

# Chapter 16

## A Vision for Ending the Tobacco Epidemic: Toward a Society Free of Tobacco-caused Death and Disease

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## A Vision for Ending the Tobacco Epidemic

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This nation must create a society free of tobacco-related death and disease. The leadership of U.S. Department of Health and Human Services (USDHHS) committed to this vision when it published the first ever tobacco control strategic action plan for the United States in 2010—*Ending the Tobacco Epidemic: A Tobacco Control Strategic Action Plan for the U.S. Department of Health and Human Services* (hereafter referred to as the *Strategic Action Plan*) (USDHHS 2010a). This 50th anniversary Surgeon General’s report provides the scientific basis for accelerating the implementation of this national action plan. Our work to protect our children’s health and improve the public’s health is not close to completion; this report finds that if more is not done to combat tobacco use, then 5.6 million of today’s youth will die prematurely from a smoking-related illness.

This report provides an historical perspective that reviews and updates evidence on the health consequences of smoking and exposure to tobacco smoke as well as the extensive evidence base on effective tobacco control interventions. The report also presents findings of models of future tobacco use that show the challenge ahead: at the current trajectory of decline of tobacco use, it is not possible to meet the goal of ending the tobacco epidemic quickly enough. Finally, the report discusses different ways to achieve a society free of premature death and disease caused by tobacco.

### Historical Perspective

The *Strategic Action Plan* stated “The United States has made historic progress in combating the epidemic of tobacco-caused illness and death since the landmark 1964 Surgeon General’s Report on the health effects of cigarette smoking” (USDHHS 2010a, p. 9). The evidence in this Surgeon General’s report provides a wealth of findings supporting that statement.

- Per capita cigarette consumption has declined by 72% from 4,345 cigarettes in 1963 to 1,196 in 2012 (see Figure 2.1);
- The prevalence of high school students who currently smoke<sup>1</sup> declined from 36.4% in 1997 to 18.1%

in 2011, the lowest level since the start of national surveys (see Chapter 13);

- The prevalence of current smoking<sup>2</sup> among adults has declined from 42.7% in 1965 to 18.1% in 2012 (see Chapter 13).

This progress is considered one of the top public health achievements of the twentieth century (Centers for Disease Control and Prevention [CDC] 1999; Ward and Warren 2007). However, smoking continues to cause unacceptable harm to public health. Several key findings of this report highlight the continuation of the still massive tobacco epidemic in the United States:

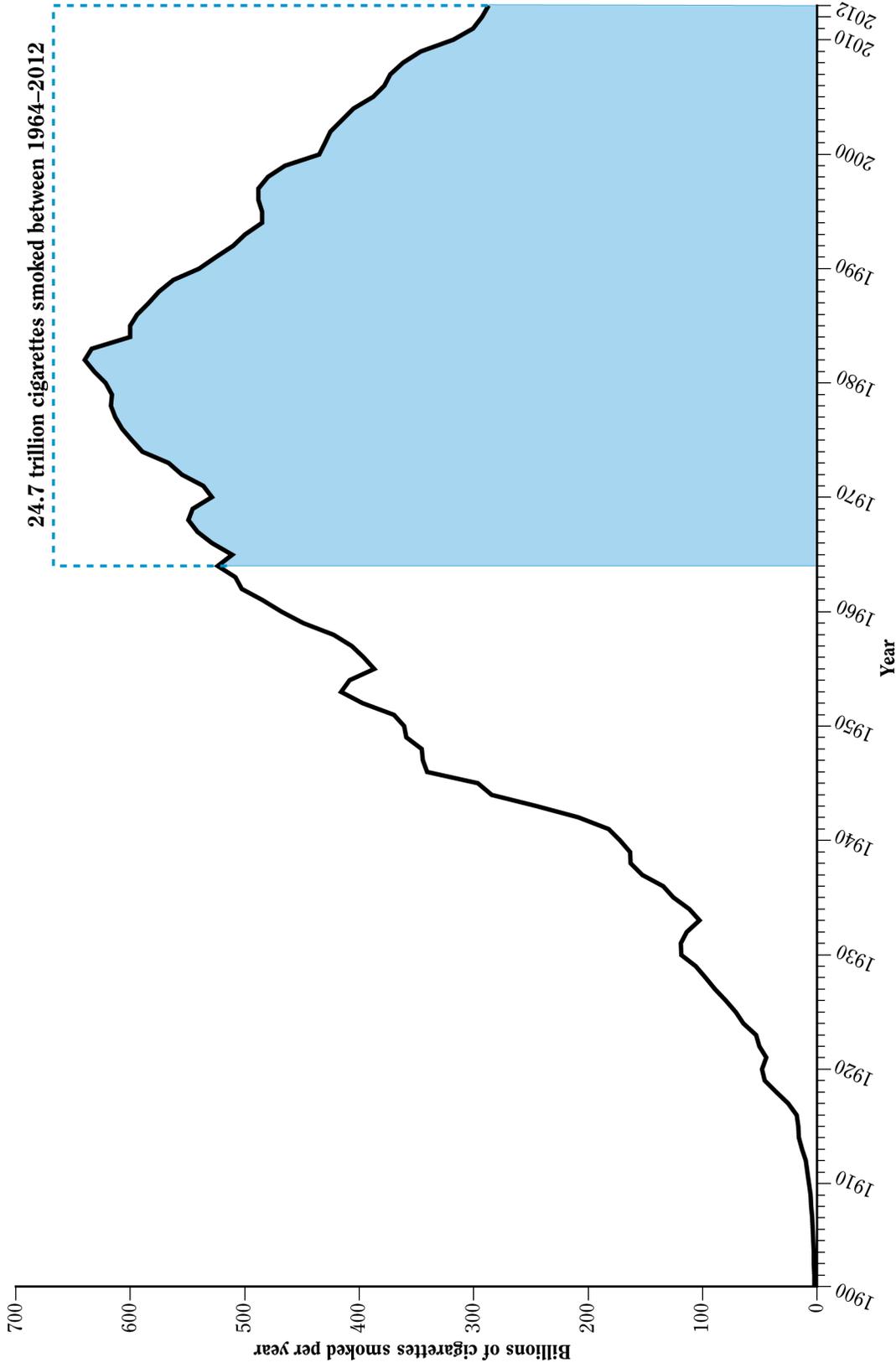
- Despite the dramatic decline in per capita cigarette consumption (see Figure 2.1), almost 25 trillion cigarettes have been consumed since 1965 (Figure 16.1).
- More than twenty million Americans have died from smoking-attributable illnesses since 1964 (see Chapter 12).
- Nearly one-half million adults still die prematurely from tobacco use each year (see Chapter 12).
- Approximately 800,000 lung cancer deaths were estimated to have been avoided in the United States during 1975–2000. However, these averted lung cancer deaths are only about 32% of the lung cancer deaths that could have been avoided if tobacco smoking had been completely eliminated after the 1964 Surgeon General’s report (Chapter 15).
- The tobacco industry continues to position itself to sustain its sales by recruiting youth and young adults and by maintaining current smokers as consumers of all their nicotine-containing products including cigarettes (see Chapters 13, 14, 15).
- For each smoker who dies from tobacco-related disease, there are two new, younger replacement smokers (USDHHS 2012).

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<sup>1</sup>Based on respondents who reported that they smoked cigarettes on at least 1 day during the 30 days before the survey.

<sup>2</sup>Based on adult respondents who reported smoking  $\geq 100$  cigarettes in their lifetime and smoking every day or on some days.

Figure 16.1 Total cigarette consumption, United States, 1900–2012



Sources: Miller 1981; U.S. Department of Agriculture, 1987, 1996, 2005, 2007a,b; Centers for Disease Control and Prevention 2012.  
Note: Data shown are annual total consumption of cigarettes. This differs from Figure 2.1, which reports the annual adult (18 years of age and older) per capita consumption.

- Disparities in smoking rates persist. Some of the highest prevalence rates are among persons of lower socioeconomic status, some racial/ethnic minority groups, sexual minorities, high school dropouts, and other vulnerable populations including those living with mental illness and substance use disorders.
- Due to the persisting prevalence of smoking among young adults in this country, 5.6 million Americans younger than 18 years of age are projected to die prematurely from a smoking-related illness (see Chapters 12 and 13).

Previous Surgeon General's reports have tracked the evolution of cigarettes into the current highly engineered, addictive, and deadly products containing thousands of chemicals that are themselves harmful. The burning of tobacco produces the complex chemical mixture of over 7,000 compounds that cause a wide range of diseases and premature deaths as a result (USDHHS 2010b). Although the prevalence of smoking has declined significantly over the past half century, risks for smoking-related disease and mortality have not. In fact, today's cigarette smokers—both men and women—have a much higher risk for lung cancer and chronic obstructive pulmonary disease than smokers in 1964, despite smoking fewer cigarettes (see Chapters 6, 7, and 11, and Figures 12.2 and 13.16).

Since 2000, each Surgeon General's report has ended with a call for action. In 2000, Surgeon General Dr. David Satcher clearly stated the challenge that is still applicable today, namely, "Our lack of greater progress in tobacco control is more the result of failure to implement proven strategies than it is the lack of knowledge about what to do" (USDHHS 2000). Knowledge garnered over the subsequent 14 years makes this statement even more cogent today.

In 2007, the Institute of Medicine's report, *Ending the Tobacco Problem: A Blueprint for the Nation*, provided 42 recommendations with the ultimate goal stated as: "... to end the tobacco problem; in other words, to reduce smoking so substantially that it is no longer a significant public health problem for our nation" (Bonnie et al. 2007, p. 1). The 2010 Surgeon General's report (2010b) listed these recommendations along with the detailed recommendations of the President's Cancer Panel for addressing tobacco use prevention and treatment and exposure to secondhand tobacco smoke (Reuben 2007). The 2012 Surgeon General's report built upon recommendations in previous reports in its final chapter: "A Vision for Ending the Tobacco Epidemic" by noting that "we have evidence-based strategies and tools that can rapidly drop youth initiation and prevalence rates down into the single digits" (USDHHS 2012, p. 856).

There is extensive knowledge about what needs to be done—not achieving greater progress results in part from not fully implementing existing knowledge about what works, and in part from the continued efforts of the tobacco industry to promote and market cigarettes and other products. The vision set forth in the *Strategic Action Plan* (USDHHS 2010a) recognizes that dramatic action is needed to change social norms further and to continue to decrease the acceptability of tobacco use (USDHHS 2012), especially smoking.

In recent years, a number of critical legislative steps have been taken to reduce tobacco use, including measures that can reduce the ability of the tobacco industry to promote tobacco use. These legislative measures bring new possibilities for tobacco control.

In February 2009, the *Children's Health Insurance Program Reauthorization Act*, Public Law 111-3, *U.S. Statutes at Large* 8 was signed, which included an unprecedented \$0.62 increase in the federal excise tax on cigarettes to \$1.01 per pack. This single legislative act—increasing the price of cigarettes—is projected to have reduced the number of middle and high school students who smoke by over 220,000 and the number using smokeless tobacco products by over 135,000 (Huang and Chaloupka 2012).

Raising prices on cigarettes is one of the most effective tobacco control interventions (USDHHS 2012; International Agency for Research on Cancer [IARC] 2011). Even with this tax increase in 2009, the average retail price of cigarettes in this country is still too low in comparison with other countries (World Health Organization [WHO] 2013). Additional price increases would accelerate progress in reducing youth and young adult rates of tobacco use (IARC 2011; USDHHS 2012; WHO 2013). The understanding of price elasticity suggests that the average retail price of cigarettes in the United States across the country would need to be raised to at least \$10 a pack, similar to prices in many other countries, in order to have a large and rapid impact (IARC 2011; USDHHS 2012; WHO 2013; Jha and Peto, in press).

In June 2009, the *Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act)*, Public Law 111-31, *U.S. Statutes at Large* 123, was signed, thereby granting the U.S. Food and Drug Administration (FDA) the authority to comprehensively regulate thousands of tobacco products for the first time in history. This law gives FDA a number of powerful tools to regulate tobacco products, both existing and new (see Chapter 14). Effective implementation of FDA's tobacco product regulation mandate is needed to reduce the harm caused by tobacco products.

In March 2010, the *Patient Protection and Affordable Care Act (Affordable Care Act)*, Public Law 111-148,

*U.S. Statutes at Large* 124 (2010):119, was signed into law. As part of its emphasis on prevention and health promotion, the law (a) requires private insurance plans and Medicaid expansion plans to cover tobacco cessation treatments, including medications that help people quit smoking; (b) requires state Medicaid programs to cover tobacco cessation medications; (c) expands smoking cessation coverage for pregnant women who receive Medicaid; and (d) provides Medicare beneficiaries with an annual wellness visit that includes personalized prevention plan services with referrals for tobacco cessation services. The *Affordable Care Act* also established the Prevention and Public Health Fund, which represents the most significant investment in U.S. history to scale up and promote effective public health and preventive measures, including programs to prevent and reduce tobacco use. The *Affordable Care Act* strengthens a key element of tobacco use cessation services by making them more available and barrier-free to almost all smokers.

The extensive evidence base supports the conclusion in Chapter 14 that mass media campaigns, comprehensive community programs, and comprehensive statewide tobacco control programs prevent initiation of tobacco use and reduce the prevalence of tobacco use among youth and adults. Although increased application of these and other proven tobacco control strategies would be highly effective, the current levels of implementation of these key strategies are far below the most effective levels according to the evidence base. State funding of tobacco control programs has been declining for years. For example, in 2010 states were only appropriating 2.4% of their tobacco revenues from both tobacco excise taxes and Master Settlement Agreement payments for tobacco control. Reaching CDC's recommended funding level would have required an additional 13% of tobacco revenues, or 3.1 billion of the \$24 billion collected (see Chapter 14) (CDC 2012).

## Health Consequences

The 2004 Surgeon General's report showed that smoking impacts nearly every organ of the body (USDHHS 2004). The 2006 report concluded that the scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke (USDHHS 2006). The new evidence in this report provides still more support for these conclusions. Fifty years after the first report in 1964, it is striking that the scientific evidence in this report expands the list of diseases and other adverse health effects caused by smoking and exposure to tobacco smoke. Figures 1.1A and 1.1B highlight these new findings and show that the risks for disease are even greater than presented in previous reports. These new findings include:

- Liver cancer and colorectal cancer are now added to the long list of cancers caused by smoking;
- Exposure to secondhand smoke is a cause of stroke;
- Smoking increases the risk of dying from cancer and other diseases in cancer patients and survivors;
- Smoking is a cause of diabetes mellitus; and
- Smoking causes general adverse effects on the body including inflammation and it impairs immune function. Smoking is a cause of rheumatoid arthritis.

This report also updates the estimates of disease, death, and economic costs attributable to smoking and exposure to tobacco smoke. The morbidity burden caused by smoking-attributable diseases is large, and new evidence suggests that over 16 million people alive today live with disease caused by smoking (see Chapter 12). In addition, the risks of death from diseases already on the causal list have increased in recent decades. This is particularly true for lung cancer risk among female smokers and chronic obstructive pulmonary disease risk for both male and female smokers (see Chapters 6 and 7). As the list of diseases caused by smoking has continued to grow, the updated estimate of the annual number of deaths attributable to smoking and exposure to secondhand smoke is now approaching 500,000 (see Chapter 12). This increase has occurred despite decreases in per capita cigarette consumption and prevalence, emphasizing our enhanced understanding of the lethality of cigarettes.

The estimated economic costs attributable to smoking and exposure to tobacco smoke have also increased. The annual indirect costs due to productivity losses are now estimated to be over \$150 billion (see Chapter 12). The estimates of direct medical expenditures have also increased as well, now ranging from at least \$130 billion annually up to \$176 billion or more (see Chapter 12).

## Ending the Tobacco Epidemic

The burden of smoking-attributable disease and premature death and its high costs to the nation will continue for decades unless smoking prevalence is reduced more rapidly than the current trajectory. The evidence in this report shows that the nation will fail to achieve the *Healthy People 2020* objective of reducing the prevalence of smoking among adults to 12%. Model estimates sug-

gest that if the status quo in tobacco control in 2008 were maintained, the projected prevalence of smoking among adults in 2050 could still be as high as 15% (see Chapter 15). Trends in smoking rates among youth and adults show progress, but the prevalence of current smoking among youth and adults is only slowly declining and the actual number of youth and young adults starting to smoke has increased since 2002 (see Chapter 13). Additionally, the use of multiple tobacco products is increasingly common, especially among young smokers. Concerns remain that use of these new products may increase initiation rates among youth and young adults, delay quitting, and prolong the smoking epidemic.

As reviewed in this report, the root cause of the smoking epidemic is also evident: the tobacco industry aggressively markets and promotes lethal and addictive products, and continues to recruit youth and young adults as new consumers of these products (see Chapter 14) (USDHHS 2012). As reviewed in Chapter 14, U.S. District Judge Gladys Kessler entered her final opinion and order on August 17, 2006, and found that the tobacco industry defendants violated the *Racketeer Influenced and Corrupt Organizations Act*, Public Law 91-452, *U.S. Statutes at Large* 84 (1970):992, codified at *U.S. Code* 18§§ 1961–68 (1994), by lying, misrepresenting, and deceiving the public “including smokers and the young people they avidly sought as ‘replacement smokers,’ about the devastating health effects of smoking and environmental tobacco smoke” (*United States v. Philip Morris*, 449 F. Suppl. 2d1(D.D.C. 2006):852). The *Tobacco Control Act* incorporates as congressional findings of fact Judge Kessler’s determinations that “the major United States cigarette companies continue to target and market to youth,” that the companies sought to “encourage youth to start smoking subsequent to the signing of the Master Settlement Agreement in 1998,” and that they “have designed their cigarettes to precisely control nicotine delivery levels and provide doses of nicotine sufficient to create and sustain addiction while also concealing much of their nicotine-related research” (*Tobacco Control Act* 2009, §2(47) – (49)).

Therefore, this report addresses the question: what steps are needed to end the tobacco epidemic? There are different ways to achieve this vision. Should the emphasis be on ending cigarette use; ending the use of the most harmful tobacco products while reducing the harm of remaining products; or ending the use of all tobacco products?

The scientific findings of the 2012 Surgeon General’s report (USDHHS 2012) show that there are evidence-based strategies that can rapidly drop initiation and prevalence

rates of smoking among youth to single digits. To reach this target, these strategies need to be fully implemented and sustained with sufficient intensity and duration. Without such increased and sustained action, 5.6 million youth younger than 18 years of age in this country today are projected to die prematurely from a smoking-related illness. But millions of these projected deaths could be averted, making tobacco control a highest priority in our overall public health commitment and strategy.

Achieving this goal of rapidly reducing rates of smoking among youth still leaves 42 million current adult smokers who are at risk of dying from a smoking-related disease. The evidence in this and previous reports highlights how deadly inhaling tobacco smoke is, especially from burning cigarettes (USDHHS 2004, 2006, 2010, 2012). Approximately 85% of the tobacco products used since 1964 have been cigarettes (U.S. Department of Agriculture 2008).

The scientific findings of the 2010 Surgeon General’s report were definitive on the causation of disease by smoking:

- Major Conclusion #2: “Inhaling the complex chemical mixture of combustion compounds in tobacco smoke causes adverse health outcomes, particularly cancer and cardiovascular and pulmonary diseases, through mechanisms that include DNA damage, inflammation, and oxidative stress.”
- Major Conclusion #4: “Sustained use and long-term exposures to tobacco smoke are due to the powerfully addicting effects of tobacco products, which are mediated by diverse actions of nicotine and perhaps other compounds, at multiple types of nicotinic receptors in the brain” (USDHHS 2010b, p. 9).

The scientific evidence is incontrovertible: inhaling the combustion compounds from tobacco smoke, particularly from cigarettes, is deadly. It has been stated that “The cigarette is also a defective product, meaning not just dangerous but *unreasonably* dangerous, killing half its long-term users. And addictive by design” (Proctor 2013, p. i27). The high risks of cigarette smoking and the historic and current patterns of tobacco use in the United States lead to a primary conclusion of this report:

- The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden.

Could the use of cigarettes and other combusted tobacco products be rapidly reduced in this country? As noted above, evidence-based strategies that can rapidly drop youth initiation and prevalence rates down to single digits have already been identified and used (USDHHS 2012). Chapter 14 reviews a broad range of well-defined and effective interventions proven to reduce adult smoking rates if implemented and sustained at funding levels consistent with CDC's recommended levels (see Chapter 14). This and previous reports outline effective programs and policies:

- Fully funded comprehensive statewide tobacco control programs funded at levels recommended by CDC;
- A higher average retail price of cigarettes in the United States. Experience from across the globe suggests at least \$10 a pack in the United States;
- Complete protection of the entire U.S. population from exposure to tobacco smoke through comprehensive smokefree indoor air policies;
- High-impact media campaigns, such as CDC's Tips from Former Smokers campaign and the proposed U.S. Food and Drug Administration prevention campaigns at a high-frequency level and exposure for 12 months a year for a decade or more; and
- Full access to cessation treatment for nicotine addiction including counseling and medication for all smokers, especially those with mental and physical comorbidities.

However, these five actions are not all that needs to be done. Although more aggressive use of those evidence-based policies and programs reviewed in Chapter 14 is a starting point, the simulation modeling results reviewed (see Chapter 15) suggest that new strategies may be needed to more rapidly reduce rates of smoking. Recently, such tobacco control strategies are beginning to be formulated that might dramatically reduce the use of tobacco products, especially cigarettes. These proposed strategies have been labeled tobacco end game scenarios (see Chapter 15). For the United States, the feasibility and applicability of these various proposals range from possible (reducing the nicotine in cigarettes to nonaddicting levels) to almost certainly infeasible (transferring the tobacco product

market to a nonprofit entity). Any application of these end game interventions should come as an integrated national tobacco control strategy that is based on a foundation of enhanced implementation of the proven strategies. Examples of end game options (see Chapter 15), which could complement the proven interventions in accomplishing our overall goal of a society free of tobacco-related death and disease, include but are not limited to: (1) reduce the nicotine content to make cigarettes less addictive (Benowitz and Henningfield 2013), and (2) greater restrictions on sales, particularly at the local level, including bans on entire categories of tobacco products (Berrick 2013; Malone 2013).

In considering options for reducing the health burden caused by smoking, many additional recommended actions have been defined in evidence reviews and guidance documents discussed in this report. For example, selected state experience suggests that all levels of government can enhance revenue collection and minimize tax avoidance and evasion through several policy approaches, such as implementing a high-tech cigarette tax stamp, improving tobacco licensure management, and making the stamps harder to counterfeit (see Chapter 14). These state practices could also be expanded to the national level with a national track and trace system. A track and trace system, in the tobacco control context, is a system that can track goods from manufacture to distribution to sale, identifying points in the supply chain where taxes should be paid and confirm payment. Enforcement enhancements would also be beneficial. Implementing such systems would also simultaneously retain the positive public health effects of taxation and protect product regulation in the market.

In addition to actions taken by the federal government, actions by national and local nongovernmental organizations can have significant impacts on social norms. As reviewed in Chapter 14, the portrayals of tobacco use in U.S. films appear to have rebounded upward in the last 2 years (see Chapter 14, Figures 14.3A and 14.3B). Based on box office attendance data, it has been estimated that youth were exposed to 14.9 billion in-theater tobacco-use impressions<sup>3</sup> in youth-rated films in 2012. Youth who are exposed to images of smoking in movies are more likely to smoke; those who experience the most exposure to onscreen smoking are approximately twice as likely to begin smoking as those who receive the least exposure (USDHHS 2012). Actions that would eliminate depiction of tobacco use in movies that are produced and rated as appropriate for children and adolescents could have a sig-

<sup>3</sup>One impression equals one tobacco use incident on screen viewed by one audience member.

nificant benefit in reducing the numbers of youth who become tobacco users. It has been suggested that the movie industry modernize the Motion Picture Association of America voluntary rating system to eliminate smoking from youth-rated films by awarding any film with smoking or other protobacco imagery an R rating (with exceptions for real historical figures who actually smoked or films that actually depict the dangers of smoking or exposure to secondhand smoke) (Glantz and Polansky 2012; Sargent et al. 2012). Further, if such a change in the Motion Picture Association of America rating system would reduce in-theater exposures from a current median of about 275 annual exposures per adolescent from PG-13 movies down to approximately 10 or less, adolescent smoking would be reduced by an estimated 18% (95% confidence interval, 14–21%) (Sargent et al. 2012).

The increasing availability of noncombustible products raises the question of using them to help eliminate the harm caused by tobacco. The *Tobacco Control Act* is governed by a requirement to protect public health, an acknowledgement that the goal of tobacco control is to improve public health overall. A public health standard is critical because strategies that reduce potential harm from toxicant exposure to individual users of tobacco products could adversely affect other individuals and public health by increasing the number of new users of cigarettes and by reducing the number of quitters (Figure 16.2).

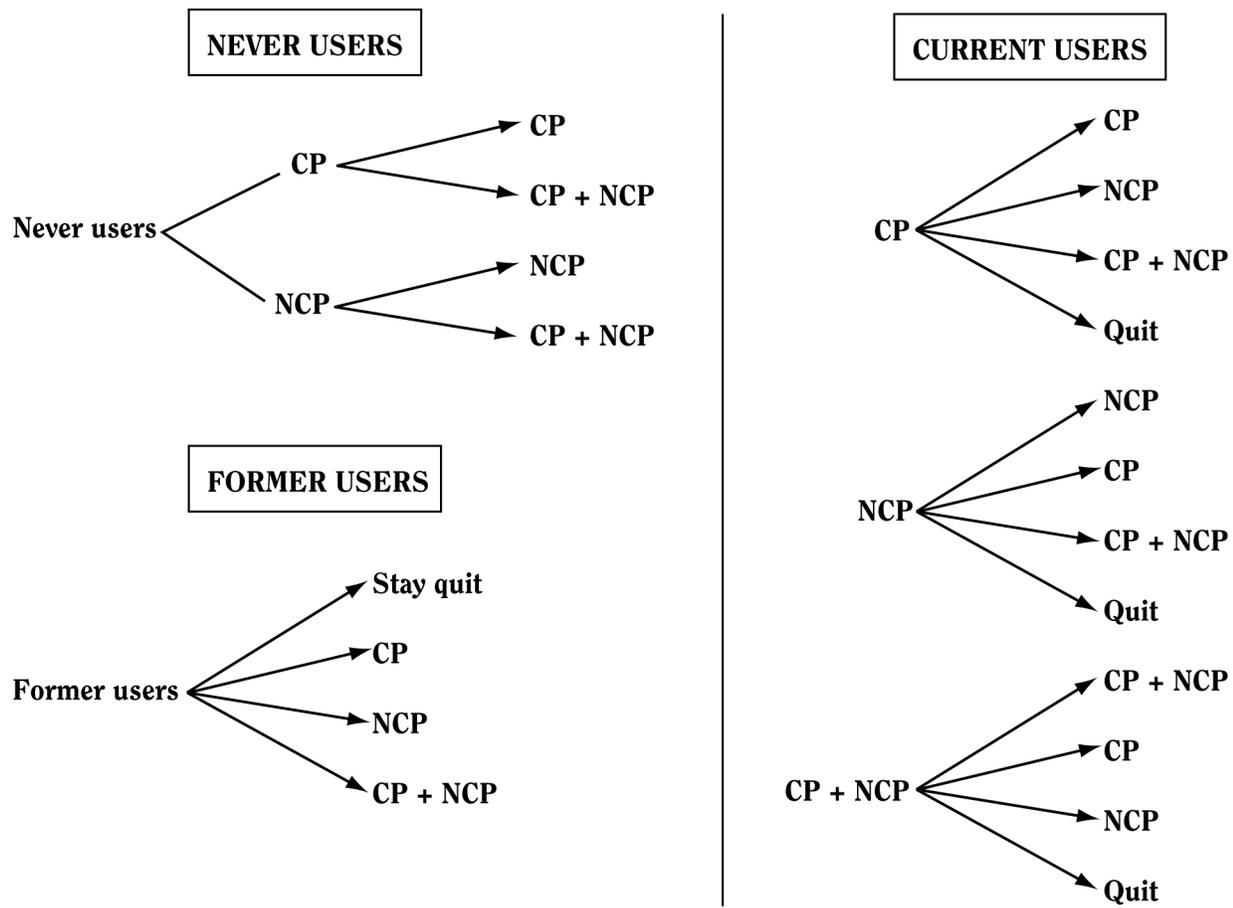
This issue of reducing direct *individual* harm in those substituting noncombustibles for cigarettes while minimizing impact on other individuals, who may start or not stop using cigarettes (Figure 16.2), arises in facing the regulatory challenge posed by electronic cigarettes (e-cigarettes or electronic nicotine delivery systems). Although these new products are entering the marketplace rapidly, and will soon be marketed by all three major tobacco manufacturers in the United States, significant questions remain about (1) how to assess the potential toxicity and health effects of the more than 250 electronic cigarette brands; (2) the magnitude of the potential reduced risk from electronic versus continuing use of conventional cigarettes for individual smokers; (3) the need to weigh the potential individual benefits and risks versus population benefits and risks; (4) how the advertising and marketing of these new products should be regulated; and (5) even assuming that electronic cigarettes could be sufficiently safe to users and offer net public health benefits, there are significant questions about the manner in which they should be regulated (Benowitz 2013).

The issue of weighing the relative benefits and risks to individuals and populations is critical when considering the potential role of any noncombustible tobacco products

in reducing the occurrence of smoking-caused diseases and morbidity. Currently, there are varying scenarios being discussed. In one scenario, noncombustible tobacco products would be substituted for cigarette smoking among a subset of smokers (people who otherwise would not quit smoking and thus are at high risk for smoking-caused diseases). Proponents claim that such a switch would significantly reduce the burden of death and disease attributable to smoking if smokers completely substituted combustible products with noncombustible products. The perspective rests on the assumption that (a) noncombustible tobacco products, used alone, are far less dangerous to individual users than continued smoking, a conclusion that appears correct based on current understanding (Levy et al. 2004; USDHHS 2010b); (b) with proper marketing, differential taxation, and other carefully calibrated policies, noncombustible products would be adopted as a complete substitute for smoking by significant numbers of current smokers, a thus far unproven assumption; (c) smokers who switched to noncombustible products otherwise would continue to smoke (as opposed to quitting), another area with significant uncertainty; and (d) the net impact on health of all the various outcomes, intended and unintended, would contribute meaningfully to tobacco harm reduction, a proposition that has been explored only once in the literature (Mejia et al. 2010). In that analysis which related only to snus, it was concluded that it would be unlikely that the promotion of the snus form of smokeless tobacco would be associated with substantial health benefits. The probability that the use of snus could delay complete cessation of cigarette smoking among health-concerned smokers would decrease the potential health benefit at the population level.

An alternative scenario regarding noncombustible products as a harm reduction strategy holds that the availability and promotion of noncombustible tobacco products would increase the aggregate damage to health produced by tobacco. Proponents of this position vary on how much they emphasize the inherent dangers of noncombustible tobacco products. Even those who concur that the use of noncombustible tobacco products may not constitute a large direct risk to individual health propose that a strategy based on their use would increase total tobacco-related harm to health. Proponents of this position argue that the availability of noncombustible products can have adverse consequences, especially under current conditions with the widespread marketing and use of cigarettes. These consequences include (a) encouraging children to experiment with tobacco products (with the expectation that a percentage of those who become regular users of noncombustible products will graduate

**Figure 16.2 Potential patterns of use of combustible products (CP) and non-combustible products (NCP)**



Source: Created by J. Samet for this Surgeon General's Report.

to smoking); (b) helping smokers maintain their addiction by using noncombustible products in environments where they cannot smoke; (c) acting as a non-risk-free substitute for cigarettes for smokers who otherwise would have quit; and (d) giving smokers an alternative means of satisfying their addiction that may lead to higher levels of recidivism to smoking. The evidence indicates that current industry practices raise concerns about all of these potential adverse consequences (USDHHS 2012). One study found that transnational tobacco companies promote less harmful tobacco products in order to maintain and extend the sales of cigarettes and to create alternative

forms of tobacco use among young people who are no longer smoking (Peeters and Gilmore 2013). Uncertainties as to the role of noncombustible tobacco products as part of a harm reduction strategy raises issues of promotion of noncombustible tobacco. Further research with attention to their individual and population-level consequences will be helpful to fully address these questions. However, the promotion of noncombustible products is much more likely to provide public health benefits only in an environment where the appeal, accessibility, promotion, and use of cigarettes and other combusted tobacco products are being rapidly reduced.

## Accelerating the National Movement to Reduce Tobacco Use

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These key conclusions of this report provide evidence that calls for dramatic action:

- The current rate of progress in tobacco control is not fast enough. More needs to be done.
- High levels of smoking-attributable disease and death costs will persist for decades into this twenty-first century unless more rapid progress is made in tobacco control. The current burden is unacceptable.
- The almost 500,000 annual premature deaths due to smoking and exposure to tobacco smoke are far too many. Even 100,000 or 200,000 annual attributable deaths are far too many; yet this is a realistic projection of the burden well into the middle of this twenty-first century if more rapid progress is not made in tobacco control.
- The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden.

There are important lessons to be learned from other successes in public health. In confronting worldwide epidemics caused by smallpox and polio, the eradication of the diseases was the clear objective. From this single-minded focus, the best strategies and actions based on public health science and practice were applied, evaluated, refined, and sustained for decades. The results are now evident: smallpox was eradicated decades ago and polio is on the verge of elimination. The nation should firmly commit to this goal of creating a society free of tobacco-related death and disease by engaging all sectors of society to an equally single-minded focus.

In the last 50 years, the smoking rate in the United States has been cut by more than one-half (from 42.7% in 1965 to 18% in 2012). The *Strategic Action Plan* provides a critical framework to guide and coordinate efforts to reduce the smoking rate to less than 10% for both youth and adults in 10 years, averting millions of smoking-related deaths. This national commitment will require increased and sustained action to rapidly eliminate the use of cigarettes and other forms of combustible tobacco products. As end game strategies are being developed, the following actions should be implemented:

- Counteracting industry marketing by sustaining high impact national media campaigns like the

CDC's Tips from Former Smokers campaign and FDA's youth prevention campaigns at a high frequency level and exposure for 12 months a year for a decade or more;

- Raising the average excise cigarette taxes to prevent youth from starting smoking and encouraging smokers to quit;
- Fulfilling the opportunity of the *Affordable Care Act* to provide access to barrier-free proven tobacco use cessation treatment including counseling and medication to all smokers, especially those with significant mental and physical comorbidities;
- Expanding smoking cessation for all smokers in primary and specialty care settings by having health care providers and systems examine how they can establish a strong standard of care for these effective treatments;
- Effective implementation of FDA's authority for tobacco product regulation in order to reduce tobacco product addictiveness and harmfulness;
- Expanding tobacco control and prevention research efforts to increase understanding of the ever changing tobacco control landscape;
- Fully funding comprehensive statewide tobacco control programs at CDC recommended levels; and
- Extending comprehensive smokefree indoor protections to 100% of the U.S. population.

Former WHO Director General Gro Brundtland was correct in 1999 in stating the need to evaluate current action from the perspective of our grandchildren and their children (Asma et al. 2002). As future generations look back on our current actions and knowledge of the tobacco epidemic, will current efforts show the commitment to public health and social justice set forth in our national plans and objectives?

This nation's decades-long battle against the tobacco epidemic has successfully prevented millions of premature deaths that would otherwise have occurred—an historic achievement by any measure. On the fiftieth anniversary of the landmark 1964 Surgeon General's report, this nation must rededicate itself not only to carrying forward the successful tobacco control efforts that have long been under way but also to expanding and accelerating those efforts in full recognition of the challenge that remains.

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