered (monthly)
- Members' success story shared on SmartHealth website (May – October 2016)



- SmartHealth Week (June 6-12): Promoted new, week-long activities and engaged state employees and Cabinet leaders through messages from Governor Inslee
- Member's success story, SmartHealth deadline reminder for wellness incentive in 2017, and SmartHealth participation results from January – April 2016 shared in PEBB Program's *For Your Benefit* newsletter

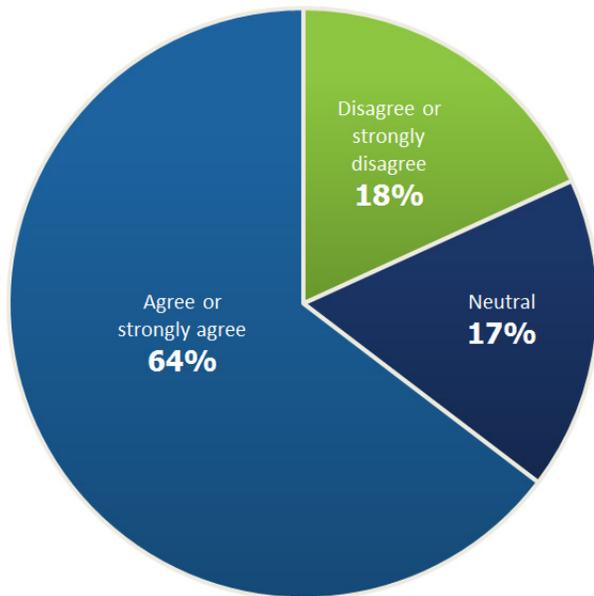


APPENDIX 2: 2015 ACTIVITY PARTICIPATION

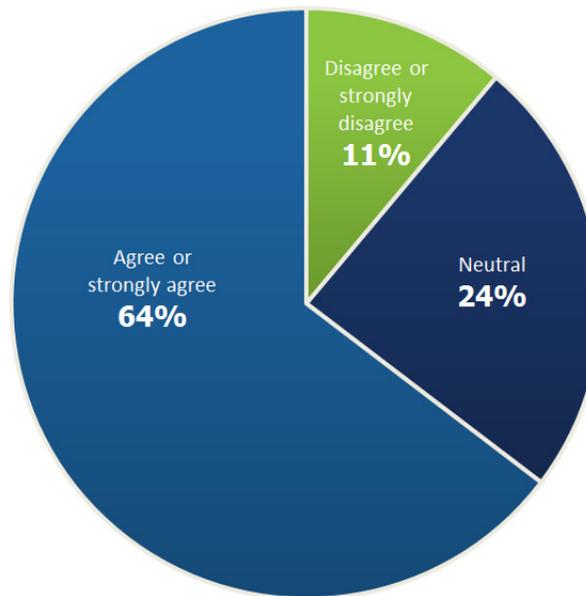


APPENDIX 3: 2015 MEMBER SATISFACTION

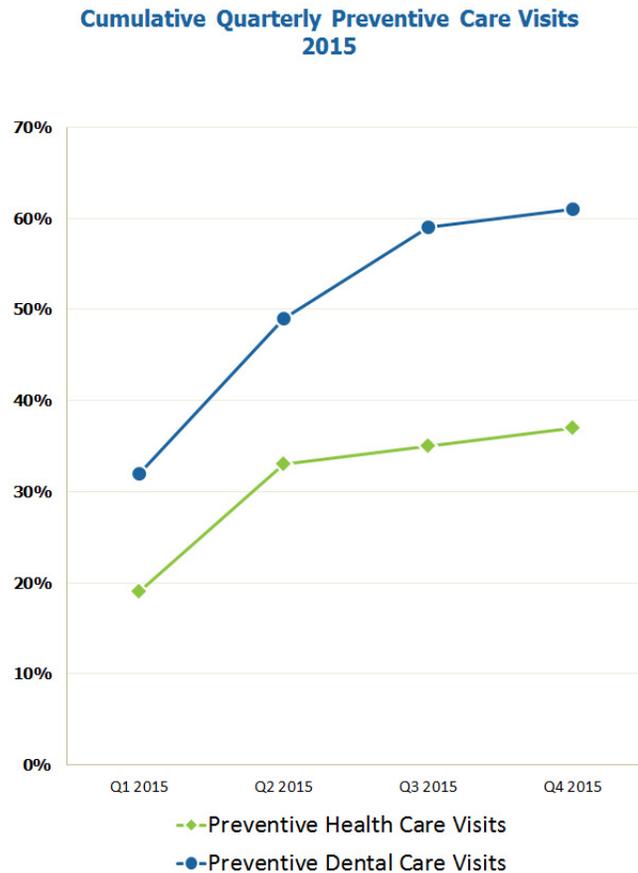
"SmartHealth was easy to use."



"I would recommend SmartHealth to a coworker."



APPENDIX 4: 2015 PREVENTATIVE CARE VISITS



Data received from our dental plans showed that PEB members had a low rate of preventative care visits. We created an activity in SmartHealth to raise awareness of the importance of dental care visits and assigned a high number of points when a preventative visit was completed. The percentage of members receiving preventative dental visits increased to nearly 50 percent by the end of the incentive period and leveled off to 60 percent by the end of the year.

We also created an activity to raise awareness of the importance of preventative health care visits and assigned points to it. Preventative health care visits can detect larger problems early and allow for more effective interventions. The data shows an increase in preventative health visits as well prior to the end of the incentive period and then leveling off to the end of the year.

