
Conclusions: In the United States, tobacco control is estimated to have been associated with avoidance of 8 million premature deaths and an estimated extension of mean life span of 19 to 20 years.

Summary: January 2014 marked the 50th anniversary of the first Surgeon General’s report on smoking and health (Surgeon General’s Advisory Committee on Smoking and Health [1964] http://prolific.nlm.nih.gov/NN/3/B/M/Q/, accessed December 13, 2012.) What followed were efforts by governments, voluntary organizations, and the private sector to provide education on smoking dangers. Also followed were increases in cigarette taxes, smoke-free air laws, anti-smoking media campaigns, marketing and sales restrictions on tobacco companies, lawsuits, and a greater focus on smoking-cessation treatment programs. A recent report also estimates many individuals in the United States gained additional years of life from 1964 through 2012, with this a direct result of tobacco control-influenced decisions to quit smoking or never start smoking (Warner KE et al, Am J Public Health 2014;104:83-9). It is also estimated that >800,000 lung cancer deaths have been avoided between 1975 and 2000 as a result of tobacco control (Moolgavkar SH et al, J Natl Cancer Inst 2012;104:541-8). The objective of this current report was to model reductions in smoking-related mortality associated with implementation of tobacco controls since 1964. Smoking histories for individual birth cohorts that would have occurred under likely scenarios had tobacco control never emerged were estimated. National mortality rates and mortality rate ratio estimates from analytic studies of the effect of smoking on mortality yielded death rates by smoking status. Actual smoking-related mortality from 1964 through 2012 was compared with estimated mortality under no tobacco control, including a likely scenario (primary counterfactual) and upper and lower bounds that would capture plausible alternatives. Smoking histories were obtained from National Health Interview Surveys for the United States adult population from 1964 through 2012. The number of premature deaths avoided and years of life saved were primary outcomes. Change in life expectancy at age 40 years associated with change in cigarette smoking exposure constituted another measure of overall health outcome. From 1964 to 2012, an estimated 17.7 million deaths were related to smoking. An estimated 8.0 million (credible range [CR], 7.4-8.3, million for the lower and upper tobacco control counterfactuals, respectively) fewer premature smoking-related deaths than what would have occurred under the alternative tobacco control scenario (5.3 [CR, 4.8-8.5] million men and 2.7 [CR, 2.5-2.7] million women). This resulted in an estimated 157 million life-years (CR, 139-165 million life-years) saved, a mean of 19.6 years for each beneficiary (111 [CR, 97-117] million life-years for men, 46 [CR, 42-48] million life-years for women). During this time, estimated life expectancy at age 40 increased 7.8 years for men and 5.4 years for women, of which tobacco control is associated with 2.3 years (CR, 1.8-2.5 years) for men (30% [CR, 23%-32%] of the increase) and 1.6 years (CR, 1.4-1.7 years) for women (29% [CR, 25%-32%] of the increase).

Comment: Since the Surgeon General Report of 1964 and the implementation of tobacco controls, the fact that an estimated 8 million U.S. individuals have had their lives extended by these tobacco controls argues that tobacco control has in sense been a great public health success story. Unfortunately, however, nearly 50 years later, still a fifth of U.S. adults continue to smoke, and smoking continues to claim hundreds of thousands of lives annually. In fact, an additional article in the same issue of the Journal of the American Medical Association, in which this article appeared, indicates that since 1980, although there have been large reductions in the estimated percentage prevalence of daily smoking globally for men and women, population growth means the actual number of smokers has in fact increased significantly. Tobacco therefore still remains a threat, and perhaps a potentially increasing threat, to the health of the world’s population (Ng M et al, JAMA 2014;311:183-92).

A Clinical Rule (Sex, Contralateral Occlusion, Age, and Restenosis) to Select Patients for Stenting Versus Carotid Endarterectomy: Systematic Review of Observational Studies With Validation in Randomized Trials

Conclusions: A clinical prediction rule based on sex, contralateral carotid occlusion, age, and restenosis may be potentially useful in identifying patients in whom carotid artery stenting (CAS) is not inferior with respect to carotid endarterectomy (CEA) for risk of perioperative stroke or death.

Summary: Randomized trials strongly suggest CAS is associated with higher procedural risk of stroke than CEA in patients with symptomatic stenosis (Bonati LH et al, Cochrane Database Syst Rev 2012;9:CD000515; and Brott TG et al, N Engl J Med 2010;363:11-23). However, additional data suggest that risk of stroke may be similar for CAS and CEA after the periprocedural period (Mas JL et al, Lancet Neurol 2008;7:885-92; and Eckstein HH et al, Lancet Neurol 2008;7:893-902). The authors of the current report have also previously demonstrated that meta-analysis of risk associations from a compilation of large observational studies can provide potentially reliable and consistent data on clinical characteristics associated with procedural risk of CEA and CAS (Bonati LH et al, Lancet 2010;376:1062-73). In this study, the authors sought to derive a simple clinical risk rule to enable clinicians to potentially choose between CAS and CEA in the treatment of patients with symptomatic carotid artery stenosis. This was a systematic review of observational studies of procedural risk of CEA or CAS, which extracted data on nine predefined risk factors: age, contralateral carotid occlusion, coronary artery disease, diabetes mellitus, sex, hypertension, peripheral artery disease, and type and side of stenosis. Pooled relative risks of procedural stroke or death were then calculated. Factors with differential effects on the risk of CAS vs CEA were identified by interaction tests and used to derive a rule for patient selection. The rule was then tested using individual patient data from randomized trials of CAS vs CEA from The Carotid Stenting Trials’ Collaboration. The authors identified 170 studies for inclusion in their analysis. Two independent reviewers used titles and abstracts to assess the eligibility of studies. Final selection for inclusion in the analysis was made after reviewing full-text articles. Ultimately, 170 studies (227 articles, >70,000 patients) provided data for one or more of the nine potential risk factors. There were 115 studies (149 articles) relating to CEA and 68 studies (83 articles) relating to CAS, with some studies related to both CEA and CAS. Analysis indicated patients with contralateral occlusion or restenosis and women aged <75 years were at relatively low risk for CAS (SCAR-negative), with all others being high risk (SCAR-positive). In the Carotid Stenting Trials’ Collaboration validation portion of the study, there were 3049 patients, and 694 (23%) were SCAR-negative. The pooled relative risk of procedural stroke and death with CAS vs CEA was 0.93 (0.49-1.77; P = .83) in SCAR-negative patients and 2.41 (1.66-3.45; P < .0001) in SCAR-positive patients (P = .05 for interaction).

Comment: The data have several limitations. First, most patients with recurrent carotid stenosis likely do not need treatment. In addition, the authors were not able to stratify for type of protection devices used with CAS, and data were not available concerning anatomic variables, such as type of aortic arch, anagulation of the carotid artery, severe calcification of the carotid bifurcation, or plaque composition, that may have significant influence on periprocedural risk of CAS. From a simplistic point of view, one can make the observation that there was no score that indicated CAS was better than CEA and that the large majority of patients were best treated with CEA over CAS based on the clinical score derived. It therefore appears, as we already knew, that in the large majority of clinical circumstances, CEA still seems preferable to CAS.

A Pragmatic View of the New Cholesterol Treatment Guidelines

Conclusions: The new cholesterol treatment guidelines represent a substantial departure from previous recommendations.

Summary: This short article summarized updated guidelines for the treatment of high blood cholesterol levels that were released in November