The Dubious Empirical and Legal Foundations of Wellness Programs

Adrianna McIntyre
Nicholas Bagley
University of Michigan Law School, nbagley@umich.edu
Austin Frakt
Aaron Carroll

Available at: https://repository.law.umich.edu/articles/1908

Follow this and additional works at: https://repository.law.umich.edu/articles

Part of the Health Law and Policy Commons, Labor and Employment Law Commons, and the Legislation Commons

Recommended Citation

This Article is brought to you for free and open access by the Faculty Scholarship at University of Michigan Law School Scholarship Repository. It has been accepted for inclusion in Articles by an authorized administrator of University of Michigan Law School Scholarship Repository. For more information, please contact mlaw.repository@umich.edu.
The Dubious Empirical and Legal Foundations of Workplace Wellness Programs

Adrianna McIntyre, Nicholas Bagley, Austin Frakt, Aaron Carroll†

Contents

I. BASIC STRUCTURE AND TAKE-UP OF WELLNESS PROGRAMS ........................................ 59
II. THE CONCEPTUAL CASE FOR WELLNESS PROGRAMS ............................................... 61
III: WHAT THE AFFORDABLE CARE ACT CHANGED .................................................. 63
IV. THE EMPIRICAL LITERATURE: KEY FINDINGS AND CRITIQUES ................................. 64
   Experience of individual employers ................................................................. 65
      A. Johnson & Johnson ............................................................................. 65
      B. PepsiCo ......................................................................................... 66
      C. University of Minnesota. ................................................................. 67
   Evidence from meta-analyses and literature reviews: ............................................ 68
      A. Baicker et al. .............................................................. 68
      B. Osilla et al. .............................................................................. 69
   Other critiques of the literature .................................................................... 70
V: WELLNESS PROGRAMS AND DISCRIMINATION ........................................... 73
   The Pregnancy Discrimination Act. .................................................................... 74
   Genetic Information Nondiscrimination Act. .................................................. 74
   Americans with Disabilities Act. ................................................................. 76
VI: CONCLUSION ........................................................................................................... 79

I. BASIC STRUCTURE AND TAKE-UP OF WELLNESS PROGRAMS

Despite spawning a broad empirical literature and a six-billion-dollar-per-year industry, no formal or universally accepted definition of a “wellness program” exists. In reviewing the workplace-wellness market for a report the Affordable Care Act (“ACA”) commissioned, scholars at the RAND Corporation broadly defined a workplace-wellness program as “an employment-based activity of employer-sponsored benefit aimed at promoting health-related behaviors (primary prevention or health promotion) and disease management (secondary prevention).” Initiatives

† This project was supported by grant number T32HS000055 from the Agency for Healthcare Research and Quality. The content is solely the responsibility of the authors and do not necessarily reflect the positions or policies of the Agency for Healthcare Research and Quality, U.S. Department of Veterans Affairs, Boston University, Harvard University, Indiana University, or University of Michigan.

targeting primary prevention are also sometimes called “lifestyle management” programs, a term used throughout this paper.²

Screening activities, such as health-risk appraisals and biometric screenings, are the most common elements of wellness programs and frequently serve as the entry point for lifestyle and disease interventions. Health-risk appraisals are self-reported surveys with questions about health behaviors such as eating habits, exercise, smoking, and stress, while biometric screens collect clinical data, like blood pressure, glucose, and body-mass index. A minority of employers offer only screening activities, without follow-up interventions.³

Lifestyle management targets risk factors for chronic disease, and such programs are oriented toward preventing chronic diseases. The most ubiquitous preventive interventions focus on nutrition, weight management, fitness, and smoking cessation; in 2012, over seventy percent of lifestyle-management programs offered these components. About half also offered some type of support for alcohol- and substance-use disorders and stress management.⁴

Specific program design varies widely by employer; the menu of available lifestyle interventions includes subsidized gym memberships, onsite weight-management group meetings, or telephone counseling to help employees quit smoking. Environmental changes to the workplace designed to encourage healthier behavior—putting more nutritious food in vending machines and the cafeteria or offering on-site vaccinations and fitness activities—could also be considered lifestyle interventions.⁵ A defining feature of lifestyle management is that the initiatives are available to all participants; employees need not qualify in order to participate in these components of a wellness program.

By contrast, disease-management programs are limited to employees with manifest chronic conditions, such as diabetes, heart disease, asthma, or depression.⁶ Disease-management interventions are typically individually tailored and coordinated with the employee’s personal physician; they aim to improve health through better medication adherence and bolstered patient self-care knowledge and ability.⁷

Disease-management and lifestyle-management programs are sometimes administered separately, and employers may offer one type of intervention without the other.⁸ Historically, lifestyle-management

². FinaL Report, supra note 1, at 2.
³. Id. at 26.
⁴. Id. at 31.
⁵. Id. at xvi; Id. at 23.
⁶. Id. at 31.
⁷. John P. Caloyeras et al., Managing Manifest Diseases, But Not Health Risks, Saved PepsiCo Money Over Seven Years, 33 Health Aff. 124, 125-126 (2014)
⁸. FinaL Report, supra note 1, at 33.
programs have been more prevalent: according to a 2015 survey, eighty-one percent of large employers—those with more than two hundred workers—offered some sort of lifestyle management as part of a wellness program, compared to the sixty-eight percent that offered disease management. This gap is even wider among small firms, where forty-nine percent offered lifestyle interventions; only thirty-two percent reported that disease management was available in their programs.9

Firms frequently offer financial incentives to encourage employee participation in wellness programs. The Affordable Care Act has expanded the scope of incentives available to employers, as detailed in Part IV. The incidence of incentives, however, is not distributed evenly across types of wellness initiatives. Nearly one-third of all employers with health benefits offer incentives to workers or require them to complete a health-risk assessment; this rate is much higher among large firms than small firms.10 Disease management is the least likely component of wellness programs to be subject to incentives.11 This may be related to concerns about targeting incentives specifically toward individuals diagnosed with chronic diseases; this paper will further examine that tension in Part VI.

II. THE CONCEPTUAL CASE FOR WELLNESS PROGRAMS

The Centers for Disease Control and Prevention (CDC) estimate that eighty-six percent of national health expenditures could be attributed to treatment for chronic medical conditions in 2010, representing over $2.2 trillion in one year alone.12 Chronic conditions—including hypertension, depression, diabetes, and heart disease—account for seven out of ten deaths each year in the United States.13 In addition to being common and costly, chronic conditions are often preventable. Many conditions are associated with adverse risk behaviors like poor nutrition, inadequate physical activity, and alcohol and tobacco use. In theory, diminishing or eliminating these adverse behaviors should reduce the prevalence of chronic disease.

Over recent decades, chronic disease has become more commonplace, and the burden has shifted from the elderly to include more working-age adults. One analysis suggests that the number of non-elderly adults with at

10. Id. at 6.
11. FINAL REPORT, supra note 1, at xxii.
13. Id.
least one chronic condition increased by over twenty-five percent from 1997 to 2006.\footnote{Catherine Hoffman \& Karyn Schwartz, \textit{Eroding Access Among Nonelderly U.S. Adults with Chronic Conditions: Ten Years of Change}, 27 \textit{Health Aff.} W340, W342 (2008).}

Given that fifty-nine percent of Americans aged nineteen to sixty-four had employer-sponsored insurance in 2014, some of the financial burden of chronic disease is borne by firms that provide health coverage as part of a compensation and benefits package.\footnote{\textit{Health Insurance Coverage of Adults 19-64}, \textit{Kaiser Family Found.}, http://kff.org/other/state-indicator/adults-19-64/?currentTimeframe=0 (last visited Feb. 18, 2017).} Direct costs manifest in the form of healthcare expenses that accrue from providing health coverage. Firms with employees who seek relatively more—or relatively more expensive—care bear those costs through higher insurance premiums if they purchase insurance, or higher medical spending if they self-insure.

Indirectly, chronic conditions can also increase absenteeism—missing work for health-related reasons—and “presenteeism”—working while sick, leading to reduced productivity. Some analyses have suggested that these indirect costs are substantial. One survey administered by PricewaterhouseCoopers found that absenteeism and presenteeism are up to four times higher for individuals with chronic disease than for those without.\footnote{\textit{PricewaterhouseCoopers’ Health Research Inst., The Price of Excess: Identifying Waste in Healthcare Spending} 7 (2008).} A separate report from the Milken Institute suggested that these indirect costs actually exceed direct health expenditures.\footnote{Ross Devol \textit{et al.}, \textit{An Unhealthy America: The Economic Burden of Chronic Disease} 7 (2007).}

Among the privately insured, most of the ten conditions for which spending grew the fastest between 1987 and 2009—including mental disorders, pulmonary disease, hyperlipidemia, and diabetes—were chronic diseases.\footnote{Kenneth E. Thorpe, \textit{Treated Disease Prevalence and Spending Per Treated Case Drove Most of the Growth in Health Care Spending in 1987-2009}, 32 \textit{Health Aff.} 851, 856 (2013).} Over one-third of the increase in spending on such conditions is attributable to an increase in the number of people receiving treatment.\footnote{\textit{Id.}} In 2012, investigators evaluated the economic impact of ten common, modifiable health risk factors, including blood pressure, total cholesterol, obesity, blood glucose levels, tobacco use, and physical inactivity.\footnote{Ron Z. Goetzel \textit{et al.}, \textit{Ten Modifiable Health Risk Factors are Linked to More than One-Fifth of Employer-Employee Health Care Spending}, 31 \textit{Health Aff.} 2474, 2476 (2012).} The authors reported that these ten factors were associated with over twenty...

\footnote{15. \textit{Health Insurance Coverage of Adults 19-64}, \textit{Kaiser Family Found.}, http://kff.org/other/state-indicator/adults-19-64/?currentTimeframe=0 (last visited Feb. 18, 2017).}
\footnote{17. Ross Devol \textit{et al.}, \textit{An Unhealthy America: The Economic Burden of Chronic Disease} 7 (2007).}
\footnote{19. \textit{Id.}}
\footnote{20. Ron Z. Goetzel \textit{et al.}, \textit{Ten Modifiable Health Risk Factors are Linked to More than One-Fifth of Employer-Employee Health Care Spending}, 31 \textit{Health Aff.} 2474, 2476 (2012).}
percent of total employer-employee health spending.\textsuperscript{21} At the individual level, being at high risk for depression was most strongly correlated with increased medical spending among the ten risk factors evaluated. On average, employees at high risk for depression had medical spending that was forty-eight percent higher than their counterparts who were not. High blood glucose, high blood pressure, and obesity were also strong drivers of health spending; those risk factors were associated with health spending increases of 31.8 percent, 31.6 percent, and 27.4 percent, respectively, compared to patients who did not exhibit these risk factors.

In principle, health expenditures associated with modifiable behavior are health expenditures that might be avoided. Wellness programs tempt employers with an alluring promise: they can help employees get and stay healthy, leading to increased time at work, improved productivity, and reduced health spending. It is a promise that employers believe in: some forty-three percent of surveyed employers believe that wellness programs deliver positive returns on investment.\textsuperscript{22} Others are more reserved in their confidence about financial returns, but nonetheless see the programs as effective recruitment and retention tools.\textsuperscript{23}

\section*{III: WHAT THE AFFORDABLE CARE ACT CHANGED}

For legal purposes, wellness programs come in two essential forms. Participatory wellness programs offer employees a financial incentive based only on their participation.\textsuperscript{24} Employees might receive a reward, for instance, if they fill out a health assessment or attend a smoking-cessation class.\textsuperscript{25} The reward can take a variety of forms: a premium discount or rebate, waived or reduced cost-sharing, or the elimination of a surcharge.\textsuperscript{26} Alternatively, employees might be penalized for failing to participate. Health-contingent wellness programs require employees to achieve health-related targets in order to receive the financial incentive.\textsuperscript{27} Employees

\textsuperscript{21} Id. at 2474.
\textsuperscript{22} Final Report, supra note 1, at 2.
\textsuperscript{24} Final Report, supra note 1, at 2.
\textsuperscript{26} Final Report, supra note 1, at xxi.
\textsuperscript{27} Fact Sheet, supra note 25.
might, for example, have to visit the gym a certain number of times each month or keep their blood pressure under control.

On their face, participatory wellness programs treat all employees alike. Health-contingent programs, however, discriminate among employees based on factors related to their health. That, in turn, creates a potential conflict with laws that aim to prevent employers from discriminating against their sickest employees in the provision of health insurance. Most prominently, the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") prohibits employers from creating eligibility rules or adjusting employee premiums based on "health status-related factors." Without an exception, HIPAA would have precluded employers from adopting health-contingent wellness programs. To enable such programs, Congress crafted an exception that allowed employers to condition up to twenty percent of the cost of coverage upon successfully meeting wellness standards.

Enthusiasm for wellness programs grew over the next decade, spurred in particular by reports from companies like Safeway, which claimed that adopting a wellness program allowed it to hold its healthcare costs constant. It did not matter that those reports were, in fact, wildly misleading; a 2005 restructuring of its employee-benefit plan accounted for the spending reductions, not a wellness program. Wellness programs had captured Congress's imagination.

In 2010, Congress used the Affordable Care Act to relax HIPAA's strictures. Under current law, employers are permitted to make thirty percent of an employee’s premiums contingent on achieving health objectives and up to fifty percent on tobacco cessation. The ACA further gives the Secretaries of the Treasury, the Departments of Labor, and Health and Human Services authority to increase this general limit to fifty percent of the cost of coverage.

IV. THE EMPIRICAL LITERATURE: KEY FINDINGS AND CRITIQUES

Most of the numerous studies on the efficacy of employer-based wellness programs suffer from serious methodological shortcomings. Some are little more than thinly-veiled promotional materials pulled together at
the wellness industry’s behest. But good studies do exist and, when considered together, they paint a reasonably consistent picture of wellness programs’ performances, or lack thereof.

To bring that picture into focus, we will examine the available research from two perspectives. We will start with several studies that rigorously evaluate the experience of individual firms with wellness programs. Sensitive to the limitations of studies that focus on a single firm, however, we then step back and examine several meta-analyses that have helped frame contemporary discussion around employer-based wellness initiatives. The message of these studies, taken together, is clear. Wellness programs aimed at improving employee lifestyles yield little, if any, savings. Programs that focus on managing employees’ chronic diseases, however, hold substantially more promise.

Experience of individual employers

The three studies considered below feature large employers—Johnson & Johnson, PepsiCo, and the University of Minnesota—that have undertaken periodic analyses of their wellness programs. In all three cases, the most recent analysis was published after 2010. Conclusions from individual studies must be drawn with caution; findings from one employer may not be generalizable to other institutions. This section is not intended to be comprehensive—meta-analyses offer a more holistic picture—but is representative of a few key issues in the literature: the effects of disease-management versus lifestyle interventions, the importance of longer-time horizons for elucidating the impact of wellness programs, and the nature of a positive return-on-investment (“ROI”) study.

A. Johnson & Johnson

The Johnson & Johnson family of companies has offered workplace wellness initiatives since 1979. In its current form, the firm’s Live for Life program includes lifestyle components— reimbursement for gym memberships, weight-loss program memberships, and computerized coaching, among others—in addition to chronic disease management. The company offered a five-hundred-dollar incentive for employees who completed a health-risk assessment and participated in follow-up programs; the five hundred dollars were a credit that could be applied toward a worker’s health insurance premium.

Researchers, including two senior executives from Johnson & Johnson, conducted an analysis that compared Johnson & Johnson’s health costs against those from similar, de-identified large firms. The sixteen comparison companies varied in their wellness program offerings. Johnson & Johnson employees were “matched” to employees of other firms along

35. Id. at 491.
dimensions of age, sex, geographic region, and health-plan type. Employees were not matched on comorbidities or other observable measures of health status, but the analysis adjusted for the Charlson Comorbidity Index, an aggregate measure of chronic-disease burden, as well as psychiatric diagnoses and the richness of the employer’s insurance plan. As with all observational studies, it is possible that meaningful but unobservable differences remain, which could bias results.

Relative to comparison firms, Johnson & Johnson experienced 3.7 percent lower annual growth in health care expenditures over the 2002 to 2008 study window. This analysis did not differentiate between whether employees participated in lifestyle-management or disease-management components of the program, so inferences about the sources of savings cannot be drawn easily from this study alone. Assuming that health costs otherwise would have grown at rates similar to their peers, the study estimated that Live for Life saved Johnson & Johnson between $1.88 and $3.92 for every dollar spent, depending on assumptions about administrative costs. It is unclear why the analysis used a range of proxy costs, instead of calculating ROI using the actual cost of program administration.

B. PepsiCo

A seven-year evaluation of PepsiCo’s wellness program provides one of the longest study time horizons in the literature. The company introduced Healthy Living, a wellness program that offered both lifestyle- and disease-management elements, in 2003. Healthy Living provided five lifestyle-management programs in 2011, targeting fitness, nutrition management, weight management, stress management, and smoking cessation. Disease management was offered to employees that had at least one of the following ten chronic conditions: asthma, atrial fibrillation, chronic obstructive pulmonary disease, congestive heart failure, coronary artery disease, diabetes, hyperlipidemia, hypertension, lower-back pain, or stroke.

For the lifestyle-management program, investigators considered seven years of program data following two baseline years; for disease management, they had eight years of program data following one baseline year. Program participants were matched to nonparticipants within the company on a number of variables, including age, sex, geographic location, income, education, and health status.

36. Mary Charlson et al., The Charlson Comorbidity Index Can Be Used Prospectively to Identify Patients Who Will Incur High Future Costs, 9 PLOS ONE 1, 2 (2014).
37. Henke et al., supra note 34, at 495.
38. Caloyeras et al., supra note 7, at 125.
39. id.
40. id. at 125-126.
41. id. at 125.
medical costs, and comorbidities. The authors aimed to ensure that changes in health spending were not attributable to any observable ex ante differences between employees that did and did not participate in the wellness program. By comparing employees within the firm, the authors also assured that the analysis was not confounded by factors that might vary across companies.

The analysis found a $1.46 overall ROI, meaning that for every dollar invested in the program, PepsiCo saved $1.46 in health costs. However, savings were not balanced evenly across the lifestyle-management and disease-management programs; the disease-management program accounted for all net savings. For each dollar invested in the lifestyle-management program, PepsiCo only saved $0.48, meaning that the lifestyle management resulted in a net loss to the firm, even after accounting for changes in self-reported absenteeism. By contrast, the return for disease management alone was $3.78. Fewer employees participated in disease management than lifestyle management. The authors noted that the disease-management participants who also participated in the lifestyle-management program demonstrated significantly higher savings overall, suggesting that there may be an interaction effect and that targeting lifestyle-management programs toward employees with manifest chronic disease may improve their ROI.

C. University of Minnesota

John A. Nyman and his coauthors have published multiple papers evaluating the University of Minnesota’s health-promotion program at various stages after its 2006 implementation. The program included a wellness assessment with an incentive for completion; using results from the wellness assessment, health coaching was available to enrollees who were identified to have a risk factor, and disease management was available for enrollees identified as having one or more chronic diseases. Additional lifestyle components included a 10,000-step program and web-based health resources.

The analysis used baseline data from 2004 through 2006 and tracked average monthly expenditures, comparing employees who participated in at least one of the program components—wellness assessment, lifestyle management, or disease management—against employees who did not

42. Id. at 126.
43. Id. at 128.
44. Id.
45. John A. Nyman et al., The Effectiveness of Health Promotion at the University of Minnesota: Expenditures, Absenteeism, and Participation in Specific Programs, 52 J. OCCUPATIONAL & ENVTL. MED. 269, 272 (2010).
participate in the program. Employees were not “matched” in this analysis, but the study used a strong econometric design to control for the presence of specific risk factors and chronic diseases. In the first two years of the program, the investigators determined that the lifestyle-management program did not reduce health expenditures, while the disease-management program did. However, the disease-management program savings were not sufficient over this time period to overcome the cost of administering both programs.

In the third year, the program delivered a positive ROI, generating $1.76 in savings for every dollar invested in the program. These results were driven entirely by the disease-management component through reduced health expenditures alone; disease management was not associated with a significant reduction in absenteeism. Participation in the lifestyle-management program was not associated with reduced expenditures or absenteeism.

Evidence from meta-analyses and literature reviews:

A. Baicker et al.

A widely cited meta-analysis published in 2010 by Katherine Baicker and coauthors evaluated thirty-two peer-reviewed publications on wellness programs and found strong positive returns on investment. To be included in the review, studies had to offer “well-defined” interventions, treatment groups, and comparison groups, though comparison groups were not always randomly assigned. The review does not distinguish between “disease management,” “lifestyle management,” and hybrid programs.

Accounting for the cost of the programs—this is the analysis that suggested wellness programs cost an average of $144 per employee per year to administer—Baicker and colleagues reported an average ROI of $3.27 with regard to direct health costs. They also found a significant ROI of $2.73 in reduced absenteeism.

The authors are careful to outline potential sources of bias that could skew their findings; the authors raise concerns of selection bias and publication bias throughout the paper’s introduction, results, and discussion. The voluntary nature of most wellness programs is a key
source of potential selection bias: employees who participate in the program may differ from the comparison group in important but unobservable characteristics, such as individual motivation to lose weight or quit smoking. The authors also stipulate that studies finding strong positive returns for wellness programs may be more likely to be submitted or accepted for publication than studies that demonstrate no impact. Furthermore, the meta-analysis does not discern between lifestyle- and disease-management interventions.

Many of the studies Baicker included are now twenty or more years old—nineteen of the thirty-two papers were published before 1996—which should give scholars pause in attempting to generalize findings to today’s wellness programs. Advances in medical therapies may have diminished the potential that wellness programs once had. As an example, John P. Caloyeras and colleagues highlight that statins only achieved widespread use for cholesterol control in the nineties. Absent this therapy, early wellness programs may have had a greater effect on health outcomes and spending.

One of the most comprehensive reviews to date was published to accompany RAND’s 2012 Workplace Wellness Programs Study, sponsored by the United States Departments of Labor and Health and Human Services and commissioned as part of the Affordable Care Act. The review, published in the American Journal of Managed Care, included thirty-three articles published after 2000, in contrast to the older studies evaluated by Baicker et al. In order to be included in this review, studies had to be published after 2000 and have a control or other comparison group. The review focused on “comprehensive” wellness programs but did not treat disease management and lifestyle management as distinct categories. Seventeen of the thirty-three included studies were randomized controlled trials (“RCTs”); ten of the remaining studies used observational designs, and six had comparison groups that were not random in assignment. Ultimately, the authors reported “mixed results” while raising questions about the rigor of study designs.

Cumulatively, the included studies tested sixty-three wide-ranging outcomes; this diversity makes it difficult to generalize lessons for any particular domain. Each study evaluated one or more of the following:

55. *Id.* at 6.
57. Caloyeras et al., *supra* note 7 at 129.
58. *Id.*
60. *Id.* at e78.
exercise, diet, physiological markers, healthcare costs, smoking, absenteeism, mental health, and alcohol use. Most studies suggested that wellness programs had positive effects, but the authors strongly qualify this finding in the review. Studies with observational designs demonstrated positive effects in about three-quarters of cases, substantially more than in randomized controlled trials, which demonstrated positive effects in only about half of cases.

Evidence on absenteeism and healthcare costs proved particularly sparse. Only eight studies that evaluated health costs as an outcome met the review’s inclusion criteria, and just one of those studies was an RCT, which did not find an effect. The four observational studies that evaluated absenteeism found positive effects—including one study that suggested a return of $15.60 for every dollar spent—but no RCTs were available to corroborate these findings rigorously. This limited body of evidence stands in contrast to the volume of literature on healthcare costs and absenteeism published before 2000.

Other critiques of the literature

Concerns with the methodological validity of the wellness literature range beyond the selection bias and publication bias Baicker highlighted in the 2010 review. Studies often have short time horizons—Osilla reported that seventy percent of studies included had a follow-up of two years or fewer—and failing to follow a study population for a sufficient period of time could lead to either underestimates of the program effect if the benefits take several years to accrue as health or financial outcomes or overestimates if smoking cessation, weight loss, or other health gains lapse in the long term, for example, or if there are diminishing returns that are overwhelmed by administrative costs after some time.

A 2014 paper by Siyan Baxter and colleagues sought to determine whether there was a relationship between wellness programs’ reported returns on investment and the quality of study methodology in peer-reviewed evaluations. In order to assess study “quality,” the authors used a thirty-six-item checklist developed by The BMJ, a general-medicine journal. The checklist contains questions about study design, data collection, and analysis and interpretation of results. The authors conducted a sensitivity analysis for quality scoring by using two additional

62. Osilla et al., supra note 59, at e78.
63. Siyan Baxter et al., The Relationship Between Return on Investment and Quality of Study Methodology in Workplace Health Promotion Programs, 28 AM. J. HEALTH PROMOTION 347, 348 (2014).
64. Id. at 349.
65. Id.
methodological—quality checklists, which resulted in similar relative—quality scores.

In the review, Baxter reported that included studies generally reported positive returns on investment, “evidenced in all instances except randomized control trials.” The authors further reported that methodological quality was a significant predictor of ROI; the lowest-quality studies reported the highest ROI figures, while more rigorously evaluated studies tended to report lower returns.66

Even if we believe published findings to be methodologically sound, we must contend with issues of generalizability. As Baicker and coauthors remark in their review, the employers who are most likely to benefit from a wellness program are the same ones who are most likely to be early adopters of wellness programs.67 Additionally, the studies included in the reviews favor large employers; over ninety percent of employers in the Baicker paper and over half in the Osilla review had over one thousand employees.68 It is not clear that success reported by large firms could be easily replicated in smaller companies.

Studies offer little discussion of the broader context in which their findings are rooted. Both the 1990s and recent years have seen trends in insurance design that could confound study results if not accounted for methodologically. In the 1990s, health-maintenance organizations (“HMOs,” or “managed care”) gained popularity, resulting in narrower networks and reduced health spending.69 More recently, high-deductible plans are increasingly prevalent among employer-sponsored insurance; higher deductibles also tend to reduce utilization and spending.70 A poorly designed study might attribute spending reductions to wellness programs when they are actually driven by secular changes in benefit design. Safeway made this error, for example, when it attributed a spending slowdown to its wellness program instead of a shift to greater employee cost-sharing.

In a 2013 Health Affairs paper, Jill Horwitz and coauthors proffered a conceptual framework outlining the necessary conditions for a wellness program to work as intended—by reducing costs by promoting health.71 First, the authors stipulate, a given program must be successfully designed to identify employees with targetable health risks; these employees must

66.  Id. at 358.
67.  Baicker et al., supra note 51, at 5-7.
68.  Osilla et al., supra note 59, at e71.
69.  Gail Jensen et al., The New Dominance of Managed Care: Insurance Trends in the 1990’s, 16 HEALTH AFF. 125, 134 (1997).
70.  Elliot S. Fisher & Peter V. Lee, Toward Lower Costs and Better Care—Averting a Collision between Consumer-and Provider-Focused Reforms, 374 NEW ENG. J. MED. 903, 904 (2016).
be more expensive to employers than those without health risks. 72 Next, the incentives offered—typically financial in nature—must, in fact, motivate employees to improve their health behaviors. 73 Lastly, improvements in their health behaviors must necessarily lead to cost savings for employers. The authors were not convinced that available evidence firmly substantiates any of these assumptions, let alone all of them. 74 Instead of improving employee health, the authors suggest, wellness programs that rely on financial incentives may function by shifting costs to employees with chronic health conditions, disproportionately penalizing sicker employees. 75 In addition, to the extent that incentives shift costs from employer to employee, wellness program evaluations might overstate reductions in health spending.

Economically speaking, providing participation rewards is considered equivalent to having penalties in place. Indeed, to the extent permitted, employers might prefer the use of penalties over rewards—though identical in a rational economic sense, empirical evidence has demonstrated that penalties are more successful in inducing behavior change than rewards. 76 Furthermore, the authors point out, as wellness programs with incentives become more commonplace, we might expect this financial risk to be distributed in a regressive fashion; many of the chronic conditions’ risk factors of interest are disproportionately prevalent among low-income and minority populations, as well as the elderly. 77

It is also worth highlighting the uneven distribution and “stickiness” of health spending in general. Among the privately insured, under-sixty-five population, the bottom fifty percent of spenders represented less than ten percent of all health expenditures, while the top one percent of spenders represent fourteen percent of spending. 78 Hirth and coauthors examined the persistence of high spending in this population and found that about one-third of spenders in the top ten percent remained in that decile five years later. 79 This concentration of expenditures suggests that we should expect broad-based wellness programs to be substantially less efficient than programs designed to target high-cost individuals.

72. Id. at 471.
73. Id.
74. Id. at 474.
75. Id. at 473.
76. Mitesh S. Patel et al., Framing Financial Incentives to Increase Physical Activity Among Overweight and Obese Adults: A Randomized, Controlled Trial, 164 ANN. INTERN. MED. 385 (2016).
79. Id.
V: WELLNESS PROGRAMS AND DISCRIMINATION

Setting aside their questionable efficacy, wellness programs are difficult to reconcile with a number of federal laws that aim to restrict employers’ ability to discriminate among their employees in the provision of health insurance. After all, the point of wellness programs is to discriminate. Those employees who adhere to the wellness program—whether by filling out a detailed health assessment, taking a blood test, or attending smoking-cessation courses—pay less for their health coverage. Those who do not pay more.

HIPAA is the most prominent of the laws that discourage employers from discriminating among employees. Because it prohibits employers from crafting eligibility rules or adjusting a worker’s premiums based on “health status-related factors,” Congress had to exempt health-contingent wellness programs from HIPAA in order to enable their adoption. But Congress has created no such exemption for a number of other laws—including Title VII, the Genetic Information Nondiscrimination Act (“GINA”), and the Americans with Disabilities Act (“ADA”)—that also discourage discriminating among employees. Congress’s apparent enthusiasm for wellness programs is thus in tension with its longstanding commitment to equal treatment in the workplace. That tension has created challenges for employers and for the Equal Employment Opportunity Commission (“EEOC”), which has primary responsibility for implementing antidiscrimination laws.

Health assessments have been a recurring source of confusion. Such assessments are often quite detailed and touch on sensitive subjects. At the same time, employers often bring financial pressure to bear on employees to fill them out. Penn State, for example, tried to impose a one-hundred-dollar monthly insurance surcharge for failing to fill out a health assessment that asked, among other things, “whether employees have recently had problems with a supervisor, a separation or a divorce, their finances or a fear of job loss; another question asks female employees whether they plan to become pregnant over the next year.” At a raucous faculty meeting, covered in the New York Times, employees rebelled against requests to share that information.

Although Penn State beat a hasty retreat, the episode brought to light the tension between wellness programs and antidiscrimination law. Can

health assessments be squared with laws that aim to protect workers from discriminatory practices? Is it legal for employers to probe so deeply into their employees’ medical histories?

The Pregnancy Discrimination Act

Offering incentives for employees to take health assessments does not violate Title VII, which prohibits discrimination on the basis of race, religion, national origin, age, or gender.\footnote{42 U.S.C. § 2000(e)-2(a) (2012).} Incentives are questionable, however, for health assessments that ask about pregnancy or family planning. The Pregnancy Discrimination Act (“PDA”) was enacted in 1978 to clarify that Title VII’s prohibition on sex discrimination in the workplace also extends to pregnancy-related discrimination.\footnote{42 U.S.C. § 2000e(k).}

By its terms, Title VII does not forbid employers from asking about an employee’s pregnancy plans.\footnote{EQUAL EMP’T OPP. COMM’N, INFORMAL DISCUSSION LETTER ON TITLE VII: PREGNANCY DISCRIMINATION IN JOB INTERVIEWS (Feb. 2, 2007), available at https://www.eeoc.gov/eeoc/foia/letters/2007/pregnancy_discrimination.html.} To be liable under the PDA, an employer would have to fire the employee or otherwise take an adverse employment action against her because of her pregnancy status.\footnote{See Kennedy v. Schoenberg, Fisher, & Newman Ltd., 140 F.3d 716, 722 (7th Cir. 1998) ("An unlawful employment practice is established whenever pregnancy is a motivating factor for an adverse employment decision.").} Nonetheless, because the fact that an employer has asked about pregnancy “may indicate a possible intent to discriminate based on pregnancy,” the EEOC “recommend[s] that employers avoid these types of questions.”\footnote{Pregnancy Discrimination – FAQs, EQUAL EMP’T OPP. COMM’N, https://www.eeoc.gov/yous/health/pregnancy2.html.}

Many wellness programs buck that advice, perhaps because they generally do not share identifiable data with employers that might enable pregnancy discrimination.\footnote{Julie Appleby, Pregnancy—A Touchy Subject in Employee Wellness Health Assessments, KAISER HEALTH NEWS (Aug. 4, 2015), http://khn.org/news/pregnancy-a-touchy-subject-in-employee-wellness-health-assessments/.} Time will tell if legal exposure or employee blowback leads wellness programs to drop pregnancy-related questions from their health assessments.

Genetic Information Nondiscrimination Act

In contrast to Title VII, GINA explicitly restricts what sorts of information employers can solicit from their employees. Under GINA, an employer may not “request, require, or purchase genetic information for underwriting purposes.”\footnote{29 U.S.C. § 1182(d)(1) (2012).} The EEOC has interpreted this provision to mean that a refusal to disclose genetic information cannot affect how much an

---

87. See Kennedy v. Schoenberg, Fisher, & Newman Ltd., 140 F.3d 716, 722 (7th Cir. 1998) ("An unlawful employment practice is established whenever pregnancy is a motivating factor for an adverse employment decision.").
employee pays for health coverage. Because adherence to a wellness program affects the cost of employer-sponsored coverage, employers cannot offer a financial incentive for employees to complete a health assessment requesting the disclosure of genetic information.

What is genetic information? In general, it is defined narrowly enough to exclude conventional medical histories or screenings, which do not inquire into the genetic basis for diseases. Significantly, however, genetic information includes the “manifestation of a disease or disorder in family members of an individual.” The reason is simple: a family member’s illness may suggest a genetic propensity in the individual employee. So asking an employee whether she has ever had breast cancer does not violate GINA, but asking whether her sister or mother has ever had breast cancer does. Yet, until recently, such questions were apparently common in health assessments.

What about spouses? Because an employee’s spouse does not share a genetic background with the employee, the spouse’s disease history is unlikely to enable discrimination against the employee on the basis of her genetic information. Plus, employers that offer family coverage have a genuine financial interest in the health of their employees’ spouses. Some employers, for example, have adopted wellness programs imposing a substantial “tobacco surcharge” on employees with a spouse who smokes.

Seeing no reason to prohibit the practice, the EEOC finalized a rule in May 2016 “clarifying” that employers can offer substantial penalties—thirty percent of the price of self-only coverage—in exchange for information relating to a spouse’s manifestation of a disease or disorder.

Seeing no reason to prohibit the practice, the EEOC finalized a rule in May 2016 “clarifying” that employers can offer substantial penalties—thirty percent of the price of self-only coverage—in exchange for information relating to a spouse’s manifestation of a disease or disorder. Because the average price of self-only coverage was $6251 in 2014, an average employee could face a penalty of up to $1875. These financial inducements cannot be used to solicit any information about the diseases or disorders of an employee’s children, since those may signal something about the

98. KAISER FAMILY FOUND. & HEALTH RESEARCH & EDUC. TRUST, supra note 9, at 7.
employee’s own genetic information, but information about a spouse’s ailments is fair game.

The only problem is that the EEOC’s rule appears to contravene GINA. The statute uses absolute language to prohibit employers from requesting genetic information that will affect the rates that employees pay for health coverage. And the statute could not be clearer that genetic information includes the “manifestation of a disease or disorder in family members of an individual,” spouses included. The EEOC cannot add an exception to the statute because it believes it would be sensible to do so. It is not even clear that the EEOC is correct that a spouse’s medical history raises “minimal” risk of genetic discrimination against the employee. That history, for example, might suggest that the employee’s children, who may be covered on her health plan, have a genetic predisposition to certain diseases. That predisposition might tempt employers to discriminate against the employee. Congress is free to guard against that risk, and it has done so in GINA. The EEOC’s rule therefore appears vulnerable to legal challenge from an employee who suffers a penalty for refusing to share her spouse’s medical information.

Americans with Disabilities Act

The debate over asking about a spouse’s health status is a minor issue when compared to the difficulties that the ADA poses for health assessments. To avoid the risk of disability discrimination, the ADA prohibits employers from conducting medical examinations of their employees, including medical histories, unless they are “voluntary.” Most health assessments include detailed questions about employees’ medical histories; as such, the ADA requires those assessments to be offered on a voluntary basis.

100. 29 U.S.C. § 1182 (d)(1) (“A group health plan, and a health insurance issuer offering health insurance coverage in connection with a group health plan, shall not request, require, or purchase genetic information for underwriting purposes”).
101. 42 U.S.C. § 2000ff(3)(B); GINA’s definition of “family member” includes the “dependent[s]” of an individual, with the word “dependent” defined to track its use in a provision of the U.S. Code governing group health plans. 42 U.S.C. § 2000ff(3)(A); That provision, in turn, defines an individual’s dependent to include “a dependent of the individual through marriage.” 29 U.S.C. §1181(f)(2)(A)(iii). In November 2014, the EEOC’s regional office in Minnesota unsuccessfully sought a preliminary injunction to stop a wellness program from seeking medical information from an employee’s spouse. As the office argued, “[m]edical information relating to manifested conditions of spouses is family medical history—or genetic information—under GINA.” Petition for a Temporary Restraining Order and Preliminary Injunction, at 9, EEOC v. Honeywell Intern., Inc., No. 14-4517 (D. Minn. Nov. 27, 2014).
That presents a conundrum. Can a health assessment be “voluntary” if an employee faces a financial penalty for refusing to take it? In its 2016 rulemaking, the EEOC answered that question affirmatively, concluding that ACA-compliant wellness programs do not violate the ADA. Employers are therefore free, under the rule, to offer inducements of up to thirty percent of the cost of the employee’s coverage to encourage the completion of health assessments.

Once again, however, the EEOC’s rule appears untenable. The agency defends its interpretation with reference to the claim that the agency’s job is “to provide as much consistency as possible” between the ADA and the ACA. In this, the EEOC could have in mind two different legal arguments. Neither is compelling.

First, the EEOC might believe that the ACA implicitly created a safe harbor from the ADA for practices that the ACA explicitly authorizes. The intuition is that Congress would not have allowed employers to establish robust wellness programs if most of those programs would violate the ADA. Instead, Congress should be taken to have narrowed the scope of the ADA when it comes to asking about medical histories.

A well-established rule of interpretation, however, holds that Congress cannot be understood to repeal its prior handiwork by implication. The rule exists for good reason. Courts and agencies cannot repeal laws; only Congress can do that. By the same token, courts and agencies cannot ignore a duly enacted law just because they suspect a later Congress would have preferred to do away with it. And who knows what Congress’s attitude was toward the ADA? Congress may not have understood that wellness programs raise concerns about disability discrimination. It is not at all clear how Congress would have resolved the tension between the ACA and the ADA had it considered the matter.

Until Congress clarifies matters, the proper approach is to say that the ACA authorizes wellness programs only to the extent that they do not violate the ADA. The statutes are not in irreconcilable conflict. Wellness programs that discourage smoking, for example, will not run afoul of the ADA since nicotine addiction is probably not a disability within the meaning of the statute. Similarly, wellness programs could drop their health

---

105.  Id. at 31132.
assessments in order to comply with the ADA. If that inhibits certain types of wellness programs, it is up to Congress to come up with a fix, not the EEOC.

Second, the EEOC might believe that, because the word “voluntary” can be interpreted more or less restrictively, it is appropriate for the agency to select the interpretation that fits best with other statutes, including the ACA. That is true, as far as it goes: if at all possible, statutes enacted at different times should be interpreted to cohere with one another. To put it in the language of administrative law, agencies can properly take into account later-enacted statutes at the second step of **Chevron**. But the EEOC’s argument only works if the word “voluntary” is amenable to the construction that the agency has created. If it is not, the EEOC cannot adopt that interpretation, even if doing so would harmonize the ADA with the ACA. In administrative law terms, such an interpretation would flunk **Chevron**’s first step. The question thus boils down to whether the EEOC can reasonably say that a health assessment is still “voluntary” if there is a substantial financial penalty for refusing to take it. Notice that the ACA has no bearing on that inquiry. It is purely a question of the meaning of the ADA.

That is where the EEOC’s argument falls apart. The average premium for a family plan in 2015 was $17,545; thirty percent of that is $5263. Under the EEOC’s rule, then, an employer can dock an employee with family coverage’s pay more than five thousand dollars if she refuses to undergo a health assessment. No reasonable person would view a health assessment as “voluntary” when backed by a draconian penalty. Indeed, until this latest rule, the EEOC viewed any penalty as problematic; in enforcement guidelines, the agency explained that an assessment was voluntary only “as long as an employer neither requires participation nor penalizes employees who do not participate.” The agency is free, in rulemaking, to adjust its understanding of what qualifies as voluntary. But it is not free to close its eyes to the coercive effect of exorbitant financial penalties.

The EEOC’s rule is thus legally vulnerable. Whether it will be successfully challenged remains to be seen, but Congress may ultimately need to resolve the tension between its avid support for wellness programs and its efforts to stamp out disability discrimination.

110. See PDK Labs v. DEA, 438 F.3d 1184, 1192 (D.C. Cir. 2006).
112. **Kaiser Family Found.**, *supra* note 9, at 1.
VI: CONCLUSION

The evidence does not support the unbridled enthusiasm for wellness programs that has swept the country. Some wellness programs that focus on managing chronic illnesses may be effective, but the lifestyle-management programs that are now ubiquitous in the American workplace almost certainly are not. Reflecting the degree to which skepticism is borne out by the empirical literature, wellness-industry executives are reportedly reimagining the value proposition of their programs to de-emphasize return on investment.114

What is more, some of those programs appear to violate the ADA, at least where their financial inducements leave employees with little practical choice of whether to participate in a health assessment. Should firms hope to use wellness programs to minimize healthcare spending, they would do well to prioritize disease management over lifestyle management. Similarly, insofar as the federal government aims to structure regulations to support effective wellness programs, it should orient its policies to favor disease management. No good reason exists for federal policy to support the entrenchment and expansion of empirically unsubstantiated lifestyle-management programs. In particular, the EEOC’s efforts to insulate wellness programs from the ADA should be reconsidered; the financial penalties that the ACA permits for an employee’s non-compliance with a wellness program are so large that they cannot reasonably be viewed as voluntary within the meaning of the ADA. Though the EEOC judges them to be non-coercive, this is a departure from its prior view of financial penalties.

Even disease-management programs raise concerns. The durable connection between employment and health coverage may make it inevitable that employers will seek to become stewards of their employees’ health. But disease-management programs target employees with chronic conditions, many of whom are disabled under federal law. The ADA likely is not an impediment to such programs: it prohibits “classifying” disabled workers in a way “that adversely affects the[ir] opportunities or status,”115 and it is hard to see how a wellness program that rewards the chronically ill for participating “adversely” affects them. But even if the law is no obstacle, many people find it unsettling that employers can interfere in their disabled employees’ private medical decisions. Firms assertively entering the disease-management space may give rise to the specter—whether or not it gives rise to the corresponding reality—that employers could predicate other decisions upon employee health. The rise of such concerns may provide even more reason to question the wisdom of linking coverage to employment.

The evidence favoring disease-management programs is not conclusive. In the Medicare population, in particular, such programs do not


appear to have met with consistent success. The Congressional Budget Office evaluated major demonstration projects in care coordination and disease management in Medicare, and none has achieved spending or quality targets. One possible explanation for this discrepancy is that findings from the elderly Medicare population do not generalize well to working-age Americans who have access to insurance through their employers; perhaps chronic conditions, targeted at earlier stages, are more responsive to intervention and management. Alternatively, disease-management strategies offered by employers may be different and more effective than interventions in the Medicare demonstrations. Or it is possible that the studies finding strong return on investment for employers’ disease-management efforts were anomalies. These areas are ripe for future research.

Ultimately, however, the evidence on wellness programs is discomfiting. Most programs do not work; some raise serious legal concerns. It is time for employers and policymakers to rethink their enthusiasm for the wellness movement.
