

**Heart Disease and Stroke. You're the Cure.**



## **Policy Position Statement on Clean Indoor Air Laws and the Impact on Cardiovascular Disease**

### **I. Position**

The American Heart Association 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)).<sup>1</sup> These guidelines and fundamental principles were developed with several national partners in the public health community to guide and maximize the impact of smoke free policy efforts and increase the number of workers and residents in the United States who are protected from second hand smoke in workplaces and public places. The principles incorporate experiences and lessons learned from tobacco control advocates across the country over the past several decades. Some of these principles include sufficient planning, emphasis on local initiatives, resource allocation, strong grassroots organization, readiness within the community, model policy language, and the need to incorporate expert advisors.

The AHA maintains that smoke free laws should be comprehensive and should apply to all workplaces and public environments, that there should be no preemption of local ordinances, and no exemptions for hardship, opting out, or ventilation. Other exemptions to avoid include those for casinos and gaming organizations, bars, and private clubs.

### **II. Background**

Cigarette smoking remains the leading cause of preventable morbidity and premature death in the United States.<sup>2</sup> Each year, approximately 443,000 persons in the U.S. die prematurely as a result of smoking or exposure to secondhand smoke.<sup>3</sup> Second hand smoke is a carcinogen to children and adults who do not smoke.<sup>4</sup> Second hand-smoke produces immediate adverse effects on heart function, blood platelets, inflammation, endothelial function and the vascular system.<sup>5</sup> The American Heart Association (AHA) 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 various policies prioritized by the AHA 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. The focus of this position statement is on comprehensive smoke free air laws and their impact on the incidence of cardiovascular disease. Smoke free laws protect the public as well as employees who work in those environments.

Estimates are that exposure to second hand smoke (also called passive smoking) causes 21,800-75,100 coronary heart disease (CHD) deaths and 38,100-128,900 myocardial infarctions (MIs) annually.<sup>6</sup> Long-

term exposure to second hand smoke, such as that occurring in a home or workplace, is associated with a 25%–30% increased risk for coronary heart disease in adult nonsmokers.<sup>7</sup>

There are other health impacts of second hand smoke. A recent study linked exposure to dementia in adults.<sup>8</sup> Those people exposed to high levels of passive smoking were 44% more likely to suffer cognitive impairment, affecting their memory and ability to perform calculations.<sup>8</sup> In infants and children, second hand smoke is a risk factor for heightened asthma attacks, acute respiratory illness, Sudden Infant Death Syndrome, and ear infections.<sup>3</sup> Pregnant women exposed to second hand smoke show a greater risk of giving birth to low-birth-weight babies.<sup>3</sup>

There is evidence that exposure to second hand smoke disproportionately affects minorities<sup>9</sup>, women, and those in lower socioeconomic groups since many of these individuals are employed in the hospitality industry. Blue collar workers are less likely than white collar indoor workers to be covered by smoke-free policies.<sup>3</sup>

There is increasing evidence that comprehensive smoke free laws implemented across localities, states, and even countries may lower cardiovascular disease incidence and significantly improve public health.<sup>10</sup> Physicians should counsel patients that exposure to second-hand smoke is a fully preventable cause of death. The health care costs associated with disease incidence caused by second hand smoke exposure are estimated at \$1.8-6.0 billion.<sup>3</sup> If recent trends in the reduction in the prevalence of passive smoking continue, the health and economic burden of passive smoking in the U.S. would be reduced by approximately 25%–30%.<sup>4</sup> This potential reduction has important ramifications for lowering Medicare, Medicaid, and private insurance costs.

There are important economic arguments for these laws as well. The hospitality and tobacco industries often promote the idea that business will suffer after these laws are passed. However, increasing evidence from municipalities, states, and countries where these laws have been passed show no significant impact on sales data and in many instances business actually increases.<sup>3</sup> Additional benefits for businesses are lower cleaning costs, lower worker absenteeism, and increased productivity.<sup>3</sup>

The AHA will continue to monitor the health and economic impact of smoke-free laws as they are implemented across the United States and the world.

## **II. Current Landscape**

According to the American Non-Smokers Rights Foundation, at the end of 2009, a total of 30 states, along with Puerto Rico and the District of Columbia, had laws in effect that require either 100% smoke free workplaces and/or restaurants and/or bars (see <http://www.no-smoke.org/goingsmokefree.php?id=519>) for updated statistics as new laws and regulations are passed). Nineteen states, along with Puerto Rico and Washington, DC have a state law in effect that requires workplaces, restaurants, and bars to be 100% smoke free. A total of 3052 municipalities in the United States have local laws in effect that restrict where smoking is allowed. Despite this tremendous progress, it is estimated that 25-40% of the U.S. population is still exposed to cigarette smoke and its inherent risks so there is still significant work to be done.<sup>11</sup>

In recent years, several countries, including Italy, Australia, New Zealand, Ireland, Malta, Norway, Sweden, Scotland, France, and India have instituted comprehensive bans on smoking at worksites and in public.

### **III. Evidence for the Impact on Cardiovascular Disease**

In 2008, the Centers for Disease Control and Prevention requested that the Institute of Medicine (IOM) convene an expert committee to assess the state of the science on the suggested causal relationship between secondhand smoke exposure and acute coronary events. The IOM report<sup>12</sup> was released on October 15, 2009 and 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 AMI 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 acute myocardial infarction (AMI) after implementation of smoke-free air laws.<sup>12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28</sup>

### **IV. Conclusion**

Available evidence suggests that legislating for comprehensive smoke-free environments leads to substantial reductions in second-hand smoke exposure, improved health outcomes, and reductions in smoking prevalence.

### **V. Summary Policy Recommendations**

The American Heart Association advocates for comprehensive smoke-free workplace laws across the United States that are in compliance with the Fundamentals of Smoke-free Workplace Laws guidelines. The AHA believes that smoke free laws should apply to all workplaces and public environments, that there should be no preemption of local ordinances, and no exemptions for hardship, opting out, or ventilation. Other exemptions to be avoided include casinos and gaming organizations, bars, tobacco shops, and private clubs.

The American Heart Association supports further research to determine the impact of comprehensive clean indoor air laws on the incidence of cardiovascular disease, 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 cardiovascular disease incidence and prevalence to track the impact of public health interventions.

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