

Chapter 7

A Vision for Ending the Tobacco Epidemic

History of Tobacco Control Among Young People in the United States	<i>849</i>
Tobacco Control Among Youth and Young Adults: The Recent Disappointing Trends	<i>850</i>
Tobacco Control Among Youth and Young Adults: How to Make Progress	<i>853</i>
Final Call to Action	<i>856</i>
References	<i>858</i>

History of Tobacco Control Among Young People in the United States

For generations, public health policies and programs in the United States have attempted to prevent young people from using tobacco products. Laws prohibiting the sale of tobacco products to minors appeared in New Jersey and Washington as early as 1883, in Nebraska in 1885, and in Maryland in 1886 (U.S. Department of Health and Human Services [USDHHS] 2000). When the health consequences of cigarette smoking became well established in the middle of the twentieth century, the need to prevent youth and young adults from becoming addicted to tobacco products gained a new importance (USDHHS 1994, 2000). In 1964, the Surgeon General's Advisory Committee concluded, "Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action" (U.S. Department of Health, Education, and Welfare [USDHEW] 1964, p. 33). This conclusion led to a permanent change in the way this country and the world considered the marketing and sales of tobacco products. And yet, by 1979 the lack of progress in preventing smoking was discouraging. The 1979 Surgeon General's report, *Smoking and Health*, noted that since the release of the 1964 report, "... smoking among teenage boys is remaining virtually constant and among teenage girls it is actually increasing" (USDHEW 1979, p. 17–5). The 1979 report stated as well:

Becoming a smoker may have the immediate value to some teenagers of being accepted by their peers, feeling more mature because smoking is an adult behavior forbidden to the child, providing a level of physiological stimulation and pleasure, and might even serve the function of an act of defiance to authority figures. The prevention programs reviewed rarely incorporate such concepts. Rather, they focus primarily on information relating to the long-term dangers of smoking (USDHEW 1979, p. 17–6).

Over the next 15 years, research on new prevention strategies increased, and some progress was made in reducing smoking rates among youth. By the 1990s, however, the need for greater emphasis on preventing youth from smoking was recognized. Rates of current smoking among high school seniors had declined from 38.8% in 1976 to 29.4% in 1981 but had remained almost unchanged during the 1980s at around 29–30% (see Chapter 3, "The Epidemiology of Tobacco Use Among

Young People in the United States and Worldwide," Figure 3.8). However, data on smoking from the early 1990s suggested that rates among high school students were increasing again (Centers for Disease Control and Prevention [CDC] 1992, 2000, 2011b; Kann et al. 1995; Burns and Johnston 2001).

The landmark 1994 Surgeon General's report, *Preventing Tobacco Use Among Young People*, the first report to focus solely on youth, came during a time when the tobacco industry had been implementing advertising and promotional strategies to ensure that it had "replacement smokers" for the adult smokers who were quitting or dying (USDHHS 1994; Perry 1999). The "Joe Camel" campaign typified the industry's efforts at that time, a period in which the rate of initiation of smoking and the prevalence of smoking increased among youth (Pierce et al. 1998; Wayne and Connolly 2002; DiFranza et al. 2006). From 1991 to 1997, the rate of current smoking among high school students increased from 27.5% to 36.4%. Thus, 30 years after the historic 1964 Surgeon General's report, it was clear that much more needed to be done to stop the tobacco epidemic and that the young people's tobacco use needed to be addressed. The 1994 report was an important element in mobilizing nationwide action to reduce rates of smoking among youth and young adults (Lynch and Bonnie 1994; USDHHS 1994).

As reviewed in the 2000 Surgeon General's report, *Reducing Tobacco Use* (USDHHS 2000), the period of the 1990s saw many important events in tobacco control:

- Under Commissioner David Kessler, the U.S. Food and Drug Administration (FDA) asserted its intention to regulate tobacco products.
- State attorneys general began suing the tobacco industry to recover Medicaid payments made for tobacco-caused diseases.
- Four states—Florida, Minnesota, Mississippi, and Texas—settled the lawsuits brought by their attorneys general, making these states the recipients of awards that, over 25 years, will total in the billions of dollars for each of them. The settlements also yielded many restrictions on the marketing and sales of tobacco products. Major new statewide tobacco control programs were funded in Florida, Massachusetts, Minnesota, and Mississippi.

- The remaining 46 states and the District of Columbia settled the lawsuits brought by their attorneys general as well as in the Master Settlement Agreement, in which the tobacco industry agreed to pay the states approximately \$206 billion over the following 25 years.
- The American Legacy Foundation was funded through the Master Settlement Agreement and took Florida's "truth" media campaign nationwide.
- Industry documents obtained during the legal discovery process of the Minnesota and state attorneys general lawsuits were made available to the public.

From 1997 into the start of the twenty-first century, rates of smoking among youth fell sharply, and it seemed that the flow of "replacement smokers" into the customer base of the tobacco industry could finally be shut off. The statewide programs and the national "truth" campaign of

the American Legacy Foundation used the insights in the 1994 report to act on the evidence that almost all future smokers start and get addicted to tobacco products in adolescence and young adulthood. For example, Table 7 in the 1994 report (USDHHS 1994, p. 65) documented that of the adults who had ever smoked daily, 82% tried their first cigarette before the age of 18 years, and 98% became daily smokers before the age of 25 years. Thus, the evidence was clear: if we were able to prevent the onset of tobacco use completely until age 25, the epidemic would decline and indeed would end in the near future, as the remaining adult smokers were helped to quit. The prevention efforts mounted in this period involved a true paradigm shift, a recognition that the attractiveness of tobacco products to youth needed to be countered less by "health information" than by hard-hitting, graphic, depictions of the immediate harms of smoking, unveiling the manipulations of the tobacco industry, and presenting denormalizing themes (Farrelly et al. 2002, 2005, 2009).

Tobacco Control Among Youth and Young Adults: The Recent Disappointing Trends

Unfortunately, the rapid decline in tobacco use in the early twenty-first century has not continued at the same pace. Tobacco use among youth remains unacceptably high, and national surveys show that declines in rates of current smoking have been slower and more sporadic in recent years (see Chapter 3). At this time, almost one in four high school seniors is a current cigarette smoker. Among youth who smoke cigarettes, the concurrent use of other tobacco products—particularly cigars and smokeless tobacco—has not declined since 2001. More than one-half of White and Hispanic male cigarette smokers in high school also use tobacco products other than cigarettes, as do almost one-half of Hispanic female smokers in high school. This is worrisome as the use of multiple tobacco products may help promote and reinforce addiction, as well as lead to greater health problems. In addition, since 2005, initiation rates have actually risen among young adults, aged 18–25 years, for both smoking and use of smokeless tobacco.

Evidence reviewed in this report indicates, then, that initiation rates of tobacco use among youth and young adults should continue to cause great concern and, indeed, that the situation is similar in several ways to what

was observed in the 1994 report. For example, as shown in Table 7.1, in 1991, 81.9% of adults 30–39 years of age who had ever smoked daily had first tried a cigarette before the age of 18 years; for 2010, the corresponding estimate was 88.2%. In 1991, 94.8% of such persons had begun smoking daily before 25 years of age; for 2010, the estimate was 95.6%. Also, data from the National Survey on Drug Use and Health for 2008–2010 indicate that Marlboro, Newport, and Camel, the three most heavily advertised brands and the brands of choice for established smokers among adolescents and young adults in 1994, remained the top selections for young people in 2007–2009.

This report has updated our understanding of the many factors involved in the initiation and use of tobacco products. Chapter 4, "Social, Environmental, Cognitive, and Genetic Influences on the Use of Tobacco Among Youth," reviewed the evidence that adolescents and young adults are uniquely susceptible to social and environmental influences to use tobacco. As was noted in the 1979 Surgeon General's report, adolescence through young adulthood remains the period in life when use of tobacco products can be perceived by young people as being an "acceptable rebellion" or "mild bad behavior" that they can discontinue in the future (McAlister et al. 1979). If tobacco

Table 7.1 Cumulative percentages of recalled age at which respondents first tried a cigarette and began to smoke daily among 30- to 39-year-olds who have ever smoked daily, 1991 compared with 2010

Age (in years)	First tried a cigarette		Began smoking daily	
	1991	2010	1991	2010
<12	15.6	20.9	1.9	4.7
<14	36.7	43.6	8.0	16.0
<16	62.2	72.9	24.9	40.9
<18	81.9	88.2	53.0	65.1
<20	91.3	93.2	77.0	80.2
<25	98.4	98.8	94.8	98.6

Source: 2010 National Survey on Drug Use and Health: Substance Abuse and Mental Health Services Administration (unpublished data)

use were similar to getting a tattoo or dyeing one's hair, for example, which might also be rebellious behaviors, we would not be as concerned. It is the addictiveness of tobacco use and its short- and long-term health and economic consequences that transform this "act of rebellion" into a major public health problem. Thus, the effects on personal behavior of social and environmental influences continue to make up one of the major challenges to preventing smoking among young people. This is particularly important since tobacco marketing utilizes themes that are appealing to adolescents, such as being rebellious and attractive. However, more fully using our understanding that young people often use tobacco because of these influences can help us create better and more effective prevention efforts.

The situation is unfortunately complicated by the fact that the social and environmental factors that promote tobacco use continue to evolve. Chapter 5, "The Tobacco Industry's Influences on the Use of Tobacco Among Youth," reviewed the evidence that the tobacco industry's advertising and promotional activities as well as its pricing practices are causally related to the initiation and progression of tobacco use among young people. Similarly, images of smoking in the entertainment media, particularly movies, have created a prosmoking environment that causes the initiation of smoking and its continued use. Also, there is evidence suggesting that other factors, including the packaging and design of tobacco products, the creation of new products, and other activities of the

tobacco industry may have a role in increasing the appeal of tobacco products to adolescents and young adults.

The evidence reviewed in this report indicates that the practices of the tobacco industry are evolving in the areas of promotion and advertising even as it tries to minimize the role played by such activities as major causes of tobacco use among youth and young adults (see Chapter 5, Figure 5.5). For example, recent industry campaigns have attempted to reframe the use of tobacco products as an "acceptable rebellion" within a hipster aesthetic (Hendlin et al. 2010). The ways in which the industry's practices in recruiting "replacement smokers" have evolved and continue to be effective have been set forth in a review by the National Cancer Institute (NCI 2008) and are described in *United States v. Philip Morris* Final Opinion (*U.S. v. Philip Morris* No. 99-2496 [D.D.C. Aug. 17, 2006]). The evidence clearly indicates that youth and young adults remain heavily exposed to and influenced by advertising and promotional efforts aimed at increasing the use of tobacco products. These advertising and promotional activities can be considered under the four "Ps" of marketing: Product, Price, Promotion, and Placement (Cummings et al. 2002).

- **Product:** Evidence reviewed in this report suggests that tobacco products are designed to be attractive and appealing to youth and young adults. Chapter 5 provided evidence indicating how certain features of cigarettes and other tobacco products can appeal to younger smokers. In addition, there is evidence that highly addictive, smooth-tasting tobacco products (e.g., menthol cigarettes [with lower levels of menthol]) have been modified for this market, raising concerns about how changes in product design may be contributing to an increased likelihood that tobacco will be consumed by young people.
- **Price:** Chapter 5 documented how the marketing and promotional expenditures of the tobacco industry have become increasingly concentrated on efforts to reduce the prices of tobacco products. The evidence continues to grow that youth and young adults are more price sensitive than are adults.
- **Promotion:** The evidence continues to show that youth and young adults are more sensitive than adults in general to advertising and promotional campaigns. As greater restrictions have been placed on traditional advertising of tobacco products, the retail environment has become a primary location to bombard youth with brand imagery, which has made tobacco products appear attractive and

broadly acceptable. Emerging evidence was provided in Chapter 5 regarding the widespread promotion of tobacco products in the new digital marketing landscape, which includes both tobacco industry corporate and brand Web sites as well as social networking sites.

- *Placement:* The evidence in Chapter 5 pointed to the industry-sponsored programs that influence product location within the retail environment as well as the concentration of these activities in low-income and racially diverse neighborhoods. This report has documented the fact that industry-sponsored programs affect point-of-sale marketing and product location in the store environment and that these initiatives are effective in reaching youth.

In addition, as was reviewed in NCI Monograph No. 19, *The Role of the Media in Promoting and Reducing Tobacco Use*, a variety of media influences continue to create social norms of acceptability of tobacco use that encourage the use of tobacco products (NCI 2008). Chapters 4 and 5 in this report build upon the NCI review and provided a conceptual framework of how these advertising, social, and media influences affect youth and young adults. Chapter 5 also provided a comprehensive review of the impact of smoking in the movies and the evidence linking exposure to images of smoking in the entertainment media to the initiation of adolescent smoking. Evidence indicates that there is a strong dose-response relationship between the number of smoking depictions viewed by nonsmoking adolescents and the rate of initiation of smoking in that group. Fortunately, there is evidence that efforts to reduce exposures to such depictions of smoking, such as parental restrictions on what their children may watch, can reduce risks of smoking initiation. More promising still is the potential for policies that will discourage depictions of smoking in movies viewed by children. Recent evidence indicates that new policies may already be leading to declines in the level of smoking imagery in youth-rated movies (CDC 2011a), but depictions of smoking in DVDs (digital video discs), cable channels, and other media remain common and continue to create a social environment that presents smoking as socially acceptable and appealing to youth.

Since 1964, the Surgeon General's reports have documented the continuing need to mobilize national efforts to prevent the initiation of tobacco use among youth. Yet, as Chapter 3 showed, almost one-fifth of high school youth today are smokers, one-tenth of high school senior males are smokeless tobacco users, and one-fifth of high school senior males are cigar smokers. Virtually all (98%) adult daily cigarette smokers initiate smoking by 25 years of age—identical to what was reported in 1994.

So why has progress in reducing smoking rates among young people been so hard to achieve? As noted above, the advertising and promotional activities of the tobacco industry and depictions of smoking in the entertainment media have continued, and they remain potent factors promoting tobacco use. Unfortunately, our national efforts to counter these influences have not kept pace in recent years, and funding for several of the boldest and most innovative statewide programs, in Florida, Massachusetts, Minnesota, Mississippi, Oregon, New York, and Washington, has been sharply reduced or virtually eliminated (Campaign for Tobacco-Free Kids 2011). Correspondingly, the overall level of investment in statewide tobacco control programs has declined since 2003 (Campaign for Tobacco-Free Kids 2011). Exposure to counteradvertising, funded by states, is now only 3.5% of recommended levels. Moreover, the annual payments by industry under the Master Settlement Agreement to the American Legacy Foundation were stopped after the initial 5-year period, substantially reducing the intensity of the foundation's national "truth" media campaign (American Legacy Foundation 2006). The U.S. Food and Drug Administration's (FDA's) attempt to assert authority over tobacco products was blocked in 2000 by a Supreme Court decision (*Food and Drug Administration v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 [2000]; 120 S. Ct. 1291), and the agency only gained this authority through legislation in 2009 (*Family Smoking Prevention and Tobacco Control Act*). Finally, as reviewed above, the tobacco industry adapted to the new post-Master Settlement Agreement environment in its marketing and promotional campaigns and is keeping its spending on marketing at a very high level—nearly \$10 billion allocated to marketing to the U.S. in 2008.

Tobacco Control Among Youth and Young Adults: How to Make Progress

Chapter 6 (“Efforts to Prevent and Reduce Tobacco Use Among Young People”) in this report reviewed the evidence on what the most effective strategies are to prevent and reduce tobacco use among young people. With the release of the 2000 Surgeon General’s report, *Reducing Tobacco Use*, Surgeon General David Satcher stated that

Our lack of greater progress in tobacco control is attributable more to the failure to implement proven strategies than it is to a lack of knowledge about what to do (USDHHS 2000, p. 436).

Dr. Satcher’s statement clearly applies to our national efforts to prevent the initiation of tobacco use among youth and young adults. The evidence strongly supports the need for coordinated, multicomponent interventions that combine mass media campaigns, tobacco tax increases, school-based policies and programs, and statewide and community-wide changes in smoke-free policies and norms. Unfortunately, the decrease in state investments for comprehensive programs to prevent tobacco use, including media campaigns to prevent smoking (Campaign for Tobacco-Free Kids 2011), is an indicator that lack of funding has become a problem for implementing proven strategies. Chapter 6 provided clear evidence that the initiation and use of tobacco by youth and young adults could be significantly and effectively reduced by implementing mass media campaigns, comprehensive community programs, and comprehensive statewide tobacco control programs. Moreover, following the 1998 Master Settlement Agreement between 46 states and the District of Columbia and the tobacco industry, together with the independent settlements in the remaining 4 states (Florida, Minnesota, Mississippi, and Texas), state investments in comprehensive tobacco control programs increased to \$821.4 million in fiscal year 2002 (CDC, in press). Sadly, the level of investments has since declined to \$643.1 million in 2010, only 17.7% of the investment level recommended by CDC’s *Best Practices for Comprehensive Tobacco Control Programs—2007* (CDC 2007). Evidence indicates that states that have made larger investments in comprehensive tobacco control programs have seen the prevalence of smoking among adults and youth decline faster as investments levels increased (Farrelly et al. 2008). And yet, several of the states that were demonstrating the most progress in reducing youth smoking rates (among

them California and New York) had their levels of funding severely reduced (Campaign for Tobacco-Free Kids 2011).

One of the critical impacts of the reduced level of funding for statewide tobacco control programs has been a lowering of the intensity of countermarketing media campaigns. In its 2007 *Best Practices*, CDC recommended that states fund countermarketing media campaigns to prevent tobacco use at a level so that 80% of the youth in the state would on average be exposed to at least 10 prevention messages per quarter (800 total rating points [TRPs]) (CDC 2007). With the reduced funding levels in the states, CDC’s 2010 *Tobacco Control State Highlights* found that the median level of exposure across states in 2008 was only 28 TRPs, or 3.5% of the recommended level (CDC 2010). The evidence reviewed in Chapter 6 supports the need to sustain countermarketing media campaigns at an intensity level similar to those recommended by CDC *Best Practices* (2007). Further, the evidence reviewed there indicates that the countermarketing messages should build upon the growing evidence base regarding the themes, emotional content, format, and characteristics of execution of the campaigns that have demonstrated the greatest efficacy. Given the continuing high level of protobacco messages to which youth and young adults are being exposed, the reduced levels of countermarketing media campaigns by the states has been identified by Ibrahim and Glantz (2007) as one of the factors that could be contributing to the slowing of progress in preventing tobacco use among youth.

Chapter 6 also reviewed the potential for additional regulatory approaches to reduce the initiation and practice of smoking among youth and young adults. The 2009 legislation giving FDA authority to regulate the manufacture, distribution, advertising, and promotion of tobacco products is no doubt the most significant advance on the regulatory scene. Some of FDA’s responsibilities include reviewing premarket applications for new and modified-risk tobacco products, requiring new health warnings on cigarette packs (and smokeless tobacco products), and establishing and enforcing restrictions on advertising and promotion. FDA has additional authorities that it can exercise, including subjecting tobacco products such as cigars, dissolvables, and e-cigarettes to Chapter 9 of the Food, Drug, and Cosmetic Act. FDA could also establish product standards for nicotine yields or for the reduction or elimination of other constituents, as appropriate, for the

protection of the public's health. Also, the Substance Abuse and Mental Health Services Administration has been enforcing the Synar Amendment of 1992, which requires the states, the District of Columbia, and the eight U.S. territories to enact and enforce laws prohibiting the sale of tobacco products to individuals younger than 18 years of age. FDA is now also enforcing federal law prohibiting the sale of cigarettes and smokeless tobacco to individuals younger than 18 years of age. FDA is now also enforcing federal law prohibiting the sale of cigarettes and smokeless tobacco to individuals younger than 18 years of age.

Additionally, in 2011, FDA and NIH released requests for applications, and also funded projects to study a number of research areas including epidemiology and cohort study based-studies, the basic science of addiction, the toxicology of toxic substances in tobacco products, and behavioral studies. The findings from these research studies will contribute to the evidence base that FDA will draw from as it establishes tobacco authority decision-making rules.

Internationally, there has been even stronger regulatory action. The *WHO Report on the Global Tobacco Epidemic, 2011; Warning About the Dangers of Tobacco* provides a summary of these actions (World Health Organization [WHO] 2011). Among the actions covered in the report are the use of large, pictorial warning labels on cigarette packs, the elimination of point-of-sale promotions and advertisements, and the imposition of tobacco excise taxes at levels much higher than any currently in the United States. In the United States, researchers are calling for a review of these and other policy and regulatory efforts to define potential "novel policy directions" to be considered in the future (Warner and Mendez 2010). However, as these endgame policy innovations are considered and evaluated, much more can be done now to reduce the rates of tobacco use among American youth and young adults.

In November 2010, USDHHS released a strategic action plan to end the tobacco epidemic in this country (USDHHS 2010). The evidence in the current Surgeon General's report confirms the conclusion of that action plan: we know how to end the tobacco epidemic. The USDHHS plan, *Ending the Tobacco Epidemic: A Tobacco Control Strategic Action Plan for the U.S. Department of Health and Human Services*, endorsed five strategies for ending the tobacco epidemic, as shown in Table 7.2:

- Youth targeted mass-media countermarketing campaigns
- Adoption of comprehensive smoke-free laws

- Availability of accessible, affordable tobacco cessation options
- Raising the retail price of tobacco products through excise tax increases
- Restricting advertising and promotion

Besides the five strategies shown in Table 7.2, the USDHHS *Strategic Action Plan* (2010) pointed out the need to (1) build sustainable capacity and infrastructure for comprehensive tobacco control programs, noting the 2007 CDC recommendation of investing \$9–\$18 per capita for optimal tobacco control outcomes and (2) regulate the manufacture, marketing, and distribution of tobacco products, noting that a number of activities in the action plan will provide key department-wide support for the new tobacco regulatory mission of FDA in implementing the 2009 *Family Smoking Prevention and Tobacco Control Act*.

In December 2010, USDHHS released *Healthy People 2020*, the nation's disease prevention and health promotion plan. The 20 tobacco objectives served as the foundation for the USDHHS *Strategic Action Plan* (2010). A complete list of the *Healthy People 2020* objectives can be found on their Web site (USDHHS 2011).

The USDHHS *Strategic Action Plan* (2010) recognized that the use of tobacco products by this nation's youth has deadly health consequences. Recent evidence has shown the impact of the failure to maintain the rate of decline in youth smoking since 2003. If high school students' smoking levels had continued to decline at the rate observed from 1997 to 2003, the prevalence of current smoking among high school students in 2009 would have been only about 8% (vs. 19.5%) (Figure 7.1). This would have resulted in approximately 3 million fewer smokers among youth and young adults by 2009. We need to regain the momentum of the 1997–2003 decline in tobacco use, and viable evidence-based, methods to do so are available.

The feasibility of this projection (Figure 7.1) of a continuing decline in smoking rates among youth is supported by the declines observed from 2003 to 2009 in New York City and in states that were maintaining funding for comprehensive tobacco prevention programs (Campaign for Tobacco-Free Kids 2011). In addition, the 2009 Youth Risk Behavior Survey reported that among Black female high school seniors, the rate of current smoking was only 4.8%. These data suggest that rates of smoking among high school students could be reduced by more than 50% over the next decade and thus could be in the single digits by 2020 if all the evidence-based strategies defined in this report were implemented.

Table 7.2 Strategic actions to end the tobacco epidemic

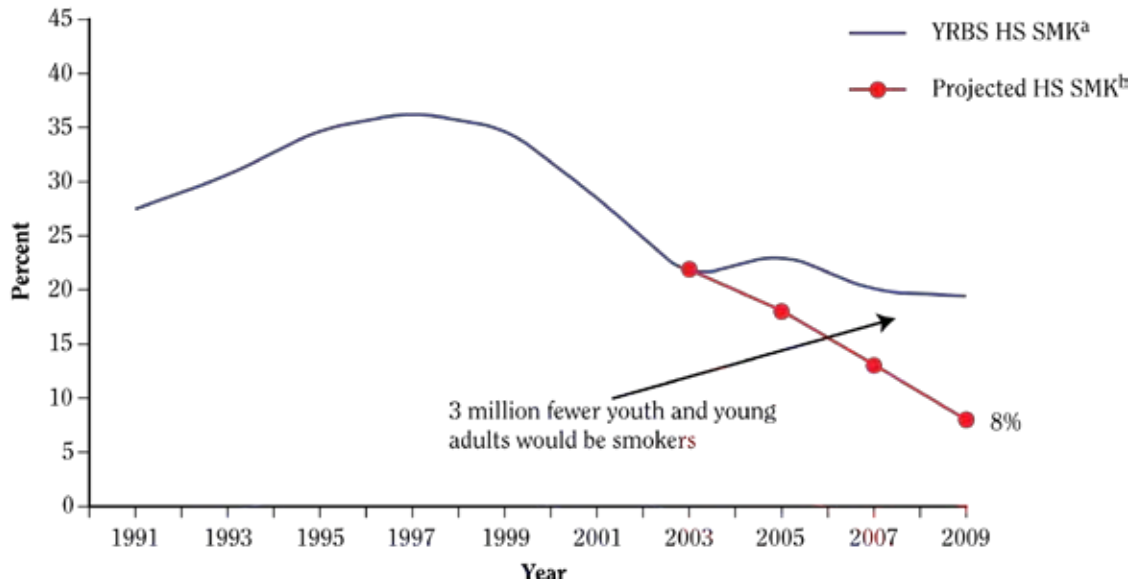
Youth-targeted mass-media countermarketing campaigns	Tobacco use prevalence declines when adequately funded mass-media countermarketing campaigns are combined with other strategies in multicomponent tobacco control programs. The most prominent of these efforts is the national truth [®] campaign (February 2000–2004), which resulted in approximately 450,000 fewer adolescents initiating smoking in the United States. During 2000–2002, the truth [®] campaign spent \$324 million on media, research, public relations, and related expenditures. A cost-utility analysis found that the campaign recouped its costs and that just under \$1.9 billion in medical costs were averted for society over the lifetimes of the youth who did not become smokers.
Adoption of comprehensive smoke-free laws	Smoke-free policies improve indoor air quality, reduce negative health outcomes among nonsmokers, decrease cigarette consumption, encourage smokers to quit, and change social norms regarding the acceptability of smoking. A 2009 IOM report, <i>Secondhand Smoke Exposure and Cardiovascular Effects: Making Sense of the Evidence</i> , confirmed a strong causal relationship between implementation of smoke-free laws and decreases in heart attacks. Elimination of secondhand smoke exposure also reduces lung cancer and other pulmonary diseases.
Availability of accessible, affordable tobacco cessation options	Tobacco dependence is a chronic disease that often requires repeated interventions and multiple quit attempts. The U.S. Public Health Service Clinical Practice Guideline, <i>Treating Tobacco Use and Dependence: 2008 Update</i> , notes that tobacco dependence treatments, such as counseling and use of medications, are effective across a broad range of populations. The combined use of medication and counseling almost doubles the smoking abstinence rate compared with either medication or counseling alone. Quitlines are among the most cost-effective clinical preventive services and can reach large numbers of smokers with proper promotion and clinical referral.
Raising the retail price of tobacco products through excise tax increases	For every 10% increase in the price of tobacco products, consumption falls by approximately 4% overall, with a greater reduction among youth. The 2009 enactment of the 62-cent federal cigarette excise tax increase to fund an expansion of the State Children’s Health Insurance Program is projected to prevent initiation of smoking by nearly 2 million children. The tax increase will also have the projected benefits of causing more than 1 million adult smokers to quit, averting nearly 900,000 smoking-attributed deaths, and producing \$44.5 billion in long-term health care savings by reducing tobacco-related health care costs. Similar effects are found when states raise tobacco excise taxes.
Restricting advertising and promotion	The National Cancer Institute 2008 monograph, <i>The Role of the Media in Promoting and Reducing Tobacco Use</i> , documents that tobacco advertising and promotion increase tobacco use. It concludes that countries that have implemented comprehensive tobacco advertising bans have been successful in reducing tobacco consumption by as much as 5.4%.

Source: U.S. Department of Health and Human Services 2010.

It is important to note that communities that have been the most successful at driving down youth initiation have done so in the context of comprehensive programs that also focused on decreasing adult smoking by changing the social norms and policies around smoking. As reviewed above, prior Surgeon General’s reports have called for a greater mobilization of our national prevention efforts to stop the annual flow of “replacement smokers” into the deadly addiction of tobacco use. Unfortunately, although significant progress was achieved for some years following each of these reports, progress has not been sustained. Failure to stem this flow of “replacement smokers”

results in millions more youth and young adults becoming addicted to tobacco products and suffering the immediate and longer-term health effects of this addiction, including premature disability and death. Chapter 2 of this report, “The Health Consequences of Tobacco Use Among Young People,” documents that these health effects can be observed even sooner than prior reports had indicated. Lung cancer, heart disease, chronic obstructive pulmonary disease, and other major chronic diseases caused by smoking will continue to be leading causes of premature death until the tobacco epidemic is stopped.

Figure 7.1 Current rates of cigarette smoking among high school students and projected rates if the 1997–2003 decline had continued; Youth Risk Behavior Survey (YRBS) 1991–2009; United States



Source: 1991–2009 YRBS: Centers for Disease Control and Prevention, Division of Adolescent and School Health (unpublished data).

Note: **HS SMK** = high school smokers.

^aHigh school students who smoked on 1 or more of the 30 days preceding the survey.

^bProjected high school students who smoked on 1 or more days of the past 30 days if 1997–2003 decline had been maintained.

The USDHHS *Strategic Action Plan* (2010) recognized that dramatic action was needed to change social norms and decrease the social acceptability of tobacco use. This plan concluded that the overriding objective is

...to reinvigorate national momentum toward tobacco prevention and control by applying proven methods for reducing the burden of tobacco dependence. HHS will lead this trans-

formative national endeavor by example, leveraging existing resources and expertise and making new investments to the furthest extent possible to maximize the nation's tobacco prevention and control efforts. The recommendations set forth here, when fully implemented, will markedly accelerate our nation's effort to defeat the tobacco epidemic (USDHHS 2010, p. 26).

Final Call to Action

The findings in this report and experience from 1998 to 2005 show that we have evidence-based strategies and tools that can rapidly drop youth initiation and prevalence rates down into the single digits. Key points from this report that must be considered in this effort include

- Harm from smoking begins immediately, ranging from addiction to serious damage to the heart and lungs.

- Prevention efforts must include both adolescents and young adults to encompass both initial experimentation and progression to daily use.
- Tobacco company advertising and promotional activities cause adolescent and young adult smoking initiation and are compounded by depictions of smoking in the movies.

- Tobacco use among youth declined from the late 1990s, but this decline has slowed in recent years.
- Our best strategy for creating large, rapid declines is through coordinated, adequately funded multicomponent interventions rather than a single “silver bullet” program or policy.

In addition, the FDA's new regulatory authority provides strong opportunities for further ensuring the elimination of the harms caused by tobacco use for our youth.

The evidence and findings of this Surgeon General's report require us all to work together to rekindle and increase the momentum of previous decades to create a

society free from tobacco-related death and disease. The evidence is clear: we can prevent youth and young adults from ever using tobacco products. We can end the tobacco epidemic.

If we do not act decisively today, a hundred years from now our grandchildren and their children will look back and seriously question how people claiming to be committed to public health and social justice allowed the tobacco epidemic to unfold unchecked.

Former WHO Director-General
Gro Harlem Brundtland (1999)

References

- American Legacy Foundation. *2006 Annual Report: The Story of the Year*. Washington: American Legacy Foundation, 2006.
- Brundtland GH. Speech to the WHO International Conference on Tobacco and Health; November 15, 1999; Kobe, Japan. <http://www.who.int/director-general/speeches/1999/english/19991115_kobe.html>; accessed: July 29, 2011.
- Burns DM, Johnston LD. Overview of recent changes in adolescent smoking behavior. In: *Changing Adolescent Smoking Prevalence—Where It Is and Why*. Smoking and Tobacco Control Monograph No. 14. Bethesda (MD): U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2001. NIH Publication No. 02-5086.
- Campaign for Tobacco-Free Kids. *A Broken Promise to Our Children: The 1998 State Tobacco Settlement 12 Years Later*. Washington: Campaign for Tobacco-Free Kids, American Heart Association, American Cancer Society, Cancer Action Network, American Lung Association, and Robert Wood Johnson Foundation. 2011; <http://www.tobaccofreekids.org/content/what_we_do/state_local_issues/settlement/FY2011/StateSettlementReport_FY2011_web.pdf>; accessed: December 6, 2011.
- Centers for Disease Control and Prevention. Tobacco, alcohol, and other drug use among high school students—United States, 1991. *Morbidity and Mortality Weekly Report* 1992;41(37):698–703.
- Centers for Disease Control and Prevention. Trends in cigarette smoking among high school students—United States, 1991–1999. *Morbidity and Mortality Weekly Report* 2000;49(33):755–8.
- Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs—2007*. Atlanta (GA): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2007.
- Centers for Disease Control and Prevention. *Tobacco Control State Highlights, 2010*. Atlanta (GA): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.
- Centers for Disease Control and Prevention. Smoking in top-grossing movies—United States, 2010. *Morbidity and Mortality Weekly Report* 2011a;60(27):909–13.
- Centers for Disease Control and Prevention. Trends in the Prevalence of Tobacco Use: National YRBS: 1991–2009 [fact sheet]. National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health, 2011b; <http://www.cdc.gov/healthyyouth/yrbs/pdf/us_tobacco_trend_yrbs.pdf>; accessed: July 29, 2011.
- Centers for Disease Control and Prevention. State tobacco control funding following state tobacco settlement agreement—United States, 1998–2010, in press.
- Cummings KM, Morley CP, Horan JK, Steger C, Leavell N-R. Marketing to America's youth: evidence from corporate documents. *Tobacco Control* 2002;11(Suppl 1):i5–i17.
- DiFranza JR, Wellman RJ, Sargent JD, Weitzman M, Hipple BJ, Winickoff JP, Center for Child Health Research of the American Academy of Pediatrics. Tobacco promotion and the initiation of tobacco use: assessing the evidence for causality. *Pediatrics* 2006;117(6):e1237.
- Family Smoking Prevention and Tobacco Control Act*, Public Law 111-13, 123 U.S. *Statutes at Large* 1776 (2009).
- Farrelly MC, Davis KC, Duke J, Messeri P. Sustaining 'truth': changes in youth tobacco attitudes and smoking intentions after 3 years of a national antismoking campaign. *Health Education Research* 2009;24(1):42–8.
- Farrelly MC, Davis KC, Haviland ML, Messeri P, Heaton CG. Evidence of a dose-response relationship between "truth" antismoking ads and youth smoking prevalence. *American Journal of Public Health* 2005;95(3):425–31.
- Farrelly MC, Heaton CG, Davis KC, Messeri P, Hersey JC, Haviland ML. Getting to the truth: evaluating national tobacco countermarketing campaigns. *American Journal of Public Health* 2002;92(6):901–7.
- Farrelly MC, Pechacek TF, Thomas KY, Nelson D. The impact of tobacco control programs on adult smoking. *American Journal of Public Health* 2008;98(2):304–9.
- Food and Drug Administration v. Brown and Williamson*, 529 U.S. 120 (2000); 120 S. Ct. 1291, available at http://ciel.org/Publications/FDA_Brown_Willamson.pdf.
- Hendlin Y, Anderson SJ, Glantz SA. 'Acceptable rebellion': marketing hipster aesthetics to sell Camel cigarettes in the US. *Tobacco Control* 2010;19(3):213–22.
- Ibrahim JK, Glantz SA. The rise and fall of tobacco control media campaigns, 1967–2006. *American Journal of Public Health* 2007;87(8):1383–96.

- Kann L, Warren CW, Harris WA, Collins JL, Douglas KA, Collins ME, Williams BI, Ross JG, Kolbe LJ. Youth Risk Behavior Surveillance—United States, 1993. *Morbidity and Mortality Weekly Report* 1995;44(SS-1):1–55.
- Lynch BS, Bonnie RJ, editors. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths*. Washington: National Academies Press, 1994.
- McAlister AL, Perry C, Maccoby N. Adolescent smoking: onset and prevention. *Pediatrics* 1979;63(4):650–8.
- National Cancer Institute. *The Role of the Media in Promoting and Reducing Tobacco Use*. Tobacco Control Monograph No. 19. Bethesda (MD): U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2008. NIH Publication No. 07-6242.
- Perry CL. The tobacco industry and underage teen smoking: tobacco industry documents from the Minnesota litigation. *Archives of Pediatrics & Adolescent Medicine* 1999;153(9):935–41.
- Pierce JP, Choi WS, Gilpin EA, Farkas AJ, Berry CC. Tobacco industry promotion of cigarettes and adolescent smoking. *JAMA: the Journal of the American Medical Association*. 1998;279(7):511–15.
- U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People. A Report of the Surgeon General*. Atlanta (GA): U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.
- U.S. Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General*. Atlanta (GA): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2000.
- U.S. Department of Health and Human Services. *Ending the Tobacco Epidemic: A Tobacco Control Strategic Action Plan for the U.S. Department of Health and Human Services*. Washington: Office of the Assistant Secretary for Health, 2010.
- U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. *Healthy People 2020*, 2011; <<http://www.healthypeople.gov/2020/default.aspx>>; accessed: November 1, 2011.
- U.S. Department of Health, Education, and Welfare. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Washington: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, 1964. PHS Publication No. 1103.
- U.S. Department of Health, Education, and Welfare. *Smoking and Health. A Report of the Surgeon General*. Washington: U.S. Department of Health, Education, and Welfare, Public Health Service, Office of the Assistant Secretary for Health, Office on Smoking and Health, 1979. DHEW Publication No. (PHS) 79-50066.
- U.S. v. Philip Morris*, No. 99-2496 (D.D.C. Aug. 17, 2006), available at <http://www.library.ucsf.edu/sites/all/files/ucsf_assets/FinalOpinion_full_version.pdf>.
- Warner KE, Mendez D. Tobacco control policy in developed countries: yesterday, today, and tomorrow. *Nicotine & Tobacco Research* 2010;12(9):876–87.
- Wayne GF, Connolly GN. How cigarette design can affect youth initiation into smoking: Camel cigarettes 1983–93. *Tobacco Control* 2002;11(Suppl 1):i32–i39.
- World Health Organization. *WHO Report on the Global Tobacco Epidemic, 2011: Warning About the Dangers of Tobacco*. Geneva (Switzerland): World Health Organization, 2011.

