Healthy Incentives

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Introduction:

Incentives and rewards are tools commonly implemented to improve participation and outcomes. In addition, implementing self-monitoring and tracking tools support outcomes and sustainability of participation and outcomes in health improvement programs. The research presented below provides an overview of key scientific evidence that supports the value of these programs.

I. Engaging and Retaining Users: Evidence for Incentives and Rewards

According to Maibach, Rothschild, and Novelli (in Glanz, Rimer, & Lewis, 2003), social marketing is the practice of using marketing strategies to engage and retain people in health behaviors by removing barriers and offering attractive benefits that help fulfill their self-interests. Social marketing practices showing positive effects in health behavior change research include (Maibach, Rothschild, & Novelli in Glanz, 2003):

- Incentives and rewards to persuade users to complete program-related tasks.
- Program features that help users meet their own self-interests (e.g., compensation, competition, entertainment, learning, change, etc.).
- Program features that identify and remove barriers that may interfere with user motivation or ability to complete program-related tasks.

Studies evaluating the effectiveness of traditional and online health behavior change programs establish engagement and retention of users as a requirement for successful health behavior change (Evers, et al., 2003; Marshall, et al., 2003; Kane, et al., 2004; Leslie, et al., 2005; Norman, et al., 2006; Steele, et al., 2007; Vandelanotte, et al., 2007). Health risk assessments (HRA) are commonly used by employers to engage employees in their health promotion programs. Thus, studies focus on completion of the HRA as an outcome measure to indicate participation in these programs (Taitel, et al., 2008; Seaverson, et al., 2009). There is insufficient evidence to support that the completion of the HRA alone will lead to behavior change and health risk reduction, however the evidence is growing to suggest that HRAs coupled with comprehensive health promotion programs are effective in reducing health risk (Centers for Disease Control and Prevention, 2007; Musich, et al., 2003). Typically, those who complete the HRA without prompting are different from those who don't (Lynch, et al., 1989; Glasgow, et al., 1993). Consequently, employers focus their efforts on increasing HRA participation rates to engage more individuals who would normally not participate in these programs to gain a more representative picture of their employee group. Ultimately, employee participation is the key to maximizing the success of worksite health promotion programs

(Goetzel, et al., 2007). Moreover, evidence from established behavioral theories and models supports positive reinforcement as an effective strategy for facilitating learning and behavior change (Bandura, 1998; 2001; Glanz, Rimer, & Lewis, 2003). Finally, the following research findings support the use of social marketing practices, including economic incentives, to achieve positive health-related outcomes:

- Hunnicutt (2008) states that 8 in 10 employees believe that wellness programs can be an effective way to improve health; but only 3 in 10 currently participate or have participated over the past three years. Incentives are an important way to engage employees in workplace wellness programs.
- Herman, et al. (2006) showed that provision of cash incentives was effective for encouraging participation in a virtual fitness center program and eliciting improved health status in a Web-based, employer-sponsored physical activity program.
- In a study evaluating the evidence of the impact of economic incentives on consumers' adoption of preventive health behaviors, Kane, et al. (2004) showed that economic incentives successfully influenced program participation 73% of the time.
- French, et al. (2001) found that economic incentives in the form of price reductions (10%, 25%, and 50%) increased in-school purchases of low-fat snacks by 9%, 39%, and 93% in adolescent and adult subgroups.
- In a review of Internet program components in the literature, Tufano, et al. (2005) concluded that there is significant evidence for the effectiveness of program features drawn from social marketing and those addressing multiple variables and barriers affecting user participation (environmental, institutional, social, economic, etc.).
- Two reviews evaluating the effectiveness of Web-based health behavior change programs (physical activity and dietary change) found stronger positive effects for subgroups who used the site more often, resulting in higher exposure to program materials (Norman, et al., 2007; Vandelanotte, et al., 2007) and warranting site features that increase exposure.
- In a review and analysis of studies on health and financial outcomes of worksite health promotion and disease prevention programs, Pelletier, et al. (1996, in Stokes 2006) found that senior-level management buy-in, including financial incentives, was one of four major characteristics of successful worksite wellness programs.
- A 2008 survey of 453 large employers by consulting firm Watson Wyatt found 50% of employers are using incentives to encourage participation in health improvement programs, while 74% are expected to use incentives in 2009. The same survey showed an average additional health care coverage cost of $1,503 for "high risk" workers, and reported a 5-7% reduction in health coverage cost increases (1% vs. 6-8% annually) for companies who penalize workers for poor health status (Kavilanz, 2009).
- A 2009 survey by consulting firm Watson Wyatt found that moderate financial incentives ($51-$100) can increase participation in smoking cessation and weight management programs, and in

biometric screenings. Incentives greater than $100 were shown to increase participation in health risk assessments (Watson Wyatt Worldwide, 2009).

- In a case study of worksite wellness at a large, international organization, a program with a strong focus on incentives resulted in a 93% retention rate of employees receiving incentives, and an estimated long term savings of $700 million by 2015 (U.S. Department of Health and Human Services, 2003).

- In a randomized, controlled trial evaluating the effectiveness of incentives for smoking cessation among employees of a multinational, U.S.-based company (n = 878), Volpp, et al. (2009) found that employees who received information about cessation plus financial incentives had significantly higher cessation rates than those who received information only (9.7 % higher at 9 or 12 months; 5.8% higher at 15 or 18 months). In the study, cessation rates were confirmed by biochemical tests, measured "within the first 6 months of enrollment," at 9 or 12 months after enrollment, and at 15 or 18 months after enrollment. Program enrollment and completion rates were also measured. Financial incentives were $100 for employees completing the program, $250 for employees quitting within the first 6 months of enrollment, and $400 for employees who remained tobacco-free for an additional 6 months after initial cessation. In addition to higher cessation rates at all measured intervals, incentivized groups had significantly higher enrollment (10 % higher) and completion rates (8.3 % higher) than control groups.

- Taitel et al. (2008) confirms basic behavioral theory principles by noting that higher incentive values lead to higher participation rates in HRA completion; however this is strongly influenced by employer communication about the program and also by the level of organizational commitment. Research supports that investing in extensive communications and demonstrating organizational commitment will provide positive effects beyond health promotion; including improved retention, employee relations, and productivity (Edelman, 2006). It also appears that the type of incentive does not matter, but rather the important concept is the monetary value of the incentives as perceived by the employees (Taitel, et al., 2008).

- Seaverson, et al. (2009) found that HRA participation rates were significantly higher with organizations that had strong communications, regardless of the type of incentive. Similarly, participation rates were also higher among organizations with strong culture compared to those with weaker culture, regardless of incentive used. They determined that the strongest predictor of HRA participation was the amount of the incentive, with each $20 of incentive producing an increase in participation of 1.58%. Lastly, an interesting finding was that using a benefits-integrated incentive design was associated with a 6% increase in HRA participation. Having this type of incentive design had an average of $131 higher incentive value.

- Sustaining behavior change is a result of extrinsic and intrinsic rewards. Incentives are considered extrinsic rewards, which can positively influence behavior in the short term but may negatively affect intrinsic motivation if this external reward is the reason for behavior change. Given this, it is advisable to diminish external rewards over time and focus on increasing the individual's perception of skill, competence, and desire to change behavior (Deci, et al., 1989; DiClemente, 1999).

II. Motivating Users to Change: Evidence for Self-Monitoring and Interactive Health Information

In addition to extrinsic rewards, further review of the literature shows that intrinsic motivation, the user's belief in his/her ability to succeed at behavior change (self-efficacy), and increased awareness about risk, current behavior, and desired behavior are among the initial conditions necessary for learning and health behavior change (Prochaska & DiClemente, 1994; Bandura, 1998; 2001; Glanz, Rimer, & Lewis, 2003). The delivery of interactive self-monitoring tools and clear, interactive "how-to" information to achieve these objectives is supported by the following theories and models (Glanz, Rimer, & Lewis, 2003):

- Social Cognitive Theory
- Health Belief Model
- Transtheoretical Model/Stages of Change

In addition, multiple studies evaluating the effectiveness of traditional and online health behavior change programs support the use of interactive self-monitoring and informational tools to facilitate users in making and maintaining behavioral change. Healthyroads' review of the health behavior change literature shows these key findings:

- In a scientific statement published by the American Heart Association, Marcus, et al. (2006) showed that multi-component interventions incorporating self-monitoring, goal-setting, problem solving, and feedback are more effective than interventions giving advice only.
- Results from the literature review of Tufano, et al. (2005) show positive effects for health behavior change with the use of self-monitoring tools and feedback that allows users to compare current behavior to past behavior. The authors also found support for the use of constructs from Social Cognitive Theory, the Health Belief Model, and the Transtheoretical Model.
- Tate, Wing, and Winnett (2001), reported superior effectiveness of an intervention incorporating self-monitoring and weekly reporting for behavioral weight loss.
- In a study evaluating the efficacy of a tailored Internet-based physical activity intervention, instantaneous feedback specific to the user allowed self-monitoring and resulted in increased logins (Lewis, et al., 2008). Users in the study rated goal-setting and self-monitoring as the most useful program components.
- In a behavioral weight loss program, consistent self-monitoring of exercise was associated with greater exercise and weight loss. The authors concluded that interventions targeted at increasing self-monitoring and improving transient difficulties with exercise and outcome expectancies may improve treatment outcomes (Carels, et al., 2005).
- Self-monitoring and self-maintenance skills (in the form of frequent self-weighing) have been shown to increase chances of successful weight maintenance, by allowing program participants to catch weight gains early and make necessary health behavior changes before weight gain is out of control (Butryn, et al., 2007; Wing, et al., 2007).

- A successful, self-directed weight loss program using progress-tracking as a motivational strategy and allowing participants to self-monitor and self-regulate diet and activity, showed positive outcomes for moderate weight loss (Santosa, et al., 2008).
- A study evaluating the effectiveness of behavioral indicators of successful weight management showed that measures of self-monitoring for diet and physical activity were consistently related to weight loss outcomes (Nothwehr, et al., 2007).
- In their review of user preferences for physical activity Web site features, Ferney and Marshall (2006) made positive recommendations for program features that provide interactivity, opportunities for self-monitoring, and accessible chunks of useful health information.
- In a comparison of print versus Internet physical activity interventions, Marcus, et al. (2006) listed instantaneous interactivity between the user and Web site, and new content updated over time as two criteria for site effectiveness.
- In their review of user interests, Verhijden, Jans, and Hildebrandt (2008), reported significant user interest in taking online tests, taking follow up tests, and receiving tips for successful maintenance of behaviors.

Conclusion:

These studies indicate that the use of incentives and self-monitoring tools have the potential to significantly influence the participation, motivation, and outcomes of health improvement programs. Additionally, the best approaches provide a comprehensive program that considers HIPAA regulations regarding wellness incentives and ADA guidelines to ensure that all employees have an equal and fair opportunity to participate successfully in the health promotion/wellness program (Hunnicutt, 2008).

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