amounts to 51 billion cigarettes per year.

By signing on to the WHO's mandate, China agreed that by 2008, clear health warnings would occupy more than 30% of the surface of every cigarette pack sold. It is already technically illegal in China to promote tobacco on billboards or in magazines, and all forms of advertising will be banned by 2010. There are also plans for a "smoke-free Olympics" in 2008, and some tobacco-control advocates hope that the cities hosting the Olympics will become smoke-free forever. Hong Kong has already outlawed smoking in public places, as of January 2007.

Some skeptics fear that it may be too late to quell the tobacco epidemic in many developing countries. Even the most optimistic observers recognize that it will take at least a generation of hard work to see real change. In the meantime, millions more people will lose their lives to tobacco-related diseases, and low-income countries will need to come to grips with the devastation that tobacco can wreak.

**An interview with Dr. Steven Schroeder, director of the Smoking Cessation Leadership Center at the University of California, San Francisco, can be heard at www.nejm.org.**

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# Making Smoking History Worldwide

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It seemed impossible at first. But in 2004, Ireland made history as the first country to implement a comprehensive smoking ban in indoor workplaces, including restaurants and bars. Defying dire predictions, Ireland's policy has proved to be both popular and enforceable, with ready compliance,[1] no decline in business, and improved health outcomes for hospitality workers. Overwhelming public support for the ban has come from smokers and nonsmokers alike, dispelling the belief that restaurants and bars should represent bastions of smoking and socialization. For a country traditionally known for its smoke-filled pubs, the new societal standard represents a breathtaking (or breath-enhancing) revolution.

Historians may someday view Ireland's bold move as a tipping point for global public health. Previous actions worldwide had stemmed from mounting scientific evidence, summarized most recently in the 2006 U.S. Surgeon General's report,[2] confirming that exposure to secondhand smoke leads to premature death and disease, including lung cancer and ischemic heart disease. For example, in 1998, California became the first U.S. state to adopt smoke-free policies for all restaurants and bars. South Africa passed national laws in 2000 making public places smoke-free, although exemptions for bars and restaurants were allowed. Most recently, the Bloomberg Global Initiative to Reduce Tobacco Use has been funded by New York City Mayor Michael Bloomberg with the aim of reducing tobacco use in low- and middle-income countries.

When Ireland enacted its smoke-free policy, startled observers wondered whether other countries would follow suit. The answer came within months, when New Zealand successfully implemented a comprehensive ban. Global momentum has since accelerated, with a host of additional countries enacting policies within a few years (see map). Most smoke-free countries are in Europe (although a number of these countries allow for the possibility of a designated, enclosed, ventilated smoking room). But other continents have seen activity as well: Australia and Canada are poised to join the group, and a growing number of countries are considering legislation. Though the United States lacks a federal policy, 17 states and dozens of municipalities are recognized as having smoke-free public places.

Furthermore, the 2003 World Health Organization Framework



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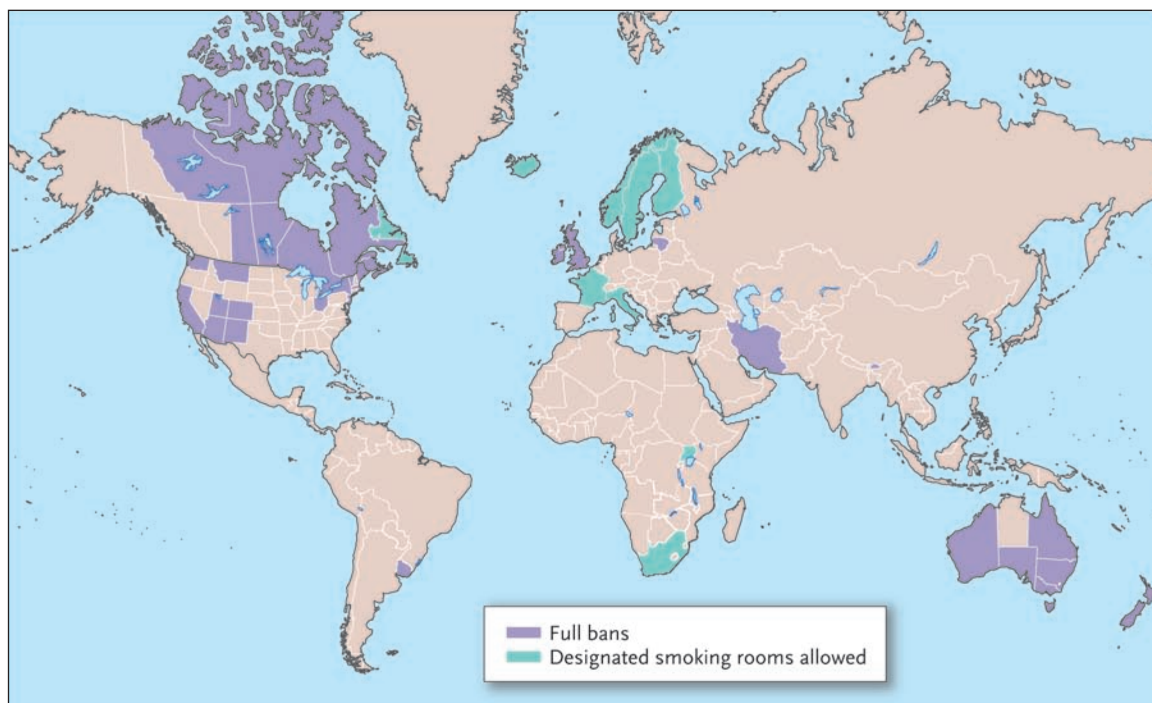


**Countries, States, and Provinces That Have Banned Smoking in Indoor Workplaces and Other Indoor Public Places.**

Legislation in some countries and regions (shown in green) allows for the possibility of a designated, enclosed, ventilated smoking room. Full bans are also in force in Rhode Island, Hawaii, Puerto Rico, Washington, DC, Bermuda, the British Virgin Islands, Bhutan, and the Australian Capital Territory; legislation allowing for designated smoking rooms is in force in Malta. Full bans will go into effect in Quebec in 2008 and in Montana, Utah, and Hong Kong in 2009; a law allowing for the possibility of designated smoking rooms will go into effect in Finland in 2009.

Convention on Tobacco Control (FCTC) has galvanized commitment. This first international public health treaty calls for countries to adopt clean-air policies, as well as initiatives such as price and tax increases, advertising bans, and warning labels for tobacco packages. (However, since the FCTC's language regarding smoke-free places leaves room for partial restrictions that may not protect public health, Ireland's comprehensive approach should serve as a model.) To date, 145 countries have ratified this treaty, but the United States is not among them.

Policies requiring clean indoor air have already improved public health. Studies in the United States, Scotland, Norway, and New Zealand, like those in Ireland, demonstrate benefits such as improvements in the respiratory health of hospitality workers. Overall, indoor smoking bans have been associated with a 3.8% reduction in the prevalence of smoking.[3] Popular support for smoke-free bars and restaurants increases after such legislation passes, because clean-air environments become viewed as those most conducive to leisure-time enjoyment.

In short, the world has begun to reclaim clean air as the social norm. For too long, the tobacco industry has spent billions to normalize, market, and glamorize a behavior that is now recognized as a tragic drug addiction. Industry marketing has fueled global consumption exceeding 5 trillion cigarettes annually, leading to 100 million deaths in the 20th century and a billion deaths projected for the century ahead.[4] Furthermore, evidence points to systematic increases in nicotine yields from cigarettes marketed in the United States in recent years. Fundamental to industry success is the portrayal of smoking as a desirable way of staying "alive with pleasure." Now, however, entire countries have begun to deglamorize and denormalize this addiction.

Fundamental shifts in social norms never come easily, however. These gains have materialized only after decades of committed leadership in public health practice bridging the worlds of science, government, politics, advocacy, and other arenas. Examination of



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the inner workings of successful initiatives reveals some critical lessons. In Ireland, the ban succeeded with support from government and opposition parties, health care organizations, trade unions, public health advocates, and others. In New Zealand, the forces of science, public health advocacy, and public education also converged to advance legislation. In Bhutan, Buddhism was the cultural backdrop for a smoke-free policy that includes the world's only national ban on the sale of tobacco. In Uruguay, a national smoking ban was strongly supported by the president, an oncologist. In many countries, private businesses, including hotel chains, have instituted smoke-free environments for customers and employees alike.

Changing social norms requires perseverance. Some countries have passed partial smoking bans as part of a strategy for transitioning toward comprehensive bans. France, after partially restricting smoking in bars and restaurants in 1991 but not enforcing the law, is currently phasing in a ban to be completed in 2008, backed up by a social marketing campaign, an enormous cadre of agents for enforcement, and fines for noncompliance. Change also entails confronting unfounded economic arguments: although critics regularly assail smoking bans for hurting business, more than 20 high-quality studies have shown no negative economic effect of smoke-free policies on restaurants and bars.[5]

Such fundamental social changes threaten the tobacco industry, which has a record of nimbly responding to market pressures. Over time, manufacturers have carefully cultivated market share by targeting children, members of minority groups, women, and increasingly, new customers in the developing world. To curry consumer acceptance, they not only have added chemicals to mask smoke's odor but also have instituted myriad design changes involving filters, ventilation systems, "light" and "low-tar" cigarettes, and "potential reduced-exposure products." In addition, they are now actively marketing smokeless tobacco products, no doubt partly in response to the increasing number of smoke-free environments. And all products are marketed in the complete absence of product regulation.

Given these developments, the world's nearly 1.3 billion smokers deserve heightened support. Studies indicate that most smokers want to quit but are unable to do so. Smoke-free policies remove the social stimuli that promote relapse, motivating smokers to decrease consumption and quit. But battling this addiction also requires better systems of care, including behavioral modification, counseling, pharmacologic interventions, telephone "quit lines," and other services. Providing access to such resources, a challenge in high-income countries, is even more daunting in the developing world. Furthermore, since the addiction disproportionately burdens those of lower socioeconomic status, tobacco control must rank as a prime focus of global efforts to eliminate health disparities.

The first few years of the 21st century have made possible what was once considered impossible. In the face of an escalating pandemic, a global haze may be starting to lift. We are witnessing a public health evolution in which the once-extraordinary is rapidly becoming the social norm. Making smoking history moves us closer to reaffirming the right to the highest standard of human health for all.

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