

Workplace Wellness Recognition for Optimizing Workplace Health

A Presidential Advisory From the American Heart Association

Gregg C. Fonarow, MD, FAHA, Chair; Chris Calitz, MPP; Ross Arena, PhD, PT, FAHA; Catherine Baase, MD; Fikry W. Isaac, MD, MPH, FAHA; Donald Lloyd-Jones, MD, ScM, FAHA; Eric D. Peterson, MD, MPH, FAHA; Nico Pronk, PhD; Eduardo Sanchez, MD, MPH; Paul E. Terry, PhD; Kevin G. Volpp, MD, PhD; Elliott M. Antman, MD, FAHA;
on behalf of the American Heart Association

Abstract—The workplace is an important setting for promoting cardiovascular health and cardiovascular disease and stroke prevention in the United States. Well-designed, comprehensive workplace wellness programs have the potential to improve cardiovascular health and to reduce mortality, morbidity, and disability resulting from cardiovascular disease and stroke. Nevertheless, widespread implementation of comprehensive workplace wellness programs is lacking, and program composition and quality vary. Several organizations provide worksite wellness recognition programs; however, there is variation in recognition criteria, and they do not specifically focus on cardiovascular disease and stroke prevention. Although there is limited evidence to suggest that company performance on employer health management scorecards is associated with favorable healthcare cost trends, these data are not currently robust, and further evaluation is needed. As a recognized national leader in evidence-based guidelines, care systems, and quality programs, the American Heart Association/American Stroke Association is uniquely positioned and committed to promoting the adoption of comprehensive workplace wellness programs, as well as improving program quality and workforce health outcomes. As part of its commitment to improve the cardiovascular health of all Americans, the American Heart Association/American Stroke Association will promote science-based best practices for comprehensive workplace wellness programs and establish benchmarks for a national workplace wellness recognition program to assist employers in applying the best systems and strategies for optimal programming. The recognition program will integrate identification of a workplace culture of health and achievement of rigorous standards for cardiovascular health based on Life's Simple 7 metrics. In addition, the American Heart Association/American Stroke Association will develop resources that assist employers in meeting these rigorous standards, facilitating access to high-quality comprehensive workplace wellness programs for both employees and dependents, and fostering innovation and additional research. (*Circulation*. 2015;131:e480-e497. DOI: 10.1161/CIR.000000000000206.)

Key Words: AHA Scientific Statements ■ cardiovascular system ■ exercise ■ health ■ nutritional status
■ prevention and control ■ quality assurance, health care ■ smoking cessation ■ weight loss

There are an estimated 155 million working-age, largely employed, adults in the United States,^{1,2} which creates a large captive population that can potentially benefit from ongoing engagement with respect to health and wellness. Therefore, the workplace is an important setting for

cardiovascular disease (CVD) and stroke risk assessment and prevention.³⁻⁵ Despite the potential for implementing broad primary and secondary prevention interventions, a 2004 survey estimated that only 6.9% of US employers offered comprehensive workplace wellness programs (CWPPs).⁶ Although a

The opinions expressed in this article are not necessarily those of the editors.

The American Heart Association makes every effort to avoid any actual or potential conflicts of interest that may arise as a result of an outside relationship or a personal, professional, or business interest of a member of the writing panel. Specifically, all members of the writing group are required to complete and submit a Disclosure Questionnaire showing all such relationships that might be perceived as real or potential conflicts of interest.

This advisory was approved by the American Heart Association Science Advisory and Coordinating Committee on February 27, 2015, and the American Heart Association Executive Committee on March 9, 2015. A copy of the document is available at <http://my.americanheart.org/statements> by selecting either the "By Topic" link or the "By Publication Date" link. To purchase additional reprints, call 843-216-2533 or e-mail kelle.ramsay@wolterskluwer.com.

The American Heart Association requests that this document be cited as follows: Fonarow GC, Calitz C, Arena R, Baase C, Isaac FW, Lloyd-Jones D, Peterson ED, Pronk N, Sanchez E, Terry PE, Volpp KG, Antman EM; on behalf of the American Heart Association. Workplace wellness recognition for optimizing workplace health: a presidential advisory from the American Heart Association. *Circulation*. 2015;131:e480-e497.

Expert peer review of AHA Scientific Statements is conducted by the AHA Office of Science Operations. For more on AHA statements and guidelines development, visit <http://my.americanheart.org/statements> and select the "Policies and Development" link.

Permissions: Multiple copies, modification, alteration, enhancement, and/or distribution of this document are not permitted without the express permission of the American Heart Association. Instructions for obtaining permission are located at http://www.heart.org/HEARTORG/General/Copyright-Permission-Guidelines_UCM_300404_Article.jsp. A link to the "Copyright Permissions Request Form" appears on the right side of the page.

© 2015 American Heart Association, Inc.

Circulation is available at <http://circ.ahajournals.org>

DOI: 10.1161/CIR.000000000000206

contemporary survey found that $\approx 77\%$ of employers, including all large employers, reported offering workplace wellness programs,⁷ definitions of wellness programs vary, and there is a lack of recent evidence of the prevalence of comprehensive programs. To be considered comprehensive, programs must have all 5 elements described by Healthy People 2010: health education, supportive social and physical environments, integration into other organizational initiatives, linkage to other related programs, such as employee health and safety programs, and wellness screenings.⁶ Thus, CWWPs have the potential to improve health behaviors at the individual level and to enable structural change at the organizational level to bring about a healthy workplace and workforce. However, the presence of a workplace wellness program does not guarantee its effectiveness, and many programs may be ineffective because of poor design, implementation, and evaluation.^{2,8–11}

To realize the full potential of workplace wellness programs, there is a need to develop, implement, disseminate, and sustain high-quality models, that is, CWWPs. Several employer health management checklists or “scorecards” and workplace wellness recognition programs have been developed to improve organizational accountability for employee health and wellness. However, none of the currently available program assessment models are specifically focused on ideal cardiovascular health (CVH), which is imperative from a population health and healthcare economics standpoint. Furthermore, there is limited scientific evidence related to the correlations among different scorecards and recognition systems, program quality, and improvements in employee health over time.

The American Heart Association (AHA)/American Stroke Association (ASA) is uniquely positioned as a national professional organization that is focused on the prevention and treatment of CVD and stroke to play an important role in defining and increasing the adoption of CWWPs. In fact, a key strategic impact goal for the AHA/ASA is to improve the CVH of all Americans by 20% while reducing deaths resulting from CVD and stroke by 20% by the year 2020. Although achievement of these goals requires a life-course approach beginning in childhood, focusing on effective health improvement strategies with working-age adults in the workplace setting is a vital part of the continuum. Recognizing the integral role that workplace wellness plays in achieving the 2020 impact goal, the AHA/ASA is invested in leading efforts to ensure that standardized, high-quality, and thus effective programming is available to employees. A key aspect of increasing the effectiveness of CWWPs is establishing broadly adopted measures and benchmarks that can be used to guide quality assessment and improvement. The objectives of this advisory are to assess the state of widely used scorecards and recognition programs, to make recommendations for an AHA/ASA national workplace wellness recognition program focused on CVH and CVD/stroke prevention, and to describe how the AHA/ASA programs would be differentiated from and provide incremental value to current recognition programs.

Background

Despite impressive reductions in mortality from CVD and stroke as a result of improved prevention and treatment

strategies, these 2 conditions remain the first and fifth leading causes of death in the United States, respectively.^{12–14} An estimated 730 000 people die of heart disease and stroke each year, which represents 29% of all deaths in the United States.¹³ Substantial disparities in mortality and CVD incidence by race-ethnicity have been documented, with a higher burden among blacks and Hispanics.¹⁴ Furthermore, the aging population and the high prevalence of unhealthy lifestyle-related factors such as physical inactivity, poor nutrition, and obesity are projected to further increase the burden of CVD, stroke, and other noncommunicable diseases (NCDs).^{14–16} One study estimates that increased adolescent obesity alone will increase the prevalence of coronary heart disease in the range of 5% to 16% by 2035, with >100 000 excess cases of coronary heart disease–attributable deaths during the same period.¹⁷ Unless effective prevention strategies are implemented, the direct healthcare costs of CVD are projected to triple from \$273 billion in 2010 to \$818 billion in 2030, and indirect costs associated with lost productivity are predicted to increase from \$172 billion to \$276 billion during the same period.¹⁸

The AHA/ASA’s 2020 Impact Goal sets out strategies for improving CVH and decreasing cardiovascular mortality. Drawing on extensive analysis of all available evidence, the AHA/ASA has developed a comprehensive set of metrics to define CVH. The metrics cover 7 domains, called Life’s Simple 7, that define CVH: smoking status, diet quality, physical activity levels, body mass index, blood pressure, blood cholesterol, and fasting blood sugar. These 7 metrics are classified into 3 clinical strata: ideal, intermediate, and poor (Table 1).¹⁹ An assessment tool (My Life Check)²⁰ and composite score (range, 0–10) based on Life’s Simple 7 reflecting CVH have been developed and validated. Individuals with ideal levels for all 7 metrics are considered to have ideal CVH; however, several surveys have demonstrated that very few Americans have ideal CVH.^{21–25} Only 18% of Americans have ≥ 5 metrics with ideal levels, with lower prevalence among men (11%) compared with women (25%).¹⁴ These data are corroborated by other investigations using similar measures, such as the Optimal Lifestyle Metric, which focused on the summary health scores of 4 healthy behaviors, namely the simultaneous adherence to abstinence from smoking, adequate physical activity, eating 5 fruits and vegetables daily, and consuming a limited or no amount of alcohol.²⁶ These 4 healthy behaviors have proved difficult to sustain for most Americans and are responsible for almost 40% of all deaths, nearly 80% of chronic diseases, and almost 75% of all healthcare expenditures in the United States.²⁷ Increased rates of mental disorders are also increasingly contributing to greater disability in the US population.²⁸ Conversely, adherence to this set of 4 healthy behaviors has been associated with an increase in healthy life expectancy of 14 years.²⁹ Among employees, varying levels of adherence to these behaviors show a dose-response relationship to lower short-term (2 years of follow-up) incidence of coronary heart disease, diabetes mellitus, dyslipidemia, hypertension, and back pain.²⁶ Furthermore, adherence to these healthy behaviors was associated with a significantly better emotional health state, as measured by feelings of depression, risk for high stress, and impact of emotional health on daily life.³⁰ Therefore, the AHA/ASA Impact

Table 1. Life's Simple 7: Definitions of Poor, Intermediate, and Ideal CVH in the AHA/ASA 2020 Goals for Adults ≥20 Years of Age

	Level of Health for Each Metric		
	Poor	Intermediate	Ideal
Current smoking	Yes	Former ≤12 mo	Never or quit >12 mo; never tried; never smoked whole cigarette
BMI*	≥30 kg/m ²	25–29.9 kg/m ²	18.5–25 kg/m ²
PA†	None	1–149 min/wk moderate or 1–74 min/wk vigorous 1–149 min/wk moderate+2 times vigorous >0–<60 min of moderate or vigorous every day	≥150 min/wk moderate or ≥75 min/wk vigorous ≥150 min/wk moderate+2 times vigorous ≥60 min of moderate or vigorous every day
Healthy diet pattern (No. of components)‡	0–1	2–3	4–5
Total cholesterol	≥240 mg/dL	200–239 mg/dL or treated to goal	<200 mg/dL
Blood pressure	SBP ≥140 mm Hg or DBP ≥90 mm Hg	SBP 120–139 mm Hg or DBP 80–89 mm Hg or treated to goal	SBP ≤120 mm Hg DBP <80 mm Hg
Fasting plasma glucose	≥126 mg/dL	100–125 mg/dL	<100 mg/dL

AHA/ASA indicates American Heart Association/American Stroke Association; BMI, body mass index; CVH, cardiovascular health; DBP, diastolic blood pressure; PA, physical activity; and SBP, systolic blood pressure.

*Represents appropriate energy balance (ie, dietary quantity and PA to maintain normal body weight).

†My Life Check question to assess PA is, “How much physical activity do you get each week: 1) moderate 2) vigorous?”

‡In the context of a healthy dietary pattern that is consistent with a Dietary Approaches to Stop Hypertension (DASH)-type eating pattern, to consume ≥4.5 cups/d of fruits and vegetables, ≥2 servings/wk of fish, and ≥3 servings/d of whole grains and no more than 36 oz/wk of sugar-sweetened beverages and 1500 mg/d sodium.

Goal 2020 represents an important shift from focusing on clinical disease management to improving CVH by promoting healthy lifestyle behaviors, addressing modifiable health behaviors in addition to risk biomarkers, and implementing both individual-level and population-based health promotion strategies that improve population-level CVH.³¹

An underlying goal of the Patient Protection and Affordable Care Act³² provisions relating to workplace wellness is to address the documented association between workers' modifiable risk factors and increased healthcare costs.^{33,34} Although chronic NCDs currently account for ≈84% of annual healthcare expenditures, two thirds of total healthcare dollars are spent on treating NCDs among working-age adults <65 years of age.³⁵ An estimated 20% to 30% of companies' annual healthcare expenditures are spent on employees with 10 modifiable risk factors. These include the 7 risk factors that comprise Life's Simple 7: cigarette smoking, obesity, hypertension, dyslipidemia, physical inactivity, poor diet, and diabetes mellitus.^{14,33} In addition, 3 other factors, depression, stress, and overconsumption of alcohol, are important risk factors inversely associated with CVH and positively associated with higher medical expenditures.³³ A study by Bolnick and colleagues³⁶ estimated that the total healthcare expense per person for working-age adults is \$3534, and that up to 20% of these direct costs could be saved if the modifiable risk factors of NCDs among workers were reduced to their theoretical minimums.

Purpose of CWPPs

Framework for CWPPs

The purposes of investing in CWPPs are to improve employee health and well-being, to save direct and indirect costs associated with poor health and NCDs, and to generate

value through additional health and non-health-related outcomes, all achieved with a process that allows the creation of a workplace culture conducive to these goals.^{10,11,37–42} However, not all workplace wellness programs are created equal. The Patient Protection and Affordable Care Act does not define or establish a quality standard for workplace wellness programs and requires only that programs be “reasonably designed to promote health or prevent disease.”^{32,43} In the absence of guidance on this issue, it is reasonable to identify best practices that have been associated with successful program outcomes in the design of workplace wellness programs. Based on a review of the literature that considered primary research on this topic⁴⁴ and insights stemming from industry reports and consensus statements, an analysis identified 44 best practices that are clustered into 9 best practice principles for program design (Table 2).^{40,45}

This review recognizes the 5 elements of a CWPP as defined by Healthy People 2010⁶ and is informed by the Essential Elements of Effective Workplace Programs and Policies for Improving Worker Health and Wellbeing list generated by an expert panel convened by the National Institute for Occupational Safety and Health.⁴⁶ Insights from behavioral economics also indicate that, to the extent that programs involve financial incentives, recognizing triggers for judgment/assumption-based decision errors is important in designing programs to be as effective as possible.^{47,48}

The Regulatory Context

Specific to compliance, Congress revised the law related to workplace wellness programs in the Patient Protection and Affordable Care Act. Workplace wellness programs are defined as programs offered by employers that are “designed to promote health or prevent disease.”^{49,50} Regulations published in 2013 differentiate between participatory wellness

Table 2. Nine Best Practice Principles of CWWPs

Design Principle	Description
Leadership	Elements that set program vision and organizational policy, ensure resources, support implementation, and connect programs to business goals
Relevance	Elements that address factors critical to participation and employee engagement
Partnership	Collaborative efforts with other stakeholders, including unions, vendors, and community organizations
Comprehensiveness	Elements consistent with the Healthy People 2010 definition of comprehensiveness
Implementation	Elements that ensure a planned, coordinated, and fully executed work plan and process tracking system
Engagement	Promotion of an ongoing connection between employees and the program that creates trust and respect and builds a culture of health
Communications	Elements that ensure a strategic approach to making the program visible on an ongoing basis
Data driven	The intentional use of data in measuring, integrating, evaluating, and reporting on the program and its improvement over time
Compliance	Elements that ensure that the program meets regulatory requirements and protects personal information of employees and participants

CWWP indicates comprehensive workplace wellness program.

programs, which do not offer a reward or do not require an individual to satisfy a health-related standard to qualify for a reward, and health-contingent wellness programs, which can be either outcome based (individuals either attain or maintain specific health outcomes or an alternative standard to obtain rewards) or activity only (completion of an activity or an alternative standard to obtain a reward).⁵¹ Reporting and otherwise using an individual's personal health information, including information obtained from a workplace wellness program, requires compliance with numerous laws and regulations. These include the Health Insurance Portability and Accountability Act, the Americans with Disabilities Act, the Genetic Information Nondiscrimination Act, and the Employment Retirement Income Security Act, as well as state regulatory requirements. Employees may be hesitant to participate in a workplace wellness program if they have concerns about how their personal health information will be used and protected. Thus, employers should ensure that their policies related to the protection and use of personal health information and the regulatory landscape are transparently disclosed to employees.^{3,52,53}

The Health and Economic Outcomes of Workplace Wellness Programs

The scientific literature demonstrates that participation in a worksite wellness program is most likely to improve population-level health outcomes when programs are defined as comprehensive, multilevel, and multicomponent programs; designed according to the 9 best practice principles described above; informed by evidence of effectiveness; and fully executed and evaluated.^{10,11,37,38,44} The AHA/ASA issued a policy statement recommending that CWWPs should incorporate a screening component (including assessing CVH status as

described by Life's Simple 7), which is followed up by comprehensive and high-quality interventions aimed at improving CVH metrics.³ However, when studies or reviews on the subject include programs that are poorly designed, not informed by evidence of effectiveness, inadequately resourced, and not fully executed, marginal/neutral benefits or even negative results are potentially obtained.^{9,11} This makes clear the need for definitions and standards about what constitutes a bona fide workplace wellness program that is "reasonably designed" to produce positive health outcomes.^{2,11}

When economic outcomes are considered, similar logic applies. Well-designed programs appear to generate savings from reduced healthcare expenditures and reduce absenteeism,^{37,38,44} whereas poorly designed and ineffective programs may have a neutral or negative financial impact.^{54,55} Baicker and colleagues³⁷ estimate the healthcare cost return on investment (ROI) to be \$3.27 for every dollar spent on worksite wellness programs and the absenteeism ROI to be \$2.73 for every dollar spent. Other research has demonstrated that the level of ROI is associated with the rigor of the research methods used and the comprehensiveness and duration of the program interventions.^{56,57} Furthermore, there is strong evidence that reducing NCD risk among working-age adults could reduce healthcare costs.^{2,58} However, the National Business Group on Health estimates that employers allocate <2% of their total healthcare expenditures to prevention programs.⁵⁹ This persistent underinvestment in prevention and health promotion may reflect the historic undervaluation of prevention.^{1,2,60-62} As both Goetzel et al¹¹ and Volpp and colleagues^{11,63} have pointed out, few employer-provided programs are expected to produce a positive ROI, yet workplace wellness programs are often held to a higher standard than medical treatments to justify their worth to employers. This is true despite the fact that the primary goal of health services is more often to improve health, not to save money. Moreover, cost is often not considered in coverage decisions; thus, many accepted treatment options lack cost-effectiveness. This double standard leads to overinvestment in low-value treatments and underinvestment in prevention. A few research studies published in the past 2 years using different study designs reported mixed results on net cost savings from workplace wellness programs.^{9,55,64} Limited investment in research, the overuse/misuse of ROI that has tended to narrowly focus on direct healthcare costs and absenteeism, and some methodologically weak research are significant obstacles to making the workplace a more effective and widely adopted site for prevention and health promotion.^{2,11}

The Business Case for Workplace Wellness in the Community Context

The decision to invest in the health of employees has an additional benefit for their families and the communities where they live, creating far-reaching benefits for the company. For example, companies that intentionally and strategically invest resources in this manner may be seen as employers of choice, experience less turnover, increase their ability to attract and retain top talent, increase the likelihood to achieve safety targets, enhance manufacturing reliability, increase employee engagement and job satisfaction, and

manage healthcare costs better.^{10,65} Significant barriers may exist, however, for companies to justify such investments. These barriers include a lack of a sufficiently compelling and well-understood business case, the pervasive belief that preventive services must save money to be worthwhile (as opposed to improving health like other healthcare services), lack of insight about what is required to successfully connect with local community resources, the complexity of working with multiple stakeholders in a collaborative and long-term initiative, and clarity on the most effective implementation models.⁶⁵ In addition, a clear lack of professional preparation and leadership with respect to some workplace wellness programs has been noted.² Leaders should clearly demonstrate support of CWWPs, both vocally and through their actions in implementing and sustaining initiatives. A culture of health can be defined as a workplace culture that supports health. According to the Centers for Disease Control and Prevention (CDC), a culture of health in the workplace requires that employee health and safety be valued, supported, and promoted through workplace health programs, policies, benefits, and environmental supports.⁶⁶ Employees who feel that a culture of workplace wellness is strongly supported and encouraged by leadership may be more likely to participate in programs offered. Succinctly stated, there is a greater need for CWWP champions at all levels within an organization.

Current State of Workplace Wellness Scorecards and Recognition Programs

Companies seeking guidance on how to create a healthy worksite and workforce have access to a number of organizational tools that have been developed over the past 2 decades. Scorecards generally refer to self-assessment tools that help employers to determine whether their programs are consistent with industry best practices. Recognition programs are generally award-based initiatives offered by professional organizations or societies interested in celebrating excellence in wellness programming and promoting program quality and performance. These programs typically use organizational checklists or scorecards as the basis of tiered recognition or accreditation. URAC, formerly known as the Utilization Review Accreditation Commission,⁶⁷ and the National Committee on Quality Assurance⁶⁸ are the only healthcare quality-assessment organizations that have developed wellness-specific accreditation programs and quality-assurance standards for worksite wellness vendors that are regularly reviewed by expert panels. The results of their assessments are made available to vendors or sponsoring companies but are not shared for industry-wide benchmarking purposes. Organizations like the National Wellness Institute⁶⁹ offer programs that certify worksite wellness professionals; however, the focus of this advisory is on organizational scorecards and recognition programs, not accreditation of third-party worksite wellness vendors or individual professionals.

The majority of existing programs draw on elements of the 9 best practices summarized in the previous section. However, scoring methodologies and the scientific validation of these programs and tools vary. Specific to scorecards,

there is some emerging evidence from the United States that correlates high-scoring companies with abated trends in healthcare cost.⁷⁰ We are aware of only 1 study that has examined the influence of a recognition program on company financial performance. In their study of the American College of Occupational and Environmental Medicine's Corporate Health Achievement Awards, Fabius and colleagues⁷¹ showed that the highest-rated programs, per recognition program criteria, had superior financial performance compared with similar companies that had not been recognized by this program. There appear to be no studies that have associated performance against quality criteria of a recognition program with improvements in employee CVH risk factors over time.

Worksite Health Scorecards

Assessment tools to evaluate various components of workplace wellness programs are available from several different organizations. Table 3 summarizes the key features of 3 free online scorecards that are currently most widely used: The Health Enhancement Research Organization's (HERO) Employee Health Management Best Practice Scorecard (HERO ScoreCard),⁷² the National Business Group on Health Wellness Impact Scorecard,⁷³ and the CDC Worksite Health ScoreCard.⁷⁴ Table 3 highlights that there is considerable variation in the structure and scoring methodologies of these scorecards. Each scorecard has different weights for individual components. The most striking difference is that reporting employee health outcomes is optional and does not contribute to the overall score in the HERO and CDC scorecards, whereas 58% of the National Business Group on Health scorecard (105 of 200 points) is allocated to documenting the impact of programs on health behaviors, health outcomes, and wellness savings.⁷⁵

The scorecards also vary in the degree to which they are scientifically validated. Several descriptive analyses have supported the predictive validity of the HERO ScoreCard; respondents with higher scores report higher health assessment participation rates and improved employee health risk.^{41,57,76,77} A retrospective study based on version 3 of the tool found that higher scores were associated with reduced healthcare costs.⁷⁰ The study examined ≈700 000 annual individual employee health insurance claims from 33 organizations that completed the scorecard from 2009 to 2011. Organizations were dichotomized into high (scores of 100–200) and low (scores of 0–99); healthcare costs and risk factor trends were then compared. Results showed that high-scoring companies experienced significant reductions in inflation-adjusted healthcare costs (average, –1.6% points over 3 years) compared with low-scoring companies that remained stable (per-person per-year cost, \$3051 versus \$2855). However, the study showed mixed results for reductions in health risk factors. The first version of the CDC scorecard, which consisted of 12 sections, was validated for content and reliability by Emory University. The study consisted of 93 employers ranging in size from very small (<100 employees) to large (>750 employees). The original survey had a maximum of 215 points, and the average overall score was 129 points, ranging from 99 points (very small companies) to 153 points (very large companies). Four

Table 3. Comparison of Select Organizational Health Scorecards

	HERO	NBGH	CDC
First launched	2006 (version 4)	2009	2012 (version 2)
Development	HERO and Mercer convened a Think Tank Force for Metrics with members representing the consulting industry, wellness vendors, and employers	NBGH's Institute on Innovation in Workforce Well-Being and NBGH's Benchmarking and Analysis, with input from an external preventive medicine consultant	CDC Division for Heart Disease and Stroke Prevention, Emory University Institute for Health and Productivity Studies, Research Triangle International, CDC National Center for Chronic Disease Prevention, and The Health Promotion Workplace Workgroup
Estimated reach	1000 companies	>100 large companies (≥ 5000 employees), mostly NBGH members	900–1000*
Length (No. of questions)	64 scored questions plus 5 optional questions in the Outcomes section	33 questions	125 questions
Scoring methodology	Automatic scoring based on expert consensus formula Total maximum score is 200 points.	Total maximum score is 200 points	Total maximum score is 264 points
Components	Strategic planning Organizational and cultural support Programs Program integration Participation strategies Measurement and evaluation Program costs† Outcomes‡	Focus is on 5 specific areas: tobacco cessation, healthy nutrition/weight management, regular physical activity, stress management, and use of preventive screenings. Metrics are organized into 3 domains: Strategy and tactics Participation Workforce impact	Consists of 16 components that measure: Organizational support Risk factors for chronic diseases (eg, tobacco control, nutrition, and physical activity) Disease-specific strategies (eg, diabetes mellitus) Vaccination Occupational health and safety
Assessments and reports	Automatic scoring report from overall score, section scores, and national norms e-mailed on submission	Users receive individual reports with feedback on how their scores compare with employer benchmarks	Customized company reports not yet available but in development*
Validation studies published	Yes, several including a predictive validation study	None at present	Yes, content and interrater reliability studies published

CDC indicates Centers for Disease Control and Prevention; HERO, Health Enhancement Research Organization; and NBGH, National Business Group on Health.

*J. Lang, CDC, personal communication, November 14, 2014.

†Does not contribute to the total score.

‡Section is optional and does not contribute to the total score.

additional modules added in 2013 were validated by the use of a protocol similar to the original study.⁷⁴ At present, no validation study of the National Business Group on Health scorecard has been published in the peer-reviewed literature.

Worksite Wellness Recognition Programs

Worksite wellness accreditation can be defined as an external assessment process used by accreditation organizations to evaluate whether a company's wellness program satisfies certain structural, process, and outcome standards. Most accreditation programs require that companies demonstrate a certain level of performance based on a worksite wellness scorecard or checklist; however, many accreditation programs do not specifically require that companies demonstrate achievement or standards in workforce health. In contrast, most worksite wellness recognition programs frequently assess the achievement of certain performance levels on the basis of both organizational and employee health outcomes; however, the composition and scoring of quality metrics vary by program. Some programs offer recognition based on program components as opposed to achieving a specified level of quality or performance. There are a number of existing recognition programs for worksite wellness

programs. Table 4 summarizes the key features of some of the more widely recognized national accreditation/recognition programs: HealthLead,⁷⁸ Wellness Council of America's Well Workplace Awards,⁷⁹ AHA/ASA's Fit-Friendly Worksites,⁸⁰ The Health Project's Everett Koop National Health Awards,⁸¹ the American College of Occupational and Environmental Medicine's Corporate Health Achievement Award,⁸² and the National Business Group on Health's Best Employers for Healthy Lifestyles.⁸³

Table 4 shows considerable variation in recognition programs with respect to eligibility criteria, scoring, recognition tiers, assessment process, and estimated reach. HealthLead is currently the only accreditation program for workplace wellness programs that audits responses using site visits. The scoring methodology allows a company to receive the initial level of accreditation without showing positive outcomes. However, the 2 higher levels of accreditation require a higher level of performance, including positive outcomes. To date, no research has assessed the effect of the HealthLead accreditation on improvements in workforce health over time, although efforts are currently underway to do so (N. Pronk, personal communication, November 21, 2014). Although the AHA/ASA's Fit-Friendly Worksites does not

Table 4. Comparison of Select Workplace Wellness Recognition Programs

	HealthLead	Well Workplace Award	Fit-Friendly Worksites	Everett Koop National Health Award	Corporate Health Achievement Award	Best Employers for Healthy Lifestyle
Organization	US Healthiest, nonprofit established with funding from CDC, ASTHO, and NACCHO	WELCOA, a member organization representing >5000 US businesses	AHA/ASA	The Health Project, a public-private partnership established in 1992	ACOEM	NBGH
Year launched	2008	2012	2007	1994	1996	2005
Eligibility criteria	Open to all companies	Open to member organizations	Open to all companies with 25 employees; CWWP must have been in place for at least 12 mo	Open to all companies nationwide; CWWPs must have been in place for at least 36 mo	North American organizations with >500 employees	Fortune 500 company, Forbes Top 100, or have at least 5000 employees
Scoring system	100 maximum points, 20 allocated to outcomes reporting	Uses Well Work Checklist	Uses AHA/ASA checklist	Proprietary. Applicants are encouraged to include results from available scorecards such as HERO Scorecard or CDC Worksite Health Scorecard	1000 maximum points; 4 sections weighted equally; points awarded for program content/quality, appropriate dissemination, metrics, and positive outcomes or outcome trends	All applicants must complete online WISCORE scorecard
Components	Organizational engagement and support Population health management Well-being and outcomes	Senior-level support Cohesive wellness teams Data collection Operational planning Health promotion Interventions Program evaluation	Physical activity Nutrition Workplace culture of health Tobacco	Program must demonstrate: Reduced need and demand for medical services Improved Healthy People health promotion targets Reduced net healthcare and/or productivity costs	Leadership and management Healthy workers Healthy environment Healthy organization	Focus is on 5 specific areas: tobacco cessation, healthy nutrition/weight management, regular physical activity, stress management, and use of preventive screenings. Metrics are organized into 3 domains: strategy and tactics, participation, and workforce impact.
Recognition tiers	3	4	2, renewed annually; 1-time award for innovation	1 award tier plus Honorable Mention category	1 award tier	2
Assessment process	Fee-based comprehensive online survey is followed by a fee-based site visit to audit results	Each section of the checklist is graded (100 points) and feedback is given on a 4-point scale (needs attention, good, very good, and excellent)	Online application; initial tier recognition requires a minimum of 6 physical activity, 2 nutrition, and 1 workplace culture best practice	Award application form is assessed	Award committee and examiners are appointed annually to assess applications	Online scorecard
Estimated reach	19 companies accredited to date	>1000 businesses	≈4000 companies annually	≈70 awards	>30 businesses to date	≈150 companies to date

ACOEM indicates American College of Occupational and Environmental Medicine; AHA/ASA, American Heart Association/American Stroke Association; ASTHO, Association of State and Territorial Health Organizations; CDC, US Center for Disease Control and Prevention; CWWP, comprehensive workplace wellness program; NACCHO, National Association of County and City Health Officials; NGBH, National Business Group on Health; WELCOA, Wellness Council of America; and WISCORE, Wellness Impact Scorecard.

currently have an auditing component, the annual program reach is significant. To receive higher-tier recognition as a Fit-Friendly Worksite, an organization must achieve initial-tier recognition and demonstrate at least 1 of the prespecified positive outcomes in any of 3 categories (behavior change, cost savings, and ROI). Outcomes are required to show a 10% annual relative change for the company to receive the award. A tobacco policy requirement has been added, and companies have until November 1, 2015, to implement and

actively enforce written tobacco ban policies to be eligible for accreditation.⁸⁴

The workplace wellness recognition programs focus on structural processes or outcome measures in various combinations, and there is substantial variability in the criteria used among the existing programs. To focus on improving CVH and reducing CVD and stroke, a more optimal approach may be a recognition system that more comprehensively and systematically evaluates the effectiveness of a program in reducing

CVH risk among its employees. The continued persistence of suboptimal CVH and the significant variability between different workplace wellness programs provide a compelling rationale for a national CWWP recognition program based on rigorous standards aimed at optimizing Life's Simple 7. Implementation of a CWWP recognition program from the AHA/ASA based on Life's Simple 7 metrics would provide a framework to evaluate and recognize those workplaces with effective systems in place that meet high standards for obtaining CVH and producing favorable clinical outcomes.

AHA/ASA Experience With Hospital Recognition Programs: Potential Applicability to a CWWP Recognition Program

Get With The Guidelines (GWTG) is a comprehensive suite of clinical practice guidelines and 4 disease-specific registries that were developed by the AHA/ASA to improve the quality of in-hospital care and to reduce care disparities for CVD and stroke. A program for coronary artery disease was launched nationally in 2001, followed by programs for stroke and heart failure in 2003 and 2005, respectively. Approximately 31% of all hospitals registered with the AHA/ASA participate in at least 1 GWTG program, and many use >2 of the modules.⁸⁵ GWTG programs were designed to reduce the barriers to routine use of evidence-based care by improving provider knowledge, attitudes, and behaviors to implement evidence-based care. Elements of the program include stakeholder and opinion leader meetings, collaborative learning sessions, hospital toolkits, local clinical champions, multidisciplinary teams, and hospital recognition.⁸⁶ The AHA/ASA also developed clinical databases (ie, registries) that allow hospitals and physicians to collect information in real time for quality assessment and for regional and national benchmarking.

An essential driver of quality improvement in GWTG has been an AHA/ASA national recognition program for hospitals.⁸⁷ GWTG uses a hospital recognition program known as the Performance Achievement Award that is based on process measures that include both performance (ie, achievement) and quality measures. Measures are developed by AHA physician volunteers and AHA/ASA staff, are based on national guidelines and performance measures, and are harmonized with measures developed by other national stakeholders such as the American College of Cardiology, the US Department of Health and Human Services, and The Joint Commission and those already endorsed by the National Quality Forum. The Performance Achievement Award recognizes the attainment of 85% performance for each of the modules of performance measures. AHA/ASA also used recognition for target stroke and target heart failure (Honor Roll). The recognition awards are used as a nonfinancial incentive to engage hospital leadership, governance, and the hospital's community to support GWTG objectives. Although it is a voluntary program, participation has grown significantly within each disease module since program inception. Today, there are almost 2000 unique GWTG contracts across the 4 registries, with the highest participation in the stroke program (1656 participating hospitals). Total patient admission records grew from 123 986 in fiscal year 2005 to >4.6 million records in fiscal year 2013.⁸⁵ Performance Achievement Award and Honor Roll hospitals receive national

recognition through a number of channels, including having their hospital name and award listed in *US News & World Report Best Hospitals Edition* advertisements, inclusion on the AHA Quality Map (www.heart.org/myhealthcare), and use of the recognition logos on marketing materials, signs, and the Web.

GWTG has been shown to substantially improve the quality of hospital-based care by identifying critical gaps in care, fostering the implementation of targeted interventions to reduce disparities, measuring progress over time, and facilitating the development of new quality measures. Furthermore, GWTG has demonstrated that nonfinancial incentives such as the AHA/ASA recognition awards also encourage leadership and community support of high-performing systems of care. Data analysis has shown rapid and year-over-year improvements in evidence-based care for stroke, heart failure, and coronary artery disease between 2006 and 2011. For example, the recognition program for stroke has been associated with rapid improvements in door-to-needle time, now within 60 minutes, in >1000 hospitals and other clinical outcomes such as smoking cessation counseling given at discharge.⁸⁵ In addition, Primary Stroke Center Certification and GWTG-Stroke Performance Achievement Award recognition identified stroke hospitals with higher conformity to care measures for patients hospitalized with acute ischemic stroke. However, Performance Achievement Award recognition was a more robust identifier of stroke hospitals with better performance.⁸⁸

Although the hospital setting and worksite wellness programs clearly differ in numerous ways, including the fact that healthcare provision is the core business of hospitals, whereas most businesses are not reimbursed for keeping their employees healthy, they should share common goals, including providing high-quality interventions, delivered in a standardized fashion based on best available evidence and expert opinion; reducing healthcare expenditures; and demonstrating improved outcomes as a result of care provided. The inclusion of and attention given to worksite wellness programming in the Patient Protection and Affordable Care Act have facilitated migration of this model into the healthcare arena. Therefore, establishing specific and transparent performance standards for what defines a CWWP is warranted. The AHA/ASA believes that, just as national recognition from the AHA/ASA motivated positive performance in GWTG, a similar approach has the potential to help increase adoption of high-quality CWWPs.

Utility of AHA's Life's Simple 7/My Life Check for Evaluating Employee Health

The strong link between Life's Simple 7 and the construct of CVH was summarized in detail in the AHA's 2020 Strategic Impact Goal statement.¹⁸ Since then, an extensive body of literature from numerous observational and prospective studies has demonstrated that the Life's Simple 7 metrics and the associated CVH score are strongly associated with many favorable outcomes, summarized in Table 5.⁸⁹ For example, better CVH scores are associated with lower CVD incidence, prevalence, and mortality and all-cause mortality in all race-ethnic subgroups studied to date. Ford and colleagues²¹ found that the number of ideal CVH metrics is strongly and inversely

Table 5. Domains of Improved Outcomes With Which Greater Levels of CVH (as Defined by the AHA) Have Been Associated Prospectively

All-cause (total) mortality	End-stage renal disease
CVD, coronary, stroke mortality	Atherosclerosis and arterial stiffness in younger adults
Nonfatal CVD events	Cognitive function in younger and older adults
Coronary heart disease	Depression
Stroke	Quality of life
Incident cancer	Compression of morbidity
Venous thromboembolism	Medicare charges

AHA indicates American Heart Association; CVD, cardiovascular disease, and CVH, cardiovascular health.

Reproduced from Lloyd-Jones.⁸⁹

related to mortality resulting from both CVD and other causes after adjustment for a variety of factors such as demographics, socioeconomic status, alcohol use, self-reported health status, health insurance, and history of CVD or cancer. Adults who had ≥ 5 ideal CVH metrics were at 78% lower risk of all-cause mortality and 88% lower risk of cardiovascular death over 5.8 years of follow-up. Although very few adults met all 7 CVH metrics in the ideal category ($\approx 1\%$ in this sample), most adults met 2, 3, or 4 ideal metrics, which were nevertheless associated with substantial reductions in mortality compared with people with no ideal metrics. Similarly, in a 20-year follow-up of adults in the Atherosclerosis Risk in Communities Study (ARIC), a prospective cohort study in 4 US communities, there was a strong inverse gradient of cumulative CVD incidence according to the number of ideal CVH metrics. Adults with ≥ 6 ideal CVH metrics had a 6% cumulative CVD incidence compared with a 50% CVD incidence for people with no ideal factors. Of note, Folsom and colleagues²² demonstrated that having 1 more metric at ideal levels, compared with 1 fewer, in middle age was associated with a similar stepwise improvement in CVD risk regardless of which metric improved (ie, risk reductions were similar for ideal behavioral factors or health factors).

A study of stroke incidence and cognitive function found that after adjustment for demographic, socioeconomic, and region of residence, each improved category of Life's Simple 7 (ie, poor to intermediate and intermediate to ideal) was associated with a 25% lower risk of stroke; the results were similar for white and black adults.²³ This study also found that a small improvement in the Life's Simple 7 score conferred significant health benefits: A 1-point higher Life's Simple 7 score was associated with an 8% lower risk of stroke. In a multiethnic community-based prospective cohort study with a significant representation of Caribbean Hispanics, Dong and colleagues²⁴ also found an inverse association between the number of ideal CVH metrics and individual CVD end points, including stroke, myocardial infarction, and vascular death, after 11 years of follow-up. The results were remarkably similar for whites, blacks, and Caribbean Hispanics. Although this population cohort is older than the ARIC cohort, results showed a 59% lower CVD risk for those adults with 5 to 6 ideal metrics compared with those having 0 to 1 ideal metric. Furthermore, the researchers once again found

that there were incremental benefits to increasing the number of CVH metrics; people with ≥ 5 ideal metrics and 2 to 3 ideal metrics were at 50% and 30% lower risk of vascular death, respectively, compared with people with 0 to 1 metric. These results led the authors to conclude that "despite race-ethnic disparities in the prevalence of ideal CVH, our data provide evidence to support the uniform application of the AHA ideal CVH metrics for CVD risk assessment and health promotion for all Americans regardless of their race-ethnic backgrounds."²⁴

A number of additional major health outcomes have been found to be significantly associated with the CVH score of Life's Simple 7 metrics. Rasmussen-Torvik and colleagues⁹⁰ found that there was a significant, graded, inverse association between the number of ideal CVH metrics at baseline and cancer incidence. Participants meeting 6 to 7 ideal health metrics had 51% lower risk of incident cancer over 18 years of follow-up than those meeting goals for 0 ideal CVH metrics. Other investigators have also shown a lower risk for venous thromboembolism⁹¹ and end-stage renal disease with higher CVH scores.⁹² In addition, several groups have reported lower burden of subclinical CVD. For example, in the Young Finns Study, change in ideal CVH status, both from childhood to adulthood and from young adulthood to middle age, was an independent predictor of lower adult pulse-wave velocity.⁹³ An article by Xanthakis and colleagues²⁵ extend these findings by also linking the CVH score with circulating biomarkers and prevalent subclinical CVD in the Framingham Heart Study population. The CVH score was also associated with lower odds of subclinical disease and lower risk of CVD. The authors point out that these findings validate earlier studies and validate the linear association between CVH score and CVD incidence, thereby establishing Life's Simple 7 as a reasonable framework for public health interventions.

In addition to the compelling data on clinical outcomes and subclinical measures, a number of investigators have observed better quality of life, better cognitive function, lower prevalence of depression, compression of morbidity, and reduced Medicare charges associated with higher CVH in middle age. Allen and colleagues⁹⁴ used data from the National Health and Nutrition Examination Survey (NHANES) and observed that, compared with those in overall low CVH (with scores of 0–7 of 14 points), individuals with high CVH (defined as 11–14 points on the CVH score) are 6.4 times more likely to report that they are in excellent general health and 60% less likely to report poor physical or mental health ≥ 14 days of the prior month. These findings translated into an average of 3.2 fewer unhealthy days per month reported by those with high compared with low CVH and a difference of almost 1 full day per month when individuals were unable to perform their usual activities. Prospective data from the Coronary Artery Risk Development in Young Adults (CARDIA) Study also indicate that the CVH score in young adulthood and maintenance of better CVH into middle age are both associated with better self-reported quality of life 25 years later at a mean age of 50 years.

Also from the CARDIA Study, the CVH score in young adulthood (at a mean age of 25 years) was significantly

inversely associated with cognitive function measures obtained 25 years later, including visual motor speed, executive function, and verbal memory measures, even after adjustment for demographic, behavioral, and socioeconomic factors.⁹⁵ Thus, CVH in young adulthood may be an important determinant of cognitive function in middle age, when individuals are at their highest productivity. In >20 000 participants from the large, representative, biracial cohort of the Reasons for Geographic and Racial Differences in Stroke (REGARDS) Study, Kronish and colleagues⁹⁶ observed that participants with depressive symptoms were significantly more likely to have poor levels on each of the Life's Simple 7 components (except for cholesterol), and there was a graded association between increasing depressive symptoms and lower total Life's Simple 7 CVH score.

Wilkins and colleagues⁹⁷ observed significant greater longevity and relative and absolute compression of morbidity at the end of life associated with high CVH status at almost all ages studied from 45 to 75 years in both men and women. In other words, in addition to prolonged life, individuals with better CVH spent significantly less time with CVD before death compared with those with poorer CVH. Associated with these findings, having more ideal CVH factors in middle age (\approx 50 years of age) has been associated with lower annual, total, and last-year-of life expenditures during Medicare eligibility.^{98,99}

These data suggest that attainment of the AHA 2020 goals to improve CVH could contribute to substantial reductions in mortality. They also show that the Life's Simple 7 metric is linked to CVD/stroke outcomes and is therefore a valid measure of CVH and valid proxy of overall health. Consequently, the individual components of Life's Simple 7 metrics and its composite score are valid measures of health that should be used as a standardized, objective measurement of workforce health for an AHA/ASA CWWP recognition program. The My Life Check online health assessment tool developed by the AHA allows collection of and feedback on the components of and the composite score of Life's Simple 7. A new version of My Life Check leverages state-of-the-art technology and allows longitudinal assessment of CVH of individuals and aggregate CVH for companies, as well as multilevel benchmarking. The updated version allows individuals the option to synchronize their wearable health-monitoring devices, which enables timely feedback on and tracking of health behaviors. Furthermore, the updated version offers the capability to enable intracompany and intercompany challenges and competitions to increase participation in healthy behaviors. The chief executive officers from 22 Fortune 1000 companies, including the AHA, participating in the AHA CEO Roundtable have collectively pledged to actively serve as role models for creating a culture of health in their organizations, to provide Life's Simple 7 as an evidence-based common standard for health programs to their employees and dependents, and to disseminate evidence-based environmental policies and disease prevention programs to improve worker health. This cohort of companies, which employ \approx 2 million adults, will work toward the implementation of the enhanced version of My Life Check during 2015 and 2016 and represents a large sample to assess the use of My Life Check in the workplace.¹⁰⁰

Metrics Recommended for an AHA/ASA Employee Health Recognition Program

Existing worksite wellness recognition programs are generally based on self-reported measures of program delivery processes (eg, organizational policies, presence of wellness committees, and champions) and a broad range of health outcomes, ranging from smoking to stress. In some cases, information about ROI, including research methods used, is also collected, and increasingly, "value on investment" criteria (ie, measures related to productivity, performance, or a culture of health) are increasingly included. These assessments offer organizations the opportunity to demonstrate use of certain best practices in their worksite wellness program. Nevertheless, such recognition program applications are not designed to demonstrate a clear path from worksite wellness programs to improvements in population-level CVH of employees. Accordingly, the AHA/ASA national CWWP recognition program focuses on the use of science-based metrics to assess the CVH of working adults and proposes the provision of resources and technical assistance to companies that wish to improve and sustain the CVH of their employees. Specifically, the program will be based on CVH measured directly through the Life's Simple 7 composite score. Workplaces reporting measures that indicate a high level of CVH among employees and achieving a 20% relative improvement in the aggregate Life's Simple 7 composite score from the baseline measurement will receive the highest honors from AHA/ASA. The Life's Simple 7 composite score is calculated using the 3 levels of CVH (0=poor status, 1=intermediate status, 2=ideal status), which yields a CVH score for each adult participant ranging from 0 to a maximum of 14 points. The Life's Simple 7 Composite score converts an individual's CVH score by dividing an employee's total score by the maximum number of total points (14) and then multiplying by 10. For adults with no special considerations (defined as no diabetes mellitus or previous or current history of heart disease or on medications for controlling blood pressure, cholesterol, or blood glucose) and ideal diet, the maximum possible points is 14, and the maximal possible composite score is 10.0 (Figure 1).

Although the Life's Simple 7 metrics may already be routinely collected in many mature worksite wellness programs, for companies to achieve AHA/ASA recognition, it is recommended that they do the following:

- Provide data showing achievement or improvements in the percent of employees who know their Life's Simple 7 metric numbers;
- Provide the percent of current employees with measured CVH via My Life Check Life's Simple 7 composite score and the percent of healthy employees who are have high levels of CVH as indexed by the Life's Simple 7 composite score; and
- Report longitudinal metrics concerning CVH and the magnitude of improvement occurring longitudinally in Life's Simple 7 metrics and composite score.

The level of a given employee population's CVH needed for various levels of recognition will be determined at

My Life Check[®]

Live Better With Life's Simple 7[®]

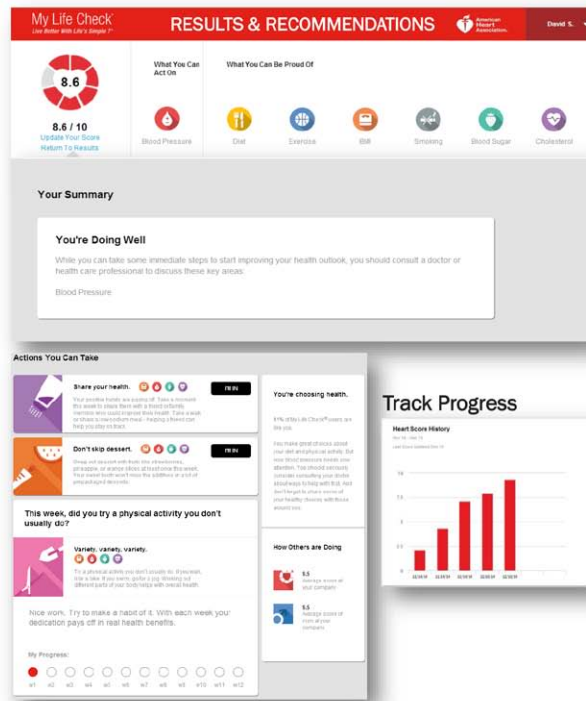
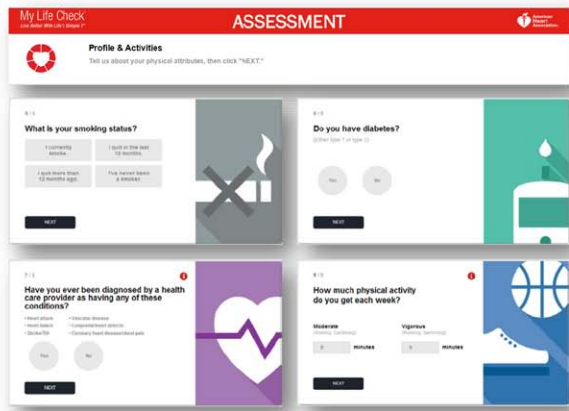


Figure 1. My Life Check.

the outset by absolute levels of CVH for companies by Life's Simple 7 composite scores and analysis of progress achieved by applicant companies relative to their baseline data. These longitudinal data will be examined along with research to date concerning levels of change that have been achieved in other community and workplace cohorts relative to their starting points. Because the workplace is not synonymous with a worksite and is not bound by the physical location of employees, field-based and telecommuting employees will be included in the recognition program. It should also be considered whether alternative mechanisms for Life's Simple 7 metrics being collected and reported other than My Life Check would be acceptable for recognition. Although other important risk factors such as alcohol abuse, poor mental health, insufficient sleep, and poorly managed stress are not currently included in Life's Simple 7 or the My Life Check algorithm, the recognition program will incorporate any additional metrics that AHA/ASA decides to add.

We expect that those companies based in geographic regions with poorer CVH, as captured, for example, by the CDC's Behavioral Risk Factor Surveillance System data,¹⁰¹ and with higher incidence and prevalence of less favorable Life's Simple 7 characteristics may have greater opportunities for improving cardiovascular risk in their total employee population. Conversely, those companies with lower baseline data collection and CVH may face greater challenges in producing improvements. It is also likely that the CVH levels and percent change that can be achieved in small companies (ie, <1000 employees), which employ approximately half of America's private-sector employees,¹⁰² will be different from changes possible in large companies (ie, >1000 employees). Consequently, consideration should be given to weighting the

AHA/ASA recognition criteria and annually adjusting weights to remain responsive to what is learned about what is possible in affecting change in CVH in a variety of workplaces. Although larger companies may be more likely to apply for the AHA/ASA recognition program, My Life Check is a tool that can be implemented and scaled up to any size of company, including small and midsize companies in low-wage industries that often face economic constraints and capacity challenges to implement CWWPs.^{10,103} Small companies also employ a greater proportion of low-income workers who are at increased risk of CVD,¹⁰⁴ so AHA/ASA should give careful consideration to the role that race/ethnicity and socioeconomic status play in the implementation of CWWPs. Finally, AHA/ASA should also give careful consideration to potential implementation barriers related to health data collection and reporting and to monitoring progress in overcoming these barriers.

Preliminary recognition level criteria are listed in Table 6 and should be considered in determining award levels. These criteria allow recognition based on absolute levels of CVH and recognition based on changes accomplished over time.

Table 6. Preliminary AHA/ASA Workplace Wellness Recognition Program Levels

Recognition Level	Initial Tier	Middle Tier	Highest Tier
Percentage of employees with all Simple 7 data reported	25–<50	50–<75	≥75
My Life Check composite score aggregate	6.0–<7.0	7.0–<8.0	≥8.0
My Life Check composite scores relative improvement, %	5–<10	10–<20	≥20

AHA/ASA indicates American Heart Association/American Stroke Association.

The primary principle guiding parameter will be how best to encourage and recognize progress toward and ultimately achievement of the goal of 20% relative improvement in CVH as indexed by Life’s Simple 7.

The estimated reach of current programs noted in Table 4 suggests that the perceived benefits of recognition programs provide sufficient incentive for many companies to invest the time and resources in participating in these schemes. However, current participation represents a relatively small proportion of the estimated 11 300 large US firms (with ≥1000 employees),¹⁰⁵ which suggests that other external strategies beyond recognition programs, including public policy and private-sector initiatives, may be needed to increase the adoption CWWPs.¹⁰⁶

A Culture of Health and Wellness Program Process Metrics

CWWPs are multilevel health promotion interventions that are designed to foster improvements in both individual health behaviors and organizational structure, environment, and culture. Indeed, affecting significant population-level changes in CVH in the workplace will require a culture of health that supports innovative employee health interventions designed to engage and sustain high levels of employee participation. The AHA/ASA recognition program will also include a culture of health assessment (Figure 2). This approach will require using an existing assessment tool in its current form, adapting/modifying given tools as needed, or developing a new culture of health assessment index. We anticipate that any approach will be done in consultation with other stakeholder organizations. For example, we will consider the comprehensive metrics for employee health management published in February by HERO and the Population Health Alliance. The risk factors that make up Life’s Simple 7 are contained in the Health Impact section

of the HERO/Population Health Alliance guidelines.¹⁰⁷ The AHA/ASA may also consider imbedding CVH-related process metrics in an ongoing way via such professional venues.

This culture of health assessment will help to measure the extent to which companies use recommended evidence-based environmental and policy strategies, including strategies contained in the Community Guide of the Community Preventive Services Task Force (<http://www.thecommunityguide.org/>). Whereas the My Life Check score captures improvements in “downstream” health behaviors, the culture of health index reflects the incorporation of “upstream” strategies to create and sustain supportive corporate environments for lifestyle change. The intentional integration of these tools, ideally at the personal level, will improve researcher and practitioner knowledge of how employees are experiencing their organization’s culture and the impact that improvements in the environment can have on their behaviors and health risks. Furthermore, through its participation in the Preventive Health Partnership,¹⁰⁸ a collaboration with the American Cancer Society and the American Diabetes Association, the AHA/ASA can support successful programs such as the American Cancer Society’s Worksite Solutions that use an evidence-based upstream approach and target the needs of small businesses.¹⁰⁹

Finally, CWWPs have the potential to address all levels of the socioecological framework, that is, individual, interpersonal, organizational, community, and policy.¹¹⁰ CWWPs can work collaboratively with local community resources such as forming partnerships with nearby fitness centers and parks.¹¹¹ There is growing evidence that programs that integrate community (including business) and clinical resources can improve community-wide CVH and clinical outcomes.^{112,113}



Figure 2. American Heart Association/American Stroke Association workplace wellness recognition program overview.

Future Strategies for Recognition and Research

While the recognition program is implemented, it will be essential to continuously evaluate whether the selected criteria remain valid and meaningful, whether the program is meeting its primary aims, and whether unintended consequences are being avoided. It will be important for the AHA/ASA to support, collect, and review further research to determine the effectiveness of workplace wellness programs on a broad range of outcomes, to identify best implementation and dissemination strategies, and to evaluate the impact of the workplace wellness recognition program. There are important opportunities to identify best practices in incentivizing the adoption and effective implementation of CWWPs and further research into the impact of such programs on CVH, clinical outcomes, and other aspects. It also would be desirable to conduct studies showing the relationship between commonly used process metrics and the Life's Simple 7 composite and how improvement in CVH over time in the workplace environment translates into better outcomes.

Conclusions/Recommendations

Optimizing Workplace Wellness Program via a Recognition Program

The AHA/ASA is committed to supporting and facilitating the translation of research into practice, improving CVH, and preventing CVD and stroke. As a recognized leader in evidence-based guidelines, improving systems of care, and quality programs, the AHA/ASA is dedicated to the achievement of optimal CVH for all individuals. Therefore, the AHA/ASA has engaged in a number of initiatives to further the advancement of CVH and evidence-based prevention, to improve quality of care, to control costs, and to optimize outcomes, including the development of clinical practice guidelines for prevention, treatment, and performance measures. AHA/ASA volunteers, councils, and working groups consist of multidisciplinary members who have extensive expertise in basic, translational, clinical, and population science; quality assessment, quality of care, and outcomes research; statistical and methodological expertise; and public policy, community engagement, and advocacy. The AHA/ASA also has been a leader in the development of systems of care, quality programs for the prevention and treatment of CVD and stroke, and accreditation, certification, and recognition programs, including national hospital accreditation programs. An AHA/ASA national CWWP recognition program would have the potential to advance evidence-based standards with a focus on CVH and to provide recognition for those employers that are delivering appropriate, highest-quality workplace health and wellness initiatives to their employees. By offering a CWWP recognition program that integrates an organizational culture of health assessment with a CVH assessment, the AHA/ASA would continue to advocate for achieving ideal CVH through comprehensive prevention, to provide leadership, and to help set standards in translating prevention and CVH research into actual practice to support workplaces, employers, employees, and their dependents in the critical goal of building healthier lives free of CVD and stroke.

Recommendations

As a part of the AHA/ASA's mission and organizational strategy, it is recommended that the association encourage

expansion of CWWPs, make the enhanced version of My Life Check available for assessment of CVH in the workplace, and establish a CWWP recognition program. It is also recommended that the AHA/ASA provide programs that assist companies in applying best systems and strategies for CWWPs. The recommended CWWP recognition program integrates identification of a culture of workplace wellness, assessment of CVH through an enhanced version of My Life Check, and achievement of rigorous standards for CVH metrics as defined by Life Simple 7. In addition, the AHA/ASA should widely disseminate existing workplace resources (Table 7) and develop new resources and programs that assist employers, employees, and dependents in meeting these rigorous standards and that provide high-quality CWWPs. To promote innovation, improvements, and achievement in workplace wellness programs, the AHA/ASA presents the following recommendations for CWWP recognition:

- Provide objective, unbiased, and meaningful assessments of the culture, structure, processes, and outcomes performance of a workplace wellness program, with a particular focus on CVH, by using a workplace wellness index that indicates the level to which companies have successfully built and achieved a workplace culture of health based on best practices.
- Deploy the validated evidence-based workplace wellness indicators of CVH based on the Life's Simple 7 composite score and an enhanced version of My Life Check. This platform provides objective, unbiased, consistent assessment and interval reassessment of the CVH health achievements of a CWWP.
- Apply a tiered recognition criteria allowing recognition of companies within defined categories that demonstrate outstanding leadership in building a workplace culture of health that has translated into the overall healthiest employee population.
- Foster innovation and promote sharing of effective strategies by having a category of recognition awards for workplace wellness programs that can demonstrate successful integration of novel and innovative approaches into organizations for improving employee health outcomes.

Table 7. AHA Workplace Wellness Program Resources

Resource	Reference
AHA Workplace Wellness Guide for Organizational Leaders	114
AHA Workplace Step by Step Manual	115
AHA Healthy Workplace Food and Beverage Toolkit	116
AHA Activity Tracker	117
AHA Heart Walk	118
AHA Nutrition Center (heart healthy menus, and healthy cooking tips)	119
AHA CPR & First Aid	120
Heart360 (blood pressure monitoring)	121
My Life Check	20
AHA Workplace Wellness Resources	122

AHA indicates American Heart Association; and CPR, cardiopulmonary resuscitation.

- Give highly visible, prominent distinction to workplaces that achieve high standards and meet the recognition criteria.
- Provide toolkits, resources, and other programs to assist employers in improving and optimizing their workplace wellness programs.
- Provide monitoring for potential unintended consequences resulting from the recognition program.
- Support, collect, and review further research to determine the effectiveness of workplace wellness programs on a broad range of outcomes such as health disparities, identify best implementation strategies, and evaluate the impact of the workplace wellness recognition program.

This recommended CWWP recognition program holds promise with regard to promoting the best interests of

employees and their families and addressing many of the challenges that employers face in providing high-quality workplace wellness and creating a culture of health. As a part of its commitment to promoting high-quality, evidence-based prevention for CVD and stroke, the AHA/ASA should provide the scientific evidence and implement this national recognition program for workplace wellness. The provision of standardized, objective, unbiased recognition criteria has the potential to incentivize achievement of CVH in the workplace for millions of employees. The CWWP recognition program will provide highly visible distinctions for employers that achieve high standards of performance in workplace wellness and employee health. The AHA/ASA provides the recommendations described above with the goal of helping to address these issues as a means of accelerating progress toward the 2020 goals and achieving improvements in CVH for all.

Disclosures

Writing Group Disclosures

Writing Group Member	Employment	Research Grant	Other						
			Research Support	Speakers' Bureau/Honoraria	Expert Witness	Ownership Interest	Consultant/Advisory Board	Other	
Gregg C. Fonarow	UCLA Medical Center	None	None	None	None	None	None	None	None
Elliott M. Antman	Brigham and Women's Hospital	None	None	None	None	None	None	None	None
Ross Arena	University of Illinois, Chicago	None	None	None	None	None	None	None	None
Catherine Baase	Dow Chemical	None	None	None	None	None	None	None	None
Chris Calitz	American Heart Association	The Vitality Group—Independent research funded in collaboration with The Vitality Institute†	None	None	None	None	None	CDC*	None
Fikry W. Isaac	Johnson & Johnson Global Health Services	None	None	None	None	None	None	None	None
Donald Lloyd-Jones	Northwestern University	None	None	None	None	None	None	None	None
Eric D. Peterson	Duke Clinical Research Institute	None	None	None	None	None	None	None	None
Nico Pronk	HealthPartners	The National Institute for Occupational Safety and Health (NIOSH)—Center of Excellence subcontract with Harvard School of Public Health*	None	None	None	None	None	None	None
Eduardo Sanchez	American Heart Association	None	None	None	None	None	None	None	None
Paul E. Terry	StayWell	None	None	None	None	None	StayWell*	None	None
Kevin G. Volpp	University of Pennsylvania	Humana†; Weight Watcher†; Vitality Institute†; Merck†	None	None	None	None	VAL Health†	VAL Health†; CVS Caremark†	None

This table represents the relationships of writing group members that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all members of the writing group are required to complete and submit. A relationship is considered to be "significant" if (a) the person receives \$10 000 or more during any 12-month period, or 5% or more of the person's gross income; or (b) the person owns 5% or more of the voting stock or share of the entity, or owns \$10 000 or more of the fair market value of the entity. A relationship is considered to be "modest" if it is less than "significant" under the preceding definition.

*Modest.
†Significant.

Reviewer Disclosures

Reviewer	Employment	Research Grant	Other Research Support	Speakers' Bureau/Honoraria	Expert Witness	Ownership Interest	Consultant/Advisory Board	Other
Jeffrey Harris	University of Washington	None	None	None	None	None	None	None
Ilene Klein	Qualcomm Inc	None	None	None	None	None	Vitality Institute*	None
Richard Murray	Merck	None	None	None	None	Merck†	None	None
Derek Yach	Vitality Institute	None	Vitality Institute†	None	None	Discovery Holdings*	None	None

This table represents the relationships of reviewers that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all reviewers are required to complete and submit. A relationship is considered to be "significant" if (a) the person receives \$10 000 or more during any 12-month period, or 5% or more of the person's gross income; or (b) the person owns 5% or more of the voting stock or share of the entity, or owns \$10 000 or more of the fair market value of the entity. A relationship is considered to be "modest" if it is less than "significant" under the preceding definition.

*Modest.

†Significant.

References

- Vitality Institute. Investing in prevention: a national imperative: key findings and recommendations from the Vitality Institute Commission on Health Promotion and the Prevention of Chronic Disease in Working-Age Americans. Vitality Institute Web site. 2014. <http://www.thevitalityinstitute.org/commission>. Accessed December 14, 2014.
- Tryon K, Bolnick H, Pomeranz J, Pronk N, Yach D. Making the workplace a more effective site for prevention on noncommunicable diseases in adults. *J Occup Environ Med*. 2014;56:1137–1144. doi: 10.1097/JOM.0000000000000300.
- Arena R, Arnett DK, Terry PE, Li S, Isaac F, Mosca L, Braun L, Roach WH Jr, Pate RR, Sanchez E, Carnethon M, Whitsel LP. The role of worksite health screening: a policy statement from the American Heart Association. *Circulation*. 2014;130:719–734. doi: 10.1161/CIR.0000000000000079.
- Arena R, Guazzi M, Briggs PD, Cahalin LP, Myers J, Kaminsky LA, Forman DE, Cipriano G Jr, Borghi-Silva A, Babu AS, Lavie CJ. Promoting health and wellness in the workplace: a unique opportunity to establish primary and extended secondary cardiovascular risk reduction programs. *Mayo Clin Proc*. 2013;88:605–617. doi: 10.1016/j.mayocp.2013.03.002.
- Carnethon M, Whitsel LP, Franklin BA, Kris-Etherton P, Milani R, Pratt CA, Wagner GR; American Heart Association Advocacy Coordinating Committee; Council on Epidemiology and Prevention; Council on the Kidney in Cardiovascular Disease; Council on Nutrition, Physical Activity and Metabolism. Worksite wellness programs for cardiovascular disease prevention: a policy statement from the American Heart Association. *Circulation*. 2009;120:1725–1741. doi: 10.1161/CIRCULATIONAHA.109.192653.
- Linnan L, Bowling M, Childress J, Lindsay G, Blakey C, Pronk S, Wieker S, Royall P. Results of the 2004 National Worksite Health Promotion Survey. *Am J Public Health*. 2008;98:1503–1509. doi: 10.2105/AJPH.2006.100313.
- Claxton G, Rae M, Panchal N, Damico A, Whitmore H, Bostick N, Kenward K. Health benefits in 2013: moderate increases in employer-sponsored plans. *Health Aff (Millwood)*. 2013;32:1667–1676.
- Goetzel R, Chung Roemer E, Kent K, Smith K. Health care cost savings from comprehensive worksite health promotion (CWHPP) programs: policy narrative: comprehensive worksite health promotion program: report to the Bipartisan Policy Center. Comprehensive Worksite Health Promotion Programs. 2013. http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/Worksite%20Health%20Promotion%20Programs_0.pdf. Accessed December 14, 2014.
- Mattke S, Schnyer C, VanBusum KR. A Review of the U.S. Workplace Wellness Market. 2012. <http://www.dol.gov/ebsa/pdf/workplacewellness-marketreview2012.pdf>. Accessed November 14, 2014.
- Pronk NP. Placing workplace wellness in proper context: value beyond money. *Prev Chronic Dis*. 2014;11:E119. doi: 10.5888/pcd11.140128.
- Goetzel RZ, Henke RM, Tabrizi M, Pelletier KR, Loeppke R, Ballard DW, Gosmeier J, Anderson DR, Yach D, Kelly RK, McCalister T, Serxner S, Selecky C, Shallenberger LG, Fries JF, Baase C, Isaac F, Crighton KA, Wald P, Exum E, Shurney D, Metz RD. Do workplace health promotion (wellness) programs work? *J Occup Environ Med*. 2014;56:927–934. doi: 10.1097/JOM.0000000000000276.
- Kochanek KD, Murphy SL, Xu JQ, Arias E. *Mortality in the United States, 2013*. NCHS data brief, No. 178. Hyattsville, MD: National Center for Health Statistics; 2014.
- Johnson NB, Hayes LD, Brown K, Hoo EC, Ethier KA; Centers for Disease Control and Prevention (CDC). CDC national health report: leading causes of mortality and associated behavioral risk and protective factors, 2005–2013. *Morb Mortal Wkly Rep*. 2013;63(suppl 4):3–27.
- Mozaffarian D, Benjamin EJ, Go AS, Arnett DK, Blaha MJ, Cushman M, de Ferranti S, Després JP, Fullerton HJ, Howard VJ, Huffman MD, Judd SE, Kissela BM, Lackland DT, Lichtman JH, Lisabeth LD, Liu S, Mackey RH, Matchar DB, McGuire DK, Mohler ER 3rd, Moy CS, Muntner P, Mussolino ME, Nasir K, Neumar RW, Nichol G, Palaniappan L, Pandey DK, Reeves MJ, Rodriguez CJ, Sorlie PD, Stein J, Towfighi A, Turan TN, Virani SS, Willey JZ, Woo D, Yeh RW, Turner MB; American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2015 update: a report from the American Heart Association. *Circulation*. 2015;131:e29–e322. doi: 10.1161/CIR.0000000000000152.
- Anand SS, Yusuf S. Stemming the global tsunami of cardiovascular disease. *Lancet*. 2011;377:529–532. doi: 10.1016/S0140-6736(10)62346-X.
- Kohl HW 3rd, Craig CL, Lambert EV, Inoue S, Alkandari JR, Leetongin G, Kahlmeier S; Lancet Physical Activity Series Working Group. The pandemic of physical inactivity: global action for public health. *Lancet*. 2012;380:294–305. doi: 10.1016/S0140-6736(12)60898-8.
- Bibbins-Domingo K, Coxson P, Pletcher MJ, Lightwood J, Goldman L. Adolescent overweight and future adult coronary heart disease. *N Engl J Med*. 2007;357:2371–2379. doi: 10.1056/NEJMsa073166.
- Heidenreich PA, Trogon JG, Khavjou OA, Butler J, Dracup K, Ezekowitz MD, Finkelstein EA, Hong Y, Johnston SC, Khera A, Lloyd-Jones DM, Nelson SA, Nichol G, Orenstein D, Wilson PW, Woo YJ; on behalf of American Heart Association Advocacy Coordinating Committee; Stroke Council; Council on Cardiovascular Radiology and Intervention; Council on Clinical Cardiology; Council on Epidemiology and Prevention; Council on Arteriosclerosis, Thrombosis and Vascular Biology; Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation; Council on Cardiovascular Nursing; Council on the Kidney in Cardiovascular Disease; Council on Cardiovascular Surgery and Anesthesia; Interdisciplinary Council on Quality of Care and Outcomes Research. Forecasting the future of cardiovascular disease in the United States: a policy statement from the American Heart Association. *Circulation*. 2011;123:933–944. doi: 10.1161/CIR.0b013e31820a55f5.
- Lloyd-Jones DM, Hong Y, Labarthe D, Mozaffarian D, Appel LJ, Van Horn L, Greenlund K, Daniels S, Nichol G, Tomaselli GF, Arnett DK, Fonarow GC, Ho PM, Lauer MS, Masoudi FA, Robertson RM, Roger V, Schwamm LH, Sorlie P, Yancy CW, Rosamond WD; on behalf of American Heart Association Strategic Planning Task Force and Statistics Committee. Defining and setting national goals for cardiovascular health promotion and disease reduction: the American Heart Association's Strategic Impact

- Goal through 2020 and beyond. *Circulation*. 2010;121:586–613. doi: 10.1161/CIRCULATIONAHA.109.192703.
20. American Heart Association. My Life Check. <http://mlc.heart.org/>. Accessed November 14, 2014.
 21. Ford ES, Greenlund KJ, Hong Y. Ideal cardiovascular health and mortality from all causes and diseases of the circulatory system among adults in the United States. *Circulation*. 2012;125:987–995. doi: 10.1161/CIRCULATIONAHA.111.049122.
 22. Folsom AR, Yatsuya H, Nettleton JA, Lutsey PL, Cushman M, Rosamond WD; ARIC Study Investigators. Community prevalence of ideal cardiovascular health, by the American Heart Association definition, and relationship with cardiovascular disease incidence. *J Am Coll Cardiol*. 2011;57:1690–1696. doi: 10.1016/j.jacc.2010.11.041.
 23. Kulshreshtha A, Vaccarino V, Judd SE, Howard VJ, McClellan WM, Muntner P, Hong Y, Safford MM, Goyal A, Cushman M. Life's Simple 7 and risk of incident stroke: the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study. *Stroke*. 2013;44:1909–1914. doi:10.1161/STROKEAHA.111.000352.
 24. Dong C, Rundek T, Wright CB, Anwar Z, Elkind MS, Sacco RL. Ideal cardiovascular health predicts lower risks of myocardial infarction, stroke, and vascular death across whites, blacks, and Hispanics: the Northern Manhattan Study. *Circulation*. 2012;125:2975–2984. doi: 10.1161/CIRCULATIONAHA.111.081083.
 25. Xanthakis V, Enserro DM, Murabito JM, Polak JF, Wollert KC, Januzzi JL, Wang TJ, Tofler G, Vasan RS. Ideal cardiovascular health: associations with biomarkers and subclinical disease and impact on incidence of cardiovascular disease in the Framingham Offspring Study. *Circulation*. 2014;130:1676–1683. doi: 10.1161/CIRCULATIONAHA.114.009273.
 26. Pronk NP, Lowry M, Kottke TE, Austin E, Gallagher J, Katz A. The association between optimal lifestyle adherence and short-term incidence of chronic conditions among employees. *Popul Health Manag*. 2010;13:289–295. doi: 10.1089/pop.2009.0075.
 27. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000 [published correction appears in *JAMA*. 2005;292:298]. *JAMA*. 2004;291:1238–1245. doi: 10.1001/jama.291.10.1238.
 28. US Burden of Disease Collaborators. The state of US health, 1990–2010: burden of diseases, injuries, and risk factors. *JAMA*. 2013;310:591–608.
 29. Khaw K-T, Wareham N, Bingham S, Welch A, Luben R, Day N. Combined impact of health behaviors and mortality in men and women: the EPIC-NORFOLK prospective population study. *PLoS Med*. 2008;5:e12.
 30. Pronk NP, Katz AS, Gallagher J, Austin E, Mullen D, Lowry M, Kottke TE. Adherence to optimal lifestyle behaviors is related to emotional health indicators among employees. *Popul Health Manag*. 2011;14:59–67. doi: 10.1089/pop.2010.0007.
 31. Spring B, Ockene JK, Gidding SS, Mozaffarian D, Moore S, Rosal MC, Brown MD, Vafiadis DK, Cohen DL, Burke LE, Lloyd-Jones D; American Heart Association Behavior Change Committee of the Council on Epidemiology and Prevention, Council on Lifestyle and Cardiometabolic Health, Council for High Blood Pressure Research, and Council on Cardiovascular and Stroke Nursing. Better population health through behavior change in adults: a call to action. *Circulation*. 2013;128:2169–2176. doi: 10.1161/01.cir.0000435173.25936.e1.
 32. Patient Protection and Affordable Care Act, 124 Stat. 156–157, Public Health Law 111–148 (March 23, 2010).
 33. Goetzel RZ, Pei X, Tabrizi MJ, Henke RM, Kowlessar N, Nelson CF, Metz RD. Ten modifiable health risk factors are linked to more than one-fifth of employer-employee health care spending. *Health Aff (Millwood)*. 2012;31:2474–2484. doi: 10.1377/hlthaff.2011.0819.
 34. Madison K, Schmidt H, Volpp KG. Smoking, obesity, health insurance, and health incentives in the Affordable Care Act. *JAMA*. 2013;310:143–144. doi: 10.1001/jama.2013.7617.
 35. Moses H 3rd, Matheson DH, Dorsey ER, George BP, Sadoff D, Yoshimura S. The anatomy of health care in the United States. *JAMA*. 2013;310:1947–1963. doi: 10.1001/jama.2013.281425.
 36. Bolnick H, Millard F, Dugas JP. Medical care savings from workplace wellness programs: what is a realistic savings potential? *J Occup Environ Med*. 2013;55:4–9. doi: 10.1097/JOM.0b013e31827db98f.
 37. Baicker K, Cutler D, Song Z. Workplace wellness programs generate savings. *Health Aff (Millwood)*. 2010;29:304–311.
 38. Soler RE, Leeks KD, Razi S, Hopkins DP, Griffith M, Aten A, Chattopadhyay SK, Smith SC, Habarta N, Goetzel RZ, Pronk NP, Richling DE, Bauer DR, Buchanan LR, Florence CS, Koonin L, MacLean D, Rosenthal A, Matson Koffman D, Grizzell JV, Walker AM; Task Force on Community Preventive Services. A systematic review of selected interventions for worksite health promotion: the assessment of health risks with feedback. *Am J Prev Med*. 2010;38(suppl):S237–S262. doi: 10.1016/j.amepre.2009.10.030.
 39. Pronk NP, Allen CU. A culture of health: creating and sustaining supportive organizational environments for health. In: Pronk NP, ed. *ACSM's Worksite Health Handbook*. 2nd ed. Champaign, IL: Human Kinetics; 2009.
 40. Pronk NP. Best practice design principles of worksite health and wellness programs. *ACSM's Health Fit J*. 2014;18:42–46.
 41. Terry P, Grossmeier J, Mangen D, Gingerich S. Analyzing best practices in employee health management: how age, sex, and program components relate to employee engagement and health outcomes. *J Occup Environ Med*. 2013;55:378–392.
 42. Terry PE, Seaverson EL, Grossmeier J, Anderson DR. Association between nine quality components and superior worksite health management program results. *J Occup Environ Med*. 2008;50:633–641. doi: 10.1097/JOM.0b013e31817e7c1c.
 43. Madison K, Schmidt H, Volpp KG. Using reporting requirements to improve employer wellness incentives and their regulation. *J Health Polit Policy Law*. 2014;39:1013–1034. doi: 10.1215/03616878-2813683.
 44. Goetzel RZ, Ozminkowski RJ. The health and cost benefits of work site health-promotion programs. *Annu Rev Public Health*. 2008;29:303–323. doi: 10.1146/annurev.publhealth.29.020907.090930.
 45. Pronk NP. Fitness of the US workforce. *Ann Rev Public Health*. 2015;36:131–149.
 46. National Institute for Occupational Safety and Health (NIOSH), Center for Disease Control and Prevention. Total Worker Health. <http://www.cdc.gov/niosh/TWH/essentials.html>. Accessed December 15, 2014.
 47. Loewenstein G, Asch DA, Volpp KG. Behavioral economics holds potential to deliver better results for patients, insurers, and employers. *Health Aff (Millwood)*. 2013;32:1244–1250. doi: 10.1377/hlthaff.2012.1163.
 48. Volpp KG, Asch DA, Galvin R, Loewenstein G. Redesigning employee health incentives: lessons from behavioral economics. *N Engl J Med*. 2011;365: 388–390.
 49. US Department of Labor, Employee Benefits Security Administration. The Affordable Care Act and Wellness Programs. <http://www.dol.gov/ebsa/newsroom/fswellnessprogram.html>. Accessed December 15, 2014.
 50. Madison KM, Volpp KG, Halpern SD. The law, policy, and ethics of employers' use of financial incentives to improve health. *J Law Med Ethics*. 2011;39:450–468. doi: 10.1111/j.1748-720X.2011.00614.x.
 51. Incentives for nondiscriminatory wellness programs in group health plans. *78 Fed Regist*. 2013;78:33158.
 52. Earles AC, Heinen L. Employee health promotion: a legal perspective. In: Pronk NP, ed. *ACSM's Worksite Health Handbook*. 2nd ed. Champaign, IL: Human Kinetics; 2009.
 53. Consensus Statement of the Health Enhancement Research Organization; American College of Occupational and Environmental Medicine; American Cancer Society and American Cancer Society Action Network; American Diabetes Association; American Heart Association. Guidance on a reasonably designed, employer-sponsored wellness program using outcomes-based incentives. *J Occup Environ Med*. 2012;54:889–896.
 54. Begley S. Exclusive: workplace wellness fails the bottom line, waistlines—RAND. <http://www.reuters.com/article/2013/05/24/us-wellness-idUSBRE94N0XX20130524>. Accessed November 21, 2014.
 55. Caloyeras JP, Liu H, Exum E, Broderick M, Mattke S. Managing manifest diseases, but not health risks, saved PepsiCo money over seven years. *Health Aff (Millwood)*. 2014;33:124–131. doi: 10.1377/hlthaff.2013.0625.
 56. Baxter S, Sanderson K, Venn AJ, Blizzard CL, Palmer AJ. The relationship between return on investment and quality of study methodology in workplace health promotion programs. *Am J Health Promot*. 2014;28:347–363. doi: 10.4278/ajhp.130731-LIT-395.
 57. Grossmeier J, Terry PE, Anderson D, Wright S. The financial impact of population health management programs: reevaluating the literature. *Popul Health Manag*. 2012;15:129–134.
 58. Nyce S, Grossmeier J, Anderson D, Terry P, Kelley B. Association between changes in health risk status and changes in future health care costs: a multiemployer study. *J Occup Environ Med*. 2012; 54:1364–1373.
 59. National Business Group on Health. The National Business Group on Health/Fidelity Investments' survey: employer investments in improving health. <https://www.businessgrouphealth.org/benchmarking/surveyreports.cfm>. Accessed December 15, 2014.
 60. McGinnis RZ, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Aff (Millwood)*. 2002;21:78–93.
 61. Mayes R, Oliver TR. Chronic disease and the shifting focus of public health: is prevention still a political lightweight. *J Health Polit Policy Law*. 2012;37:181–200.

62. Yach D, Calitz C. New opportunities in the changing landscape of prevention. *JAMA*. 2014;312:791–792. doi: 10.1001/jama.2014.8900.
63. Volpp KG, Loewenstein G, Asch DA. Assessing value in health care programs. *JAMA*. 2012;307: 2153–2154.
64. Gowrisankaran G, Norberg K, Kymes S, Chernew ME, Stwalley D, Kemper L, Peck W. A hospital system's wellness program linked to health plan enrollment cut hospitalizations but not overall costs. *Health Aff (Millwood)*. 2013;32:477–485. doi: 10.1377/hlthaff.2012.0090.
65. Webber A, Mercure S. Improving population health: the business community imperative. *Prev Chronic Dis*. 2010;7:A121. http://www.cdc.gov/pcd/issues/2010/nov/10_0086.htm. Accessed December 15, 2014.
66. Centers for Disease Control and Prevention. Glossary. Workplace Health Promotion. <http://www.cdc.gov/workplacehealthpromotion/glossary/>. Accessed December 10, 2014.
67. URAC. Comprehensive Wellness. https://www.urac.org/accreditation-and-measurement/accreditation-programs/all-programs/comprehensive_wellness/. Accessed November 14, 2014.
68. National Committee on Quality Assurance. How do I know a good wellness program vendor when I see one? <http://www.ncqa.org/tabid/834/Default.aspx>. Accessed November 14, 2014.
69. National Wellness Institute. Council on Wellness Accreditation & Education. <http://www.nationalwellness.org/?page=CWAE>. Accessed December 15, 2014.
70. Goetzel RZ, Henke RM, Benevent R, Tabrizi, Kent KB, Smith KJ, Roemer EC, Grossmeier J, Mason ST, Gold DB, Noeldner SP, Anderson DR. The predictive validity of the HERO scorecard in determining future health care cost and risk trends. *J Occup Environ Med*. 2014;56:136–144. doi: 10.1097/JOM.000000000000081.
71. Fabius R, Thayer RD, Konicki DL, Yarborough CM, Peterson KW, Isaac F, Loepke RR, Eisenberg BS, Dreger M. The link between workforce health and safety and the health of the bottom line: tracking market performance of companies that nurture a “culture of health.” *J Occup Environ Med*. 2013;55:993–1000. doi: 10.1097/JOM.0b013e3182a6bb75.
72. Grossmeier J, Flynn JP, Noeldner SP, Gold D. The Health Enhancement Research Organization (HERO) employee health management best practice scorecard. *Am J Health Promot*. 2013;TAPH4-5.
73. Heinen L, Marlo K, Sherrets D. The National Business Group on Health (NBGH) WISCORE (Wellness Impact Scorecard). *Am J Health Promot*. 2013;TAPH5-6.
74. Centers for Disease Control and Prevention. CDC Worksite Health ScoreCard. http://www.cdc.gov/dhdp/pubs/docs/hsc_manual.pdf. Accessed November 10, 2014.
75. National Business Group on Health. WISCORE. http://www.businessgrouphealth.org/scorecard_v6/index.cfm?event=gettingStartedDoc. Accessed December 14, 2014.
76. Umland B. Relating best practice scores to outcomes: the HERO employee health management best practice scorecard in collaboration with Mercer: annual report, 2010:3–4. <http://www.the-hero.org>. Accessed November 10, 2014.
77. Gold D, Umland B. Relating best practice scores to outcomes. The HERO employee health management best practice scorecard in collaboration with Mercer: annual report, 2010:5–7. <http://www.the-hero.org>. Accessed November 10, 2014.
78. Health Lead. <http://www.ushealthiest.org/>. Accessed December 15, 2014.
79. Wellness Council of America (WELCOA). The Well Workplace Process. <https://www.welcoa.org/services/build/well-workplace-process/>. Accessed December 15, 2014.
80. American Heart Association. AHA Fit-Friendly Worksite. http://www.heart.org/HEARTORG/GettingHealthy/WorkplaceWellness/Fit-FriendlyWorksites/Fit-Friendly-Worksites_UCM_460748_SubHomePage.jsp. Accessed November 10, 2014.
81. The Health Project. <http://www.thehealthproject.com/awards/index.html>. Accessed November 10, 2014.
82. American College of Occupational and Environmental Medicine. Corporate Health Achievement Award Checklist. [http://www.chaa.org/pdfs/CHAA_Checklist%20\(2\).pdf](http://www.chaa.org/pdfs/CHAA_Checklist%20(2).pdf). Accessed November 10, 2014.
83. National Business Group on Health (NBGH). Best Employers for Healthy Lifestyles. <https://www.businessgrouphealth.org/bestemployers/>. Accessed December 15, 2014.
84. American Heart Association. AHA Fit-Friendly Worksites Honor Roll 2013–2014. http://www.heart.org/HEARTORG/GettingHealthy/WorkplaceWellness/Fit-FriendlyWorksites/Fit-Friendly-Worksites-Honor-Roll_UCM_460615_Article.jsp. Accessed December 10, 2014.
85. Ellrodt AG, Fonarow GC, Schwamm LH, Albert N, Bhatt DL, Cannon CP, Hernandez AF, Hlatky MA, Luepker RV, Peterson PN, Reeves M, Smith EE. Synthesizing lessons learned from get with the guidelines: the value of disease-based registries in improving quality and outcomes. *Circulation*. 2013;128:2447–2460. doi: 10.1161/01.cir.0000435779.48007.5c.
86. Hong Y, LaBresh KA. Overview of the American Heart Association “Get with the Guidelines” programs: coronary heart disease, stroke, and heart failure. *Crit Pathw Cardiol*. 2006;5:179–186. doi: 10.1097/01.hpc.0000243588.00012.79.
87. Fonarow GC, Liang L, Smith EE, Reeves MJ, Saver JL, Xian Y, Hernandez AF, Peterson ED, Schwamm LH; GWTG-Stroke Steering Committee & Investigators. Comparison of performance achievement award recognition with primary stroke center certification for acute ischemic stroke care. *J Am Heart Assoc*. 2013;2:e000451. doi: 10.1161/JAHA.113.000451.
88. Fonarow GC, Gregory T, Driskill M, Stewart MD, Beam C, Butler J, Jacobs AK, Meltzer NM, Peterson ED, Schwamm LH, Spertus JA, Yancy CW, Tomaselli GF, Sacco RL. Hospital certification for optimizing cardiovascular disease and stroke quality of care and outcomes. *Circulation*. 2010;122:2459–2469. doi: 10.1161/CIR.0b013e3182011a81.
89. Lloyd-Jones DM. Cardiovascular health and protection against CVD: more than the sum of the parts? *Circulation*. 2014;130:1671–1673. doi: 10.1161/CIRCULATIONAHA.114.012869.
90. Rasmussen-Torvik LJ, Shay CM, Abramson JG, Friedrich CA, Nettleton JA, Prizment AE, Folsom AR. Ideal cardiovascular health is inversely associated with incident cancer: the Atherosclerosis Risk in Communities study. *Circulation*. 2013;127:1270–1275.
91. Cushman M, Judd SE, McClure LA, Lakoski SG, Folsom AR, Zakai NA. American Heart Association's Life's Simple 7 and risk of venous thromboembolism: the Reasons for Geographic and Racial Differences in Stroke (REGARDS) Study. *J Am Heart Assoc*. 2015;4:e001494. doi: 10.1161/JAHA.114.001494.
92. Muntner P, Judd SE, Gao L, Gutiérrez OM, Rizk DV, McClellan W, Cushman M, Warnock DG. Cardiovascular risk factors in CKD associate with both ESRD and mortality. *J Am Soc Nephrol*. 2013;24:1159–1165. doi: 10.1681/ASN.2012070642.
93. Aatola H, Hutri-Kähönen N, Juonala M, Laitinen TT, Pahkala K, Mikkilä V, Telama R, Koivisto T, Lehtimäki T, Viikari JS, Raitakari OT, Kähönen M. Prospective relationship of change in ideal cardiovascular health status and arterial stiffness: the Cardiovascular Risk in Young Finns Study. *J Am Heart Assoc*. 2014;3:e000532. doi: 10.1161/JAHA.113.000532.
94. Allen NB, Ning H, Huffman MD, Liu K, Reis J, Lloyd-Jones D. Maintenance of ideal cardiovascular health over 20 years and its impact on health related quality of life: the Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Circulation*. 2013;128(suppl):A15499. Abstract. Published online November 15, 2013. http://circ.ahajournals.org/cgi/content/meeting_abstract/128/22_MeetingAbstracts/A15499. Accessed April 9, 2015.
95. Reis JP, Loria CM, Launer LJ, Sidney S, Liu K, Jacobs DR Jr, Zhu N, Lloyd-Jones DM, He K, Yaffe K. Cardiovascular health through young adulthood and cognitive functioning in midlife. *Ann Neurol*. 2013;73:170–179. doi: 10.1002/ana.23836.
96. Kronish IM, Carson AP, Davidson KW, Muntner P, Safford MM. Depressive symptoms and cardiovascular health by the American Heart Association's definition in the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study. *PLoS One*. 2012;7:e52771. doi: 10.1371/journal.pone.0052771.
97. Wilkins JT, Ning H, Berry J, Zhao L, Dyer AR, Lloyd-Jones DM. Lifetime risk and years lived free of total cardiovascular disease. *JAMA*. 2012;308:1795–1801. doi: 10.1001/jama.2012.14312.
98. Daviglus ML, Liu K, Greenland P, Dyer AR, Garside DB, Manheim L, Lowe LP, Rodin M, Lubitz J, Stamler J. Benefit of a favorable cardiovascular risk-factor profile in middle age with respect to Medicare costs. *N Engl J Med*. 1998;339:1122–1129. doi: 10.1056/NEJM199810153391606.
99. Daviglus ML, Liu K, Pirzada A, Yan LL, Garside DB, Greenland P, Manheim LM, Dyer AR, Wang R, Lubitz J, Manning WG, Fries JF, Stamler J. Cardiovascular risk profile earlier in life and Medicare costs in the last year of life. *Arch Intern Med*. 2005;165:1028–1034. doi: 10.1001/archinte.165.9.1028.
100. American Heart Association/American Stroke Association (AHA/ASA). Twenty-two leading CEOs join the American Heart Association in a groundbreaking initiative to significantly shift the culture of health in the workplace. <http://newsroom.heart.org/news/twenty-two-leading-ceos-join-the-american-heart-association-in-a-groundbreaking-initiative-to-significantly-shift-the-culture-of-health-in-the-workplace>. Accessed December 15, 2014.

101. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System. <http://www.cdc.gov/brfss/>. Accessed December 15, 2014.
102. US Census Bureau. Historical data tabulations by enterprise: 2010. <http://www.census.gov/econ/susb/data/susb2010.html>. Accessed January 14, 2015.
103. Hannon PA, Garson G, Harris JR, Hammerback K, Sopher CJ, Clegg-Thorp C. Workplace health promotion implementation, readiness, and capacity among midsize employers in low-wage industries: a national survey. *J Occup Environ Med*. 2012;54:1337–1343. doi: 10.1097/JOM.0b013e3182717cf2.
104. Harris JR, Huang Y, Hannon PA, Williams B. Low socioeconomic status workers: their health risks and how to reach them. *J Occup Environ Med*. 2011;53:132–138.
105. US Census Bureau. Statistics about business size (including small businesses). <http://www.census.gov/econ/smallbus.html>. Accessed January 15, 2015.
106. Patel D, Goetzel RZ, Beckowski M, Milner K, Greyling M, da Silva R, Kolbe-Alexander T, Tabrizi MJ, Nossel C. The Healthiest Company Index: a campaign to promote worksite wellness in South Africa. *J Occup Environ Med*. 2013;55:172–178. doi: 10.1097/JOM.0b013e3182728d61.
107. Health Enhancement Research Organization and Population Health Alliance. Program measurement and evaluation guide: core metrics for employee health management. <http://hero-health.org/wp-content/uploads/2015/02/HERO-PHA-Metrics-Guide-FINAL.pdf>. Accessed February 24, 2015.
108. American Cancer Society; American Diabetes Association; American Heart Association. <http://www.everydaychoices.org/>. Preventive Health Partnership Web site. Accessed January 14, 2015.
109. Harris JR, Cross J, Hannon PA, Mahoney E, Ross-Viles S, Kuniyuki A. Employer adoption of evidence-based chronic disease practices: a pilot study. *Prev Chron Dis*. 2008;5:A92. Accessed January 14, 2015.
110. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. *Health Educ Q*. 1988;15:351–377.
111. Harris JR, Hannon PA, Beresford SA, Linnan LA, McLellan DL. Health promotion in smaller workplaces in the United States. *Annu Rev Public Health*. 2014;35:327–342. doi: 10.1146/annurev-publhealth-032013-182416.
112. Record NB, Onion DK, Prior RE, Dixon DC, Record SS, Fowler FL, Cayer GR, Amos CI, Pearson TA. Community-wide cardiovascular disease prevention programs and health outcomes in a rural county, 1970–2010. *JAMA*. 2015;313:147–155.
113. Labarthe DR, Stamler J. Improving cardiovascular health in a rural population: can other communities do the same? *JAMA*. 2015;313:139–140. doi: 10.1001/jama.2014.16963.
114. American Heart Association. Workplace Wellness Guide for Organization Leaders. http://www.heart.org/HEARTORG/GettingHealthy/WorkplaceWellness/WorkplaceWellnessResources/Workplace-Wellness-Guide-for-Organization-Leaders_UCM_460427_Article.jsp. Accessed January 18, 2015.
115. American Heart Association. Workplace Wellness Kit. http://www.heart.org/HEARTORG/GettingHealthy/WorkplaceWellness/WorkplaceWellnessResources/The-American-Heart-Associations-Worksite-Wellness-Kit_UCM_460433_Article.jsp. Accessed January 18, 2015.
116. American Heart Association. Healthy Workplace Food and Beverage Toolkit. http://www.heart.org/HEARTORG/GettingHealthy/WorkplaceWellness/WorkplaceWellnessResources/Healthy-Workplace-Food-and-Beverage-Toolkit_UCM_465195_Article.jsp. Accessed December 10, 2014.
117. American Heart Association. Activity Tracker. http://www.startwalkingnow.org/start_workplace_mystart_tracker.jsp. Accessed January 18, 2015.
118. American Heart Association Heart Walk. Find a Heart Walk near you. <http://www.heartwalk.org/site/c.fkUIeOUIgJ8H/b.8939141/k.BD45/Home.htm>. Accessed January 18, 2015.
119. American Heart Association. Nutrition Center. http://www.heart.org/HEARTORG/GettingHealthy/NutritionCenter/Nutrition-Center_UCM_001188_SubHomePage.jsp. Accessed January 18, 2015.
120. American Heart Association. CPR & First Aid. http://www.heart.org/HEARTORG/CPRAndECC/CPR_UCM_001118_SubHomePage.jsp. Accessed January 18, 2015.
121. American Heart Association. Heart360. <https://www.heart360.org/>. Accessed January 18, 2015.
122. American Heart Association. Workplace Wellness Resources. http://www.heart.org/HEARTORG/GettingHealthy/WorkplaceWellness/WorkplaceWellnessResources/Workplace-Wellness-Resources_UCM_460461_SubHomePage.jsp. Accessed January 18, 2015.

Workplace Wellness Recognition for Optimizing Workplace Health: A Presidential Advisory From the American Heart Association

Gregg C. Fonarow, Chris Calitz, Ross Arena, Catherine Baase, Fikry W. Isaac, Donald Lloyd-Jones, Eric D. Peterson, Nico Pronk, Eduardo Sanchez, Paul E. Terry, Kevin G. Volpp and Elliott M. Antman
on behalf of the American Heart Association

Circulation. 2015;131:e480-e497; originally published online April 13, 2015;
doi: 10.1161/CIR.0000000000000206

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2015 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the
World Wide Web at:

<http://circ.ahajournals.org/content/131/20/e480>

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in *Circulation* can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the [Permissions and Rights Question and Answer](#) document.

Reprints: Information about reprints can be found online at:
<http://www.lww.com/reprints>

Subscriptions: Information about subscribing to *Circulation* is online at:
<http://circ.ahajournals.org/subscriptions/>