Effective Interventions to Reduce Smoking-Induced Heart Disease Around the World

Time to Act

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Tobacco is a leading cause of preventable death worldwide. For 2002, the World Health Organization (WHO) estimated that 5 million deaths were attributable to smoking. This issue of Circulation contains a detailed analysis of the 1.62 million deaths that smoking contributes to global and regional cause-specific mortality from cardiovascular disease. Ezzati et al estimate that >1 in 10 cardiovascular deaths (11%) is caused by smoking. More deaths occurred in men than in women and in industrialized than in developing countries. Nevertheless, smoking is an important contributor to cardiac deaths (17% for men and 5% for women) in both industrialized and developing countries.

The implications of the results of the study by Ezzati et al are simple and straightforward. If smoking did not exist, then 1.62 million cardiovascular deaths would not have occurred. Even in regions where the number of deaths attributable to smoking was low, thousands of deaths could be prevented. In addition, the finding that regions with a longer history of smoking had the largest percentage of total cardiovascular mortality attributable to smoking is a warning sign for countries in which the tobacco industry is just beginning to spread the smoking epidemic.

Cardiovascular health can be improved quickly through sound public health measures that have an impact at a population level. Smoke-free workplaces and public places, comprehensive advertising bans, increased taxation on tobacco products, and strong graphic warning labels on cigarette packs quickly reduce tobacco consumption and, thus, cardiovascular disease. For example, in California, a strong antitobacco program that stressed adherence to laws banning or limiting smoking and exposed the tobacco industry was associated with 59,000 fewer heart disease deaths than would have been expected based on historical trends, ≈13% below the number of deaths expected after 8 years. More important, the benefits started to appear within 1 year of starting the tobacco control program.

Smoke-free workplaces and homes not only protect people from the substantial risks of heart disease caused by secondhand smoke but also are powerful prevention strategies. Increases in cigarette taxes provide similar protection. In addition to these established prevention strategies, new evidence has demonstrated that smoking by actors in movies is a major reason that adolescents begin smoking. The tobacco industry has long used smoking in movies to recruit new smokers, open new markets, and maintain the social acceptability of smoking around the world. Eliminating smoking from movies rated “G,” “PG,” or “PG-13” by giving movies containing scenes with smoking an automatic “R” (adult content) rating would substantially reduce adolescent initiation almost immediately.

The epidemiological transition, the shift from diseases resulting from nutritional deficiencies and infectious diseases to degenerative diseases (eg, cardiovascular disease, cancer), is underway in most developing countries, with some experiencing the “double burden of disease” (nutritional deficiencies and degenerative diseases coexisting in the same country). The tobacco industry’s aggressive expansion into the developing world as part of the globalization of commerce is probably the most important reason for this transition. Moreover, unlike the activity of infectious diseases, the tobacco industry acts as an “intelligent vector,” spreading the risk of cardiovascular disease by aggressively marketing to youths and opposing antismoking legislation, price increases, and other tobacco-control measures worldwide. If smoking prevalence continues to increase, then the toll exacted by tobacco is expected to reach 10 million each year by 2020, with 70% of these deaths occurring in developing countries.

We know how to halt this epidemic: Implement the same strategies that have been applied successfully in many countries and provide support (including financial support) for tobacco-control advocates who are fighting the invasion of the multinational tobacco companies. Although there are obvious differences in cultural and political systems, some of the common strategies that the tobacco companies use—buying off the political leaders and recruiting physicians and scientists who claim that the evidence linking smoking and passive smoking to heart disease and other diseases is “controversial”—are universal as are the strategies for countering these efforts.

Despite the limitations that Ezzati et al recognize in their article, their estimates are reasonable and in agreement with...
the best information available on the worldwide burden of cardiovascular disease caused by smoking. The fact that they had to estimate the disease burden points to the need for better surveillance of smoking and smoking-induced disease in developing countries.

All available information points to the need for medical and other healthcare professionals in both the industrialized and developing worlds to begin to address the problem of cardiovascular disease caused by smoking. Cardiologists and cardiothoracic surgeons treat patients with heart disease every day, but they often fail to deal with its cause—in this case, smoking. They should screen every patient for tobacco use and exposure to secondhand smoke, which has effects nearly as great as smoking on many aspects of the cardiovascular system. Smokers should be offered smoking cessation therapy and nonsmokers counseled to avoid secondhand smoke exposure. Helping a patient to stop smoking has as great or greater benefit than many other forms of treatment. Furthermore, like lipid-lowering drugs and antihypertensive medication, smoking cessation should be considered a therapeutic, not a preventive, intervention.

In addition to counseling and prescribing pharmaceutical aids to smoking cessation, referring patients to toll-free telephone services substantially increases smokers’ success rate in quitting and requires little time in the clinic. These free services are available in many countries and provide information and counseling for smokers interested in quitting. Many states in the United States offer “quit lines” as part of their tobacco control programs; they can be reached by calling 1-800-QUITNOW.

In addition to treating patients who smoke, cardiologists, cardiothoracic surgeons, nurses, and other healthcare professionals who care for people with heart disease should also become tobacco-control advocates and support smoke-free hospitals and clinics, workplaces, and public places, and other tobacco control policies. In Helena, Montana, there was a substantial drop in hospital admissions when the city implemented a public smoking ban. In February 2004, representatives from health professionals’ organizations around the world met in Geneva, Switzerland, to develop and endorse the Code of Practice on Tobacco Control for Health Professional Organization. This group agreed, among other things, that healthcare professionals need to become role models in promoting smoke-free hospitals, support smoking-free hospitals and clinics, workplaces, and public places, and other tobacco control policies.

In addition, health professionals or organizations were encouraged to become politically active in the fight against tobacco. On February 27, 2005, the WHO Framework Convention on Tobacco Control (FCTC) entered into force. The WHO FCTC is WHO’s first international treaty. The objective of the treaty is “to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke.” In brief, the WHO FCTC encourages countries to implement comprehensive bans on tobacco advertising, large and pictorial health warnings on tobacco packaging, ban misleading terms such as “light cigarettes,” protect citizens from exposure to secondhand smoke, combat smuggling, increase tobacco taxes, and promote smoking cessation. In addition, Article 2.1 states that countries are encouraged to implement measures that are stronger than the minimum standards required by the treaty. As of April 28, 2005, 168 countries had signed (including the United States) and 74 had ratified (not including the United States) the WHO FCTC. Ratification remains open, so the United States and the other countries can still become a party to the treaty or even implement its provisions without formal ratification. Despite incomplete data, it is now clear that there is a growing epidemic of smoking-induced cardiovascular disease that we can stem through sound tobacco control policy. Cardiologists, cardiothoracic surgeons, nurses, and their professional societies worldwide should not continue to remain passive and wait for the death toll to rise. For industrialized nations like the United States, tobacco still represents the leading cause of death—4 times that of obesity—so past efforts to reduce the toll of tobacco-induced disease should not be eased but rather increased.

Given these facts, it is all the more remarkable that tobacco control does not have a higher priority for professional and scientific organizations concerned with controlling heart disease. Despite the fact that cardiovascular disease and stroke account for more smoking-induced deaths in the United States than does cancer (183 657 versus 157 761 for active and passive smoking combined), tobacco control is virtually nonexistent in the National Heart and Blood Institute’s research agenda. The American Heart Association, although playing an increasingly active role in public policy efforts to control smoking (including endorsing the “R” rating for smoking in the movies), rarely deals with tobacco control at its annual Scientific Sessions and has never held a plenary session on the subject. The overall low visibility of tobacco control in cardiovascular research is even reflected in the journal Circulation, which does not include “tobacco” or “smoking” among the “subject codes” that readers may use to search the literature for specific articles. All of these things need to change.

The good news is that the risks of heart disease fall quickly with smoking cessation or avoidance of secondhand smoke exposure, so even modest interventions quickly yield substantial health benefits. The excess risk of a myocardial infarction is reduced by 50% within 1 year of quitting smoking. While the work for political and organizational change worldwide continues, tobacco control must become the standard of good healthcare practice for those treating patients with heart disease. Given the evidence, continued inaction represents a form of malpractice.

Disclosure
Dr Bialous is a consultant working with various universities and organizations.

References


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