

Employer Wellness Programs—A Work in Progress

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Approximately 4 of 5 large US employers offer a wellness program as part of their employees' health benefits.¹ Workplace wellness programs include a coordinated set of activities that support employees in making changes to health behaviors that may reduce their risk for certain chronic conditions and enable employees



Related article [page 1491](#)

with existing diagnoses to manage them more effectively. Comprehensive, multicomponent programs typically include health assessments and biometric screening to quantify risk factors; education and coaching for lifestyle behavior modification (eg, tobacco cessation, physical activity promotion, stress reduction, and weight management); and in some cases, chronic disease management.

Employer investment in wellness programs is driven largely by the assumption that these programs generate health and economic benefits. The underlying premise is straightforward. On average, healthier employees have lower medical care spending, which affects employer-sponsored insurance premiums.² Healthier employees are also less likely to miss work due to illness and are more productive while at work.³ More recently, advocates have begun articulating a broader value proposition for organizational investments in wellness programs, including benefits in the form of stronger employee engagement, reduced turnover, and improved profitability.⁴

The effect of wellness programs on employees' health status, medical care spending, and productivity remains uncertain. If employees who participate in a wellness program are able to maintain or improve their health status over time, relative to what would have occurred in the absence of program participation, a positive return on investment may be realized. However, most scholarly evaluations rely on observational study designs that examine a single program implemented within an organization.⁵⁻¹⁰ Since employee participation is almost always voluntary, critics argue that comparisons of outcomes for participants relative to nonparticipants are misleading due to potential selection bias. In other words, even though researchers can statistically control for observed differences, unobserved factors such as an employee's motivation may be correlated with both the decision to participate and the health or economic outcomes being studied. In turn, this can bias the estimated effects of wellness program participation on changes in health, medical care, and productivity.

A small but increasing number of studies have pursued randomized trials of employer wellness programs in an effort to mitigate selection bias and generate causal inferences. The study by Song and Baicker¹¹ reported in this issue of *JAMA*

evaluated the health, economic, and employment effects of a multicomponent wellness program offered by a large warehouse retail firm with more than 200 worksites in the eastern United States. The authors examined a broad set of outcomes, including health risk assessment-based measures of self-reported health status and health behaviors; biometric screening for blood pressure, cholesterol, glucose, and body mass index; annual medical care spending and utilization; and employment outcomes corresponding with absenteeism, job tenure, and work performance. For their study design, the authors randomized 20 worksites to have access to the wellness program (n = 4037 employees), 20 worksites to serve as primary controls (n = 4106 employees), and 120 worksites (n = 24 831) to serve as secondary controls for a subset of outcomes.

Over an 18-month period, the wellness program was offered at treatment worksites and included 8 sequentially delivered modules instructed by dietitians, each of 4 to 7 weeks in duration, and covering topics such as engaging with the health care delivery system, nutrition, exercise, stress management, sleep, and weight management. Employees who completed a given module received a financial incentive (eg, \$25 gift card). Participation varied widely across employees, worksites, and modules. Approximately 35.2% of employees in the treatment worksites completed at least 1 module, and among those who did, the mean number of completed modules was 3.7.

Using multivariate regression analysis and multiple inference adjustment, the authors tested for differences in outcomes between those exposed to the wellness program vs not based on worksite assignment as well as differences between participants and nonparticipants. Overall, Song and Baicker¹¹ found that the wellness program offered by the employer had limited effects on the outcomes examined at the conclusion of the study period. For self-reported health behaviors, randomization into a treatment worksite resulted in a higher proportion of employees who reported engaging in regular exercise by 8.3 percentage points (95% CI, 3.9-12.8 percentage points) and a higher proportion who reported actively managing their weight by 13.6 percentage points (95% CI, 7.0-20.2 percentage points). Analogous results for the effect of program participation were slightly larger in magnitude. Using a single index measure of self-reported health behaviors, the authors reported slightly better performance among employees in the treatment worksites relative to those in the control worksites at the end of the study period.

With respect to the clinical measures of health obtained using biometric screening, 29% of employees in the primary control group had high cholesterol, 23% had hypertension, and

43% were obese. No statistically significant differences were detected between the employees in the control group worksites and treatment group worksites at the end of the 18 months. Similarly, the authors found no significant differences in mean medical care spending or utilization.

As their final set of analyses, the authors used administrative data from all 160 worksites to examine absenteeism, measured as the percentage of scheduled hours missed; job tenure, measured as days employed during the treatment period; and performance review scores. Once again, the authors found no significant differences in productivity or performance between the treatment and control worksites.

The report by Song and Baicker¹¹ is a valuable contribution to the wellness program evaluation literature, given the rigorous study design and carefully executed analysis. This study complements another recent randomized trial that evaluated the health and economic effects of a multicomponent wellness program offered at the University of Illinois at Urbana-Champaign.¹² While these 2 studies differ on a number of dimensions, they both found limited effects of the program. Rigorous nonrandomized studies that evaluated lifestyle management programs similar to the one analyzed by Song and Baicker¹¹ also have reported null associations between workplace programs and outcomes.^{13,14}

Drawing generalized conclusions about overall wellness program effectiveness is misguided, given the wide variation in designs and organizational environments in which these programs are implemented. However, growing evidence that demonstrates limited or no program effects should encourage wellness companies and employers to critically assess the programs they are offering and increase their willingness to innovate, test, and evaluate novel designs. For many employers contemplating what to do with their wellness programs, the ongoing debate regarding

program effectiveness renders these decisions more challenging. While employers must ensure some level of equity in their offerings, traditional, broad-based programs like the one analyzed by Song and Baicker may lack the necessary intensity, duration, and focus on particular employee segments to generate significant effects over a short time horizon. Investments in more targeted approaches that focus on those individuals with elevated risks for or already having poor health status or health behaviors may yield larger health and economic benefits.

Additionally, the organizational environment in which wellness programs are implemented can influence employees' perceptions and engagement over time. Organizations that strategically integrate evidence-based wellness interventions with policies (eg, tobacco-free campuses) and environmental modifications (eg, healthy eating options in the cafeteria, on-site exercise facilities) can better support employees' efforts to make healthy choices throughout their workdays and create a stronger organizational culture of health.¹⁵ Of course, these policies, practices, and longer-term investments in organizational culture cannot be incorporated easily into any single organization clinical trial study design.

Employer wellness programs are evolving and should be considered a work in progress. Continued investments in research, development, and the generation of high-quality evaluations are needed to determine whether specific program designs and implementation strategies can generate sustained health behavior changes that in turn can lead to measurable health and economic benefits. Given their broad diffusion, employer wellness programs that are able to demonstrate positive outcomes can provide a valuable complement to health system- and community-based approaches for reducing chronic disease prevalence and its economic effects on society.

ARTICLE INFORMATION

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