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From the American Heart Association

## Editor's Note

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We are excited to release the second issue of our *Policy Report*, which highlights some important new areas of policy research for the American Heart Association/American Stroke Association. We know that these recent papers will help inform both our state and federal advocacy efforts and contribute to the American Heart Association's 2020 Impact Goal. They include:

- A policy statement on comprehensive smoke-free policy in multi-unit housing. This is a new area of our tobacco prevention and control work at the state and local levels, which expands our efforts to reduce tobacco use throughout the population.
- An executive summary of "Interactions within Stroke Systems of Care," an important policy paper that just published in *Stroke*. It highlights several key elements that a stroke system of care needs to reduce stroke-related deaths and disability, outlining the key steps to appropriately address patient needs from the moment stroke symptoms appear through transport, treatment and rehabilitation.
- An update of our forecasting numbers for the future economic costs of heart disease and stroke. Strikingly, combined costs of heart disease and stroke are projected to exceed \$1.1 trillion by 2030.

Finally, I would like to highlight our important work over the last several months to develop principles for the delivery of palliative care. We convened a stellar advisory panel of experts from around the country, which was chaired by long-time AHA volunteer Lynne Braun, past chair of the Cardiovascular and Stroke Nursing Council.

After months of deliberation, the group has worked with AHA policy research staff to develop a statement of principles that will guide our advocacy work at the state and federal levels. It helps ensure access to medical care for people with serious illnesses and is focused on providing them with relief from their symptoms, pain and stress. The ability to choose this type of treatment is an important part of impactful, compassionate patient care. The American Heart Association continues to position itself within this important national dialogue.

As noted in "Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement from the American Heart Association" in *Circulation* 123: 933, 2011, people over 65 have a higher prevalence of cardiovascular disease. Since that segment of our population is expected to grow significantly in the next two decades, it behooves us to prepare for appropriate, compassionate care of our aging population. Palliative care that is routinely offered to patients and seamlessly integrated into care from the point of diagnosis will be increasingly important, and therefore policy efforts to guide our work in the future are especially timely.

This new issue of the *Policy Report* continues to expand on our policy work. We hope it will be an increasingly valuable resource for our partners in public health, practitioners, policymakers and the media.



Elliott Antman, MD  
Chair, Advocacy Coordinating Committee





# The Latest Policy Statements

## American Heart Association/American Stroke Association Stroke Association Principles for Palliative Care

### Introduction

The American Heart Association/American Stroke Association aims to help all Americans build healthier lives free of cardiovascular diseases and stroke. These efforts include increasing access to high-quality, evidence-based care that improves patient outcomes and quality of life and is consistent with patients' values, preferences and goals. Ensuring awareness of and access to palliative care aligns with the AHA/ASA's goals.

Palliative care is defined as medical and supportive care for people with serious illness that is routinely integrated into care by all practitioners and focused on providing patients and their families with relief from illness and suffering burden — including symptoms, pain and stress — regardless of diagnosis.<sup>1</sup> The AHA/ASA has developed principles to guide its advocacy in this important area.

### Background

The AHA/ASA believes that its engagement in support of palliative care is appropriate and necessary for several reasons.

**Many patients suffer from burdensome symptoms that adversely affect function and quality of life.** Cardiovascular disease and stroke impose a significant burden on many patients and caregivers. For example, end-stage heart failure is described as having “the largest effects on quality of life of any advanced disease,”<sup>2</sup> and its patients are described as a group “for whom symptoms limit daily life despite usual recommended therapies and for whom lasting remission into less symptomatic disease is unlikely.”<sup>3</sup> Stroke is one of the leading causes of death and disability

in adults. The palliative care needs of patients and their families with stroke are enormous.<sup>4</sup>

While less common, children and infants also suffer from heart failure and stroke, which are often related to underlying congenital syndromes or anomalies diagnosed around the time of birth. Although heart failure patients are often assumed primarily to suffer from fatigue and dyspnea, pain and depression are also extremely common.<sup>5</sup> Additionally, patients experience edema, insomnia, anxiety, confusion, anorexia and constipation.<sup>6</sup> Psychosocial concerns, such as hopelessness and social isolation<sup>7, 8</sup> and including depression and anxiety,<sup>9, 10</sup> are prevalent among patients with heart failure and are more likely to go untreated.<sup>11</sup>

Palliative care, with its primary focus on both expert relief of symptoms and supportive care, has the potential to alleviate patients' and family caregiver distress, improve their quality of life and foster well-being even as seriously ill patients live with illness burden and approach the end of life.

**Many patients and families want palliative care, but often do not receive it.** Research demonstrates that patients living with serious illness identify elements of palliative care such as pain and symptom management, avoidance of inappropriate prolongation of dying, achievement of a sense of control and avoiding burdening others among their top priority needs from the healthcare system.<sup>12</sup> A majority of seriously ill patients, however, are not currently receiving palliative care.<sup>13</sup>

As medical technology advances, patients are living longer and with conditions that were previously fatal, but with significant adverse implications for their quality of life and that of their families. Patients who suffer from acute cardiovascular events or stroke when previously highly functional also need additional support for

coping and adjusting to the illness and complex decisionmaking. Together, these factors support the need for the holistic approach taken by palliative care in helping patients and families achieve care goals. Palliative care does this by creating an environment that integrates medically appropriate and supportive care practices to help patients achieve goals of improved functioning and prolonging life, when possible, and with comfort and the preservation of hope at the end of life.

Treatment goals are clarified and valued, care is coordinated across settings and the patient's practical, social, emotional and spiritual needs are supported. However, the "evidence suggests that these options are underused; when they are used, it is often so late in the course of illness that the potential of these options is undermined and their efficacy decreased."<sup>14</sup>

**Advance care planning supports the alignment of care with patient preferences.** Advance care planning discussions offer patients and families the opportunity to understand what to expect in the future, and to express their preferences and expectations for the medical care they wish to receive throughout the course of treatment for their condition, as well as near death. The process also allows patients to gain an accurate understanding of their conditions and prognosis, together with the benefits and burdens of treatment options in the context of this prognosis, so that they may meaningfully participate in decisionmaking.

When facilitated properly, the process of advance care planning is also flexible enough to allow patients of all ages and variable levels of cognition to participate to the level of their interest and ability. Importantly, 95% of patients with heart failure express interest in these discussions.<sup>15</sup> Given that heart failure and stroke are conditions for which the disease trajectory is often prolonged, uncertain and unpredictable,<sup>16,17</sup> it is particularly important that these individuals are given information about expected outcomes when life-sustaining interventions are discussed as therapeutic options and empowered to plan their preferred course of treatment according to different scenarios.

They should also be supported to revisit and adjust their treatment plan as their conditions and goals for care change, and these preferences should be documented so that all providers across settings align their efforts with what matters most to the patient and family. Without accurate education about the likely course of disease during the advance care planning process, patients with cardiovascular diseases and stroke often inaccurately estimate their survival and functional outcomes after clinical conditions such as cardiac arrest. This can lead to confusion, missed opportunities, chaotic decisionmaking and increased burdens and suffering.

**Medical literature supports shared decision making as a best practice.** The AHA's *Scientific Statement on Decision Making in Advanced Heart Failure* states that treatment discussions with patients "should always include specific description of alternative approaches, including continuation or withdrawal of ongoing treatments and focus on symptomatic care." It goes on to explain that "Shared decision making incorporates the perspective of the patient, who is responsible for articulating goals, values, and preferences as they relate to his or her health care [and] incorporates the perspective of the clinician, who is responsible for narrowing the diagnostic and treatment options to those that are medically reasonable."<sup>3</sup>

Together, the physician, patient and family work to understand how different treatments effectuate their preferences so that the plan reflects the values and goals of the patient and family. The healthcare system, however, lacks an integrated approach for discussing sudden devastating or serious illness care with patients and families, and in many cases practitioners are not adequately trained to discuss these options<sup>18,19</sup> or are not comfortable discussing them. As a result, patients and families are often insufficiently informed of all of their alternative care choices and their respective risks and benefits.

**Palliative care may improve outcomes.** The perception persists that palliative care hastens death and marks the end of life-prolonging treatment. Studies examining real-world care delivery, however, find otherwise. One study, for example, examined the impact of introducing palliative care early in treatment for metastatic non-small-cell lung cancer and found that patients who received early palliative care, provided at the same time as disease-focused treatment, had extended mean survival, less depression, and better quality of life compared to patients who did not receive concurrent palliative care.<sup>20</sup>

Another study that examined outcomes for patients receiving palliative care-focused case management while receiving care for chronic pulmonary disease or heart failure found significantly better outcomes on self-management of illness, awareness of illness-related resources and legal preparation for end of life. Patients also reported lower symptom distress, greater vitality, better physical functioning and higher self-rated health than randomized controls.<sup>21</sup> While more research is needed in patients of all ages with cardiovascular disease and stroke, these data suggest that early, integrated palliative care has the potential to increase longevity and improve quality of life.

### AHA/ASA Guiding Principles

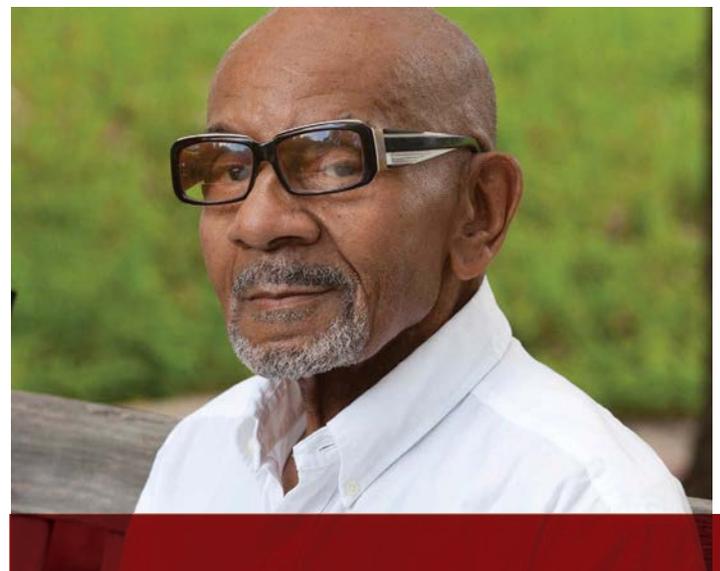
Recognizing the literature showing that palliative care helps meet the priority needs of patients, better aligns patient care with preferences, supports clinical care best practices and contributes to improved quality of care and outcomes for patients and families, the AHA/ASA supports a system of care that:

- Provides patients\* with access to continuous, coordinated, comprehensive, high-quality palliative care given simultaneously with specialist-level cardiovascular and stroke care:
  - A palliative approach is offered at the time of diagnosis of serious illness in conjunction with therapies that can change the clinical course of illness (e.g., heart transplantation or ventricular assist device).
  - Care is provided by an interdisciplinary team, including, as appropriate, individuals from nursing, medicine, social work, physical and occupational therapy, speech and language therapy, nutrition, psychology, psychiatry, pediatrics, child life, obstetrics, pharmacy, spiritual care, and ancillary services. Practitioners trained in complementary and alternative therapies may also be included.
  - The delivery of both disease-focused and palliative care is based on the evaluation of the best existing evidence.
  - Care is coordinated and integrated between treatments focused on disease-specific interventions and those focused on quality of life. When disease-specific treatment may have the potential to extend longevity but possibly worsen quality of life, explicit discussion with patients and/or their

\*Throughout the document, "patients" refers to adult patients and/or the responsible decisionmakers for patients without decisional capacity or competence.

responsible decisionmakers occurs in detail before embarking on such therapies. Pediatric patients should be included in these discussions when developmentally appropriate.

- A subspecialty palliative care team collaborates closely with primary managing clinicians regarding the most relevant and current technology and medical management for the patient's specific medical conditions.
- Care is not episodic, but is continuous along the care continuum across settings and care transitions, and includes regular screening of individuals for physical symptoms and other sources of suffering and the need for related adjustments to current regimens.
- Well-communicated and organized transitions are made between care settings (e.g., from hospital to rehabilitation facilities) so that care goals are clearly and explicitly conveyed to the receiving care team.
- All patients, regardless of racial or ethnic characteristics or ability to pay, are offered palliative care, when medically appropriate, focused on finding out what matters most to patients and their families, and on comprehensive assessment and relief of symptom distress.
- Ensures well-prepared, empowered individuals and families:
  - The public is informed as to what palliative care is, its availability and how to obtain it from the healthcare system.
  - Conversations about preferences for treatment occur early in the disease process, and throughout the course of disease, rather than when death is imminent.
  - Patients and family members engage in shared decision-making with healthcare practitioners to achieve care goals.
  - Individuals are informed of the importance of designating a healthcare surrogate decisionmaker in the event of a future loss of decisional capacity, offered the support and opportunity to make that designation and engage in conversations with the appointed surrogate decision maker about the patient's values and preferences. Processes are in place so they can revisit the decision to/not designate a surrogate.
  - Patients and families are informed of and understand the extent of life limitations (prognosis, quality of life, function, likelihood of recovery to a better condition, transplant or ventricular assist device eligibility) resulting from their condition(s).
  - Information on treatment options is presented to patients in a culturally sensitive and understandable manner, in plain and developmentally appropriate language, in the language of their choice, and in a setting conducive to patient and family understanding (e.g., quiet, time for questions).
  - Patients and families considering treatment options to extend life understand that symptom relief and attention to quality of life are always provided whether or not life-prolonging interventions are pursued and as death approaches.
  - The public is informed by their healthcare provider regarding the typical survival and functional outcomes of attempted resuscitation after cardiac arrest and other life-sustaining interventions (such as ventricular assist device (VAD) or implantable cardioverter defibrillator (ICD) placement).
  - Patients and families are informed of their options under federal and state law to document their care preferences, and family is knowledgeable about their loved one's preferences. Family members understand their rights and any limitations imposed by law when patients have not documented their care preferences.
- Patients and families are informed about what is happening and what to expect when the patient is nearing death.
- Customizes care to reflect patient and family preferences, as well as the unique situation of each individual:
  - A patient's care preferences and goals are regularly assessed, especially as the condition worsens or improves over time, and evidence-based care plans are developed and revised over time to document these preferences and goals.
  - An assessment of an individual's care preferences includes religious and spiritual, social and cultural components, as well as considerations of dignity, meaning, illness, suffering burden and quality of life.
  - Benefits, risks and burdens of care are regularly assessed and care planning is sensitive to changes in the individual's condition.
  - In addition to particular interventions, care preferences include factors such as location and setting of care (e.g., receiving care at home versus coming back to the hospital frequently).
  - In developing a care plan, the individual's family situation (including capacity to provide needed care), as well as available community and social supports are considered.
  - Patients and families are informed of the legal protections, processes and methods in place for them to document their preferences and direct their care, as well as their legal right not to do so.
  - A pediatric patient's unique needs and developmental stage are considered when assessing care preferences. Parents/legal guardians are an important part of determining care preferences, as well.
  - Care for the family, such as the needs of the family caregiver and bereavement support, is also included when developing a patient's care plan.
- Develops and supports a skilled, compassionate and responsive healthcare workforce:
  - Healthcare practitioners of all types are knowledgeable about palliative care, what it is, its availability and how to educate their patients about it and how to access it.
  - All healthcare providers are trained in primary palliative competencies and are knowledgeable about how to access specialty-level palliative care, as needed.



- The current and future healthcare workforce is educated and trained in core palliative care principles and practices and team-based care. This includes the ability to assess the unique communication needs of patients (e.g., non-verbal cues and language barriers), facilitate discussions with patients about life goals and personal preferences, manage common symptoms, as well as how to communicate unpredictable disease trajectories and the risks, benefits and burdens of advanced technologies to patients.
- Healthcare practitioners provide evidence-based recommendations based on both functional and quality of life outcomes.
- Resources are made available to support practitioners in delivering palliative interventions.
- Practitioners are attentive to the unique needs of subpopulations, including religious/spiritual affiliation, health literacy, age, race, ethnicity and culture.
- Education, tools and prognostic indicators to assist in determining the appropriate timing for initiating conversations about care options are developed and given to practitioners.
- Information about patient care goals and preferences is available to practitioners at the point of care (i.e., care goals are clearly documented and easily found in the electronic health record) so they may be seamlessly incorporated into care decisions, including those made in “crisis” situations.
- The healthcare team is provided with emotional support when caring for seriously ill and complex patients and families.
- Continually assesses itself and its performance against these principles:
  - An expanded evidence base is built to understand how to best measure and evaluate alignment of the system with these principles.
  - Validated quality measurement tools for patients of all ages are developed to assess whether care delivered matches the preferences of patients, meets their symptom, family and practical support needs, and continually identifies areas for improvement.
  - Research is conducted assessing the use of simultaneous palliative care principles and practices integrated with disease-modifying treatments from the point of diagnosis of advanced heart disease and stroke, across care settings and throughout the course of the illness.

### Acknowledgments

These principles were created and approved by an expert panel convened by the AHA/ASA. The members of the panel, whom the AHA/ASA wishes to thank and recognize for their valuable input, are listed below. The AHA/ASA would also like to thank Dr. Hannah Lipman, Chief, Bioethics Consultation Service and Associate Professor of Clinical Medicine, Montefiore Medical Center, for her thoughtful review of the document. These principles were approved by the American Heart Association’s Advocacy Coordinating Committee on September 4, 2013.

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## Forecasting the Future of Cardiovascular Disease in the United States: An Update

To prepare for future cardiovascular care needs, the American Heart Association developed a methodology to project the prevalence and future costs of care for hypertension, coronary heart disease, heart failure, stroke and all other CVD through 2030 (Heidenreich et al., 2011). In 2012, the indirect and direct cost estimates were further disaggregated by type of service (hospital, physician, home health, nursing home, prescriptions.)

The AHA updated the projections to reflect more recent available data for some key sources. These included:

- 2006-2010 Medical Expenditure Panel Survey
- 1999-2010 National Health and Nutrition Examination Survey
- 2010 Census and projections
- 2012 Annual Social and Economic Supplement, Current Population Survey
- 2012 Congressional Budget Office Long-Term Budget Outlook projections of per capital increases in health care costs
- 2012 "Expectancy Data, The Dollar Value of a Day: 2011 Dollar Valuation"
- 2010 Multiple Cause of Death from CDC WONDER system

The projections assume no change in policy but do reflect changing demographics as well as revised assumptions about per capita health care cost growth. They illustrate what is likely to happen to CVD prevalence and costs if no change to current policy is made and no further action is taken to reduce the disease and economic burden of CVD. They also serve as a useful baseline to gauge the success of current and future CVD policy.

**Table 1. Projections of Crude CVD Prevalence (%), 2010–2030 in the United States**

Year	All CVD*		Hypertension		CHD		HF		Stroke	
	Original	Update	Original	Update	Original	Update	Original	Update	Original	Update
2010	36.9		33.9		8.0		2.8		3.2	
2015	37.8	41.0	34.8	38.8	8.3	6.8	3.0	2.3	3.4	3.0
2020	38.7	42.0	35.7	39.7	8.6	7.1	3.1	2.5	3.6	3.2
2025	39.7	42.9	36.5	40.6	8.9	7.5	3.3	2.7	3.8	3.4
2030	40.5	43.9	37.3	41.4	9.3	7.8	3.5	2.8	4.0	3.6
% Change (2015 to 2030)	7	7	7	7	12	15	17	22	18	20

**Table 2. Projected Direct (Medical) Costs of CVD, 2010–2030 (in Billions 2012\$) in the United States**

Year	All CVD*		Hypertension		CHD		HF		Stroke		Hypertension as Risk Factor†	
	Original	Update	Original	Update	Original	Update	Original	Update	Original	Update	Original	Update
2010	\$278		\$71		\$36		\$25		\$29		\$133	
2015	\$365	\$456	\$93	\$112	\$48	\$102	\$33	\$16	\$39	\$66	\$174	\$180
2020	\$480	\$576	\$121	\$140	\$63	\$129	\$44	\$21	\$52	\$85	\$227	\$225
2025	\$634	\$730	\$158	\$175	\$83	\$165	\$59	\$27	\$71	\$110	\$300	\$284
2030	\$834	\$918	\$204	\$216	\$109	\$209	\$79	\$34	\$97	\$141	\$397	\$357
% Change (2015 to 2030)	128	101	119	93	127	105	139	113	149	114	128	98

**Highlights**

- By 2030, 43.9% of the U.S. population — 122 million people — will have some form of CVD.
  - By 2030, 43% of men and 45% of women will have some form of CVD, and blacks suffer at higher rates than whites and Hispanics.
  - Hypertension, which impacted 38 percent of adult Americans in 2013, is the most common form of cardiovascular disease, but it’s not the fastest growing. Between 2013 and 2030, heart failure and stroke will each increase by about 20% due largely to the aging of the population.
- Between 2013 and 2030, real (2012\$) total direct medical costs of CVD are projected to more than double, from \$415 billion to \$918 billion.
- Real indirect costs (due to lost productivity) for all CVD are estimated to increase from \$189 billion in 2013 to \$290 billion in 2030, an increase of 53%.
- The combined costs are projected to exceed \$1.1 trillion by 2030.
  - Annual CVD costs for persons age 65 to 79 are projected to increase by a whopping 144 percent, from \$215 billion in 2013 to \$524 billion per year in 2030.

These findings indicate CVD prevalence and costs are projected to increase substantially. Effective prevention strategies are needed to limit the growing burden of CVD.

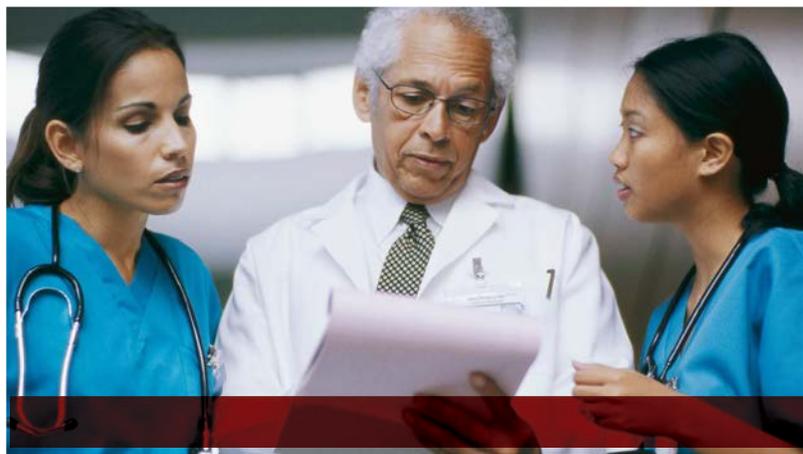
**Key Changes**

Total projected costs of CVD in 2030 increased by about 10% since the initial analysis (Heidenreich et al., 2011). Cost projections changed the most for CHD (+40%), HF (-45%), and stroke (+38%). This was driven primarily by a large increase in the “treated prevalence” of CHD and stroke in the Medical Expenditures Panel Survey condition files.

In 2008, MEPS changed the way they coded conditions to include people that have ever been told they have the disease. The estimated per-person costs fell with the addition of these relatively lower treatment intensity cases, but the net effect was to increase the total costs of CHD and stroke. In addition, many more HF patients were now listed as having a CHD/stroke comorbidity, which led us to attribute less of their spending to HF and lowered the HF cost estimates.

A second significant revision, which also offset some of the increases described above, were lower projections of annual real growth in per capita medical costs made by the Congressional Budget Office. The original estimate of 3.6% declined to 2.7% in the update.

The American Heart Association will continue to update these forecasted numbers each year to help inform our policy efforts and underscore the importance of prevention initiatives and improved access to quality affordable health care.



## Interactions within Stroke Systems of Care: Policy Recommendations from the American Heart Association/American Stroke Association

Higashida R, Alberts MJ, Alexander DN, Crocco TJ, Demaerschalk BM, Derdeyn CP, Goldstein LB, Jauch EC, Mayer SA, Meltzer NM, Peterson ED, Rosenwasser RH, Saver JL, Schwamm L, Summers D, Wechsler L, Wood JP; on behalf of the American Heart Association Advocacy Coordinating Committee. Interactions within stroke systems of care: a policy statement from the American Heart Association/American Stroke Association. *Stroke*. 2013; published online before print August 29, 2013, 10.1161/STR.0b013e3182a6d2b2

### A Summary Policy Brief

#### Background

As the No. 4 cause of death in the United States, stroke and its care have a profound impact on public health. Across the United States and in other parts of the world, cities, states and regions are developing multi-tiered systems for the care of patients with acute stroke. They often involve a range of healthcare components supported by various rules and regulations.

Several new care paradigms and technologies are emerging as important elements of a stroke system of care. They include:

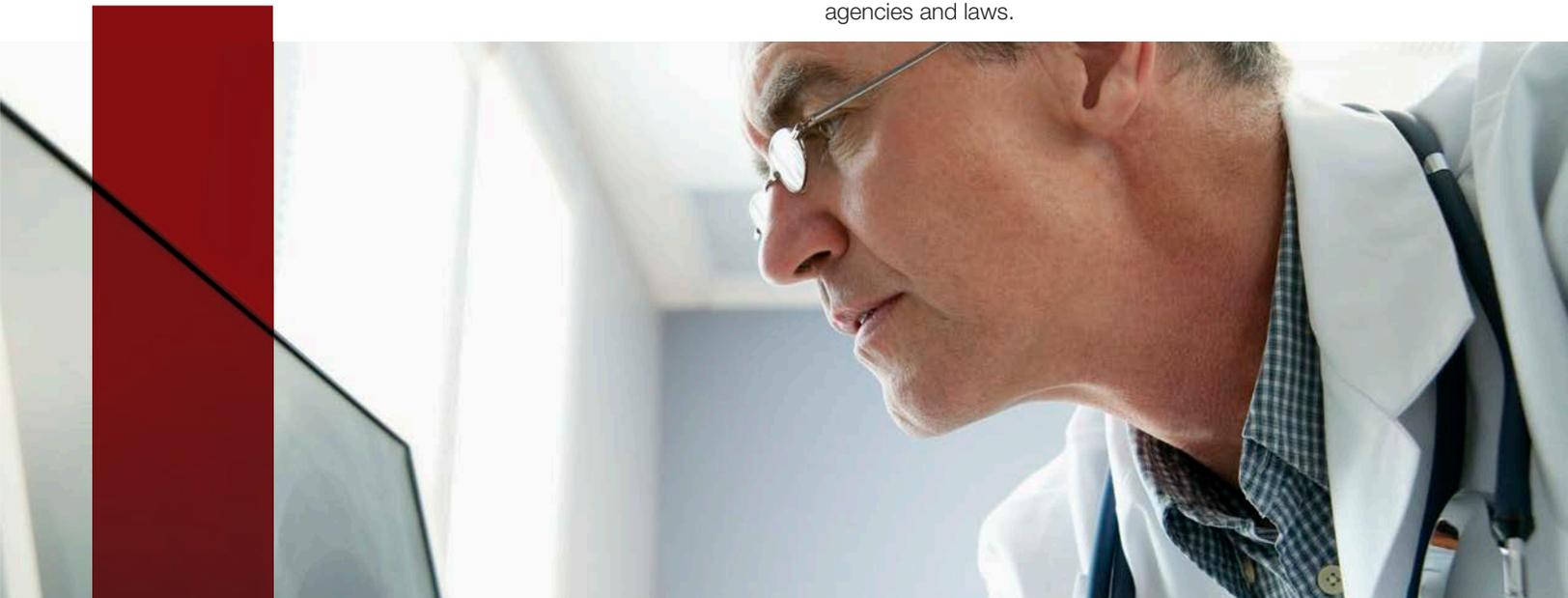
- the development and proliferation of various levels of stroke centers;
- the expanded use of telemedicine technologies;
- advanced medical, endovascular and surgical interventions; and
- comprehensive rehabilitation strategies and programs.

Pre-hospital care and triage, as well as the efficient transfer of patients between hospitals, are also key components of stroke systems.

This paper by Higashida et. al builds on the original 2005 Stroke Systems Task Force white paper and puts forth concepts and elements for stroke systems of care that are intended to optimize patient care and management processes and improve patient outcomes. They are practical to implement and are supported by existing clinical data and/or expert consensus opinion. The paper also makes policy recommendations for the key elements of a stroke system of care.

#### Recommendations

1. Public health leaders along with medical professionals and others should assign and implement public education programs focused on stroke systems and the need to seek emergency care in a rapid manner. These programs should be repetitive and should be assigned to reach diverse populations.
  - 1a. EMS leaders in coordination with local, regional and state agencies (and in consultation with medical authorities and local experts) should develop triage paradigms and protocols that ensure that all patients with a known or suspected stroke are rapidly identified and assessed using a validated and standardized instrument for stroke screening. Examples include the FAST (Face, Arm, Speech Test) scale, LAPSS (Los Angeles Pre-Hospital Stroke Screen) or the Cincinnati Pre-Hospital Stroke Scale (CPSS).
2. Unless there are compelling mitigating circumstances, in cases where there are several acceptable hospitals in a well-defined geographic region, extra transportation times to reach another facility should be limited to no more than 15–20 minutes. In cases where several hospitals exist, EMS should seek care at the facility capable of offering the highest level of stroke care.
  - 2a. Protocols using pre-hospital EMS notification that a stroke patient is en-route should be used routinely.
3. Healthcare authorities, medical leaders and government agencies should support the formation, operations and certification of stroke centers as one proven means to improve patient care outcomes. The stroke centers should publicly report their performances and outcomes.
4. Different services within a hospital that may be transferring patients through a continuum of care, as well as different hospitals that may be transferring to other facilities, should establish hand-off and transfer protocols and procedures that ensure safe and efficient patient care within and between facilities.
  - 4a. Protocols for inter-hospital transfer of patients should be established and approved beforehand so that efficient patient transfers can be accomplished at all hours of the day and night.
5. All hospitals care for stroke patients within a stroke system of care should develop, adopt and adhere to care protocols that reflect current care guidelines as established by national and international professional organizations and state and federal agencies and laws.



6. Due to the limited distribution and availability of neurologic, neurosurgical and radiologic expertise, the use of telemedicine/ telestroke resources and systems should be supported by healthcare institutions, governments, payors and vendors as one method to ensure adequate 24/7 coverage and care of stroke patients in a variety of settings.
7. Cities, counties and regions are urged to develop an organizational infrastructure and decisionmaking body to assist in addressing care issues, decisionmaking, implementation and problem solving. This is typically in the form of a "Stroke Committee" defined by a region or other overarching body.
  - 7a. All of the elements of a stroke system of care will operate in a highly complex and multidisciplinary environment with many elements and stakeholders, each with their own rules and recommendations. In terms of the many controlling authorities, it is paramount that the best interest of the patient be the primary concern and driving factor when rules and regulations are made and implemented.
8. Government agencies and third-party payors are urged to develop and implement reimbursement schedules for patients with acute stroke that reflect the demanding care and expertise that such patients require to achieve an optimal outcome, regardless of whether they receive a specific medication or procedure.
9. Each major element of a stroke system of care, as well as the entire system as defined by local regional factors, should develop and implement at least two meaningful quality improvement projects that will result in improved patient care and/or outcomes.
  - 9a. Stroke outcome measures must include adjustments for baseline severity.
10. A stroke system of care should ensure that all patients have access to post-stroke care (i.e., discharge planning services, rehabilitation, nursing facilities, medical follow-up) regardless of their financial status or socio-economic background. Such availability will ensure that each patient has the opportunity to achieve a maximum recovery from their stroke, which will ultimately reduce its societal and economic impact.

## Policy Position on Smoke-Free Policies in Multi-Unit Housing (June 2013)

### Position

The American Heart Association has long advocated for strong public health measures that will reduce the use of tobacco products in the United States and limit exposure to secondhand smoke. The policies prioritized by the association and its national partners include adequate funding for tobacco cessation and prevention programs, comprehensive smoke-free air laws, taxation of tobacco products and FDA regulation of tobacco.

As states and localities accomplish each of these policy priorities, they are increasingly looking for other policy strategies to address the impact of tobacco use on health. Smoke-free policies in multi-unit housing are emerging as an important strategy to address smoking and exposure to tobacco smoke in homes where children, adolescents, the elderly and the disabled are especially vulnerable. Research has shown that smoke-free policies in the home reduce secondhand smoke exposure for all residents; and can increase cessation among smokers and decrease relapse in former smokers.<sup>1, 2, 3, 4, 5</sup>

The American Heart Association supports comprehensive smoke-free policies in multi-unit housing. In public housing, these policies could be mandated as part of regulation since taxpayer dollars are used to subsidize the health and economic consequences of smoking. In privately owned housing, legislation or regulation could provide incentives to owners such as insurance discounts, or funding for education, communication and cessation resources as motivation to adopt comprehensive smoke-free policies. While advocating for comprehensive smoke-free policies, the American Heart Association wants to ensure that smokers are not denied access to public housing as they can abide by policies that allow for outdoor smoking areas.

### Background

#### Multi-Unit Housing and Exposure to Secondhand Smoke

About 40 million Americans live in multi-unit housing properties (apartments, condominiums and townhouses), representing 31.5% of all housing units in the United States.<sup>6</sup> Recent federal government data show that approximately 7.1 million Americans live in subsidized housing.<sup>7</sup> Of these individuals, about 2.1 million live in public housing where the housing is owned or operated by a Housing Authority.<sup>6</sup> Determining public and subsidized housing can be complex as ownership and administration is often decentralized and fragmented between the federal government and local public housing authorities.<sup>8</sup> For example, there are publicly owned and subsidized apartment buildings and there are voucher programs for privately owned properties where tenants receive a subsidy from the federal government to help cover their private housing rent. Additionally, states offer supplemental public housing programs that operate without federal funding. Despite the complexity, in each of these cases, at least some tax dollars are being used to subsidize all or a portion of the housing costs.

Surveillance data show that the smoking rate is higher in subsidized housing where 32.7% of adults use tobacco compared with 20.6% in the general population.<sup>9, 10</sup> As more states and localities have passed smoke-free air laws for public spaces and workplaces, the home is the most significant source of exposure to secondhand smoke, especially for children.<sup>11</sup> Americans on average spend about two-thirds of their time each day in their residences.<sup>12</sup>



However, only half of U.S. households with both children and smokers have complete home smoking bans and unfortunately bans are less common among smoking families with older children, in African-American and Hispanic households, and in households in states where there is a higher smoking prevalence.<sup>13</sup>

Even if people living in multi-unit housing have a smoke-free policy for their own home, they may still suffer incursions from others in the complex. Research has documented the transfer of secondhand smoke in the air<sup>14, 15, 16, 17, 18, 19, 20</sup> and transfer of secondhand smoke constituents through heating, ventilation, air conditioning systems and other connections between units.<sup>6, 21, 22, 29</sup> As many as half of multi-unit housing residents report that smoke has entered their unit from elsewhere in the building or complex<sup>24, 25</sup> and detectable levels of nicotine have been documented in multi-unit buildings where smoking is permitted.<sup>26, 27, 28</sup>

In 2009, the U.S. Department of Housing and Urban Development encouraged smoke-free policies in public housing to prevent the migration of secondhand smoke between housing units in an attempt to lower exposure especially among the most vulnerable tenants including the elderly, children and people with chronic illnesses.<sup>29</sup> In public housing, children and adolescents are 39 percent of residents<sup>30</sup> while older Americans comprise 15 percent of residents. There is evidence that exposure to secondhand smoke disproportionately affects minorities,<sup>31, 32</sup> women and those in lower socioeconomic groups since a larger number of these individuals are residing in subsidized housing and blue collar workers are less likely than white collar workers to be covered by smoke-free policies in their workplaces.<sup>3</sup>

### Health Impact

Cigarette smoking remains the leading cause of preventable morbidity and premature death in the United States.<sup>33</sup> Each year, approximately 467,000 people in the U.S. die prematurely as a result of smoking and 49,000 from exposure to secondhand smoke.<sup>34</sup> Secondhand smoke is a carcinogen to children and adults who do not smoke<sup>35</sup> and produces immediate adverse effects on heart function, blood platelets, inflammation, endothelial function and the vascular system.<sup>36</sup> Additionally, increasing exposure to secondhand smoke, such as that experienced with chronic exposure in the home, amplifies the negative health impact. More than 88 million non-smokers over the age of 3 are exposed to secondhand smoke in the United States.<sup>37</sup>

Studies on the health impact of secondhand smoke are robust. No level of secondhand smoke exposure is safe.<sup>38</sup> In 2009 the Institute of Medicine assessed the state of the science on the suggested causal relationship between secondhand smoke exposure and heart attacks. The IOM report<sup>39</sup> explored in a comprehensive way the strengths and weaknesses of population-based studies, the pathophysiology of secondhand smoke exposure and myocardial infarction, knowledge gaps and strength of the relationship between low exposure and heart attack incidence. On the basis of its review of the available experimental and epidemiologic literature, including relevant studies on air pollution and particulate matter, the IOM concluded that there is a causal relationship between smoking bans and decreases in acute coronary events. However, the report did not estimate the effect size or magnitude of the impact. Studies from around the world have now provided evidence for the reduced incidence of heart attacks after implementation of smoke-free air policies.<sup>40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55</sup>

Other health effects of exposure to secondhand smoke include dementia in adults<sup>56</sup> and impairment on cognitive function and

the ability to perform mental tasks.<sup>38</sup> In infants and children, secondhand smoke is a risk factor for heightened asthma attacks, acute respiratory illness, Sudden Infant Death Syndrome and ear infections.<sup>38</sup> Pregnant women exposed to secondhand smoke show a greater risk of giving birth to low-birth-weight babies.<sup>38</sup>

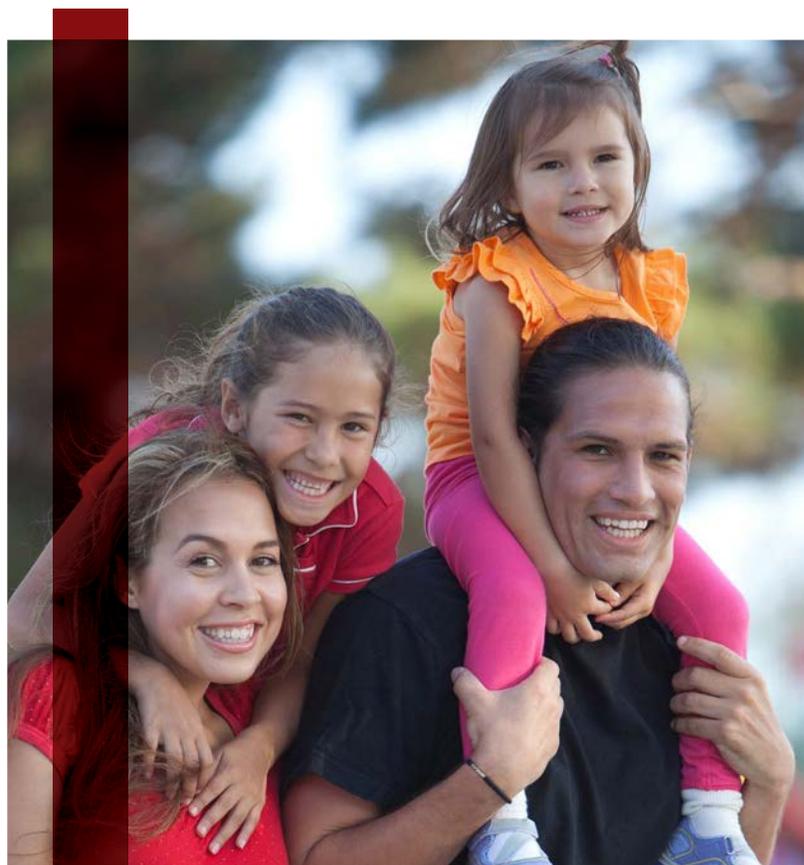
Estimates are that exposure to secondhand smoke causes 21,800-75,100 coronary heart disease deaths a year and 38,100-128,900 heart attacks annually.<sup>57</sup> Long-term exposure to secondhand smoke, such as that occurring in a home or the workplace, is associated with a 25%–30% increased risk for coronary heart disease in adult nonsmokers.<sup>58</sup>

### The Economics of Smoke-Free Multi-Unit Housing

The health care costs associated with disease incidence caused by secondhand smoke exposure are estimated at \$1.8-6.0 billion.<sup>38</sup> If recent trends in the reduction in the prevalence of secondhand smoke exposure continue, the health and economic burden in the U.S. would be reduced by approximately 25%–30%.<sup>10</sup> This potential reduction has important ramifications for lowering Medicare, Medicaid and private insurance costs.

One recent study<sup>59</sup> estimated the annual cost savings associated with smoke-free policies in multi-unit housing by calculating savings for secondhand smoke-related health care costs, renovations of housing units that permit smoking and smoking-attributed fires. Renovations or repairs include paint to cover smoke stains, cleaning of ducts, replacing stained window fixtures and replacing carpets.

The calculations in the study showed that prohibiting smoking in all U.S. subsidized housing could save approximately \$521 million per year, including \$341 million in secondhand smoke-related health care expenditures, \$108 million in renovation expenses and \$72 million in smoking-attributable fire losses. Just prohibiting smoking in public housing alone would save approximately \$154 million annually. Another study of multi-unit housing owners in California



showed that comprehensive smoke-free policies implemented statewide could save owners over \$18 million a year.<sup>60</sup> Clearly there are economic motivations for smoke-free policies that go beyond the critically important health benefits.

### **Residents' Acceptance of Smoke-Free Policies**

Several studies have reviewed whether tenants support smoke-free policies in multi-unit housing. Generally, former smokers, non-smokers, ethnic minorities and those living with children support these policies specifically for improved health, fire safety and building cleanliness.<sup>61, 63, 63, 64</sup> A clear majority of tenants report having a smoke-free policy in their own homes, but as already mentioned, these residents experience incursions of secondhand smoke from other tenants and for almost 10% of residents, that incursion is daily.<sup>65</sup> Current smokers are less supportive of smoke-free policies and can be non-compliant.<sup>6</sup> It is important that there is acceptance and buy-in from all tenants with implementation of any smoke-free policies to minimize enforcement issues and maximize the health benefits. Use of messaging on the communal impact of smoking as well as readily available cessation services can help facilitate acceptance.

### **Multi-Unit Housing Owners' Acceptance**

Landlords, public authorities or owners of multi-unit housing are more skeptical of instituting smoke-free policies due to concerns about enforcement, tenant objections, loss of market share, vacancy and turnover.<sup>6</sup> However, only a small percentage of owners who have implemented smoke-free policies report increased vacancy and turnover.<sup>6</sup> So there is some inconsistency in what is expected to happen versus the actual response, perhaps because of less availability of other housing options for low-income tenants. Studies show greater adoption of smoke-free policies in higher-income housing units. In surveys owners who had not yet implemented smoke-free policies showed some interest in learning more about how to implement them.<sup>6</sup> There is also some indication that owners would be motivated by economic incentives such as insurance discounts and subsidies to promote advertising of smoke-free buildings.<sup>66</sup>

Research shows that comprehensive smoke-free policies are still relatively uncommon in multi-unit housing and many landlords do not perceive a demand. This may be because tenants do not feel there is opportunity to ask for these policies. There is also some indication that landlords need further education about the capacity for secondhand smoke to pass between units and expose non-smoking tenants as well as the financial advantages of adopting smoke-free policies.<sup>67</sup> Several activities can move owners/landlords along toward adopting smoke-free policies (see Appendix A) and cost-effective media strategies have been developed to educate tenants and owners about the advantages of adopting comprehensive smoke-free policies.<sup>68</sup>

One of the most difficult challenges for implementing a comprehensive smoke-free policy, especially in public housing, is enforcement.<sup>69</sup> Monitoring and compliance reporting mechanisms have to be established with sanctions for noncompliance. Threatening eviction is especially difficult in public housing where the fundamental tenet is to protect against homelessness for vulnerable populations. However, enforcement policies for a smoke-free policy would be very much like holding tenants accountable for other rules like sanitation or pet ownership where enforcement and monitoring may already be in place.

Additionally, landlords and housing authorities can reduce their legal liability by restricting or banning smoking since there

are liability concerns for exposing their non-smoking tenants to secondhand smoke.<sup>70, 71</sup> The Federal Fair Housing Act of 1992, the Americans with Disabilities Act, the Rehabilitation Act and state disability discrimination laws provide protection against housing discrimination for people with disabilities, including those with sensitivities to tobacco smoke.<sup>70</sup> There is currently no state or federal law that prohibits multi-unit housing operators from implementing smoke-free policies.<sup>72</sup> Smokers do not have a "right to smoke" and smokers are not a protected class under the fair housing laws.

### **Voluntary vs. Mandatory Implementation**

Although still relatively less common, smoke-free policies in multi-unit housing (public and private) are gaining momentum and can be approached voluntarily or in a mandatory way. Following the U.S. Department of Housing and Urban Development's recommendation in 2009, more states, localities and local housing authorities began to consider smoke-free policies. For example, at the beginning of January 2005, seventeen public housing authorities in six states had smoke-free policies for some or all of their buildings but by February 2010, this number had increased to 141 local housing authorities in twenty states.<sup>73</sup> More than 50 public housing authorities in Minnesota developed smoke-free policies and several cities and counties in California required smoke-free policies in public multi-unit housing.<sup>74</sup>

A multi-year campaign around voluntary adoption in Oregon led to a 29% increase in the availability of smoke-free rental units in the Portland-Vancouver metro area for private and public multi-unit housing owners.<sup>75</sup> Additionally, there is evidence that as broader clean indoor air laws for public places are adopted, there is increased implementation of smoke-free policies in multi-unit housing because shifting social norms are driving continued policy change.<sup>76</sup>

As momentum grows, homeowner associations, landlords or housing authorities seeking to implement smoke-free policy should consider several factors: support within the resident community, how the policy should be implemented, how comprehensive it should be, how to handle new versus established tenants, procedures for adopting and communicating the policy, implementation costs, enforcement, potential legal challenges and impact on resale. At the federal level, the Department of Housing and Urban Development has at least three options to address smoke-free policy in subsidized housing (see Appendix B for a more thorough explanation of these options with ramifications). (1) Take no regulatory action and let public housing authorities regulate smoking policies on their own; (2) Specifically include tobacco smoke in existing air quality requirements (which would mean that in order to comply with federal regulation, most housing authorities would have to address second-hand smoke exposure) and; (3) provide conditions for full funding that require federally funded public housing to phase in 100% smoke-free policies.<sup>77</sup>

### **Conclusion**

Studies show that secondhand smoke transfer in multi-unit housing is common, the current prevalence of policies is low (even though there is growing momentum) and a clear majority of tenants in multi-unit housing would choose a smoke-free building over housing where smoking is permitted if other amenities are equal. Additionally, property managers who adopt no-smoking policies indicate that they are likely to continue doing so.<sup>78</sup> No level of secondhand smoke exposure is safe.

Whether adopted on a voluntary basis in housing units that are privately owned or mandated in housing units that are subsidized by

public funding, there are clear health, economic and legal benefits for tenants and owners. Public policy can also drive smoke-free policies in private housing by offering incentives or resources to owners who implement them. Policies should prohibit smoking in all new and existing residences that share walls or common areas and outdoor common areas should be smoke-free except for designated smoking areas. The American Heart Association supports comprehensive smoke-free policies in all multi-unit housing.

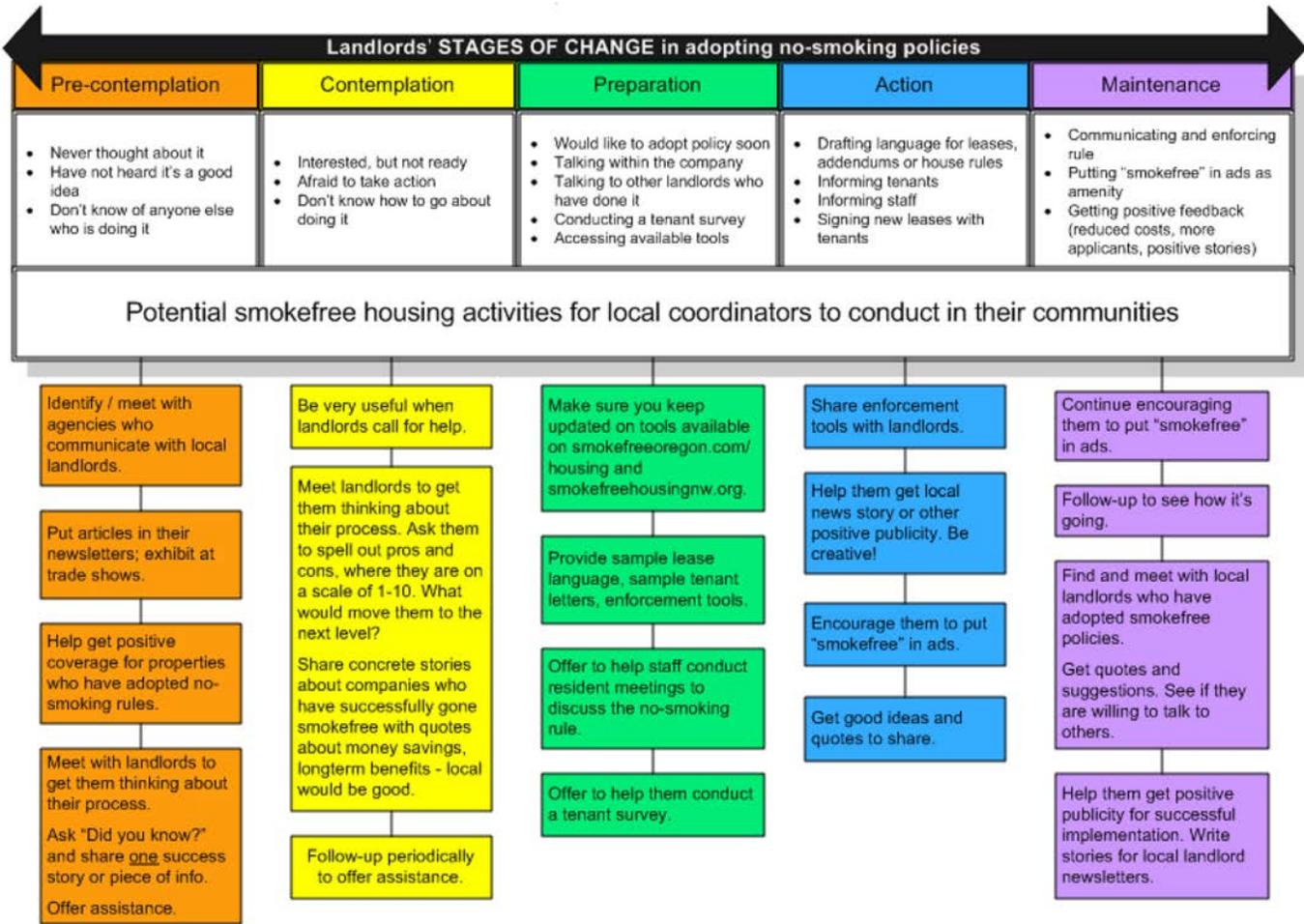
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Appendix A:



Note: Adapted with permission from material developed by Health in Sight LLC.

From: Pizacani, B., Laughter, D., Menagh, K., Stark, M., Drach, L., & Hermann-Franzen, C. Moving Multiunit Housing Providers Toward Adoption of Smoke-Free Policies. 2011. *Preventing chronic disease*, 8(1).

**Appendix B: Table 1**

Table Assessing Costs and Benefits of Possible HUD Approaches to Smoking in Public Housing

Courses of Action	Costs	Benefits	Comment
HUD takes no regulatory action: PHAs regulate smoking policies on their own.	Long-term continued tobacco smoke exposure in most public housing settings for the foreseeable future.	Encourages more local control and fewer households with smokers would be at-risk for displacement.	The <i>status quo</i> will likely continue to result in more households below or near the poverty level suffering effects of tobacco smoke exposure than higher SES households due to lack of market forces in public housing.
HUD interprets existing air quality requirements to include tobacco smoke.	Without a clear directive to make programs non-smoking, many PHAs would likely maintain status quo resulting in continued exposure and resulting harm to residents. PHAs that take action may be forced to evict non-complying tenants.	Some PHAs may act on regulatory interpretation by prohibiting smoking and would be forced to respond to residents' complaints concerning air quality problems caused by tobacco smoke.	This intermediate step falls short of directing PHA policy but could lead to an increase in smoke-free public housing without the need for changes in HUD's granting requirements.
By conditioning full funding, HUD effectively requires all federally funded public housing to phase in 100% smoke-free policies.	HUD action would be controversial. Enforcement could require PHAs and Section 8 private landlords to evict noncomplying tenants.	Would likely result in dramatic reduction of tobacco smoke exposure and resulting harm for a vulnerable population.	By conditioning full funding on policy compliance by PHAs, HUD is in a unique position to eliminate a major preventable cause of disease from the home where market forces have retarded adoption of such policies.

From: Winickoff, J., Gottlieb, M., & Mello, M. M. Indoor Smoking Regulations in Public Housing. *NEJM*, 2010. 362(24), 2319.

# Policy Position Statements

## Promoting Cardiovascular Health Tobacco

### FDA Regulation of Tobacco

The signing of the Family Smoking Prevention and Tobacco Control Act by President Obama in 2009 was a landmark achievement toward further reducing disease and death from use of tobacco. The U.S. Food and Drug Administration (FDA) now has the tools and jurisdiction to reign in the tobacco industry. The AHA will continue to work with the Center for Tobacco Products and support and monitor its efforts to prohibit marketing and advertising of tobacco targeting youth, to ban misleading claims, and to regulate the manufacture of tobacco products in the interest of public health. The AHA will ensure comprehensive implementation of FDA regulation of tobacco and learn from the data gathered during the regulatory process to continue to improve tobacco control efforts in the United States.

### Excise Taxes

To help save lives, the AHA advocates for significant increases in federal, state, and county or municipal excise taxes that cover all tobacco products. This work has successfully led to significant increases in the federal, state and local excise taxes on tobacco. Currently, the federal government imposes a tax of \$1.01/pack of cigarettes and increased the rates on other tobacco products such as smokeless tobacco products and cigars. At the same time, states have imposed tobacco excise taxes with a current nationwide average of \$1.53/pack (as of July 2013).<sup>1</sup> This is an increase from an average of 43.4 cents in January 2002 — an incredible public health achievement. Many studies have examined the impact

of cigarette tax increases on smoking prevalence, especially in youth. Most have found that higher taxes reduce consumption and especially cessation rates in young smokers. The general consensus is that

for every 10% increase in the real price of cigarettes, the increased cost reduces overall cigarette consumption by approximately 3% to 5%, lowers the number of young adult smokers by 3.5%, and cuts the number of children who smoke by 6% to 7%. These taxes are a health win that reduces tobacco use, saves lives, raises revenue for cash-strapped states, and lowers healthcare costs.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_321036.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_321036.pdf)

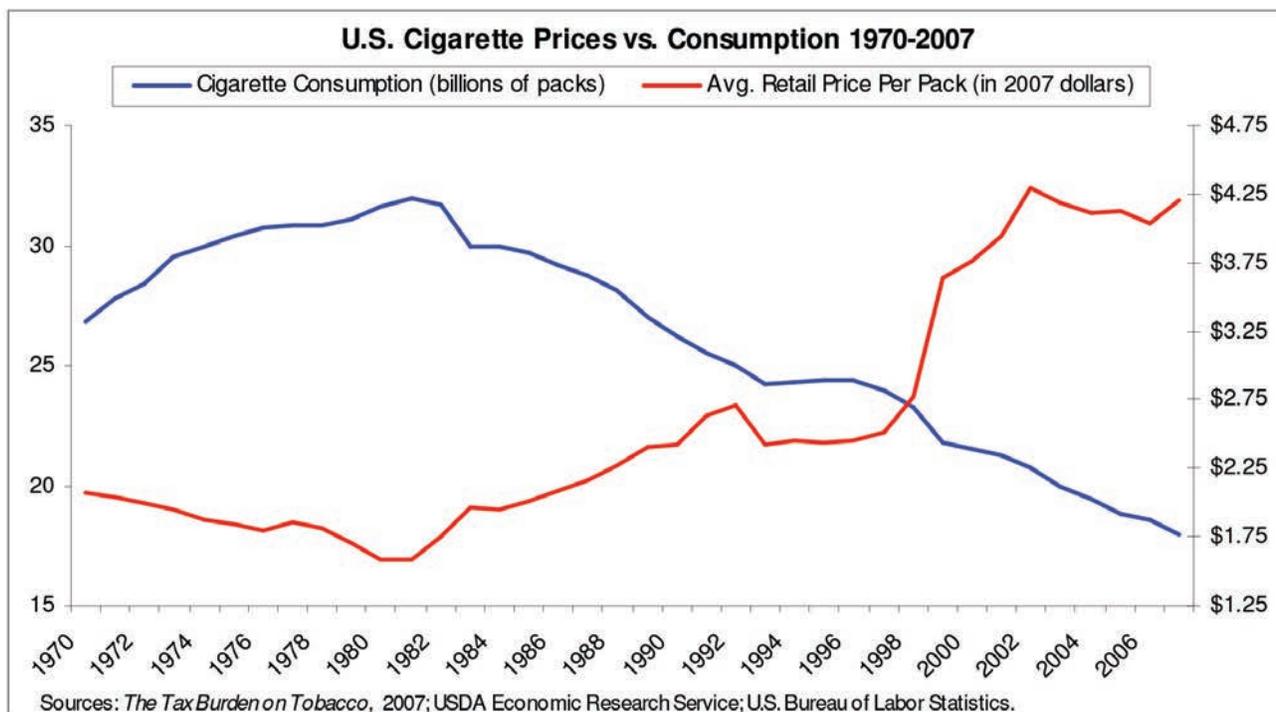
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### Clean Indoor Air Laws

The AHA advocates for comprehensive smoke-free workplace laws at the state and local levels in compliance with the Fundamentals of Smoke-free Workplace Laws guidelines ([http://www.no-smoke.org/pdf/CIA\\_Fundamentals.pdf](http://www.no-smoke.org/pdf/CIA_Fundamentals.pdf)). There is increasing evidence that comprehensive smoke-free laws implemented across localities, states, and even countries lower the incidence of cardiovascular disease (CVD) and significantly improve public health. Physicians should counsel patients that exposure to secondhand smoke is a fully preventable cause of death. The AHA maintains that smoke-free laws should be comprehensive and 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 or for casinos, bars, and private clubs.

The AHA supports further research to determine the impact of



comprehensive clean indoor air laws on the incidence of acute myocardial infarction (MI), stroke, mortality, and other morbidities in adults and children and the magnitude of the impact of these laws, as well as more comprehensive surveillance of incidence and prevalence of CVD to track the impact of public health interventions.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304804.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304804.pdf)

## Eliminating the Sale of Tobacco Products in Pharmacies

The AHA advocates that tobacco products should not be sold in pharmacies, citing the incongruence of placing tobacco products for sale near tobacco cessation aids. Reducing availability of tobacco products is a key strategy in changing societal norms regarding tobacco use, leading to fewer persons starting to use tobacco and more users trying to quit.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304805.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304805.pdf)

## Smokeless Tobacco Products

As a national nonprofit health organization committed to promoting tobacco control research and policy efforts, the AHA does not recommend the use of smokeless tobacco products as an alternative to cigarette smoking or as a smoking cessation product. Following the passage of FDA regulation of tobacco and clean indoor air laws, the tobacco industry responded with a plethora of products that are alternatives to traditional cigarette smoking. As a result, there is a disturbing trend toward increased initiation and use of smokeless tobacco products among youth and adolescents. The AHA will work to ensure that the FDA closely monitors and scrutinizes actual and implied health claims for these products. Given that the use of smokeless tobacco products in general has harmful effects on health and is addictive, the scientific community should prioritize strategic efforts to (1) evaluate factors associated with the initiation and use of smokeless tobacco products; (2) determine to what extent the use of these products results in continued tobacco use, including dual smoking and use of smokeless tobacco products by smokers who would otherwise quit; and (3) assess the effect of “reduced risk” messages related to smokeless tobacco products on public perception, tobacco use and cessation, and policy decision making. Clinicians should continue to discourage the use of all tobacco products and emphasize the prevention of smoking initiation and smoking cessation as primary goals for tobacco control.

<http://circ.ahajournals.org/content/122/15/1520>

### Top 10 Things to Know:

#### Smokeless Tobacco (ST) and Cardiovascular Disease

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm\\_319641.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm_319641.pdf)

## Comprehensive Coverage of Tobacco Cessation Services in Private and Public Healthcare Plans

The AHA advocates for comprehensive coverage of tobacco cessation services in public and private health insurance programs that includes use of nicotine replacement products, medication, and counseling. Tobacco cessation treatment programs remain highly cost-effective. In Massachusetts, just 2 years after implementation of tobacco cessation coverage, 26% of smokers covered by

MassHealth quit smoking, and there was a decline in the use of other costly healthcare services (a 38% decrease in hospitalizations for heart attacks; a 17% drop in emergency department and clinic visits attributable to asthma; and a 17% drop in claims for adverse maternal birth complications, including preterm labor).<sup>1</sup> Additional research with the program showed that the comprehensive coverage led to reduced hospitalizations for heart attacks and a net savings of \$10.5 million, or a return on investment of \$3.07 for every dollar spent.<sup>2</sup> Savings from these programs likely will continue to increase as time goes on and the impact of quitting increases.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_321037.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_321037.pdf)

## Comprehensive Sustainable Funding for Tobacco Cessation and Prevention Programs

The AHA advocates for sustainable funding of state tobacco prevention and cessation programs at levels that meet or exceed the recommendations of the U.S. Centers for Disease Control and Prevention (CDC). In accordance with CDC recommendations, tobacco control programs should be comprehensive, appropriately staffed, and effectively administered. The CDC's best practices incorporate community programs to reduce tobacco use and make smoking not the norm, develop robust school programs, enforce existing regulations and laws, and support statewide programs. The best practices also develop cessation programs, health promotion activities, surveillance and evaluation, administration and management, and counter marketing efforts, including paid broadcast and print media, media advocacy, public relations, and public education.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_321035.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_321035.pdf)

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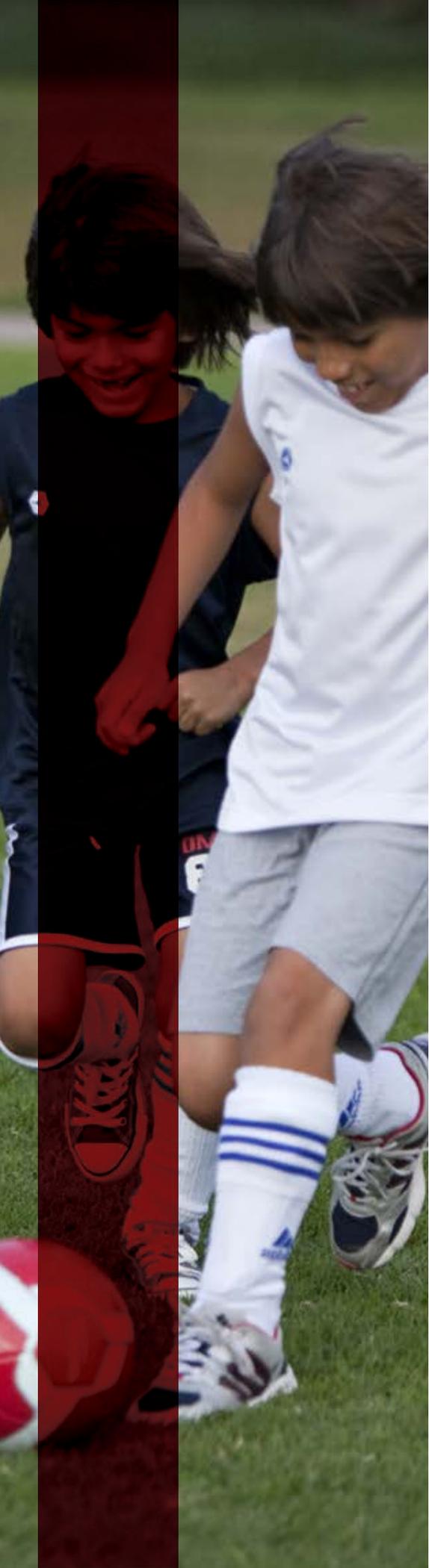
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# Physical Activity

## Physical Education in Schools

The quality and quantity of physical education in the nation's schools is an important part of a student's comprehensive, well-rounded education and a means of positively affecting lifelong health and well-being. The optimal physical education program will foster a long-term commitment to physical activity as part of a healthy lifestyle that will help children prevent chronic disease and other conditions, including abnormal cholesterol levels, high blood pressure, obesity, and heart disease. The AHA advocates for more frequent quality physical education in all schools. Quality physical education should be supplemented, but not replaced, by additional school-based physical activity.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_446067.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_446067.pdf)



## Physical Activity Guidelines for Americans

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In a landmark achievement, the U.S. Department of Health and Human Services published the first ever Physical Activity Guidelines for Americans in 2008. These science-based guidelines help guide Americans aged 6 years and older in efforts to improve and maintain their health and avoid disease through appropriate and regular physical activity and serve as the foundation for federal, state, and local physical activity policy. The guidelines also help physicians provide advice to their patients and help people learn about the health benefits of physical activity, the amount of exercise to do each day to improve or maintain health, and how to be physically active while reducing the risks of injury. Unlike the Dietary Guidelines for Americans, which are evaluated for an update every 5 years, the Physical Activity Guidelines have no such mandate from Congress. A regularly updated set of Physical Activity Guidelines is needed to guide our efforts and reduce sedentary behavior through a regular review of the latest science. The AHA will ask Congress to mandate a review of the Physical Activity Guidelines every 5 years, as is done with the Dietary Guidelines, to determine if there is enough emerging science to revise the guidelines and a comprehensive update should be mandatory at least every ten years.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_432592.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_432592.pdf)

### Top 10 Things to Know: Population Approaches to Improve Diet, Physical Activity, and Smoking Habits

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_442118.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_442118.pdf)

### Shared Use of School Facilities

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In light of our nation's epidemic of sedentary behavior, the AHA supports a number of efforts to increase opportunities for physical activity within the community, worksites, and schools. School facilities, especially those that are centered in the community, can be an excellent resource for recreation and exercise where options for engaging in physical activity are limited or too expensive. The most innovative districts are promoting shared use of

school facilities, such as school fields, running tracks, and fitness facilities, to address the educational and health needs of students and to maximize the community's use of recreational activity spaces.<sup>1</sup> The AHA supports regulation and legislation that allows shared use of school facilities within the community when school is not in session.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_312809.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_312809.pdf)

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## Changing the Built Environment to Promote Active Living

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The AHA supports legislation and other initiatives that create more livable and active communities, including robust funding for and implementation of Safe Routes to School; sustained concentrated funding to assist communities in implementing active transportation networks; adoption of Complete Streets policies to consider the needs of all users, including bikers and walkers, in transportation projects; school construction that allows for physical activity facilities; and the use of health impact assessments within community planning to increase recreational green spaces.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_323233.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_323233.pdf)

## Diet/Nutrition

### Mobile Vending Around Schools

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The AHA advocates for nutrition policy efforts that make healthy foods more affordable and accessible to all consumers and that bring food pricing and subsidies in line with federal dietary guidelines and AHA nutrition recommendations. The recent trend of mobile food vending allows for the possibility of greater access to healthy foods, such as fruits and vegetables, in low-income communities. However, it can also increase access to less-healthy foods, which is of particular concern around schools, where the targeted consumers are children.

Mobile vending around schools should provide only healthy foods and be in line with the Institute of Medicine nutrition standards for competitive foods in schools. As an emerging issue, there is limited evidence showing the health impact of mobile vending around schools. The AHA supports additional research and pilot approaches with evaluation to determine the impact on children's health, diet, purchasing behavior, and calories consumed.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_446658.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_446658.pdf)

## Nutrition Education and Promotion in Schools

Schools have an important role in providing a healthy nutrition and physical activity environment for children. School is where children spend a lot of time. To build a foundation for lifelong healthy living, the AHA advocates for

- Robust state and federal nutrition standards for school meals and competitive foods, the foods sold in vending machines, à la carte, school stores, and other places outside the meal program
- State and federal laws that hold schools accountable for implementation of robust local wellness policies that are transparent, shared with parents and the community, evaluated regularly, written into school improvement plans, and include expanded areas like food marketing and advertising to children, physical education, and staff promotion and wellness
- State laws and local policy that require schools to establish standing local wellness committees that meet regularly and have representation from school food services, physical education and health education, school administrators, parents, students, social services, counseling, school nurses, and others connected to the health of students and the school environment
- Robust technical assistance to support schools in implementing nutrition standards, effective nutrition education and promotion, and model local wellness policies with robust implementation and evaluation
- Regional or local cooperative agreements between school districts to increase purchasing power for healthy foods
- Cooperative agreements with local farmers and markets, as well as implementation of school gardens to increase the use of fresh fruits and vegetables in the school meal program and foster nutrition education that increases learning opportunities.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301787.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301787.pdf)

## Food Marketing and Advertising to Children

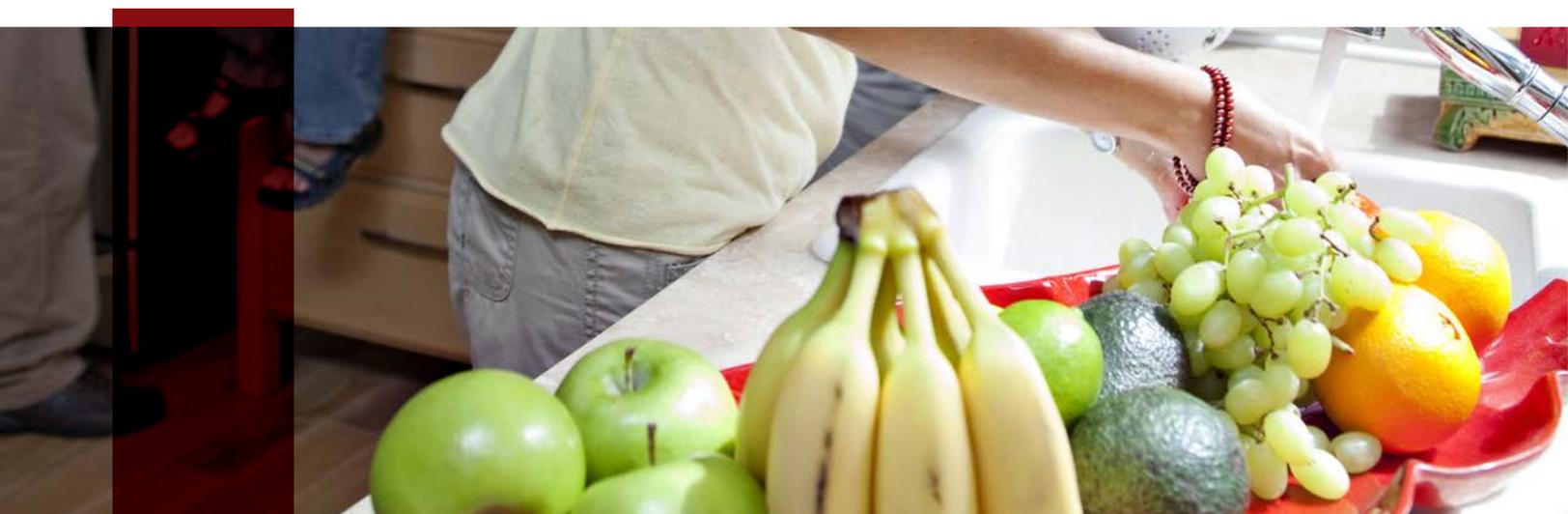
Research shows that aggressive marketing and advertising of high-calorie, unhealthy foods to children contribute to today's childhood obesity epidemic. Inappropriate consumption of low-nutrient, high-calorie foods contributes to energy imbalance. Consequently, the AHA sees no ethical, political, scientific, or social justification for marketing and advertising low-nutrient, high-calorie foods to children and supports efforts to diminish this practice in the United States. The AHA believes that industry should strengthen its voluntary standards for food marketing and advertising to children and would support other measures that restrict food advertising and marketing to children including, but not limited to Federal Trade Commission oversight, allowing only healthy foods to be marketed and advertised to children, discouraging product placement of food brands in multiple media technologies, eliminating the use of toys as a marketing tool for unhealthy kids' meals by restaurants, using licensed characters on only healthy foods, and not allowing unhealthy food and beverage advertising and marketing in schools or on educational materials. The intended effect of advocating for these positions is 2-fold: to improve children's dietary behaviors by reducing the consumption of low-nutrient, high-calorie foods while promoting consumption of healthy food choices..

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_306133.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_306133.pdf)

## Reducing Sodium in the Food Supply

The AHA advocates for a stepwise reduction in sodium consumption in the US diet to 1500 mg/d by 2020. The AHA also recommends a concurrent sustained commitment by the food and restaurant industries to maximize the use of technology and reduce the amount of salt added to the food supply. The AHA will collaborate with the FDA, the U.S. Department of Agriculture, the CDC, the National Forum for Heart Disease and Stroke Prevention, the New York City Department of Health and Mental Hygiene, and other organizations to achieve lower sodium levels in the food supply, address food labeling, develop consumer education campaigns, and promote a progressive sodium reduction strategy to lower the daily consumption of sodium by 2020.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304869.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304869.pdf)





**Top 10 Things to Know: Sodium, Blood Pressure, and Cardiovascular Disease: Further Evidence Supporting the American Heart Association Sodium Reduction Recommendations**

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_446117.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_446117.pdf)

**Eliminating Industrially Produced Trans Fats in the Food Supply**

The AHA believes that eliminating *trans* fats from the food supply through public policy approaches is an important strategy for improving cardiovascular health.<sup>1</sup> Policies include robust nutrition standards in schools, menu labeling in restaurants, bans on use of *trans* fats in restaurants, robust standards for foods marketed and advertised to children, and strong procurement policies for foods purchased in government buildings and workplaces.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301697.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301697.pdf)

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**Sugar-Sweetened Beverage Taxes**

The AHA supports a multipronged approach to address the nation's obesity epidemic, which includes creating policies that improve access and affordability of healthy foods to all people. The AHA also considers the concept of pricing less healthy foods and beverages higher to discourage consumption as a possible policy alternative to bring food and beverage pricing in line with the AHA's Diet and Lifestyle Recommendations and federal dietary guidelines

where possible. However, the AHA believes additional research is necessary to determine the impact of these types of sales taxes or excise taxes on consumption rates and shifts in consumer choice with special consideration for disparate populations. The AHA supports initiatives in certain states to pilot this policy strategy with comprehensive surveillance to discern real-world impact on consumption trends and dietary behavior. The AHA believes there should be careful consideration of unforeseen, unintended consequences and prioritizes evaluation as the most important component to determine the impact on consumer behavior.

**Criteria for AHA Support of a Beverage Tax Initiative**

To determine if the AHA might support a sugar-sweetened beverage tax proposal to assess/evaluate efficacy, the following criteria were developed as a baseline for support:

- The tax is structured to result in an increase in price for sugar-sweetened beverages (eg, a tax imposed at the time of sale as opposed to a tax imposed on the manufacturer, which can spread the cost of the tax among all products produced by the manufacturer).
- The amount of tax is anticipated to be sufficient to result in a reduction in consumption of sugar-sweetened beverages (at least 1 cent per ounce).
- Money is dedicated for evaluation with guidance that ensures rigorous evaluation, including health outcomes.
- There is a standard definition of "sugar-sweetened beverage."
- The tax does not expire after a specified time.
- At least a portion of the money is dedicated for prevention of heart disease and stroke and/or prevention of obesity.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304547.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304547.pdf)

## Menu Labeling

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The AHA supports providing information about calories on restaurant menus and menu boards at the point of purchase. Although the ultimate goal is to provide this information in all restaurants, initially it should be required in restaurants with standardized menus and recipes that do not vary markedly from 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.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301652.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301652.pdf)

## Procurement Standards for the Purchase of Foods and Beverages by Governments and Employers

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The AHA advocates for robust nutrition standards for foods and beverages purchased for use in the workplace and in government buildings.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_320781.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_320781.pdf)

## Healthy Food Financing Initiatives

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Ensuring access to healthy foods in all communities across the United States is a priority for the AHA. Several policy strategies attempt to accomplish this important goal, including healthy food financing. The AHA supports healthy food financing initiatives at the local, state, and federal levels, especially those that integrate in-store and out-of-store marketing strategies to increase the availability and affordability of healthy foods once stores are built or renovated to help shoppers choose healthy foods. Members of the community should be involved in creating these marketing strategies. Plans for sustainability should be in place because healthy food financing initiative projects are typically 1-time grants or loans. Evaluation should be incorporated into these initiatives to assess not only the economic impact and community revitalization but also the health impact and consumer purchasing behavior in communities, especially for disparate populations.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_446657.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_446657.pdf)

## Front-of-Package and Retail Shelf Icons

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Consumers, manufacturers, third-party organizations such as the AHA, and retailers realize the benefit of informing purchasers how to make healthy purchasing choices by providing symbols and other messaging on food packaging or retail shelves. Consequently, health-related icons have proliferated in the marketplace leading to significant consumer confusion. The AHA ultimately favors the establishment by the FDA of a directed, standardized, comprehensive front-of-package food labeling program and icon system with unified criteria based on the best available science and consumer research, featuring consumer education as a primary goal, along with healthier food selection and consumption. In the meantime, systems currently in the marketplace and additional research will determine which type of guidance works best for educating the consumer and facilitating healthier food choices.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304838.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304838.pdf)

# Obesity

## Comprehensive Worksite Wellness Programs

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With >130 million Americans employed across the United States, workplaces provide a large audience for CVD and stroke prevention activities. Experience has shown that workplace wellness programs are an important strategy to prevent the major shared risk factors for CVD and stroke, including cigarette smoking, obesity, hypertension, dyslipidemia, physical inactivity, and diabetes. An estimated 25% to 30% of companies' medical costs per year are spent on employees with the major risk factors listed above.<sup>1</sup> Employees and their families share the financial burden through higher contributions to insurance, higher copayments and deductibles, reduction or elimination of coverage, and trade-offs of insurance benefits against wage or salary increases. When wellness programs are successful, their influence extends beyond individual workers to their immediate family members, who are often exposed to their favorable lifestyle changes. Worksite wellness programs that can reduce these risk factors can ultimately decrease the physical and economic burden of chronic diseases, including CVD, stroke, and certain cancers. The societal benefits of a healthy employed population extend well beyond the workplace. The AHA supports efforts to achieve comprehensive worksite wellness programs to address CVD and stroke prevention.

<http://circ.ahajournals.org/content/120/17/1725>

## Reference

1. Carnethon M, Whitsel LP, Franklin BA, Kris-Etherton P, Milani R, Pratt CA, Wagner GR; on behalf of the American Heart Association Advocacy Coordinating Committee; Council on Epidemiology and Prevention; Council on the Kidney in Cardiovascular Disease; Council on Nutrition, Physical Activity and Metabolism. Worksite wellness programs for cardiovascular disease prevention: a policy statement from the American Heart Association. *Circulation*. 2009;120:1725-1741

## Use of Financial Incentives Within Worksite Wellness Programs

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As healthcare costs continue to skyrocket, employers are considering innovative strategies to reduce their expenses. Many employers are offering comprehensive worksite wellness programs that produce a return on investment and improve employee health and productivity. The AHA is a long-time supporter of these programs and wholeheartedly endorses their implementation, which creates



a culture of health in an environment where a majority of adults spend a large part of their day. Another approach some employers are using to reduce costs is to charge selected employees more for their health insurance premiums or raise deductibles if they are overweight, smoke, or do not achieve other healthy behaviors. The 2010 Patient Protection and Affordable Care Act (ACA) codifies existing statutes that allow employers to charge employees a differential insurance premium based on meeting certain health status factors or behavior metrics. The premise behind the new law is that the financial incentive/disincentive will motivate employees to take personal responsibility for their own health and improve their behaviors and health status over the short and long term. However, this underlying premise is not well supported by evidence-based research. Moreover, the unintended ramifications of this policy could be decreased access to health care, preventive services, and disease management. The AHA supports additional research to monitor the outcomes of an incentive-based approach tied to healthcare premiums for behavior outcomes on the quality of worksite wellness programming, employee health, and access to health care. The AHA also worked closely with the Health Enhancement Research Organization, the American Cancer Society, the American Cancer Society Cancer Action Network, the American Diabetes Association, and the American College of Occupational and Environmental Medicine to develop guidance for employers who want to implement incentive-based designs within their worksite wellness programs.

[http://journals.lww.com/joem/Fulltext/2012/07000/Guidance\\_for\\_a\\_Reasonably\\_Designed\\_.20.aspx](http://journals.lww.com/joem/Fulltext/2012/07000/Guidance_for_a_Reasonably_Designed_.20.aspx)

### **Prevention, Diagnosis, and Treatment of Child and Adolescent Obesity in the Healthcare Environment**

The AHA acknowledges that addressing overweight and obesity in children and adolescents in health care is a critical part of reversing the bulging waistlines and concomitant incidence of chronic disease across the United States. An American Medical Association Expert Committee released recommendations on the assessment, prevention, and treatment of child and adolescent overweight and obesity ([http://www.ama-assn.org/ama1/pub/upload/mm/433/peo\\_obesity\\_recs.pdf](http://www.ama-assn.org/ama1/pub/upload/mm/433/peo_obesity_recs.pdf)). The AHA endorses these recommendations. The evidence base concerning appropriate treatment and prevention options is still evolving; however, these recommendations represent the best available science, most

effective practice, and soundest methods moving forward. The AHA policy statement ([http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301721.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301721.pdf)) not only summarizes these recommendations but also defines the corresponding policy changes that must occur for the recommendations to be fully realized in a healthcare setting. Providers play a key role in the fight against childhood obesity and need to be given the support and training necessary to be effective in the clinical environment and as advocates in their communities.

### **Top 10 Things to Know: Change Agents for Obese Children**

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_435584.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_435584.pdf)

### **Top 10 Things to Know: Approaches to the Prevention and Management of Childhood Obesity: The Role of Social Networks and the Use of Social Media and Related Electronic Technologies**

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_444718.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_444718.pdf)

### **Body Mass Index (BMI) Screening and Surveillance in Schools**

The obesity epidemic in children is an enormous societal problem with far-reaching consequences. The AHA places a high priority on addressing the nation's childhood obesity epidemic and supports a more comprehensive surveillance system in the United States to support the goals of eliminating the epidemic burden of heart disease and stroke.<sup>1</sup> Within this context, BMI surveillance in schools — where heights and weights are measured annually and data are collected longitudinally and there is public reporting of the aggregate data — may serve to expand the understanding of childhood obesity trends and help determine the efficacy of obesity prevention programs and support program planning. The results will provide important population-based assessment and prevalence data. The programs should be adequately funded, because states and schools incur a cost to conduct them. The AHA also supports these assessments annually in the healthcare environment to improve diagnosis and treatment of childhood obesity.

BMI screening programs in schools used for individual health assessment, where results are reported to parents, raise a number of concerns around measurement techniques, adequate training for those conducting the assessment, privacy protection, effective parental notification, and the importance of linking families and physicians to resources in the community that address prevention and treatment.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301789.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301789.pdf)

### **Top 10 Things to Know: Mortality, Health Outcomes, and Body Mass Index (BMI) in the Overweight Range**

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm\\_319791.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm_319791.pdf)

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1. Goff DC, Brass L, Braun LT, Croft JB, Fiesch JD, Fowkes FGR, Hong Y, Howard V, Huston S, Jencks SF, Luepker R, Manolio T, O'Donnell C, Robertson RM, Rosamond W, Rumsfeld J, Sidney S, Zheng ZJ. Essential features of a surveillance system to support the prevention and management of heart disease and stroke: a scientific statement from the American Heart Association Councils on Epidemiology and Prevention, Stroke, and Cardiovascular Nursing and the Interdisciplinary Working Groups on Quality of Care and Outcomes Research and Atherosclerotic Peripheral Vascular Disease. *Circulation*. 2007;115:127-155.



## Obesity Prevention and Health Promotion in Child Care Settings

The AHA advocates for strong health promotion and obesity prevention programs in early childhood programs. Reaching young children and their families in child care settings is an important strategy for the primary prevention of CVD and associated risk factors through children's dietary intake, physical activity, and energy balance, thus combating the childhood obesity epidemic. Children spend many waking hours in these programs, and they should be safe, healthy, and smoke-free environments.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304549.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304549.pdf)

## Chemicals in the Environment and the Impact on Obesity

The AHA recognizes that the causes of obesity are multifactorial and complex and therefore must be addressed on multiple levels. Recently, endocrine-disrupting chemicals such as diethylstilbestrol, bisphenol A, phthalates and organotins have been proposed as potential "obesogens" that contribute to a toxic chemical burden that may initiate or exacerbate the development of obesity and its related comorbidities. Endocrine-disrupting chemicals are found in a variety of products, including plastics, cosmetics, shampoos, soaps, lubricants, pesticides, paints, and flame-retardant materials. Laboratory studies are still determining the exact mechanisms by which these substances affect weight, but current evidence suggests that they disrupt developmental and homeostatic controls over fat production and energy balance. However, determining the link with obesity can be especially challenging because obese people might be eating more and therefore exposing themselves to more of the chemicals in food packaging. Teasing out causality can be challenging. Although limited research exists on the effect of these environmental chemicals on human populations, several epidemiological studies have found that chemical exposure, particularly during critical developmental periods, is positively correlated with increased weight, CVD, and diabetes. Additional research is needed to clarify these results and establish a causal link between exposure to endocrine-disrupting chemicals and adverse health effects in humans, as well as to discern the physiological, cellular, and metabolic impact of exposure. The AHA recommends further research before taking a proactive advocacy position.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_316488.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_316488.pdf)

## Air Pollution

The AHA maintains that exposure to particulate matter air pollution is a modifiable risk factor that contributes to cardiovascular morbidity and mortality. Long-term exposures can increase risk, and a reduction in air pollution can lower risk of developing CVD. For this reason, the AHA monitors and supports legislation or regulation that will decrease air pollution and supports Environmental Protection Agency standards for reducing exposure to fine particulate matter in all communities.

<http://circ.ahajournals.org/content/121/21/2331>

### Top 10 Things to Know:

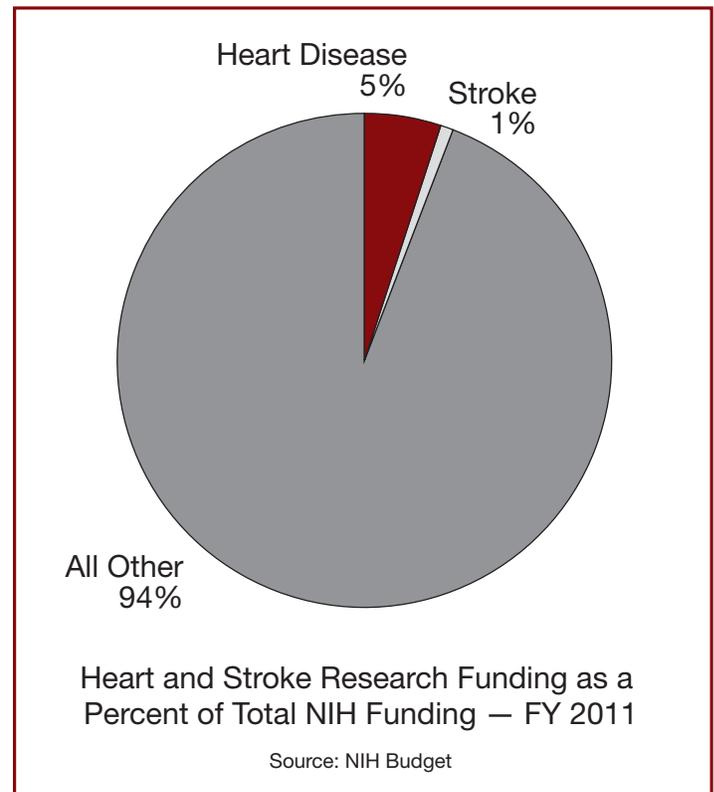
#### Air Pollution and Cardiovascular Disease (CVD)

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm\\_319618.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm_319618.pdf)

## Supporting Heart Disease and Stroke Research

# Research

### National Institutes of Health



An estimated 83 million U.S. adults suffer from CVDs. These life-threatening conditions include coronary heart disease, heart failure, stroke, and high blood pressure. In 2008, CVD was the cause of nearly 33% of all U.S. deaths and an underlying or contributing cause of about 55% of deaths. However, due in large part to National Institutes of Health (NIH)-funded research, death rates from heart disease and stroke have dropped by 60% and 70%, respectively, since 1940. Despite the significant return on investment, the NIH invested a disproportionate and meager 4% of its fiscal year 2011 budget on heart research and a mere 1% on stroke research (see chart). This funding level is not commensurate with scientific opportunities, the number of people afflicted with CVD, and the Each year, the AHA joins the medical research community and the physical and economic toll exacted on our nation.

In advocating for an adequate appropriation for the NIH to capitalize on the investment to improve Americans' health, spur economic growth and innovation, and advance science. The AHA also advocates for funding increases for NIH heart and stroke research and works to protect the NIH from cuts in funding.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304822.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304822.pdf)

### Top 10 Things to Know:

#### About Heart Disease and Stroke Statistics

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_447447.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_447447.pdf)

## CDC Heart Disease and Stroke Prevention Programs

Each year, the CDC spends on average only 16 cents per person in the United States on heart disease and stroke prevention. The CDC Division for Heart Disease and Stroke Prevention awards grants to states and conducts surveillance to improve cardiovascular health for all. However, some states receive no money. State heart disease and stroke prevention programs focus on controlling blood pressure and cholesterol, knowing heart disease and stroke signs and symptoms, calling 911, improving emergency response and quality of care, and eliminating health disparities. The CDC supports the Paul Coverdell National Acute Stroke Registry to measure, track, and improve the quality and delivery of stroke care in 6 states (Georgia, Massachusetts, Michigan, Minnesota, North Carolina, and Ohio). More than 246 hospitals participate in the Paul Coverdell National Acute Stroke Registry. Goals include addressing gaps between practice and guidelines and promoting growth of quality improvement in stroke care in hospitals and emergency medical services (EMS). Since January 2005, the Paul Coverdell National Acute Stroke Registry has collected about 120,000 stroke and transient ischemic attack cases. Data show sustained progress in 7 of 10 stroke quality improvement measures.

In 20 states, the Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program screens uninsured and underinsured low-income women aged 40 to 65 years for heart disease and stroke risk. They receive counseling, education, referral, and follow-up as appropriate. From 2000 to mid-2008, WISEWOMAN reached >84,000 low-income women, provided >210,000 lifestyle interventions, and identified 7647 new cases of high blood pressure, 7928 new cases of high cholesterol, and 1140 new cases of diabetes. Among those participants who were rescreened 1 year later, average blood pressure and cholesterol levels had decreased considerably.

The AHA advocates for adequate CDC funding for implementation of heart disease and stroke prevention programs in all states, the Paul Coverdell National Acute Stroke Registry, WISEWOMAN, and a broad surveillance system.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301639.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301639.pdf)

## Comparative Effectiveness Research

Determining the comparative effectiveness of different treatment modalities provides a potentially useful approach for improving clinical decision making and patient outcomes. There are, however, differing views of the definition, scope, and application of comparative effectiveness research that have led to considerable controversy. As a mission-driven volunteer organization that focuses on optimal cardiovascular health for all Americans and the best interests of patients with CVDs and stroke, the AHA offers the following principles on comparative effectiveness research:

- Conducting and interpreting comparative effectiveness research according to fundamental scientific principles
  - Defining value for patients through comparative effectiveness research
  - Applying comparative effectiveness research to patient treatment decisions
  - Funding and oversight of comparative effectiveness research
- The AHA stands committed to seek input, engage in meaningful

dialogue, and join in collaboration with other voluntary health organizations to help create a stronger consensus on how comparative effectiveness research can best serve the public interest.

<http://circ.ahajournals.org/content/119/22/2955>

## Genetics and CVD

The ready availability of human genetic data represents a great opportunity to improve human health by personalizing health care and has the potential to entirely transform how we think about the risk for disease. However, recent technological advances also create new moral, ethical, and legal challenges that must be addressed before the positive impact of these advances on human health can be fully realized.

- Although recent legislation protects individuals from discrimination by employers or health insurance providers on the basis of their genetic information, important areas of potential discrimination such as life insurance are not included.
- Legislation should be formulated to provide broader protection. Further patenting of DNA sequences should not be approved where the “invention” involves the observation of functionally unaltered human DNA, because allowing these patents can lead to a monopoly on testing related to these genes, reduce access to testing, and further inhibit scientific discovery.
- All genetic tests, including laboratory-developed genetic tests, should undergo independent review to confirm their analytic and clinical validity. The FDA would be an appropriate body to carry out this review. Detailed information should be made available to healthcare professionals and the public at large.
- Genetic testing should be carried out in a specialist center where genetic counseling is available. Pharmacogenomics can be used to predict drug efficacy and adverse events or to identify optimal doses for individual patients. Genetics and genomics should be a fundamental part of the training curriculum for all health professionals.

It is imperative that there be significant funding for research on the genetics of CVD by the NIH and other funding agencies to promote discovery, improve assessment of variant pathogenicity, refine genotype-phenotype correlations, and gain the necessary insights into disease pathogenesis that will ultimately allow transformation of the clinical management of inherited CVD.

<http://circ.ahajournals.org/content/126/1/142>

## Top 10 Things to Know: Genetics and Cardiovascular Disease

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_441156.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_441156.pdf)



# Access to Quality Health Care

## Pulse Oximetry Screening in Newborns

Pulse oximetry is a screening tool that, when used with newborns, can identify certain critical congenital heart defects (criticalCHDs). The signs of certain criticalCHDs might not be apparent before an infant is discharged from the hospital, which can result in significant morbidity and occasional mortality. Routine pulse oximetry screening performed on asymptomatic newborns after 24 hours of life but before hospital discharge may detect such problems. These tests are cost-effective. Routine pulse oximetry performed after 24 hours in hospitals that have on-site pediatric cardiovascular services incur very low costs and risk of harm.

A 2009 statement from the AHA and the American Academy of Pediatrics<sup>1</sup> determined that further research was needed across larger groups and systems before pulse oximetry screening could be recommended as a standard of care. Since then, many studies that support this practice have been published, and on September 23, 2011, the Secretary of the US Department of Health and Human Services adopted the recommendation of the Advisory Committee on Heritable Disorders in Newborns and Children to add pulse oximetry screening for critical CHDs in newborns to the Uniform Screening Panel.

It is now up to individual states to adopt this recommendation for their panels, determine an appropriate implementation strategy, and set a timeline for implementation. The AHA supports the Secretary's decision requiring that all newborns be screened for critical CHDs with pulse oximetry before they are discharged from the birthing facility. So far several states – California, Indiana, New Hampshire, New Jersey, Tennessee, West Virginia, Connecticut, Virginia, and Maryland – have responded and are implementing or establishing regulation to conduct pulse oximetry screening for newborns. The AHA believes that it is critically important to evaluate screening initiatives as they are implemented. The AHA also advocates for a comprehensive screening model in newborn care with pulse oximetry screening as one important strategy within that model. Pulse oximetry screening is an effective, noninvasive, inexpensive tool to diagnose critical CHDs.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_430441.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_430441.pdf)

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1. Mahle WT, et al., Role of pulse oximetry in examining newborns for congenital heart disease: a scientific statement from the American Heart Association and the American Academy of Pediatrics. *Circulation*. 2009;120:447-458.

## Healthcare Reform

As a patient-centered organization, the AHA approaches its commitment to healthcare reform from the patient perspective and believes the following 6 principles are integral to providing effective, equitable, and excellent health care for Americans. These principles are access to care, preventive services, quality health care, the elimination of health disparities, biomedical research to improve the prevention and treatment of CVD, and establishment of an adequate and diverse workforce.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_306160.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_306160.pdf)

## Health Equity and CVD

CVDs take a disproportionate toll on many racial and ethnic groups in the United States.<sup>1</sup> Racial and ethnic minority populations also confront more barriers to CVD diagnosis and care, receive lower-quality treatment, and experience worse health outcomes than their white counterparts.<sup>2</sup> Such disparities are linked to a number of complex factors, such as income and education, genetic and physiological factors, access to care, and communication barriers.<sup>2,3</sup>

The AHA/American Stroke Association (ASA) advocates for

- Meaningful, affordable high-quality health coverage for all U.S. residents that is culturally and language appropriate
- The Health Equity and Accountability Act, comprehensive legislation designed to help eradicate health disparities
- Funding at the national and state levels for WISEWOMAN or similar programs that provide free screening and lifestyle intervention services to low-income, uninsured, or underinsured women
- Improved reporting of healthcare data, including new drug and medical device safety and efficacy data, by sex, race, and ethnicity

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301731.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301731.pdf)

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## The Uninsured With Heart Disease and Stroke

An estimated 7.3 million Americans with CVDs are uninsured (Analysis of 2006–2010 National Health Interview Survey data conducted by the George Washington University Center for Health Policy Research for the American Heart Association; August 2011), often with dire health consequences. They are far less likely than their insured counterparts to receive appropriate and timely medical care and, as a result, suffer worse medical outcomes, including higher mortality rates.

Of adults (aged 18 to 64 years) who report having heart disease, hypertension, or stroke, approximately 15% are uninsured.<sup>8</sup> There are identifiable characteristics of the typical uninsured CVD patient that reflect social inequities as well.<sup>8</sup>

- Their average age is 44.
- Only 61% of uninsured individuals with CVD report having a usual place of medical care, compared with 95% of their insured counterparts.
- Blacks and Hispanics are more likely to be uninsured than whites.
- The uninsured also report being unable to afford prescription drugs nearly 4 times more often than those who are insured (43% versus 11%).
- Nearly half of the uninsured with CVD cite cost as the reason they lacked coverage; 36% cite a lost job or new employer.
- Between 10% and 22% of adults with congenital heart disease are uninsured, and two thirds have reported difficulty obtaining health insurance or changing jobs to guarantee coverage.<sup>11</sup>



The AHA supports the many patient-centered protections in the ACA that will make insurance more accessible, affordable, and adequate for Americans with heart disease or stroke. The association is working to ensure that these reforms are implemented in a common-sense and beneficial way for patients and will also work to build on these reforms in the coming years to prevent patient protections from being undermined or repealed.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304486.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304486.pdf)

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2. Skorton DJ, Garson A Jr, Fox JM, Truesdell SC, Webb, GW, Williams RG. Task force 5: adults with congenital heart disease – access to care. *J Am Coll Cardiol*. 2007;37:1093-1198

### Medicaid and CVD

Medicaid, the nation's health insurance program for low-income Americans, covers many of the country's poorest and sickest patients and provides a critical financing mechanism for their healthcare services, including those for CVD patients. More than 16 million adults with Medicaid coverage (53%) have a history of CVD.<sup>1</sup> Under the ACA, Medicaid eligibility will expand to cover uninsured persons below 133% of the poverty level (approximately \$11,000 in 2011 dollars), beginning in 2014. By 2019, Medicaid is expected to cover an additional 16 million individuals.<sup>2</sup>

The Medicaid program is a shared responsibility between the federal government and the states. Although states operate the program, make significant choices about coverage, and determine who is eligible, the federal government establishes program parameters and matches state spending on health and long-term care services.

Currently, the Congressional Budget Office projects that federal Medicaid

spending will more than double in the next decade. This dramatic increase in federal support for healthcare services for lower-income Americans is driven by increases in healthcare spending, growing demand for long-term care as the baby-boomer generation ages, and eligibility changes made by the new healthcare reform law, among other factors.

In response to tight budgets, federal and state governments are considering a variety of approaches to reduce the growth of federal and state Medicaid spending and give states more flexibility in how the program operates. The AHA opposes policies that reduce access to or significantly increase the cost of necessary care for persons with CVD. These include policies that cause states to scale back eligibility, cut benefits, or significantly increase cost sharing for Medicaid beneficiaries. Such proposals are at odds with the association's first principle of healthcare reform, which states that "all residents of the United States should have meaningful, affordable healthcare coverage."<sup>3</sup>

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_426261.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_426261.pdf)

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2. Public Laws 111-148 and 111-152, Patient Protection and Affordable Care Act. Section 2001. Congressional Budget Office, Letter to Speaker Nancy Pelosi, March 20, 2010. Selected CBO Publications Related to Healthcare Legislation, 2009-2010. Available at: <http://cbo.gov/ftpdocs/120xx/doc12033/12-23SelectedHealthcarePublications.pdf>. Accessed December 31, 2012.
3. Gibbons RJ, Jones DW, Gardner TJ, Goldstein LB, Moller JH, Yancy CW. The American Heart Association's 2008 statement of principles for healthcare reform. *Circulation*. 2008;118:2209-2218.

### Medicaid Preventive Services

The AHA believes that disease prevention is an important way to improve the quality of health of Americans for the long term and to reduce overall costs of care. Several recent studies support the link between minimizing risk factors and reducing chronic disease. Approximately 44% of the decline in U.S. age-adjusted

coronary heart disease death rates from 1980 to 2000 can be linked to improvements in risk factors, including reductions in total blood cholesterol, systolic blood pressure, smoking prevalence, and physical inactivity. However, these reductions were partially offset by increases in prevalence of obesity and diabetes.<sup>1</sup>

One of the provisions of the ACA emphasizes preventive services for the Medicaid population by giving states an incentive to provide U.S. Preventive Services Task Force Level A and B recommended services to Medicaid enrollees. The Task Force is an independent body supported by U.S. Department of Health and Human Services staff. The U.S. Preventive Services Task Force assigns 1 of 5 letter grades to each of its recommendations. Level A and B recommendations are those supported by the greatest amount of quality scientific evidence with significant certainty that the net benefit to patients is moderate or substantial. Although the full list is wide-ranging, examples of services for CVD and stroke include blood pressure monitoring, cholesterol testing and drug therapy, behavioral counseling for a healthy diet, obesity screening, and tobacco cessation programs.

Effective January 1, 2013, if states provide these prevention services without cost sharing, they will be eligible for a 1% increase in the Federal Medical Assistance percentage for the services that they do offer.<sup>2</sup>

The AHA supports coverage of preventive benefits in private and public health insurance plans. The AHA will encourage states to cover CVD-related U.S. Preventive Services Task Force A and B benefits under Medicaid without cost sharing and achieve the 1% federal payment increase.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_322234.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_322234.pdf)

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# Stroke

## Stroke in the United States

Stroke is the No. 4 killer in the United States and the leading cause of long-term disability. As baby boomers age, the problem of stroke among older adults is expected to worsen. With increased rates of stroke, the associated costs of care are projected to increase 25% by 2030.<sup>1</sup> A number of factors can increase the risk of stroke. Although there have been improvements in identifying risk factors and treatments, the ASA, a division of the AHA, urges policymakers to support the following policy recommendations for improving the quality of care that stroke patients receive:

- Support the development and implementation of stroke systems of care, including the use of telemedicine
- Increase the NIH investment in stroke research, which currently constitutes only 1% of the NIH budget
- Improve access to needed stroke care, including rehabilitation

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_305054.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_305054.pdf)

## Top 10 Things to Know: About Heart Disease and Stroke Statistics

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## Top 10 Things to Know: Million Hearts Initiative for Stroke

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_436056.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_436056.pdf)

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## Stroke in Infants, Children, and Youth

Although stroke is often viewed as an illness that mainly afflicts the elderly, it can also affect the young. The risk is greatest in the first year of life, but young adults can also experience a stroke. The common risk factors and symptoms of stroke in the young differ from those in adults, and, as a result, delayed care or misdiagnosis remains common.<sup>1</sup> As a result, the AHA/ASA guidelines for managing stroke in children focus on the prompt recognition and diagnosis of stroke, as well as implementation of steps to reduce the likelihood of a subsequent stroke.

The AHA/ASA advocates for public policies that allow children and young adults with stroke to live fuller, longer lives, including

- More public resources devoted to researching the causes and treatment of pediatric stroke
- Support for the CDC Birth Defects Centers to advance our knowledge of the risk factors of pediatric stroke
- Support for activities to increase awareness among parents, families, caregivers, and healthcare providers about pediatric stroke
- Monitoring of the implementation of healthcare reform to ensure access to adequate, affordable insurance coverage, including coverage for age-appropriate rehabilitative and habilitative services

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_302255.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_302255.pdf)

## Top 10 Things to Know: Management of Stroke in Infants and Children

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1. deVeber G, Roach ES, Riela AR, Wiznitzer M. Stroke in children: recognition, treatment, and future directions. *Semin Pediatr Neurol*. 2000;7: 309-317.

## Primary Stroke Centers

The lack of adequate acute stroke care capabilities in many hospitals endangers the lives of the thousands of Americans who suffer strokes each year. One approach to improving the stroke care infrastructure is the establishment of “stroke centers,” ie,

hospitals that have the expertise and infrastructure to deliver high-quality stroke care.<sup>1</sup> There are 2 types of stroke centers: primary and comprehensive. Primary stroke centers (PSCs) have the ability to stabilize and provide emergency care for patients with acute stroke, whereas comprehensive stroke centers can provide more specialized care for patients with complex strokes. PSCs deliver high-quality care and support stroke systems of care. These qualities allow for the quick and effective triage of stroke patients so that they receive the most timely and appropriate care.

To receive accreditation as a PSC, a hospital must meet certain requirements. Although many states and other entities have developed their own designation process, the AHA/ASA and the Joint Commission have the largest and most well-known accreditation process. This combines the scientific knowledge of the AHA/ASA with the healthcare facility evaluation experience of The Joint Commission. The AHA supports the development and accreditation of PSCs to improve the quality of acute stroke care, support stroke systems of care, and improve access to lifesaving stroke care. Specifically, the AHA encourages states to

- Formally recognize PSC accreditation through legislation or regulation
- Develop comprehensive and coordinated stroke systems of care that recognize PSCs as being a cornerstone to effective systems development

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_438862.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_438862.pdf)

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## Telemedicine Within Stroke Systems of Care

In areas underserved for acute stroke care (ie, where resources are insufficient to provide around-the-clock coverage for a healthcare facility or where travel time and distance to an approved PSC could impede care), telestroke systems should be used to supplement resources.

In underserved areas, telemedicine technology provides specialists with the data necessary to assist clinicians at the bedside in stroke-related decision making for patients.

Barriers to effective telestroke implementation include licensure and liability laws, technology assessment and deployment, community outreach/education, ensuring confidentiality of information shared, and processes of requesting and delivering telemedicine consultations.

The AHA/ASA policy recommendations for implementation of telemedicine within stroke systems of care seek to improve the outcomes of stroke patients, reduce barriers to both patients and healthcare providers, and improve healthcare delivery.

<http://stroke.ahajournals.org/content/40/7/2635.full.pdf+html>

## Top 10 Things to Know: Recommendations for Implementation of Telemedicine Within Stroke Systems of Care

[my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm\\_319778.pdf](http://my.americanheart.org/idc/groups/ahamah-public/@wcm/@sop/documents/downloadable/ucm_319778.pdf)

## Clinical Registries

Clinical registries are databases of health information on specific clinical conditions, procedures, or populations. They capture clinically important events relevant to a particular population or condition and can be integrated with electronic health records to directly support the evaluation of care delivery and patient outcomes. Registries can broaden knowledge of clinical service patterns, processes, and patient outcomes and can capture valuable, real-time patient data that are not present in an administrative record, which typically only contains claims data or billing information. These can be used in a variety of ways: to monitor certain populations, evaluate trends in the use of certain procedures and the prevalence of certain conditions, or to measure and thereby improve quality of care or safety of protocols/guidelines and certain drugs, therapies, or devices. The AHA supports the use of registries to improve quality of care and help identify risk factors to reduce chronic diseases. Specifically, the AHA

- Urges policy makers to create federal, state, and local CVD and stroke registries to monitor incidence and support the development of relevant quality-improvement initiatives
  - Encourages policy makers to use patient-centered, evidence-based, broadly adopted registries like Get With The Guidelines to meet many of the quality-improvement and reporting requirements enacted in healthcare reform
  - Encourages state officials to establish stroke registries to support high-quality stroke systems of care and mandate reporting
- [http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_432451.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_432451.pdf)
- [http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_438049.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_438049.pdf)



# Cardiovascular Care

## Systems of Care for Acute Cardiovascular Conditions

Response time during a cardiovascular event is critical, and in certain cases, it can mean the difference between life and death. Because following certain care processes has proven to improve patient outcomes and can also be cost-effective, the AHA/ASA advocates for resources in states and regions to help facilitate the development of coordinated systems of care for acute cardiovascular conditions, such as stroke, heart attack, and sudden cardiac arrest (SCA).

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304794.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304794.pdf)

### Top 10 Things to Know: Cardiovascular Disease

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## Rural and Community Access to Emergency Devices: Sudden Cardiac Arrest

In the United States, each year  $\approx$ 382,800 EMS-treated SCAs occur outside of a hospital setting. On average, just 11% of victims survive.<sup>1</sup> Their survival chances can more than double with immediate cardiopulmonary resuscitation (CPR) or early defibrillation with an automated external defibrillator (AED). For each minute that passes without these, the victim's chances of survival drop dramatically. Training in these skills, particularly in rural communities, can make a significant difference for a victim.

A recent study sponsored in part by the NIH and the AHA shows that most SCAs that occur in public places are “shockable” arrhythmias (those that respond to a shock from an AED), making AEDs in public places highly valuable.<sup>2</sup>

The AHA advocates for increased funding to the Rural and Community Access to Emergency Devices Program, which awards grants to communities to purchase AEDs and funds training for lay rescuers and first responders in their use.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_301646.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301646.pdf)

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## Congenital Heart Defects in Children, Youth, and Adults

CVD is often viewed as a problem for adults; however CHDs are the most common birth defect in the United States and are the leading killer of infants with birth defects. Despite their prevalence, thanks to advances in detection, research, and technology, more children with CHD are surviving into adulthood. Most CHD patients will require follow-up care during their lives, and, in some cases, subsequent surgeries. The AHA advocates for policies that will help survivors of congenital heart defects as they grow into adults, including

- More public resources devoted to researching the causes and treatment of CHD throughout the lifespan, along with specialized programs of care needed for children and adults with CHD.
- Support for the CDC Birth Defects Centers to advance our knowledge of the preventable causes of CHD
- Support for activities across the lifespan, including research in transition of care; increasing awareness among parents, families, and healthcare providers about CHDs; and improving understanding of healthcare utilization, costs, and needs for the growing adult population<sup>1</sup>
- Improved access to preconception and prenatal care for women of reproductive age to reduce modifiable risk factors for CHDs
- Effective screening for congenital heart defects in newborns before they are discharged from a hospital/birthing center

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_304875.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_304875.pdf)

## Top 10 Things to Know: Neurodevelopmental Outcomes in Children With Congenital Heart Disease: Evaluation and Management

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## Reducing Barriers to Implementation of Bystander CPR

A victim's chances of surviving an SCA improve when the 4 main actions in the AHA Chain of Survival are followed:

1. Early recognition of the emergency and activation of EMS
2. Early bystander CPR
3. Early delivery of shock(s) from a defibrillator if indicated
4. Early advanced life support and postresuscitation care

Because it can take time for EMS personnel to reach a victim, the actions taken by bystanders in the first few minutes of an SCA are critical. Although the majority of cardiac arrests occur at home, the presence of trained and willing rescuers and the availability of an AED are critical regardless of whether the cardiac arrest occurs in a public place or at home. Despite evidence that bystander-initiated CPR can markedly improve outcomes for a victim of SCA, there is still a low rate of its use. Any hesitation, even by those who are trained, can make a difference between life and long-term disability or even death for a victim. The fear of failure is the most common concern cited by bystanders.<sup>1</sup>

As a result, the AHA recommends several ways to increase rates of bystander CPR performed:

- Broaden CPR/AED training in public places and create telephone dispatcher-assisted CPR training. This is particularly useful because of the large number of cardiac arrests that occur at home.
- Provide reassurance for bystanders. Increase awareness of Good Samaritan legislation.
- Encourage the use of hands-only (compression-only) CPR for the untrained rescuer. It is easier to perform and can be readily guided by telephone dispatchers.

<http://circ.ahajournals.org/content/117/5/704>

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## Drug Formularies

A drug formulary is a compilation of drugs or drug products approved by a healthcare facility, healthcare system, payer, or third party for its safety and effectiveness. The approving group must be familiar with FDA terminology, the generics approval process, and the current regulatory issues surrounding bioequivalence or biosimilars. The AHA addresses several issues, including therapeutic substitution, therapeutic interchange, and generic substitution to preserve medication access for CVD and stroke patients and their well-being.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_435977.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_435977.pdf)

## Coronary Arterial Calcification and Carotid Intima-Media Thickness Screenings Among Asymptomatic Adults

To reduce the high morbidity and heavy financial burden of coronary heart disease 4 states have recently proposed or passed legislation mandating that health insurers offer coverage of certain imaging tests to screen asymptomatic adults for risk of CHD. These include scans to determine the amount of coronary artery calcification and ultrasound screenings to assess the thickness of arterial walls by measuring carotid intima-media thickness, both of which are markers for CHD risk. The AHA thinks it is important to identify persons at risk for developing CHD, particularly those at intermediate risk; however, there is currently not enough evidence to support the clinical usefulness of the widespread screening of asymptomatic adults. Until stronger and more granular evidence is established for the efficacy of coronary artery calcification scans and carotid intima-media thickness ultrasound screenings for CHD in the asymptomatic adult population, the AHA does not support state efforts to mandate coverage for these CHD screening methods. Instead, the AHA recommends that individual patients discuss alternative guideline-recommended CHD screening options with their physicians and make decisions that are consistent with the best available information based on the current science.

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_437479.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_437479.pdf)

## Percutaneous Coronary Intervention Without Surgical Backup

Percutaneous coronary intervention (PCI), more commonly known as angioplasty, is a procedure that uses a small balloon inserted with a catheter to widen coronary arteries that have been narrowed by cholesterol build-up. Initially, PCI was performed at clinical sites with surgical backup because complication rates and rates of urgent surgery were high; however, as techniques, experience, and technology improved, the need for emergency surgery declined. Currently, rates for emergency cardiac surgery resulting from PCI procedures are 0.2%. PCI is lifesaving in patients with acute ST-segment elevation myocardial infarction and has been shown





to improve quality of life when performed electively in appropriate patients. Consequently, many clinical care centers are interested in knowing more about performing PCI without surgical backup. There is presently no nationwide consensus on the practice; allowing or preventing PCI without surgical backup varies from state to state.

The AHA believes certain criteria must be considered if states wish to pursue policy allowing PCI without surgical backup.

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## Quality of Care

### Women and CVD

Heart disease, stroke, and other CVDs are the No. 1 cause of death in American women, claiming almost 420,000 lives each year, or nearly 1 death every minute. CVD kills more women than the next 3 causes of death combined, including breast cancer and all other forms of cancer.<sup>1</sup> Despite these alarming numbers, women, particularly those who are young, who are minorities, or who are from low socioeconomic backgrounds, are often not aware of the different symptoms of heart disease and stroke in women (compared with men). Nearly two thirds of women who died suddenly from CVD had no previous symptoms.<sup>1</sup> Fortunately, CVD is largely preventable. The AHA seeks to raise awareness on the rates, impact, and symptoms of heart disease and stroke in women through successful campaigns such as Go Red for Women and Por Tu Corazon, which is geared to a Spanish-speaking audience. The AHA also supports expanding the CDC-administered WISEWOMAN program, which provides CVD screening and lifestyle counseling to low-income, uninsured, and underinsured women in particular communities. Because researchers have identified gender differences in response to cardiac medications, some quite serious, the AHA supports improved reporting of healthcare data, including new drug and medical device safety and efficacy data, by sex, race, and ethnicity

[http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_302256.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_302256.pdf)

### Top 10 Things to Know: Guidelines for the Primary Prevention of Stroke

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### Top 10 Things to Know: Prevention of Heart Failure

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### Top 10 Things to Know: Women and PAD

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### Preparticipation Screening of Young Athletes

Sudden cardiac death is the leading nontraumatic cause of death among young athletes.<sup>1</sup> Although the precise incidence of sudden cardiac death among high school athletes is unknown, estimates range from 1 in 23,000 to 1 in 300,000.<sup>2</sup> Sudden cardiac death can be caused by a variety of CVDs, but is most commonly associated with congenital or acquired malformations, which can be triggered by intense athletic activity.

The AHA recommends prescreening elements that would identify or at least alert professionals to risk factors in certain athletes. Competitive athletic prescreening should consist of a targeted personal history, family history, and physical examination. Those athletes with positive findings should be referred for further evaluation and testing.<sup>3</sup> At this time, the AHA does not recommend the use of tests such as a 12-lead ECG or echocardiogram in mandatory preparticipation screening programs. Instead, these tests should be used as follow-up if an initial screening raises suspicions about the presence of a CVD.<sup>1</sup>

Any expansion of screening programs should be made in response to new science.<sup>4</sup> Policies, programs, training, and continuing education that increase provider knowledge of prescreening guidelines should be implemented.

[http://www.heart.org/idc/groups/ahaec-public/@wcm/@adv/documents/downloadable/ucm\\_443945.pdf](http://www.heart.org/idc/groups/ahaec-public/@wcm/@adv/documents/downloadable/ucm_443945.pdf)

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