

The Health Consequences of Smoking—50 Years of Progress

A Report of the Surgeon General

2014

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Message from Kathleen Sebelius

Secretary of Health and Human Services

Fifty years after the release of the first Surgeon General's report warning of the health hazards of smoking, we have learned how to end the tobacco epidemic. Over the past five decades, scientists, researchers and policy makers have determined what works, and what steps must be taken if we truly want to bring to a close one of our nation's most tragic battles—one that has killed ten times the number of Americans who died in all of our nation's wars combined.

In the United States, successes in tobacco control have more than halved smoking rates since the 1964 landmark Surgeon General's report came out. Americans' collective view of smoking has been transformed from an accepted national pastime to a discouraged threat to individual and public health. Strong policies have largely driven cigarette smoking out of public view and public air space. Thanks to smokefree laws, no longer is smoking allowed on airplanes or in a growing number of restaurants, bars, college campuses and government buildings.

Evidence in this new report shows tobacco's continued, immense burden to our nation—and how essential ending the tobacco epidemic is to our work to increase the life expectancy and quality of life of all Americans. This year alone, nearly one-half million adults will still die prematurely because of smoking. Annually, the total economic costs due to tobacco are now over \$289 billion. And if we continue on our current trajectory, 5.6 million children alive today who are younger than 18 years of age will die prematurely as a result of smoking.

I believe that we can make the next generation tobacco-free. And I am extremely proud of the Obama Administration's tobacco-control record. For example, the 2009 *Children's Health Insurance Program Reauthorization Act* included an unprecedented \$0.62 tax increase that raised the federal excise tax to \$1.01 per pack of cigarettes; we know that increasing the cost of cigarettes is one of the most powerful interventions we can make to prevent smoking and reduce prevalence. Building on this knowledge, the President's Fiscal Year 2014 Budget includes a \$0.94 per pack Federal tobacco tax increase. For the first time in history, the 2009 *Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act)* gave the U.S. Food and Drug Administration comprehensive authority to regulate tobacco products, which will play a critical role in reducing the harm caused by these products. The *Tobacco Control Act* also provided for user fees to be paid by tobacco manufacturers that can support sustained public education media campaigns targeting youth prevention and cessation. The 2010 *Affordable Care Act (ACA)* expands access to smoking cessation services and now requires most insurance companies to cover cessation treatments. The *Affordable Care Act's* Public Health and Prevention Fund is supporting innovative and effective community-based programs as well as public education campaigns promoting prevention and helping people to quit.

All of these tobacco control interventions are known to reduce tobacco use and, as a result, tobacco's extraordinary toll of death and disease. But in order to free the next generation from these burdens, we must redouble our tobacco control efforts and enlist nongovernmental partners—and society as a whole—to share in this responsibility. Ending the devastation of tobacco-related illness and death is not in the jurisdiction of any one entity. We must all share in this most worthwhile effort to end the tobacco epidemic.

Message from Howard Koh

Assistant Secretary for Health

The nation stands poised at the crossroads of tobacco control. On one hand, we can celebrate tremendous progress 50 years after the landmark 1964 Surgeon General's report: *Smoking and Health*. Adult smoking rates have fallen from about 43% (1965) to about 18% today. Mortality rates from lung cancer, the leading cause of cancer death in this country, are declining. Most smokers visiting health care settings are now routinely asked and advised about tobacco use. On the other hand, cigarette smoking remains the chief preventable killer in America, with more than 40 million Americans caught in a web of tobacco dependence. Each day, more than 3,200 youth (younger than 18 years of age) smoke their first cigarette and another 2,100 youth and young adults who are occasional smokers progress to become daily smokers. Furthermore, the range of emerging tobacco products complicates the current public health landscape.

In this context, the 50th Anniversary of the Surgeon General's report prompts us to pause and ask why this addiction persists when proven interventions can eliminate it. Of great concern, too many in our nation assume that past success in tobacco control guarantees future progress; nothing can be further from the truth. To rejuvenate and reinvigorate national efforts, in 2010, the U.S. Department of Health and Human Services unveiled its first ever strategic plan for tobacco control. *Ending the Tobacco Epidemic: A Tobacco Control Strategic Action Plan* provides a critical framework to guide efforts to rapidly drop prevalence rates of smoking among youth and adults. A major foundation and pillar of the plan is to encourage and promote leadership throughout all sectors of society. Now, this current 2014 Surgeon General's report can accelerate that leadership to fully implement the life-saving prevention that can make the next generation free of tobacco-related death and disease.

We have many tools that we know work. A comprehensive public policy approach emphasizing mass media campaigns to encourage prevention and quit attempts, smokefree policies, restrictions on youth access to tobacco products, and price increases can collectively drive further meaningful reductions in tobacco use. Furthermore, we can accelerate progress through full commitment to clinical and public health advances; including the widespread use of telephone quit lines and science-based counseling and medications for tobacco users. Promoting progress today also requires recognizing that tobacco use has evolved from being an equal-opportunity killer to one threatening the most vulnerable members of our society. We must confront, and reverse, the tragically higher tobacco use rates that threaten persons of low socioeconomic status, sexual minorities, high school dropouts, some racial/ethnic minority groups, and those living with mental illness and substance use disorders.

Of all the accomplishments of the 20th century, historians rank the 1964 Surgeon General's report as one of the seminal public health achievements of our time. Armed with both science and resolve, we can continue to honor the legacy of the report by completing the work it began in the last century. The current 2014 Surgeon General's report represents a national vision for getting the job done. With strategy, commitment, and action, our nation can leave the crossroads and move forward to end the tobacco epidemic once and for all.

Foreword

Fifty years have passed since publication of the landmark report of the Surgeon General's Advisory Committee on smoking and health. This report highlights both the dramatic progress our nation has made reducing tobacco use and the continuing burden of disease and death caused by smoking.

As a physician, when I think about smoking, I recall the patients I have cared for. The man who had a leg amputated. The woman who had to gasp for every single breath that she took. The man with heart disease who hoped to see his son graduate, but didn't live long enough to do so. That's the reality of smoking that health care providers see every day.

The prevalence of current cigarette smoking among adults has declined from 42% in 1965 to 18% in 2012. However, more than 42 million Americans still smoke. Tobacco has killed more than 20 million people prematurely since the first Surgeon General's report in 1964. The findings in this report show that the decline in the prevalence of smoking has slowed in recent years and that burden of smoking-attributable mortality is expected to remain at high and unacceptable levels for decades to come unless urgent action is taken.

Recent surveys monitoring trends in tobacco use indicate that more people are using multiple tobacco products, particularly youth and young adults. The percentage of U.S. middle and high school students who use electronic, or e-cigarettes, more than doubled between 2011 and 2012. We need to monitor patterns of use of an increasingly wide array of tobacco products across all of the diverse segments of our society, particularly because the tobacco industry continues to introduce and market new products that establish and maintain nicotine addiction.

Tobacco control efforts need to not only address the general population, but also to focus on populations with a higher prevalence of tobacco use and lower rates of quitting. These populations include people from some racial/ethnic minority groups, people with mental illness, lower educational levels and socioeconomic status, and certain regions of the country. We now have proven interventions and policies to reduce tobacco initiation and use among youth and adults.

With intense use of proven interventions, we can save lives and reduce health care costs. In 2012, the Centers for Disease Control and Prevention (CDC) launched the first-ever paid national tobacco education campaign — *Tips From Former Smokers (Tips)* — to raise awareness of the harms to health caused by smoking, encourage smokers to quit, and encourage nonsmokers to protect themselves and their families from exposure to secondhand smoke. It pulled back the curtain in a way that numbers alone cannot, and showed the tobacco-caused tragedies that we as health care professionals see and are saddened by every day. As a result of this campaign, an estimated 1.6 million smokers made an attempt to quit and, based on a conservative estimate, at least 100,000 smokers quit for good. Additionally, millions of nonsmokers talked with friends and family about the dangers of smoking and referred smokers to quit services. In 2013, CDC launched a new round of advertisements that helped even more people quit smoking by highlighting the toll that smoking-related illnesses take on smokers and their loved ones.

CDC has also established reducing tobacco use as one of its "Winnable Battles." These are public health priorities with large-scale impact on health that have proven effective strategies to address them. CDC believes that with additional effort and support for evidence-based, cost-effective policy and program strategies to reduce tobacco use, we can reduce smoking substantially, prevent millions of people from being killed by tobacco, and protect future generations from smoking.

While we have made tremendous progress over the past 50 years, sustained and comprehensive efforts are needed to prevent more people from having to suffer the pain, disability, disfigurement, and death that smoking causes. Most Americans who have ever smoked have already quit, and most smokers who still smoke want to quit. If we continue to implement tobacco prevention and cessation strategies that have proven effective in reducing tobacco use, people throughout our country will live longer, healthier, more productive lives.

Thomas R. Frieden, M.D., M.P.H.
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Preface

*from the Acting Surgeon General,
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On January 11, 1964, Luther L. Terry, M.D., the 9th Surgeon General of the United States, released the first report on the health consequences of smoking: *Smoking and Health: Report of the Advisory Committee of the Surgeon General of the Public Health Service*. That report marked a major step to reduce the adverse impact of tobacco use on health worldwide.

Over the past 50 years, 31 Surgeon General's reports have utilized the best available evidence to expand our understanding of the health consequences of smoking and involuntary exposure to tobacco smoke. The conclusions from these reports have evolved from a few causal associations in 1964 to a robust body of evidence documenting the health consequences from both active smoking and exposure to secondhand smoke across a range of diseases and organ systems.

The 2004 report concluded that smoking affects nearly every organ of the body, and the evidence in this report provides even more support for that finding. A half century after the release of the first report, we continue to add to the long list of diseases caused by tobacco use and exposure to tobacco smoke. This report finds that active smoking is now causally associated with age-related macular degeneration, diabetes, colorectal cancer, liver cancer, adverse health outcomes in cancer patients and survivors, tuberculosis, erectile dysfunction, orofacial clefts in infants, ectopic pregnancy, rheumatoid arthritis, inflammation, and impaired immune function. In addition, exposure to secondhand smoke has now been causally associated with an increased risk for stroke.

Smoking remains the leading preventable cause of premature disease and death in the United States. The science contained in this and prior Surgeon General's reports provide all the information we need to save future generations from the burden of premature disease caused by tobacco use. However, evidence-based interventions that encourage quitting and prevent youth smoking continue to be underutilized. This report strengthens our resolve to work together to accelerate and sustain what works—such as hard-hitting media campaigns, smokefree air policies, optimal tobacco excise taxes, barrier-free cessation treatment, and comprehensive statewide tobacco control programs funded at CDC-recommended levels. At the same time, we will explore “end game” strategies that support the goal of eliminating tobacco smoking, including greater restrictions on sales. It is my sincere hope that 50 years from now we won't need another Surgeon General's report on smoking and health, because tobacco-related disease and death will be a thing of the past. Working together, we can make that vision a reality.

Boris D. Lushniak, M.D., M.P.H.
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