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Making a Case for Population Health

A Selected Case Study in Population Health Management...

Weigh and Win Program Helps Adults Lose Weight, Saves Money Through Gamification

by Paul Estabrooks, Ph.D., Kathryn E. Wilson, Ph.D., CES,
 and Todd McGuire

Program Objectives:

- Provide Colorado adults with access to an effective weight management platform.
- Effectively reach and retain the masses while specifically targeting high-risk populations.
- Successfully track participant progress using incentaHEALTH's patented HEALTHspot® kiosk, providing photographed weigh-ins and verified weight-loss data.
- Be more cost-effective than other publicly available weight-loss programs.
- Innovate obesity management by providing a gamified, outcomes-based incentive program.

Program Description: Weigh and Win is a scalable, technology-supported and community-based weight loss program that reaches a large number of participants and may contribute to reducing health disparities.

Weigh and Win verifies weight-loss data by using a HEALTHspot kiosk that photographs weigh-ins and provides Colorado adults with access to an effective weight management platform. With the primary focus on decreasing obesity rates, the program, since its inception in 2011, has engaged participants with rewards tied to measured results.

incentaHEALTH, a leader in measurable wellness programs, designed Weigh and Win to help organizations and communities reduce healthcare costs. The program utilizes gamification by offering incentives to individuals for improving their health. Colorado residents 18 and over can sign up for free through www.weighandwin.com and receive daily coaching on healthy eating and active living by email or text message. Coaching includes tips for weight loss, weekly grocery shopping lists, daily meal plans supplied by registered dietitians and daily exercise routines provided by certified personal trainers.

Quarterly weigh-ins at one of 105 community kiosk locations throughout the state track progress. Participants receive quarterly cash rewards for weight loss and maintenance, as well as becoming eligible for monthly prize drawings for participation. Those who begin the program at an unhealthy weight (BMI ≥ 25) qualify for cash rewards. Weigh and Win is supported by Kaiser Permanente, in partnership with additional community partners, as an effort to encourage healthy eating and active living throughout Colorado.

“Quarterly weigh-ins at one of 105 community kiosk locations throughout the state track progress. Participants receive quarterly cash rewards for weight loss and maintenance, as well as becoming eligible for monthly prize drawings for participation.”

Evaluation: A study facilitated by the University of Nebraska Medical Center, Virginia Tech, Kaiser Permanente Colorado and incentaHEALTH evaluated 40,308 Colorado adults enrolled in Weigh and Win between 2011 and 2014.¹ The primary objective of this study was to examine reach, effectiveness and cost metrics associated with the Weigh and Win program to compare weight loss interventions and inform healthcare system decisions on the appropriateness of community program referral.

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The length of time between participants' initial weigh-ins and their most recent weigh-ins (performed at any HEALTHspot kiosk in the community) represented enrollment duration. Locations include recreation centers, libraries, community clinics, retailers, hospitals and schools.

A calibrated, medical-grade, 600-pound-capacity Tanita WB-110A scale (Class III NTEP-certified) at each kiosk objectively measured weight. Quarterly weight was defined as the weigh-in recorded closest to the quarter-end date relative to the initial weigh-in date, and was recorded as missing when no weigh-ins were completed in a given quarter. Percentage weight loss was calculated using initial body weight. Once a participant had achieved a clinically meaningful weight loss (i.e., 3% or 5%), maintenance was defined as continuing that magnitude of weight loss for six or 12 months.

Each participant received daily health coaching emails or text messages with fitness and meal plans. The program also encouraged unlimited access to health coaches over the phone or via email.

"The use of the patented incentaHEALTH scale has allowed us to change the dynamic of patient engagement," says Todd McGuire, cofounder and chief technology officer of incentaHEALTH. "By offering a playful 'photo booth' experience at the scale, we've changed the tone of the program from the typical medical experience and made it much less intimidating. The enthusiasm from the community has been tremendous, with more than 86,000 Coloradans signing up."

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Total implementation costs over the four-year study were \$2,822,698. The majority of costs were related to annual fees (\$1,758,766), which included the maintenance and oversight of technical system support (\$1,124,803), kiosk leasing (\$349,500) and participant-related prizes and activities unrelated to weight loss (\$248,151). Program implementation personnel costs were \$383,119, marketing personnel and activity weighed in at \$344,054 and

weight-loss incentives distributed to participants with a BMI > 25 totaled \$300,000. Finally, monthly fees that were primarily related to Internet and short message service (SMS) use were \$36,759.

Results: When examining the reach, effectiveness and implementation costs associated with the Weigh and Win program as a means of evaluating community-wide obesity prevention efforts, researchers ultimately found the program to:

- Encourage engagement indicating an average duration between an initial and most recent weigh-in of 1.7 years across all groups.
- Effective reach and retention of a large number of participants, possibly contributing to a reduction in health disparities.
- More cost-effective than other publicly available weight-loss programs.

A total of 40,308 adults [79% women with an initial body mass index of 32.3 (≥ 30 is considered to be obese); 73% white; BMI = 32.3 ± 7.44 ; and age, 43.9 ± 13.1 years] enrolled in Weigh and Win. Women were more likely than men to enroll in the program and continue engagement beyond an initial weigh in (57% vs. 53%). Based on census data, African Americans were over represented in the sample by four times the state's census data. Among participants who engaged in the program beyond an initial weigh-in ($n = 19,029$), 47% and 34% of participants lost 3% and 5% of their initial body weight, respectively. The average duration for those who achieved 5% weight loss was 1.7 ± 1.3 years. African American participants were more likely to achieve 5% weight loss and remain enrolled in the program longer than non-African American participants (2.0 ± 1.3 vs. 1.6 ± 1.2 years).

Approximate cost per participant for the 12-month program was \$84, which is favorable when compared to other publicly available weight loss programs, such as Weight Watchers that costs \$258 for six months.

"We know obesity increases the risk for diabetes, high blood pressure, heart disease, cancer and stroke," says Amy Bayer, Kaiser Permanente Colorado registered dietitian and coauthor of the study. "Kaiser Permanente is proud to be a part of the Weigh and Win program which, as this study suggests, helps program participants lose weight, reducing their risk of obesity-related illnesses."

Lessons Learned:

- The incentaHEALTH patented, photographed weigh-ins reinforce participant motivation, contributing to continuous engagement and increased measured results.
- Reaching difficult to engage/high-risk audiences (high BMI, certain minority groups) through a community platform is effective.
- Throughout six years of program implementation, enrollments have continued at a rate of 40 per day, with a varying (limited to non-existent) marketing budget.

¹ Estabrooks PA, Wilson KE, McGuire TJ, et al. "A Quasi-Experiment to Assess the Impact of a Scalable, Community-Based Weight Loss Program: Combining Reach, Effectiveness and Cost." *Journal of General Internal Medicine*. April 2017;32(Supplement 1):24-31.

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