

Social Programs That Work Review

Evidence Summary for Obesity Treatment through Behavioral Coaching

HIGHLIGHTS:

- **PROGRAM:** A community-based behavioral coaching program for obese adults, delivered through primary care practices.
- **EVALUATION METHODS:** A well-conducted randomized controlled trial (RCT) with a sample of 415 obese patients in six primary care practices in Baltimore.
- **KEY FINDINGS:** As of two years post-random assignment, the program group had lost significantly more weight than the control group (about 8-9 pounds more).

I. Evidence rating: **SUGGESTIVE TIER**

The standard for Suggestive Tier is:

Programs that have been evaluated in one or more well-conducted RCTs (or studies that closely approximate random assignment) and found to produce sizable positive effects, but whose evidence is limited by only short-term follow-up, effects that fall short of statistical significance, or other factors. Such evidence suggests the program may be an especially strong candidate for further research, but does not yet provide confidence that the program would produce important effects if implemented in new settings.

II. Description of the Program:

Obesity is a major public health problem in the United States. While studies show it is often feasible for obese individuals to achieve short-term weight loss, most find it difficult to maintain weight loss over time.

In this two-year program for obese adults, trained bachelor's-level coaches provide advice on weight management through reduced calorie intake and exercise. Program participants also receive web-based learning modules and tools for tracking their weight loss, exercise duration, and calories consumed. The program is delivered in one of two formats:

- (i) In-Person Support. Coaches provide up to 57 individual and/or group meetings over two years – initially on a weekly basis, tapering to one or two times per month. The coaches are employed by Johns Hopkins University.
- (ii) Remote Support. Coaches provide up to 33 phone calls over two years – initially on a weekly basis, tapering to once per month. The coaches are employed by Healthways, a disease-management company.

The program recruits participants through primary care practices, using physician referral, brochures, and targeted mailings to patients. Participants' primary care physicians play a supportive role in program delivery, reviewing each participant's weight-loss progress at routine office visits and encouraging ongoing participation in the program.

The cost of the program is not reported, but the Remote Support version appears to be inexpensive (we estimate the cost of the coaches' time to be about \$112 per participant per year in 2017 dollars).

III. Evidence of Effectiveness:

Evaluation Method: A single-site randomized controlled trial, with follow up two years after random assignment.

This program was evaluated in a randomized controlled trial, conducted in a real-world community setting, with a sample of 415 obese patients in six primary care practices in Baltimore, Maryland. All patients were at least 21 years of age, had at least one cardiovascular risk factor (e.g., hypertension or diabetes), and had regular access to a computer. The participants were randomly assigned to (i) a group that received In-Person Support, (ii) a group that received Remote Support, or (iii) a control group that received weight loss brochures and a one-time meeting with a weight-loss coach at the time of random assignment.

64% of sample members were female; 56% were white and 41% were African-American; 59% were college graduates; and their household income ranged from less than \$50,000 (22%) to \$100,000 or more (41%). Their average age was 54 years, their average weight was 228 pounds.

Effects two years after random assignment (compared to the control group):

The following table shows the effects of each version of the program on the primary study outcome – weight loss:

| | Average weight loss (pounds) | % who lost at least 10% of their bodyweight |
|--------------------------|---|--|
| In-Person Support | 11.2 | 19.5% |
| Remote Support | 9.9 | 18.3% |
| Control | 1.8 | 8.6% |

The difference between each treatment group and the control group was statistically significant at the 0.05 level. There were no statistically significant differences between the two treatment groups on either outcome. This finding suggests that remote coaching was about as effective as in-person coaching in facilitating weight loss.

Discussion of Study Quality:

- The study evaluated In-Person Support and Remote Support as delivered to a diverse set of patients in six primary care practices in Baltimore, thus providing evidence of program effectiveness under real-world implementation conditions.
- The study had low sample attrition: At the two-year follow-up, weight outcomes were obtained for 94% of the original sample, and follow-up rates were very similar across the three randomized groups.
- At the start of the study, the treatment and control groups were highly similar in their pre-program characteristics (e.g., demographics, weight, education, medical conditions).
- The study appropriately sought to measure outcomes for all participants assigned to the treatment groups, regardless of whether or how long they participated in the program (i.e., the study used an “intention-to-treat” analysis).
- The study used an objective outcome measure – weight loss – assessed by research assistants who were unaware (“blind”) as to which sample members were in the treatment versus control groups.
- Study limitations:
 - › The study’s follow-up period was only two years. Longer-term follow-up would be desirable to determine if the effects at two years persist.

- › The sample was geographically concentrated in Baltimore, Maryland and, although socio-economically diverse, had an average level of education and income somewhat above the U.S. average.

Thoughts on what more is needed to build strong evidence:

Replication of the above findings in a second trial, in another setting and population, would be desirable to confirm the initial findings and establish that they generalize to other settings where the program might normally be implemented.

IV. References:

Lawrence J. Appel, Jeanne M. Clark, Hsin-Chieh Yeh, Nae-Yuh Wang, Janelle W. Coughlin, Gail Daumit, Edgar R. Miller III, Arlene Dalcin, Gerald J. Jerome, Steven Geller, Gary Noronha, Thomas Pozefsky, Jeanne Charleston, Jeffrey B. Reynolds, Nowella Durkin, Richard R. Rubin, Thomas A. Louis, and Frederick L. Brancati. “Comparative effectiveness of weight-loss interventions in clinical practice.” *The New England Journal of Medicine*, 2011, vol. 365, pp. 1959–1968.