

**American Heart Association Guide for Improving Cardiovascular Health at the Community Level, 2013 Update : A Scientific Statement for Public Health Practitioners, Healthcare Providers, and Health Policy Makers**

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on behalf of the American Heart Association Council on Epidemiology and Prevention

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## American Heart Association Guide for Improving Cardiovascular Health at the Community Level, 2013 Update A Scientific Statement for Public Health Practitioners, Healthcare Providers, and Health Policy Makers

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The goal of this American Heart Association Guide for Improving Cardiovascular Health at the Community Level (AHA Community Guide) is to provide a comprehensive inventory of evidence-based goals, strategies, and recommendations for cardiovascular disease (CVD) and stroke prevention that can be implemented on a community level. This guide advances the 2003 AHA Community Guide<sup>1</sup> and the 2005 AHA statement on guidance for implementation<sup>2</sup> by incorporating new evidence for community interventions gained over the past decade, expanding the target audience to include a broader range of community advocates, aligning with the concepts and terminology of the AHA 2020 Impact Goals, and recognizing the contributions of new public and private sector programs involving community interventions.

In recent years, expanding arrays of programs and policies have been implemented in increasingly diverse communities to provide tools, strategies, and other best practices to potentially reduce the incidence of initial and recurrent cardiovascular events. The AHA Community Guide complements the AHA statement entitled “Population Approaches to Improve

Diet, Physical Activity, and Smoking Habits”<sup>3</sup> and supports the AHA 2020 goal<sup>4</sup> to “improve the cardiovascular health of all Americans by 20%, while reducing deaths from CVDs and stroke by 20%.” The present AHA Community Guide supports the AHA 2020 goal by identifying exemplary regional or national programs that encourage cardiovascular health behaviors and health factors (formerly addressing risk behaviors and risk factors) from which communities might acquire proven strategies, expertise, and technical assistance for improving cardiovascular health.

### The AHA Community Guide Complements Existing CVD and Community Guidelines

The AHA Community Guide seeks to prevent the onset of disease (primary prevention) and to maintain optimal cardiovascular health (primordial prevention) among broader segments of the population. Prior research indicates that using public health strategies such as sodium reduction in processed foods to lower blood pressure,<sup>5-8</sup> tobacco laws to promote smoking cessation,<sup>9-11</sup> and modification of the built

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The opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the Office of the US Department of Health and Human Services or the Federal Government.

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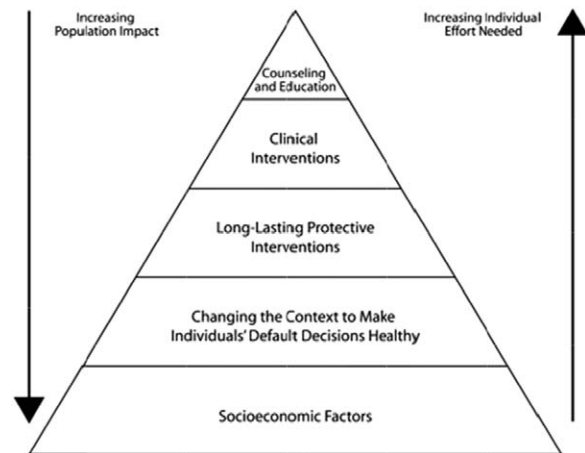
environment to increase physical activity<sup>12–14</sup> can preserve optimal levels of these cardiovascular health factors from childhood throughout the life course<sup>15,16</sup> or shift the entire distribution of cardiovascular risk to lower levels.<sup>17</sup> This public health approach yields lifelong benefits in terms of good health and reduced healthcare costs. The AHA Community Guide complements existing AHA, National Heart, Lung, and Blood Institute, and Centers for Disease Control and Prevention guidelines and initiatives to preserve cardiovascular health and to achieve primary and secondary prevention of heart disease and stroke.<sup>18–30</sup> Most of these existing policy statements and guidelines for heart disease and stroke prevention target individuals and healthcare providers. The Centers for Disease Control and Prevention's *Guide to Community Preventive Services*<sup>27,28</sup> addresses some health behaviors and comorbid conditions (ie, nutrition, physical activity, smoking, and obesity) that are relevant to CVD prevention; however, it does not address a comprehensive set of cardiovascular health factors (omitting, for example, hypertension and hypercholesterolemia). Thus, despite the existing CVD prevention guidelines for individuals and healthcare providers<sup>21,22,29,30</sup> and the *Guide to Community Preventive Services*,<sup>31</sup> a comprehensive and up-to-date review of community approaches for CVD prevention is an important and timely contribution to a comprehensive CVD prevention model in the United States. This rationale provides the basis for this updated AHA Community Guide.

This guide has the unique opportunity to build upon, to develop synergies with, and to further advance the multiple interventions and policy changes occurring over the past decade. Through the Affordable Care Act and other recent legislation, federal policies have been set in motion to support and enhance community engagement as an essential and unique role in prevention.<sup>32</sup> These policies range from implementation of community assessment components for hospitals to the development of Accountable Care Organizations, as well as coverage of preventive health services under public and private insurance, integration of community health workers in many of these programs, and transformation of communities' policy infrastructure to support cardiovascular health.<sup>32</sup>

### Identifying Interventions for Population-wide Cardiovascular Health Promotion and CVD Risk Reduction

Various interventions for population-wide health promotion and risk reduction efforts have been categorized by Frieden<sup>33</sup> in a health impact pyramid (Figure 1). At the base of the pyramid are interventions that have the broadest impact on populations (eg, socioeconomic factors), which decreases from bottom to top, and at the top are those that require the greatest individual effort (eg, counseling and education), which decreases from top to bottom.

The social and environmental origins of CVD have long been recognized as mediated in large part by lifestyles and behaviors that are modifiable. Cardiovascular health in children predicts subsequent cardiometabolic health in adulthood,<sup>34,35</sup> affirming the importance of maintaining healthy lifestyle behaviors from early in life. Longitudinal population



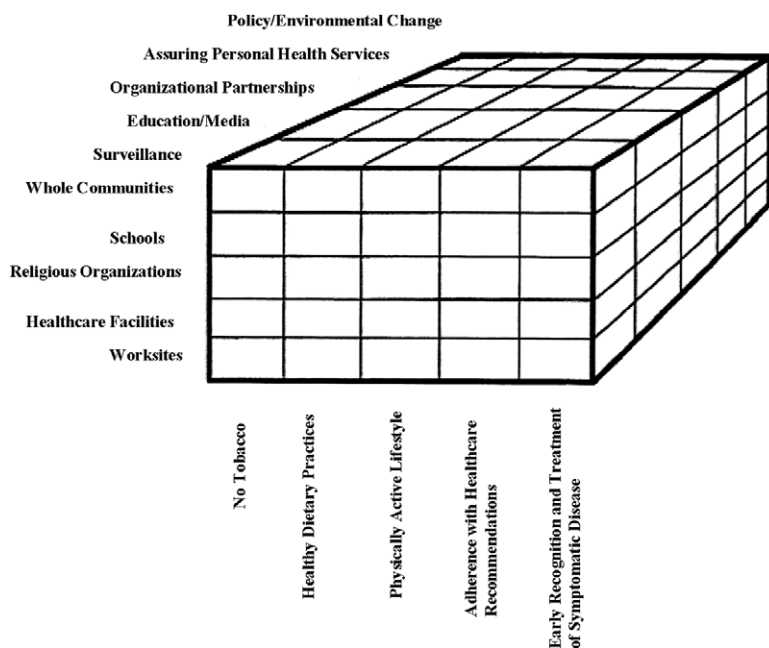
**Figure 1.** Health impact pyramid. Reproduced from Frieden<sup>33</sup> with permission of the publisher. Copyright © 2010, American Public Health Association.

studies have documented low lifetime risk of heart disease and stroke in people with few or no risk factors.<sup>15,36–38</sup> The large reductions in heart disease and stroke mortality in the United States and other high-income countries since the 1960s are partially attributable to population-wide reductions in tobacco use and dietary fat, including saturated fat and cholesterol.<sup>39–42</sup> These primordial prevention strategies allow maintenance of optimal cardiovascular health over a longer period of time for a larger portion of the population, consistent with the AHA 2020 goals.<sup>4</sup> Considerable new evidence has quantified the relative costs of interventions at the individual versus population level.<sup>43,44</sup> According to the World Health Organization, policy and other environmental changes may bring about major reductions in CVD burden in all countries for less than \$1 per person per year, whereas costs of individual counseling, drug, or surgical approaches are at least several-fold higher.<sup>44</sup>

The AHA Community Guide recommends interventions targeted at all the strata of the pyramid, with an emphasis on the second level, changing the context to make individuals' default decisions healthy.<sup>33</sup> The improvement in socioeconomic status (first level)<sup>33</sup> is a worthy goal for any society, and the AHA Community Guide fully recognizes the critical importance of the social determinants of CVD.<sup>45,46</sup> The AHA Community Guide encourages communities to implement community-wide interventions that are socially and culturally appropriate<sup>47</sup> to reduce disparities and inequities in the cardiovascular health of socioeconomically disadvantaged subgroups.<sup>48,49</sup>

### The Conceptual Framework for Heart Disease and Stroke Prevention at the Community Level

Population approaches to worldwide noncommunicable disease prevention have come of age over the past 20 years with the publication of a series of declarations and reviews by the International Heart Health Society.<sup>50,51</sup> The International Heart Health Society established a policy framework and experience base on which governmental agencies, the private sector, nongovernmental organizations, employers, and the healthcare sector could “join forces in eliminating this modern epidemic by adopting new policies, making regulatory



**Figure 2.** Conceptual framework for population-wide cardiovascular risk behaviors change: the optimal health behaviors and factors, community settings, and public health interventions. Modified from Pearson et al.<sup>1</sup> Copyright © 2003, American Heart Association, Inc.

changes, and implementing health promotion and disease prevention programs directed at entire populations.”<sup>50</sup> In agreement, the United Nations recognizes noncommunicable diseases, of which heart disease and stroke constitute a large part, as leading causes of morbidity, mortality, and healthcare cost worldwide.<sup>52</sup> These documents consistently **identify 3 dimensions (Figure 2) around which community-wide approaches might be organized: the optimal behaviors targeted for population-wide change, the community setting targeted for intervention, and the public health interventions required for population-wide changes to improve cardiovascular health.**<sup>1</sup> The writing group members were assigned to task groups based on each optimal behavior and intervention goal. These task groups were responsible for identifying evidence to support the behaviors to which most of CVD risk has been attributed, population-wide recommendations for maintenance of cardiovascular health, public health intervention goals and recommendations to improve cardiovascular health behaviors and factors in the community, and current programs that support strategic implementation of intervention goals in the community.

### **Health Behaviors and Factors Targeted for Population-wide Change**

The list of optimal behaviors is deceptively brief (Table 1) yet corresponds to the behaviors to which lack of CVD risk has been attributed in epidemiologic studies, namely no tobacco smoking or exposure to environmental tobacco smoke, healthy dietary practices (including healthy weight), physically active lifestyle, adherence to healthcare recommendations for hyperlipidemia/hypertension/diabetes mellitus assessment and control, and early recognition and treatment of symptomatic coronary and cerebrovascular disease, including acute coronary syndromes and transient ischemic attack/stroke. The rationale for inclusion on this list of targeted behaviors includes a high relative risk for heart and stroke

associated with them in those individuals who have not optimized these behaviors and factors,<sup>38,78</sup> significant room for their improvement in the general US population or specific communities,<sup>79</sup> and evidence that these behaviors are modifiable. Table 1 includes references to systematic reviews and previous AHA Scientific Statements, which address the first 2 criteria. These sources quantify the risk and prevalence of the targeted behaviors, allowing the burden of heart disease and stroke attributable to them to be estimated for purposes of promoting studies at the community level. Additionally, Table 1 identifies substantial shortfalls in attaining healthy behaviors in the US population.

### **Community Settings Targeted for Intervention**

Various community settings, including worksites, healthcare facilities, religious organizations, schools, and whole communities, provide platforms for programs to promote and improve health behaviors and health factors. A comprehensive community intervention appears to be most effective, with partners providing interventions in multiple settings simultaneously.<sup>80</sup> Interventions that target entire communities such as mass media or public policies are necessary and frequently used for population-wide behavior change. These may not be sufficient to reach underserved subgroups such as racial/ethnic minorities, children/youth, or the elderly. In these subgroups, additional targeted approaches are often needed. Other interventions such as programs to improve lifestyle or medication adherence or to promote early recognition of symptomatic disease may be especially effective in healthcare settings or worksites.<sup>81,82</sup> The rise of social networking has led to new definitions of virtual communities that may be targeted for interventions. Finally, many organizations located where people live, work, worship, study, and play may be able to provide especially effective programs using local media, leaders, or policies that are influential at a grassroots level.

**Table 1. Behaviors Targeted to Improve Cardiovascular Health at the Community Level and the Prevalence of Optimal Levels in the US Adult Population**

Optimal Behaviors	Prevalence in US Adults With Optimal Behaviors
No tobacco	
Reduce tobacco use <sup>53,54</sup>	73% are nonsmokers <sup>4*</sup>
Reduce exposure to environmental tobacco smoke <sup>55</sup>	...
Healthy dietary practices	≈1% meet 4–5 of 5 healthy dietary recommendations <sup>4*</sup>
BMI <25 kg/m <sup>2</sup> : appropriate caloric balance for age, sex, height, and physical activity <sup>4</sup>	33% have a BMI <25 kg/m <sup>2</sup> *4
Increase vegetable and fruit intake <sup>4</sup>	12% eat at least 4.5 cups/d <sup>56†</sup>
Increase whole grain intake <sup>4,57</sup>	7% eat at least three 1-oz servings/d <sup>56†</sup>
Increase fish intake <sup>4,58</sup>	18% eat at least two 3.5-oz servings/wk <sup>56†</sup>
Decrease fats <sup>4</sup>	...
Saturated fat	9% consume <7% saturated fat as a percent of total calories <sup>56†</sup>
Trans fat	...
Dietary cholesterol <sup>59</sup>	39% of men (≥19 y of age) consume <300 mg/d <sup>60‡</sup> 79% of women (≥19 y of age) consume <300 mg/d <sup>60‡</sup>
Decrease sugar <sup>4,61</sup>	...
Decrease sugar-sweetened beverages	52% drink <450 kcal/wk <sup>56†</sup>
Decrease salt <sup>6,62</sup>	<1% consume <1500 mg/d <sup>56†</sup>
Physically active lifestyle	
Increase physical activity transport (eg, biking) <sup>63–65</sup>	45% do at least 150 min/wk of moderate and/or vigorous activity combined <sup>4*</sup>
Occupational/work-related <sup>63,65</sup>	
Increase active sports <sup>63</sup> and other leisure-time physical activity (planned exercise) <sup>63,66–69</sup>	
Adherence with healthcare recommendations (eg, hyperlipidemia/hypertension/diabetes mellitus)	
Increase screening and diagnosis of risk factors (BP, total cholesterol, fasting blood glucose) <sup>18,19</sup>	BP 42% (untreated) with BP<120/<80 mm Hg <sup>4*</sup> TC 45% (untreated) with TC<200 mg/dL <sup>4*</sup> FBG 58% (untreated) with FBG <100 mg/dL <sup>4*</sup>
Provide health care to favorably modify behaviors and risk factors <sup>59,70,71</sup>	34% of US adults have hypertension <sup>56†</sup>
Hypertension (BP): >140/90 mm Hg	<ul style="list-style-type: none"> <li>• Of these, 80% were aware of their hypertension</li> <li>• Of these, 70% are treated</li> <li>• Of these, 46% are in control</li> </ul>
High total cholesterol: >200 mg/dL	55% of US adults have high TC <sup>72*</sup> <ul style="list-style-type: none"> <li>• Of these, 50% were aware of their high TC</li> <li>• Of those aware they have high TC, 54% are treated</li> <li>• Of those with high TC, 33% are in control</li> </ul>
Diabetes mellitus (fasting blood glucose): >126 mg/dL	8% of US adults are diagnosed with diabetes mellitus Type 2 diabetes mellitus accounts for 90%–95% of all diagnosed cases of diabetes mellitus in adults <sup>56†, 73‡</sup> <ul style="list-style-type: none"> <li>• Of these, 73% were aware of their condition<sup>56†</sup></li> <li>• Of these, 82% are treated<sup>73‡</sup></li> <li>• Of these, 57% are in control<sup>73‡</sup></li> </ul>
Early recognition and treatment of symptomatic disease	
Encourage early presentation for diagnosis and treatment <sup>74–76</sup>	<50% of patients with acute coronary syndrome obtain treatment within 1.5 h <sup>74§</sup>
Improve emergency out-of-hospital care by first responders <sup>74–77</sup>	<25% of patients with acute stroke obtain treatment within 3 h <sup>74  </sup>

BMI indicates body mass index; BP, blood pressure; FBG, fasting blood glucose; and TC, total cholesterol. Optimal refers to levels associated with lower risk for developing cardiovascular disease.

\*National Health and Nutrition Examination Survey (NHANES) 2005–2006.

†NHANES 2005–2008.

‡NHANES 2003–2006.

§Atherosclerosis Risk in Communities Study.

||Paul Coverdell National Acute Stroke Registry.

In some instances, community-based interventions have failed to fully consider who is receiving the information, the setting in which the educational programming occurs, and how the programming is delivered. Such approaches may actually promulgate racial/ethnic, socioeconomic, and geographic disparities by benefiting early-adopter communities while leaving late-adopter communities at higher risk.<sup>83</sup> A recently expanding approach to these types of interventions is to use the principles of community-based participatory research by working with community members to understand the social and cultural context of the target population, to identify appropriate settings for the intervention, and to work with local community members to design and implement the intervention. Interventions that have adhered to the principles of community-based participatory research by using culturally sensitive approaches, conducting interventions in settings such as churches<sup>84</sup> and barbershops,<sup>85</sup> and using local neighborhood residents as health promoters<sup>86-88</sup> have been successful in promoting healthy behavior change. Community involvement and leadership are critical to the successful and inclusive implementation of cardiovascular health interventions.

### **Public Health Interventions for Population-wide Cardiovascular Health Promotion and CVD Risk Reduction**

Building on the framework established by the Institute of Medicine's *The Future of Public Health*<sup>89</sup> and the Centers for Disease Control and Prevention's 10 essential public health services,<sup>90</sup> the AHA Community Guide defines the interventions themselves as activities at the community level that are required for population-wide promotion of healthy behaviors. These activities include surveillance, education and media, organizational partnerships, assurance of personal health services and environmental and policy changes.

Surveillance assesses and describes the prevalence of optimal cardiovascular health behaviors and factors, heart disease and stroke, and the underlying social and physical environmental influences. Valuable, yet incomplete, surveillance data for social and environmental conditions, risk factors, use of preventive services, and measures of morbidity/mortality are available from national-level (eg, Behavioral Risk Factor Surveillance Survey,<sup>91</sup> National Health Interview Survey,<sup>92</sup> and National Health and Nutrition Examination Survey),<sup>38,79</sup> state-level (eg, California Health Interview Survey),<sup>93</sup> and county-level reports.<sup>94</sup> In 2007, the AHA recommended filling the critical gaps in the US surveillance system to support the prevention and management of heart disease and stroke.<sup>95</sup> In 2011, the Institute of Medicine recommended that the Department of Health and Human Services establish a coordinated national surveillance system that would integrate existing efforts to provide CVD data.<sup>96</sup>

Although surveillance continues and strengthened national- and state-level systems are awaited, communities should also strive to create and maintain surveillance programs for cardiovascular health of their local populations. Surveillance raises the community's awareness of social conditions and suboptimal behaviors, motivating engagement in interventions.

To target intervention programs to groups with the greatest burdens, surveillance is increasingly used to identify health disparities/inequities in smaller population subgroups based on race, ethnicity, socioeconomic status, disability, and geographic location.<sup>97</sup> Continuous surveillance extending before, during, and after implementation is essential for the evaluation of intervention programs.

Education at the individual level or via mass media raises awareness and literacy about the burden, causes, and means to prevent heart disease and stroke and creates a favorable "information environment" supporting healthful lifestyle change. Increasingly, electronic media, electronic gaming, and social networking methods have been used to reach adolescents and young adults. Local media may be very useful for education in religious organizations, community centers, and worksites. Surveillance and educational interventions may be sufficient to change behavior in some communities, but other communities may require additional support through community organization, healthcare provision, or environmental change.<sup>83</sup>

Organizational partnerships are an important part of any intervention strategy. They can provide local venues for education and health services, foster resource development and broad-based advocacy for policies and legislation, and ultimately result in permanent changes in the local environment.

Assurance of personal health services as a public health strategy recognizes that populations need local healthcare providers. Healthcare providers can screen for and diagnose treatable risk factors such as hypertension and hyperlipidemia, promote behavioral change and/or prescribe pharmacological regimens required for their control, monitor adherence and risk factor goal attainment, and provide on-site medical services for early recognition and treatment of symptomatic disease. Healthcare providers can also identify patients with known CVD and treat with appropriate cardioprotective pharmacotherapies because numerous studies have shown that compliance with these medications can reduce individual risk.<sup>98</sup>

Environmental changes and policies are not limited to local, state, or national government but are also required at worksites, schools, religious organizations, community-based organizations, and healthcare facilities because each of these organizations can alter its own rules and facilities to be heart healthy. Public policy change can take several forms, including financial, legal, regulatory, and trade policies,<sup>99-102</sup> affecting a wide range of factors that can promote healthy behavior.<sup>96</sup> Policy changes focused on improvements in diet, physical activity, and tobacco environments and wellness programs can improve behaviors, reduce risk, and increase referrals of at-risk individuals to appropriate services.

The AHA Community Guide integrates these 3 dimensions (ie, optimal health behaviors, community settings, and public health interventions) to create a comprehensive set of opportunities for cardiovascular health improvement at the community level (Figure 2).<sup>1</sup> This 5×5×5 cube identifies numerous opportunities for communities to contribute to prevention of heart disease and stroke by focusing on one or more optimal behavior–community setting–intervention opportunities. The guide also encourages community leaders to view heart disease and stroke prevention more broadly and comprehensively.

**Table 2. Systematic Reviews/Evidence Summaries With Recommendations for Optimal Behaviors at the Community Level**

Optimal Behaviors	Review/Summary	Recommendation
<b>No tobacco</b>		
Reduce tobacco use	Surgeons General reports <sup>104</sup> USPSTF <sup>31</sup> IOM report on tobacco <sup>105</sup>	Complete cessation for individuals  Reductions in prevalence of smoking to level where public health impact is minimal
Reduce exposure to environmental tobacco smoke	Surgeon General Reports <sup>55</sup> IOM report on tobacco <sup>105</sup>	Curtail all sources of involuntary exposure to environmental tobacco smoke
<b>Healthy dietary practices</b>		
Calories	AHA 2020 Impact Goals <sup>4</sup> AHA diet and lifestyle recommendations <sup>106</sup> AHA obesity guidelines <sup>107</sup> 2010 US dietary guidelines <sup>108</sup>  NHLBI integrated guidelines for children and adolescents <sup>19</sup>	Women: 1600–2400 cal/d Men: 2000–3000 cal/d Calorie ranges depend on age and physical activity level. Balance calorie intake and physical activity to achieve or maintain a healthy body weight. Healthy body weight for adults: BMI <25 kg/m <sup>2</sup> Healthy body weight for youths (2–18 y of age): BMI <85th percentile based on CDC 2000 growth charts
Vegetable and fruit intake	AHA 2020 Impact Goals <sup>4</sup> AHA diet and lifestyle recommendations <sup>106</sup> 2010 US dietary guidelines <sup>108</sup>	At least 4.5 cups/d
Whole grains (eg, whole-wheat bread, brown rice)	AHA 2020 Impact Goals <sup>4</sup> Harris and Kris-Etherton, 2010 <sup>57</sup> 2010 US dietary guidelines <sup>108</sup>	At least three 1-oz-equivalent servings /d (1.1 g fiber per 10 g carbohydrate)
Fish intake (eg, wild salmon, anchovies)	AHA 2020 Impact Goals <sup>4</sup> AHA diet and lifestyle recommendations <sup>106</sup> 2010 US dietary guidelines <sup>108</sup> Mozafarriar and Rimm, 2006 <sup>58</sup>	At least two 3.5-oz servings/week (low mercury)
SFA, TFA, and cholesterol	AHA 2020 Impact Goals <sup>4</sup> ATP III <sup>59</sup> AHA diet and lifestyle recommendations <sup>106</sup> 2010 US dietary guidelines <sup>108</sup>	SFA <7% of calories, TFA as low as possible, dietary cholesterol <300 mg/d
Sugar	AHA 2020 Impact Goals <sup>4</sup> Johnson et al, 2009 <sup>61</sup> AHA 2020 Impact Goals <sup>4</sup>	<150 cal/d (men), <100 cal/d (women)  <450 kcal (36 oz)/wk (sugar-sweetened beverages such as soda and juice)
Sodium	AHA 2020 Impact Goals <sup>4</sup> AHA sodium statement <sup>62</sup> IOM report on sodium intake <sup>109</sup>	<1500 mg/d sodium
<b>Physically active lifestyle</b>		
	2008 US physical activity guidelines <sup>63</sup> AHA/ACSM recommendations <sup>67</sup> <i>The Guide to Community Preventive Services</i> <sup>10</sup> 2008 US physical activity guidelines <sup>63</sup>	Adults (≥18 y of age): 150 min of moderate aerobic activity per week or 75 min of vigorous physical activity per week  Children and youth (6–18 y of age): 60 min of moderate to vigorous aerobic activity daily, with at least 3 of the 7 days each week including vigorous physical activity Both adults and children/youth: aerobic activity should be performed in bouts of at least 10 min
	2008 US physical activity guidelines <sup>63</sup> AHA/ACSM recommendations <sup>67</sup> <i>The Guide to Community Preventive Services</i> <sup>10</sup> 2008 US physical activity guidelines <sup>63</sup> AHA/ACSM recommendations <sup>67</sup> <i>The Guide to Community Preventive Services</i> <sup>10</sup>	Minimum of 2 d/wk of resistance exercise to maintain and improve muscle strength and endurance, complemented by stretching/flexibility exercises
	2008 US physical activity guidelines <sup>63</sup> AHA/ACSM recommendations <sup>67</sup> <i>The Guide to Community Preventive Services</i> <sup>10</sup>	Supplement structured exercise with an increase in daily lifestyle activities (eg, walking, active commuting, parking farther away from stores, doing household chores, using stairs rather than elevators or escalators)
<b>Adherence with healthcare recommendations (eg, hypertension, hyperlipidemia, diabetes mellitus)</b>		
Screening and diagnosis of risk factors	ATP III <sup>59</sup> JNC 7 <sup>71</sup> ADA <sup>111</sup> NHLBI overweight and obesity guide <sup>112</sup> Lloyd-Jones et al, 2004 <sup>113</sup>	Total cholesterol <200 mg/dL BP <120/80 mm Hg Fasting blood glucose <100 mg/dL BMI <25 kg/m <sup>2</sup> No family history of premature CVD

(Continued)

**Table 2. Continued**

Optimal Behaviors	Review/Summary	Recommendation
Healthcare recommendations to favorably modify behaviors and risk factors	ATP III <sup>69</sup> NHLBI integrated guidelines for children and adolescents <sup>19</sup>	Routine cholesterol testing should begin in young adulthood ( $\geq 20$ y of age) Youths (2–8 y of age) should be screened for high cholesterol if they have a family history of premature CVD ( $\leq 55$ y of age) or a parent history of hypercholesterolemia Universal cholesterol screening is recommended for youths 9–11 y of age
	USPSTF for blood pressure <sup>114</sup> JNC 7 <sup>71</sup> USPSTF for diabetes mellitus <sup>115</sup> ADA <sup>111</sup>	Screen BP every 2 y ( $< 120/80$ mm Hg) Screen BP every 1 y (systolic, 120–139 mm Hg diastolic, 80–90 mm Hg) Screen for type 2 diabetes mellitus in adults with BP $> 135/80$ mm Hg or symptoms Screen for type 2 diabetes mellitus in adults ( $\geq 45$ y of age) and adults of any age with BMI $\geq 25$ kg/m <sup>2</sup> and at least 1 risk factor for diabetes mellitus Screen BMI every 2 y (BMI $< 25$ kg/m <sup>2</sup> and no history of being overweight)
	NHLBI Overweight and Obesity Guide <sup>112</sup> USPSTF obesity treatment <sup>116,117</sup>	
Delayed recognition and treatment of symptomatic disease		
Presentation for diagnosis and treatment Emergency out-of-hospital care by first provider	AHA reducing delay in seeking treatment <sup>74</sup> AHA CPR and emergency care <sup>77</sup>	Increase knowledge of heart attack and stroke symptoms Immediate activation of the EMS system, provision of CPR, and operation of a defibrillator in recognition of symptoms
	AHA reducing delay in seeking treatment <sup>74</sup>	Treatment for acute coronary syndrome should begin within 1 h of signs/symptom onset
	AHA ischemic stroke guidelines <sup>118</sup>	Thrombolytic therapy for ischemic stroke within 3 h of symptom onset

ACP indicates American College of Physicians; ACSM, American College of Sports Medicine; ADA, American Diabetes Association; AHA, American Heart Association; ATP III, Third Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults; BMI, body mass index; BP, blood pressure; CDC, Centers for Disease Control and Prevention; CPR, cardiopulmonary resuscitation; CVD, cardiovascular disease; EMS, emergency medical services; IOM, Institute of Medicine; JNC, Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; NHLBI, National Heart, Lung, and Blood Institute; SFA, saturated fat; TFA, *trans* fat; and USPSTF, US Preventive Services Task Force.

### Evidence Base for Community Guide Recommendations

Clinical evidence-based guidelines are developed through the use of standardized classes and grades of evidence and rely heavily on randomized clinical trials.<sup>103</sup> **The evidence for population-based policies, programs, and strategies is fundamentally different, relying on observational studies and community intervention trials, sometimes with limited statistical power.** Nonetheless, it would be incorrect to presume that evidence-based recommendations are not feasible for community-level interventions. Indeed, systematic reviews of the literature and other sources by expert panels and policy organizations provide a solid foundation of evidence on which to make recommendations for the development and implementation of community-based programs.

The AHA Community Guide summarizes the underlying evidence that substantiates population-wide recommendations for the maintenance of cardiovascular health (Table 2). The writing group members identified the most current systematic reviews, evidence summaries, and population goals for each optimal behavior. Additional relevant studies were identified through iterative writing group discussions. Table 2 also identifies a growing number of organizations and programs that are objectively and frequently assessing community-based strategies and programs. The Department of Health and Human Services' Healthy People 2020; Task Force on Community Preventive Services; US Preventive Services Task Force; National Prevention Strategy; US Dietary Guidelines Advisory Committee; US Physical Activity Guidelines Advisory Committee; Office of the US Surgeon General; National Heart, Lung, and Blood Institute's National

Program to Reduce Cardiovascular Risk; AHA's Get With The Guidelines Program; and Guideline Advantage Program are examples of organizations and programs that contribute enormously to the ability to assemble evidence summaries. Recently, the American Recovery and Reinvestment Act, Title IV, and certain other provisions of the Affordable Care Act have provided support for several additional programs that enhance the evidence base for population-wide chronic disease control, including Communities Putting Prevention to Work, Community Transformation Grants, Patient Centered Outcomes Research Institute, Center for Medicare & Medicaid Innovation, and the Million Hearts Initiative.<sup>24,32</sup>

### Guide to Improving Cardiovascular Health at the Community Level: Goals, Model Programs, and Recommendations

The 2003 Community Guide included a large table on strategies and goals to implement population-based interventions and provided selected recommendations illustrating their implementation in specific community settings by improving behaviors. The list was not to be considered all inclusive but was meant to demonstrate feasible activities that could contribute to a community's overall effort to improve its cardiovascular health.

The present AHA Community Guide has retained this format (Table 3) with an updating of intervention goals and recommended actions for public health programs. The goals and recommended actions promote lifestyle and behavior change at both the individual and community levels and policy change at the community level. Although the majority of the goals and recommended actions remain the same as the 2003 Community Guide, there are some important additions based on more recent



**Table 3. Guide to Improving Cardiovascular Health at the Community Level: Intervention Goals and Recommended Actions for Public Health Programs**

Intervention Goals	Recommended Actions
<p><b>Surveillance</b><sup>95,96,119</sup></p> <p>Goal: All communities should have access to data that CVD and stroke are leading causes of death and disability for everyone in their community.</p>	<ul style="list-style-type: none"> <li>• Determine and make available data on the burden of CVD and stroke morbidity and mortality at the local level (city or county).</li> <li>• Identify groups defined by sex, race/ethnicity, socioeconomic status, or geographic location that are at especially high risk of CVD and stroke within each community.</li> <li>• Assess the levels of major preventable causes of CVD and stroke in the community, including social and environmental factors (eg, safety, air pollution), lifestyle behaviors (eg, unhealthy diet, tobacco use, sedentary lifestyle), and risk factors (hypertension, atrial fibrillation, diabetes mellitus, elevated blood cholesterol, and obesity).</li> </ul>
<p><b>Media and education</b><sup>3,31,82,68,77,120–126</sup></p> <p><i>General health education</i></p> <p>Goal: All communities should provide information to its members about the burden, causes, and early symptoms of CVD and stroke.</p> <p>Goal: Communities should provide materials and programs to motivate individuals and teach them skills for changing risk behaviors that will target multiple population subgroups.</p>	<ul style="list-style-type: none"> <li>• Mass media (television, radio, newspaper) should disseminate results of surveillance about the burden of CVD and stroke in the community.</li> <li>• Mass media, social media, and local media should emphasize the importance of lifestyle behaviors and risk factors on cardiovascular health.</li> <li>• Public education campaigns should make the community aware of clinical guidelines for prevention of CVD and stroke in men and women.</li> <li>• Mass and local media should emphasize the early warning signs of MI and stroke.</li> <li>• Ongoing education programs should provide training of lay community members in CPR.</li> <li>• All citizens should know how to access the emergency medical care system.</li> <li>• A guide to community resources (services and programs) for prevention, diagnosis, and treatment of CVD and stroke should be available to all community members.</li> <li>• Communities should support and publicize research-based programs for CVD and stroke risk reduction that are targeted to key population subgroups, especially disadvantaged groups.</li> <li>• Communities should promote the use of Web-based programs for risk reduction by making access to such programs available in public libraries and schools.</li> <li>• Food advertising directed to youth should be limited to foods that are promoted within health guidelines.</li> <li>• Screen time (including TV and computers) should be limited to 1–2 h/d for youths. Adults should limit screen time outside of work.</li> </ul>
<p><i>School and youth education</i></p> <p>Goal: All schools should have research-based comprehensive and age-appropriate curricula about cardiovascular health and ways to improve health behaviors and to reduce CVD and stroke risk.</p> <p>Goal: All schools should implement age-appropriate curricula on changing dietary, physical activity, and smoking behaviors.</p> <p>Goal: All schools should provide teaching of early warning signs of MI and stroke and appropriate initial steps of emergency care.</p>	<ul style="list-style-type: none"> <li>• School curricula should include lessons about risk factors for CVD and stroke and the extent of heart disease and stroke in the community.</li> <li>• Research-based curricula about effective methods of changing health behaviors should be implemented.</li> <li>• Students should learn skills needed to achieve regular practice of healthful behaviors, and parents should learn how to support their children’s healthful behaviors.</li> <li>• Specific curricular materials for healthy nutrition and physical activity should be offered.</li> <li>• Quality physical education should be required daily in kindergarten through 12th grade, with an increasing emphasis on lifetime sports/activities. Implementation of research-based curricula is recommended.</li> <li>• Meals and other foods provided at schools should provide healthy foods conducive to cardiovascular health, including competitive foods, vending machines, and the elimination of easy access to sugar-sweetened beverages.</li> <li>• Students should know how to activate the emergency medical system.</li> <li>• CPR instruction should be available to students at appropriate ages.</li> <li>• Training in CPR should be a requirement for graduation from secondary schools.</li> </ul>
<p><i>Worksite education</i></p> <p>Goal: All worksites should provide materials and services to motivate and assist employees to adopt and maintain heart-healthy behaviors.</p> <p>Goal: All worksites should provide instruction in early warning signs of MI and stroke and appropriate initial steps of emergency care.</p>	<ul style="list-style-type: none"> <li>• Worksites should have effective worksite wellness programs available to their employees.</li> <li>• Worksites should promote increased physical activity in the day’s work (eg, stair climbing).</li> <li>• Workers should have access to research-based effective materials and services to help them adopt and maintain heart healthy behaviors.</li> <li>• Workers should know how to activate the emergency medical system.</li> <li>• CPR instruction should be available to all workers.</li> </ul>
<p><i>Healthcare facility education</i></p> <p>Goal: All healthcare facilities should make available research-based, effective educational materials and programs about changing and maintaining risk factors/risk behaviors, ways to prevent CVD and stroke, and early warning signs of CVD and stroke.</p>	<ul style="list-style-type: none"> <li>• Healthcare facilities should have effective worksite wellness programs available to their employees.</li> <li>• Print and other media should be available in healthcare facilities to describe CVD and stroke risk factors and their early warning signs.</li> <li>• Guides for primary and secondary prevention should be made available for all patients.</li> <li>• Educational materials should be modified to accommodate for limited literacy, cultural and language diversity, sex differences, and dissemination flexibility.</li> </ul>

(Continued)

**Table 3. Continued**

Intervention Goals	Recommended Actions
<p>Community organization and partnering<sup>65–88</sup></p> <p>Goal: All communities will have an action plan for CVD and stroke prevention and control with specific targets and goals.</p> <p>Goal: All communities will provide materials and services for risk behavior and risk factor change that are research based whenever possible.</p>	<ul style="list-style-type: none"> <li>• Identify organizations and institutions in the community that can provide services and resources in prevention and care of CVD and stroke.</li> <li>• Create opportunities for citizens of all ages to become involved in community activities for CVD and stroke prevention.</li> <li>• Educate community organizations about effective research-based materials and services and make these available.</li> </ul>
<p>Ensuring personal health services<sup>74,77</sup></p> <p>Goal: Increase the percentage of people at risk who maintain optimal cardiovascular health as established by national guidelines.</p> <p>Goal: Increase the percentage of patients suffering acute coronary syndromes (eg, MI, cardiac arrhythmias) or cerebrovascular syndromes (eg, stroke, TIA) who receive appropriate acute interventions within the time frame of maximal effectiveness.</p> <p>Goal: Provide training concerning smoking, physical activity, nutrition, and effective behavior change counseling methods in medical schools and appropriate residency programs.</p>	<ul style="list-style-type: none"> <li>• Modify educational materials to accommodate for limited literacy and culture and language diversity.</li> <li>• Provide tobacco users with telephone support interventions including cessation counseling or assistance in attempting to quit or in maintaining abstinence.</li> <li>• Ensure access to screening, counseling, and referral services for CVD and stroke risk factors for all people.</li> <li>• Provide access to rehabilitation and risk factor control programs for CVD and stroke survivors.</li> <li>• Train emergency first responders in the use of AEDs and provide them with AEDs in accordance with AHA recommended guidelines.</li> <li>• Equip high-public-density locations and high-risk activities and have personnel trained in the use of AEDs, in accordance with AHA recommended guidelines.</li> <li>• Require research-based curricula for the MD and nursing degrees, emphasizing skill-building in behavior change related to smoking, diet, and exercise.</li> </ul>
<p>Environmental change<sup>92,100,105,109,110,127–134</sup></p> <p>Goal: Ensure access to healthy foods so that all members of the community can meet national dietary recommendations.</p>	<ul style="list-style-type: none"> <li>• Grocery stores and food markets should provide selections of fruits, green and yellow vegetables, and fiber-rich grain products at reasonable costs.</li> <li>• Restaurants should increase offerings of and identify dishes that meet nutritional guidelines and provide nutritional labeling.</li> <li>• Schools, childcare, and government institutions should increase the access to and identify meals and snacks that contribute to better overall dietary quality and meet dietary guidelines.</li> <li>• Food services at worksites should identify and make available selections low in saturated fat, <i>trans</i> fat, sodium, and calories with expanded access to fruits, vegetables, and fiber-rich grain products.</li> <li>• Healthful foods should be promoted at all food sources, including packaged foods or in grocery stores, cafeterias, vending machines, or restaurants, by methods such as point-of-purchase displays.</li> <li>• Communities should support farmer's markets and community gardens.</li> <li>• Food carts should sell fresh fruits and vegetables in lower socioeconomic/underserved neighborhoods. Food carts and mobile vending units that sell near schools should adhere to the Institute of Medicine's nutrition standards for competitive foods in schools.</li> <li>• Work with city and urban planners to develop affordable and accessible public transit to help residents reach groceries and supermarkets.</li> <li>• Introduce urban land use policies and tax incentive that will attract supermarkets to low-income neighborhoods.</li> </ul>
<p>Goal: Ensure access to safe, appropriate, and enjoyable forms of physical activity, so that all ages can meet national guidelines for moderate and vigorous physical activity</p>	<ul style="list-style-type: none"> <li>• Physical education programs should be supported within the school curricula and within community activity centers.</li> <li>• Every community should commit to providing safe and convenient paths for walking and bicycling as a means of transportation and recreation.</li> <li>• Buildings should be designed so that stairwells are visible, convenient, and comfortable to use. Use of stairwells should be promoted through signs.</li> <li>• Worksites should provide employer-sponsored physical activity and fitness programs.</li> <li>• Schools should provide access to their physical activity space and facilities for community members outside normal school hours.</li> <li>• Campaign and informational approaches should promote physical activity.</li> </ul>
<p>Goal: Ensure a tobacco-free environment for all citizens.</p>	<ul style="list-style-type: none"> <li>• School facilities, property, vehicles, and school events should be smoke free and tobacco free.</li> <li>• Worksites should have formal smoking policies that prohibit smoking.</li> <li>• Local or state ordinances should prohibit smoking in public places; states should not preempt local ordinances that are more restrictive than the state's.</li> <li>• Indoor areas in correctional facilities should be smoke free.</li> <li>• Healthcare facilities should be smoke-free and tobacco free</li> </ul>
<p>Goal: Ensure clean air.</p>	<ul style="list-style-type: none"> <li>• Decrease air pollution with a goal of meeting EPA standards and reducing exposure to particulate matter in all communities.</li> </ul>

(Continued)

Table 3. Continued

Intervention Goals	Recommended Actions
<p>Policy change<sup>3,6,105,109,117,118,135,136</sup></p> <p>Goal: Reduce initiation of tobacco use by adolescents and young adults and increase cessation among current smokers.</p>	<ul style="list-style-type: none"> <li>• Each state should fund state tobacco control programs at the level recommended by the Centers for Disease Control and Prevention and include in the programs evidence-based components.</li> <li>• Support significant increases in tobacco excise taxes at the state, county, or municipal levels. Seek opportunities to allocate a substantial portion of revenues generated by increased tobacco excise taxes to tobacco control, prevention and cessation programs, and other health-related initiatives such as those to improve access to health care.</li> <li>• State, local, and healthcare agencies should strongly encourage parents to make homes and cars smoke free.</li> <li>• Tobacco advertising and promotions that influence adolescents and young adults must be eliminated.</li> <li>• Laws prohibiting the sale of tobacco products to minors must be enforced.</li> <li>• State or local governments should regulate the display of tobacco advertising and products in stores and ban self-service displays and vending machines for tobacco.</li> <li>• All states should require retail licenses for sale of tobacco, which can be used to regulate and enforce regulations on sales to minors and advertising.</li> <li>• Substantial portions of the tobacco settlement monies should be used for tobacco control and other tobacco-related illnesses.</li> </ul>
<p>Goal: Encourage healthy messages in the mass media.</p>	<ul style="list-style-type: none"> <li>• Food advertising directed to youth should be limited to foods that are promoted within health guidelines.</li> <li>• Television shows for children should promote physical activity during commercial breaks.</li> </ul>
<p>Goal: Provide adequate reimbursement for clinical preventive and rehabilitative services.</p>	<ul style="list-style-type: none"> <li>• Insurance coverage should be provided for evidence-based treatments for nicotine dependency and for promoting healthful nutrition and physical activity (such as the Diabetes Prevention Program).</li> <li>• Clinical preventive services and early exercise-based outpatient cardiac rehabilitation should be covered by health insurance plans.</li> </ul>
<p>Goal: Reduce obesity.</p>	<ul style="list-style-type: none"> <li>• Implement and evaluate strategies to reduce consumption of sugar-sweetened beverages, including taxation, restriction within government feeding programs, and creation of nutrition standards for worksites, schools, and other public environments.</li> <li>• Ensure that supplies of fresh drinking water are freely available in all places such as through water fountains.</li> <li>• Provide calorie information in restaurants through menu labeling.</li> <li>• Invite consumers to advocate that restaurants downsize fast-food portions.</li> <li>• Require vending machine companies to replace unhealthy items with healthier choices.</li> <li>• Incorporate parks, wide sidewalks, and bike lanes into community and street design.</li> <li>• Consider healthcare costs and conduct health impact assessments in urban planning, altering ordinances to encourage development that promotes physical activity (higher density, mixed use, and high street connectivity).</li> </ul>
<p>Goal: Reduce sodium consumption.</p>	<ul style="list-style-type: none"> <li>• Encourage menu labeling.</li> <li>• Enact government policies to reduce sodium in packaged foods.</li> <li>• Increased access to fresh fruits and vegetables in urban communities.</li> <li>• Establish sodium limits within nutrition standards for schools, worksites, and procurement policies.</li> </ul>

AED indicates automatic external defibrillator; AHA, American Heart Association; CPR, cardiopulmonary resuscitation; CVD, cardiovascular disease; EPA, Environmental Protection Agency; MI, myocardial infarction; and TIA, transient ischemic attack.

evidence that demonstrates the substantial impact of obesity, sodium consumption, and air pollution on cardiovascular health. For surveillance, there is a stronger emphasis on assessing social and environmental factors that influence cardiovascular health (eg, safety and air pollution). Environmental and policy change recommendations follow to reduce air pollution, obesity, and sodium consumption. An improvement on the previous guide is the addition of references of research studies that provide evidence for the effectiveness of these recommendations in reducing heart disease, stroke, or associated risk behaviors.

A major addition has been the listing of current programs (Table 4) that illustrate best practices at the national, regional, or local levels, including recommendations, methods, and tools to support strategic implementation to attain the goals of each of the community intervention opportunities. The model programs cited here recognize recent growth in community-based cardiovascular health promotion programs and emphasize the sizable and growing experience that might be tapped by organizations that plan to initiate new programs in their communities. Equally

important, the experience of new programs brings valuable information on contextual factors influencing programmatic outcomes, including target population factors, characteristics of the sponsoring organizations, and the wide range of intervention strategies. The new AHA Community Guide can easily be updated as the evidence base grows and diversifies.

The AHA Community Guide provides recommendations and exemplary programs that a community may use as a starting point. However, successful implementation of community interventions requires careful consideration and planning early on in the process. Although many community-based efforts do not have the resources to implement all of these recommendations, the AHA implementation guide of 2005 provides a useful framework for implementing a successful cardiovascular health community intervention.<sup>2</sup> This framework includes a cycle of assessment, community-based planning, and widespread and sustained implementation, supported by community mobilization and evaluation at each stage.<sup>2</sup> Community mobilization highlights the importance

**Table 4. Guide to Improving Cardiovascular Health at the Community Level: Intervention Goals and Current Public Health Programs**

Intervention Goals and Current Programs	
Surveillance	
Goal: All communities should have access to data that CVD and stroke are leading causes of death and disability in men and women in their community.	<p>AHA Heart Disease and Stroke Statistics Update<sup>56</sup> The AHA, in conjunction with the CDC, National Institutes of Health, and other government agencies, compiles up-to-date statistics on heart disease, stroke, and other vascular diseases in the Heart Disease and Stroke Statistical Update. This is a valuable resource for researchers, clinicians, healthcare policy makers, media professionals, the public, and others who seek the best national data available on disease morbidity, mortality, and risks; quality of care; medical procedures and operations; and costs associated with the management of these diseases. <a href="http://www.heart.org/statistics">www.heart.org/statistics</a></p> <p>Arkansas Cardiovascular Health Examination Survey A model program at the state level is the Arkansas Cardiovascular Health Examination Survey, which uniquely combines interview and examination data at this level. <a href="http://www.healthy.arkansas.gov/programsServices/chronicDisease">www.healthy.arkansas.gov/programsServices/chronicDisease</a></p> <p>Behavioral Risk Factor Surveillance The Behavioral Risk Factor Surveillance Survey provides state-specific estimates of the prevalence of certain health-risk behaviors and of the delivery of clinical preventive services. <a href="http://www.cdc.gov/brfss/">http://www.cdc.gov/brfss/</a></p> <p>CDC National Cardiovascular Disease Surveillance The system is designed to integrate multiple indicators from many data sources to provide a comprehensive picture of the public health burden of CVDs and associated risk factors in the United States at the national and state levels. <a href="http://www.cdc.gov/dhdsp/ncvdss/">http://www.cdc.gov/dhdsp/ncvdss/</a></p> <p>County Health Rankings The University of Wisconsin Population Health Institute model is used to rank counties based on health behaviors (alcohol and tobacco use, diet, and exercise), clinical care (access and quality), and environment (built environment and environmental quality) using many data sources, including the Behavioral Risk Factor Surveillance Survey, NCHS, Census, and US Department of Agriculture Food Environment Atlas. <a href="http://www.countyhealthrankings.org/">http://www.countyhealthrankings.org/</a></p> <p>CDC State Tobacco Activities Tracking and Evaluation System This system is an electronic data warehouse containing up-to-date and historical state-level data on tobacco use prevention and control. The system is designed to integrate many data sources to provide comprehensive summary data and to facilitate research and consistent data interpretation. The system was developed by the CDC in the Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion. <a href="http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx">http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx</a></p> <p>Walk Score Walk Score measures how easy it is to live a car-light lifestyle. Walk Score measures the walkability of an address. The Walk Score algorithm awards points based on the distance to amenities in each category. Amenities within 0.25 mile receive maximum points, and no points are awarded for amenities &gt;1 mile. <a href="http://www.walkscore.com/">http://www.walkscore.com/</a></p>
Education <sup>68</sup>	
<i>General health education</i>	
Goal: All communities should provide information to its members about the burden, causes, and early symptoms of CVD and stroke.	<p>AHA Heart Disease and Stroke Statistics Update<sup>56</sup> The AHA, in conjunction with the CDC, National Institutes of Health, and other government agencies, compiles up-to-date statistics on heart disease, stroke, and other vascular diseases in the Heart Disease and Stroke Statistical Update. This is a valuable resource for researchers, clinicians, healthcare policy makers, media professionals, the public, and others who seek the best national data available on disease morbidity, mortality, and risks; quality of care; medical procedures and operations; and costs associated with the management of these diseases. <a href="http://www.heart.org/statistics">www.heart.org/statistics</a></p> <p>AHA Go Red for Women: Know Your Numbers To dispel the myths and raise awareness of heart disease as the No. 1 killer of women, the AHA created Go Red For Women, a passionate, emotional, social initiative designed to empower women to take charge of their heart health. Know Your Numbers provides recommended goals for women for optimal behaviors (eg, blood pressure, cholesterol). <a href="http://www.goredforwomen.org/know_your_numbers.aspx">http://www.goredforwomen.org/know_your_numbers.aspx</a></p> <p>AHA Heart360 Heart360 is an online tool that helps track and manage heart health and provides helpful advice and information. Health information can be entered in an easy-to-use tool, and records are safely and securely stored in Microsoft HealthVault. <a href="https://www.heart360.org/">https://www.heart360.org/</a></p>
Goal: Communities should provide materials and programs to motivate individuals and teach them skills for changing risk behaviors that will target multiple population subgroups.	

(Continued)

Table 4. Continued

Intervention Goals and Current Programs	
	<p><b>AHA “Know your Heart” Program - Conozca Su Corazón</b>                      The AHA has reached the Latino community through Conozca Su Corazón for many years. This program is derived from the ever-popular Answers by Heart materials translated into Spanish.  <a href="http://es.heart.org/dheart/HEARTORG/Conditions/Answers-by-Heart-Fact-Sheets-Multi-language-Information_UCM_314158_Article.jsp">http://es.heart.org/dheart/HEARTORG/Conditions/Answers-by-Heart-Fact-Sheets-Multi-language-Information_UCM_314158_Article.jsp</a></p> <p><b>AHA My Life Check/Life’s Simple 7</b>                      My Life Check was designed by the AHA with the goal of improved health by educating the public on how best to live. These measures have one unique thing in common: any person can make these changes, the steps are not expensive to take, and even modest improvements to health will make a big difference.  <a href="http://mylifecheck.heart.org/">http://mylifecheck.heart.org/</a></p> <p><b>AHA/American Stroke Association Power to End Stroke</b>                      Power to End Stroke educates blacks about their disproportionate risk of stroke and shares how to win the fight against that risk. Blacks are among those least aware despite having a high prevalence risk and have almost twice the risk of strokes compared with whites.  <a href="http://www.powertoendstroke.org">http://www.powertoendstroke.org</a></p> <p><b>Active Living Research, A Robert Wood Johnson Foundation–Funded Center</b>                      Active Living Research is a national program of the Robert Wood Johnson Foundation. Its primary goal is to support and share research on environmental and policy strategies that can promote daily physical activity for children and families across the United States. Active Living Research places special emphasis on research related to children of color and lower-income children who are at highest risk for obesity.  <a href="http://www.activelivingresearch.org">www.activelivingresearch.org</a></p> <p><b>Association of Black Cardiologists</b>                      Founded in 1974, the Association of Black Cardiologists, Inc, is a nonprofit organization with an international membership of 2500 health professionals, lay members of the community (community health advocates), corporate members, and institutional members. The association is dedicated to eliminating the disparities related to cardiovascular disease in all people of color.  <a href="http://www.abcardio.org/">http://www.abcardio.org/</a></p> <p><b>CDC Morbidity and Mortality Weekly Report</b>                      The <i>Morbidity and Mortality Weekly Report</i> is a weekly epidemiological digest for the United States published by the CDC. It is the main vehicle for publishing public health information and recommendations that have been received by the CDC from state health departments, with each issue covering reports that have been received in the week through Friday and published on the following Friday.  <a href="http://www.cdc.gov/mmwr/">http://www.cdc.gov/mmwr/</a></p> <p><b>Department of Health and Human Services and NHLBI Heart and Vascular Diseases Facts Program</b>                      This program provides educational information on improving lifestyle behaviors, meeting recommended goals for risk factors/behaviors, and CVD symptoms and treatment.  <a href="http://www.nhlbi.nih.gov/health/public/heart/">http://www.nhlbi.nih.gov/health/public/heart/</a></p> <p><b>Red Dress Campaigns</b>                      The Red Dress, the centerpiece of The Heart Truth, is a red alert that inspires women to take action to protect their heart health. The Red Dress was designed to build awareness that women are at risk for heart disease and to motivate them to take action to reduce their risk.  <a href="http://www.nhlbi.nih.gov/educational/hearttruth/about/red-dress.htm">http://www.nhlbi.nih.gov/educational/hearttruth/about/red-dress.htm</a></p>
<p><b>School and youth education</b></p> <p>Goal: All schools should have research-based comprehensive and age-appropriate curricula about cardiovascular health and ways to improve health behaviors and reduce CVD risk.</p> <p>Goal: All schools should implement age-appropriate curricula on changing dietary, physical activity, and smoking behaviors.</p> <p>Goal: All schools should provide teaching of early warning signs of MI and stroke and appropriate initial steps of emergency care.</p>	<p><b>Alliance for a Healthier Generation</b>                      The Alliance for a Healthier Generation works to address one of the nation’s leading public health threats: childhood obesity. The goal of the alliance is to reduce the prevalence of childhood obesity by 2015, and to empower kids nationwide to make healthy lifestyle choices. Founded in 2005 by the AHA and William J. Clinton Foundation, the alliance works to positively affect the places that can make a difference in a child’s health: homes, schools, doctor’s offices, and communities.  <a href="http://www.healthiergeneration.org/about.aspx">http://www.healthiergeneration.org/about.aspx</a></p> <p><b>Coordinated Approach to Child Health (CATCH)</b>                      CATCH is an Education Agency–approved Coordinated School Health Program designed to promote physical activity and healthy food choices and to prevent tobacco use in elementary school–aged children. CATCH focuses on coordinating 4 components: the Eat Smart school nutrition program, kindergarten–grade 5 and grades 6–8 classroom curriculums, a physical education program, and a family program.  <a href="https://sph.uth.tmc.edu/catch/">https://sph.uth.tmc.edu/catch/</a> and <a href="http://catchusa.org/">http://catchusa.org/</a></p>

(Continued)

Table 4. Continued

Intervention Goals and Current Programs	
	<p><b>Let's Move!</b> Let's Move! is a comprehensive initiative, launched in 2010 by the First Lady Michelle Obama, dedicated to addressing the challenge of childhood obesity within a generation, so that children born today will grow up healthier and able to pursue their dreams. Combining comprehensive strategies with common sense, Let's Move! is about putting children on the path to a healthy future during their earliest months and years by giving parents helpful information and fostering environments that support healthy choices, providing healthier foods in schools, ensuring that every family has access to healthy, affordable food, and helping kids become more physically active. <a href="http://www.letsmove.gov/">http://www.letsmove.gov/</a></p> <p><b>Shape Up America!</b> Shape Up America! is a 501(c)3 not-for-profit organization committed to raising awareness of obesity as a health issue and to providing responsible information on healthy weight management. The Web site provides information and ideas for community members and healthcare professionals on achievement of healthy weight. <a href="http://www.shapeup.org/">http://www.shapeup.org/</a></p> <p><b>2008 US Physical Activity Guidelines</b> The 2008 Physical Activity Guidelines for Americans provide science-based guidance to help Americans ≥6 y of age to improve their health through appropriate physical activity. Developed with health professionals and policy makers in mind, the guidelines can help an individual learn about the health benefits of physical activity, understand how to do physical activity in a manner that meets the guidelines, understand how to reduce the risks of activity-related injury, and assist others in participating regularly in physical activity. <a href="http://health.gov/paguidelines/">http://health.gov/paguidelines/</a></p>
<i>Worksite education</i>	<p><b>CDC National Healthy Worksite Program</b> The National Healthy Worksite Program is designed to assist employers in implementing science and practice-based prevention and wellness strategies that will lead to specific, measureable health outcomes to reduce chronic disease rates. <a href="http://www.cdc.gov/NationalHealthyWorksite/">http://www.cdc.gov/NationalHealthyWorksite/</a></p> <p><b>Stanford Health Improvement Program</b> Over the past 25 years, Stanford University has developed an exemplary educational program to promote health, particularly cardiovascular health, to its employees. This program is integrated with health insurance plan incentives and provides a broad range of health promotion and physical activity programs. Through the BeWell Program, this program is integrated with the department of athletics, recreation, and physical education and offers social networking support for behavior change. <a href="http://hip.stanford.edu/">http://hip.stanford.edu/</a></p> <p><b>HealthLead, US Healthiest Workplace Accreditation Program</b> HealthLead recognizes employers for meeting recognized standards to promote health and well-being among their employees. It is designed to provide a competitive edge to organizations, both in the eyes of the financial community and in attracting prospective employees as a "best place" to work. <a href="http://www.ushealthiest.org/index.php">http://www.ushealthiest.org/index.php</a></p> <p><b>Partnership for Prevention's Leading by Example</b> This initiative has been well received by business leaders as a highly successful and respected CEO-to-CEO communications campaign targeted to raising awareness of the benefits of engaging in worksite health. The Leading by Example mission has helped fuel a consensus among senior management that their support is a prerequisite for creating an employer's culture of good health for its employees. <a href="http://www.prevent.org/">http://www.prevent.org/</a></p>
<i>Healthcare facility education</i>	<p><b>Preventive Cardiovascular Nurses Association</b> This association is the leading nursing organization dedicated to preventing CVD through assessing risk, facilitating lifestyle changes, and guiding individuals to achieve treatment goals. The association is committed to educating and supporting nurses so that they may successfully rise to the current state of healthcare demands. <a href="http://www.pcna.net/about/index.php">http://www.pcna.net/about/index.php</a></p>

(Continued)

Table 4. Continued

Intervention Goals and Current Programs	
Community Organization and Partnering	
Goal: All communities will have an action plan for CVD and stroke prevention and control with specific targets and goals.	<p>CDC Public Health Action Plan to Prevent Heart Disease and Stroke Key partners, public health experts, and heart disease and stroke prevention specialists came together to develop targeted recommendations and specific action steps toward the achievement of national goals for preventing heart disease and stroke over the next few decades, through 2020 and beyond. <a href="http://www.cdc.gov/dhdsp/action_plan/index.htm">http://www.cdc.gov/dhdsp/action_plan/index.htm</a></p>
Goal: All communities will provide materials and services for risk behavior and risk factor change that are research based whenever possible.	<p>CDC Community Health Assessment and Group Evaluation Action Guide This guide is a data-collection tool and planning resource for community members who want to make their community a healthier one. The purpose of this guide is to gather and organize data on community assets and potential areas for improvement before deciding on the critical issues to be addressed in a community action plan. <a href="http://www.cdc.gov/healthycommunitiesprogram/tools/change/downloads.htm">http://www.cdc.gov/healthycommunitiesprogram/tools/change/downloads.htm</a></p> <p>CDC Prevention Research Centers This program directs a national network of 37 academic research centers, each at either a school of public health or a medical school that has a preventive medicine residency program. The centers are committed to community-based, participatory prevention research needed to drive the major community changes that can prevent and control chronic diseases. <a href="http://www.cdc.gov/prc/about-prc-program/index.htm">http://www.cdc.gov/prc/about-prc-program/index.htm</a></p> <p>CDC Racial and Ethnic Approaches to Community Health The CDC has responded to disparities in health among racial and ethnic minority populations by launching Racial and Ethnic Approaches to Community Health. The CDC funds communities to address key health areas in which minority groups traditionally experience serious inequities in health outcomes. The communities form coalitions that plan, implement, and evaluate strategies to focus on the needs of 1 or more groups that include black, Alaska Natives, American Indians, Asian Americans, Hispanics/Latinos, and Pacific Islanders. Each community brings together a diverse group of people from a variety of sectors to develop, implement, and evaluate unique disease prevention and health promotion strategies. <a href="http://www.cdc.gov/reach/">http://www.cdc.gov/reach/</a></p> <p>Communities Putting Prevention to Work Communities Putting Prevention to Work is a locally driven initiative supporting 50 communities to tackle obesity and tobacco use, 2 leading preventable causes of death and disability in the United States. The initiative is supporting 50 communities to tackle obesity and tobacco use. By effectively addressing obesity and tobacco use through environmental change at the local level, this program can have a significant impact on preventing serious health problems such as heart disease, stroke, type 2 diabetes mellitus, and cancer. <a href="http://www.cdc.gov/CommunitiesPuttingPreventiontoWork/index.htm">http://www.cdc.gov/CommunitiesPuttingPreventiontoWork/index.htm</a></p> <p>Community Transformation Grant The Community Transformation Grants program will support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes mellitus. By promoting healthy lifestyles, especially among population groups experiencing the greatest burden of chronic disease, these grants will help improve health, reduce health disparities, and control healthcare spending. <a href="http://www.cdc.gov/communitytransformation/">http://www.cdc.gov/communitytransformation/</a></p> <p>Presidential Active Lifestyle Award The President's Council on Fitness, Sports and Nutrition provides programs and partnerships with the public, private, and nonprofit sectors. The council serves as a catalyst to promote healthy lifestyles through fitness, sports and nutrition programs and initiatives that engage Americans across the life span. <a href="http://www.fitness.gov/">http://www.fitness.gov/</a></p> <p>National Physical Activity Plan The National Physical Activity Plan is a comprehensive set of policies, programs, and initiatives that aim to increase physical activity in all segments of the American population. The plan is the product of a private-public sector collaborative. Hundreds of organizations are working together to change our communities in ways that will enable every American to be sufficiently physically active. <a href="http://www.physicalactivityplan.org/">http://www.physicalactivityplan.org/</a></p> <p>Partnership for a Healthier America The Partnership for a Healthier America supports the First Lady's Let's Move! program by encouraging, tracking, and communicating commitments to healthier lifestyles from partner organizations, commitments that align with the priorities of the Partnership for a Healthier America. <a href="http://www.ahealthieramerica.org/#!/our-partners">http://www.ahealthieramerica.org/#!/our-partners</a></p>

(Continued)

Table 4. Continued

Intervention Goals and Current Programs	
Ensuring personal health services	
Goal: Increase the percentage of people at risk who maintain or reduce risk factors to goal levels as established by national guidelines.	The Affordable Care Act In addition to increasing access to care, this act provides coverage for a new “wellness visit” and eliminates cost sharing for almost all of the preventive services. <a href="http://www.medicareadvocacy.org/2010/09/09/affordable-care-act-expands-medicare-coverage-for-prevention-and-wellness/">http://www.medicareadvocacy.org/2010/09/09/affordable-care-act-expands-medicare-coverage-for-prevention-and-wellness/</a>
Goal: Increase the percentage of patients suffering from acute coronary syndromes (eg, myocardial infarction, cardiac arrhythmias) or cerebrovascular syndromes (eg, stroke and TIA) who receive appropriate acute interventions within the time frame of maximal effectiveness.	Cholesterol Guideline Update (ATP III) <sup>59</sup> The Third Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III [ATP III]) presents the National Cholesterol Education Program’s updated recommendations for cholesterol testing and management. An updated version (ATP IV) is expected in 2013.
Goal: Provide training concerning smoking cessation, physical activity, nutrition, and effective behavior change counseling methods in medical schools and appropriate residency programs.	Blood Pressure Guidelines (JNC) 7 <sup>1</sup> The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure provides a new guideline for hypertension prevention and management. An updated version (JNC 8) is expected in 2013.
	CDC National Diabetes Prevention Program The National Diabetes Prevention Program is a public-private partnership of community organizations, private insurers, employers, healthcare organizations, and government agencies. These partners are working to establish local evidence-based lifestyle change programs for people at high risk for type 2 diabetes mellitus. <a href="http://www.cdc.gov/diabetes/prevention/">http://www.cdc.gov/diabetes/prevention/</a>
	NHLBI Integrated Guidelines for Cardiovascular Health and Risk Reduction for Youth and Adults The NHLBI is leading the development of an integrated set of cardiovascular risk reduction guidelines for adults using state-of-the-art methodology. Cholesterol, hypertension, and obesity guidelines are being updated, and an integrated cardiovascular risk reduction guideline is being developed. <a href="http://www.nhlbi.nih.gov/guidelines/cvd_adult/background.htm">http://www.nhlbi.nih.gov/guidelines/cvd_adult/background.htm</a> ; <a href="http://www.nhlbi.nih.gov/guidelines/cvd_ped/index.htm">http://www.nhlbi.nih.gov/guidelines/cvd_ped/index.htm</a>
	Million Hearts Initiative Million Hearts is a national initiative that was launched by the Department of Health and Human Services in September 2011 to prevent 1 million heart attacks and strokes over 5 years. The initiative will achieve its goal by emphasizing cardiovascular health across patients, providers, communities, and other stakeholders. Million Hearts has brought together a number of programs, policies, and campaigns designed to make a positive impact across the spectrum of prevention and care, promoting the “ABCS” of clinical prevention (appropriate aspirin therapy, blood pressure control, cholesterol management, and smoking cessation), as well as healthier lifestyles and communities. <a href="http://millionhearts.hhs.gov/index.html">http://millionhearts.hhs.gov/index.html</a>
	AHA Statement on Reducing Delay in Seeking Treatment <sup>74</sup> This scientific statement summarizes the evidence that demonstrates the benefits of early treatment, provides information on intervention programs, and offers suggestions for clinical practice and future research.
	Rapid Early Action for Coronary Treatment <sup>137</sup> Intervention to increase knowledge of heart attack symptoms was used in 20 communities to reduce patient-associated prehospital delay. The communities were in Alabama, Louisiana, Massachusetts, Minnesota, North Dakota, Oregon, South Dakota, Texas, Washington, and Wisconsin.
Environmental change	
Goal: Ensure access to healthy foods so that all members of the community can meet national dietary recommendations.	2010 Dietary Guidelines The 2010 Dietary Guidelines for Americans is the federal government’s evidence-based nutritional guideline to promote health, reduce the risk of chronic diseases, and reduce the prevalence of overweight and obesity <a href="http://www.cnpp.usda.gov/DietaryGuidelines.htm">http://www.cnpp.usda.gov/DietaryGuidelines.htm</a> through improved nutrition and physical activity.
	AHA Diet and Lifestyle Guidelines <sup>106</sup> Improving diet and lifestyle is a critical component of the AHA’s strategy to prevent CVD. This document presents diet and lifestyle recommendations designed to meet this objective.
	AHA Heart-Check Meal Certification Program The AHA’s Heart-Check mark on food packaging signifies that the food has been certified to meet the AHA’s guidelines for a heart-healthy food. It is a good first step in creating an overall sensible eating plan. The Web site has a list of all AHA Heart-Check certified food products that can be found in grocery stores and restaurants. <a href="http://www.heartcheckmark.org">www.heartcheckmark.org</a>
	Center for Science in the Public Interest: <i>Trans</i> Fat Bans in Restaurants The Center for Science in the Public Interest provides information on the risks associated with <i>trans</i> fat and provides examples of local and state legislation that bans <i>trans</i> fat from restaurants. <a href="http://www.cspinet.org/transfat/about.html">http://www.cspinet.org/transfat/about.html</a>

(Continued)



Table 4. Continued

Intervention Goals and Current Programs	
<p>Goal: Ensure access to safe, appropriate, and enjoyable forms of physical activity, so that all ages can meet national guidelines for moderate and vigorous physical activity.</p>	<p><b>Growing Power</b>                      Growing Power transforms communities by supporting people from diverse backgrounds and the environment in which they live through the development of community food systems. These systems provide high-quality, safe, healthy, affordable food for all residents in the community. Growing Power develops community food centers, as a key component of community food systems, through training, active demonstration, outreach, and technical assistance.  <a href="http://www.growingpower.org/">http://www.growingpower.org/</a></p> <p><i>The Guide to Community Preventive Services</i>  <i>The Guide to Community Preventive Services</i> provides recommendations for physical activity interventions.  <a href="http://www.thecommunityguide.org/pa/index.html">http://www.thecommunityguide.org/pa/index.html</a></p> <p><b>Robert Wood Johnson Foundation Active Living by Design National Program</b>                      Active Living creates community-led change by working with local and national partners to build a culture of active living and healthy eating.  <a href="http://www.activelivingbydesign.org">www.activelivingbydesign.org</a></p> <p><b>Blue Zones Pilot Project</b>                      A prototype Blue Zones community transformation program, sponsored by AARP and the United Health Foundation, was completed in Albert Lea, MN, in 2009. This community program focused on environmental interventions across 4 domains: community, social networks, habitat and inner self. Blue Zones worked with Albert Lea's leaders to transform the way the residents eat, work, exercise, and play.  <a href="http://www.bluezones.com/programs/blue-zones-communities/albert-lea-mn/">http://www.bluezones.com/programs/blue-zones-communities/albert-lea-mn/</a></p>
<p>Goal: Ensure a tobacco-free environment for all citizens</p>	<p><b>Bridging the Gap</b>                      Bridging the Gap is a nationally recognized research program. Its goal is to improve the understanding of how policies and environmental factors affect diet, physical activity and obesity among youth, as well as youth tobacco use.  <a href="http://www.bridgingthegapresearch.org/">http://www.bridgingthegapresearch.org/</a></p> <p><b>State Tobacco Control Program</b>                      Several states have developed exemplary tobacco control programs combining multiple interventions, including excise taxes, mass media education, quit lines, and school programs. Both California and New York developed robust programs in the 1990s; these are still good programs although funding has been cut substantially over the past 2 decades. Rhode Island and Massachusetts also have innovative programs.  <a href="http://www.cdph.ca.gov/programs/Tobacco/Pages/default.aspx">http://www.cdph.ca.gov/programs/Tobacco/Pages/default.aspx</a>  <a href="http://www.health.ny.gov/prevention/tobacco_control/">http://www.health.ny.gov/prevention/tobacco_control/</a>  <a href="http://www.health.ri.gov/programs/tobaccocontrol/index.php">http://www.health.ri.gov/programs/tobaccocontrol/index.php</a>  <a href="http://www.mass.gov/dph/mtcp">http://www.mass.gov/dph/mtcp</a></p>
<p>Goal: Ensure clean air.</p>	<p><b>Environmental Protection Agency Air Quality Index</b>                      The Air Quality Index is an index for reporting daily air quality. It tells how clean or polluted the air is and what associated health effects might be of concern. The Air Quality Index focuses on health effects that an individual may experience within a few hours or days after breathing polluted air.  <a href="http://airnow.gov/">http://airnow.gov/</a></p>
<p>Policy change</p>	<p><b>Environmental Protection Agency Particulate Matter Web Site</b>                      This Web site provides information on the health effects of particulate pollution, standards for particle pollution, and programs and requirements for reducing particle pollution.  <a href="http://www.epa.gov/air/particlepollution/index.html">http://www.epa.gov/air/particlepollution/index.html</a></p>
<p>Goal: Reduce initiation of tobacco use by adolescents and young adults.</p>	<p><b>AHA and Nonprofit Advocacy: Past, Present, and Future: A Policy Recommendation From the AHA<sup>138</sup></b>                      Influencing public policy through advocacy is an essential strategy used by the AHA to achieve its health impact goals and programmatic objectives. This article provides the historical context of AHA advocacy, the organizational and legal structure under which these activities are carried out, the process used to develop the association's public policy positions and goals, the approaches used to achieve these goals, and the methods developed to evaluate progress. This statement also examines the various tools and tactics that advocacy organizations use to influence public policy.</p> <p><b>AHA Policy Statement on Health Education in Schools<sup>139</sup></b>                      The American Heart Association believes that quality health education programs delivered in the nation's schools can improve the well-being and health of children and youth. School health education programs can reduce health risk behaviors such as tobacco use.</p> <p><b>AHA Policy Statement on Clean Indoor Air Laws and the Impact on Cardiovascular Disease<sup>140</sup></b>                      The AHA advocates for comprehensive smoke-free workplace laws across the United States that are in compliance with the Fundamentals of Smoke-Free Workplace Laws guidelines. The AHA believes that smoke free laws should apply to all workplaces and public environments and that there should be no preemption of local ordinances and no exemptions for hardship, opting out, or ventilation. Other exemptions to be avoided include casinos and gaming organizations, bars, tobacco shops, and private clubs.</p>

(Continued)

Table 4. Continued

Intervention Goals and Current Programs	
	<p>CDC Tobacco Use Prevention Through Schools To help prevent tobacco use and addiction among young people, the CDC supports effective school-based policies, programs, and practices to address this major health issue. This site provides guidelines and strategies, as well as program success stories. <a href="http://www.cdc.gov/healthyouth/tobacco/index.htm">http://www.cdc.gov/healthyouth/tobacco/index.htm</a></p> <p>State Tobacco Control Program Several states have developed exemplary tobacco control programs combining multiple interventions, including excise taxes, mass media education, quit lines, and school programs. Both California and New York developed robust programs in the 1990s; these are still good programs although funding has been cut substantially over the past 2 decades. Rhode Island and Massachusetts also have innovative programs. <a href="http://www.cdph.ca.gov/programs/Tobacco/Pages/default.aspx">http://www.cdph.ca.gov/programs/Tobacco/Pages/default.aspx</a> <a href="http://www.health.ny.gov/prevention/tobacco_control/">http://www.health.ny.gov/prevention/tobacco_control/</a> <a href="http://www.health.ri.gov/programs/tobaccocontrol/index.php">http://www.health.ri.gov/programs/tobaccocontrol/index.php</a> <a href="http://www.mass.gov/dph/mtcp">http://www.mass.gov/dph/mtcp</a></p>
Goal: Encourage healthy messages in the mass media.	<p>Strategy Guide on Fostering School Connectedness School connectedness—the belief held by students that adults and peers in the school care about their learning as well as about them as individuals—is an important protective factor against early sexual initiation, alcohol, tobacco and other drug use, violence, and gang involvement. This guide provides 6 strategies that teachers, administrators, other school staff, and parents can implement to increase the extent to which students feel connected to school. <a href="http://www.cdc.gov/healthyouth/AdolescentHealth/connectedness.htm">http://www.cdc.gov/healthyouth/AdolescentHealth/connectedness.htm</a></p>
Goal: Provide adequate reimbursement for clinical preventive and rehabilitative services.	<p>AHA Principles of Health Care Reform<sup>141</sup> Preventive benefits should be an essential component of meaningful healthcare coverage, and incentives should be built into the healthcare system to promote appropriate preventive health strategies.</p> <p>The Affordable Care Act In addition to increasing access to care, this act provides coverage for a new “wellness visit” and eliminates cost sharing for almost all of the preventive services. <a href="http://www.medicareadvocacy.org/2010/09/09/affordable-care-act-expands-medicare-coverage-for-prevention-and-wellness/">http://www.medicareadvocacy.org/2010/09/09/affordable-care-act-expands-medicare-coverage-for-prevention-and-wellness/</a></p>
Goal: Reduce obesity.	<p>AHA Policy Position Statement on Food Advertising and Marketing Practices to Children<sup>142</sup> The AHA believes Congress should restore to the Federal Trade Commission and the Federal Communications Commission the ability to regulate marketing of foods and beverages to children. The AHA would support other measures that restrict food advertising and marketing to children, including but not limited to allowing only healthy foods to be marketed and advertised to children, discouraging the product placement of food brands in multiple media technologies, eliminating the use of toys in unhealthy kids’ restaurant meals, using licensed characters on only healthy foods, and not allowing food and beverage advertising and marketing in schools or on educational materials.</p> <p>AHA Policy Position Statement on Menu Labeling<sup>143</sup> The AHA supports providing calorie information on menus and menu boards at point of purchase. Although the ultimate goal is to provide this information in all restaurants, initially it should be required only in restaurants with standardized menus and recipes that do not vary day to day. In tandem with this recommendation, the AHA supports the development and implementation of a consumer education campaign to help people “know their energy needs” for recommended daily calorie intake and food and beverage serving sizes.</p>
Goal: Reduce sodium consumption.	<p>AHA Policy Recommendations for Obesity Prevention and Health Promotion in Child Care Settings<sup>144</sup> The AHA advocates for strong health promotion and obesity prevention programs in early childhood programs.</p> <p>Center for Nutrition Policy and Promotion The center improves the nutrition and well-being of Americans by developing and promoting dietary guidance that links scientific research to the nutrition needs of consumers. <a href="http://www.cnpp.usda.gov/">http://www.cnpp.usda.gov/</a></p> <p>Health Text Messaging Recommendations to the Secretary The Department of Health and Human Services has been actively exploring means to capitalize on the rapid proliferation of mobile phone technology and platforms such as text messaging, to develop programs and/or partnerships with the overall aim of improving public health. <a href="http://www.hhs.gov/open/initiatives/mhealth/recommendations.html">http://www.hhs.gov/open/initiatives/mhealth/recommendations.html</a></p>

(Continued)

Table 4. Continued

Intervention Goals and Current Programs
<p>Active Living Research, A Robert Wood Johnson Foundation Funded Center Active Living Research is a national program of the Robert Wood Johnson Foundation. Its primary goal is to support and share research on environmental and policy strategies that can promote daily physical activity for children and families across the United States. Active Living Research places special emphasis on research related to children of color and lower-income children who are at highest risk for obesity. <a href="http://www.activelivingresearch.org">www.activelivingresearch.org</a></p> <p>Interagency Working Group on Food Marketed to Children: Preliminary Proposed Nutrition Principles to Guide Industry Self-Regulatory Efforts The Interagency Working Group is made up of representatives from the Federal Trade Commission, the CDC, the Food and Drug Administration, and the US Department of Agriculture. The working group has drafted a set of principles pursuant to a directive from Congress, as set out in the 2009 Omnibus Appropriations Act, with the goal of improving children's diets and addressing the high rates of childhood obesity. Marketing can be an effective tool to encourage children to make better food choices, and voluntary adoption by industry of strong, uniform nutrition and marketing principles, like those proposed here, will advance the goal of promoting children's health. <a href="http://www.ftc.gov/os/2011/04/110428foodmarketproposedguide.pdf">http://www.ftc.gov/os/2011/04/110428foodmarketproposedguide.pdf</a></p> <p>AHA Sodium Reduction Initiative The AHA wants to help all Americans lower the amount of sodium they consume. Here is what we are doing to help: encouraging manufacturers to reduce the amount of sodium in the food supply, advocating for more healthy foods to be available and accessible (eg, more fruits and vegetables and lower sodium standards in the food supply), and providing consumers with education and decision-making tools to make better food choices. <a href="http://www.heart.org/sodium">www.heart.org/sodium</a></p> <p>Menu Labeling: Center for Science in the Public Interest This center provides campaigns and education programs for states and localities to implement to support menu labeling and to encourage healthy eating at restaurants and the use of the available nutrition information. <a href="http://www.cspinet.org/menulabeling/">http://www.cspinet.org/menulabeling/</a></p> <p>Food and Farm Bill The Farm Bill goes far beyond America's farms. Every 5 years, the Farm Bill sets policies that govern a broad array of programs, from crop support to conservation and from food assistance to forestry. The Farm Bill makes up only ~2% of federal funding, but every American benefits from its provisions. Funding for nutrition programs makes up nearly 80% of Farm Bill spending. The rest of the bill supports America's farmers, ranchers, and consumers through initiatives such as commodity programs, agricultural research, trade, and rural development. <a href="http://agriculture.house.gov/">http://agriculture.house.gov/</a></p> <p>National Salt Reduction Initiative The New York City Health Department is coordinating a national effort to prevent heart attacks and strokes by reducing the amount of salt in packaged and restaurant foods. The National Salt Reduction Initiative is a coalition of local and state health authorities and health organizations working to help food manufacturers and restaurants voluntarily reduce the amount of salt in their products. <a href="http://www.nyc.gov/html/doh/html/cardio/cardio-salt-initiative.shtml">http://www.nyc.gov/html/doh/html/cardio/cardio-salt-initiative.shtml</a></p> <p>The Alabama State Board of Education The Alabama State Board of Education enacted a policy in July 2005 that establishes criteria for sodium levels in single-serving snacks in school settings. <a href="http://cnp.alsde.edu/NutritionPolicy/AlaHealthySnackStandards.pdf">http://cnp.alsde.edu/NutritionPolicy/AlaHealthySnackStandards.pdf</a></p>

AARP indicates American Association of Retired Persons; AHA, American Heart Association; CDC, Centers for Disease Control and Prevention; CEO, chief executive officer; CVD, cardiovascular disease; NCHS, National Center for Health Statistics; and NHLBI, National Heart, Lung, and Blood Institute.

of involving key leaders, organizations, and members in the planning and implementation process. Evaluation provides essential feedback that allows refinement of the intervention in response to different and changing circumstances.

### Summary and Conclusions

CVDs, including heart disease and stroke, have been the leading cause of death in the United States for >100 years. The future burden of CVD is projected to increase and to have an enormous economic impact.<sup>145</sup> The social and environmental origins of heart disease and stroke are well established, and enhanced population-based prevention programs

could lead to a large decline in CVD morbidity and mortality. The approaches to reducing CVD burden are also becoming increasingly clear: encouraging optimal health behaviors through public health interventions in community settings where people live, work, worship, study, and play. The AHA Community Guide serves to aggregate and integrate the evidence available to date to provide clinical and public health practitioners, community leaders, and policy makers with an overview of the many opportunities to improve the cardiovascular health of their communities.

A considerable amount of work is still required to address inequities in cardiovascular health in several population

subgroups. Limited resources available for public health programs also reduce our preventive capacity in terms of infrastructure, personnel, and policies to support population health programs. Some gaps in our evidence for the efficacy and effectiveness of specific population-wide interventions in various population subgroups remain.<sup>47,146</sup> Through implementation and evaluation of targeted interventions, these gaps can be narrowed and ultimately closed. To do so, implementation must include the communities where adverse health behaviors continue to cause the greatest death, disability, and healthcare expenditures.

The AHA Community Guide provides a means of approaching this challenge with an overview of the issues and a list of goals and strategies that might be implemented by communities regardless of size and resources. This guide also provides

an update of the increasing evidence supportive of these efforts (Table 3) and a growing list of exemplary programs (Table 4) that may provide models of expertise, tools, and technical support. The way forward also must include an emphasis on improving the population's cardiovascular health rather than waiting to treat individuals' CVD. The AHA Community Guide is intended to complement and support clinical guidelines; however, the prevention of heart disease and stroke mandates an emphasis on the population-wide improvement of cardiovascular health as a primary strategy to attenuate the development and progression of these diseases and their associated complications. Through primordial prevention, we can avert the continuing progression of CVD risk in each generation, which continues to demand remedial strategies that are too costly, too limited, and often too late.

## Disclosures

### Writing Group Disclosures

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Gregory W. Heath	University of Tennessee	None	None	None	None	None	None	None
Ariel T. Holland Frank	Palo Alto Medical Foundation Research Institute	None	None	None	None	None	None	None
Penny M. Kris-Etherton	Penn State Department of Nutritional Sciences	None	None	None	None	None	McDonald's Global Advisory Council*; Unilever*	None
Darwin R. Labarthe	Northwestern University	None	None	None	None	None	None	None
Joanne M. Murabito	Boston University	None	None	None	None	None	None	None
Ralph L. Sacco	University of Miami, Miller School of Medicine	NIH†	None	None	None	None	None	None
Comilla Sasson	University of Colorado	None	None	None	None	None	None	None
Melanie B. Turner	American Heart Association	None	None	None	None	None	None	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.